These are the change pages for:

DEFINITY® ECS
CallVisor® ASAI DEFINITY LAN Gateway over MAPD
Installation, Administration, and Maintenance

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Please replace the new pages with the pages you received in the original document. The old pages can be discarded.

DLG over the MAPD is provided with a default set of administered parameters, but the customers can also administer the MAPD system parameters and client information to conform to their networks.

NOTE:
Lucent Technologies support services for the MAPD system will not troubleshoot a customer LAN. If the customer LAN is experiencing difficulties, customers should follow the escalation path supplied by their LAN provider.

NOTE:
The DEFINITY ECS administration of ASAI does not change when using DLG over the MAPD.

Depending on the system setup desired, customers can configure and administer the MAPD system in several ways:

- Using telnet over TCP/IP
- Using a dumb terminal dedicated to the MAPD circuit pack
- Using the RS-232 port of a PC or host attached to the MAPD circuit pack.

A menu-driven interface offers ease of administration, and help screens are available if assistance is needed. In addition, security features explained in the Section ‘‘Security Considerations’’ in this chapter will help in guarding against unauthorized access.

System Hardware

The MAPD system assembly is supported by a “sandwich” of two boards mentioned previously, the TN801 MAPD board and a Pentium processor card. Figure 1-2 shows the MAPD system assembly.

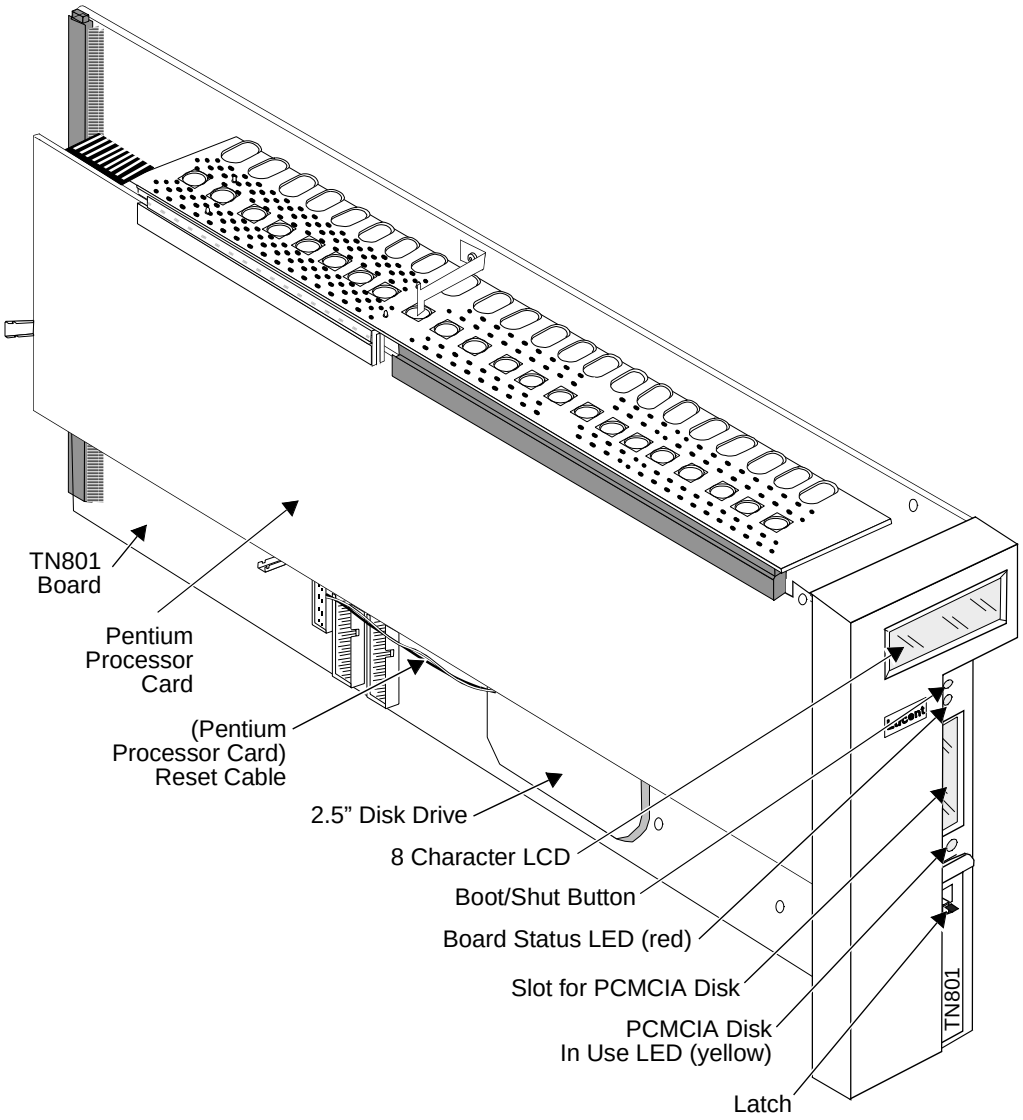

Figure 1-2. MAPD System Assembly (J58890MA)

The TN801 circuit pack supports a hard disk, Ethernet controller, and PCMCIA interface. It supports a local serial port (Admin/Port B), an additional serial port (Maint/Port A) for modem connection, and a synchronous packet adjunct serial port (DCIU, reserved for future use).

The TN801 board interfaces with the Pentium processor over industry standard PCI and ISA busses. The Pentium processor is configured with 32 megabytes of (socketed) Dynamic Random Access Memory (DRAM). The TN801 supports a

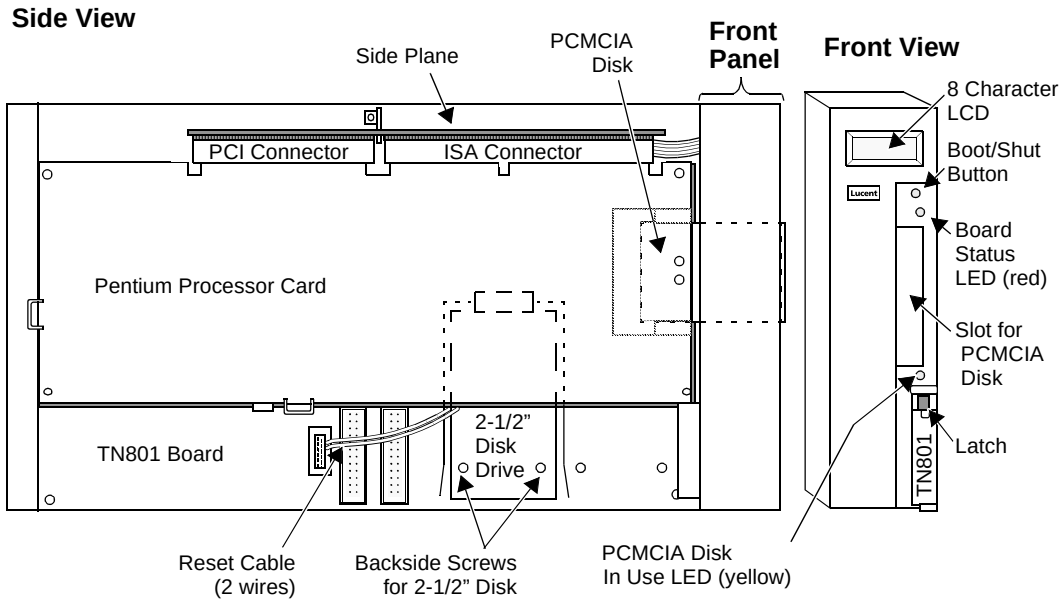

Figure 2-4. MAPD System Assembly (J58890MA)

WARNING:

The MAPD system will automatically boot when seated in the slots of a switch that is powered on. Damage to the disk could occur if the assembly is removed while booting. Therefore, try to avoid the need to adjust or reinsert the assembly after the first attempt to insert it; make sure that the assembly is properly aligned in the slot, and then insert it with a single firm push.

1. Insert the assembly and lock it in place by pushing up the securing latch. If the switch is powered on, the MAPD system will boot automatically.

   NOTE:
   If the switch is not powered on, wait until it is, and then proceed to Step 6.

2. As the MAPD system comes up, watch the Liquid Crystal Display (LCD) on the faceplate (see Figure 2-5). The LCD identifies the MAPD states and alarms.

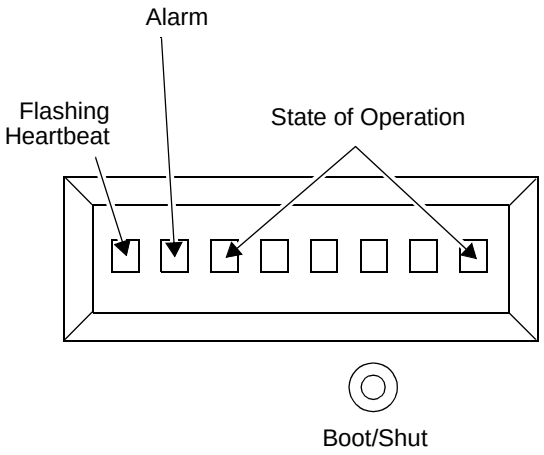

Figure 2-5. MAPD System LCD Display

The following list explains the positions of the LCD:

- Standing in front of the faceplate and reading from left to right, the first position contains the MAPD system heartbeat.
- The second position displays a letter indicating the following types of alarms: warnings (w), minor (m), major (M), and (C) for critical. This position is blank if there are no alarms.
- The remaining positions indicate the MAPD system states.

When the MAPD system is coming up, the LCD should display the following states (in order):

FWBOOT	Firmware board tests
PCBIOS	Pentium Processor Card Diagnostics
OSINIT	Operating System Initialization
PGMFW	Update MAPD Board FLASH PROMS, if necessary
AINIT	MAPD System Initialization
ASAI X	MAPD running with X established ASAI links.

If the system does not come up to the AINIT state within 10 minutes (4 to 7 minutes is average), contact the Technical Service Center (TSC) for assistance.

Physical Description

Refer to Figure 4-1, “MAPD System Assembly,” when reading this section.

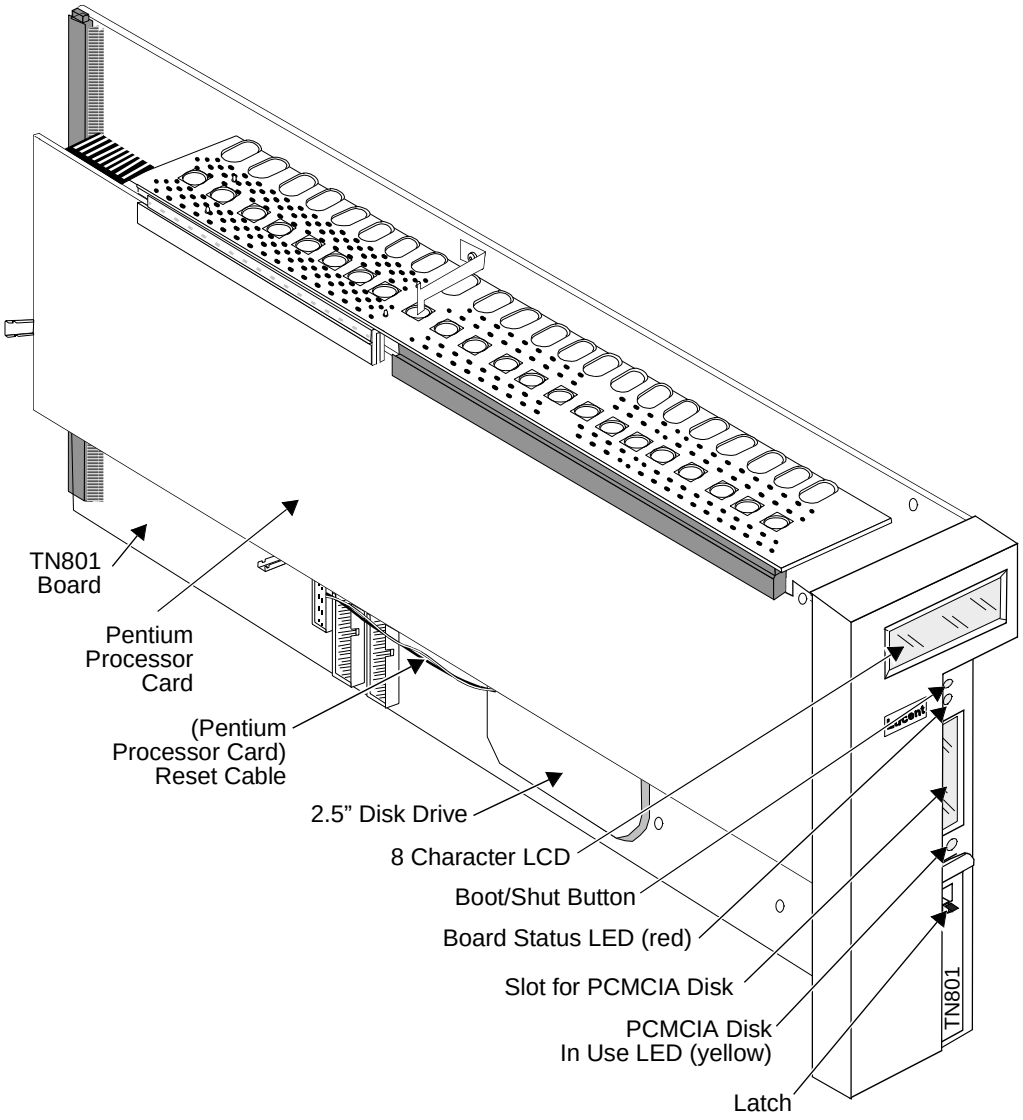

Figure 4-1. MAPD System Assembly (J58890MA)

Four main items make up the MAPD System hardware assembly shown in Figure 4-1. They are:

- The TN801 MAPD (Multi-Application Platform for the DEFINITY ECS) Board — The main circuit board that provides connectivity to the DEFINITY ECS system Busses, LAN connectivity, support for the IDE disk drive, PCMCIA interface, and ISA and PCI interfaces to the Pentium processor card.
- The Pentium Processor Card — Main processor that runs the LAN Gateway application under UNIX.
- The 2.5” Disk drive — Hard disk used to store the application, operating system, customer data, and log system error information.
- PCMCIA Disk — Used to store periodic backups of customer data, install new software releases, and remove core dumps and other maintenance information.

The system faceplate is made up of the following items:

- Red Light-Emitting Diode (LED) — Indicates the health of the MAPD. When flashing, it indicates a software problem. When it is steadily lit for more than 30 seconds, a hardware problem exists.
- Liquid Crystal Display (LCD) — An 8 character alphanumeric display that automatically shows the status of the MAPD including alarms.
- Boot/Shut button— A recessed button used to bring the entire system off-line to a Maintenance Shutdown state M_SHUT. In operational state, it closes all the files, stops file operations, and executes a spin-down of the disk drive. When pressed in the Maintenance Shutdown state M_SHUT, or in the error shutdown state E_SHUT, it reboots the system.

  NOTE:
  The button must be pressed and held for 2 seconds.

Cables include:

- LCD Cable — A flat 8 pin ribbon cable that provides connectivity between the TN801, MAPD Board and the faceplate LCD display.
- Reset Cable — A two wire cable that provides the TN801 MAPD Board with the ability to issue a reset to the Pentium processor card.
- External cable — The MAPD external cable connects the TN801 MAPD Board through the back of the switch. This cable provides an Ethernet connection to a LAN as well as administration and remote maintenance terminal connections. It has a reserved RS-232 connector also.

Returning the MAPD System to its Original State

F

WARNING:

This procedure should only be performed by a Lucent Technologies services technician.

After using this procedure, you must reconfigure the MAPD applications or restore the configuration parameters from the backup SanDisk PCMCIA FlashDisk.

This procedure describes how to return the MAPD (with its associated applications) to its original state if it should crash.

1. Make sure the administrative and/or maintenance terminal is physically connected (either directly or through a modem) to Maint/Port A on the TN801 board.
2. Power down the MAPD system assembly by disengaging it from the DEFINITY ECS carrier.
3. Insert the PCMCIA Installation disk into the TN801, and re-insert the MAPD system assembly.
4. When the system is coming up, the terminal screen displays a message similar to the following:

```
                Lucent Technologies, Inc.

                Copyright (C) 1985-1989 Phoenix Technologies Ltd.
                Copyright (C) 1996 Texas Microsystems, Inc.
                All Rights Reserved

The P5120C 120 MHz Industrial Computer BIOS, Version 4.28.MAP-D 1.4
640K Base, 031744K Extended, 256K External Cache

PCMCIA drive   - Calluna Technology CT260MC 247Mb
PCMCIA drive bootable...<CTRL-C> twice for PCMCIA boot.

                                    .
                                    .
                                    .
```

NOTE:
The PC memory test can be aborted by pressing the SPACE key while it is running.

5. Boot from the PCMCIA Disk by pressing CTRL C twice in quick succession when you see the *PCMCIA drive bootable*... line appear on the screen.

WARNING:
*Once the **PCMCIA boot drive bootable**... line appears on the screen, you only have 5 seconds to enter the CTRL C sequence. If you fail to enter it in time, you must reset the system (either by power down, reboot, or through the remote maintenance interface) to attempt again.*

At this point, the system will boot from the PCMCIA Disk, and a screen similar to the following appears

```
Booting UnixWare...
UnixWare 2.1.2 for the Intel386(tm) Family

Copyright 1984-1995 Novell, Inc., 1996 The Santa Cruz Oepration, Inc.
All Rights Reserved.

TN800 driver (mapdmux) - Version 0.1
MAINT DRIVER INIT
RMB DRIVER INIT
0:0,7,0: HBA          : (ide,1) Generic ESDI/IDE/ATA
  0,0,0: DISK         : Generic IDE/ESDI        1.00
1:0,7,0: HBA          : (ide,2) Generic ESDI/IDE/ATA
  0,0,0: DISK         : Generic IDE/ESDI        1.00

                                        .
                                        .
                                        .
```

NOTE:
If the screen shows LynnSoft PC Card Software loaded, then you did not successfully boot from the PCMCIA Disk. In this case, you must reset (either by power down, reboot, or through the remote maintenance interface) and attempt again.

The login prompt appears when the system has finished rebooting.

NOTE:
When the system is rebooted, the console will be reset while the firmware is downloaded. The download process should take less then 30 seconds after the initial login prompt is displayed. Press the RETURN key to display the login prompt again.

```
Welcome to UnixWare 2.1.2
The system's name is definity.

Console Login:


TN800 MAPD Remote Maintenance Port
defaults are:
LCP: 9600 8N1   COM2: 9600 8N1
RMP: 9600 8N1   COM1: 9600 8N1




TN800 MAPD Remote Maintenance Port
defaults are:
LCP: 9600 8N1   COM2: 9600 8N1
RMP: 9600 8N1   COM1: 9600 8N1
```

6. Press RETURN to display the login prompt, and login as `root` with the default root password.
7. Type `installIDE` to recreate the IDE disk image. This process will take place approximately 8 to 10 minutes.

NOTE:
If the installation script detects the presence of UNIX already on the IDE disk, it will prompt you for confirmation before over-writing it. If you proceed, all of the original contents on the IDE disk will be lost.

8. Shut down the system, by typing `shutdown -g0 -y`. A screen similar to the following will appear:

```
# shutdown -g0 -y
UX:shutdown: INFO:
Shutdown started.       Wed Sept 24 13:46:28 EST 1997

# UX:init: INFO: New run level: 0
UX:/sbin/rc0: INFO: The system is coming down.  Please wait.
UX:K00ANNOUNCE: INFO: System services are now being stopped.

Press any key to reboot...
```

9. Remove the PCMCIA installation disk, and insert the customer's backup SanDisk PCMCIA FlashDisk
10. Press any key to reboot the system, and boot from the internal IDE disk (for example, do **NOT** enter the CTRL C sequence this time.)
11. At the login prompt, login as `root` with the default root password.
12. If the DEFINITY LAN Gateway application needs to be installed, type

    `pkgadd -n DLGset`

NOTE:
Before loading the DEFINITY LAN Gateway application, verify that the customer has purchased it.

13. If the CV/LAN application needs to be installed, type

    `pkgadd -n cvlan`.

NOTE:
Before loading the CV/LAN application, verify that the customer has purchased it.

14. Evoke the screens by typing `eth_oam`.
15. Restore the customer's system configuration from the backup SanDisk PCMCIA FlashDisk using the following menu steps:

- Select ‘‘Maintenance (DLG)’’ from the Main Menu.
- Select ‘‘Removable Media Operations’’ from the Maintenance Menu.
- Select `Restore Configuration Data` from Removable Media Operations.

16. After the customer’s system configuration is restored, reboot the system:
    - Return to the ‘‘Maintenance (DLG)’’ Menu.
    - Select ‘‘Reset System (DLG)’’.
    - Select `Reboot System`.

NOTE:
If the CV/LAN application was installed, the UNIX kernel will be rebuilt when the system is shut down. This will take several minutes. In addition, when the system is coming up, a new kernel environment will be setup, which may also take a few minutes.

17. Following the reboot, have the customer log in at the login prompt.

Upgrading the MAPD System

H

WARNING:

This procedure should only be performed by a Lucent Technologies services technician.

This procedure describes how to upgrade the MAPD System (with its associated applications) with new software.

1. Make sure the administrative and/or maintenance terminal is physically connected (either directly or through a modem) to Maint/Port A on the TN801board.
2. Make sure the customer's backup SanDisk PCMCIA FlashDisk is inserted in the TN801board. If it is not, shut down the system, insert it, and reboot the system.
3. Log onto the MAPD System with the "services" login and evoke the screens by typing `eth_oam`.
4. Save the customer's system configuration on the backup SanDisk PCMCIA FlashDisk using the following menu steps:
   - Select ''Maintenance (DLG)'' from the Main Menu
   - Select ''Removable Media Operations'' from the Maintenance Menu.
   - Finally, select `Save Configuration Data to Removable Media`.
5. After the configuration data is saved, shut down the system:
   - Return to ''Maintenance (DLG)'' Menu.
   - Select ''Reset System (DLG).''

- Select `Shutdown`.

A screen similar to the following is displayed:

```
processing....



UX:init: INFO: New run level: 0
UX:/sbin/rc0: INFO: The system is coming down.  Please wait.
UX:K00ANNOUNCE: INFO: System services are now being stopped.

Press any key to reboot...
```

6. Remove the customer's backup SanDisk PCMCIA FlashDisk and insert the PCMCIA Installation disk into the TN801 board (the top of the disk should be facing left), and then press any key to reboot.
7. When the system is coming up, the terminal screen displays a message similar to the following:

```
                Lucent Technologies, Inc.

                Copyright (C) 1985-1989 Phoenix Technologies Ltd.
                Copyright (C) 1996 Texas Microsystems, Inc.
                All Rights Reserved

The P5120C 120 MHz Industrial Computer BIOS, Version 4.28.MAP-D 1.4
640K Base, 031744K Extended, 256K External Cache

PCMCIA drive   - Calluna Technology CT260MC 247Mb
PCMCIA drive bootable...<CTRL-C> twice for PCMCIA boot.

                                      .
                                      .
                                      .
```

NOTE:
The PC memory test can be aborted by pressing the SPACE key while it is running.

8. Boot from the PCMCIA Disk by pressing CTRL C twice in quick succession when you see the **`PCMCIA drive bootable`** line appear on the screen.

WARNING:

Once the ***PCMCIA drive bootable*** *line appears on the screen, you only have 5 seconds to enter the* CTRL C *sequence. If you fail to enter it in time, you must reset the system (either by power down, reboot, or through the remote maintenance interface) to attempt again.*

At this point, the system will boot from the PCMCIA Disk, and a screen similar to the following appears:

```
Booting UnixWare...
UnixWare 2.1.2 for the Intel386(tm) Family

Copyright 1984-1995 Novell, Inc., 1996 The Santa Cruz Oepration, Inc.
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TN800 driver (mapdmux) - Version 0.1
MAINT DRIVER INIT
RMB DRIVER INIT
0:0,7,0: HBA          : (ide,1) Generic ESDI/IDE/ATA
  0,0,0: DISK         : Generic IDE/ESDI        1.00
1:0,7,0: HBA          : (ide,2) Generic ESDI/IDE/ATA
  0,0,0: DISK         : Generic IDE/ESDI        1.00

                                    .
                                    .
                                    .
```

NOTE:

If the screen shows LynnSoft PC Card Software loaded (see the following screen), then you did not successfully boot from the PCMCIA Disk. In this case, you must reset the system (either by power down, reboot, or through the remote maintenance interface) and attempt again.

The login prompt appears when the system has finished rebooting.

NOTE:

When the system is rebooted, the console will be reset while the firmware is downloaded. The download process should take less than 30 seconds after the initial login prompt is displayed. Press the RETURN key to display the login prompt again.

```
Welcome to UnixWare 2.1.2
The system's name is definity.

Console Login:


TN800 MAPD Remote Maintenance Port
defaults are:
LCP: 9600 8N1   COM2: 9600 8N1
RMP: 9600 8N1   COM1: 9600 8N1



TN800 MAPD Remote Maintenance Port
defaults are:
LCP: 9600 8N1   COM2: 9600 8N1
RMP: 9600 8N1   COM1: 9600 8N1
```

9. Press RETURN to display the login prompt and login as `root` with the default root password.
10. Type `installIDE` to recreate the IDE disk image. This process will take approximately 8 to 10 minutes.

NOTE:
If the installation script detects the presence of UNIX already on the IDE disk, it will prompt you for confirmation before over-writing it. If you proceed, all the original contents on the IDE disk will be lost.

11. Shut down the system by typing `shutdown -g0 -y`. A screen similar to the following will appear:

```
# shutdown -g0 -y
UX:shutdown: INFO:
Shutdown started.       Wed Sept 24 13:46:28 EST 1997

# UX:init: INFO: New run level: 0
UX:/sbin/rc0: INFO: The system is coming down.  Please wait.
UX:K00ANNOUNCE: INFO: System services are now being stopped.

Press any key to reboot...
```

12. Remove the PCMCIA installation disk, and insert the customer's backup SanDisk PCMCIA FlashDisk.
13. Press any key to reboot the system, and boot from the internal IDE disk (do **NOT** enter the CTRL C sequence this time).

14. At the login prompt, login as `root` with the default root password.
15. To install the DEFINITY LAN Gateway application, type

    `pkgadd-n DLGset`.

NOTE:
Before loading the DEFINITY LAN Gateway application, verify that the customer has purchased it.

16. If the CV/LAN application needs to be installed, type

    pkgadd -n cvlan.

NOTE:
Before loading the CV/LAN application, verify that the customer has purchased it.

17. Evoke the screens by typing `eth_oam`.
18. Restore the customer's system configuration from the backup SanDisk PCMCIA FlashDisk using the following menu steps:
    - Select ''Maintenance (DLG)'' from the Main Menu.
    - Select ''Removable Media Operations'' from the Maintenance Menu.
    - Select `Restore Configuration Data` from Removable Media.
19. After the customer's system configuration is restored, reboot the system.
    - Return to the ''Maintenance (DLG).''
    - Select ''Reset System (DLG).''
    - Select `Reboot System`.

NOTE:
If the CV/LAN application was installed, the UNIX kernel will be rebuilt when the system is shut down. This will take several minutes. In addition, when the system is coming up, a new kernel environment will be setup which may also take a few minutes.

20. Following the reboot, have the customer log in at the login prompt.