



Dialogic® Host Media Processing Software Release 4.1LIN

Software Installation Guide

June 2011

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Revision History

This revision history summarizes the changes made in each published version of this document.

Document No.	Publication Date	Description of Revisions
05-2679-002	June 2011	<p>Globally replaced “Dialogic System Configuration Guide” with “Dialogic Host Media Processing Software Configuration Guide” to reflect document name change.</p> <p>Installation Overview chapter: In step 4 of Major Installation Steps section, indicated that Service Updates must also be uninstalled before installing a new version of the Dialogic HMP Software.</p> <p>Pre-Installation Requirements chapter: Removed specific OS versions in Installing the Operating System; steps are relevant for all versions. Updated step 4a and 4c in Testing the Required Operation of the Linux RTC Device.</p> <p>Installing the Software chapter: Indicated that Service Updates must also be uninstalled before installing a new version of the Dialogic HMP Software. Added step 4 about HPET in Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software.</p> <p>License Administration chapter: Renamed “Activating a License” to Activating a Single License. Added Activating a License File Directory.</p>
05-2679-001	October 2009	Initial version of this document.

About This Publication

This preface provides the following information about this document:

- [Purpose](#)
- [Intended Audience](#)
- [How to Use This Publication](#)
- [Related Information](#)

Purpose

This publication describes how to install Dialogic® Host Media Processing Software Release 4.1LIN. Information about running a demo to confirm proper installation, troubleshooting the installation, and uninstalling the software is also included.

Intended Audience

This publication is intended for:

- System Integrators
- Toolkit Developers
- Independent Software Vendors (ISVs)
- Original Equipment Manufacturers (OEMs)

How to Use This Publication

Following are some guidelines for using this publication:

- To get an overall understanding of the install process, refer to [Chapter 1, “Installation Overview”](#).
- For pre-installation requirements, refer to [Chapter 2, “Pre-Installation Requirements”](#).
- The complete installation procedure, including prerequisites, system configuration procedures, and instructions for running the verification demo, is provided in [Chapter 3, “Installing the Software”](#).
- For post-installation requirements, refer to [Chapter 4, “Post-Installation Requirements”](#).
- Refer to [Chapter 5, “License Administration”](#) for information about performing the various tasks related to obtaining, activating, and otherwise working with Dialogic® license files.
- If you need to uninstall the Dialogic® Host Media Processing Software Release 4.1LIN software, refer to [Chapter 6, “Uninstalling the Software”](#).

- If you have problems while installing the Dialogic® Host Media Processing Software Release 4.1LIN software, refer to [Chapter 7, “Troubleshooting”](#).
- To navigate through all the information, use the Contents and internal links.

Related Information

The following documents and web sites provide more information:

- *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide* - This document provides information about the release such as product features, system requirements, and user documentation. Locate this document at <http://www.dialogic.com/manuals>.
- *Dialogic® Host Media Processing Software Release 4.1LIN Release Update* - This document addresses release issues such as known problems and documentation updates. Locate this document at <http://dialogic.com/manuals>.
- For technical support, go to <http://www.dialogic.com/support>.
- For information about Dialogic® products, go to <http://www.dialogic.com>.

About This Publication

This chapter provides the following information about installing Dialogic® Host Media Processing Software Release 4.1LIN software.

- Terminology 9
- Major Installation Steps 9
- Dialogic® Software Licenses 10

1.1 Terminology

The following terms are used in this document:

Dialogic® HMP Software Release 4.1LIN

Dialogic® Host Media Processing Software Release 4.1LIN

ethX

Rack Mount server's network interface (typically eth0)

SELinux

Security-enhanced Linux (SELinux) is a reference implementation of the Flask security architecture for flexible mandatory access control. It was created to demonstrate the value of flexible mandatory access controls and how such controls could be added to an operating system.

1.2 Major Installation Steps

Following are the major installation steps:

1. Before installing the Dialogic® Host Media Processing Software Release 4.1LIN software, make sure that the system meets the hardware and software System Requirements as described in the *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide*.
2. Complete the pre-installation requirements described in [Chapter 2, “Pre-Installation Requirements”](#). In addition to both hardware and software requirements, this chapter includes operating system installation and network setup.
3. To install the software, you must have local administrative privileges. Contact your network administrator to set up administrative privileges as required.
4. Uninstall any existing Dialogic® System Releases including previous Dialogic® HMP Software Service Updates. Refer to [Chapter 6, “Uninstalling the Software”](#) for details.
5. Obtain a Dialogic® software license. You must do this before you install Dialogic® Host Media Processing Software Release 4.1LIN software. A verification license supplied with the software will allow you to run the verification demo to confirm that you have installed the Dialogic® Host Media Processing Software Release 4.1LIN software properly. However, its

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features are limited and you may want to obtain another license. Refer to [Chapter 5, “License Administration”](#) for more information about obtaining licenses.

6. Install the Dialogic® Host Media Processing Software Release 4.1LIN software and start the verification license. Refer to [Section 3.3, “Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software”](#), on page 18.
7. Complete the post-installation described in [Chapter 4, “Post-Installation Requirements”](#).
8. Run the verification demo to verify proper installation of the Dialogic® Host Media Processing Software Release 4.1LIN software. Refer to [Section 4.3, “Running the Verification Demo”](#), on page 25.
9. Activate a Dialogic® software license. Refer to [Section 5.3, “Activating a Single License”](#), on page 30.

1.3 Dialogic® Software Licenses

Before you install the Dialogic® Host Media Processing Software Release 4.1LIN, you must obtain a license file containing Dialogic® software license data. A Dialogic® software license is a file containing authorizations for a combination of call control and media processing resources. You can obtain a license file from your authorized Dialogic distributor. The default verification license file is stored in the `/usr/dialogic/data` directory.

When using the Dialogic® Host Media Processing Software Release 4.1LIN software, the license can be locked to either Dialogic® DNI board, based on the board serial number, or the host. Locking the license to a board allows you to transfer the license to another host by moving the board to that host. If a Dialogic® DNI board is installed in the system, the license must be tied to the board.

Once you have installed the Dialogic® Host Media Processing Software Release 4.1LIN software and downloaded a license on your machine, you must activate the license. Dialogic® software licenses are configured and managed using the Command Line Interface (CLI) or SNMP. Both CLI and SNMP provide remote management capability. Refer to [Chapter 5, “License Administration”](#) for detailed information about obtaining and using license files.

You can try out the Dialogic® Host Media Processing Software Release 4.1LIN software with a verification, evaluation, or trial license before you purchase a permanent, production license from Dialogic. Refer to the License Types table in [Chapter 5, “License Administration”](#) for types of licenses available for use with the software.

This chapter provides requirements that need to be met prior to installing the Dialogic® Host Media Processing Software Release 4.1LIN software. This information is contained in the following sections:

- Hardware Requirements 11
- Operating System Requirements 11
- Supported Compilers 11
- Software Requirements 11
- Installing the Operating System 12
- Installing the Dialogic® Hardware 12
- Configuring the Network 13
- Testing the Required Operation of the Linux RTC Device 13

2.1 Hardware Requirements

Refer to the *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide* for a comprehensive list of basic hardware requirements.

2.2 Operating System Requirements

Refer to the *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide* for up-to-date details about operating system support.

2.3 Supported Compilers

Refer to the *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide* for supported compilers.

2.4 Software Requirements

The following software is required:

- Dialogic® Host Media Processing Software Release 4.1LIN software

Pre-Installation Requirements

- Dialogic® Host Media Processing Software License

Note: You must have a license prior to installing the software. To request a license for a board system, you need the board serial number of the Dialogic® DNI board. For a host-only system, you need the host MAC address. Refer to [Chapter 5, “License Administration”](#).

2.5 Installing the Operating System

Before installing the operating system, make sure there are no Dialogic® boards in the chassis.

1. Power on the system.
2. Disable SELinux (refer to [Section 1.1, “Terminology”](#), on page 9 for a description of SELinux).
3. **For Red Hat Enterprise Linux**, select the “default software packages” option to obtain the packages needed to run the Dialogic® Host Media Processing Software Release 4.1LIN software.

For SUSE Linux Enterprise Server, proceed as follows:

- 3a. Select the “default system” option in the “software selection” window. Then open the “detailed selection” to add a few packages needed to run Dialogic® Host Media Processing Software Release 4.1LIN software.

Note: The development package must be selected to get the compilers.

- 3b. Use the search filter and search for “gcc”, then select “gcc” and “gcc-c++” from the results window.
- 3c. Use the search filter and search for “kernel,” and then select “kernel-source” from the results window.
4. Configure the host interface eth0 (this will be asked during install and is ethX).
5. Disable firewall.

Installation of the operating system is now complete. Proceed to the [Installing the Dialogic® Hardware](#) section.

2.6 Installing the Dialogic® Hardware

Be sure to shut down the system before attempting to install the Dialogic® hardware. Proceed as follows:

1. If a Dialogic® Host Media Processing Interface (DNI) board will be used, first determine if the chassis requires that the power jumper on the board be set. Refer to the appropriate board installation guide.

2. Install the Dialogic[®] Host Media Processing Interface (DNI) board into the PCIe slot of the chassis according to the instructions found in the appropriate board installation guide.
3. Proceed to the [Configuring the Network](#) section.

2.7 Configuring the Network

Configure the network according to the following instructions:

1. Power on the system.
2. Log in as: root or a root-level access equivalent.
3. Check in /etc/hosts file the IP address of host interface name and IP address match.

For example:

```
127.0.0.1                localhost.localdomain  localhost
<ethX IP addr>         textbox.testdomain.com  textbox
```

4. Restart the network services using the command:

```
/etc/init.d/network restart
```
5. Verify the IP addresses using `ifconfig` command.

When all pre-installation requirements are completed, proceed to [Chapter 5, “License Administration”](#).

2.8 Testing the Required Operation of the Linux RTC Device

Dialogic[®] Host Media Processing Software Release 4.1LIN can derive its system clock signaling from several sources depending on the system configuration. In configurations that include Dialogic[®] DNI Board(s), the Dialogic[®] HMP 4.1LIN software will derive its system clocking from the on-board hardware. However, when no Dialogic[®] DNI Boards are present, the software will use Linux /dev/rtc device to derive its clock. The Linux kernel uses the RTC or HPET hardware on the motherboard to provide the clock for the /dev/rtc device.

The Dialogic[®] HMP software requires /dev/rtc device to provide the interrupt (IRQ) generation at 4096 Hz frequency. It has been observed on some dated system platforms that setting the IRQ frequency is limited to a maximum of 1024 Hz when the kernel has been configured with the default options.

Pre-Installation Requirements

The following steps are necessary to ensure that the platform's system clocking can support the Dialogic® HMP 4.1LIN software operational requirements. When performing these steps, the user must be running with root privileges:

1. After installing the Linux operating system with default kernel options, install the Dialogic® HMP Software Release 4.1LIN software.
2. Verify that the IRQ frequency can be set to 4096 Hz, and that corresponding interrupts are being generated by invoking the `rtc_irq_test` utility² located in `/usr/dialogic/bin`. Evoking the tool will result in one of the following messages logged to the system console:

```
RTC_IRQ_TEST: Test Passed
```

or

```
RTC_IRQ_TEST: Test Failed
```

If the test passes, then the default configuration supports setting the IRQ frequency to 4096 Hz, and no further action is required.

The `rtc_irq_test` utility is non-disruptive. It will save and restore the current IRQ frequency setting of the `/dev/rtc` device. The Dialogic® HMP 4.1LIN software will set the IRQ frequency to 4096 when the software is started using `dlstart` command.

3. If step 2 results in a test failure, then the IRQ frequency cannot be set or the IRQ interrupts are not being generated. In such cases, the default kernel clock source and timer mode must be changed in `grub` or `lilo` boot loader. The user must disable the use of the HPET timer using the kernel boot parameters.
4. To override the default options, perform the following instructions for changing the `grub` bootfile (for `lilo` refer to the kernel manual):

- 4a. Edit `/boot/grub/menu.lst` and append the **hpet=disable** parameter or the **nohpet** parameter at the end of the selected kernel entry. Specify **hpet=disable** on 32-bit Linux systems and **nohpet** on 64-bit Linux systems. Make sure the `default= <value>` field in the file corresponds to the selected kernel entry as shown:

```
default=0 /* This line indicates the selected kernel entry. The
value of zero refers to the first "title" entry in the file . */
```

For example, on a 32-bit Linux system, if `menu.lst` contains the two kernel entries shown below and `default=0`, then **hpet=disable** should be added to the first kernel entry in the file.

```
title Red Hat Enterprise Linux AS (2.6.9-55.ELsmp)
  root (hd0,0)
  kernel /vmlinuz-2.6.9-55.ELsmp ro root=LABEL=/ rhgb quiet
  hpet=disable
  initrd /initrd-2.6.9-55.ELsmp.img
title Red Hat Enterprise Linux AS-up (2.6.9-55.EL)
  root (hd0,0)
  kernel /vmlinuz-2.6.9-55.EL ro root=LABEL=/ rhgb quiet
  initrd /initrd-2.6.9-55.EL.img
```

- 4b. Reboot the system.

- 4c. To verify that the **hpet=disable** parameter or the **nohpet** parameter has been changed, run one of the following commands:

```
dmesg | grep hpet=disable
```

or

```
dmesg | grep nohpet
```

The kernel line is displayed with the option set.

After restarting the operating system, rerun the `rtc_irq_test` utility. The tool should run successfully with “RTC_IRQ_TEST: Test Passed” displayed. If the tool fails, contact Dialogic Support Services for further assistance.

Note: The `rtc_irq_test` utility is non-disruptive and will not result in any kernel parameter change after execution. To get more information about the test results, run the tool using the `-v` (verbose) option.

When the Dialogic® HMP 4.LIN software is operating in HPET disable mode (RTC), some platforms have generated the “**rtc: lost some interrupts at 4096Hz**” message periodically. This message/condition has not shown to cause any detrimental system behavior.

Pre-Installation Requirements

This chapter provides procedures for installing the Dialogic® Host Media Processing Software Release 4.1LIN software including Service Updates. This information is contained in the following sections:

- [Assumptions and Prerequisites](#) 17
- [Order of Procedures](#) 18
- [Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software](#) . 18
- [Performing a Silent Install](#) 21

3.1 Assumptions and Prerequisites

The following are basic requirements to install and run the Dialogic® Host Media Processing Software Release 4.1LIN software including Service Updates:

- The appropriate version of Linux must be installed and the system must meet all the hardware and software “System Requirements” as described in the [Chapter 2, “Pre-Installation Requirements”](#).
Note: To install the software, you must have local administrative privileges. Contact your network administrator to set up administrative privileges as required.
- Complete the post-installation requirements found in [Chapter 4, “Post-Installation Requirements”](#) before starting Dialogic® Services.
- If you have any Dialogic® System Releases including a previous Service Update for Dialogic® Host Media Processing Software Release 4.1LIN on your machine, you must uninstall it. Follow the uninstall procedure in [Chapter 6, “Uninstalling the Software”](#).

Dialogic® Host Media Processing Software Release 4.1LIN software has three install scripts:

- One in the redistributable-runtime directory, which installs runtime components. This script does not contain header files. Use this script to install precompiled Dialogic® applications.
- One in the sdk directory, which installs header files for application development. Run this script to install the software required to compile Dialogic® applications.
- One at the top level which installs both runtime components as well as header files. Run this script to install the software required to compile and run your applications on the same computer system.

Note: For purposes of this document, only the top level install is explained which shows both the redistributable-runtime install and the SDK install.

The name of the install script for each level is `install.sh`.

3.2 Order of Procedures

This section describes the order in which the installation procedures must be performed.

Before you use the Dialogic® Host Media Processing Software Release 4.1LIN software, you must obtain a license file containing license data **before** you install the software. For more information, refer to [Chapter 5, “License Administration”](#).

If you wish to automate the software installation or integrate it into another setup program, follow the procedures in [Section 3.4, “Performing a Silent Install”](#), on page 21.

The basic order of the installation process is as follows:

1. Complete the pre-installation requirements described in [Chapter 2, “Pre-Installation Requirements”](#).
2. Install the Dialogic® Host Media Processing Software Release 4.1LIN software as described in [Section 3.3, “Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software”](#), on page 18.
3. Complete the post-installation requirements described in [Chapter 4, “Post-Installation Requirements”](#).
4. Manually start Dialogic® Services using the `dlstart` command.
The system is in manual start mode by default. Therefore, the user must manually log into the CLI and start Dialogic® Media Services after running `dlstart`. Refer to [Section 4.2.1, “dlstart in Manual Mode”](#), on page 24 for more details.
5. Run the verification demo to verify proper installation of the Dialogic® Host Media Processing Software Release 4.1LIN software. Refer to [Section 4.3, “Running the Verification Demo”](#), on page 25.

3.3 Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software

The Dialogic® Host Media Processing Software Release 4.1LIN software can be downloaded from the <http://www.dialogic.com/support/helpweb/dxall/> website. When you select this link, you will be asked to either LOGIN or JOIN.

After downloading the software, use the following procedure to install Dialogic® Host Media Processing Software Release 4.1LIN software. If a silent installation is desired, refer to [Section 3.4, “Performing a Silent Install”](#), on page 21:

1. Log in to the Linux system as root.
2. Copy the `.tgz` file downloaded from the website to its own directory and use the `tar` command to uncompress it.

```
tar -xvzf <filename>.tgz
```

3. Enter the following command to start the install script:

```
./install.sh
```

Messages similar to the following are displayed:

```
Installing Dialogic(r) HMP Software Release 4.1LIN
Redistributable Runtime
Please wait, installation is in progress...

Initializing install, please wait .....

=====
                    Dialogic(R) HMP Software Release 4.1LIN
                        Redistributable Runtime
                            INSTALLATION

You will now have the opportunity to install software packages.
After the menu is displayed, enter the package number(s) of the desired
packages, separated by a space. Enter A for all packages, Q to quit.

Package dependencies will be automatically resolved during installation. For example,
selecting a single package will automatically install all packages required for that
selection.
```

4. After entering the `./install.sh` command, if the install detects HPET, the following warning message is displayed:

```
WARNING: Detected that HPET is used as time source
WARNING: HPET may be enabled. It is recommended to disable the HPET
when running HMP.
WARNING:
```

At the end of the install process, and if HPET was not detected, the RTC IRQ test is executed. If the RTC IRQ test fails, this warning message is displayed prior to the “NOTE” script:

```
WARNING:
WARNING: RTC IRQ test failed, The HPET may be enabled.
WARNING: It is recommended to disable the HPET when running HMP
WARNING: Please see HMP Software Installation Guide for more
information.
```

5. Press **Enter** to display the menu of packages.

```
Item   Package Description
-----
 1     Dialogic(r) Host Media Processing Software Release 4.1LIN (176 MB)
 2     Dialogic(r) DNI Boards & HMP Software (229 MB)

A      Install All (229 MB)
Q      Quit Installation
```

Enter the packages you want to install, separated by a space, or [A,a,Q,q]:

6. Enter the packages you want to install, separated by a space, or [A,a,Q,q]: A

```
Package installation order (including dependencies):
lsb-dialogic-hmp41-com
lsb-dialogic-hmp41-dmdev
lsb-dialogic-hmp41-hmp
lsb-dialogic-hmp41-tle1
lsb-dialogic-hmp41-lic
lsb-dialogic-hmp41-docs
```

Note: Verification licensing is automatically installed when Item 1, Item 2, or Item A is selected.

Installing the Software

```
Checking for previously installed packages:
  None found.

Checking for sufficient disk space (need 229 MB): OK
After installation, the filesystem containing the Dialogic(r) Software will be 46% full.

Installing or upgrading 6 needed packages:

Preparing... ##### [100%]
 1:lsb-dialogic-hmp41-docs ##### [ 17%]
 2:lsb-dialogic-hmp41-com ##### [ 33%]
Building the drivers...
 3:lsb-dialogic-hmp41-dmdev ##### [ 50%]
 4:lsb-dialogic-hmp41-hmp ##### [ 67%]
 5:lsb-dialogic-hmp41-tle1 ##### [ 83%]
Building the ctimod and mercd drivers...
 6:lsb-dialogic-hmp41-lic ##### [100%]
Installation successful.
```

7. Press **Enter** to continue.

```
Item      Package Description
-----
 1      Dialogic(r) Host Media Processing Software Release 4.1LIN (176 MB)
 2      Dialogic(r) DNI Boards & HMP Software (229 MB)

A      Install All (229 MB)
Q      Quit Installation
Enter the packages you want to install, separated by a space, or [A,a,Q,q]:
```

8. If you have finished selecting packages, enter **q** to quit and complete the installation process. The following messages are displayed:

```
Installation of Dialogic(r) HMP Software Release 4.1LIN Redistributable Runtime was
successful.

Do you wish to install the Software Development Kit [y/n] ?
```

9. If applicable, enter **y** to install the Software Development Kit.

```
Installing Dialogic(r) Host Media Processing Software Release 4.1LIN Software Development
Kit

Preparing... ##### [100%]
 1:lsb-dialogic-hmp41-sdk ##### [100%]
Installation successful.

Do you wish to configure the SNMP Agent Listening Port (default is 161) [y/n] ?
```

10. If applicable, configure the SNMP Agent Listening Port. For more information, refer to the *Dialogic® Host Media Processing Software Configuration Guide*.

```
Do you wish to configure the CLI Agent Telnet Port (default is 161) [y/n] ?
```

11. If applicable, configure the CLI Agent Telnet Port. For more information, refer to the *Dialogic® Host Media Processing Software Configuration Guide*.

```
Do you wish to configure the CLI Agent Telnet Port (default is 23) [y/n]
```

12. Selecting **n** at these prompts completes the installation process. Messages similar to the following are displayed:

```
Installation of HMP Software Release 4.1LIN Software Development Kit successfully
completed.

Execution of startup script tvl2_startup completed.

-----
--
-- NOTE:                                     --
```

```

-- (1) The default Verification License has been automatically installed. --
-- (2) The Dialogic(r) system services will automatically start --
-- every time the system is rebooted. To start and stop system --
-- services manually, use the dlstop and dlstart scripts found in --
-- /usr/dialogic/bin. --
-- (3) For administration via SNMP, use any SNMP browser, library or tools --
-- (4) For administration via CLI, use the telnet command --
-- (5) For details, refer to documentation --
--
-- NEXT STEPS: --
-- (1) Before using the software, you MUST do one of the following: --
-- a) Reboot the system. -- OR --
-- b) Do the following: --
-- (i) Ensure that the environment variables are set by performing --
-- the following action: --
-- - Logout and login --
-- (ii) Start the Dialogic(R) system services manually using the --
-- dlstart script found in /usr/dialogic/bin. --
-- (2) Configure an appropriate license (higher density) via SNMP or CLI --
-- (3) If you are using PSTN, refer documentation on how to configure --
-- PSTN via SNMP or CLI --
--
-----

```

After installing the Dialogic Host Media Processing Software Release 4.1LIN Software Development Kit software, it is recommended that you reboot the system.

Alternatively, you can log out and then log in as root.

In addition, you must set the environment variables after installing the software. To set the environment variables, enter the following command:

```
source /etc/profile.d/ct_intel.sh
```

After installation, you must install the E1000 Ethernet Driver before starting Dialogic® Services. Install the driver according to the instructions in [Chapter 4, “Post-Installation Requirements”](#).

3.4 Performing a Silent Install

A silent installation is recommended when no user interaction is intended. It allows you to predefine the answers that you would normally supply to the setup program interactively.

Before you begin a silent install, you must meet the prerequisites given in [Section 3.1, “Assumptions and Prerequisites”](#), on page 17. The silent install can only be used with install.sh in the redistributable-runtime directory or with the install.sh in the sdk directory. The silent install for the sdk can be run by simply entering the following command from the sdk directory. (Note that no output is printed.)

```
./install.sh -silent
```

Use the following procedure to run the silent install for the redistributable-runtime:

1. Follow steps 1 through 2 in [Section 3.3, “Installing the Dialogic® Host Media Processing Software Release 4.1LIN Software”](#), on page 18.

Installing the Software

2. Display a list of the package names that can be silently installed by entering the following command from the redistributable-runtime directory:

```
./install.sh -silent
```

The following messages are displayed:

```
[root@sut-902 redistributable-runtime]# ./install.sh --silent
Usage: ./install.sh --silent <PKG1> <PKG2> ... <PKGn>
Initializing install, please wait .....
Valid package selections are:
Package Name  Package Description
-----
lsb-dialogic-hmp41-hmp  Dialogic(r) Host Media Processing Software (176 MB)
lsb-dialogic-hmp41-t1e1  Dialogic(r) DNI Boards & HMP Software (229 MB)
ALL                All available packages (229 MB)

./install.sh --silent lsb-dialogic-hmp41-t1e1
or
./install.sh --silent ALL
```

3. Enter the silent install command with the packages you want to install. For example, if you want to install the Dialogic[®] Host Media Processing Software Release 4.1LIN software and the Dialogic[®] DNI boards, use the following command:

```
./install.sh -silent lsb-dialogic-hmp41-t1e1
```

or

```
./install.sh -silent ALL
```

4. After installing the Dialogic[®] Host Media Processing Software Release 4.1LIN software, it is not necessary to reboot the system. However, you must set the environment variables after installing the software. To set the environment variables, enter:

```
source /etc/profile.d/ct_intel.sh
```

or, alternatively log out and then log in.

Note: It is recommended that you run the verification demo to verify that you have set up the Dialogic[®] Host Media Processing Software Release 4.1LIN software properly. Refer to [Section 4.3, “Running the Verification Demo”](#), on page 25, for details.

5. Activate a software license file as described in [Section 5.3, “Activating a Single License”](#), on page 30.

Note: A verification license is installed with the Dialogic[®] Host Media Processing Software Release 4.1LIN software. This license is intended to be used for verifying that the installation was successful. To fully utilize the Dialogic[®] Host Media Processing Software Release 4.1LIN software, you **must** obtain and activate a license. Refer to [Chapter 5, “License Administration”](#) for details. Once the new license is activated, you must start Dialogic[®] Services in order to use it.

This chapter provides the requirements that need to be met after installing the Dialogic® Host Media Processing Software Release 4.1LIN software. This information is contained in the following sections:

- [Tuning System Performance](#) 23
- [Starting Dialogic® Services](#) 23
- [Running the Verification Demo](#)..... 25

Refer to the *Dialogic® Host Media Processing Software Release 4.1LIN Release Guide* for more information.

4.1 Tuning System Performance

For information on tuning system performance, refer to the chapter on this topic in the *Dialogic® Host Media Processing Software Configuration Guide*. That chapter provides recommendations for those who choose to enhance system performance. This chapter includes such topics as optimizing NIC driver settings, and disabling driver status messages.

4.2 Starting Dialogic® Services

After you install the Dialogic® Host Media Processing Software Release 4.1LIN software, you must first run `dlstart` to start the Dialogic® Host Media Processing Software Release 4.1LIN software configuration tools. This allows you to access the CLI in order to configure the system, to change the start mode, or to start services completely.

- Notes:**
1. Before you use the Dialogic® Host Media Processing Software Release 4.1LIN you **must** obtain and activate a license. Refer to [Chapter 5, “License Administration”](#) for details.
 2. Dialogic® Services will not automatically start any time you reboot your system unless you set the system to auto start mode. See [Section 4.2.2, “Auto Start Mode”](#), on page 24 for instructions.

After this initial start, you may again need to stop or start Dialogic® Services. If you need to do this, it is recommended that you use the `ipmedia start` and `ipmedia stop` commands, rather than the `dlstart` and `dlstop` commands. The `dlstart/dlstop` commands are operating system-level commands, and `ipmedia start/stop` are CLI commands.

The `dlstart` command starts all the Dialogic® Services, including OAM services, and also starts, initializes, and downloads Dialogic® Host Media Processing Software Release 4.1LIN software and any applicable boards. The `ipmedia start` command is a subset and only starts, initializes, downloads Dialogic Host Media Processing Software Release 4.1LIN software and any applicable Dialogic boards.

Post-Installation Requirements

The `dlstop` command will stop the SNMP and CLI agents in addition to services. As a result, the user has no way to configure the Dialogic[®] software (to change licenses, etc.) because the ability to telnet into the CLI or run an SNMP MIB browser to configure through SNMP is not available.

The `ipmedia start` and `ipmedia stop` commands are preferable when starting and stopping Dialogic[®] Media Services. The advantage being that `ipmedia start/stop` is faster than `dlstart/dlstop` because it does not start and stop all services.

To start and stop Dialogic[®] Media Services, use the following commands at the CLI prompt:

```
CLI> conf system ipmedia start
CLI> conf system ipmedia stop
```

4.2.1 dlstart in Manual Mode

Proceed as follows to start Dialogic[®] Services using `dlstart` in manual mode. Log in as root and use the following command:

```
dlstart
```

The following messages are displayed:

```
STARTING DIALOGIC SERVICES...

Starting RTF Logging Server:      [ OK ]
Starting Device Mapper :         [ OK ]
Starting Timeslot Doler :        [ OK ]
Starting Telephony System Monitor : [ OK ]
Starting ssp_x86linux_boot:      [ OK ]
Starting Board Manager Service :  [ OK ]
Starting SNMP Agent Service :     [ OK ]
Starting CLI Agent Service :      [ OK ]
Starting WEB Agent Service :      [ OK ]

STARTING DIALOGIC MEDIA
.

Dialogic Media is ready to configure

STARTING DIALOGIC SERVICES COMPLETE.
```

Note: To start Dialogic[®] Media Services, access the CLI and run the following command at the CLI prompt:

```
CLI> conf system ipmedia start
```

4.2.2 Auto Start Mode

By default, `dlstart` is set to manual mode. To enable auto mode, proceed as follows:

1. At the CLI prompt, enter:

```
# telnet localhost
```

The system responds:

```
Trying 127.0.0.1...
Connected to localhost.localdomain (127.0.0.1).
Escape character is '^]'.
```



```

+-----+
| .....|
| :::   Dialogic(R) Host Media Processing Software Release 4.1LIN   ::: |
| .....|
|
| For HELP:
| Use '?' at command prompt
| Use '-h' within commands
|
+-----+
Login :

```

2. Log in as admin. The default admin password is “admin”.

3. Enter the command:

```
CLI>conf system ipmedia start-mode auto
```

The system responds:

```

updated
CLI>
EVENT-- SYSTEM Start Mode [Auto]
-----

```

4. Proceed to [Running the Verification Demo](#) to verify that the Dialogic® Host Media Processing Software Release 4.1LIN software has been set up properly.

Note: A verification license is installed with the Dialogic® Host Media Processing Software Release 4.1LIN software. This license is intended to be used for verifying that the installation was successful. To fully utilize the Dialogic® Host Media Processing Software Release 4.1LIN software, you **must** obtain and activate a license. Refer to [Chapter 5, “License Administration”](#) for details.

4.3 Running the Verification Demo

It is recommended that you run the verification demo to verify that you have set up the Dialogic® Host Media Processing Software Release 4.1LIN software properly. This demo simply receives an IP call to let you know that the installation and configuration were successful.

To run the verification demo, perform the following:

1. If you have not already done so, start the Dialogic® Services.
2. Change to the directory containing the verification demo or set it as the working directory:
/usr/dialogic/demos/Verification/VerificationDemo/Release.
3. Run the demo using the `VerificationDemo` executable. When you run the demo, you will see output similar to the following:

```

Welcome to the HMP Demonstration Program

The purpose of this demo is to establish a basic level
of functionality after installing and configuring the
Dialogic(R) Host Media Processing Software.
This application will perform some sanity checking and
then wait for a Voice Over Internet Protocol (VOIP) call
to be placed into the system using a SIP or H.323 VOIP
phone configured to use the G.711 codec. After connecting
a message prompt will be played out to the calling party.

```

Post-Installation Requirements

```
Press ENTER to continue.....

Checking that the HMP service is running.....
Getting the host IP address.....
Opening Prompt File.....
Opening Voice Device.....
Opening Global Call IP Device.....
Starting the Global Call subsystem.....

The system is initialized and ready for a call.
Place a SIP or H.323 call to the IP address of this machine.
on this system: |          |          |          \-- <ipmB1C1>
The call will be answered automatically and a welcome
message prompt will be played. Event and call
processing messages will be displayed as the call
is answered and the prompt plays. If the call is
immediately disconnected, check the settings on your
phone and make sure that G.711 is the selected codec.
Press Q at any time to quit this demo .....

Normal ResetLine Event on iptB1T1
Waiting for Incoming Call on iptB1T1
```

If you need to restart Dialogic® Services, refer to [Section 4.2, “Starting Dialogic® Services”](#), on page 23.

A license file contains a combination of call control and media processing resources.

Once you have installed the Dialogic® Host Media Processing Software Release 4.1LIN, you must activate the license on the target system using either SNMP or CLI. Remote management capability is also available using SNMP or CLI. CLI can be accessed by using telnet. On the local machine, use `telnet localhost` or from a remote machine, use `telnet <server_ip>`. For more details about using SNMP or CLI, refer to the *Dialogic® Host Media Processing Software Configuration Guide*.

The following are the common administrative tasks performed for Licensing.

Obtaining a License

You need to decide which type of license you want and get it. This chapter describes the various types of licenses and how to get each type.

Configuring the System

Once you have obtained a license, you must activate it using either SNMP or CLI.

Starting Dialogic® Services

After you install the Dialogic® Host Media Processing Software Release 4.1LIN, you start the Dialogic® Services as described in [Section 4.2, “Starting Dialogic® Services”](#), on page 23.

After that, any time you reboot your system, Dialogic® services will be automatically started. However, if you need to manually stop and start the services, you can use the procedure in that section.

5.1 Obtaining a License

This section describes the types of licenses available for Dialogic® Host Media Processing Software Release 4.1LIN and how to get them.

Licenses can be obtained from your authorized Dialogic distributor. For board-based licenses, be prepared to enter the Serial Number of the board to which you want to lock the license. For OEM licenses, contact your vendor for details. Refer to [Section 7.3, “Determining the Dialogic® DNI Board Serial Number”](#), on page 40.

Before you obtain a license, you must understand the types of licenses available and decide which type of license you want to obtain. You can try out the Dialogic® Host Media Processing Software Release 4.1LIN with a verification, or trial license before you purchase a permanent, production license. Table 1 shows the types of licenses available for use with Dialogic HMP Software, where to get each type of license, and whether you need to supply a Board Serial Number.

License Administration

Table 1. License Types

License Type	Features	Expires?	Where to get license?	Board Serial Number required?
Verification (free)	1 channel for RTP and Voice	no	included with Software ¹	no
Trial (free)	any supported channel component combination	expires in 45 days	Dialogic authorized distributor ²	yes - depending on your system, supply the Dialogic® DNI Board Serial Number or the host MAC address when ordering
Purchased	any supported channel component combination	no	Dialogic authorized distributor ²	yes - depending on your system, supply the Dialogic® DNI Board Serial Number or the host MAC address when ordering

1. A verification license is installed with the Dialogic® Host Media Processing Software Release 4.1LIN, activated and ready to use, but this license is only intended to be used for verifying that the Dialogic® Host Media Processing Software Release 4.1LIN installation was successful (see [Running the Verification Demo](#)).

2. For a list of authorized distributors, go to:www.dialogic.com.

The names of the license files identify the license type, license mechanism, included resources, and quantity of resources.

Table 2. License Type Abbreviations

License Type	Abbreviation
Purchased	pur
Trial	tri
Verification	ver

5.1.1 Using the Verification License

A verification license is installed with the Dialogic® Host Media Processing Software Release 4.1LIN, activated and ready to use, but this license is only intended to be used for verifying that the software installation was successful. Verification consists of running a demo. This is described in [Section 4.3, “Running the Verification Demo”](#), on page 25.

5.1.2 Obtaining a Trial or Purchased License

If you want to obtain one of these licenses, you must provide a Board Serial Number to your Dialogic authorized distributor when you request them. Refer to [Section 7.3, “Determining the Dialogic® DNI Board Serial Number”](#), on page 40.

Here is a description of each of these licenses:

Trial License

A trial license is free, and expires after a specified time period (see Table 1), and will allow you to try out the Dialogic® Host Media Processing Software Release 4.1LIN before you purchase a license. Because the trial license can be customized, you will need to request this license from a Dialogic authorized distributor and supply a Board Serial Number.

Purchased License

You can request any supported resource component combination and this license does not expire. You must request this license from a Dialogic authorized distributor and supply a Board Serial Number.

Now that you have obtained a license file, you must activate it. Refer to [Section 5.2, “Configuring the System”](#), on page 29.

5.1.3 Upgrading a License

You can request a new license file with additional resources for configuration features. The result is two or more license files that can be combined together to form the desired amount of features. Contact the Dialogic authorized distributor from whom you requested the original license.

5.2 Configuring the System

Configuring the system consists of activating a Dialogic® Host Media Processing Software Release 4.1LIN license. You can activate the verification license supplied with the software or another license you have obtained. Either SNMP or CLI can be used to activate a license. For more information about SNMP and CLI, and other system configuration details, see the *Dialogic® Host Media Processing Software Configuration Guide*.

To begin, you must be logged in to the CLI as administrator. The administrator user name is “root” and the default password is “public”. CLI can be accessed by using telnet on the local machine (telnet localhost) or from a remote machine (telnet <server_ip>).

1. At the CLI prompt, enter the following command to stop services:

```
CLI> conf system ipmedia stop

updated- This action can take a few minutes to complete. Please wait
CLI>
EVENT--SYSTEM Run State [Shutdown]

CLI>
EVENT--SYSTEM Run State [Inactive]

CLI>
EVENT--SYSTEM [not ready]
```

License Administration

```
CLI>
IPMedia stop complete

CLI>
```

2. At the prompt, enter

```
# telnet localhost
```

The following messages are displayed:

```
Trying 127.0.0.1...
Connected to localhost.localdomain (127.0.0.1).
Escape character is '^]'.
+-----+
| .....|
| Dialogic(R) Host Media processing Software Release 4.1LIN |
| `.....' |
| |
| For HELP: |
| Use '?' at command prompt |
| Use '-h' within commands |
+-----+

Login :root
Password :*****

CLI>
```

3. Configure the license directory for later activation by entering

```
CLI> conf license directory <Directory path where license file(s) reside>
```

Example: CLI> conf license directory /dialogic/licenses

At this point, you may configure other settings such as the media address or automatic setup. For more information, see the *Dialogic® Host Media Processing Software Configuration Guide*.

5.3 Activating a Single License

This section provides single license activation procedures. Dialogic® Services must be stopped before activating a license.

1. At the CLI prompt, enter the following command to stop services:

```
CLI> conf system ipmedia stop

updated- This action can take a few minutes to complete. Please wait
CLI>
EVENT--SYSTEM Run State [Shutdown]

CLI>
EVENT--SYSTEM Run State [Inactive]

CLI>
EVENT--SYSTEM [not ready]

CLI>
IPMedia stop complete

CLI>
```

2. Enter the `conf license activate` command and specify the license file name. For example:

```
CLI> conf license activate
xxx.lic

CLI>
```

Configuring a license file from the CLI involves the license file validation. It may take a few seconds to complete. Upon successful completion, a message similar to the following is displayed:

```
CLI>License verification is in progress. Please wait
updated - will be effective on the next ipmedia start"
```

In case of an invalid license, the following error message is displayed:

```
"License activation failed. Reverted to last selected license"
```

To view the current selected license file name, enter the command:

```
CLI> show license
```

3. Enter the following command to start media services:

```
CLI> conf system ipmedia start

updated- This action can take a few minutes to complete. Please wait
CLI>
EVENT--SYSTEM Run State [Initializing]

CLI>
EVENT--SYSTEM Run State [Active]

CLI>
EVENT--SYSTEM [ready]

CLI>
IPMedia start complete

CLI>
```

4. Exit the CLI using the `logout` command or open another terminal and use your new license.

5.4 Activating a License File Directory

This section provides license activation procedures for more than one license file found under a directory. Dialogic® Services must be stopped before activating a license.

1. At the CLI prompt, enter the following command to stop services:

```
CLI> conf system ipmedia stop
updated- This action can take a few minutes to complete. Please wait
CLI>
EVENT--SYSTEM Run State [Shutdown]

CLI>
EVENT--SYSTEM Run State [Inactive]

CLI>
EVENT--SYSTEM [not ready]

CLI>
IPMedia stop complete

CLI>
```

License Administration

2. At the CLI prompt, enter the following command to choose the license directory:

```
CLI> conf license directory /download/dialogic/license/updated
```

3. At the CLI prompt, enter the following command to show the license files:

```
CLI> show license
Selected License: /usr/dialogic/data/1r1v0e0c0s0fli_ver.lic
  License Type:      Verification
  License Category:  Node locked specific
  License Seed:      3000000000000
  Expiration Date:   permanent
  License Options:   RTP_G_711 1, Voice 1, IP_Call_Control 1,
OEM License
  Function:
  Library:
License Directory:  /download/dialogic/license/
  File Name:        30r30v30c30i_pur.lic
  License Type:      Purchased
  License Category:  Node locked specific
  Expiration Date:   permanent
  License Options:   RTP_G_711 30, Voice 30, Conferencing 30,
IP_Call_Control 30,
  File Name:        20r20v20c20i_pur.lic
  License Type:      Purchased
  License Category:  Node locked heb
  Expiration Date:   permanent
  License Options:   RTP_G_711 20, Voice 20, Conferencing 20,
IP_Call_Control 20,
  File Name:        ALL
  License Type:      Purchased
  License Category:  Node locked heb
  Expiration Date:   permanent
  License Options:   RTP_G_711 50, Voice 50, Conferencing 50,
IP_Call_Control 50, (estimated)
HMP and HMP Interface Boards
  Serial Number:    LK333333
  Description:      Host Media Processor
```

Note: See the special license file named “ALL”. This special license file enables you to choose all license files found in the current license directory. The sum of all features found is used. The “ALL” file name will only appear if all license files are of the same category and are all purchased files. Also, the license files must be HMP 4.1 LIN Software license files.

4. At the CLI prompt, enter the following command to activate all license files found in the license directory. For example:

```
CLI> conf license activate ALL
```

Configuring a license file from the CLI involves the license file validation. It may take a few seconds to complete. Upon successful completion, a message similar to the following is displayed:

```
CLI>License verification is in progress. Please wait
updated - will be effective on the next ipmedia start
```

In case of an invalid license, the following error message is displayed:

```
License activation failed. Reverted to last selected license
```

To view the current selected license file name, enter the command:

```
CLI> show license
```

5. Enter the following command to start media services:

```
CLI> conf system ipmedia start
updated- This action can take a few minutes to complete. Please wait
```

```
CLI>
```

```
EVENT--SYSTEM Run State [Initializing]
```

```
CLI>
```

```
EVENT--SYSTEM Run State [Active]
```

```
CLI>
```

```
EVENT--SYSTEM [ready]
```

```
CLI>
```

```
IPMedia start complete
```

```
CLI>
```

6. Exit the CLI using the logout command or open another terminal and use your new license.

License Administration

This chapter describes how to uninstall the Dialogic® Host Media Processing Software Release 4.1LIN software.

It is good practice to create a backup directory to save your configuration data before uninstalling the software. From the root, create a backup directory by entering the command `mkdir /backup`. Go to the `/usr/dialogic/data` directory (the default directory for license files) or whatever directory contains your license files. Using the copy command, `cp`, copy all instances of the active license file (with all extensions: `.lic`, `.pcd`, `.fcd`, `.config`) to the backup directory.

Note: Before uninstalling the software, close all telephony applications that are currently running in the system and stop the Dialogic® Services.

Follow these instructions to uninstall the software:

1. To stop Dialogic® Services, enter the following command at the prompt:

```
dlstop
```

You will see several screen messages scrolling. The services have successfully stopped when the prompt returns.

2. To uninstall the Dialogic® Host Media Processing Software Release 4.1LIN software, enter the following command at the prompt:

```
dlguninstall.sh
```

The message below is displayed:

```
=====
Dialogic(r) HMP Software Release 4.1LIN
UNINSTALL

Before you uninstall the software, you may wish to save certain configuration files that
you have modified based upon the configuration of your system.

If you wish to save these configuration files, answer Y at the prompt below to quit the
uninstall. You may then manually back up any files located under /usr/dialogic.

Once this has been done, re-run this script to uninstall the software.

Quit the uninstall and back up your configuration files now [y/n] ?
```

3. Enter **y**, to stop the uninstall process and to back up data, or enter **n** to continue. If you enter **n**, the following messages are displayed:

```
The Dialogic(r) Software will now be uninstalled.

Stopping Dialogic(r) software ...Successful
lsb-dialogic-hmp41-com... successfully removed lsb-dialogic-hmp41-com
lsb-dialogic-hmp41-dmdev... successfully removed lsb-dialogic-hmp41-dmdev
lsb-dialogic-hmp41-docs... successfully removed lsb-dialogic-hmp41-docs
lsb-dialogic-hmp41-hmp... successfully removed lsb-dialogic-hmp41-hmp
lsb-dialogic-hmp41-lic... successfully removed lsb-dialogic-hmp41-lic
lsb-dialogic-hmp41-tle1... successfully removed lsb-dialogic-hmp41-tle1
```

Uninstalling the Software

To complete the removal of the Dialogic(r) software, the following action is required:

- Logout and login

NOTE: A reboot is not required to complete the uninstall process.

4. After uninstalling the Dialogic® Host Media Processing Software Release 4.1LIN software, it is not necessary to reboot the system. However, you must log out and then log in to restore the environment settings.

This chapter provides the following information about troubleshooting problems encountered when installing the Dialogic® Host Media Processing Software Release 4.1LIN:

- [Checking the Installation](#) 37
- [Understanding the Install Error Messages](#) 38
- [Determining the Dialogic® DNI Board Serial Number](#) 40

7.1 Checking the Installation

After the Dialogic® Host Media Processing Software Release 4.1LIN software has been installed as described in [Chapter 3, “Installing the Software”](#), you can enter the following commands to confirm what has been installed:

1. To check which packages were installed, enter:

```
rpm -qa lsb-dialogic-hmp41-\*
```

The names of the installed packages are listed.

See [Table 1](#) for the software packages that are installed for each menu selection, and see [Table 2](#) for a description of each package.

2. To list the contents of the `/usr/dialogic` directory, enter:

```
ls /usr/dialogic
```

See [Table 3](#) for a description of the directories under `/usr/dialogic`.

Table 1. Software Packages Installed

Menu Selection	Packages Installed
Dialogic® Host Media Processing Software Release 4.1LIN Software	lsb-dialogic-hmp41-com, lsb-dialogic-hmp41-dmdev, lsb-dialogic-hmp41-hmp, lsb-dialogic-hmp41-lic
Dialogic® DNI Boards & Dialogic® HMP Software	lsb-dialogic-hmp41-com, lsb-dialogic-hmp41-dmdev, lsb-dialogic-hmp41-hmp, lsb-dialogic-hmp41-t1e1, lsb-dialogic-hmp41-lic
Install All	lsb-dialogic-hmp41-com, lsb-dialogic-hmp41-dmdev, lsb-dialogic-hmp41-hmp, lsb-dialogic-hmp41-t1e1, lsb-dialogic-hmp41-lic
See Table 2 for a description of each package.	

Table 2. Software Package Descriptions

Package Name	Package Description
lsb-dialogic-hmp41-com	Core Host Software for Linux
lsb-dialogic-hmp41-dmdev	Dialogic® DM3 Architecture Development Software
lsb-dialogic-hmp41-hmp	Dialogic® Host Media Processing Software Release 4.1LIN
lsb-dialogic-hmp41-t1e1	Dialogic® HMP Interface (DNI) Boards
lsb-dialogic-hmp41-lic	Licensing software
lsb-dialogic-hmp41-sdk	Dialogic® Software Development Kit

Table 3. File Locations under /usr/dialogic

Directory	Contents
bin	All Dialogic® executables
cfg	Configuration related files that can be viewed and modified by users. (Some configuration files are also in the <i>data</i> directory.)
data	Contains <i>.pcd</i> , <i>.fcd</i> , and <i>.config</i> files. The data directory typically contains <i>.lic</i> files.
demos	Demonstration programs (in separate subdirectories according to the feature)
docs	Documentation
drivers	Drivers
inc	Header files (symbolically linked into <i>/usr/include</i>) - exists only when SDK is installed
init.d	System startup scripts
lib	Library files (symbolically linked into <i>/usr/lib</i>)
log	Log files that should be checked by users
qscript	QScript tools. These tools are described in the <i>Diagnostic Guide</i> .
sctools	Files for SCbus routing convenience functions

7.2 Understanding the Install Error Messages

This section describes the error messages that can appear during installation. For convenience, the error messages have been grouped as follows:

- [Installation Prerequisites \(OS, Kernel, Disk Space\)](#)
- [Packages and Package Managers](#)

Installation Prerequisites (OS, Kernel, Disk Space)

Following is a list of error messages and what must be done to correct the error condition. The error is in bold type and an explanation follows it:

This program requires you to be a Superuser.

Log in as root and re-run the install.

This software requires a kernel upgrade. The current kernel version is [VERSION]. Please upgrade the kernel to at least version [SUPPORTED_KERNEL].

Upgrade to the requested kernel and rerun the install.

The current kernel version [VERSION] is later than the version currently supported by this software [SUPPORTED_KERNEL].

Install the supported kernel and rerun the install.

Insufficient free disk space is available on the file system containing [DLGCROOT] to install the selected software. Need 1 MB, but only have [SPACE_AVAILABLE] MB.

You must free up at least 1 MB of disk space before installing the Dialogic[®] Host Media Processing Software Release 4.1LIN software.

ERROR: check_diskspace_dlgcroot_filesystem(): number of bytes must be > 0

You must free up disk space before installing the Dialogic[®] Host Media Processing Software Release 4.1LIN software.

Unable to determine the specific distribution of Linux you are running.

Make sure you are running the distribution of Linux specified in the *Dialogic[®] Host Media Processing Software Release 4.1LIN Release Guide*.

Distributions from [OS DISTRIBUTOR] are not supported.

Make sure you are running the distribution of Linux specified in the *Dialogic[®] Host Media Processing Software Release 4.1LIN Release Guide*.

[OS DESCRIPTION] is not supported.

Make sure you are running the distribution of Linux specified in the *Dialogic[®] Host Media Processing Software Release 4.1LIN Release Guide*.

Unable to determine the OS version

Make sure you are running the distribution of Linux specified in the *Dialogic[®] Host Media Processing Software Release 4.1LIN Release Guide*.

Packages and Package Managers

The following list contains error messages, in bold type, and appropriate actions, if needed.

You have selected an invalid package.

Review the list of packages again (in the install menu) and make sure you select one or more of the packages shown in the menu.

[PKGNUM] is obsolete and will be removed

This message lets you know that the install has found an obsolete package and is deleting it.

Invalid Response

When entering your selection(s) from the install menu, you entered something other than the valid numbers and letters shown on the menu.

Troubleshooting

ERROR: Invalid package name [PACKAGE NAME].

You specified an invalid package from the command line (silent install). Check the package names listed in [Section 7.1, “Checking the Installation”](#), on page 37.

7.3 Determining the Dialogic® DNI Board Serial Number

This section shows an example of using the CLI to determine the serial number of the Dialogic® DNI board.

At the command prompt, enter:

```
CLI> show hardware
```