

BladeBoot SLES 11

BladeBoot
Software-Based iSCSI Boot
For SLES 11 on IBM Blades

Note

Before using this information and the product it supports, read the information in “Notices”, on page 30.

© 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 11	4
1.1	Infrastructure Preparation	4
1.2	Requirements	4
1.3	Install SLES	5
1.3.1	Installation Settings	5
1.3.2	Network	6
1.3.2.1	Network Device.....	6
1.3.2.2	Network Configuration	7
1.3.2.3	Enter IP Address.....	8
1.3.3	Language, Keyboard, License.....	9
1.3.4	Media Check	10
1.3.5	iSCSI Initiator Overview	11
1.3.6	System Probing	12
1.3.7	Installation Mode	13
1.3.8	Clock and Time Zone	14
1.3.9	Server Base Scenario	15
1.3.10	Installation Settings.....	16
1.3.11	Perform Installation	17
1.3.12	Password	18
1.3.13	Hostname and Domain Name.....	19
1.3.14	Network Configuration	20
1.3.15	Test Internet Connection.....	21
1.3.16	Installation Overview.....	22
1.3.17	User Authentication Method.....	23
1.3.18	New Local User.....	24
1.3.19	Release Notes	25
1.3.20	Hardware Configuration	26
1.3.21	Installation Complete	27
1.3.22	Login	28
1.3.23	Desktop.....	29
1.4	Notices.....	30
1.5	Trademarks	32

1 SLES 11

1.1 Infrastructure Preparation

You will need:

1. IBM BladeCenter (chassis for Blades)
2. IBM Blade with BladeBoot support.
 - a. Latest BIOS Firmware Update
 - b. Latest BMC Firmware Update
3. IBM iSCSI Configuration Manager (software utility)
4. iSCSI Target such as an IBM N3700 (storage appliance)

The following link can assist in locating some of the required items:

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

1.2 Requirements

1. Configure your iSCSI Target to provide a LUN.
 - a. Preferably the LUN is cleared out when created (all zeros in the first sector at a minimum).
2. Configure your Blade for iSCSI Boot.
3. Power on the Blade and verify that the IBM iSCSI Firmware Initiator is invoked and that it successfully logs in to the iSCSI Target.

You cannot proceed past this point until your SAN configuration is verified as described.

4. SUSE Linux Enterprise Server 11

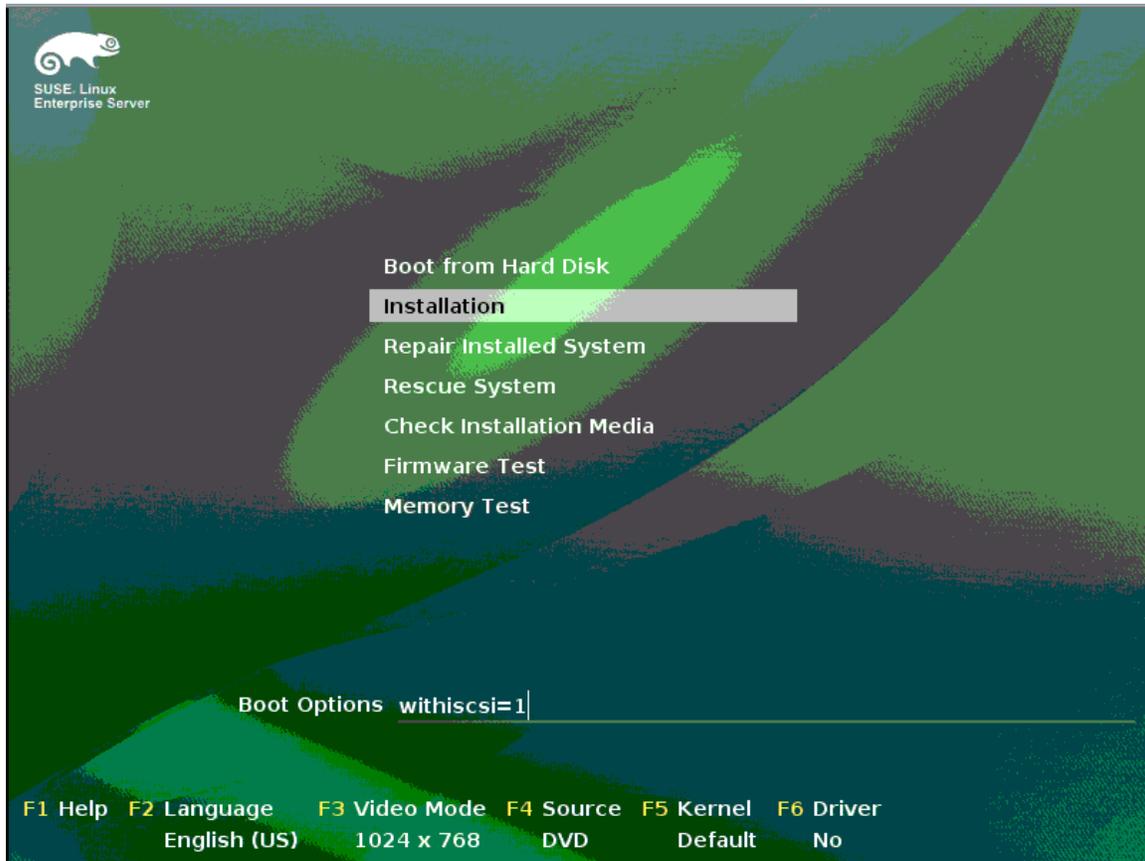
1.3 Install SLES

The list of possible consoles used to install SLES 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.

1.3.1 Installation Settings

Start the installation as follows:

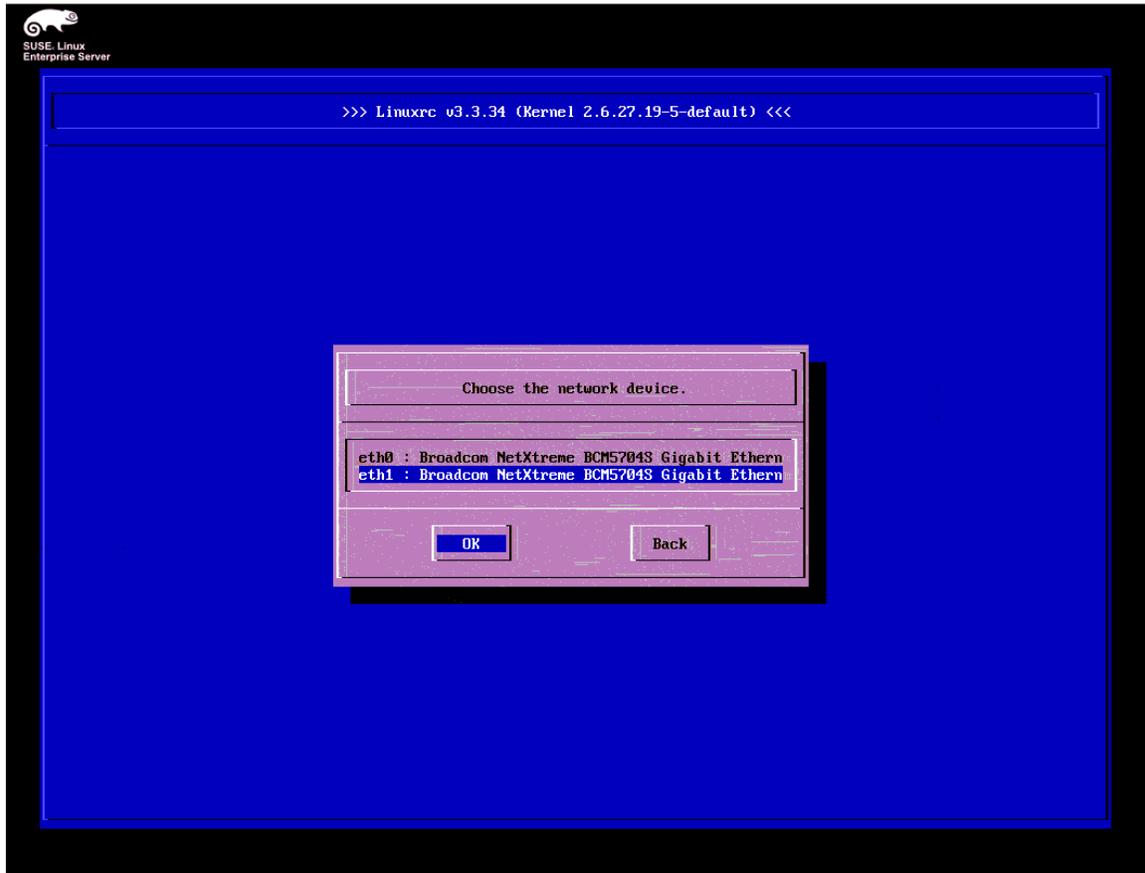
1. Boot the SUSE Linux Enterprise Server DVD (or CD 1).
2. On the boot screen, press F3, scroll to 1024 x 768, and press Enter.
3. For an iSCSI Boot installation, select Installation and enter *withiscsi=1* at the Boot Options prompt.
4. Press Enter.



1.3.2 Network

1.3.2.1 Network Device

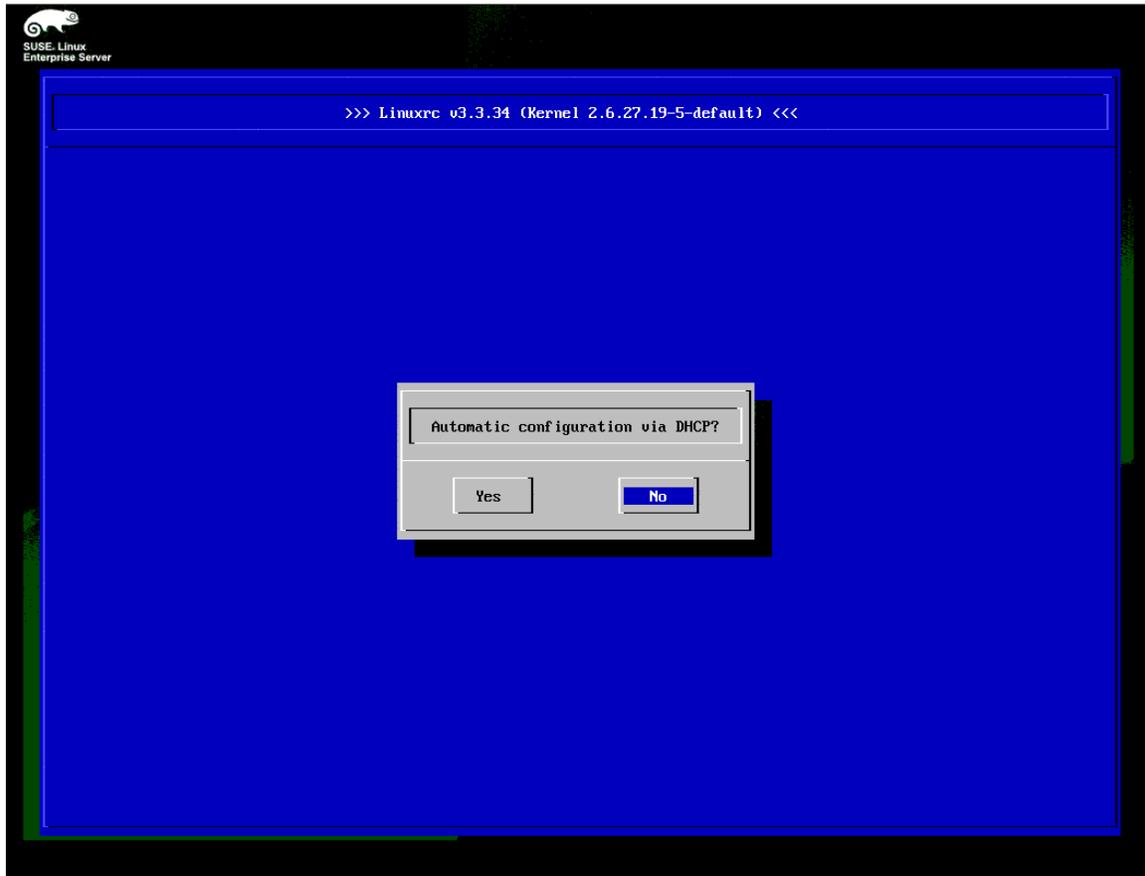
Select the device connected to the iSCSI SAN.



Select OK.

1.3.2.2 Network Configuration

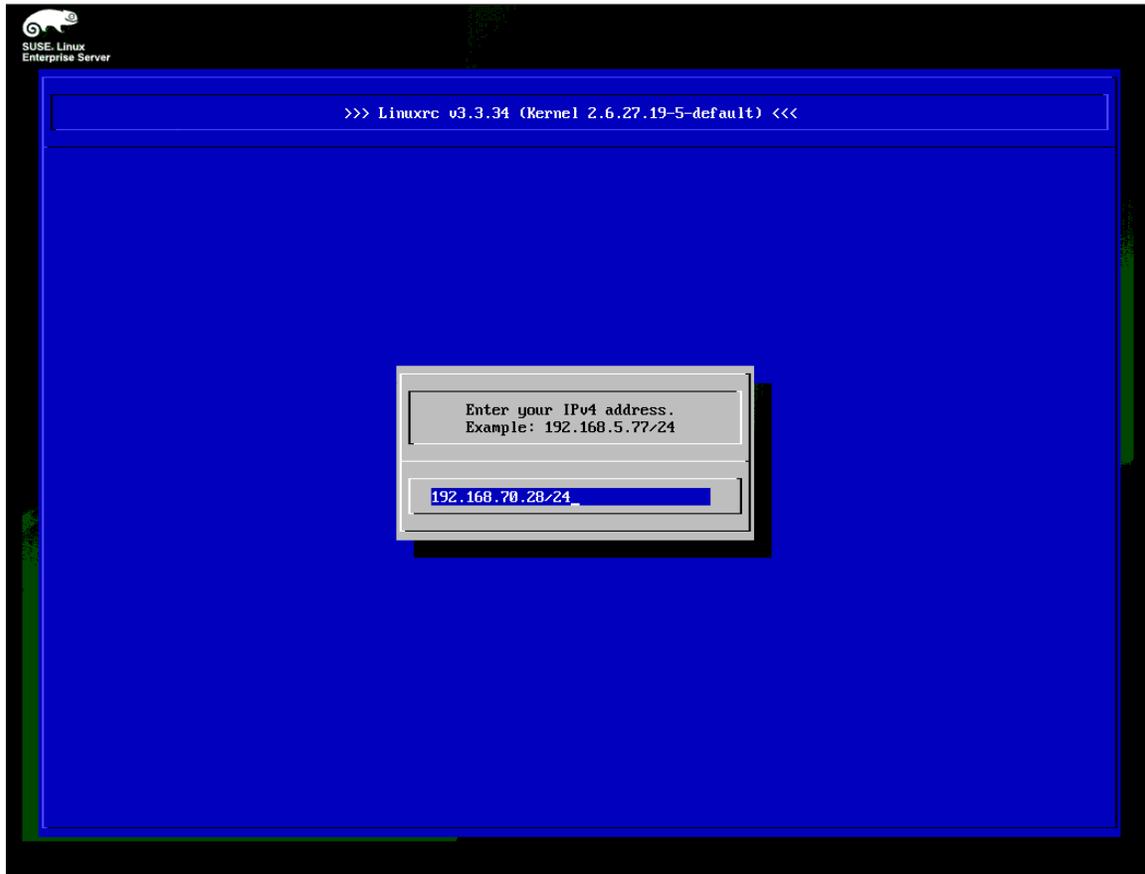
At the “Automatic configuration via DHCP” prompt make a selection based on your network infrastructure.



Click Yes (DHCP) or No (Static IP).

1.3.2.3 Enter IP Address

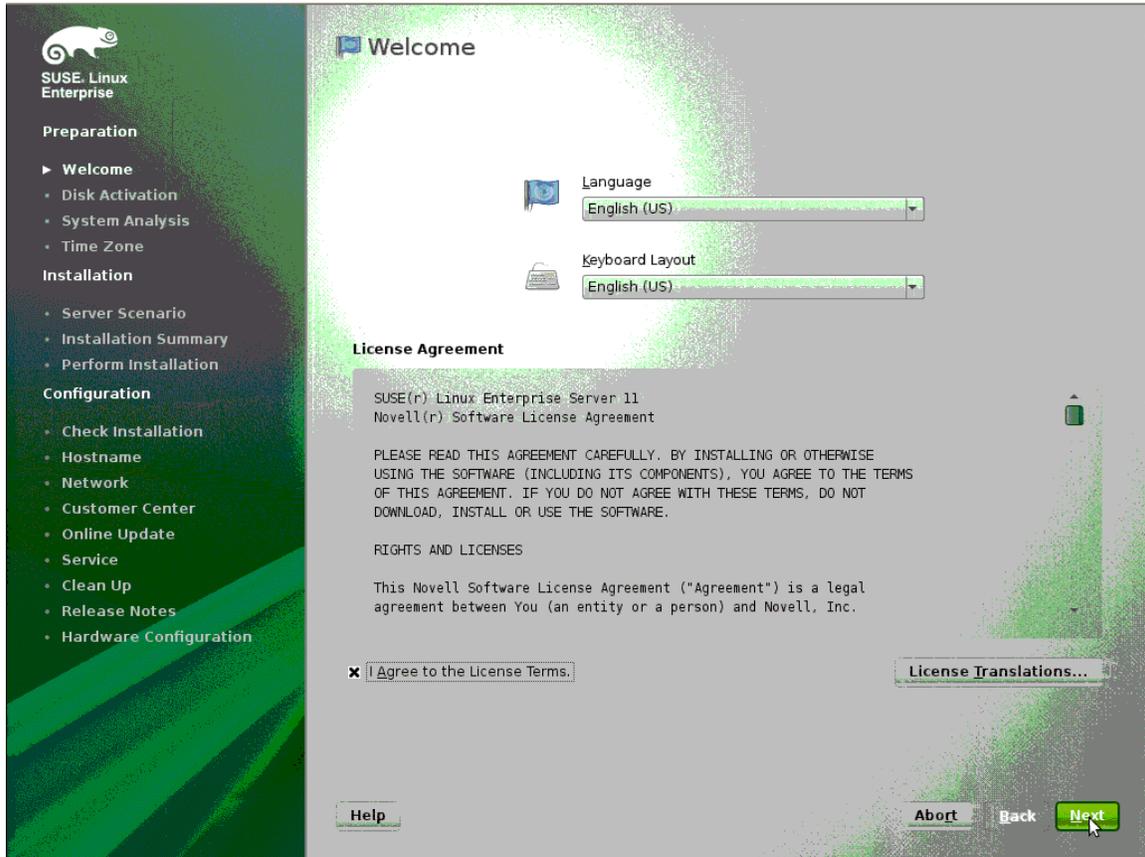
If you selected “No” to DHCP you will be prompted to enter your networking information.



Various network panels will follow. Fill them in as appropriate.

1.3.3 Language, Keyboard, License

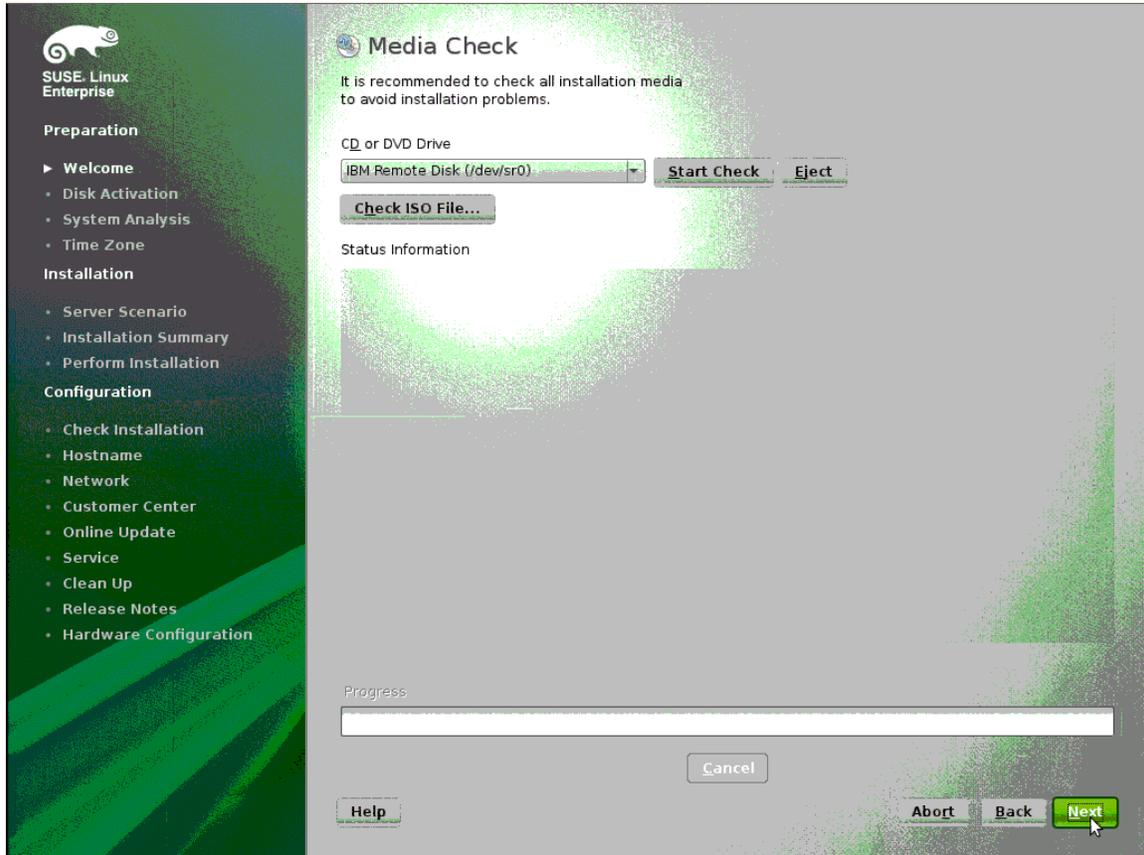
Read the License Agreement, and if you agree select “Yes, I Agree to the License Agreement”.



Click Next.

1.3.4 Media Check

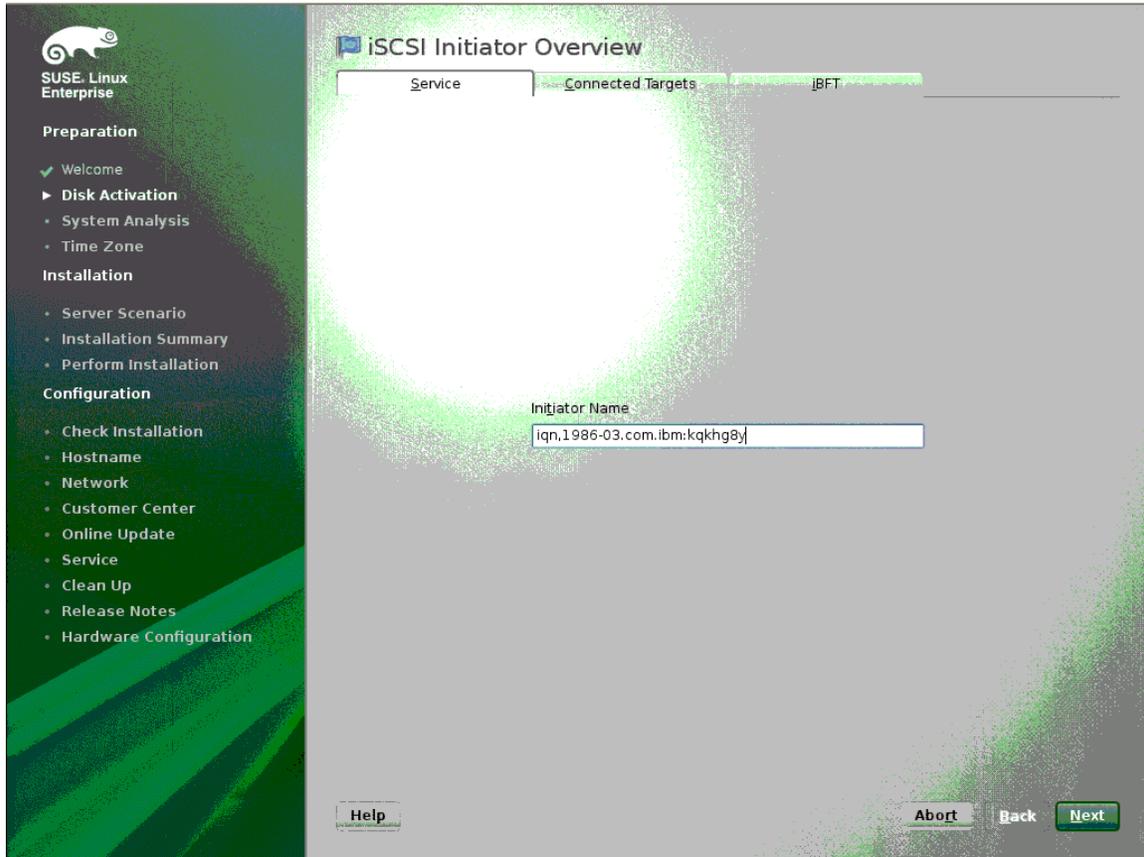
Select as appropriate.



Click Next.

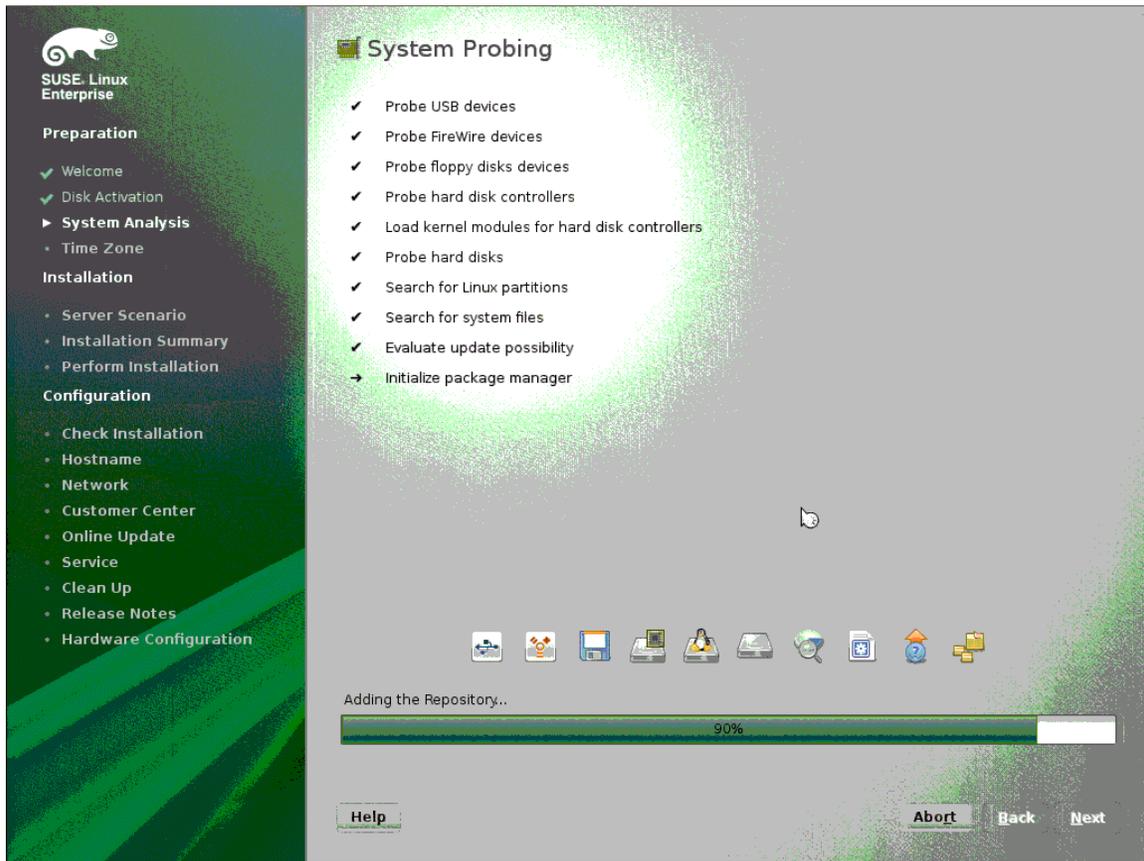
1.3.5 iSCSI Initiator Overview

Under the Service tab replace the autogenerated Initiator Name with the initiator name as shown under the iBFT tab.



Click Next.

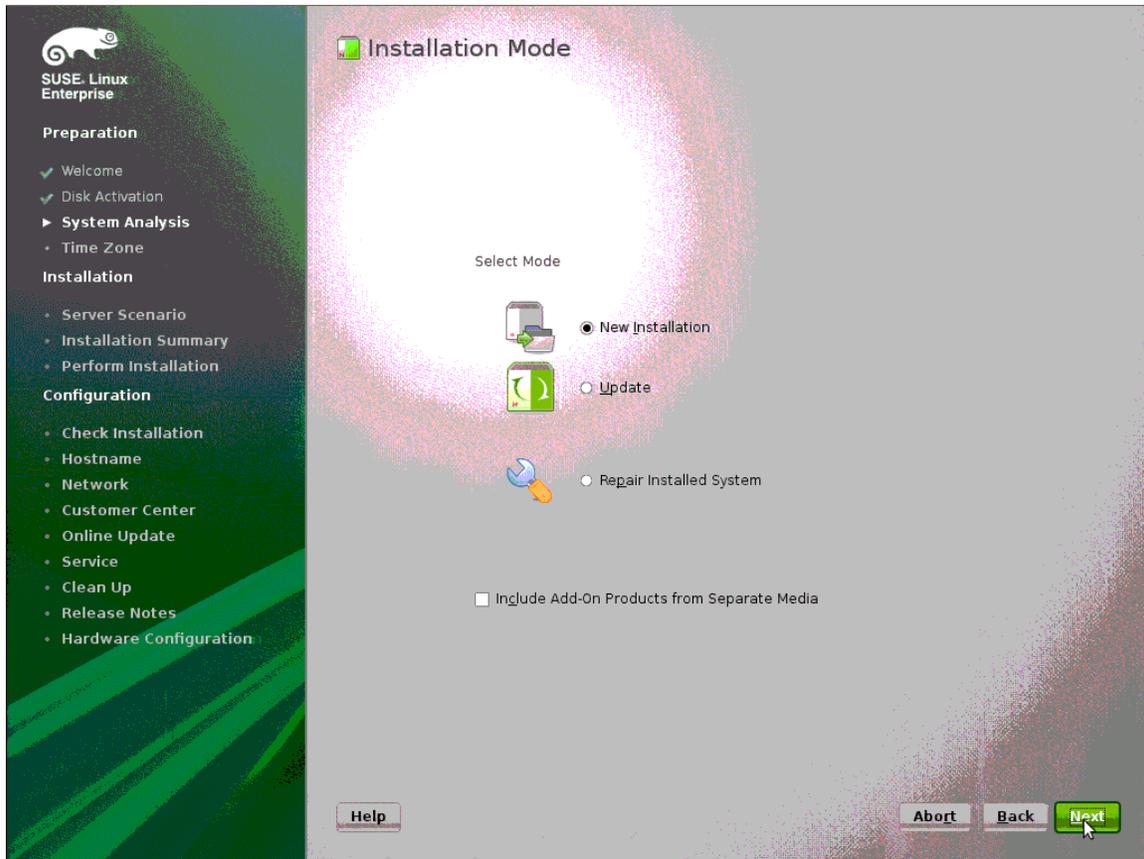
1.3.6 System Probing



Click Next.

1.3.7 Installation Mode

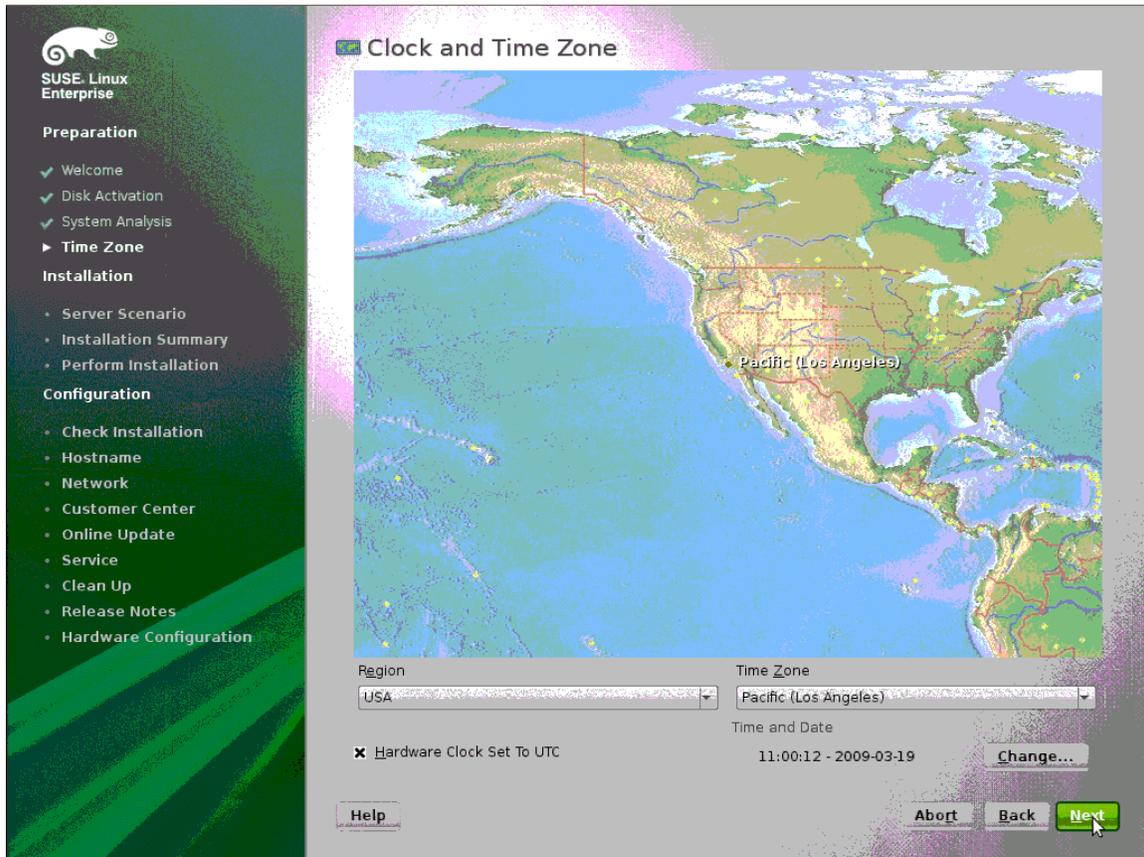
Select New Installation.



Click Next.

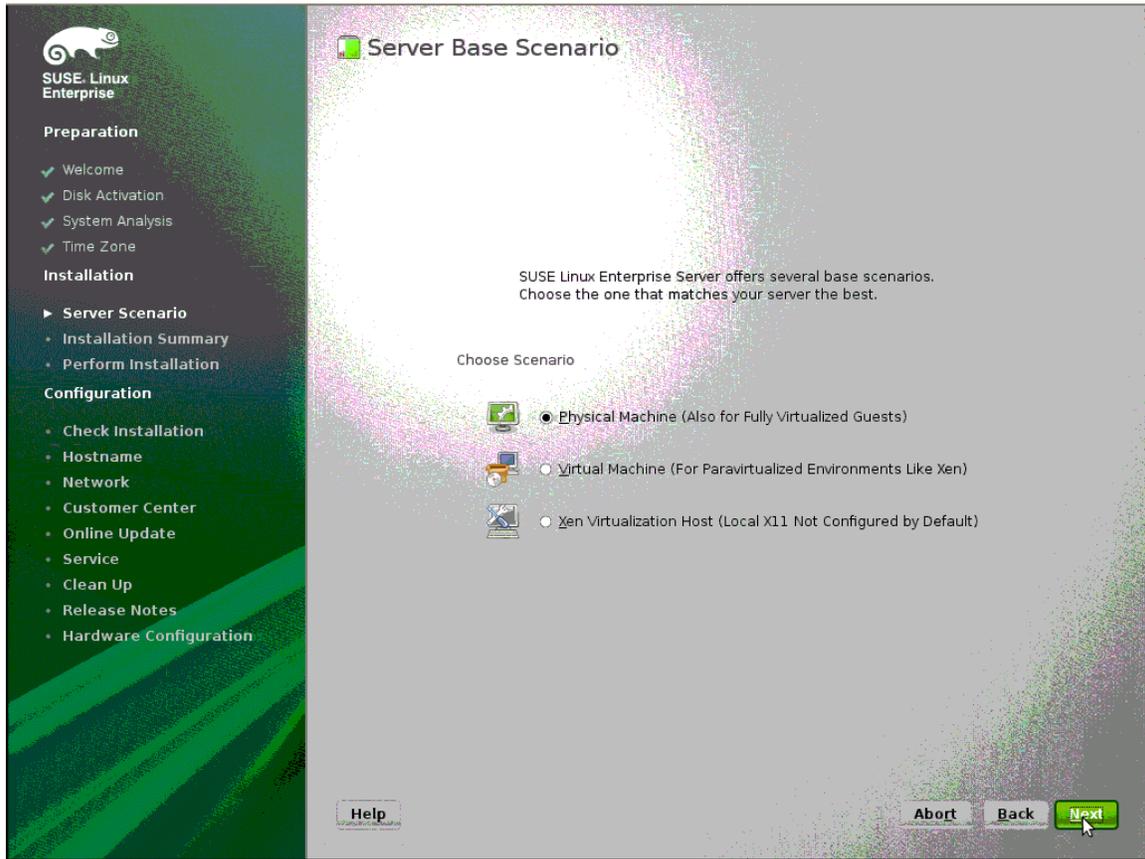
1.3.8 Clock and Time Zone

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



Click Next.

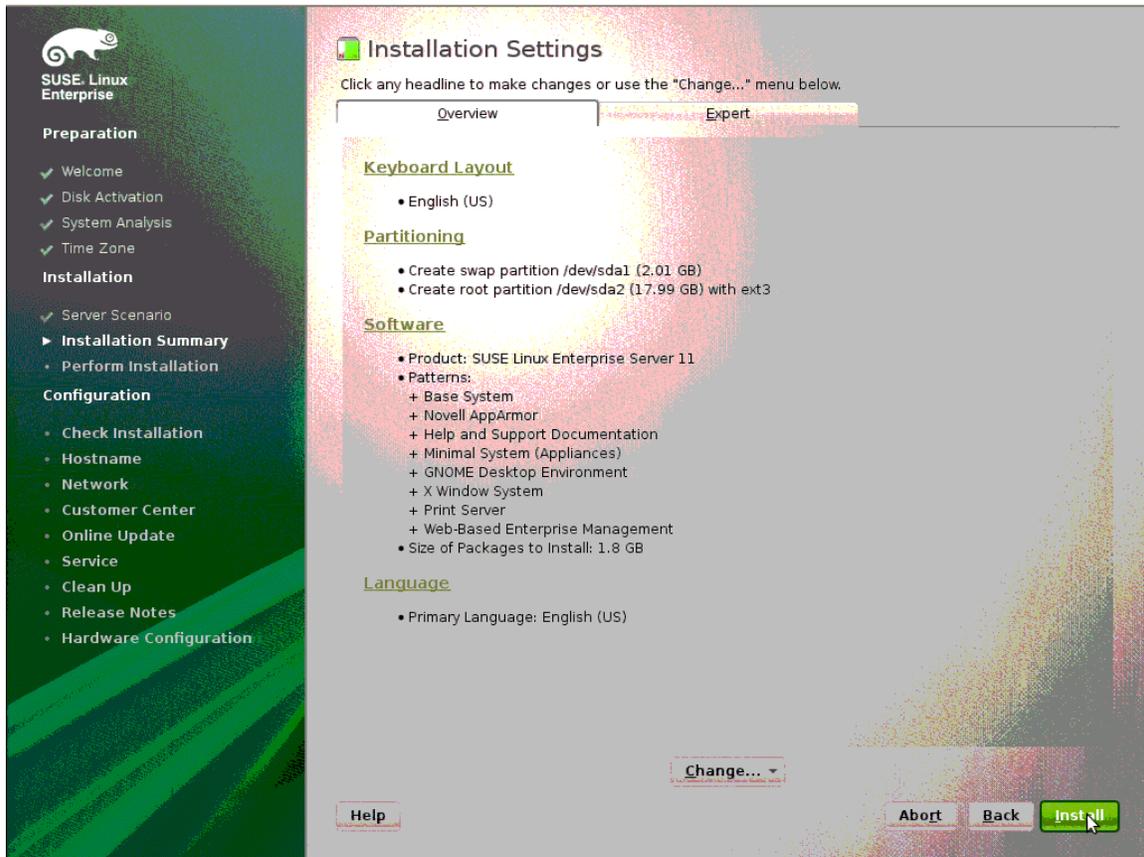
1.3.9 Server Base Scenario



Click Next.

1.3.10 Installation Settings

The defaults are fine for a reference install. Make changes appropriate to your requirements.



Click Install.

1.3.11 Perform Installation

Installation proceeds...

The screenshot shows the 'Perform Installation' window in the SUSE Linux Enterprise 11 installer. On the left is a navigation pane with sections: Preparation (Welcome, Disk Activation, System Analysis, Time Zone), Installation (Server Scenario, Installation Summary, Perform Installation), and Configuration (Check Installation, Hostname, Network, Customer Center, Online Update, Service, Clean Up, Release Notes, Hardware Configuration). The 'Perform Installation' section is active. The main area displays a table of media, a list of actions performed, and progress bars for specific packages and overall installation.

Media	Size	Packages	Time
Total	1.68 GB	959	42:21
SUSE-Linux-Enterprise-Server-11 11-0			
Medium 1	1.68 GB	959	42:21

Actions performed:

- installing latex2ntmi-pngicons-2002.2.1-004.31.noarch.rpm (installed size 8.00 kB)
- Installing iso-codes-3.3-1.20.noarch.rpm (installed size 5.98 MB)
- Installing hicolor-icon-theme-0.10-102.22.noarch.rpm (installed size 48.00 kB)
- Installing gnome2-user-docs-2.24.0-1.32.noarch.rpm (installed size 22.83 MB)
- Installing gnome-mime-data-2.18.0-67.26.noarch.rpm (installed size 3.54 MB)
- Installing gnome-menus-branding-SLED-11.1-14.26.noarch.rpm (installed size 9.00 kB)
- Installing gnome-icon-theme-2.24.0-1.16.noarch.rpm (installed size 10.46 MB)
- Installing gnome-audio-2.22.2-1.17.noarch.rpm (installed size 2.03 MB)
- Installing glib2-branding-SLES-2.16-47.3.noarch.rpm (installed size 4.00 kB)
- Installing desktop-translations-11.1-10.6.noarch.rpm (installed size 15.01 MB)
- Installing desktop-data-SLES-extra-gnome-11-22.1.noarch.rpm (installed size 6.14 MB)

Installing desktop-data-SLES-extra-gnome-11-22.1.noarch.rpm (installed size 6.14 MB)
Progress: 85%

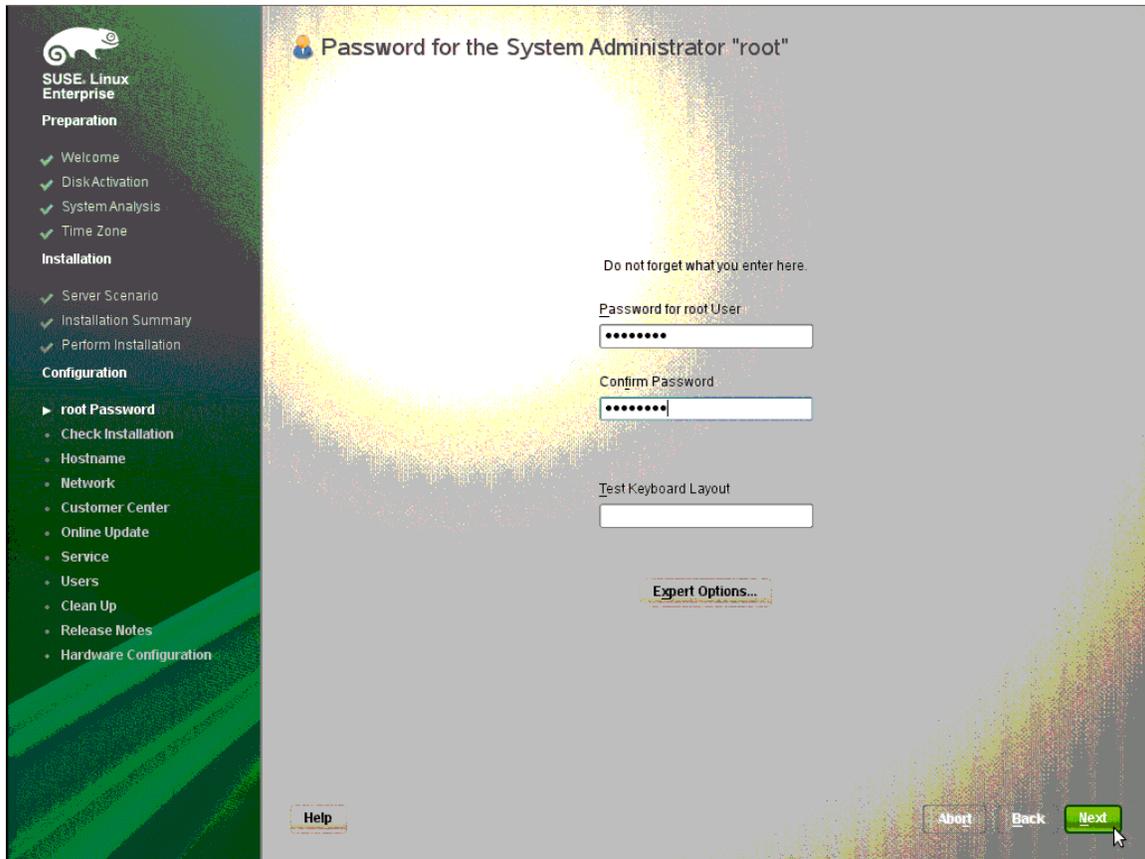
Installing Packages... (Remaining: 1.68 GB / 42:21)
Progress: 22%

Buttons: Help, Abort, Back, Next

When this phase completes the system reboots.

1.3.12 Password

Enter the password for the root user.



The screenshot shows the SUSE Linux Enterprise installation interface. On the left is a navigation pane with the following sections:

- Preparation**
 - ✓ Welcome
 - ✓ Disk Activation
 - ✓ System Analysis
 - ✓ Time Zone
- Installation**
 - ✓ Server Scenario
 - ✓ Installation Summary
 - ✓ Perform Installation
- Configuration**
 - ▶ **root Password**
 - Check Installation
 - Hostname
 - Network
 - Customer Center
 - Online Update
 - Service
 - Users
 - Clean Up
 - Release Notes
 - Hardware Configuration

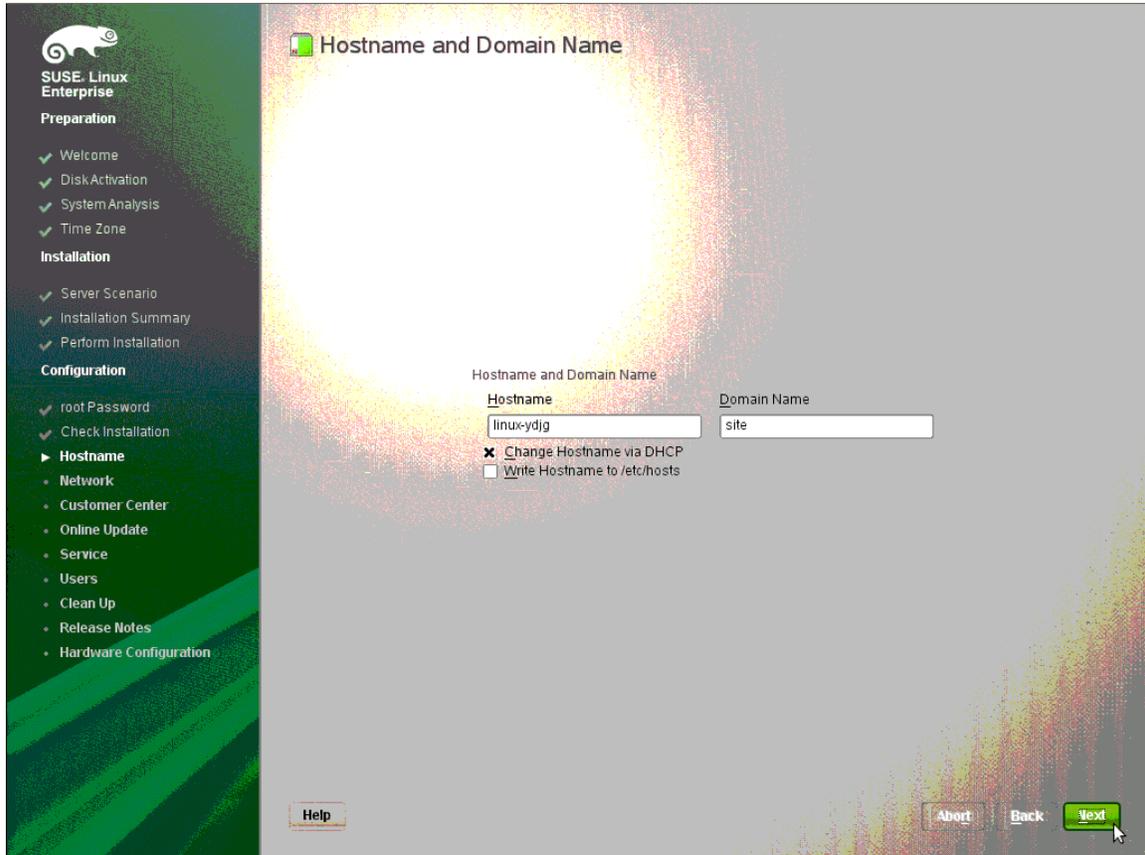
The main window is titled "Password for the System Administrator 'root'". It contains the following elements:

- A warning: "Do not forget what you enter here."
- A label "Password for root User:" followed by a text input field containing seven dots.
- A label "Confirm Password" followed by a text input field containing seven dots.
- A label "Test Keyboard Layout" followed by a text input field.
- An "Expert Options..." button.
- At the bottom, there are three buttons: "Help", "Abort", and "Next". The "Next" button is highlighted in green and has a mouse cursor over it.

Click Next.

1.3.13 Hostname and Domain Name

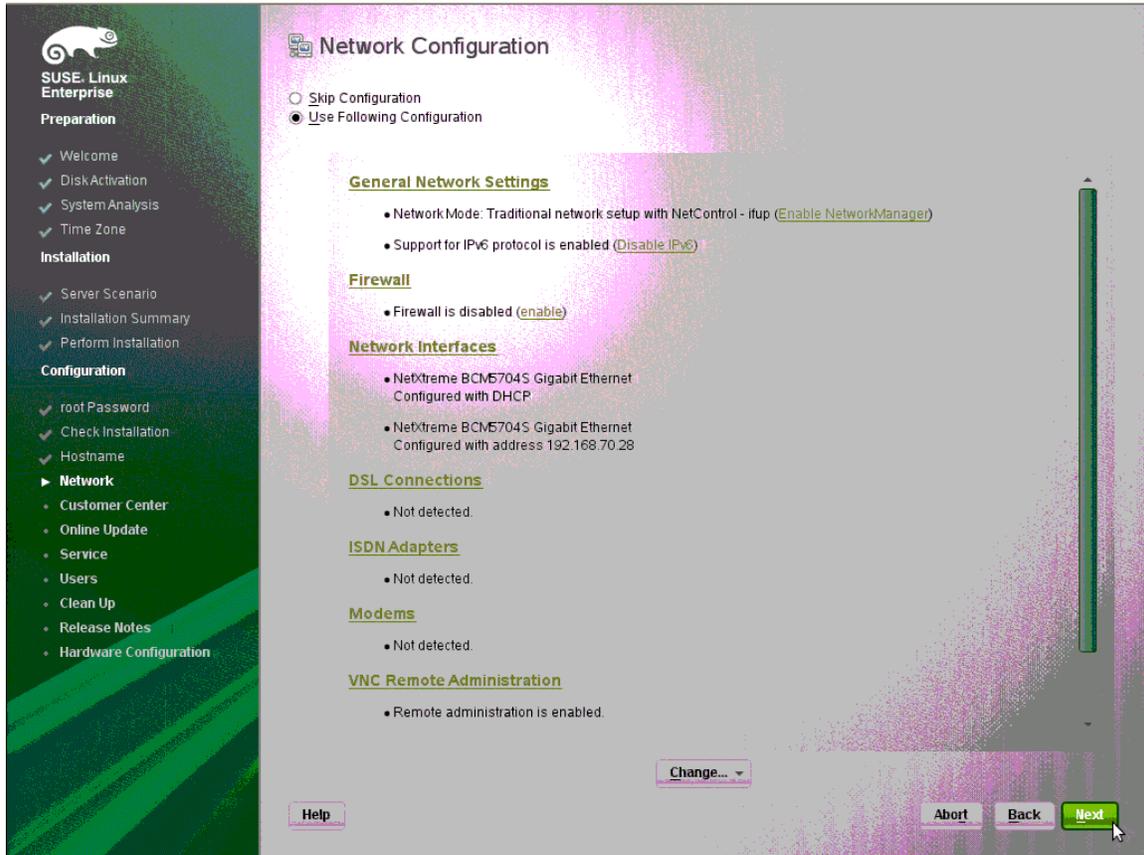
Update as appropriate.



Click Next.

1.3.14 Network Configuration

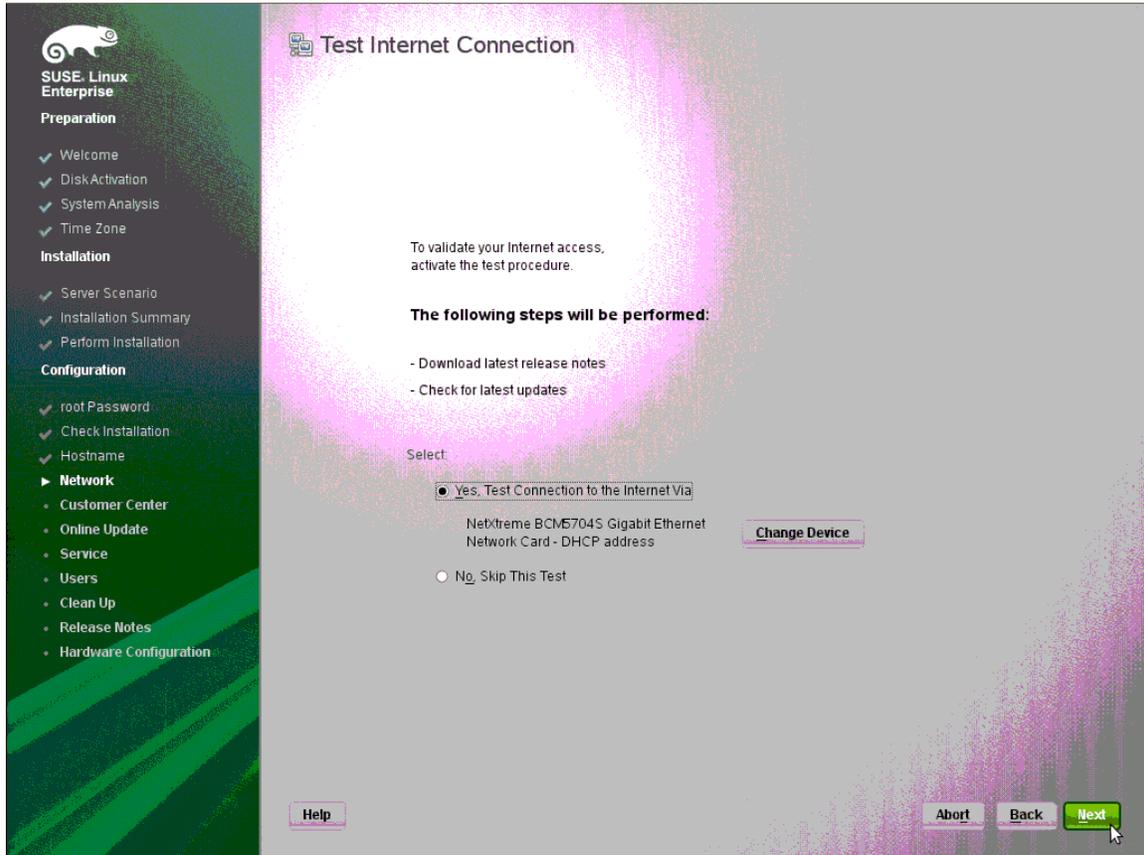
You might want to disable the firewall if you are testing in a secure lab environment. You can configure other NICs in the system at this time as well.



Click Next.

1.3.15 Test Internet Connection

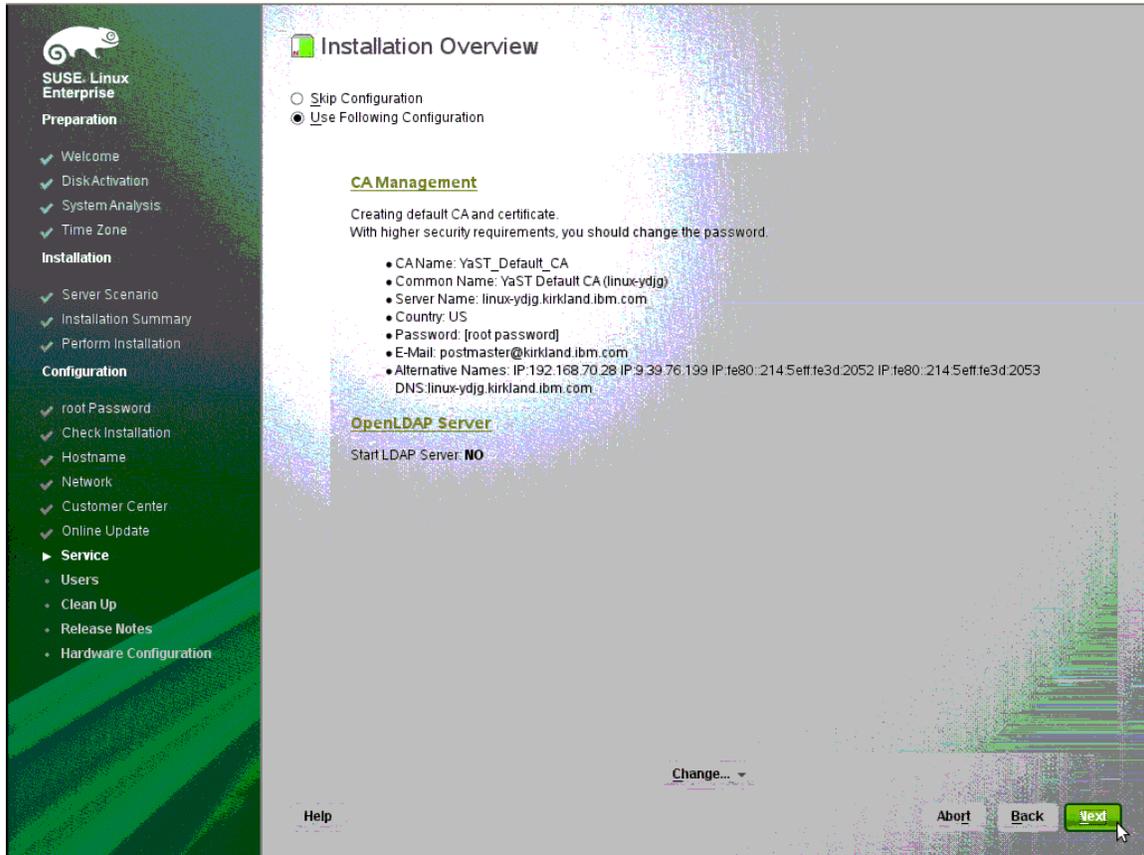
If you want to Test make sure you select the NIC that is connected to your LAN that is connected to the Internet.



Click Next.

1.3.16 Installation Overview

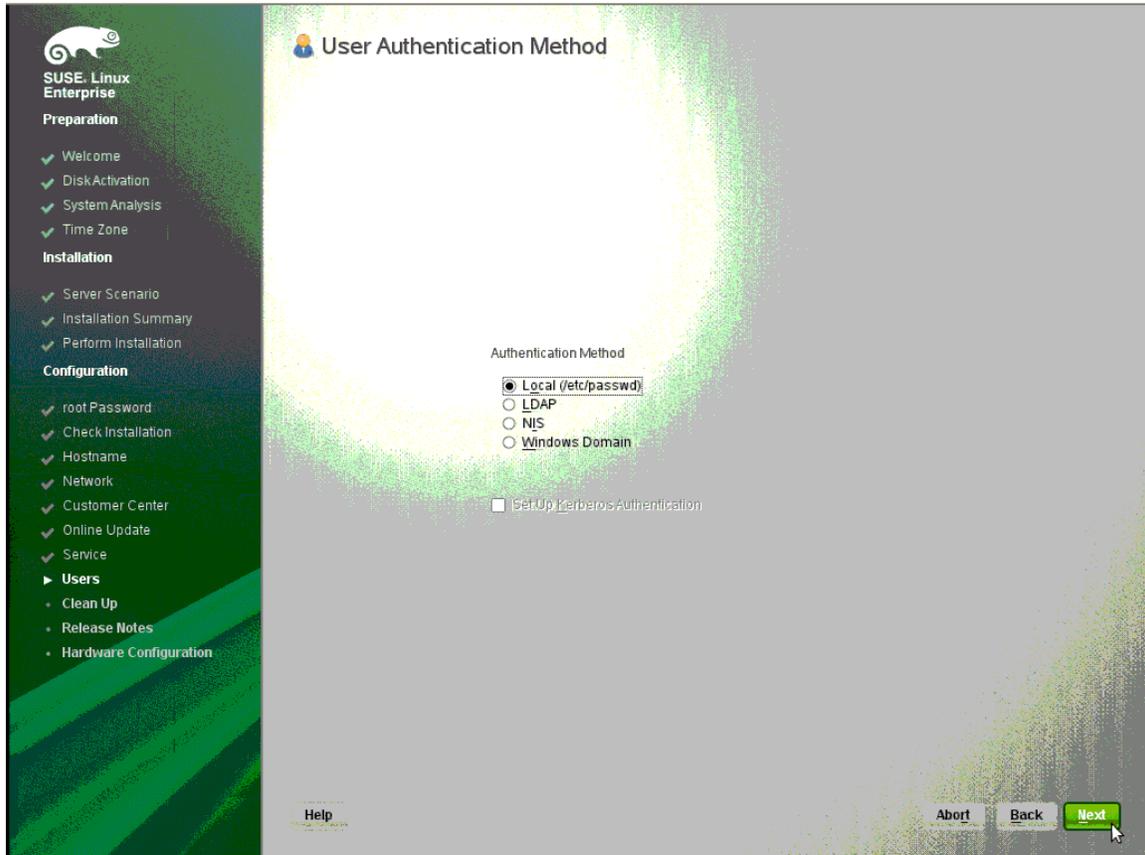
Change as required.



Click Next.

1.3.17 User Authentication Method

Select as appropriate.



Click Next.

1.3.18 New Local User

Enter user information.

SUSE Linux Enterprise

Preparation

- ✓ Welcome
- ✓ Disk Activation
- ✓ System Analysis
- ✓ Time Zone

Installation

- ✓ Server Scenario
- ✓ Installation Summary
- ✓ Perform Installation

Configuration

- ✓ root Password
- ✓ Check Installation
- ✓ Hostname
- ✓ Network
- ✓ Customer Center
- ✓ Online Update
- ✓ Service

Users

- Clean Up
- Release Notes
- Hardware Configuration

New Local User

User's Full Name
Rich B

Username
richb

Password
••••••

Confirm Password
••••••

Receive System Mail
 Automatic Login

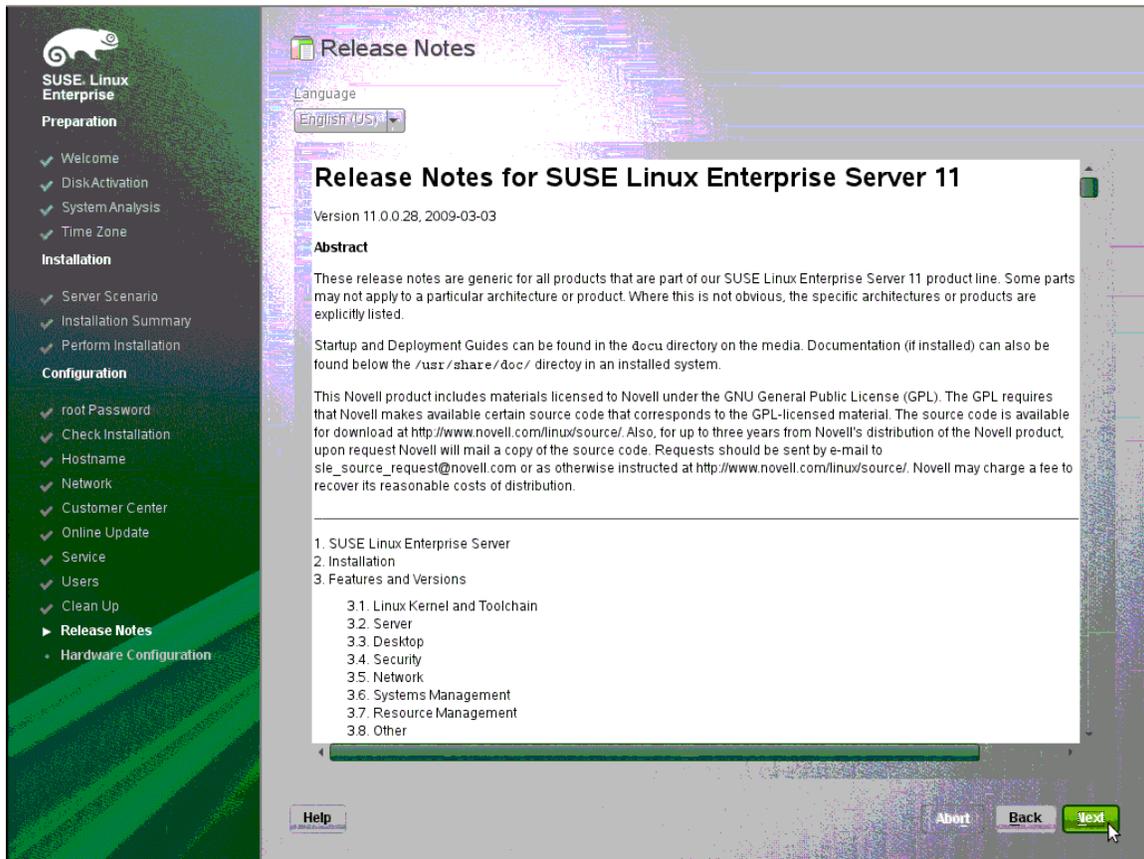
User Management

Help Abort Back **Next**

Click Next.

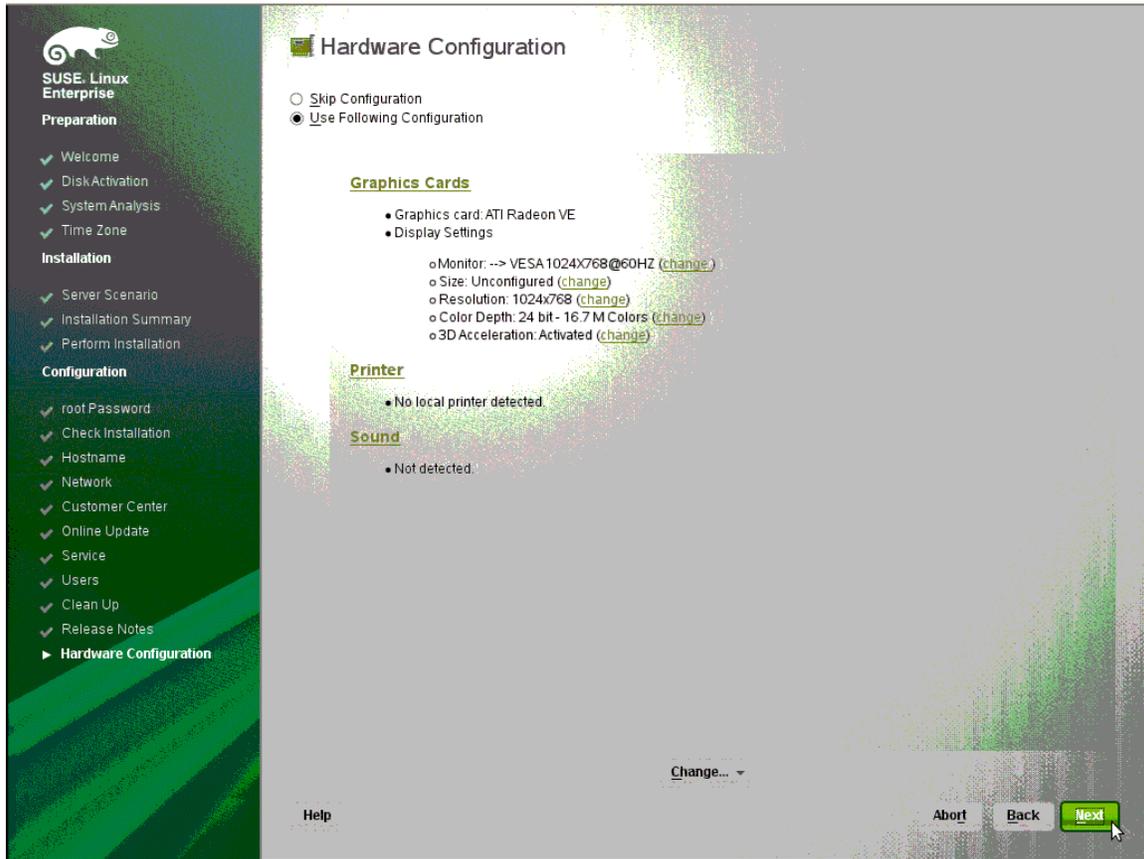
1.3.19 Release Notes

Browse the release notes.



Click Next.

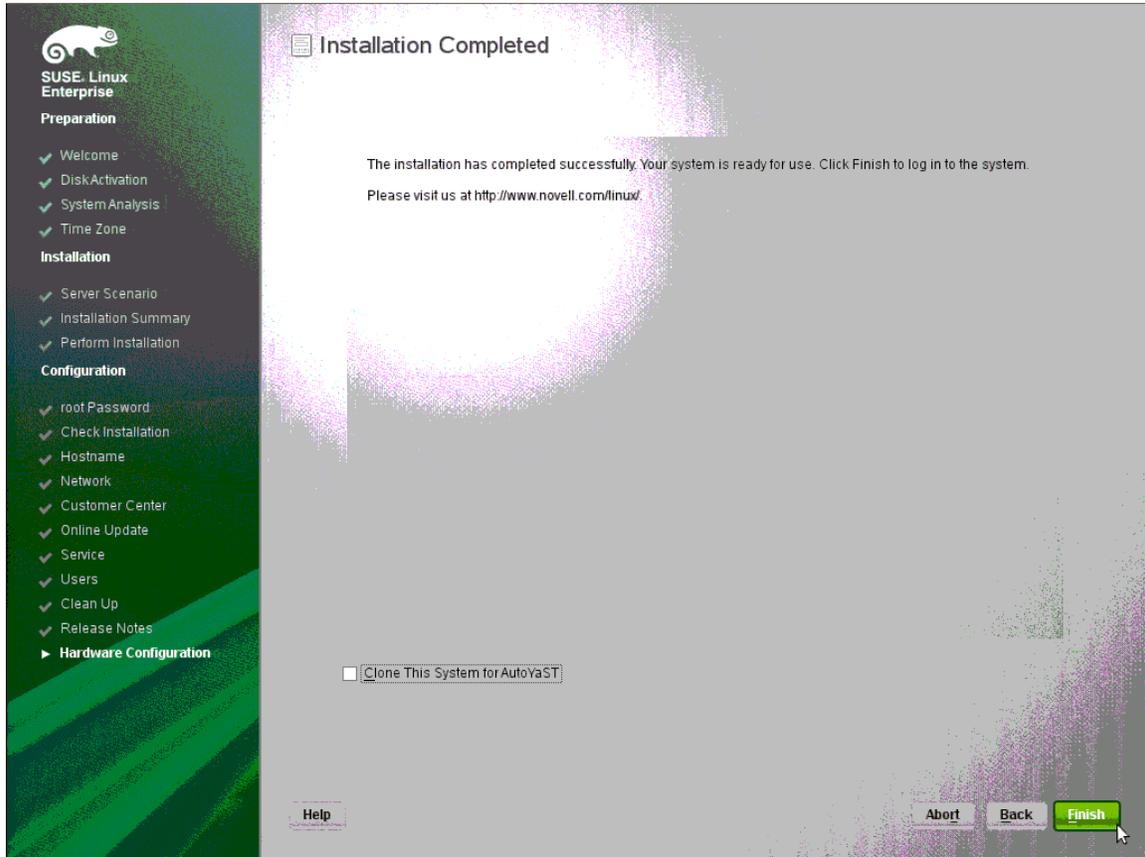
1.3.20 Hardware Configuration



Click Next.

1.3.21 Installation Complete

Congratulations! The install is complete.

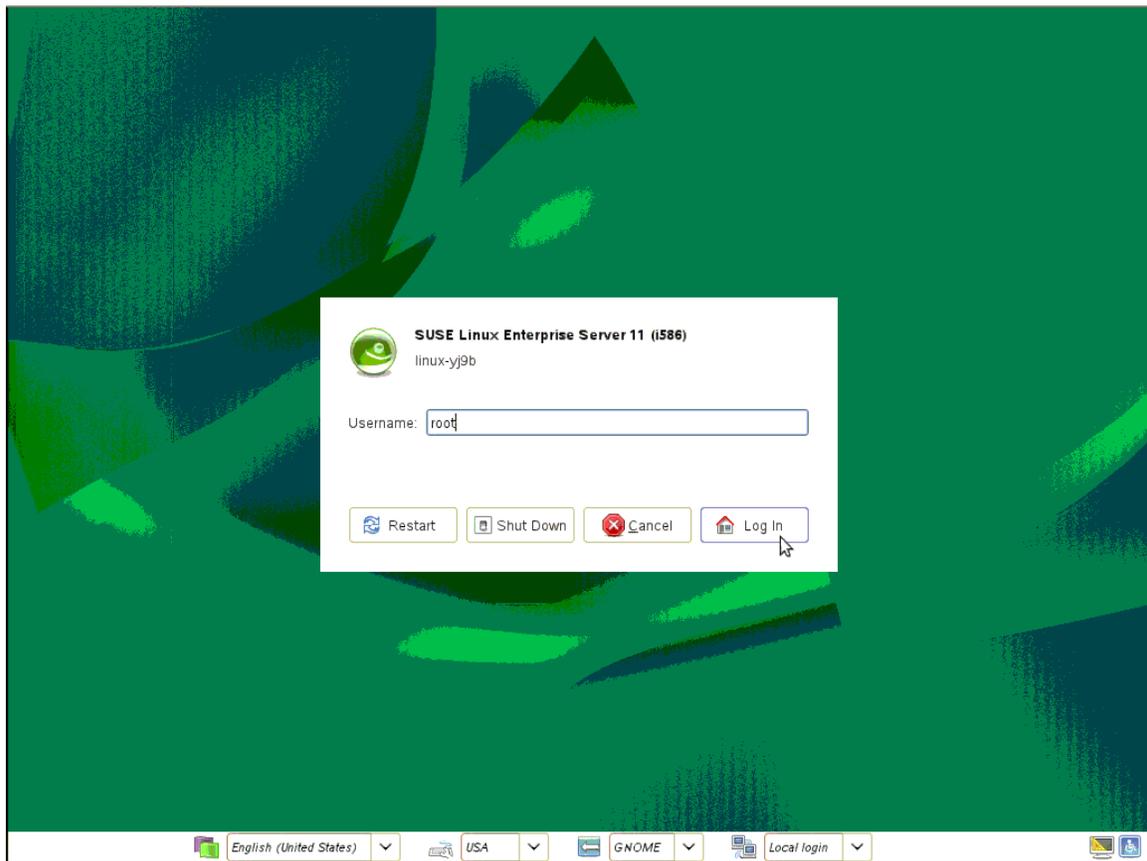


Click Finish.

1.3.22 Login

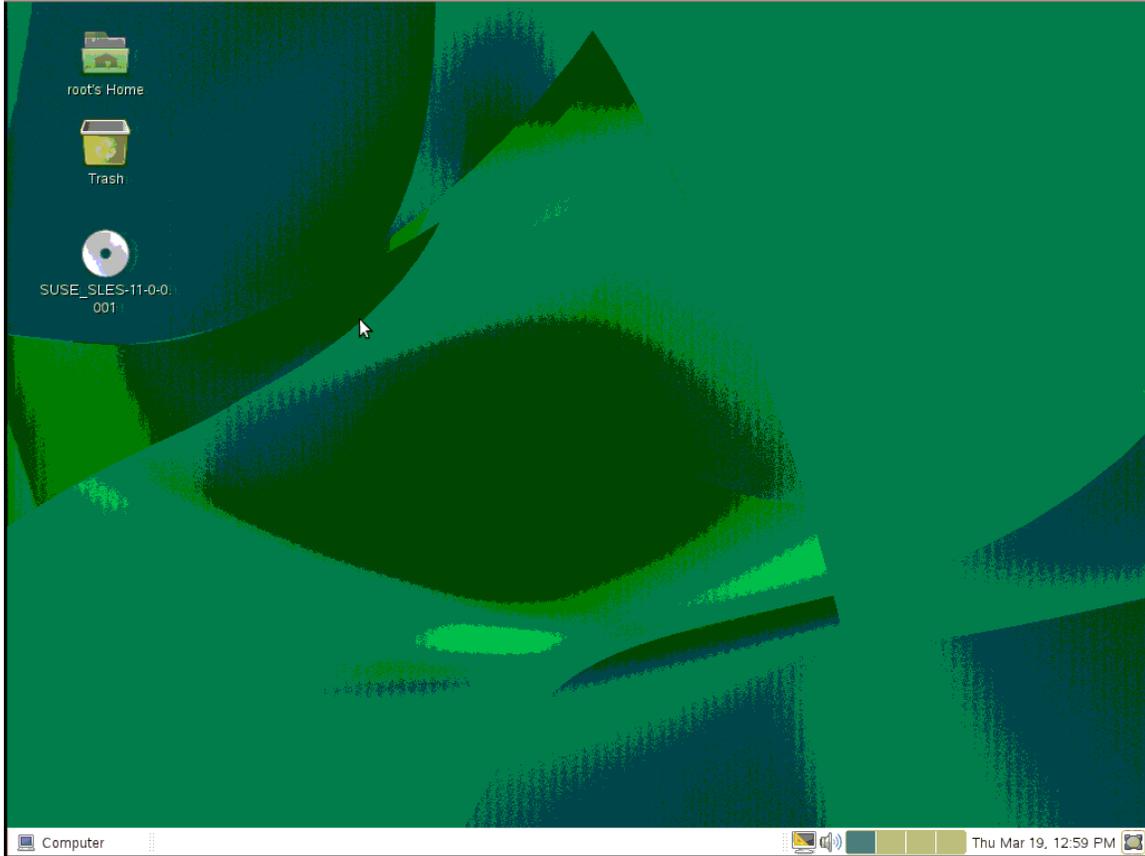
Note if you are using a Remote Console, or any console, and the graphics screen fails to appear, Ctrl-Alt-F1 will enter text mode.

Login.



1.3.23 Desktop

Done!



1.4 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.

1.5 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