OpenSUSE Leap 15.1
Installation & Configuration

Version 1.1 January 2020

Introduction

This document outlines the procedure for installing openSUSE Leap 15.1 together with any configuration required when utilising OpenSUSE Leap 15.1 as the underlying operating system for running core and embedded SelectVoice applications; Soft PBX, Voice Processing, Vision and SSL Gateway.

Prerequisites

Splicecom recommend the following Server/Computing Platforms for supporting SelectVoice applications, running on the OpenSUSE Linux operating system.

Size			Processor Max. no. of users	Memory	Max. no. of trunks
Small (MAP Solo)	Dual Core	2Gb	20	15	
Medium (MAP)	Quad Core	4Gb	500	90	
Large	Quad Core	8Gb	1,000	120	

Please be aware that your choice of platform is important. We strongly recommend you contact your Splicecom account manager to discuss the best platform to use for your customers application.

Please ensure that your Linux machine has an Ethernet connection that is active, make sure a USB keyboard, mouse and DVD player are connected and that the machine is connected to a monitor.

SelectVoice/Maximiser Software

The following versions of SelectVoice software have been tested with openSUSE Leap 15.1.

SelectVoice 1.2.68 and above.
SSL Gateway 1.2.68 and above.

S8000 4.1.18 and above.
SSL Gateway 4.1.18 and above.

Vision Software

Vision 1.7.65 and above

** IMPORTANT **

Please make sure you complete **ALL** the stages especially the section **Update Network Drivers** Failure to do so will render Manager and Vision pages unusable.

Installing OpenSUSE Leap 15.1

Insert the installation openSUSE Leap 15.1 DVD into the attached drive and restart the machine. Press F12 (This may differ for different machine BIOS's) whilst the machine is booting. You will see the following boot menu.

Use the arrows keys to select the device you are using to upgrade the system.

After a short period of time the main start-up menu will be shown, Use the arrow keys, select Installation and press Return.
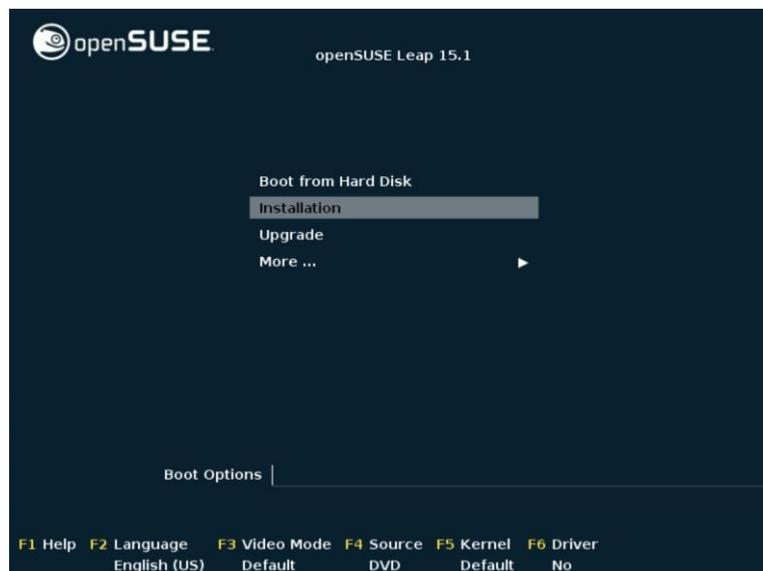
The upgrade process will now load, this may take a few minutes.

You will then be taken to the Language, Keyboard and Licence Agreement window, select 'English (UK) from the drop down list for the Language, the keyboard layout settings should automatically change.
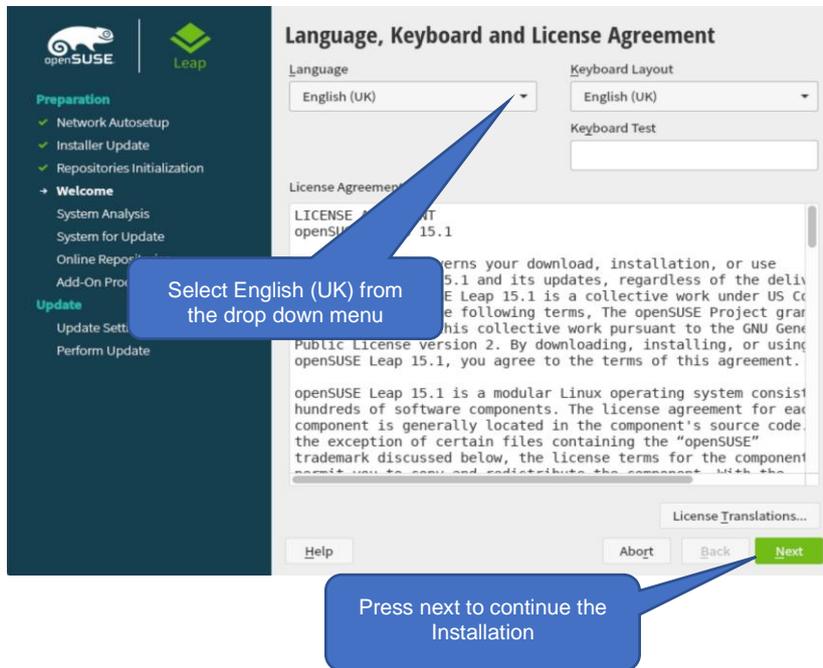
The installation process with progress with some system analysis so that it can continue with the installation.

If the system has a live internet connection you will be asked if you wish to use the online repositories, click yes to accept this option, and then click next to continue the installation.
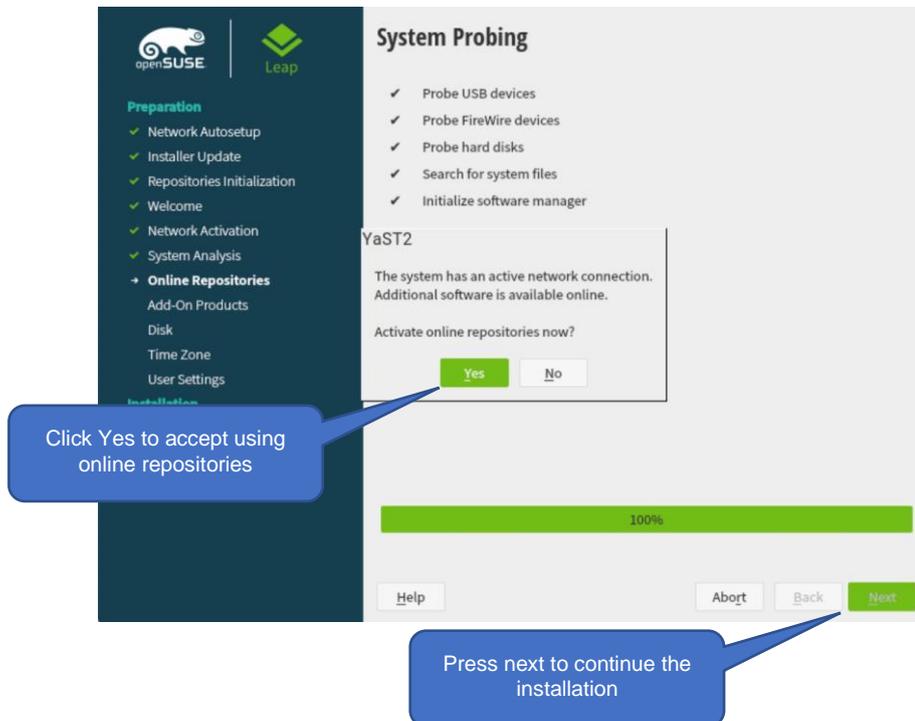
Click Next to accept the repositories.
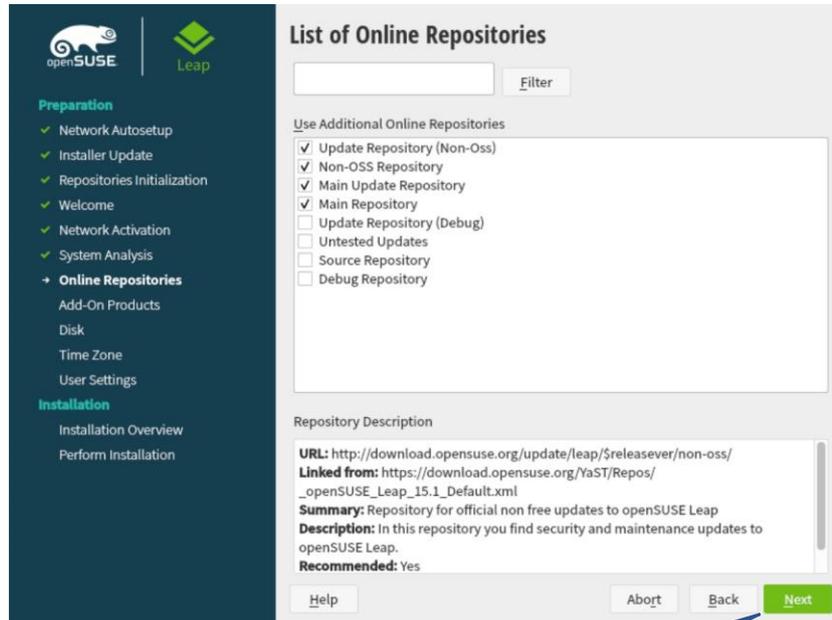
Press next to continue the installation

You will now asked to select the system role Splicecom only recommends the use of a server (Text mode interface only) installation as GUI installations have proved in the past to use system resource's.
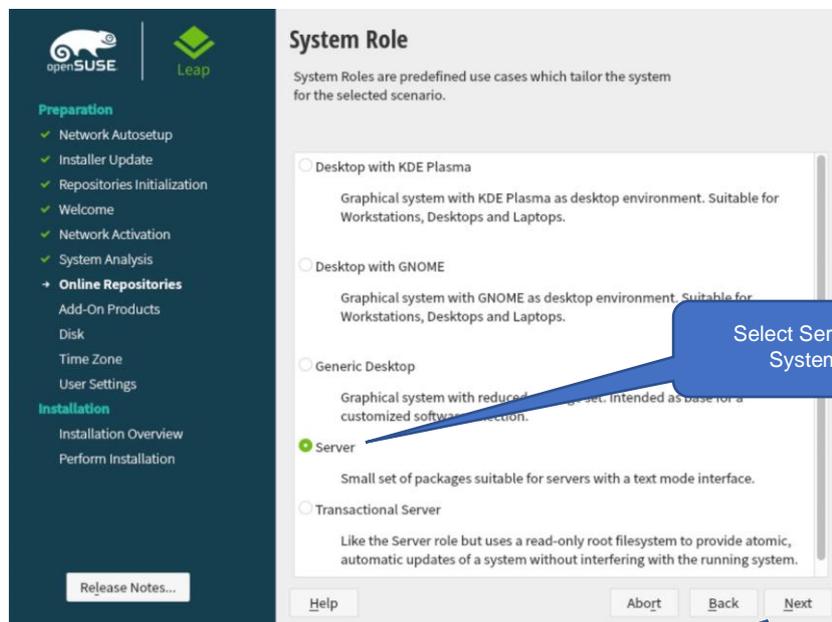
Select Server as the System Role

Press next to continue the installation

You will now be asked about the systems partition setup, Splicecom recommends the use of the whole disk without a separate user partition. Select Guided setup to setup the disk partitioning.
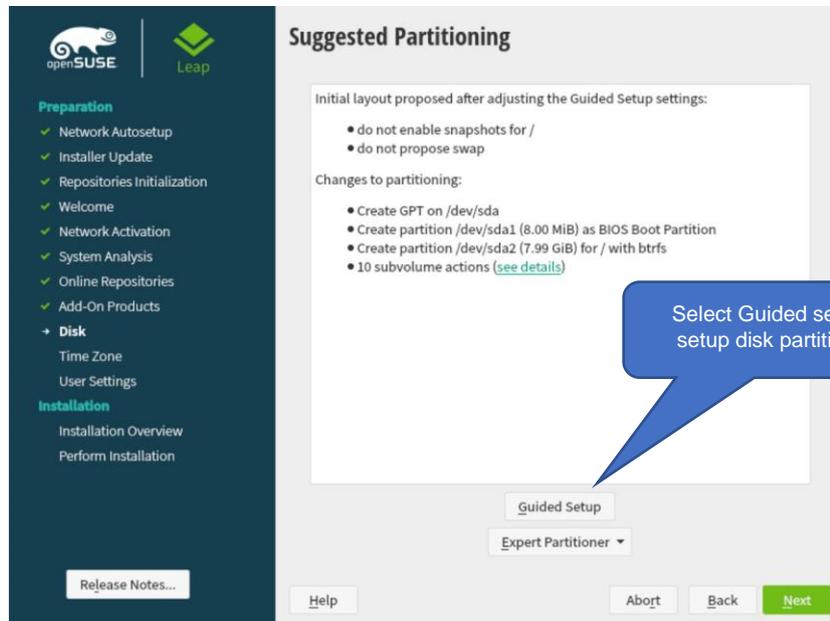
No changes are required for the Partitioning Scheme, click Next to continue the installation.
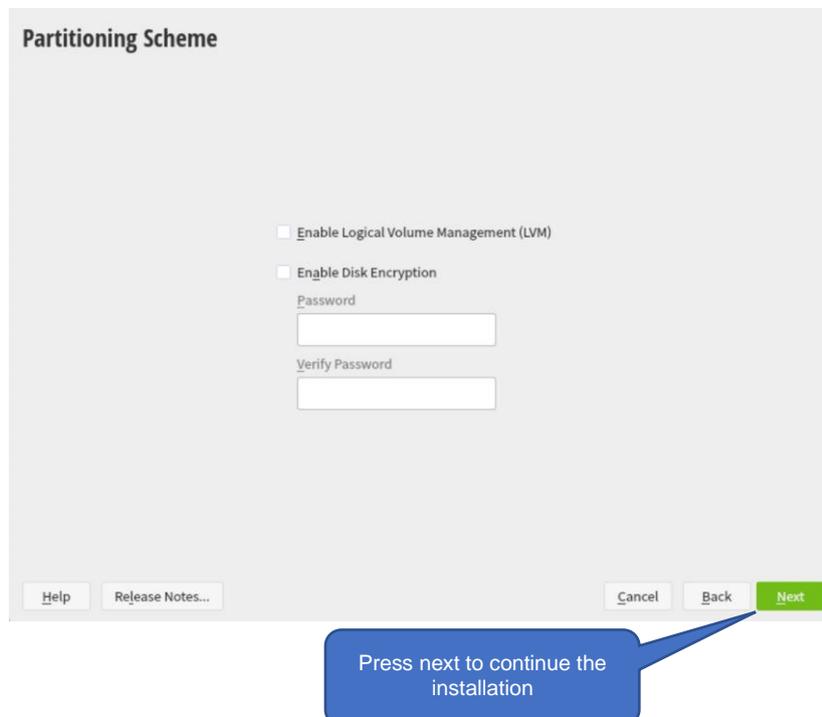
You will now be presented with the Filesystem Options screen, from the drop down list for file system type select Ext4, you should also tick 'Propose Separate Swap Partition' and tick the 'Enlarge to RAM size for suspend'

Filesystem Options

Settings for the Root Partition

File System Type

Ext4

Enable Snapshots

Select Ext4 from the drop down menu

Tick both the:
Propose Separate Swap Partition
And
Enlarge to RAM Size for suspend

Propose Separate Home Partition

File System Type

XFS

☑ Propose Separate Swap Partition
☑ Enlarge to RAM Size for Suspend

Help   Release Notes...   Cancel   Back   Next

Press next to continue the installation

Click next to accept the Suggested Partitioning (Note: screen may differ)

Suggested Partitioning

openSUSE | Leap

Preparation
✓ Network Autosetup
✓ Installer Update
✓ Repositories Initialization
✓ Welcome
✓ Network Activation
✓ System Analysis
✓ Online Repositories
✓ Add-On Products
→ **Disk**
   Time Zone
   User Settings
Installation
   Installation Overview
   Perform Installation

Release Notes...

Layout proposed by the Guided Setup with the settings provided by the user.

Changes to partitioning:

- Create GPT on /dev/sda
- Create partition /dev/sda1 (8.00 MiB) as BIOS Boot Partition
- Create partition /dev/sda2 (6.49 GiB) for / with ext4
- Create partition /dev/sda3 (1.50 GiB) for swap

Guided Setup

Expert Partitioner ▼

Help   Abort   Back   Next

Press next to continue the installation

Clock and time zone settings will automatically have been set, click next to continue.

Clock and Time Zone

Region: Europe
Time Zone: United Kingdom
☑ Hardware Clock Set to UTC
Date and Time: 2019-11-04 - 11:27:02
Other Settings...

Help   Release Notes...   Abort   Back   Next
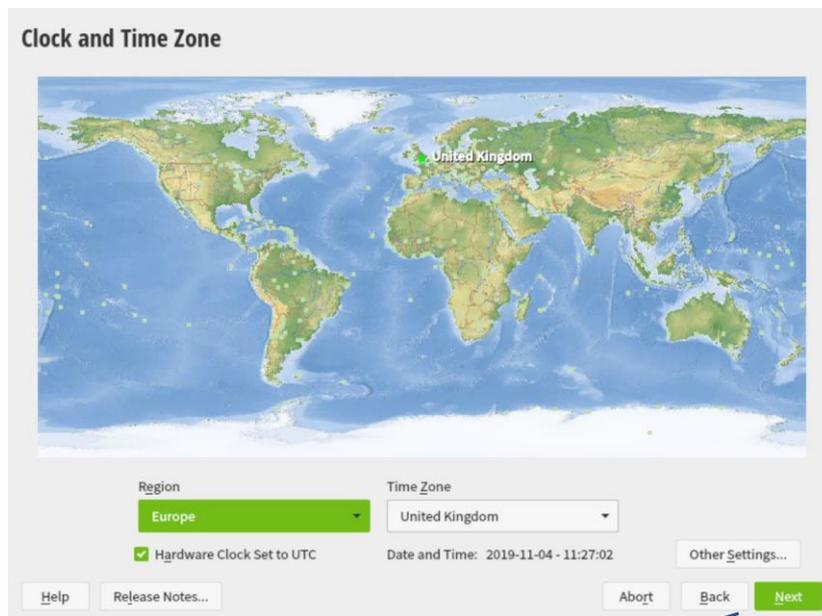
Press next to continue the installation

Setting the local user: You must have a splicecom user to do this enter the Users Full Name as splicecom and the same for Username (Note: splicecom must be lowercase) enter a password (Note: This will be changed when you install the SelectVoice software)

Local User

Preparation
✓ Network Autosetup
✓ Installer Update
✓ Repositories Initialization
✓ Welcome
✓ Network Activation

→ User Settings
Installation
Installation Overview
Perform Installation

⦿ Create New User
User's Full Name
splicecom
Username
splicecom
Password
●●●●●●●●●●●●●●
Confirm Password
●●●●●●●●●●●●●●
☑ Use this password for system administrator
☐ Automatic Login
○ Skip User Creation

NOTE: Users Full name and Username MUST be splicecom in lower case

Release Notes...   Help   Abort   Back   Next

Press next to continue the installation

The system will then show you the Installation Settings that are going to be used.

You MUST:

- Disable the Firewall
- Enable the SSH service
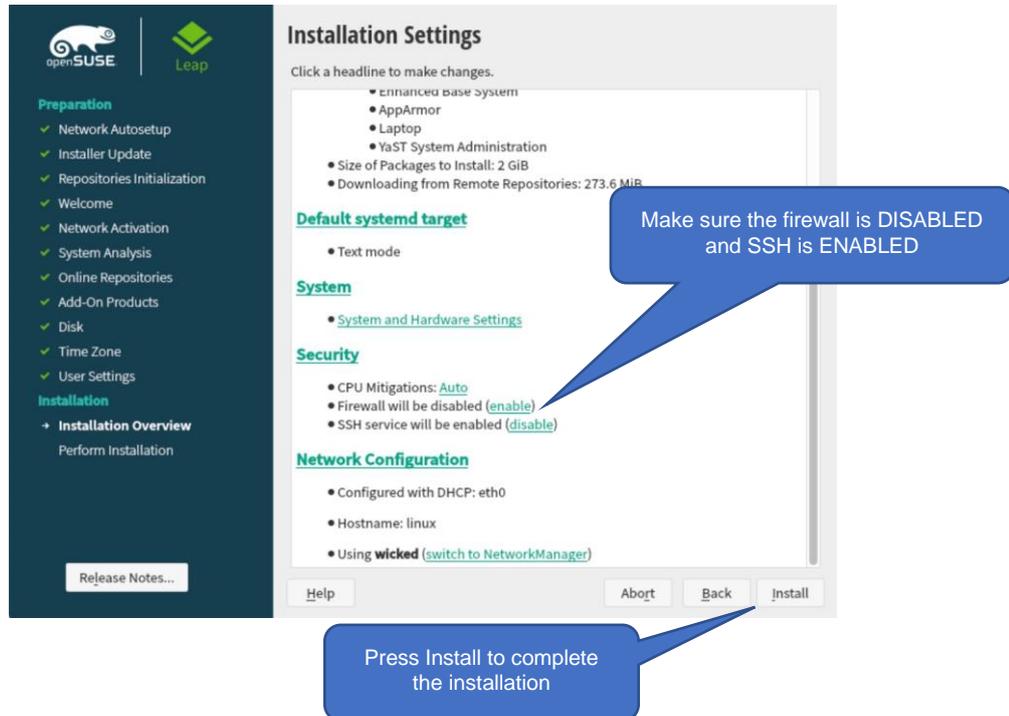
Click install to complete the installation, A popup window will appear confirming the installation, click on Install to continue or back to go and make any further changes.

Once the installation is completed the system will restart and you can then login as your user splicecom, using the password set earlier.

Upgrading Network Driver

We have found that the openSUSE leap 15.1 network driver is not compatible with MAP servers, therefor it is IMPORTANT that the following steps are carried out otherwise the Web pages for Manager and Vision will not display correctly.

Login to the system and carry out the following commands in order and exactly as typed:
NOTE: All commands are followed by 'enter'

su
zypper ar http://download.opensuse.org/repositories/home:/Sauerland/openSUSE_Leap_15.1_Update/ nicStuff
zypper refresh
zypper in r8168-blacklist-r8169 reboot

Completing the installation

To complete the installation, it is advised to install any updates to do this use the following command line instructions.

- Login as splicecom
- At the command line enter sudo zypper update

enter the password when asked then select yes (y) to install/update the packages.
You should see a screen similar to this one:

Check Additional Required Settings

The following additional instructions/parameters should be changed to complete the openSUSE 15.1 installation.

Login as Splicecom and at the command prompt enter:

- sudo vi /etc/systemd/system.conf (enter the password if requested)
- Locate the DefaultTasksMax line un-hash the line
- Change to DefaultTasksMax=infinity

- Save any changes made

At the command prompt enter:

- sudo vi /etc/sysctl.conf (enter the password if requested)
- Make sure the following lines are at the bottom of the file

    net.ipv4.ip_forward = 0
    kernel.core_pattern = /cores/core.%e.%t.%p
    fs.inotify.max_user_instances = 1024

Also make sure that the following entry is set to zero:

    net.ipv6.conf.all.forwarding = 0

- Save any changes made

Check Additional Required Settings (Continued)

At the command prompt enter:

- • sudo vi /etc/security/limits.conf

Make sure the following values have been set/added before the # End of file line:

```
*        hard      nproc    16384
*        soft      nproc     8192
root     -         nproc    unlimited
*        hard      core     unlimited
*        soft      core     unlimited
```

Use the Tab key to space the items out over the line.

- • Reboot the server for the new values to take effect.

Network Settings & Changing Device Names

You will probably wish to set the PC with a static IP address to do this you can run Yast from the command line, login to you server and at the command prompt enter the following:

- **sudo /usr/sbin/yast**

You may be prompted for your system password (Enter if requested) The
command line version of Yast will then be shown.
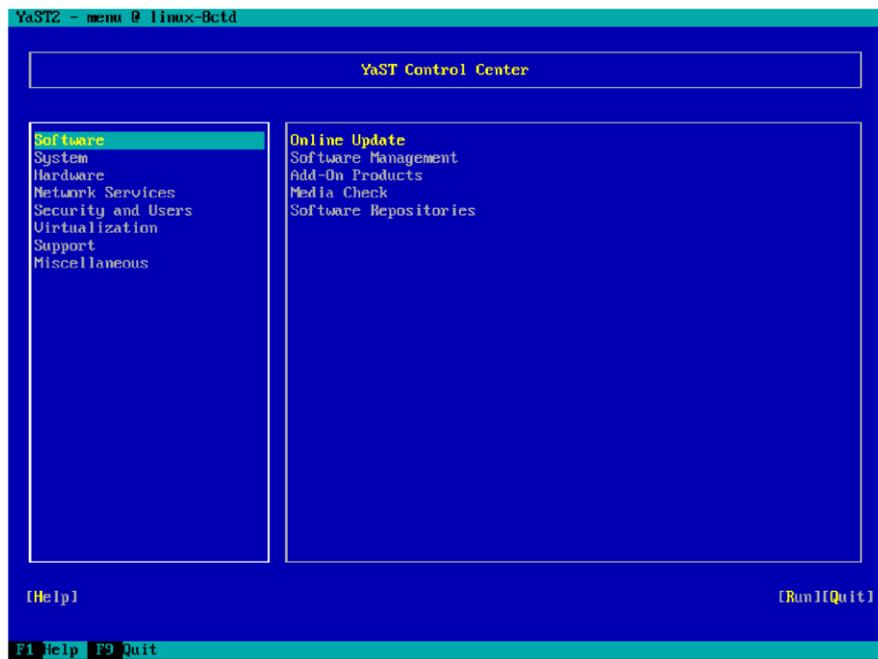
To navigate around
Yast use the arrow and Tab keys, use return to select an item.

← Move Left

→ Move Right

↑ Move Up

↓ Move Down

Tab Use the Tab key to move around the main areas of Yast

↵ Press Return

To begin with the Software option will be highlighted.

- ↓ Use the down arrow to highlight the System option
- → Use the right arrow to jump across to the main options window
- ↓ Use the down arrow down and highlight Network Settings
- ↵ Press return to select Network Settings

You will now be presented with the Network page (You may be asked to install some extra packages, install any that are required).

Network Settings (Continued)

To set a statically assigned IP address:-

Tab	Keep pressing the Tab key until Edit is highlighted
↵	Press return to select
Tab	Keep pressing Tab until the Statically Assigned IP address field
↵	Press return to select Statically Assigned
Tab	Press Tab again to move to the IP address field
eg 192.168.0.1	Enter the IP address
Tab	Press Tab again to move to the Subnet Mask
eg 255.255.255.0	Enter the Subnet address
Tab	Press Tab until Next is highlighted
↵	Press return to move onto the initial overview page again

Network Settings (Continued)

Tab	Press Tab to Highlight Overview
→	Use the right arrow to move to Hostname/DNS
Tab	Press Tab until Name Server 1 is highlighted
Eg 8.8.8.8	Enter the Name server address
Tab	Press tab to enter another Name server or continue to OK
↵	Press return to go back into the main screen
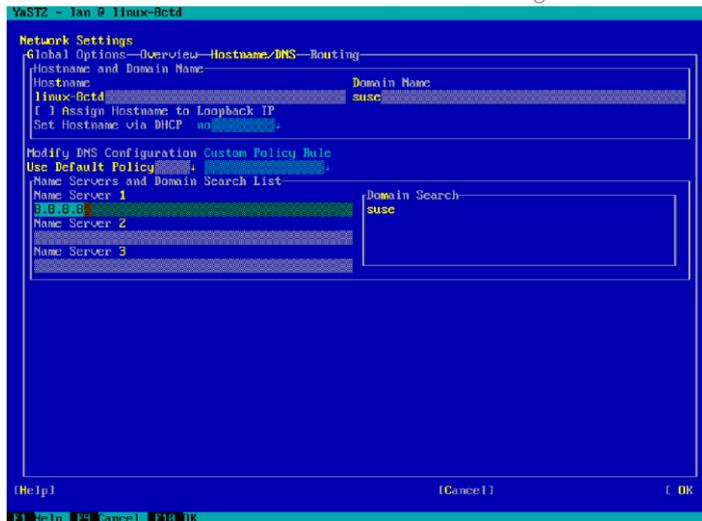
↵	Press return to go back to Network Settings
Tab	Press Tab until Overview is highlighted again
→	Use the right arrow to move to Routing
eg 192.168.0.254	Enter the default Gateway address
Tab	Press Tab to move to the Device selection
↓	Press the down arrow to get a list of devices
eg eth0	Select eth0 from the Drop down
Tab	Press tab to move to OK
↵	Press return
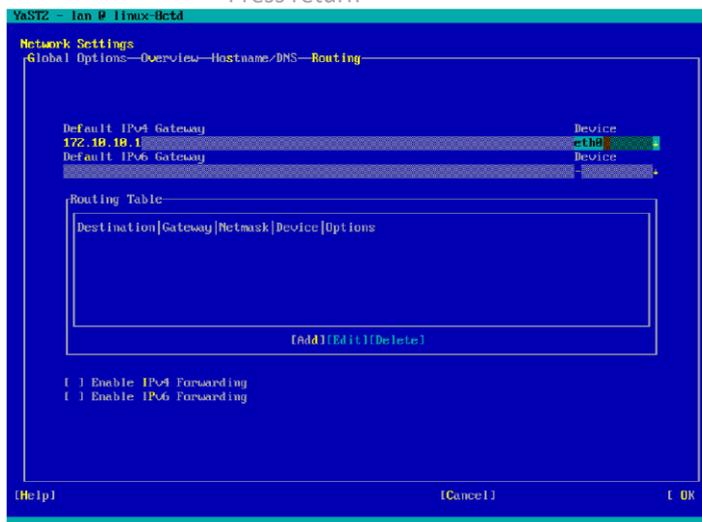
Network settings are now complete, to quit out of Yast.

Tab	Press Tab to move to Quit
↵	Press return to select Network Settings