



iSCSI Boot SLES 10 SP2

Software-Based iSCSI Boot
For SLES 10 SP2 on IBM System x Servers

Note

Before using this information and the product it supports, read the information in “Notices”, on page 35.

© Copyright International Business Machines Corporation 2006, 2009. All rights reserved.

US Government Users Restricted Rights - Use, duplication, or disclosure restricted by ADP GSA schedule contract with IBM Corp.

| | | |
|----------|-----------------------------------|----------|
| 1 | SLES 10 SP2..... | 4 |
| 1.1 | Prerequisites..... | 4 |
| 1.2 | Install SLES 10 SP2 | 5 |
| 1.2.1 | Installation Settings | 5 |
| 1.2.2 | Network..... | 6 |
| 1.2.2.1 | Network Device..... | 6 |
| 1.2.2.2 | Network Configuration | 7 |
| 1.2.2.3 | Enter IP Address..... | 8 |
| 1.2.2.4 | Netmask | 9 |
| 1.2.2.5 | Gateway | 10 |
| 1.2.2.6 | Name Server..... | 11 |
| 1.2.3 | Loading | 12 |
| 1.2.4 | Language | 13 |
| 1.2.5 | License..... | 14 |
| 1.2.6 | iSCSI Initiator Overview | 15 |
| 1.2.7 | Installation Mode | 16 |
| 1.2.8 | Clock and Time Zone | 17 |
| 1.2.9 | Installation Settings | 18 |
| 1.2.10 | License Pop Ups..... | 19 |
| 1.2.11 | Confirm Install | 20 |
| 1.2.12 | Package Installation..... | 21 |
| 1.2.13 | Finishing Basic Installation..... | 22 |
| 1.2.14 | Password | 23 |
| 1.2.15 | Hostname and Domain Name..... | 24 |
| 1.2.16 | Network Configuration | 25 |
| 1.2.17 | Test Internet Connection..... | 26 |
| 1.2.18 | Installation Settings..... | 27 |
| 1.2.19 | User Authentication Method..... | 28 |
| 1.2.20 | New Local User..... | 29 |
| 1.2.21 | Release Notes | 30 |
| 1.2.22 | Hardware Configuration | 31 |
| 1.2.23 | Installation Complete | 32 |
| 1.2.24 | Login | 33 |
| 1.2.25 | Desktop..... | 34 |
| 1.3 | Notices..... | 35 |
| 1.4 | Trademarks | 37 |

1 SLES 10 SP2

This document provides a general description of an example iSCSI SAN install. For additional information consult the appropriate operating system documentation.

1.1 Prerequisites

Refer to the [SAN Guide](#) and follow the preparation procedures including applying all applicable updates and configuration of your SAN. The San Guide is located via the following link:

<http://www-03.ibm.com/servers/eserver/bladecenter/storage/iscsi.html>

Before continuing the following steps need to be completed:

1. Confirm the Server supports iSCSI Boot
2. Perform the Update steps
3. Configure and test an example SAN
4. Create a blank LUN to receive the OS installation
5. Configure the Server to login to the blank LUN

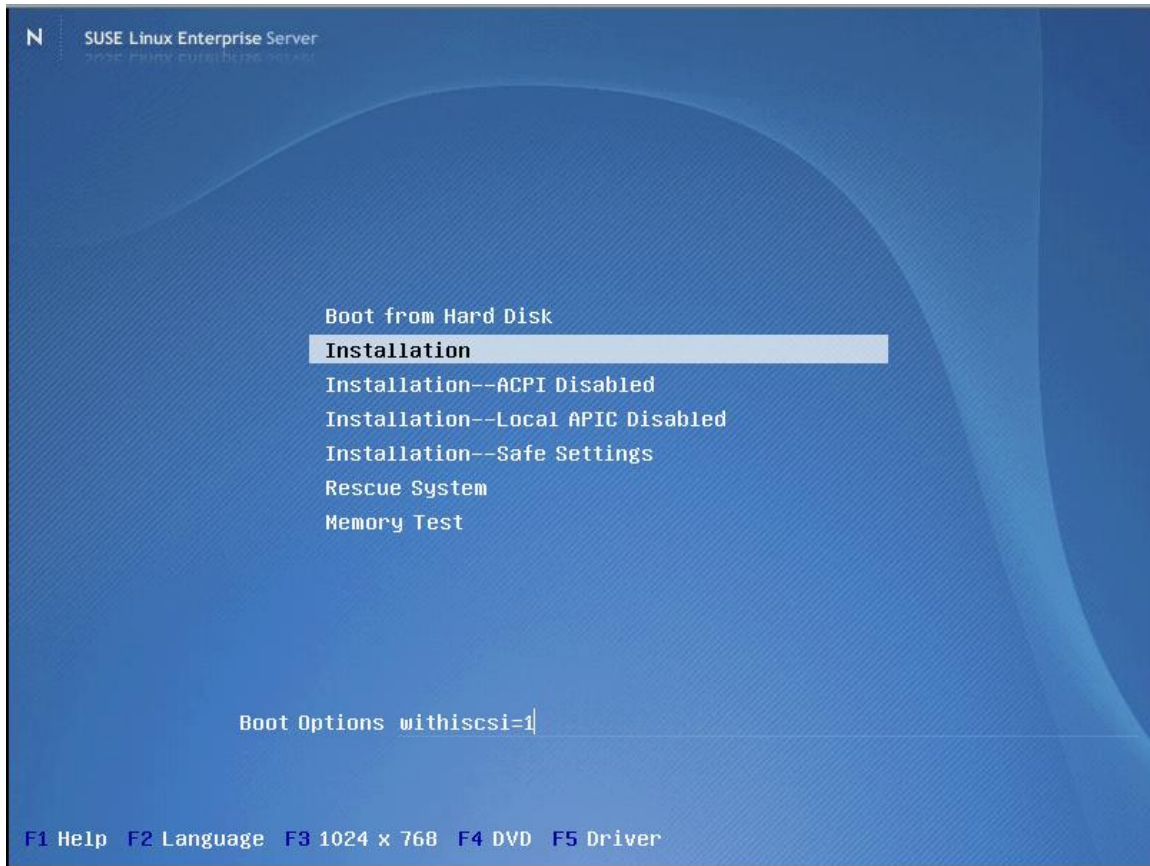
1.2 Install SLES 10 SP2

The list of possible consoles used to install SLES 10 includes a local console or “Remote Console” via the web interface of the Management Module (MM). Use of the Remote Console will require selecting a video mode compatible with the Remote Console. See the Help (ie “?” link) on the MM Remote Console web page.

1.2.1 Installation Settings

Start the installation as follows:

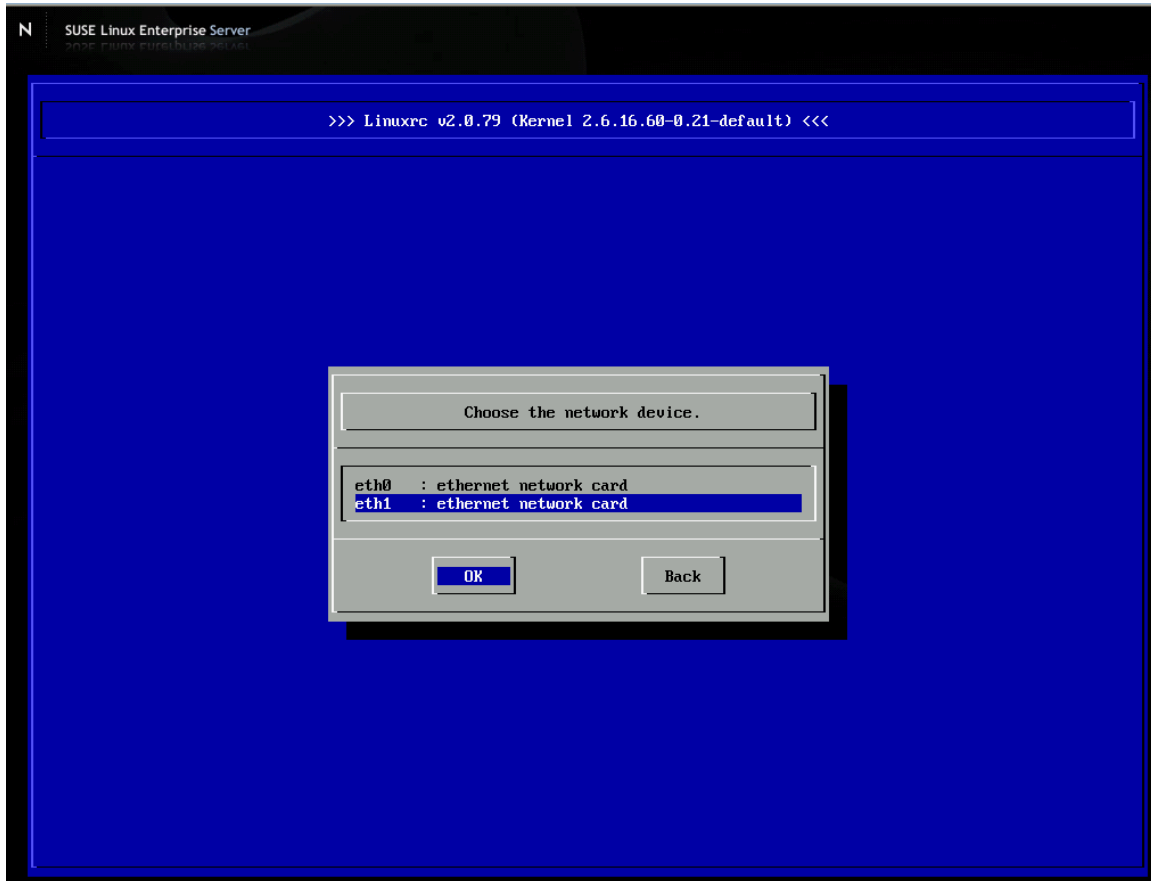
1. Boot the SUSE Linux Enterprise Server 10 SP2 DVD (or CD 1).
2. For an iSCSI Boot installation, select Installation and enter *withiscsi=1* at the Boot Options prompt.
3. Press Enter.



1.2.2 Network

1.2.2.1 Network Device

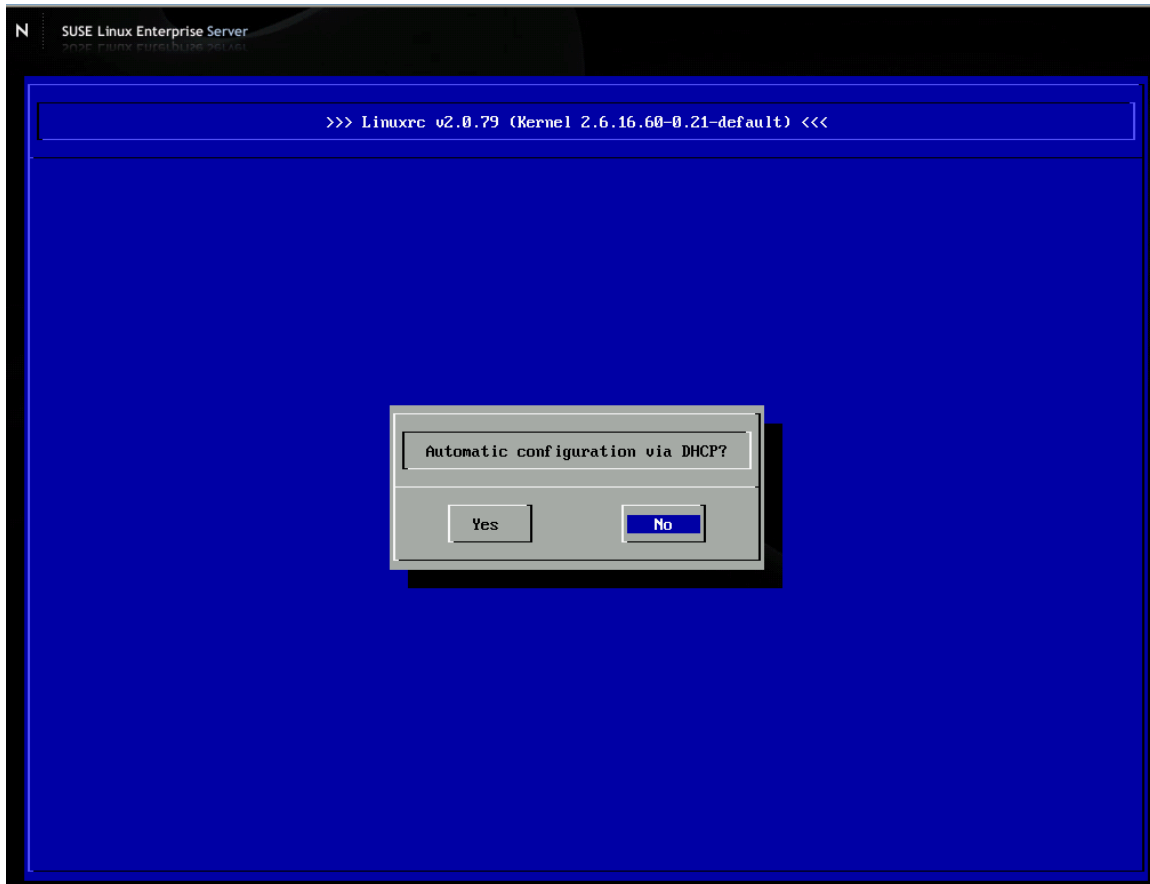
Select the device connected to the iSCSI SAN.



Select OK.

1.2.2.2 Network Configuration

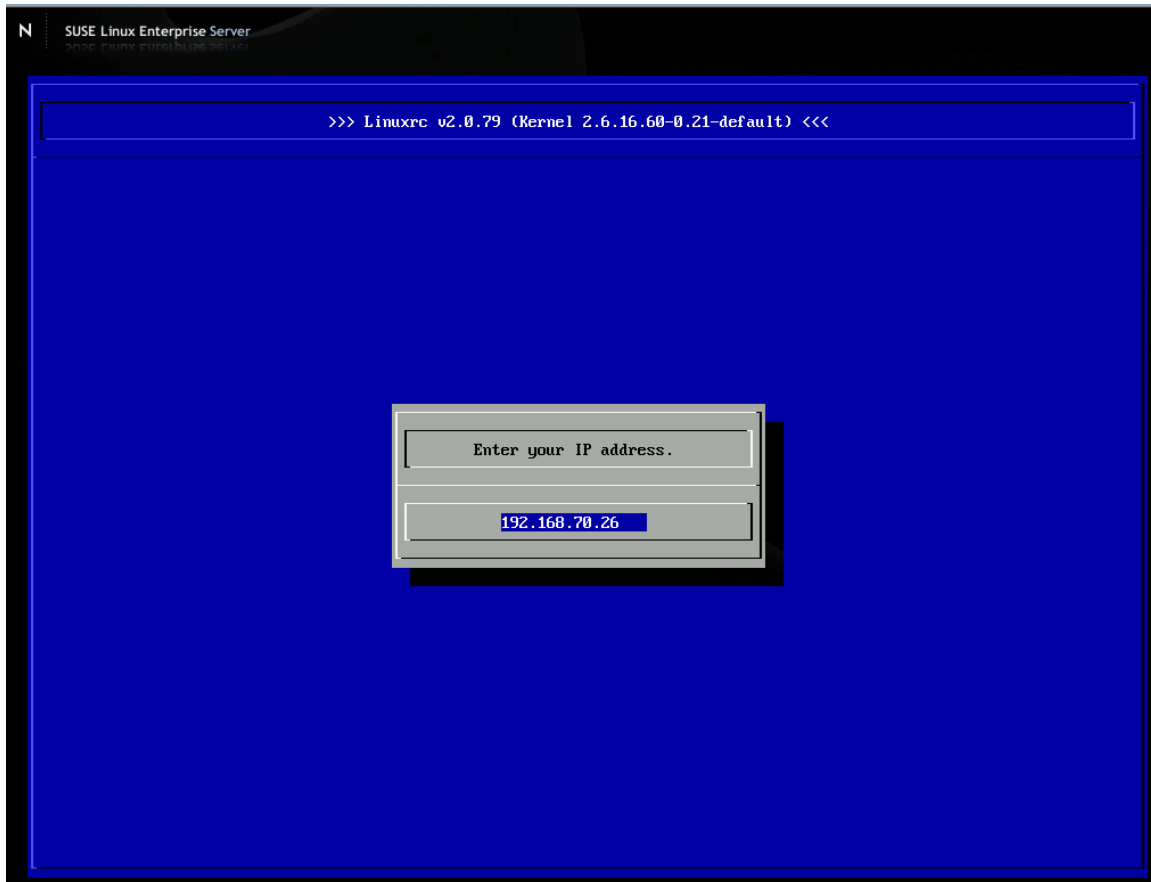
At the “Automatic configuration via DHCP” prompt make a selection based on your network infrastructure.



In this example click No.

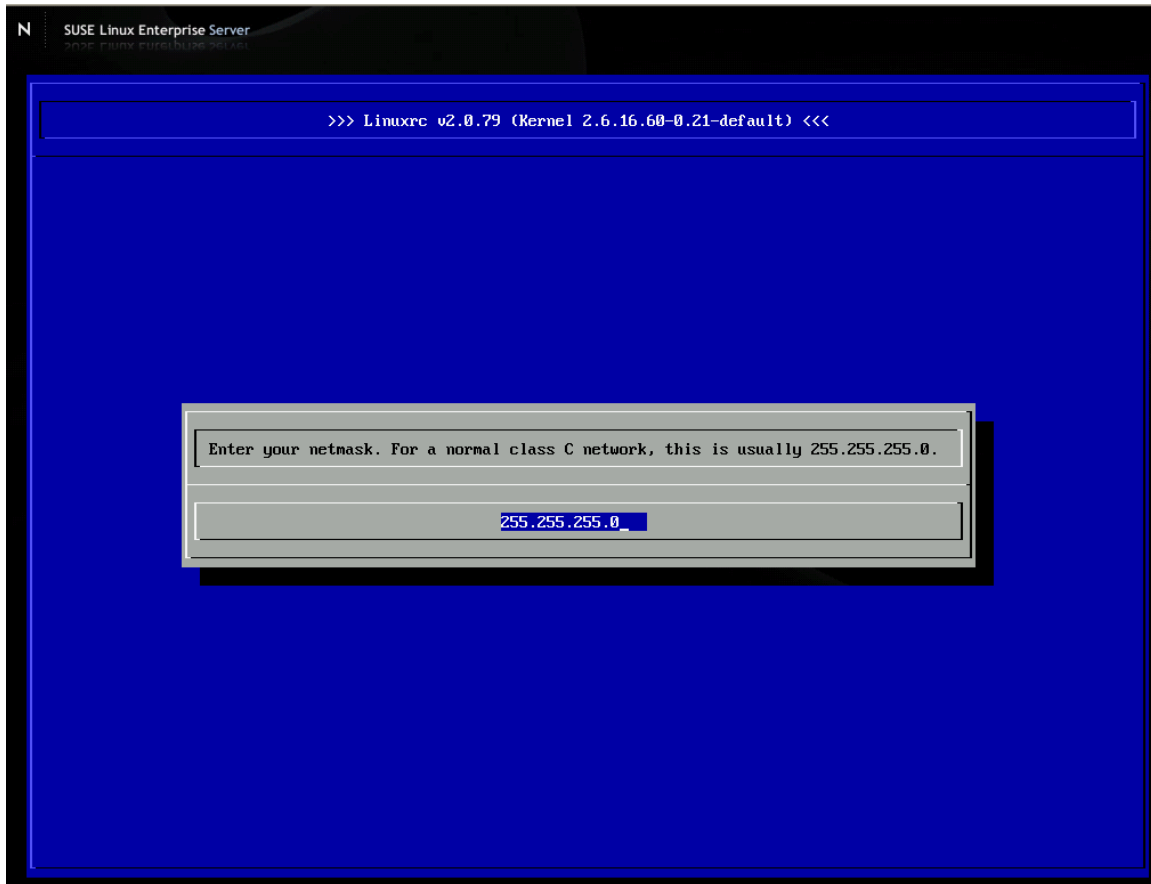
1.2.2.3 Enter IP Address

If you selected “No” to DHCP you will be prompted to enter your networking information.



Press Enter.

1.2.2.4 Netmask



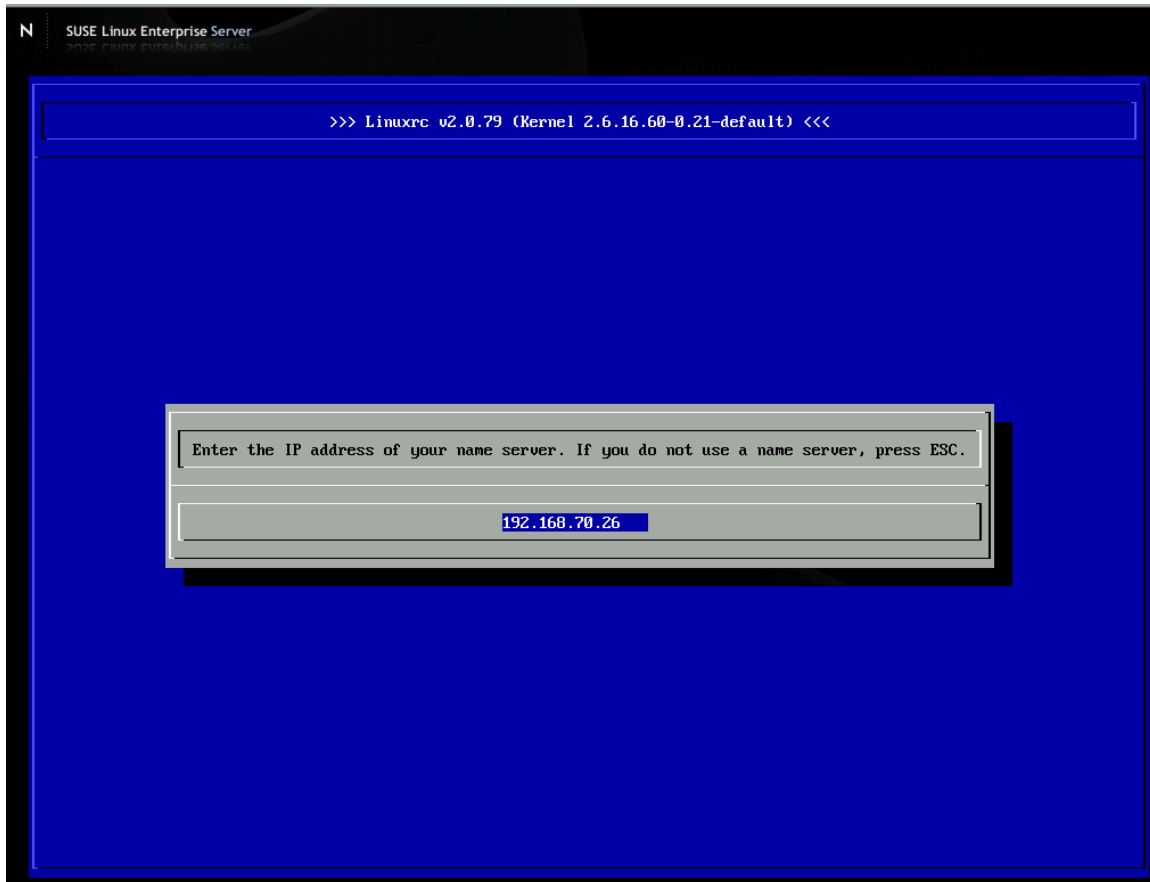
Enter your netmask and press Enter.

1.2.2.5 Gateway



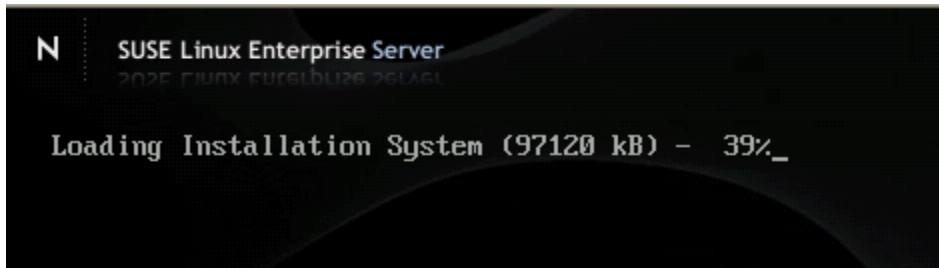
Enter your gateway IP address, note the instructions, and press Enter.

1.2.2.6 Name Server



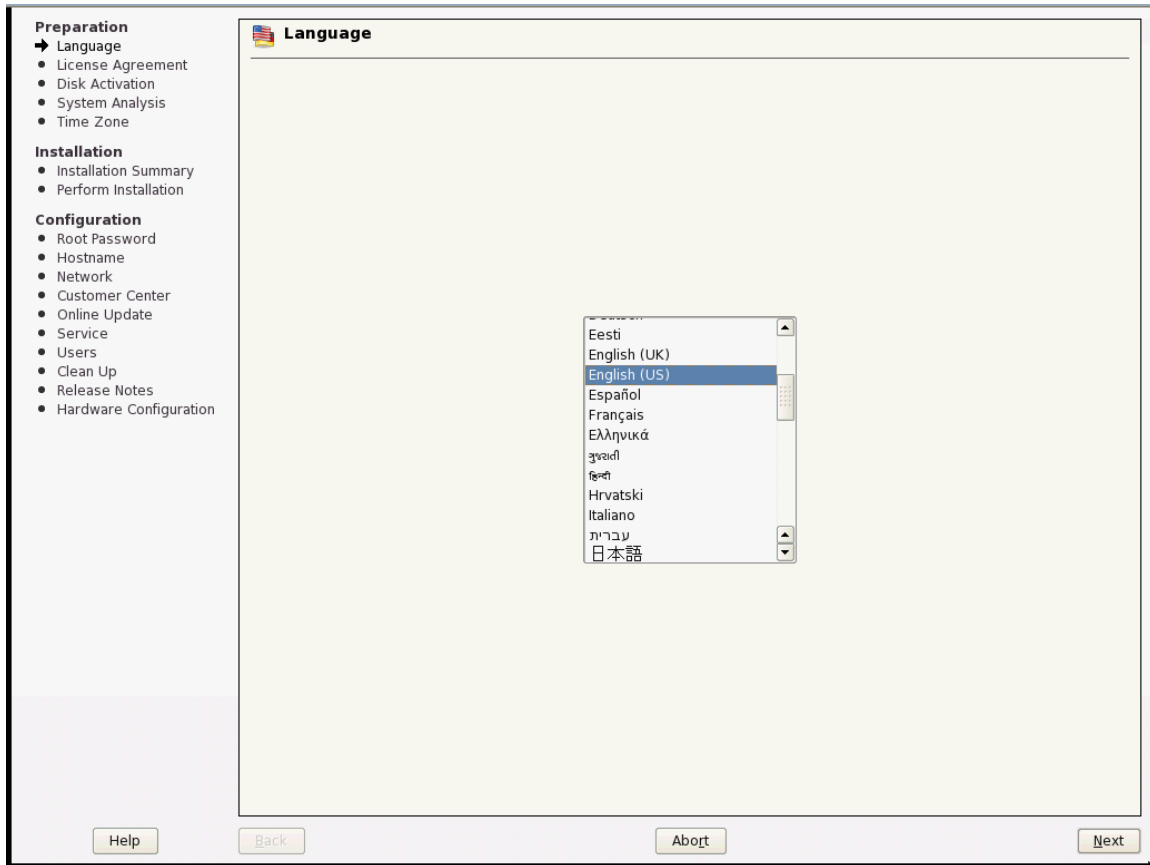
Enter your name server IP address, note the instructions, and press Enter or ESC as appropriate.

1.2.3 Loading



1.2.4 Language

Select your language.



Click Next.

1.2.5 License

Read the License Agreement, and if you agree select “Yes, I Agree to the License Agreement”.

Preparation

- ✓ Language
- ➔ **License Agreement**
- Disk Activation
- System Analysis
- Time Zone

Installation

- Installation Summary
- Perform Installation

Configuration

- Root Password
- Hostname
- Network
- Customer Center
- Online Update
- Service
- Users
- Clean Up
- Release Notes
- Hardware Configuration

License Agreement

Language
English

SUSE(r) LINUX Enterprise Server (SLES) 10 Novell(r) Software License Agreement

PLEASE READ THIS AGREEMENT CAREFULLY. BY INSTALLING OR OTHERWISE USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE WITH THESE TERMS, DO NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE AND, IF APPLICABLE, RETURN THE ENTIRE UNUSED PACKAGE TO THE RESELLER WITH YOUR RECEIPT FOR A REFUND. THE SOFTWARE MAY NOT BE SOLD, TRANSFERRED, OR FURTHER DISTRIBUTED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM NOVELL.

RIGHTS AND LICENSES

This Novell Software License Agreement ("Agreement") is a legal agreement between You (an entity or a person) and Novell, Inc. ("Novell") with respect to the software product identified in the title of this Agreement, media (if any) and accompanying documentation (collectively the "Software").

The Software is a collective work of Novell. You may make and use unlimited copies of the Software for Your distribution and use within Your Organization. The term "Organization" means a legal entity, excluding subsidiaries and affiliates with a separate existence for tax purposes or for legal personality purposes. An example of an Organization in the private sector

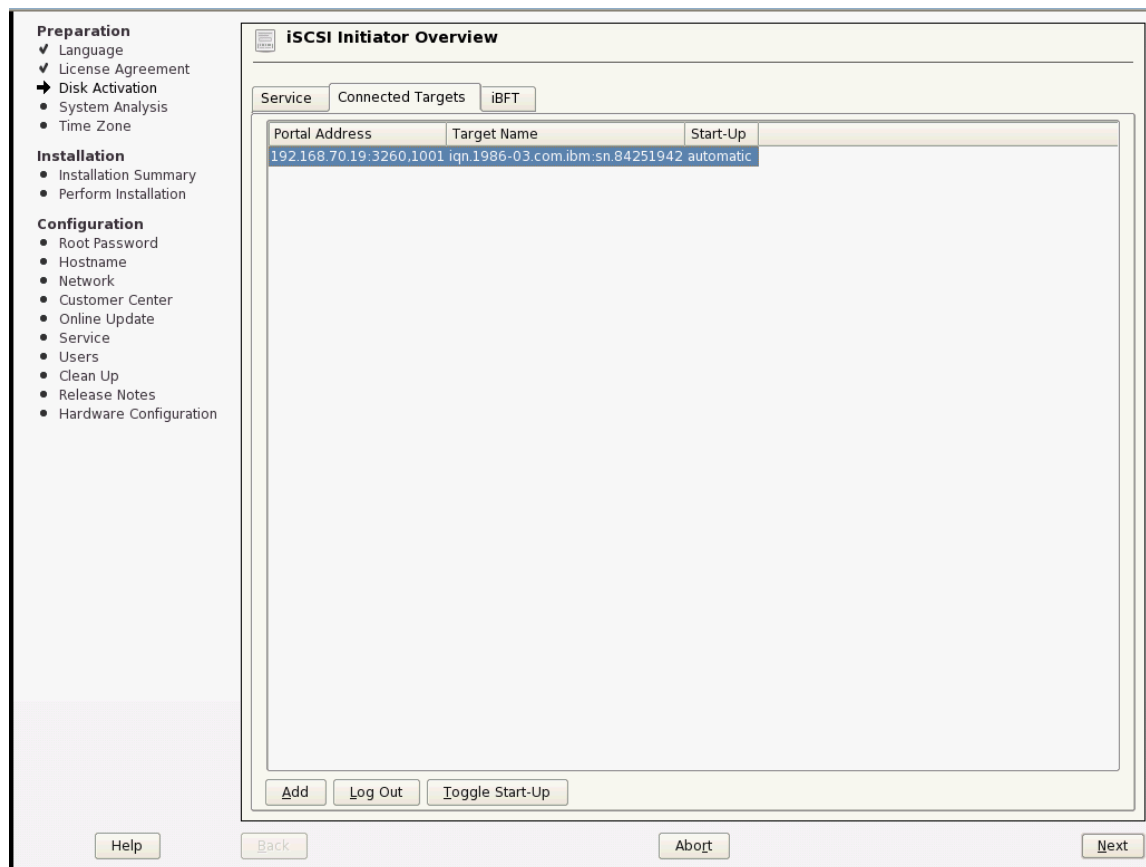
☒ Yes, I Agree to the License Agreement
☐ No, I Do Not Agree

Help Back Abort Next

Click Next.

1.2.6 iSCSI Initiator Overview

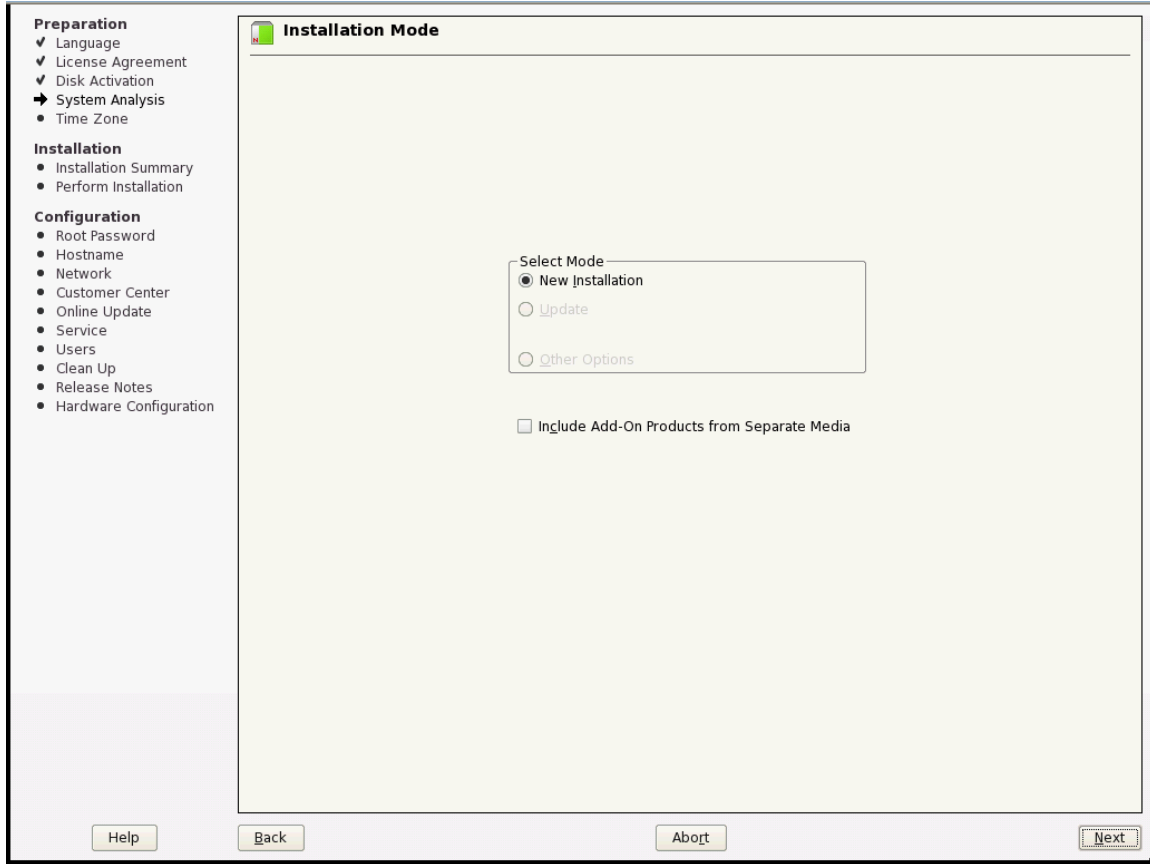
The iSCSI Target is displayed. Note that the Target information is passed from the Server firmware to the operating system automatically.



Click Next.

1.2.7 Installation Mode

Select New Installation.



Click Next.

1.2.8 Clock and Time Zone

In the "Clock and Time Zone" screen, select the applicable Region, Time Zone, and Hardware Clock settings. Change the time and date if necessary.

Preparation

- ✓ Language
- ✓ License Agreement
- ✓ Disk Activation
- ✓ System Analysis
- Time Zone

Installation

- Installation Summary
- Perform Installation

Configuration

- Root Password
- Hostname
- Network
- Customer Center
- Online Update
- Service
- Users
- Clean Up
- Release Notes
- Hardware Configuration

Clock and Time Zone

Region

- Europe
- USA**
- Canada
- Central and South America
- Russia
- Asia
- Australia
- Africa
- Pacific
- Global
- Etc

Time Zone

- Alaska
- Aleutian
- Arizona
- Central
- Eastern**
- East Indiana
- Hawaii
- Indiana Starke
- Michigan
- Mountain
- Pacific
- Samoa

Hardware Clock Set To: UTC

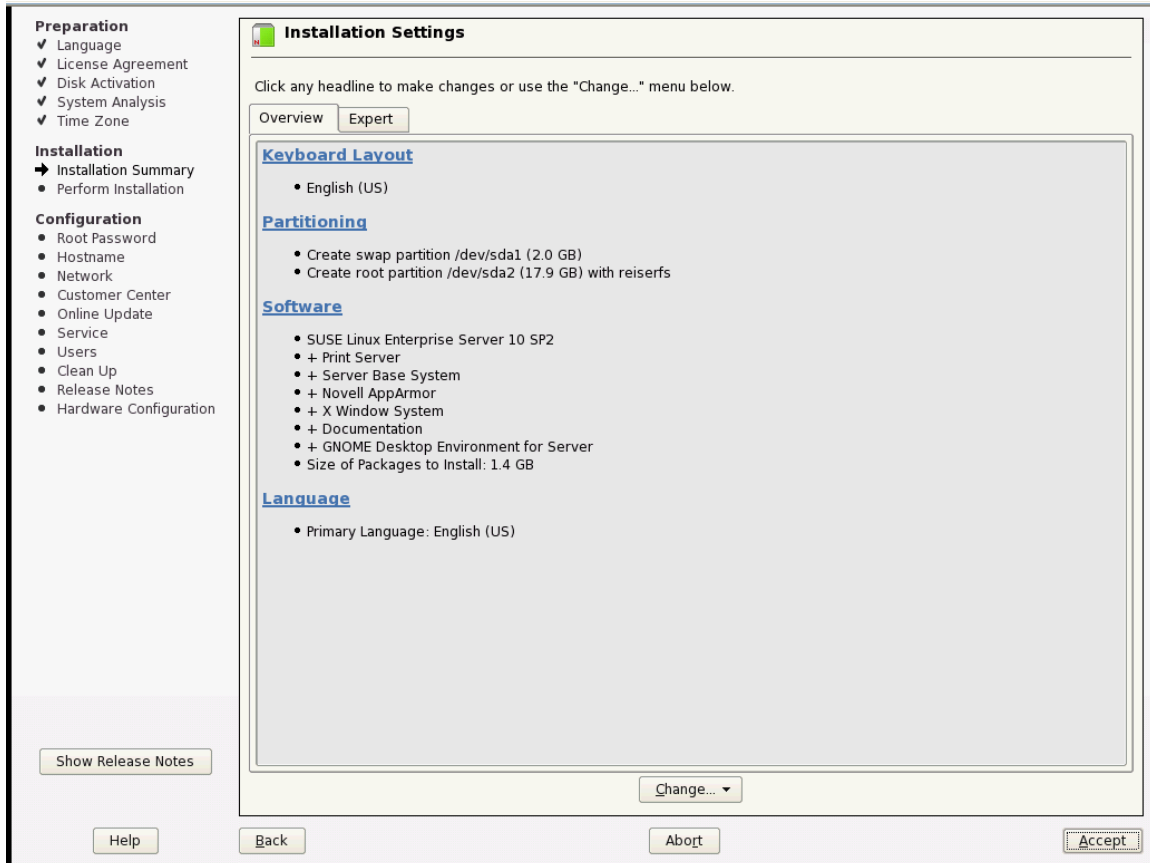
Time and Date: 10:30:25 - 2009-07-10 [Change...](#)

[Help](#) [Back](#) [Abort](#) [Next](#)

Click Next.

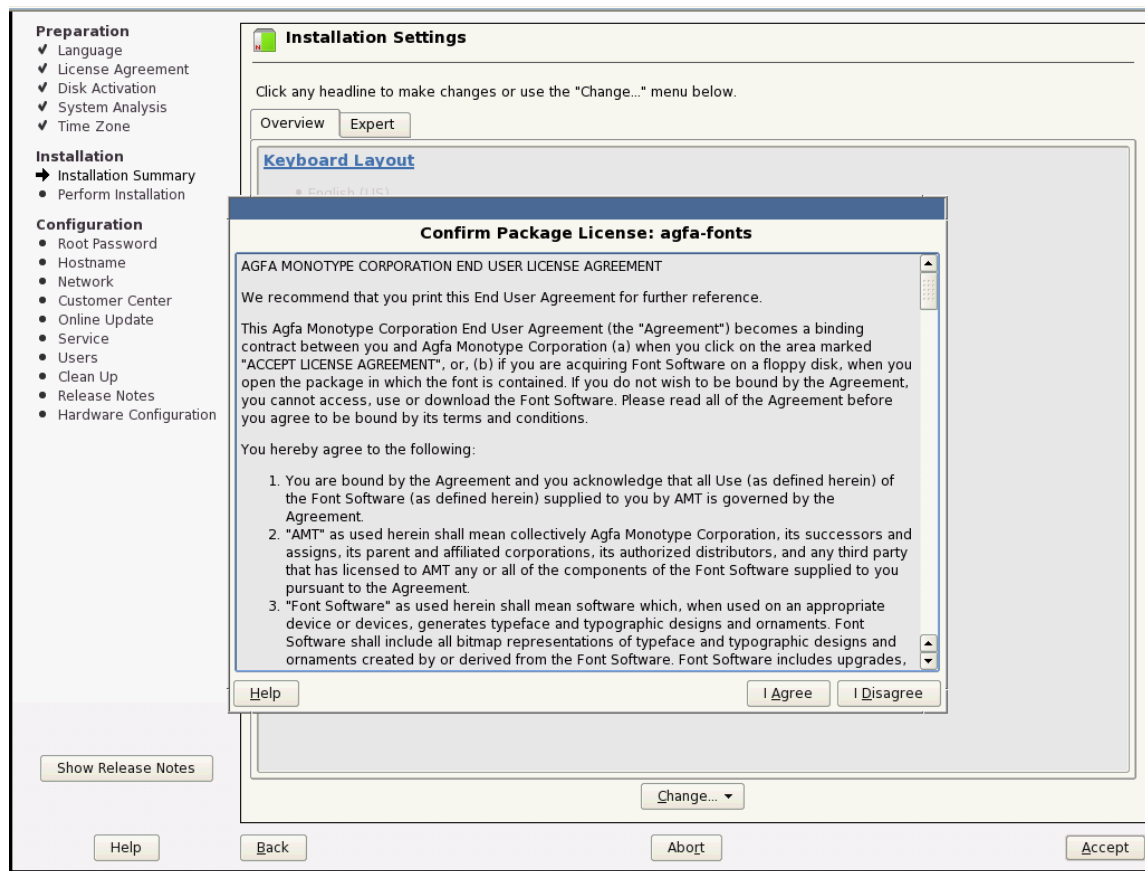
1.2.9 Installation Settings

The defaults are fine for this example install. Make changes appropriate to your requirements.



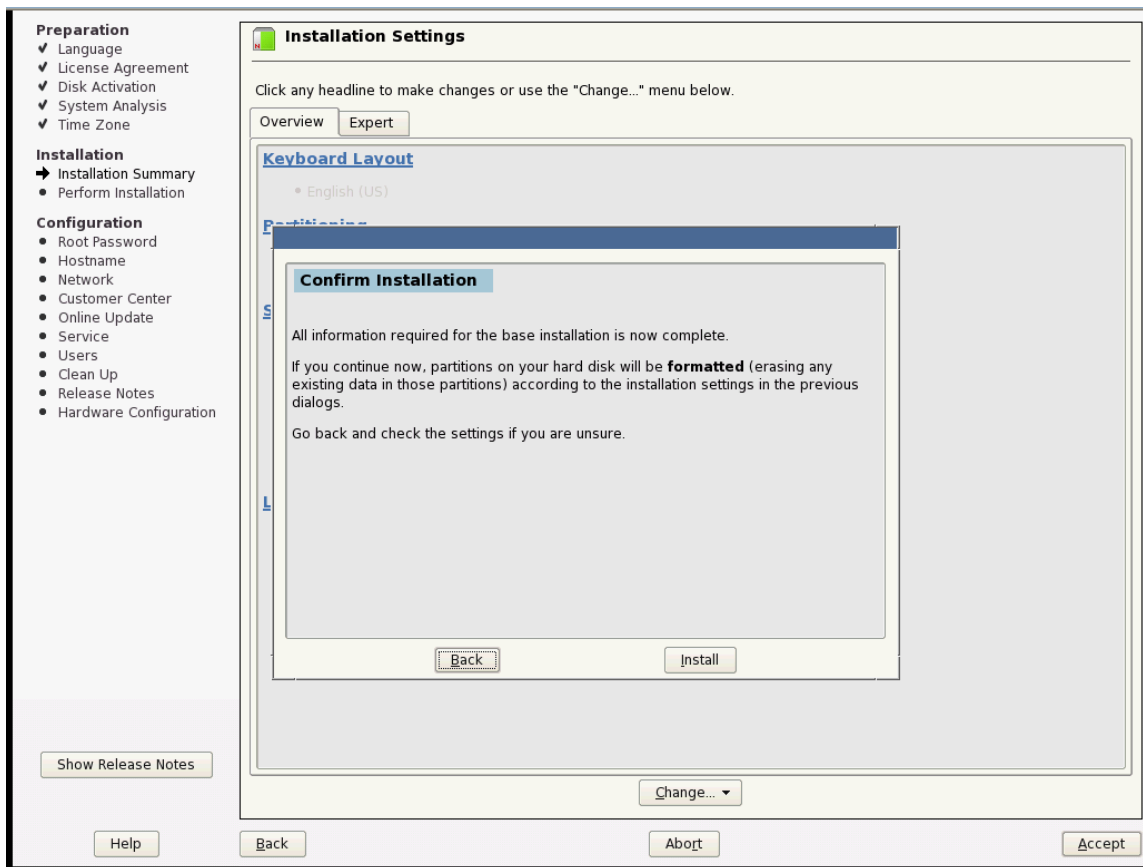
Click Accept.

1.2.10 License Pop Ups



If you agree click I Agree.

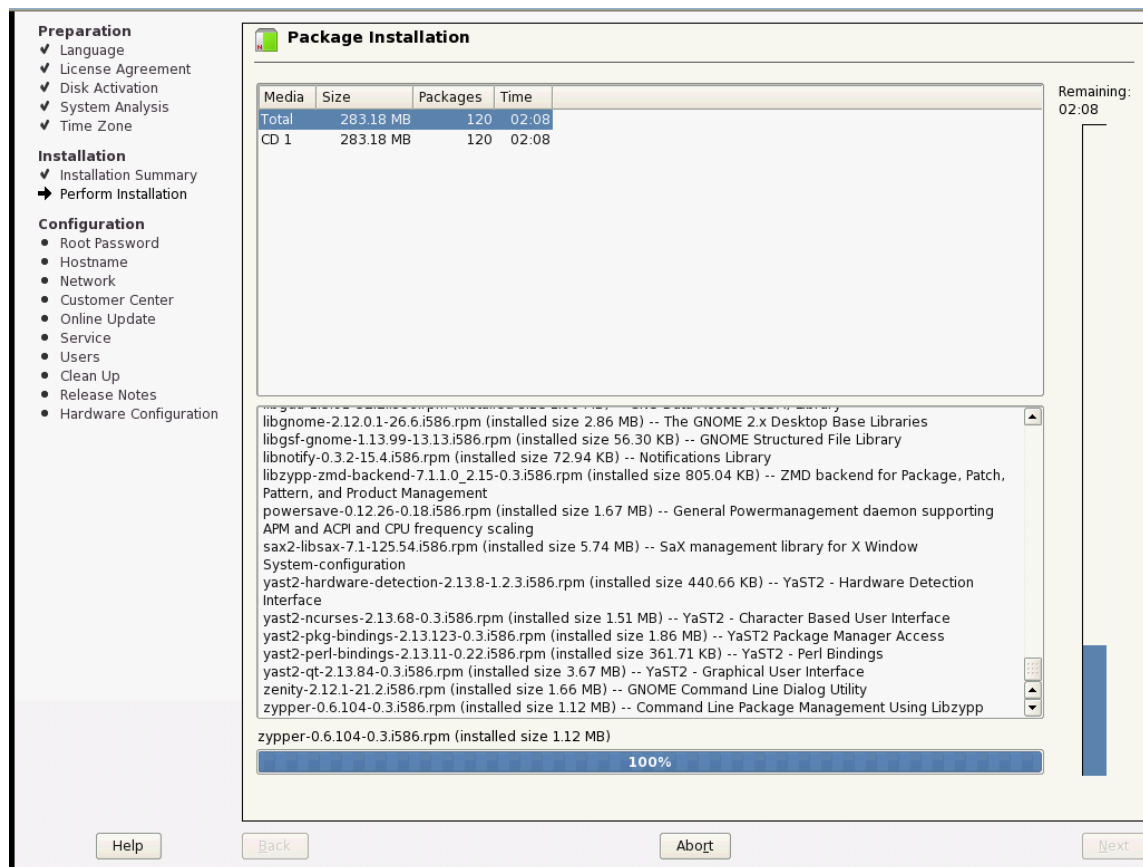
1.2.11 Confirm Install



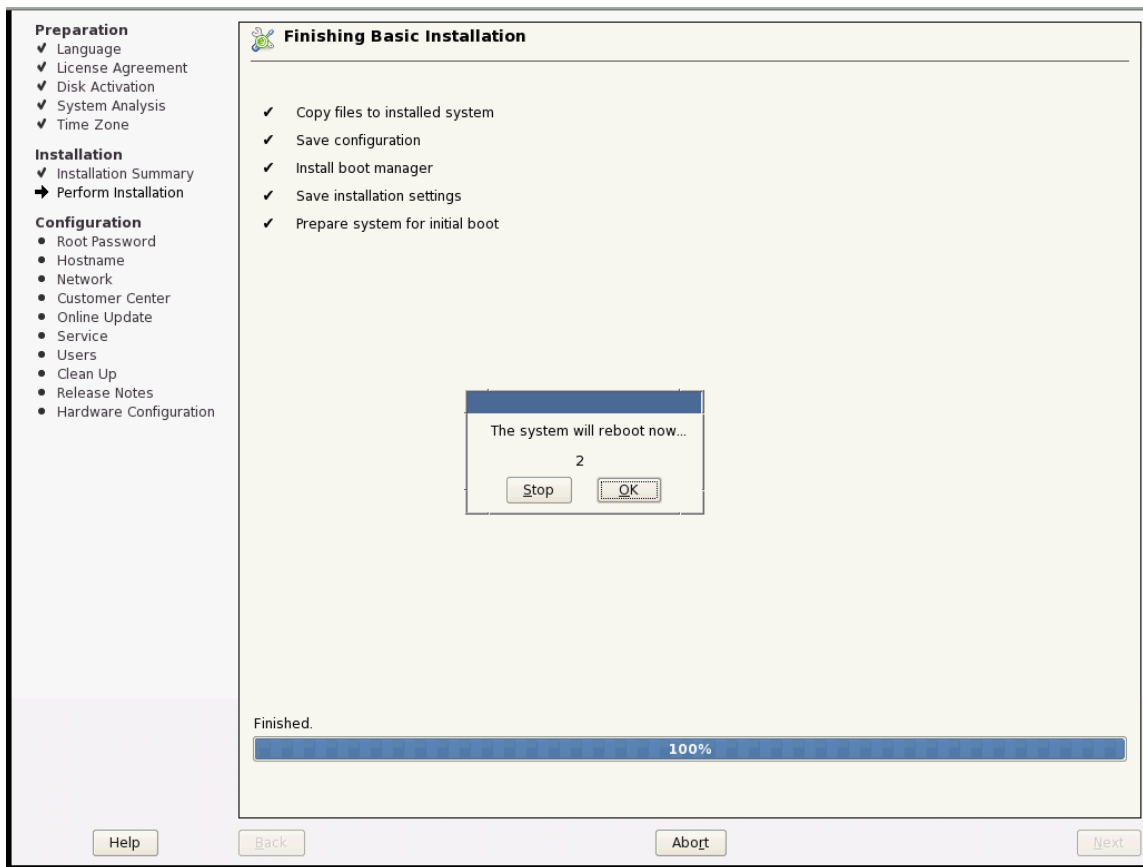
Click Install.

1.2.12 Package Installation

Installation proceeds...



1.2.13 Finishing Basic Installation



When this phase completes the system reboots.

Various countdown and initialization panels appear and then proceed.

1.2.14 Password

Enter the password for the root user.

The screenshot shows the 'Password for the System Administrator "root"' window. On the left is a navigation pane with the following sections:

- Preparation**
 - ✓ Language
 - ✓ License Agreement
 - ✓ Disk Activation
 - ✓ System Analysis
 - ✓ Time Zone
- Installation**
 - ✓ Installation Summary
 - ✓ Perform Installation
- Configuration**
 - ➔ Root Password
 - Hostname
 - Network
 - Customer Center
 - Online Update
 - Service
 - Users
 - Clean Up
 - Release Notes
 - Hardware Configuration

The main area of the window contains the following text and fields:

Do not forget what you enter here.

Password for root User
[password field with 7 asterisks]

Confirm Password
[password field with 7 asterisks]

[Expert Options... button]

At the bottom of the window are four buttons: [Help], [Back], [Abort], and [Next].

Click Next.

1.2.15 Hostname and Domain Name

Update as appropriate.

The screenshot shows the 'Hostname and Domain Name' configuration window. On the left is a navigation pane with the following sections:

- Preparation**
 - ✓ Language
 - ✓ License Agreement
 - ✓ Disk Activation
 - ✓ System Analysis
 - ✓ Time Zone
- Installation**
 - ✓ Installation Summary
 - ✓ Perform Installation
- Configuration**
 - ✓ Root Password
 - ➔ **Hostname**
 - Network
 - Customer Center
 - Online Update
 - Service
 - Users
 - Clean Up
 - Release Notes
 - Hardware Configuration

The main area of the window is titled 'Hostname and Domain Name' and contains the following fields and options:

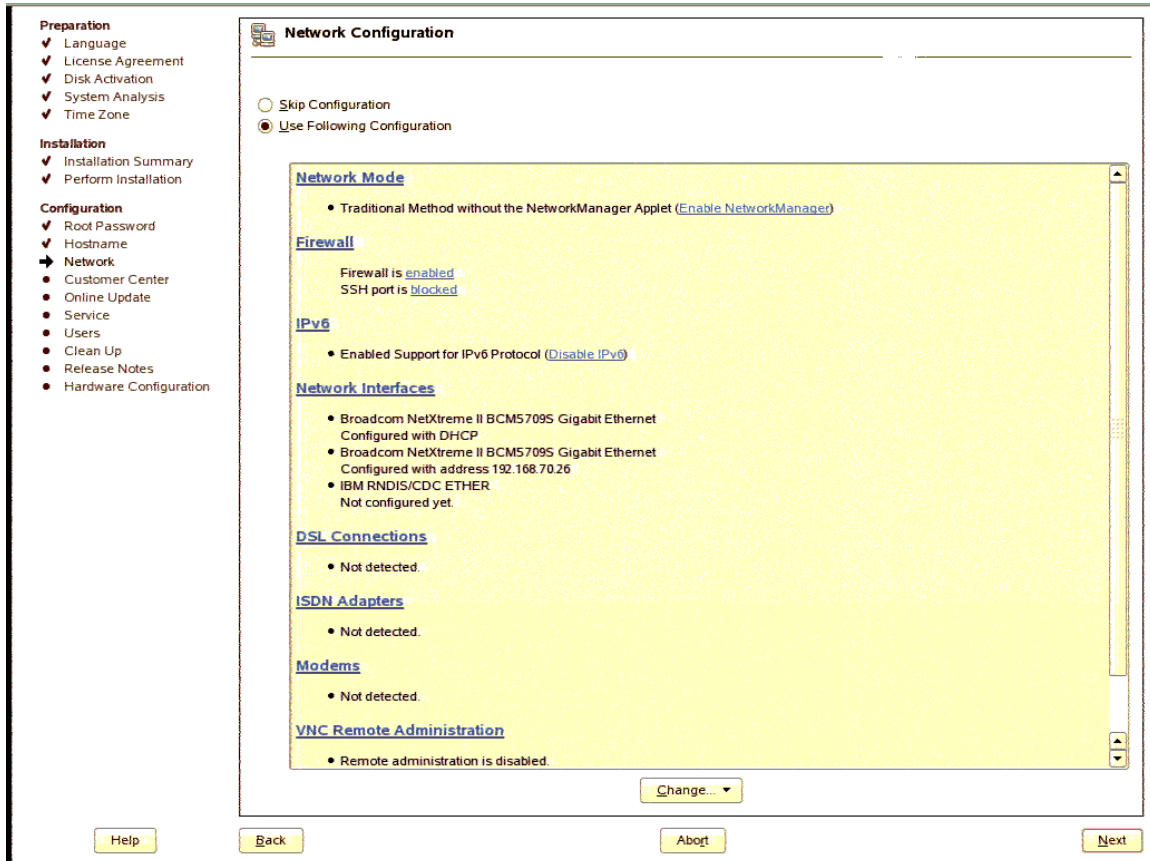
| Hostname and Domain Name | |
|--|-------------|
| Hostname | Domain Name |
| linux-yu6f | site |
| <input checked="" type="checkbox"/> Change Hostname via DHCP | |
| <input checked="" type="checkbox"/> Write Hostname to /etc/hosts | |

At the bottom of the window are four buttons: Help, Back, Abort, and Next.

Click Next.

1.2.16 Network Configuration

You might want to disable the firewall if you are testing in a secure lab environment. You can configure other NICs in the system at this time as well.



Click Next.

1.2.17 Test Internet Connection

If you want to Test make sure you select the NIC that is connected to your LAN that is connected to the Internet.

Preparation

- ✓ Language
- ✓ License Agreement
- ✓ Disk Activation
- ✓ System Analysis
- ✓ Time Zone

Installation

- ✓ Installation Summary
- ✓ Perform Installation

Configuration

- ✓ Root Password
- ✓ Hostname
- ➔ **Network**
- Customer Center
- Online Update
- Service
- Users
- Clean Up
- Release Notes
- Hardware Configuration

Test Internet Connection

To validate your Internet access, activate the test procedure.

The following steps will be performed:

- Download latest release notes
- Check for latest updates

Select:

☐ Yes, Test Connection to the Internet via Broadcom NetXtreme II BCM57... - Network card (DHCP address)

☒ No, Skip This Test

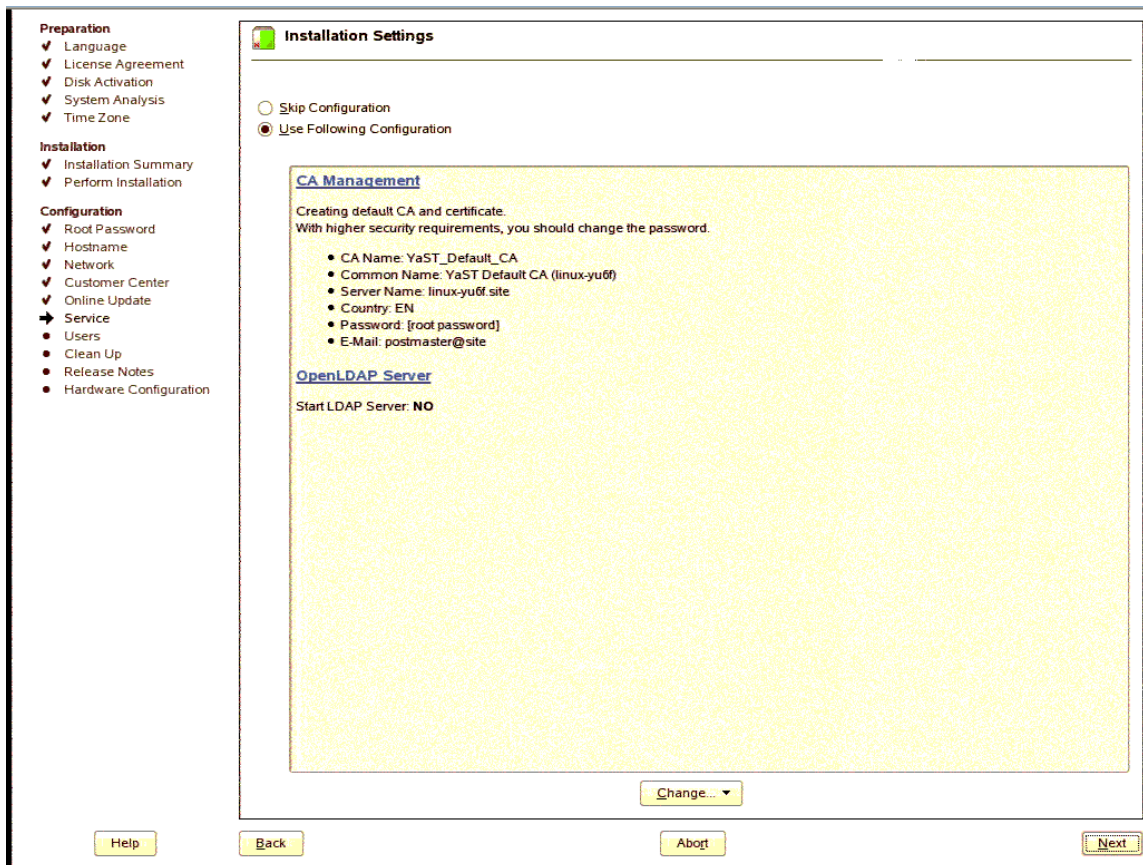
[Change Device](#)

[Help](#) [Back](#) [Abort](#) [Next](#)

Click Next.

1.2.18 Installation Settings

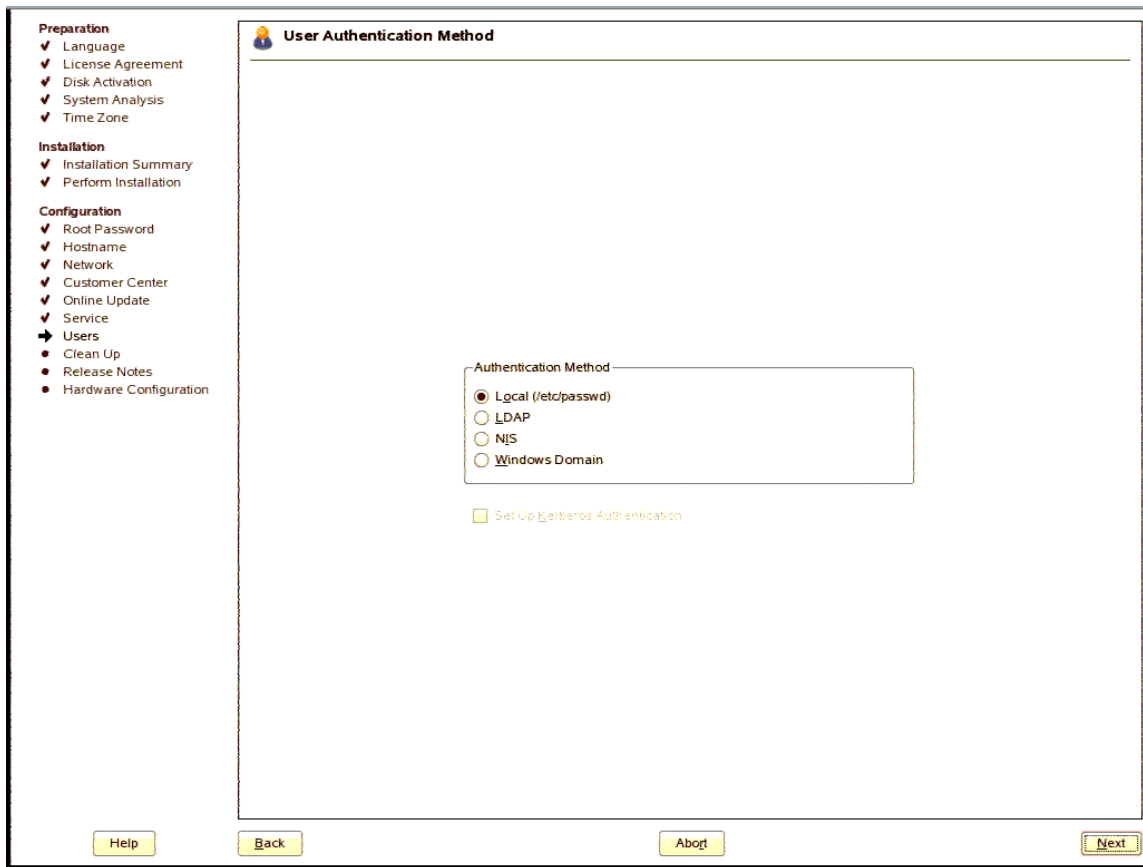
Change as required.



Click Next.

1.2.19 User Authentication Method

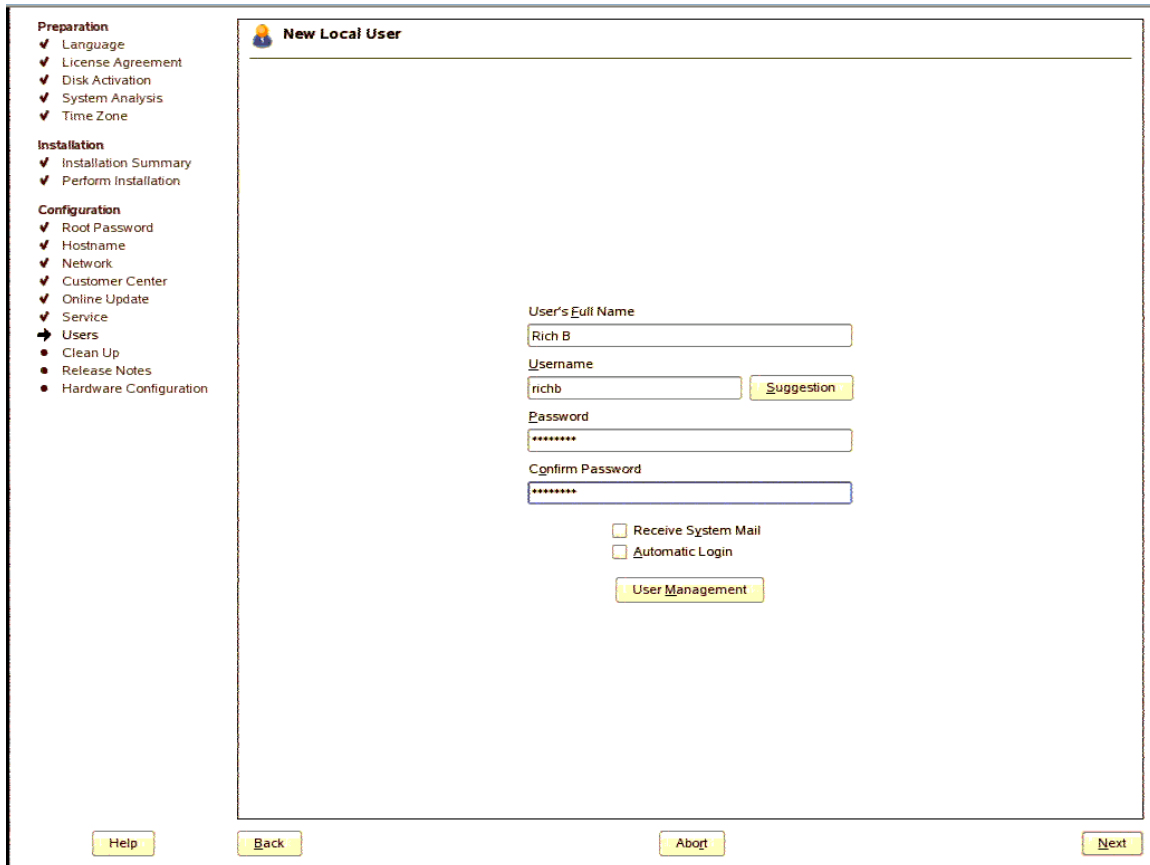
Select as appropriate.



Click Next.

1.2.20 New Local User

Enter user information.



The image shows a graphical user interface window titled "New Local User". On the left side, there is a vertical list of installation steps, each preceded by a checkmark or a right-pointing arrow. The steps are: Preparation (Language, License Agreement, Disk Activation, System Analysis, Time Zone), Installation (Installation Summary, Perform Installation), Configuration (Root Password, Hostname, Network, Customer Center, Online Update, Service), Users (highlighted with a right-pointing arrow), Clean Up, Release Notes, and Hardware Configuration. The main area of the window contains the following fields and options:

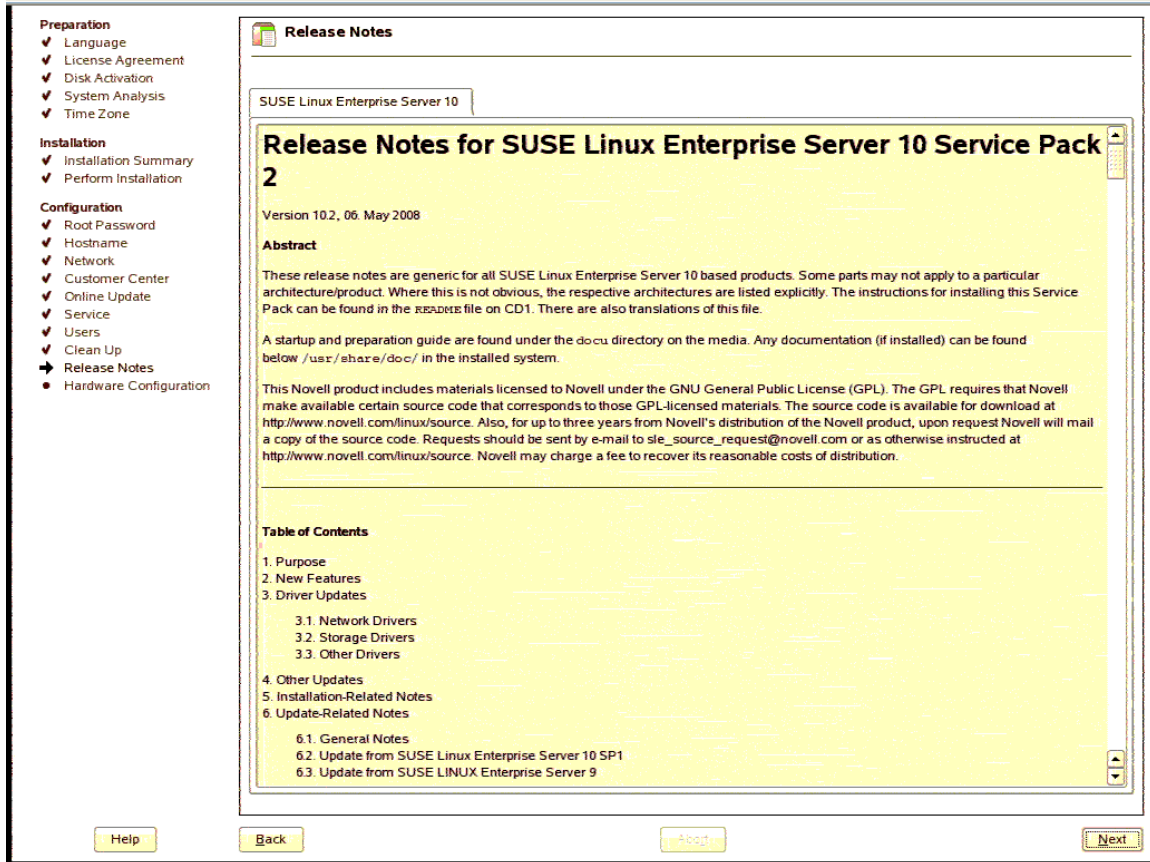
- User's Full Name:** A text box containing "Rich B".
- Username:** A text box containing "richb", followed by a yellow button labeled "Suggestion".
- Password:** A text box containing "*****".
- Confirm Password:** A text box containing "*****".
- ☐ Receive System Mail
- ☐ Automatic Login
- A yellow button labeled "User Management".

At the bottom of the window, there are four buttons: "Help", "Back", "Abort", and "Next".

Click Next.

1.2.21 Release Notes

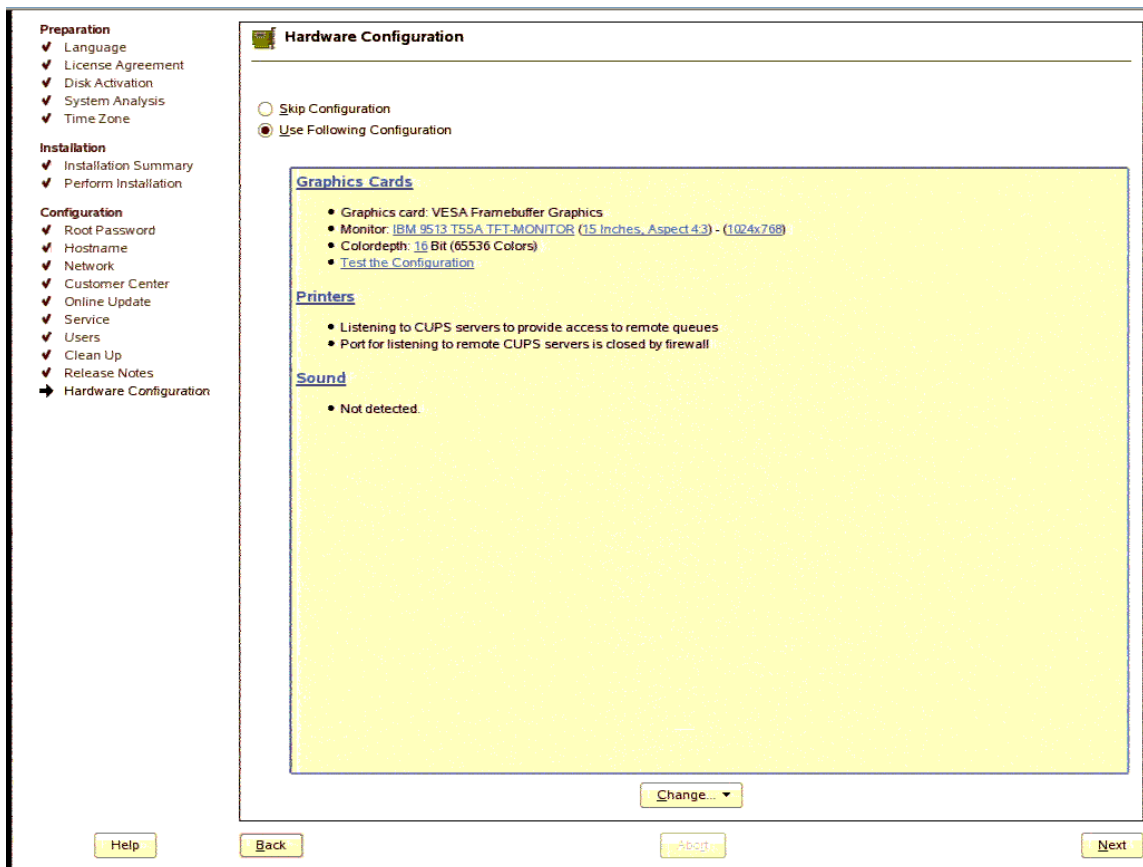
Browse the release notes.



Click Next.

1.2.22 Hardware Configuration

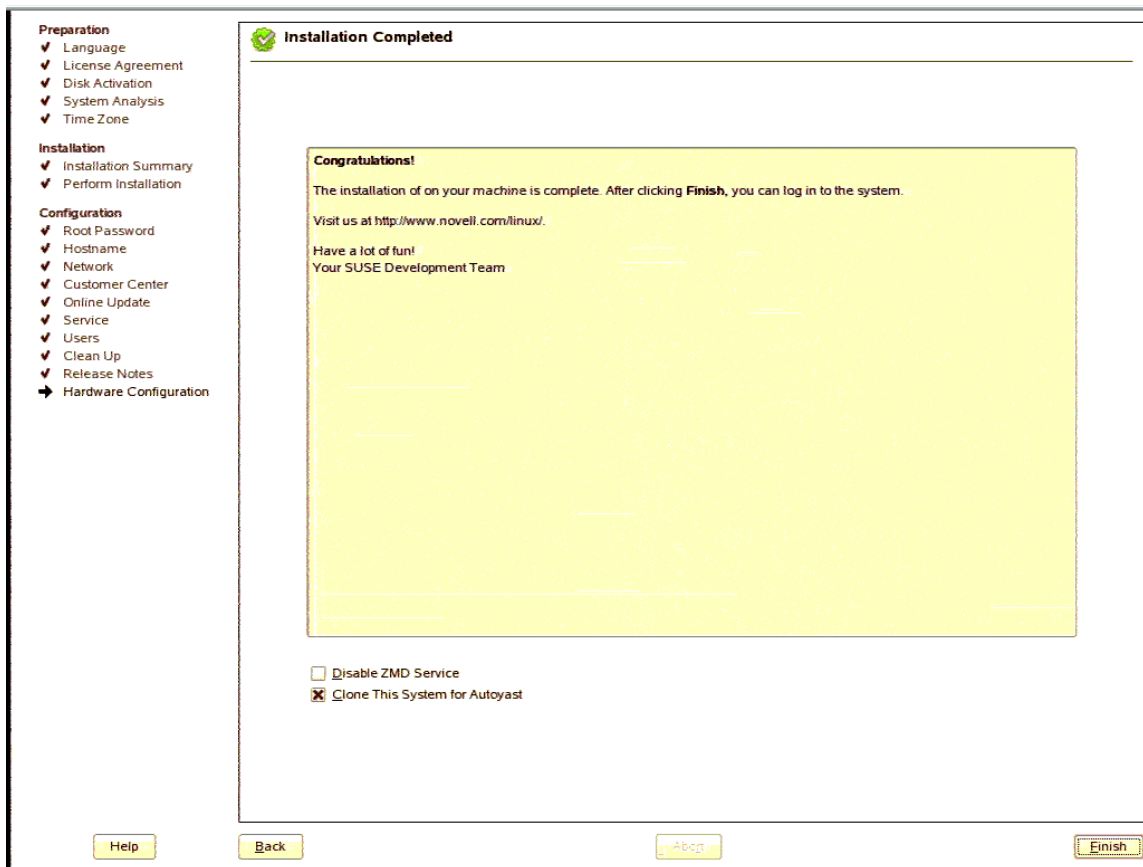
Test the configuration to be sure the video mode is compatible.



Click Next.

1.2.23 Installation Complete

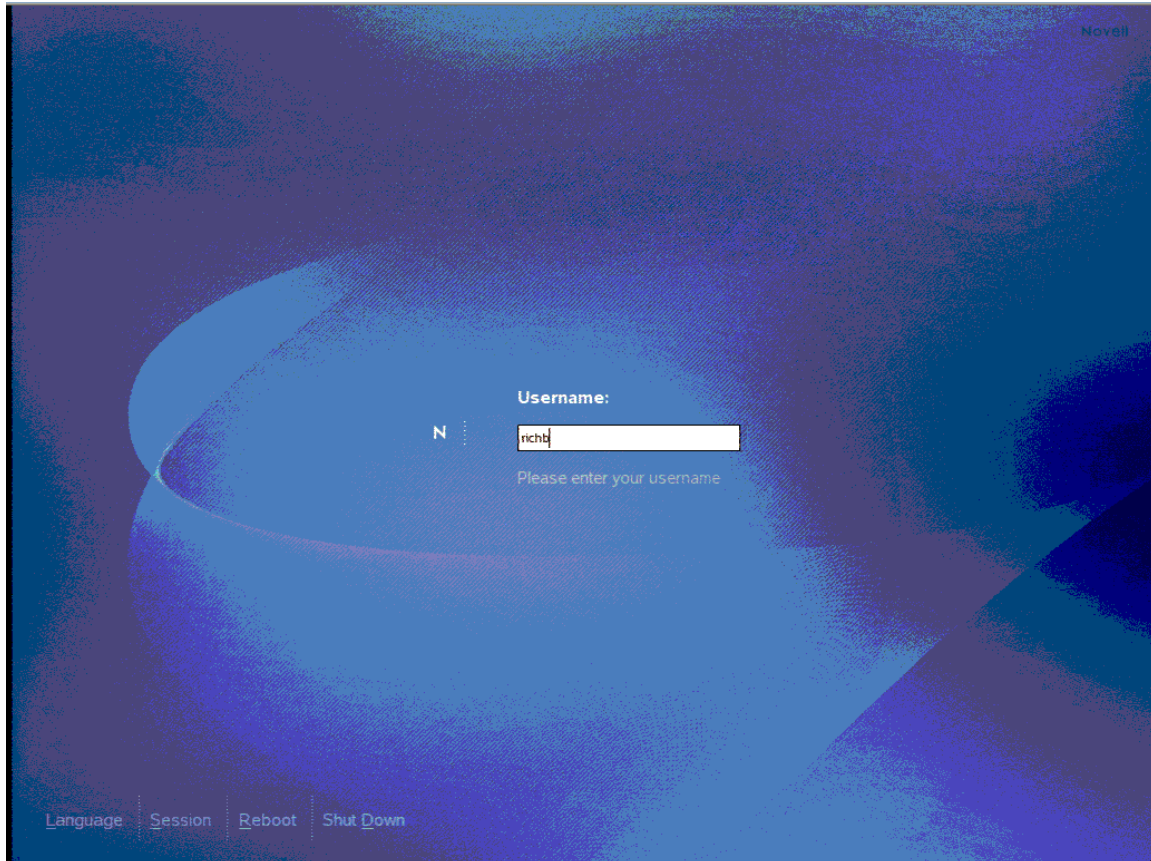
Congratulations! The install is complete.



Click Finish.

1.2.24 Login

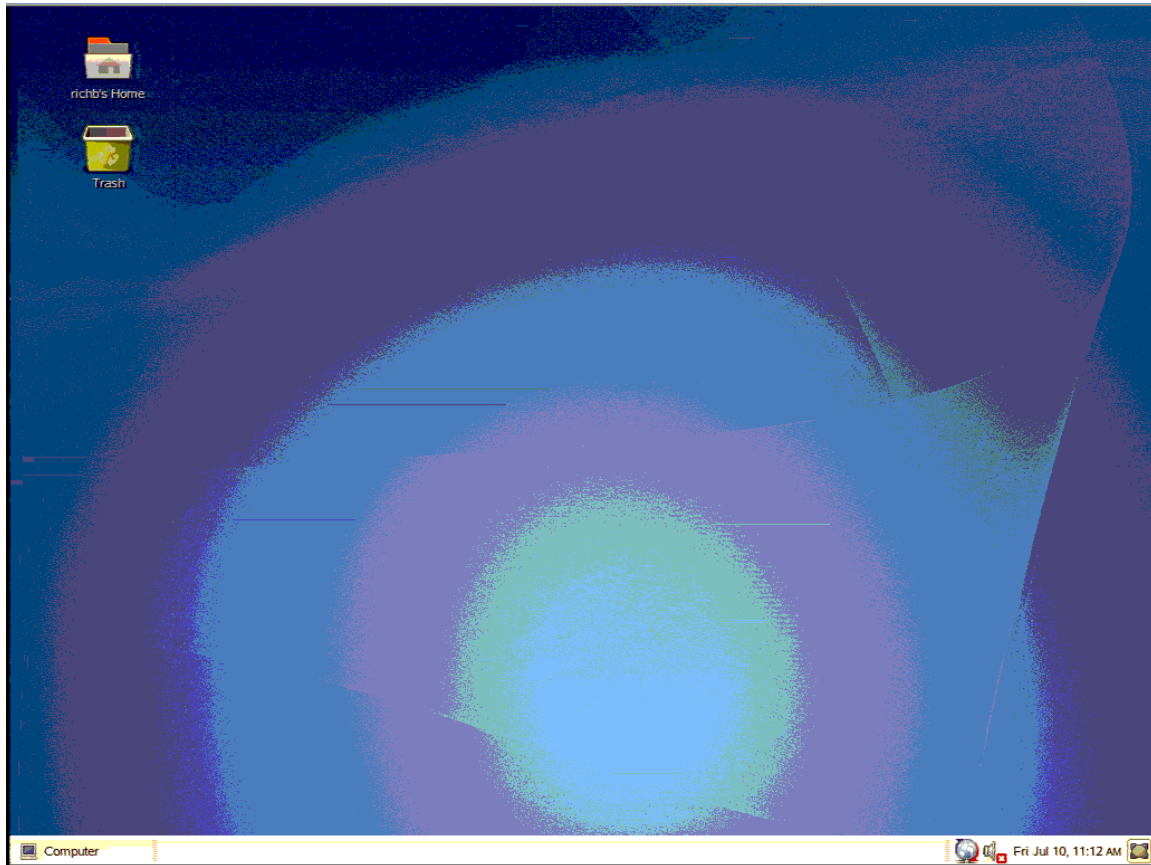
Note if you are using a Remote Console, or any console, and the graphics screen fails to appear, Ctrl-Alt-F1 will enter text mode.



Enter your username and press Enter. The password panel will follow. Enter your password and press Enter.

1.2.25 Desktop

Done!



1.3 Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

*IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.*

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

*IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan*

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

*IBM Corporation
MW9A/050
5600 Cottle Road
San Jose, CA 95193
U.S.A.*

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy,

modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

1.4 Trademarks

IBM, the IBM logo, and BladeCenter are registered trademarks of International Business Machines in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

End of Document