Linux OpenSUSE Leap 42.3
Installation & Configuration

Version 2.3 January 2018

Introduction

This document outlines the installation and configuration required when utilising OpenSUSE Leap 42.3 as the underlying operating system for running core and embedded SelectVoice applications; Soft PBX, Voice Processing, Vision and SSL Gateway.

Before You Start

The minimum specification of platform required to run one or more SelectVoice applications can be found in the following document;

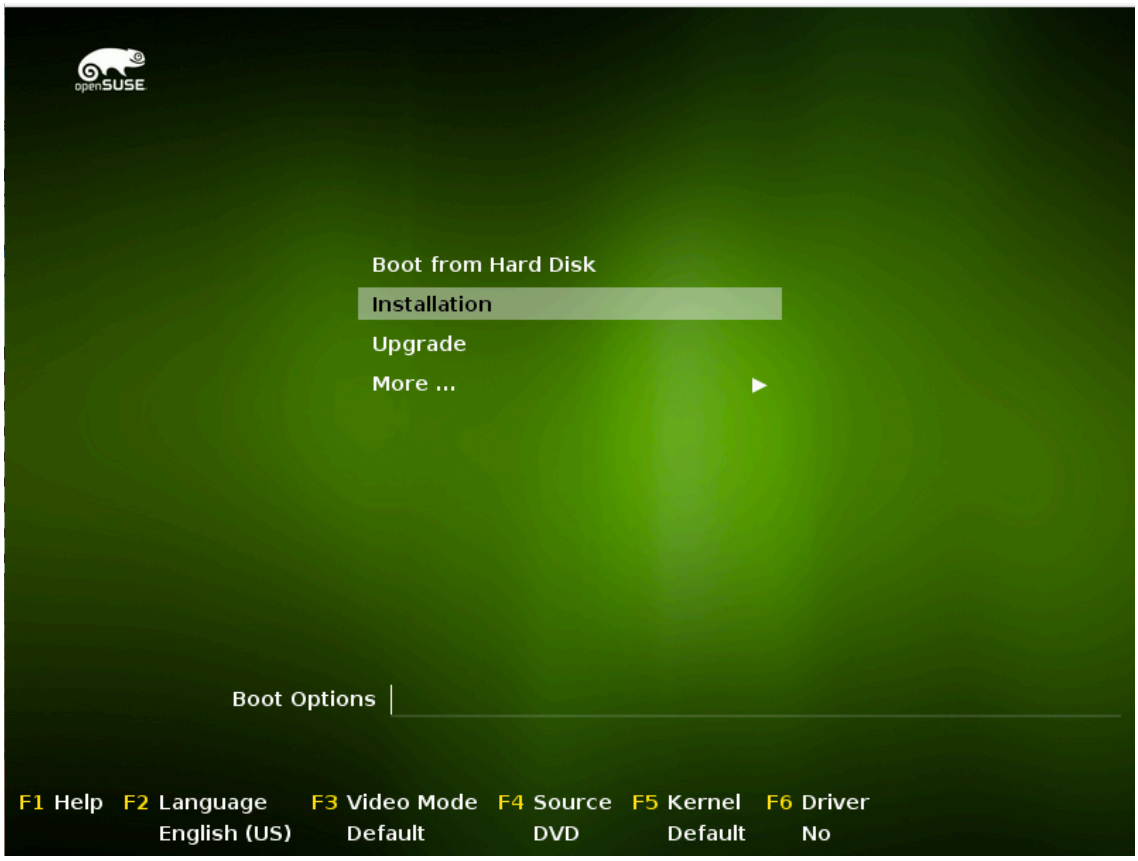
Recommended Computer Platforms For Splicecom Apps

Please be aware that your choice of platform is important. We strongly recommend the HP Proliant range of servers. Other platforms may have complex disk interfaces and LAN connections requiring special software drivers, which may not exist on the OpenSUSE install disk.

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

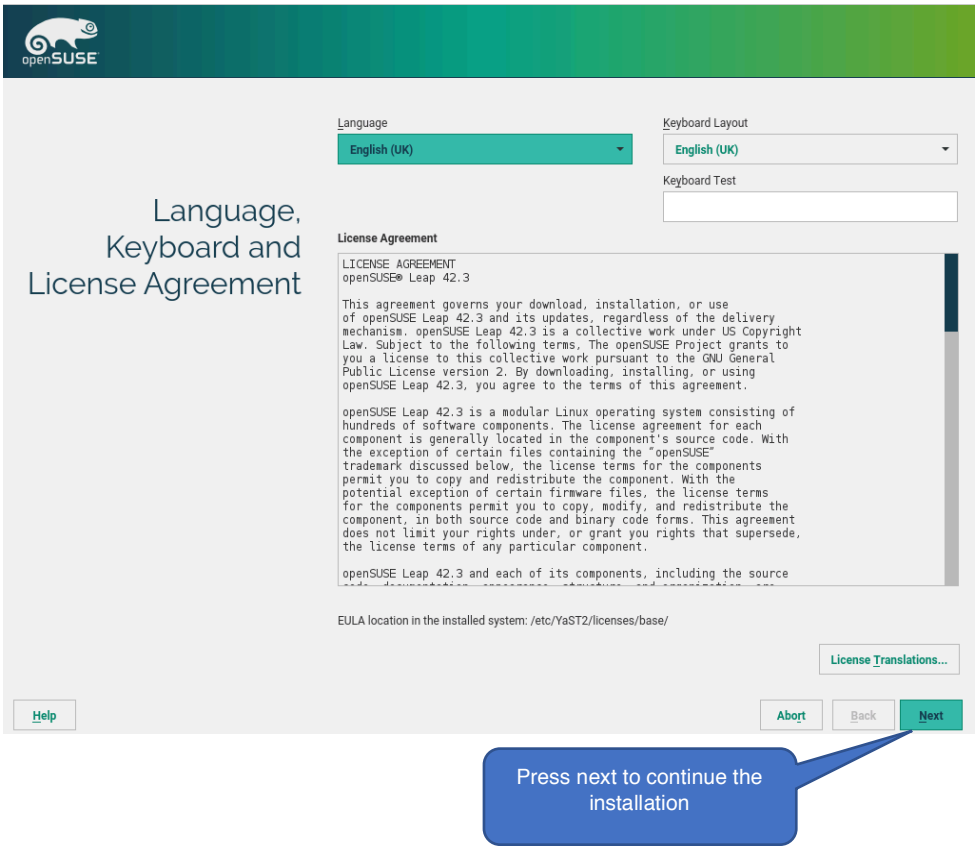
Installation of OpenSUSE Leap 42.3

First insert the installation DVD into the drive and restart the machine. The machine will boot up from the DVD and present you with a OpenSUSE installer window.



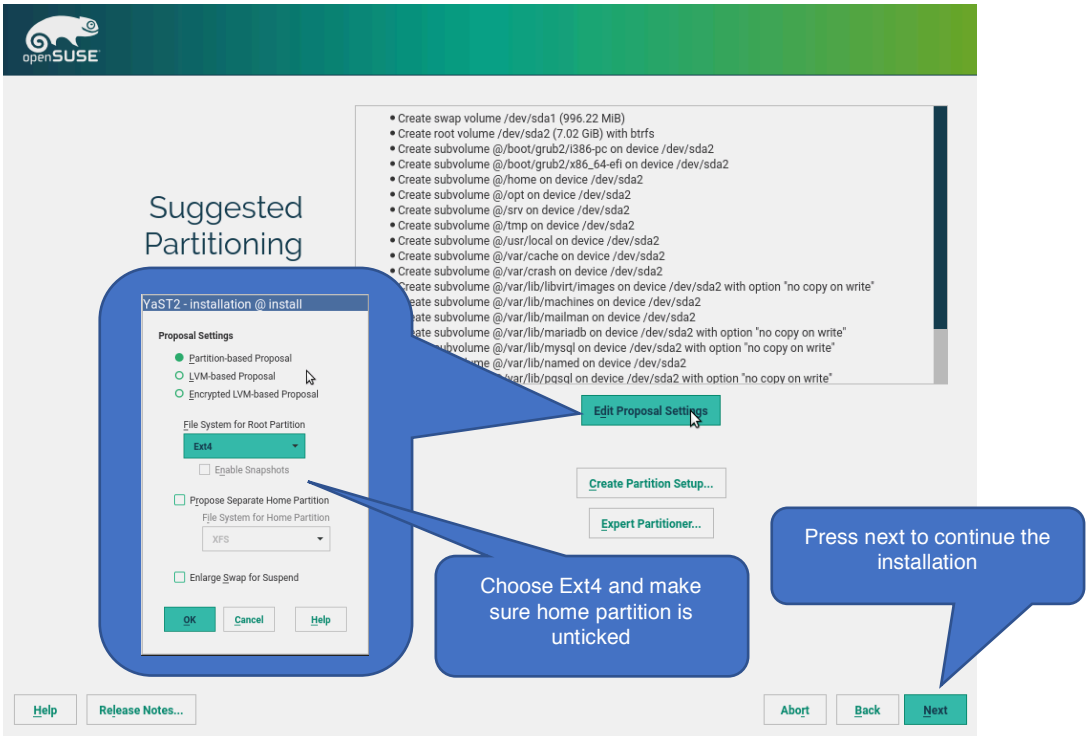
Use the arrow keys, select Installation and press Return.

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.

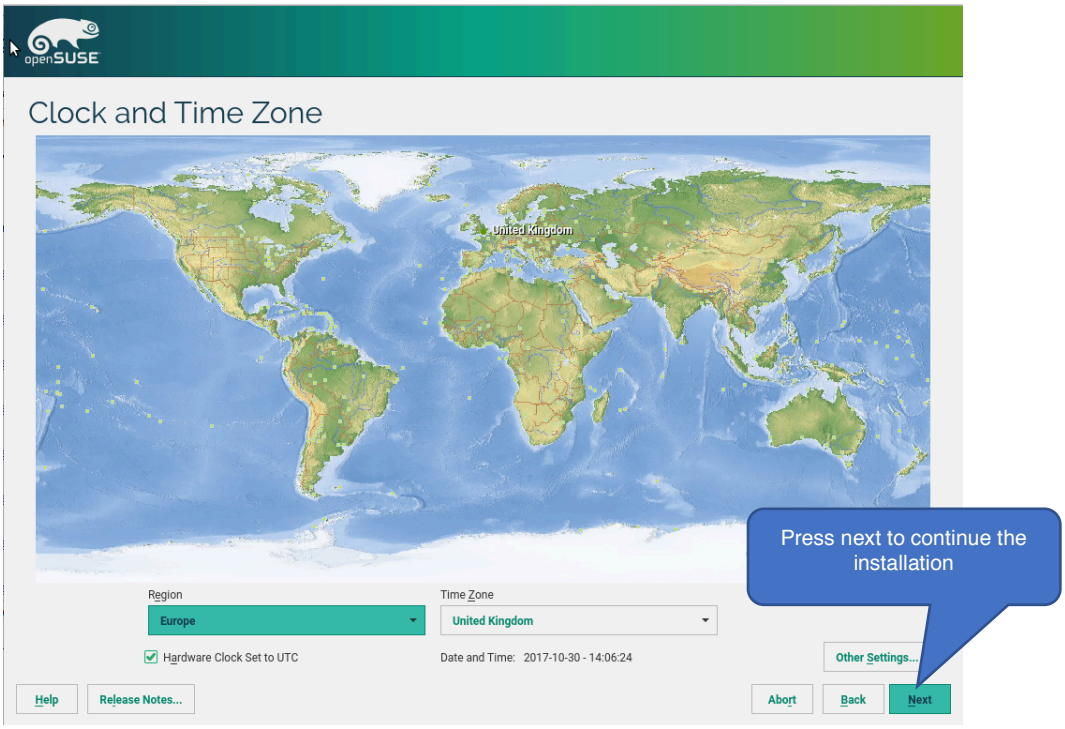


The installation process with progress with some system analysis so that it can continue on with the installation

You will then be presented with Suggested Partitioning, click on the Edit Proposal Settings button. Make sure the File System for root partition is changed to Ext4 and also make sure the Propose Separate Home partition is unticked



Select the Time Zone that matches your location, click Other Settings, select an appropriate NTP Server from the drop down list and verify this is working by clicking the 'Synchronise Now' button (this will require Internet access). Click the Accept button when ready to be returned to the below screen, click Next on this screen to progress.



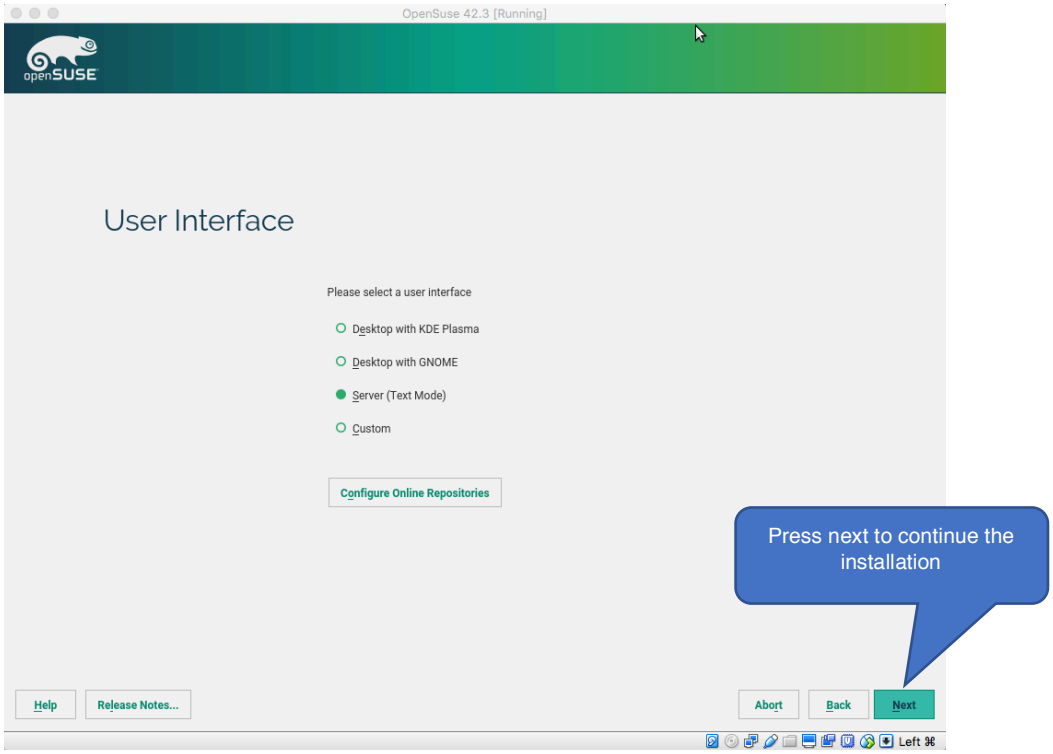
User Interface Selection

Splicecom **STRONGLY RECOMMENDS** that you **DO NOT** install the **ANY** desktop when setting up LEAP 42.3. We have found this environment to, on occasion, consume system resource to the detriment of the SelectVoice or Maximiser operating system. The worst instance we have witnessed saw 15GB of RAM being utilised by KDE, out of the available 16GB.

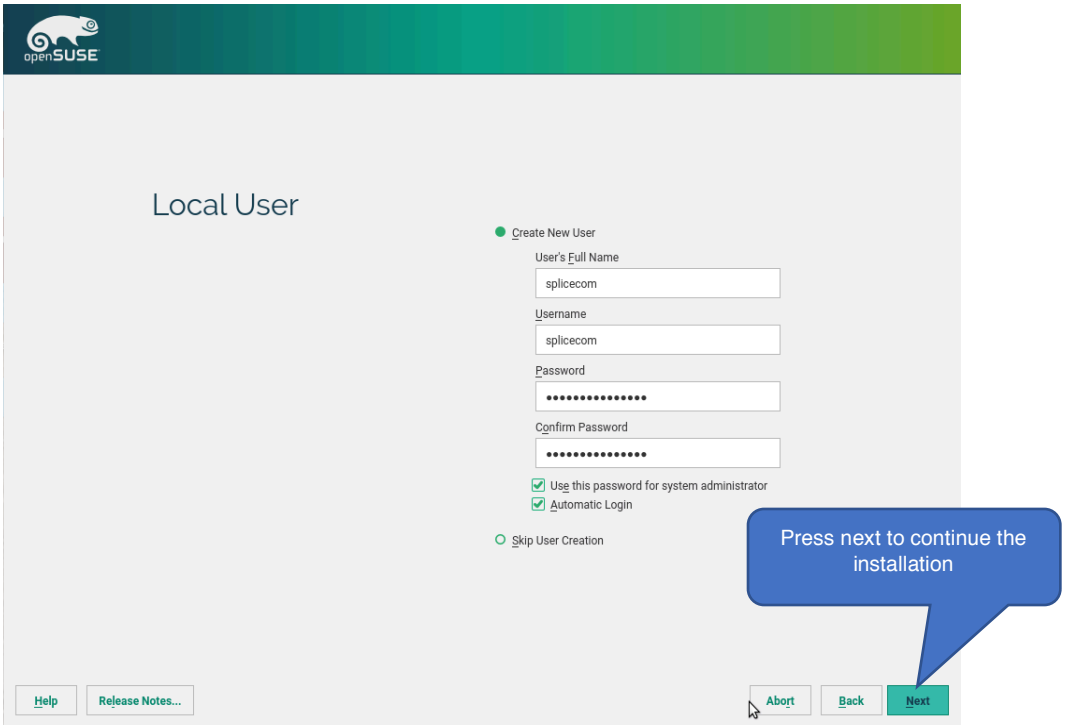
If you wish to install a desktop then follow the instructions for doing so in section **B** otherwise follow the instructions for installing a server based installation in section **A.**

A Installing OpenSUSE Leap 42.3 without a desktop

Select Server(Text Mode) from the user interface screen.



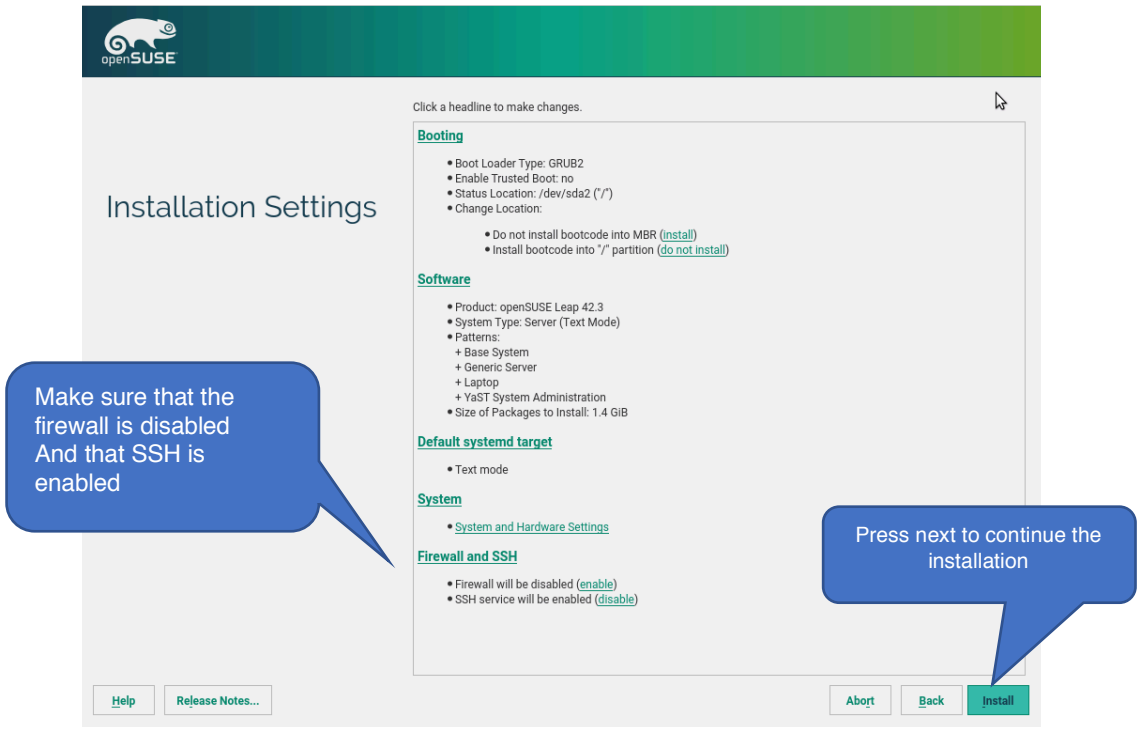
On the next screen we create a User. All SelectVoice installations require a user named splicecom we would recommend this user is created at this stage, as below, specifying your desired password. Also untick the Automatic Login option.



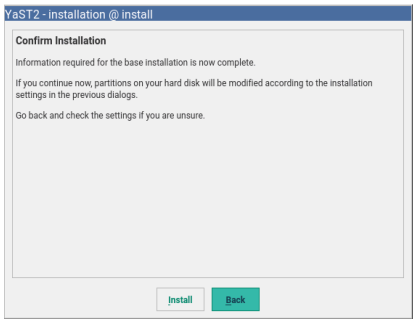
The system will then show you the Installation Settings that are going to be used.

Firewall and SSH

Disable the firewall by clicking on Disable under the Firewall and SSH section, once the screen has refreshed click on the enable to enable SSH access to the system.



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.

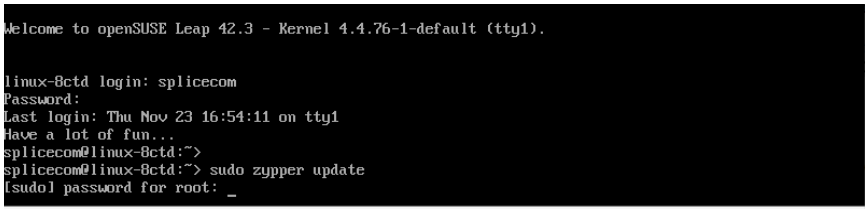


Once the installation is completed the system will restart and you can then login as your user Splicecom, using the password set earlier.

Additional Required Settings

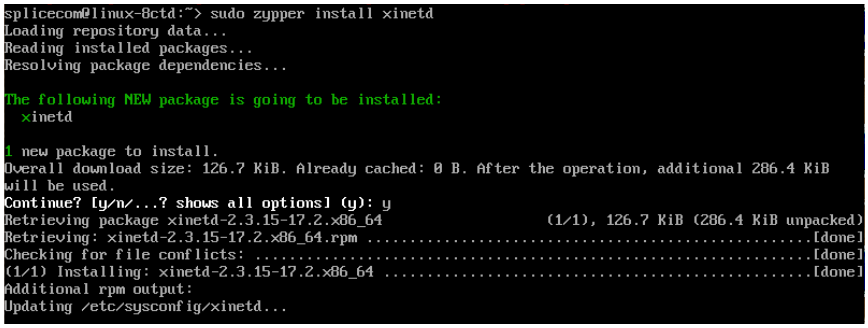
The following additional instructions/parameters have to be changed to complete the openSUSE 42.3 installation. (Note engineers will have to be familiar with the use of vi and use of the command line)

Login as Splicecom
When the command prompt enter
Sudo zypper update, enter the password when asked, select yes to install the packages.



When complete enter the following to install xinetd

sudo zypper install xinetd



reboot the server to use installed updates.

Login as Splicecom again and at the command prompt enter.

sudo vi /etc/systemd/system.conf (enter the password if requested)

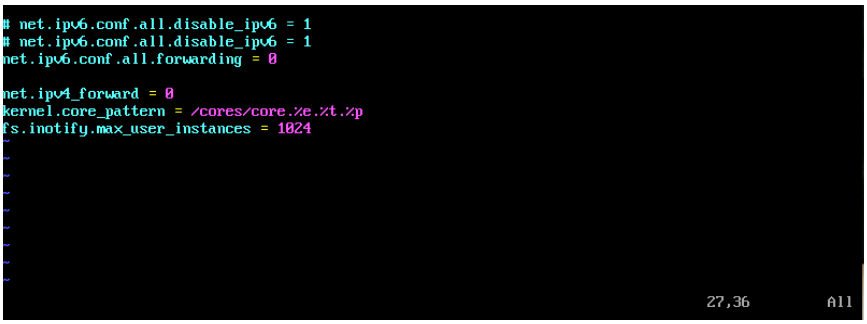
Locate the DefaultTasksMax line and unhash and change two DefaultTasksMax=infinity.

At the command prompt enter.
sudo vi /etc/sysctl.conf (enter the password if requested)
Add the following lines at the bottom of the file and then save it.

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



At the command prompt enter.

sudo vi /etc/security/limits.conf

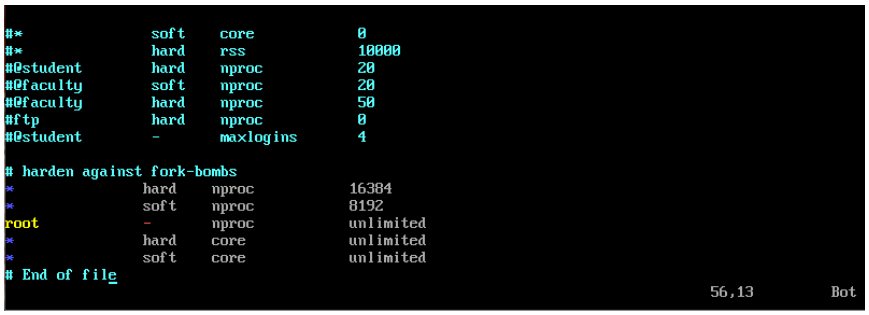
Make sure the following values are set:-

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

And add the following extra parameters below the line starting with root and above the # End of file line and then save the file.

```
*           hard    core            unlimited
*           soft    core            unlimited
```

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



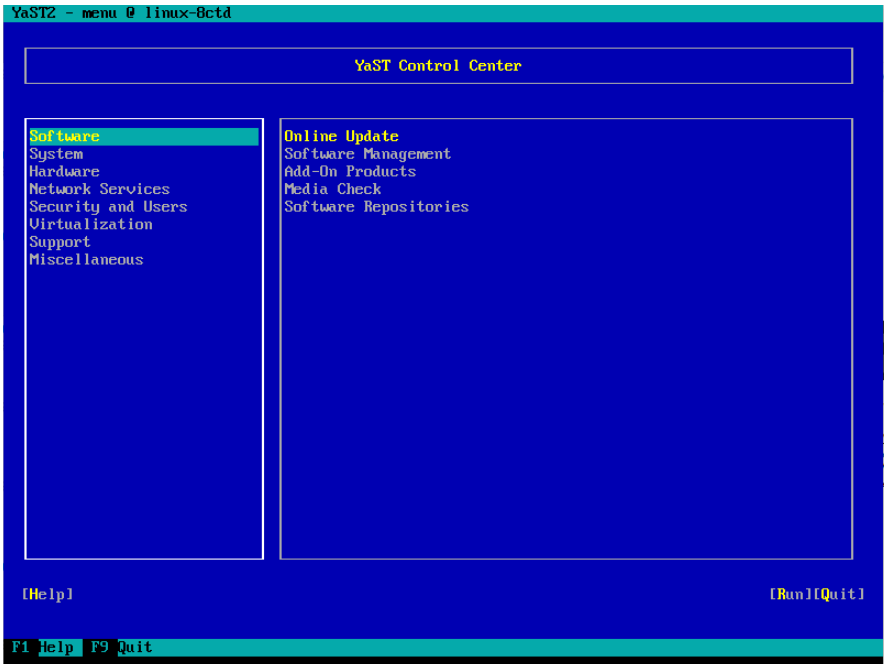
Reboot the server for the new values to take effect.

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 will be prompted for your system password, and then be presented with the command line version of Yast



To navigate around Yast use the arrow and Tab keys, use return to select an item.

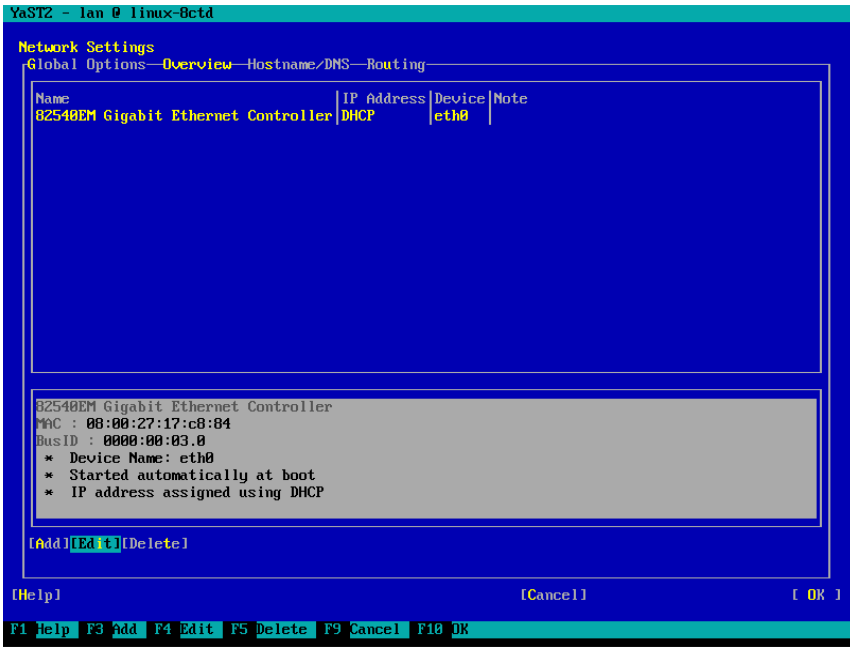
←	Move Left
→	Move Right
↑	Move Up
↓	Move Down
Tab	Use the Tab key to move around the main area's of Yast
↵	Press Return

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

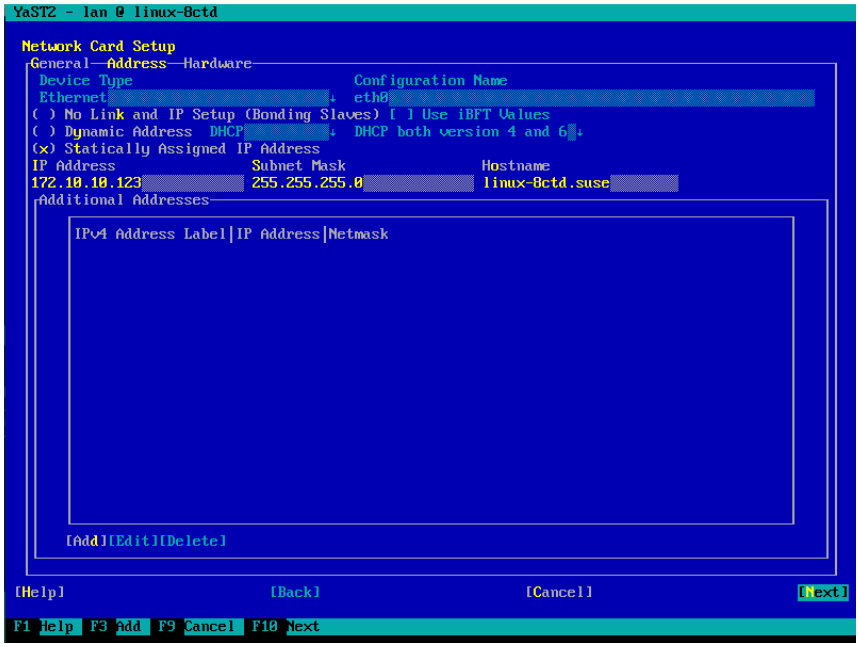
You will now see the Network page (You may be asked to install some extra packages, install any that are required).

Network Settings (Continued)



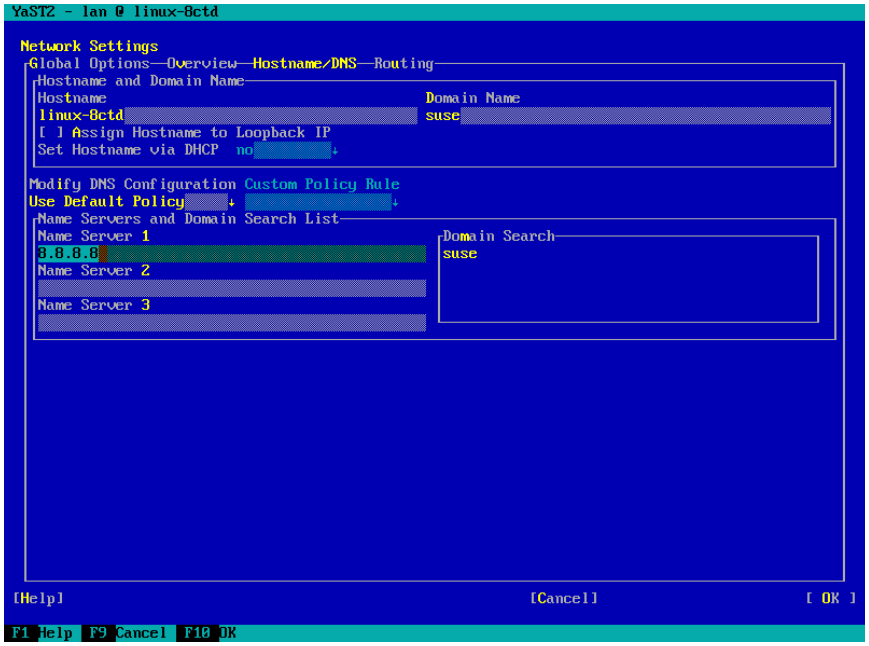
To set a statically assigned IP address:-

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

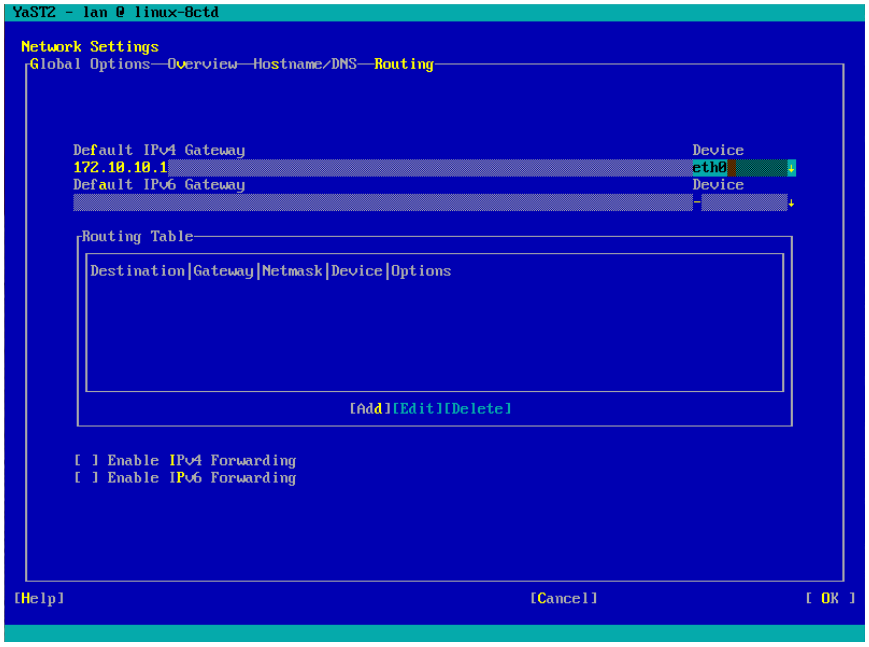


Network Settings (Continued)

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

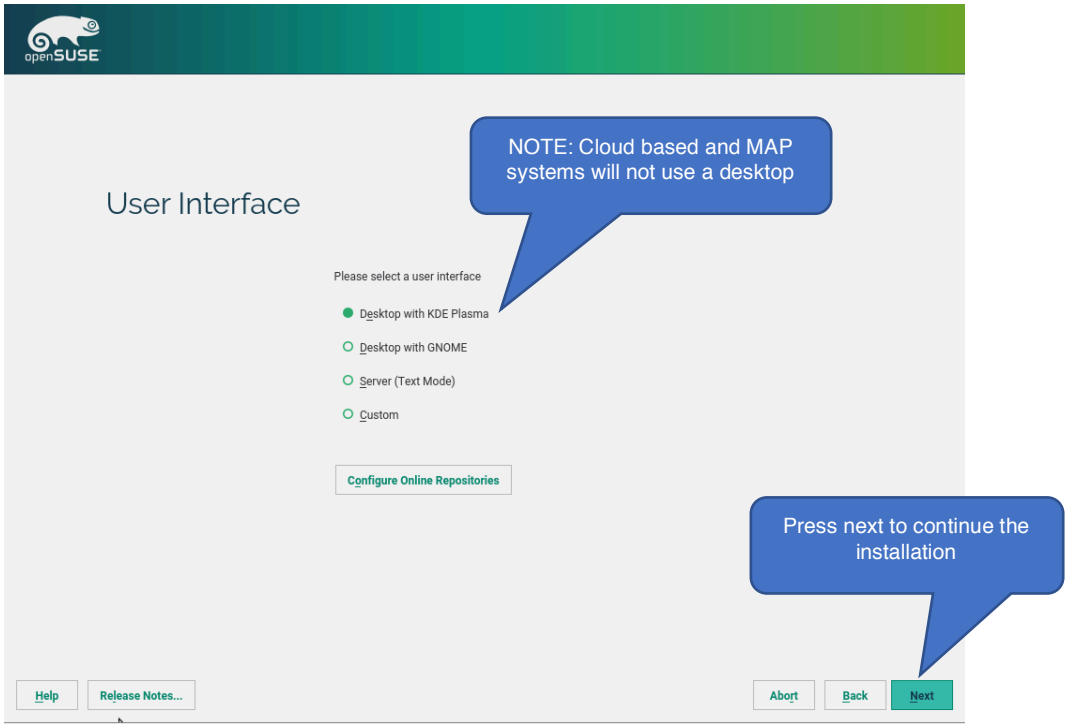


Network settings are now complete, to quit out of Yast.

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

B Installing OpenSUSE Leap 42.3 with a desktop

Select the type of Desktop you wish to use. If you are going to install a desktop then we suggest using the KDE Desktop, click Next when ready.



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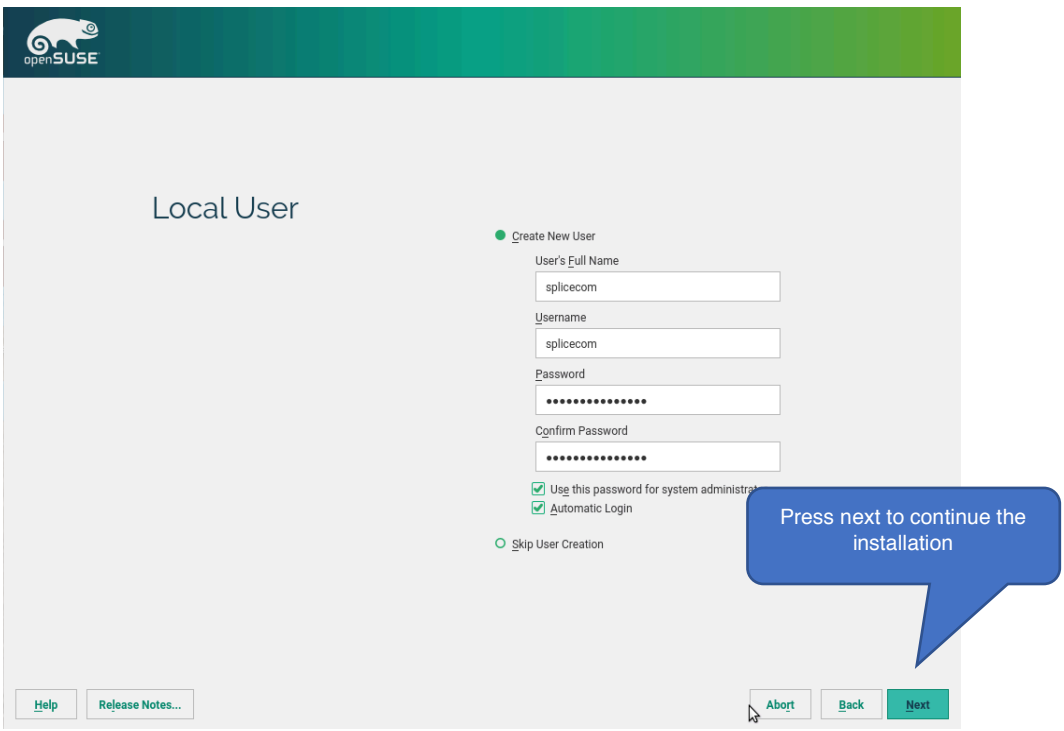

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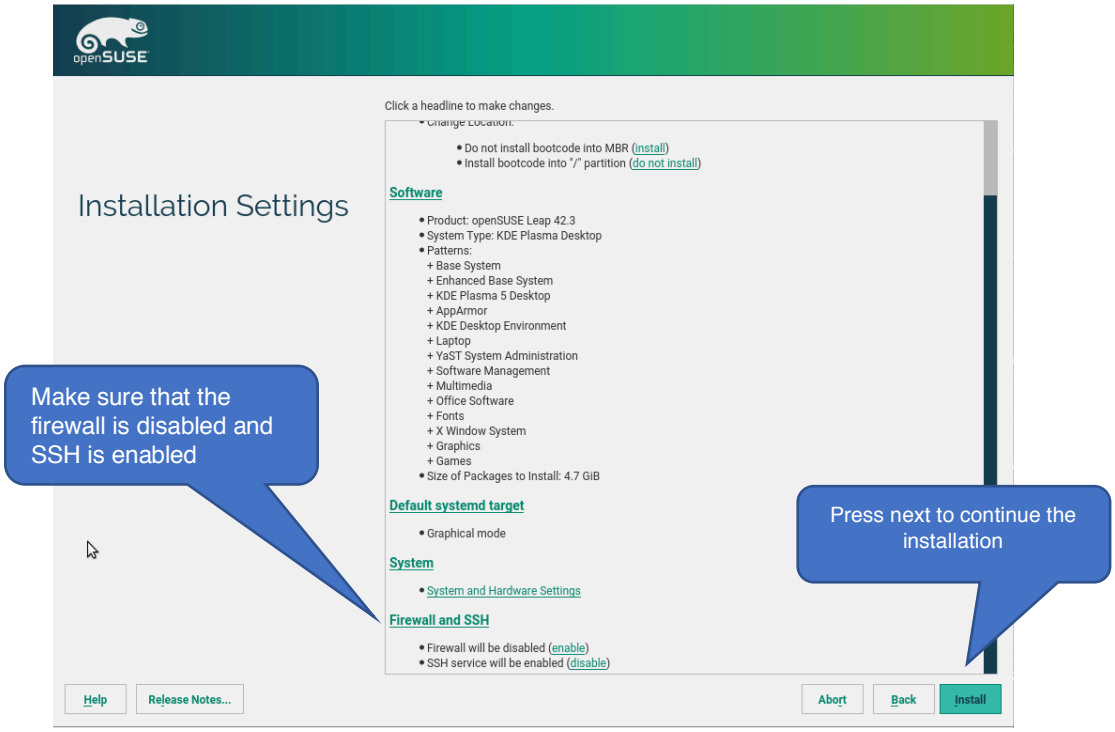

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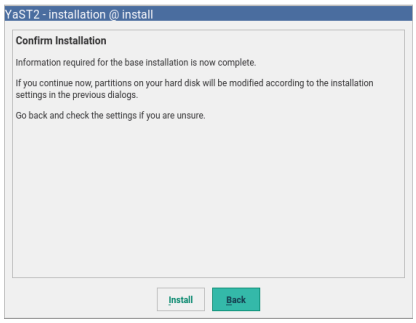
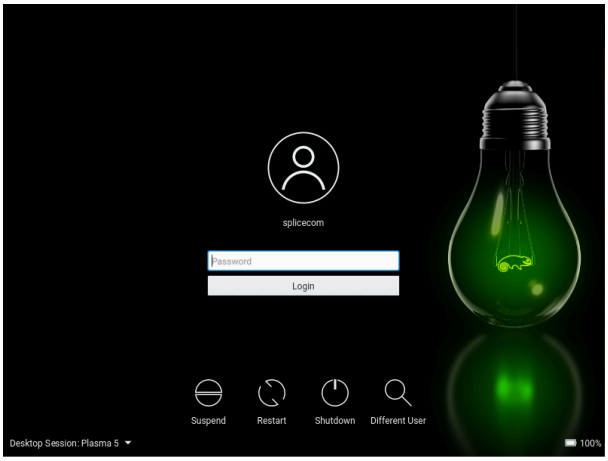
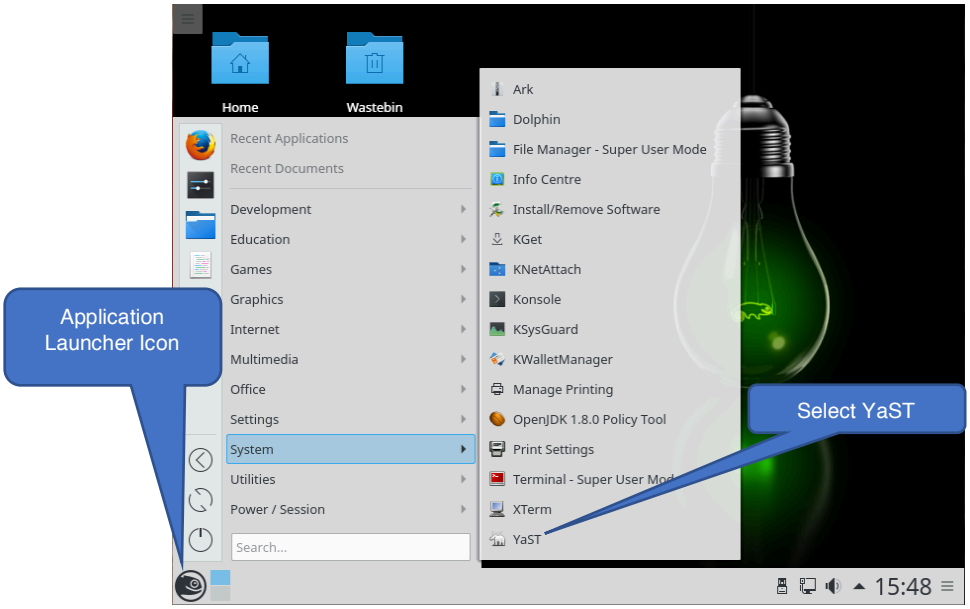


Once the installation is completed the system will restart and you can then login as your user splicecom, once logged in you will be at the Desktop.



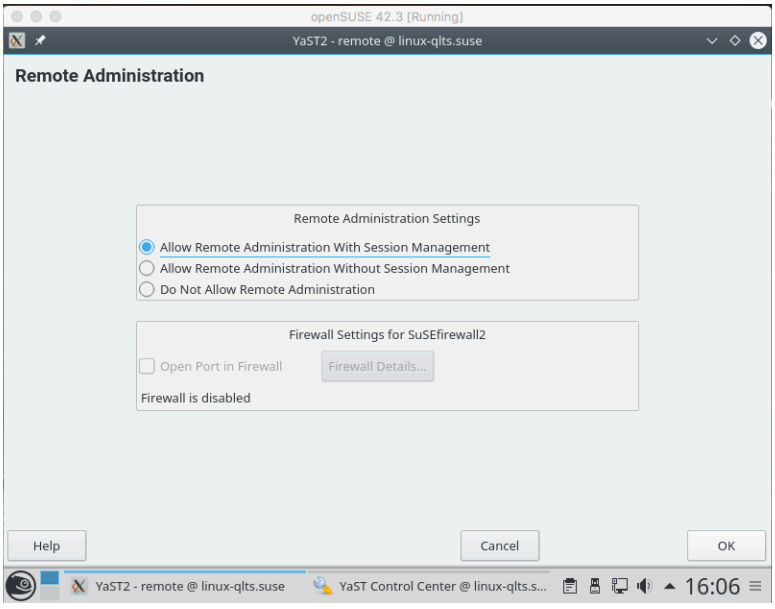
Setting up Linux for Remote Access

Once logged in as splicecom the next step is to enable remote access via VNC. Click on the Application Launcher icon in the bottom left corner. Select system from the menu and then Yast from the Sub Menu that appears, Enter the system password when prompted to.



Once YaST is open type VNC in the search field in the top left, then select 'Remote Administration (VNC)' in the right hand window

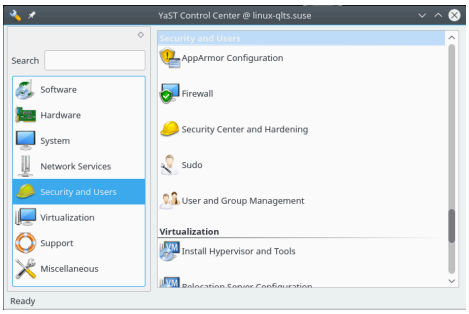
Select the radio button to Allow Remote Administration and click OK (NOTE: You may be asked to install addition packages, accept to continue)

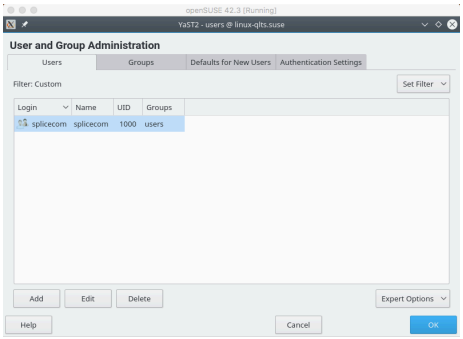


This will then allow you to VNC to the Linux machine on port 5901.

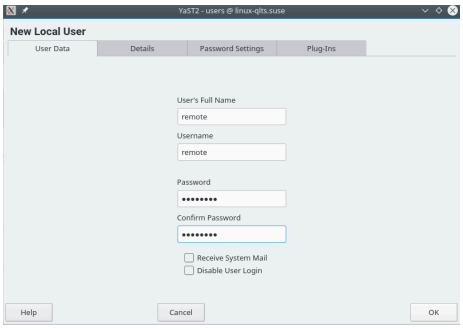
NOTE: OpenSUSE Leap 42.3 will only allow one session per User to login. This will mean that it is very important you make sure you logout the User when you are finished.

We recommend that you create two additional Users on the system purely for VNC access so there is always a way to get into the system. In order to create new Users open Yast>Security and Users, then click on User and Group Management.

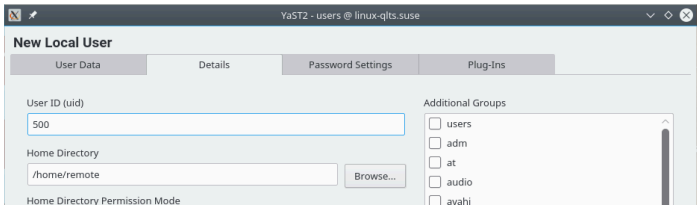


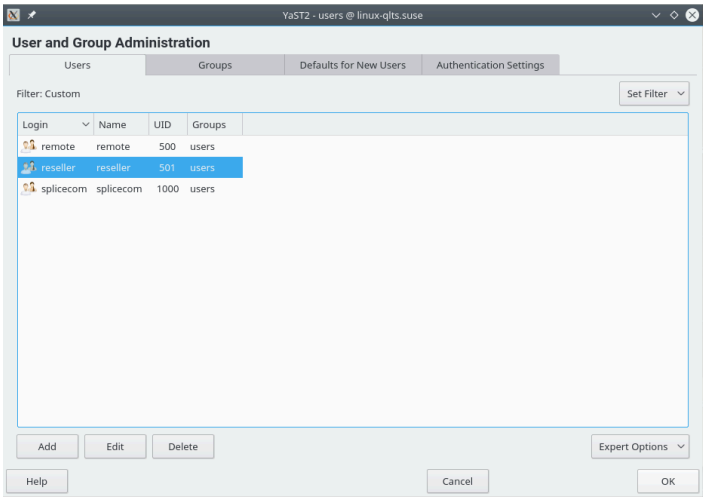


This will show you a list of users on the system, click the Add button at the bottom of the page and create a new User. We recommend you create two Users, one called remote and another called reseller. You can assign your own passwords to these Users.



So that these users are not seen on the Login screen, click on the details tab and change the UID to a value of less than 1000, for example give the remote user a value of 500 and the user reseller 501

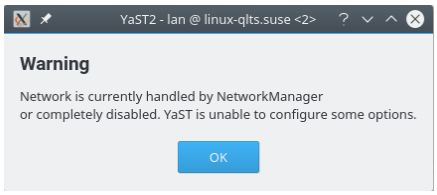




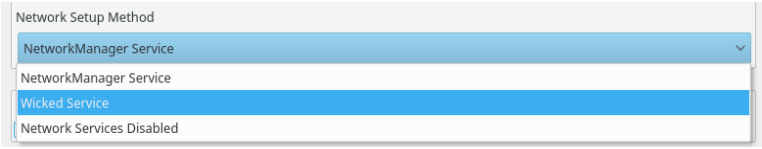
Click OK and the two new Users will now be added to the system.

Network Settings & Changing Device Names

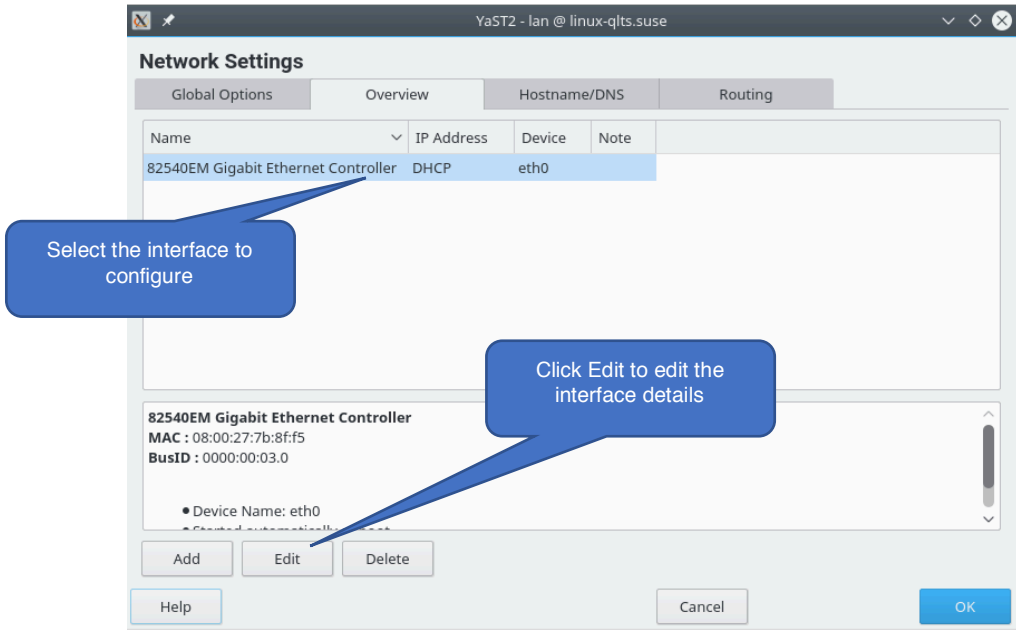
You will probably wish to set the PC with a static IP address by selecting Network Devices from the left hand side of YaST followed by Network Settings on the right, you maybe presented with a window stating that the setup is controlled by NetworkManager.

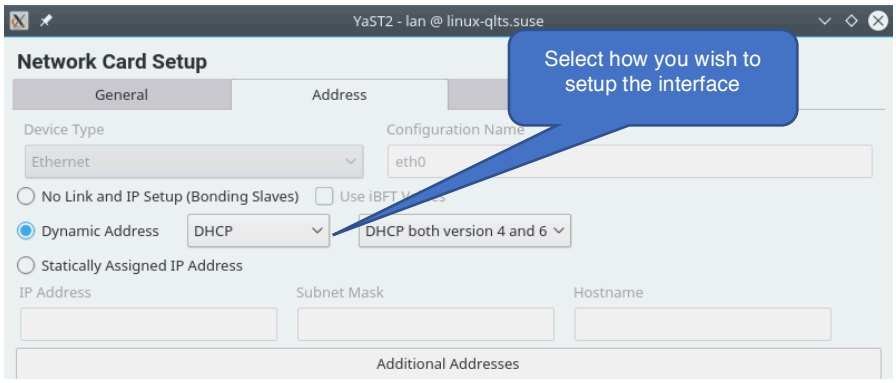


If so change it here to use Ifup by selecting 'Wicked Service' from the drop down list for Network Setup Method, click OK.. This will take you back to the YaST page where you select Network Settings again.



This will open a window showing the ethernet Interface. Select the Interface and click on the Edit button. In the next window select the radio button for Statically Assigned IP Address and set the appropriate IP Address and Subnet mask, click Next to save the settings.





This completes the Linux setup.

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t l 01923 287700 e l info@splicecom.com w l splicecom.com