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Monitoring for Environment and Security in Africa (MESA)

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eStation 2.0

Installation manual

Rel 1.0

January 2015

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Abstract / Résumé
This document provides guidelines for the installation of the eStation 2.0 system on computer and verification of correct functionalities.

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	Details	Date
	Version 1.0	March 2015

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ACRONYMS and DEFINITIONS

AMESD	African Monitoring of Environment for Sustainable Development
ACMAD	African Centre of Meteorological Applications for Development
AGRHYMET	Centre Régional de Formation et d'Application en Agrométéorologie et Hydrologie Opérationnelle
AU	African Union
BDMS	Botswana Department of Meteorological Services
CICOS	Commission Internationale du Bassin Congo-Oubagui-Sangha
CWG	The MESA Continentalisation Working Group
EO	Earth Observation
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EUMETCast	EUMETSAT's primary dissemination mechanism for the near real-time delivery of satellite data and products
FTP	File Transfer Protocol
GIS	Geographical Information System
IOC	Indian Ocean Commission
JRC	Joint Research Centre of the European Commission
MESA	Monitoring for Environment and Security in Africa
MOI	Mauritius Oceanography Institute
REC	Regional Economic Communities
RIC	Regional Implementation Centre
TA	Technical Assistance
TAT	Technical Assistance Team
THEMA	Regional and Continental Thematic Actions

1. INTRODUCTION

1.1 SCOPE OF THE DOCUMENT

This document describes how to install the eStation 2.0 (and following sub-releases) on the computers of the AMESD and MESA projects, and how to customize the machine to act as PC2 (Processing Station) or PC3 (Analysis/Visualization). In addition, it explains how to install the software on a generic computer.

1.2 APPLICABLE AND REFERENCE DOCUMENTS

Id	Title	Date	Reference
AD-1			
AD-2			
AD-3			
AD-4			

Table 1: Applicable documents

Id	Title	Date	Reference
RD-1			
RD-2			
RD-3			

Table 2: Reference documents

2. SCOPE OF INSTALLATION

The eStation 2.0 software is provided by JRC to the beneficiaries of the MESA project and is intended to be installed on the computers provided by the Supply Contract – Lot 1. It can also be installed on the AMESD PCs (i.e. DELL Optiflex 780) or on a generic computer.

2.1 INSTALLATION ON AMESD/MESA COMPUTERS

Both AMESD and MESA stations are composed by 3 PCs, as displayed in Fig. 1; PC1 is connected to the external antenna, and it is part of the so-called 'Receiving Station', while PC2 and PC3 host the eStation 2.0 application.

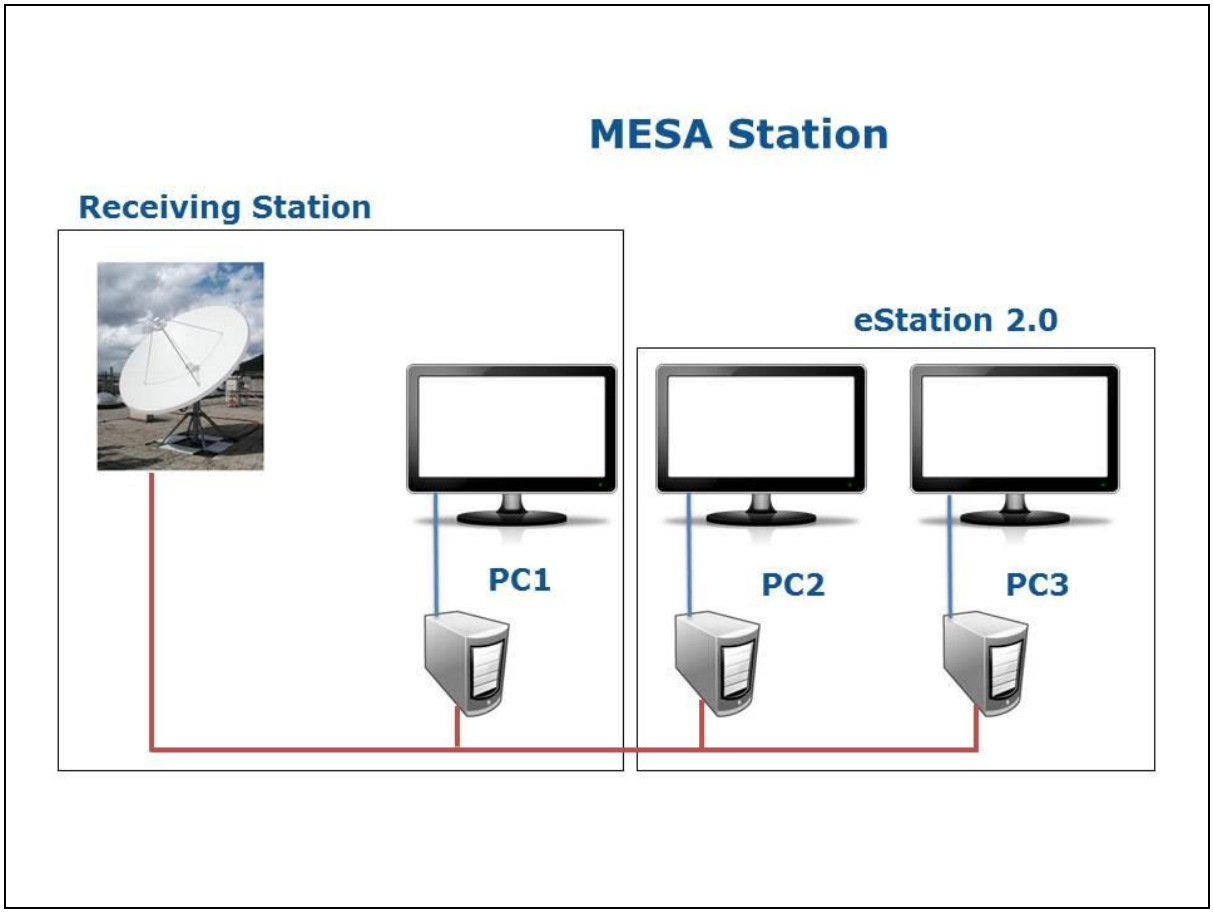

Figure 1: AMESD/MESA Stations architecture

2.2 INSTALLATION ON OTHER COMPUTERS

2.3 DESCRIPTION OF THE INSTALLATION PACKAGES

3. INSTALLATION PROCEDURE

The installation procedure is composed by three steps:

- Setting of the BIOS Configuration
- Installation of eStation 2.0 SW

Before resetting BIOS to its default insert now the DVD-Rom in the DVD reader or attached the USB key.

3.1 SETTING OF BIOS CONFIGURATION

First boot on the setup bios to reconfigure has a default the computers.
Press <F2> when the Dell™ logo appears to enter in the bios configuration (fig. 2).

Figure 2: Press <F2> when the Dell™ logo appears

Press “Load Defaults”, to restore the manufactory default setup, press “Ok” in the popup windows and “Exit” (fig. 3). Then the computer reboot automatically.

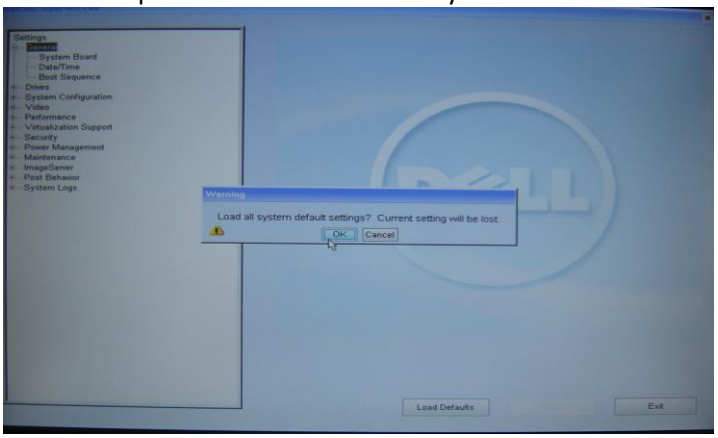

Figure 3: Loads Defaults bios setup

Press <F12> when the Dell™ logo appears to initiate a one-time boot menu (fig. 4).This action will show you the valid boot devices for the systems (fig. 5).

Figure 4: Press <F12> when the Dell™ logo appears

Select “USB-Device” (fig. 5, red color box) to boot from the eStation2.0 software USB key.

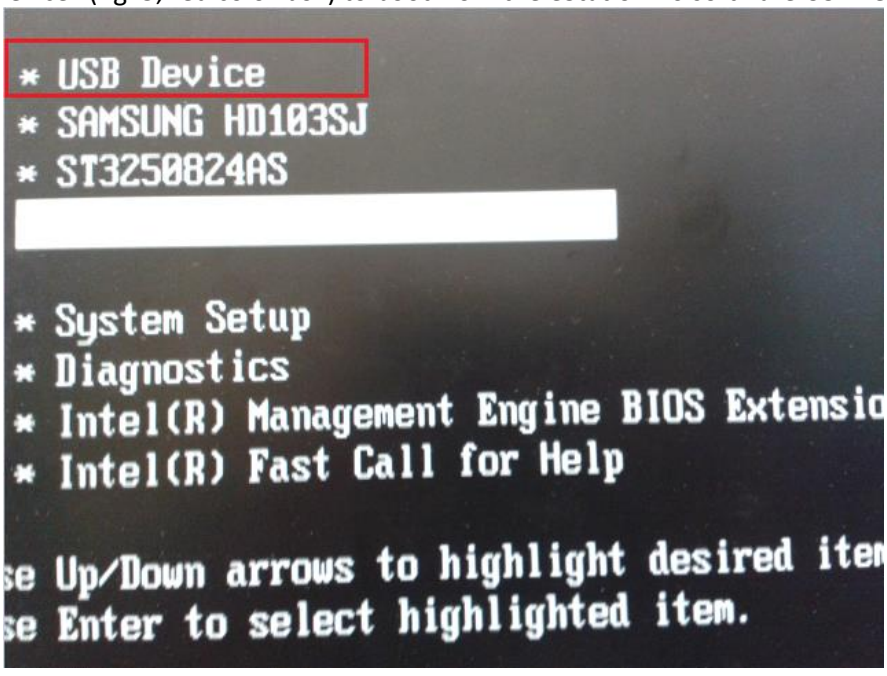

Figure 5: Choose option ‘’USB-Device”

After booting, the installation software automatically starts. Select “English” and press “Enter” (fig. 6).

Figure 6: Choose the installation language

3.2 INSTALLATION OF ESTATION 2.0

Use the Up/Down arrows to choose the “Install eStation on generic PC” (fig. 7) and press “Enter” to validate your selection.

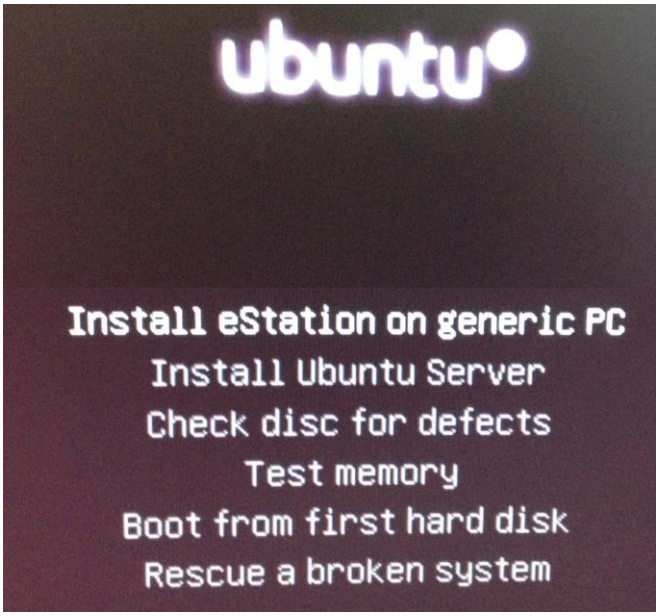

Figure 7: Choose the option “Install eStation on generic PC”

Then procedure asks for the language to be used for the installation process. By default the English language is selected (fig. 8). Press “ENTER”.

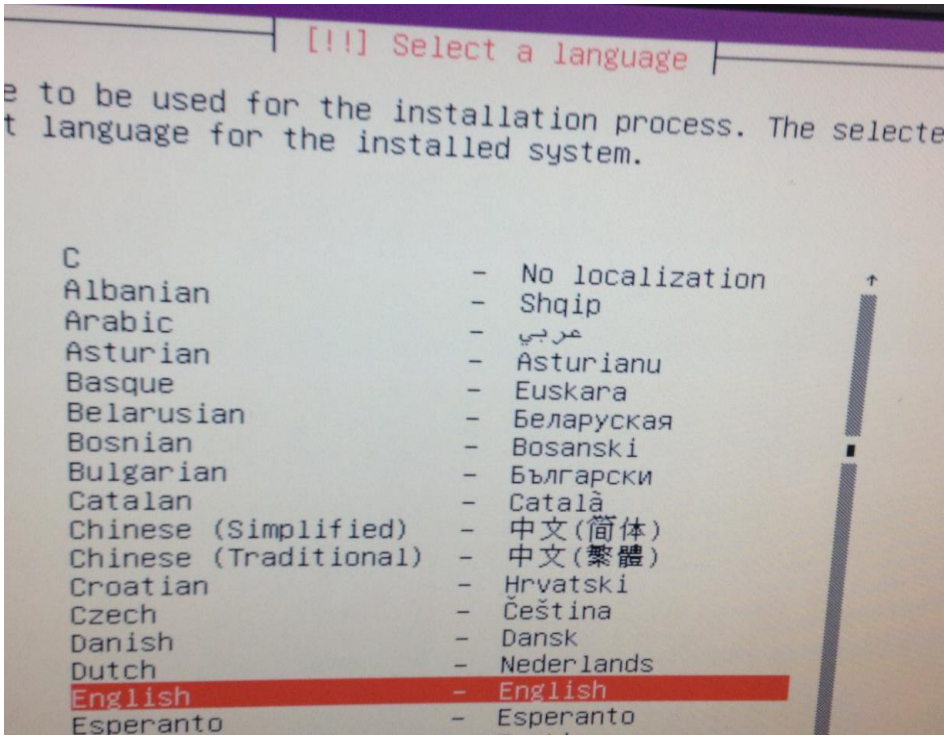

Figure 8: Option of language ”English” to be used for the installation process.

Then the installation requests to select your location. By default the United States option is selected (fig.9). Press “ENTER”.

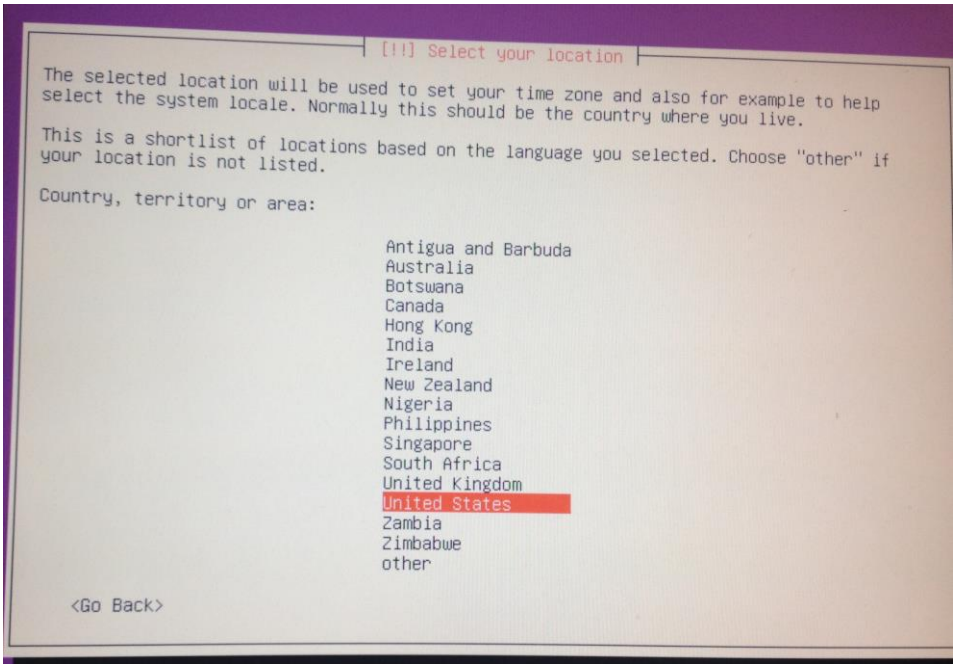

Figure 9: Option of location ”United States”.

Then the installation procedure requests to configure the keyboard. There will be three steps in order to configure the keyboard.

For the first step the option <No> should be selected and then press “Enter” key (fig.10).

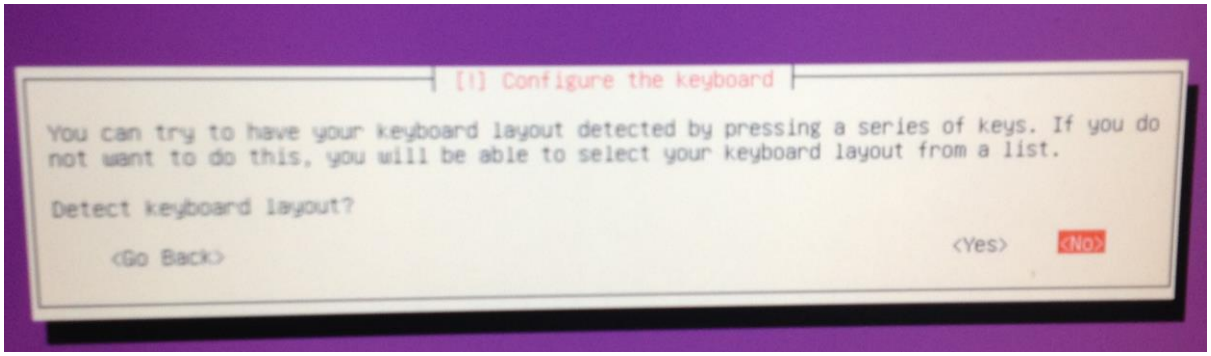

Figure 10: First step requested for ”Configure the Keyboard”.

For the other two steps (fig 11 and fig.12) by default the option “English” is selected. Press key “Enter” after every step. No need to change the option.

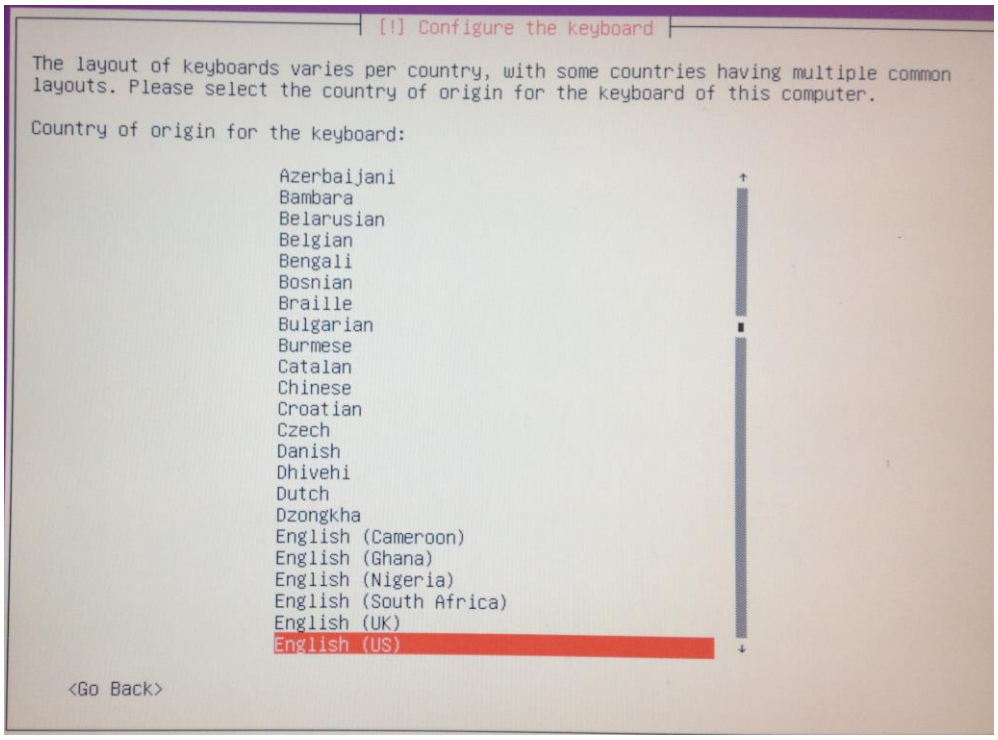

Figure 11: Second step requested for ”Configure the Keyboard”.

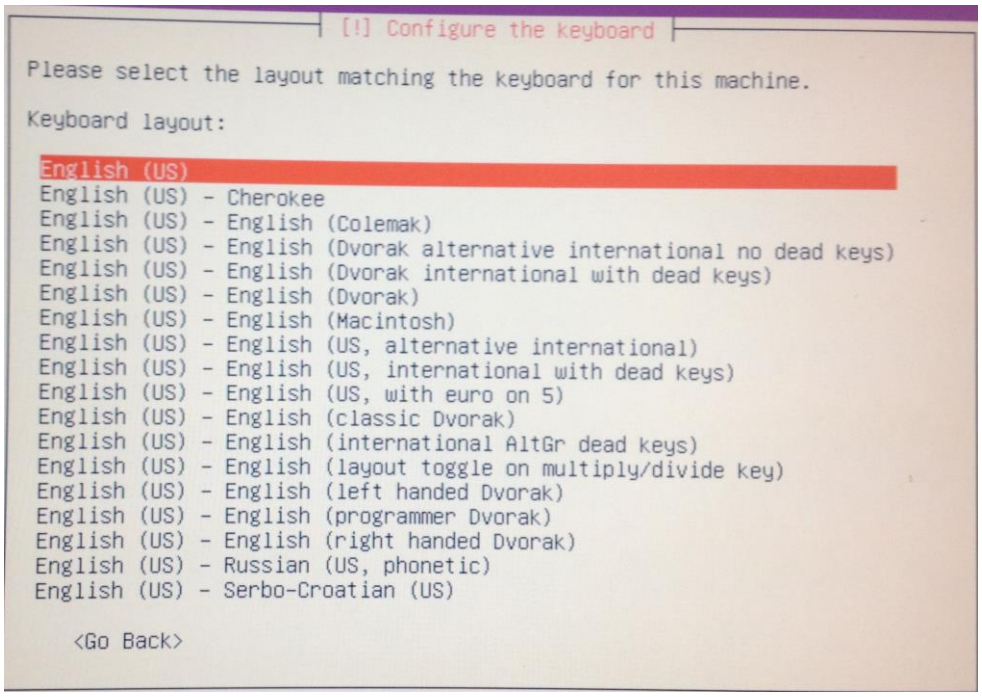

Figure 12: Third step requested in ”Configure the Keyboard”.

The installation procedure will check your CD-ROM, load additional components files necessary for installation, configuring the network.

For the configuring network there are some steps which will be displayed during the installation. First step is configuring the network with DHCP. No action is required here (fig.13).

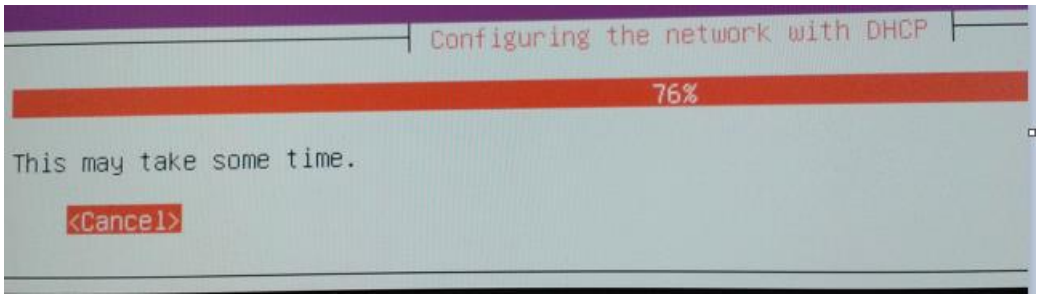

Figure 13: First step for ”Configuring the network with DHCP”.

The second step of configuring the network is shown in fig.14. Press - Continue.

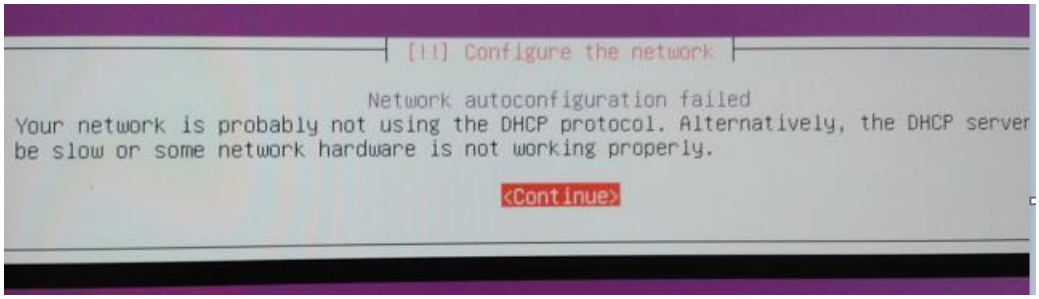

Figure 14: Second step for configuring the network.

The third step asks for choosing the network configuration method. Select “Do not configure the network at this time” and press key “Enter” (fig.15).

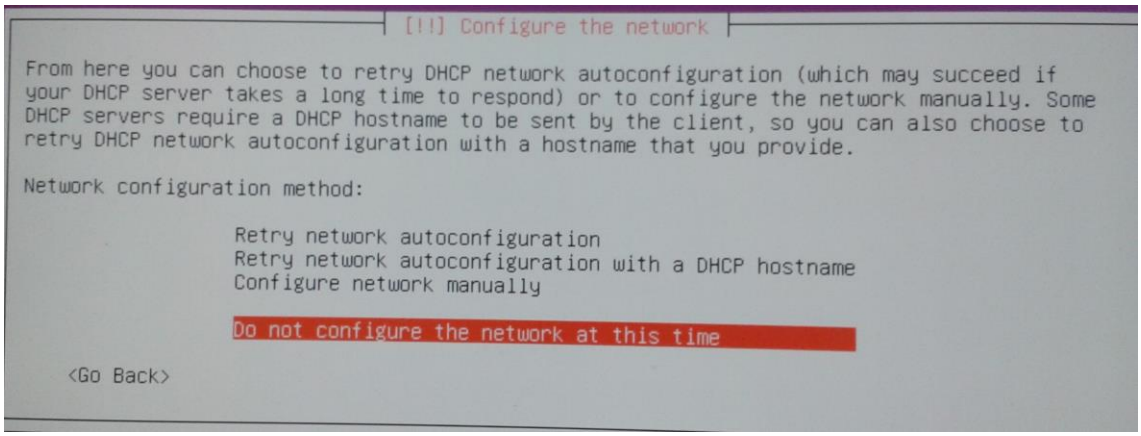

Figure 15: Third step for configuring the network.

Then in the last step, as a hostname for the system is chosen by default “Ubuntu” (fig.16). Pres key “Enter”.

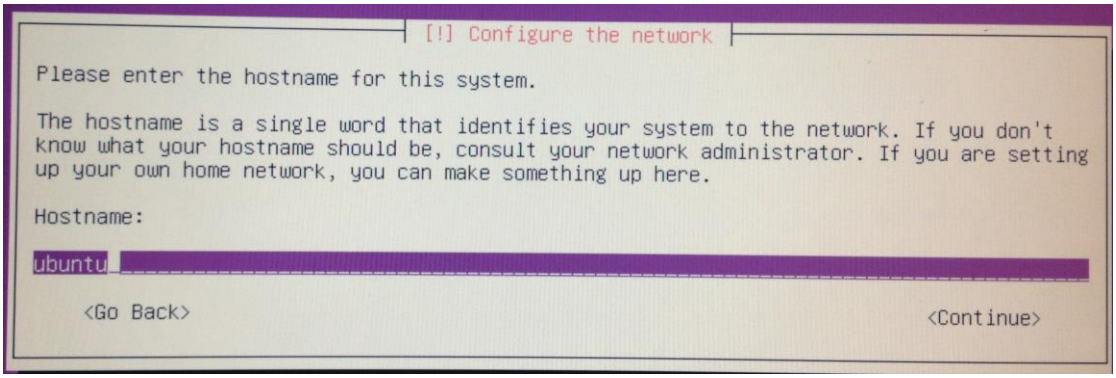

Figure 16: Configuring the network.

For the partition disks screen, select “Guided – use entire disk” and pres key “Enter” to validate the selection (fig.17).

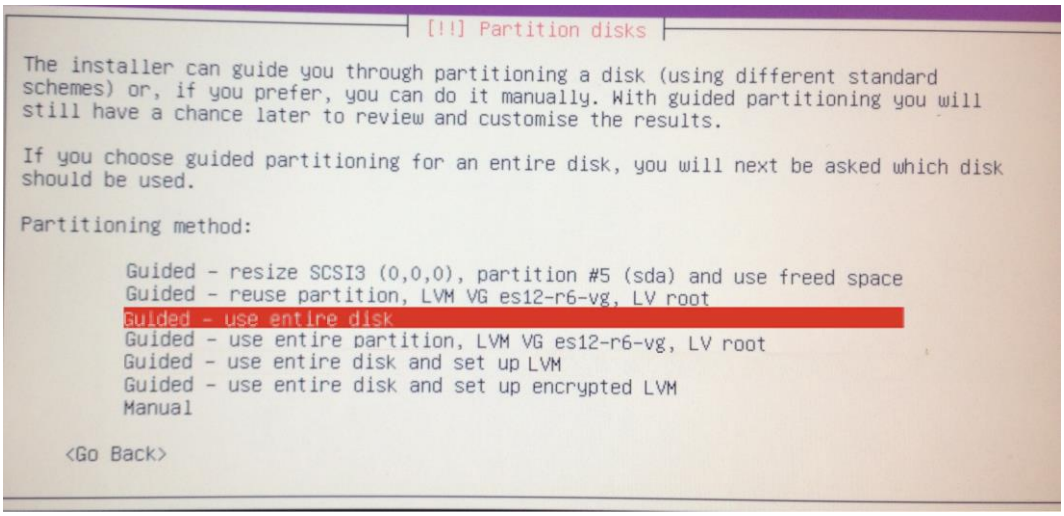

Figure 17: Partition disks process

Then the installation requests to select the hard drive where you want to install the operating system. Use the Up/Down arrow to choose the “SCSI6 (0,0,0) (sdb) – 250 GB ATA WDC WD2500…” and press “Enter” to validate your selection (fig. 18).

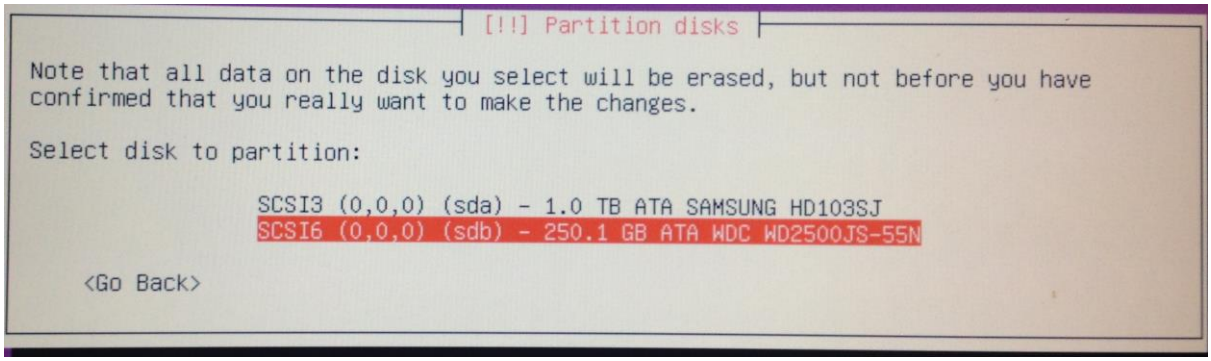

Figure 18: Choose the Disk System

Then the installation process asks for removing the existing logical volume data (fig.19).Select <Yes> and press key “Enter”.

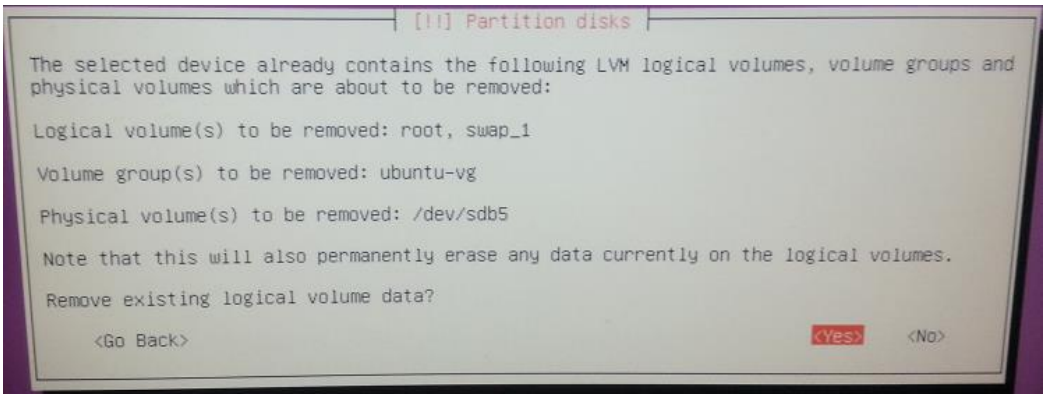

Figure 19: Remove existing logical volume data.

You will immediately need to write the changes to disk so make sure you selected the right disk and then write the changes. Select option <YES> (fig.20) and press key “Enter” to validate the selection.

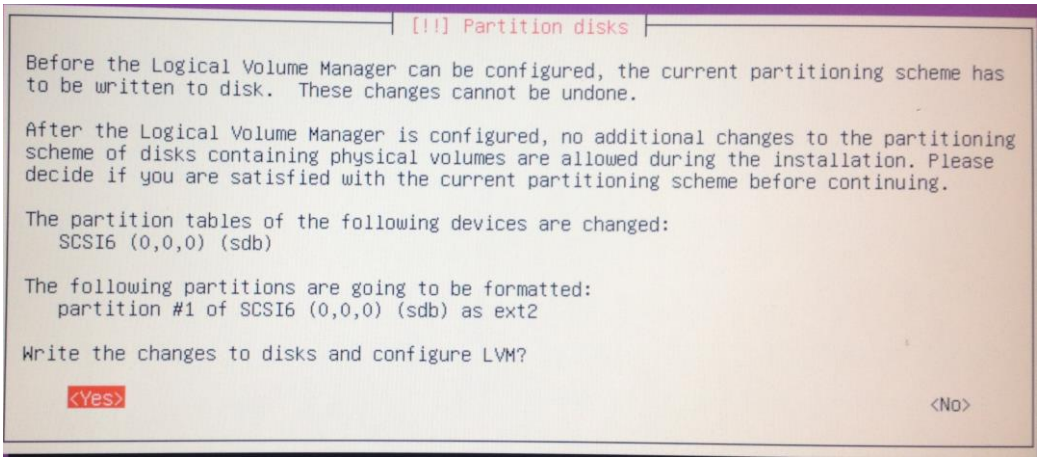

Figure 20. Write the changes to disks and configure LVM.

Then select the size you want the first logical volume to be. By default it is chosen and press key “Enter” to continue the process of installation (fig.21).

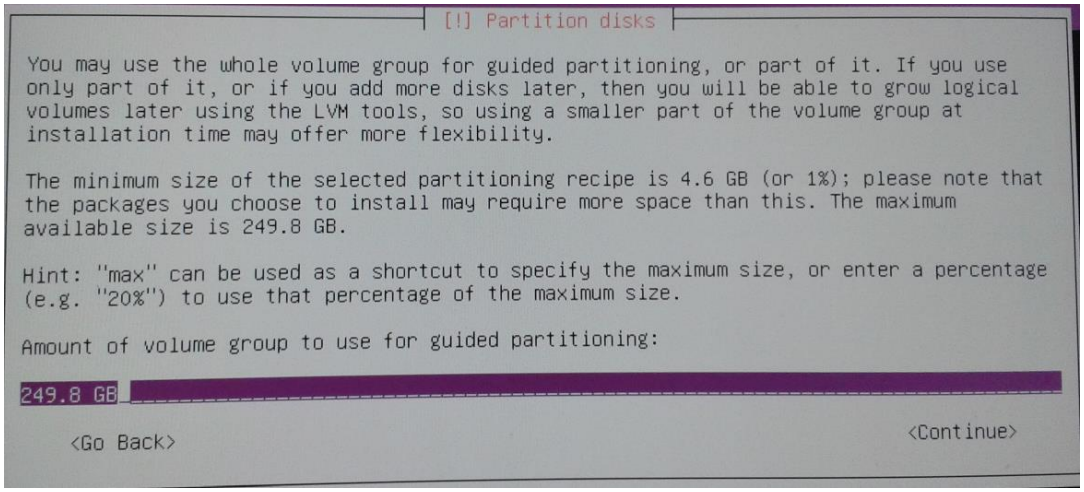

Figure 21. Choose the amount of volume group.

Then confirm your disk partitions and continue with the installation by choosing option “<Yes>” and then pressing key “Enter” (fig.22).

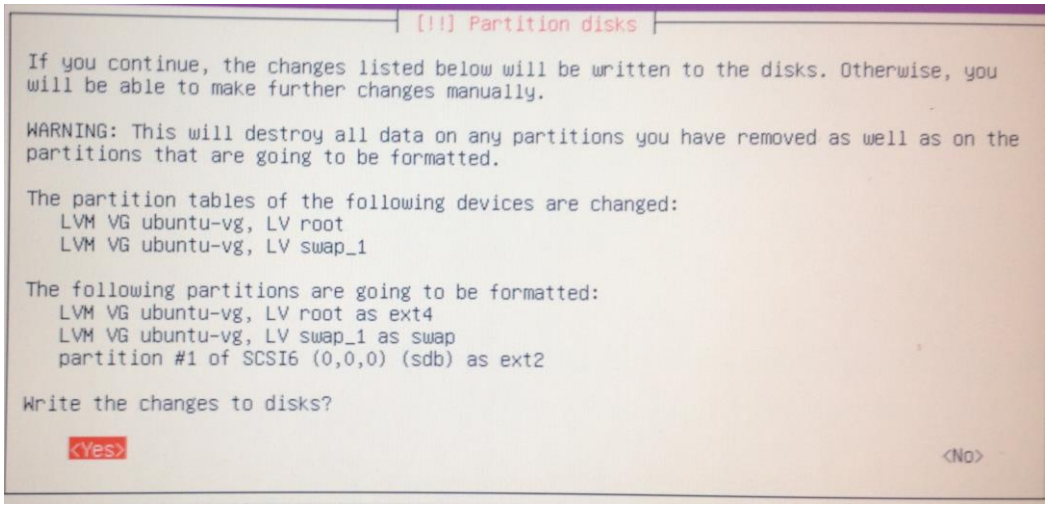

Figure 22. Confirm your disk partitions.

A progress box should now appear displaying the current progress for the installation of the base system. No action is required here (fig.23).

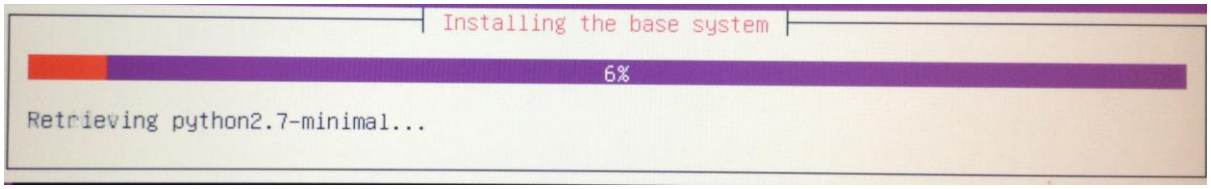

Figure 23. Installing the base system process.

The installation procedure will continue to display new messages as they are illustrated in the figures 24, and 25. No actions are required here.

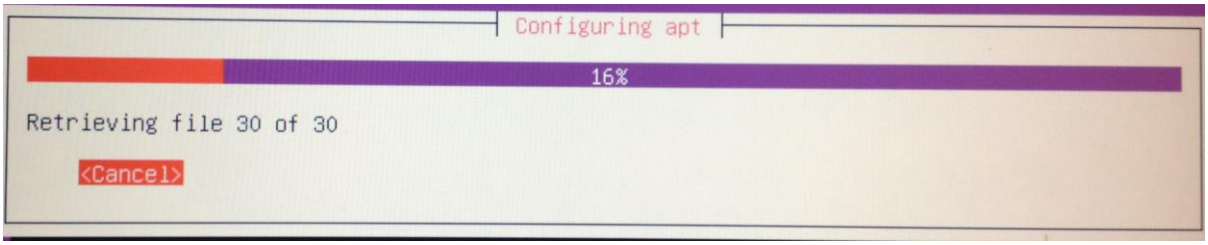

Figure 24. Configuring Apt sources.

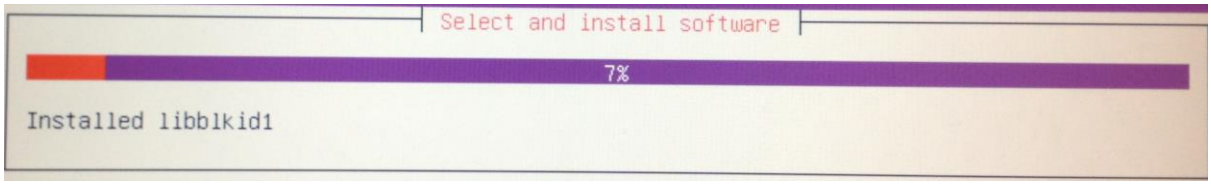

Figure 25. Select and install software.

The next step in the installation process is “Configuring xkb-data” in order to decide how the system will be updated. Choose “No automatic updates” and press key “Enter” to validate the option (fig.26).

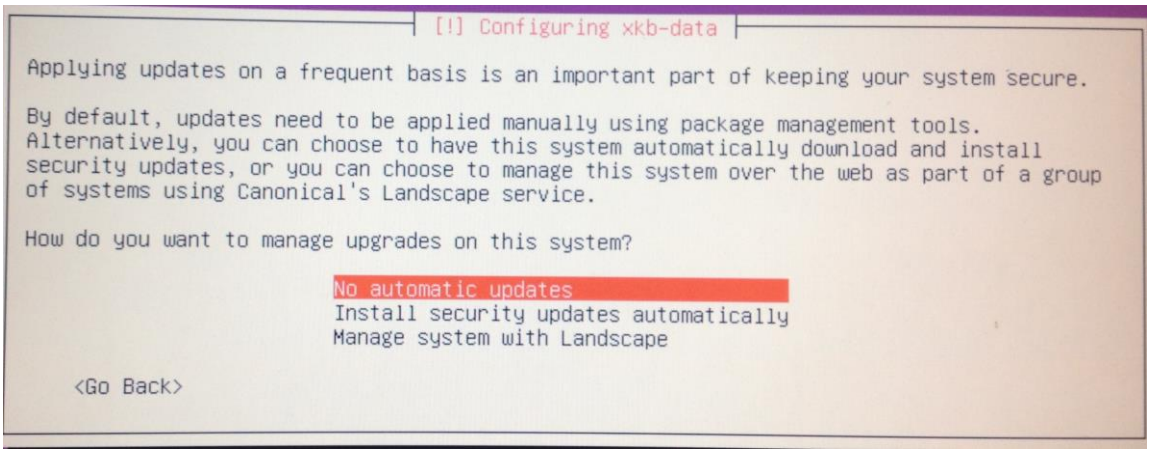

Figure 26. Configuring xkb-data

Then the installation procedure will continue the process of “Select and Install software” as it is illustrated in the figure 27. No actions are required here.

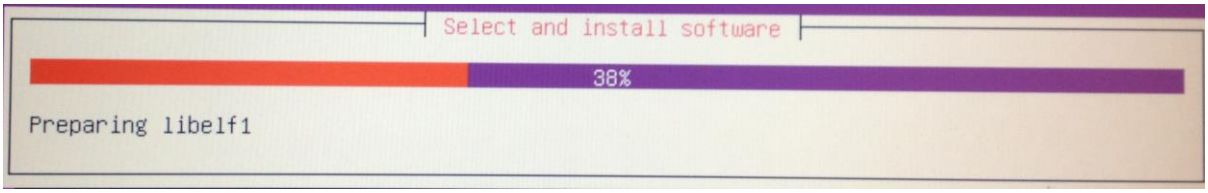

Figure 27. Select and install software.

Then the installation process asks what display manager should be used. Choose “gdm” and pres key “Enter” to validate the option (fig.28).

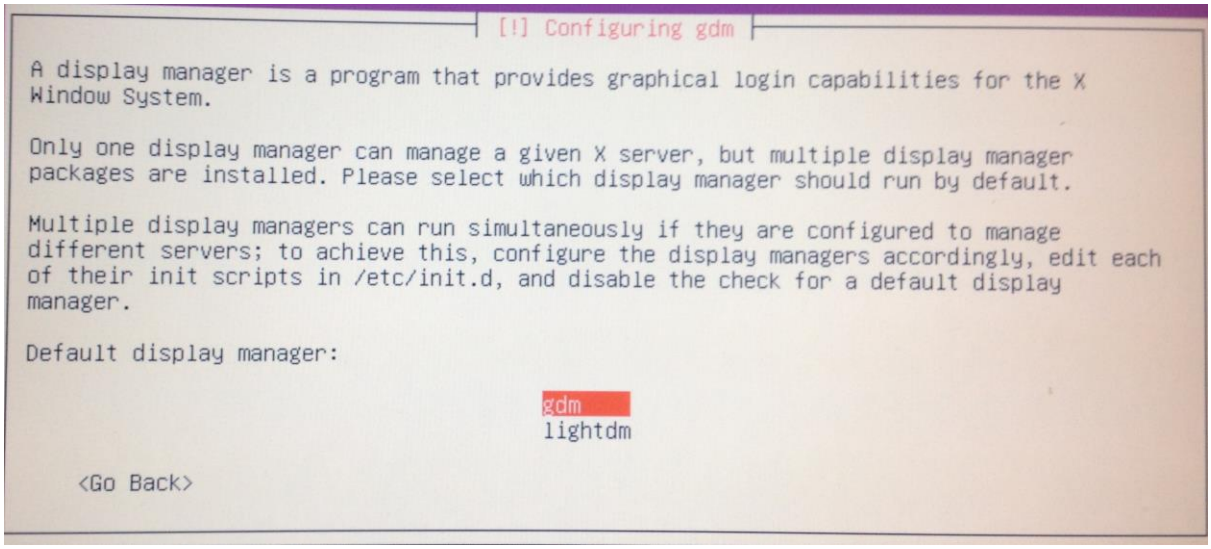

Figure 28. Selecting the display manager “gdm”.

Then the installation procedure will continue the process of “Select and Install software” as it is illustrated in the figure 29. No actions are required here.

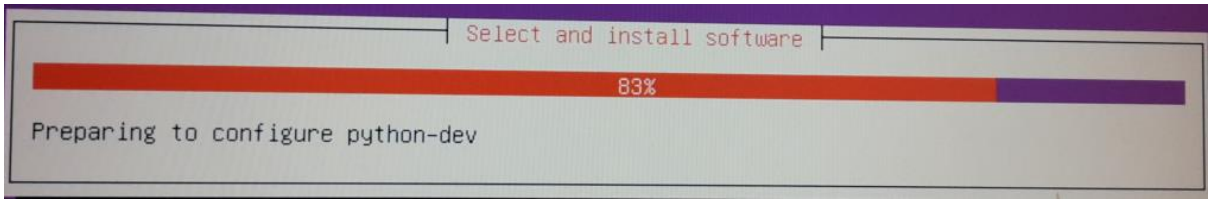

Figure 29. Select and install software.

Then the installation process asks for installing the GRUB boot loader to the Master Boot Record (MBR). Choose the "Yes" option and press key “Enter” to continue (fig.30).

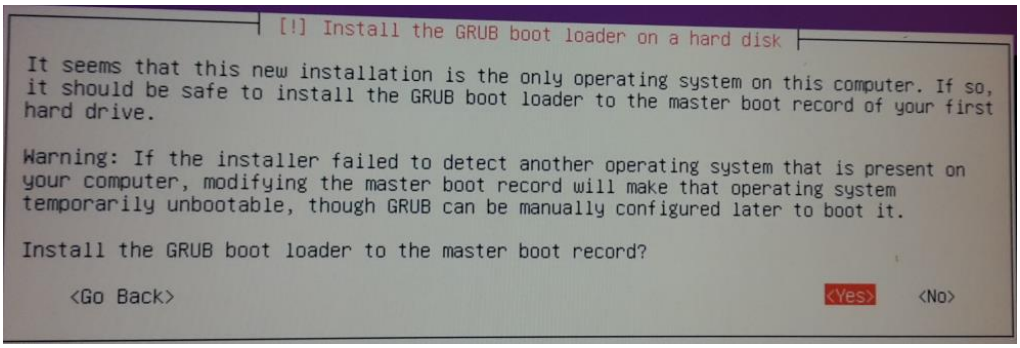

Figure 30. Installing the GRUB boot loader.

Then the installation procedure will pass to the last part as it is illustrated in the figure 31. No actions are required here.

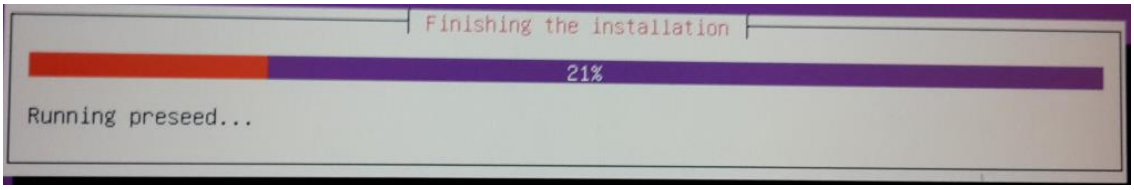

Figure 31: Last part of Installation Procedure.

Installation is almost now complete. You now need to boot into your new system. Press key “Enter” (fig.32).

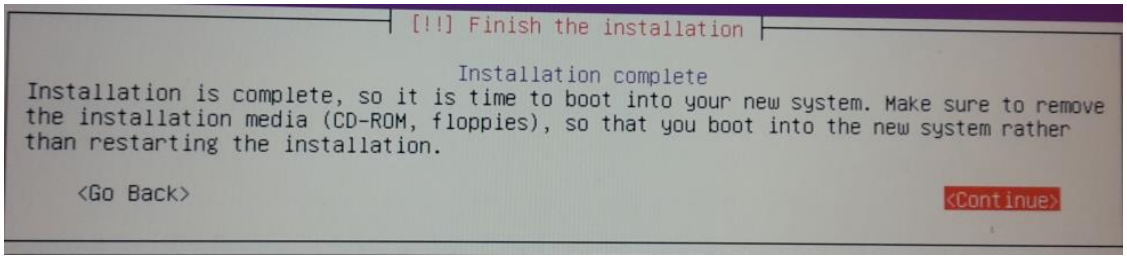

Figure 32. Installation is Complete.

When the machine is going to restart (black screen with various messages displayed on the bottom left corner), remove the USB key, so you boot into the new system rather using USB key.

After the machine is rebooting, it will prompt for username and password to login in.To complete the installation of eStation2.0 software, select as username “**eStation Admin User**” (fig.33) and type the password “**mesadmin**”.

Figure 33. Select as username **“eStation Admin User”.**

Then insert the USB key used previously for installation and on it go to the directory **/eStation/repository/amd64/**. See fig.34. In that case the USB key is ES2-K2.

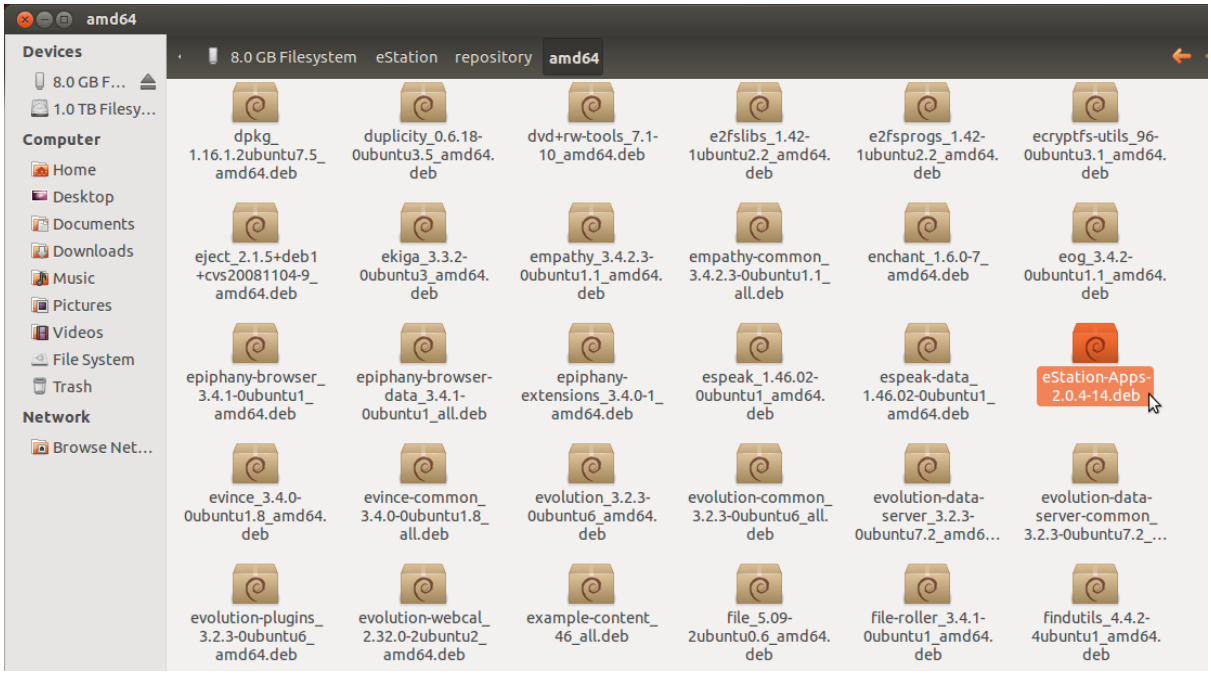

Figure 34. Select the debian package “eStation-Apps-2.0.4-14.deb”.

After the selection of the file “eStation-Apps-2.0.4-14.deb”, click on right mouse and select and then again click on option “Open With GDebi Package Installer” (fig.35).

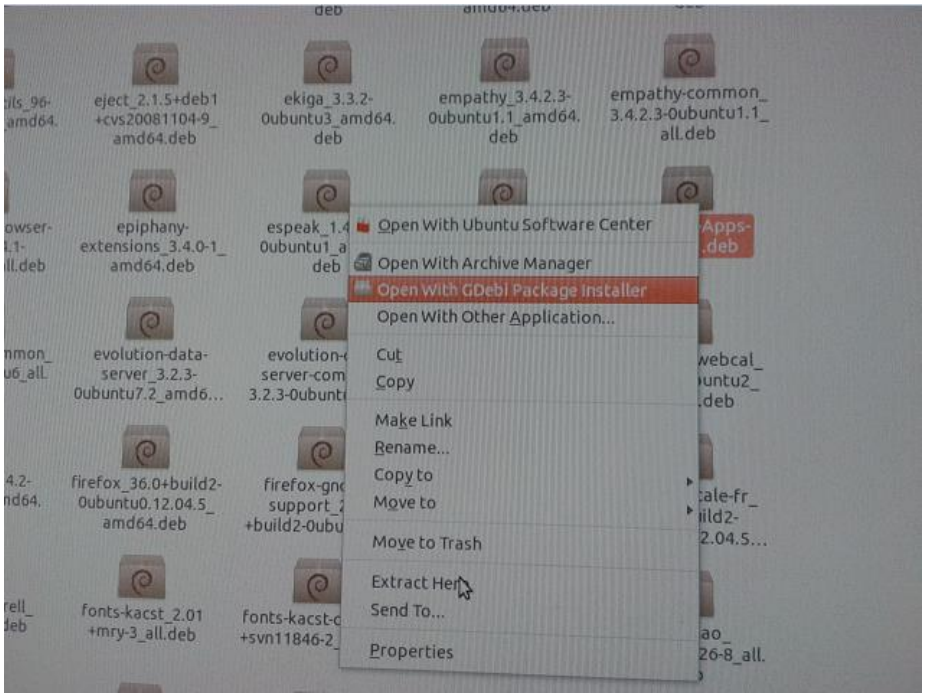

Figure 35. Select the option “Open With GDebi Package Installer”.

Click on option "**Install Package"** (fig.36) in order to initiate the installation of "eStation-Apps" application.

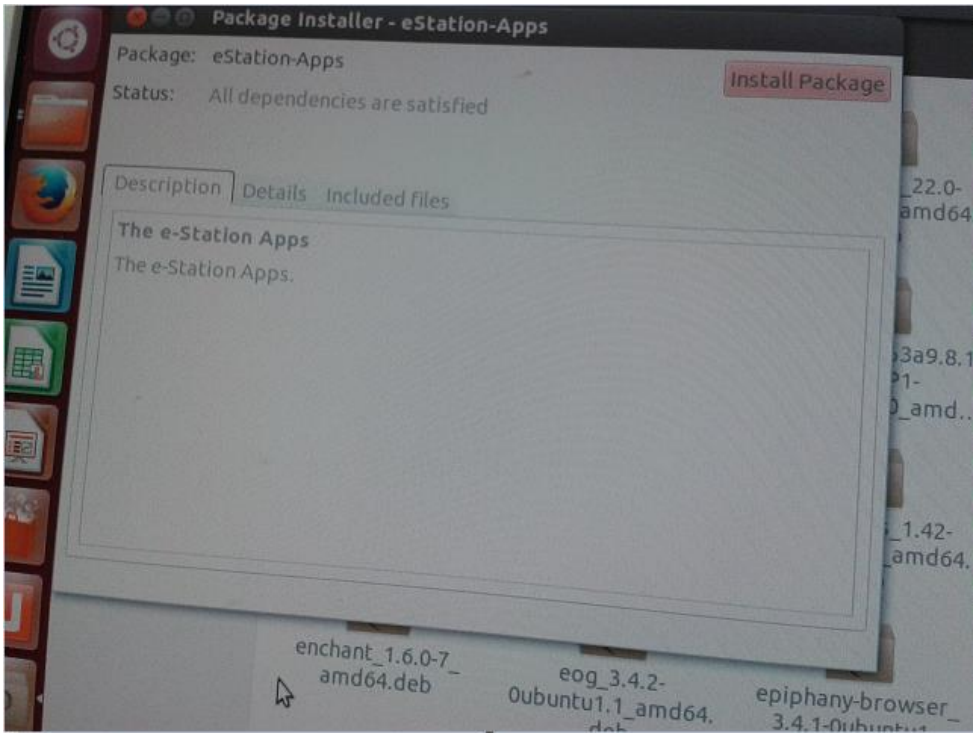

Figure 36. Initiate the installation deb package selected.

Then insert the password **"mesadmin"** and press ok (fig.37)

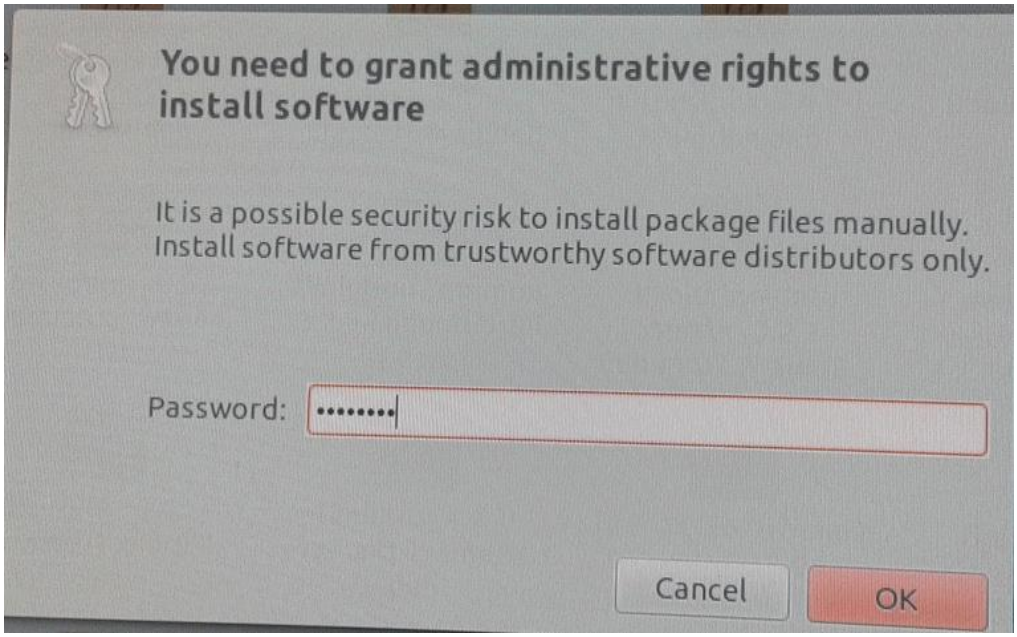

Figure 37. Allow installation of debian package.

The installation process starts (fig.38) and when it is complete, a display will be prompt as in fig.39.

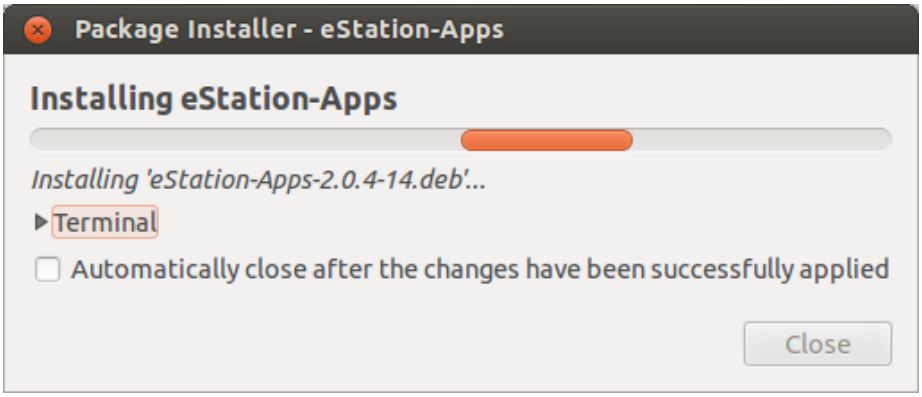

Figure 38. Installing package "eStation-Apps".

Installation of debian package "eStation-Apps" is now complete. Click on **"Close"** option (fig.39).

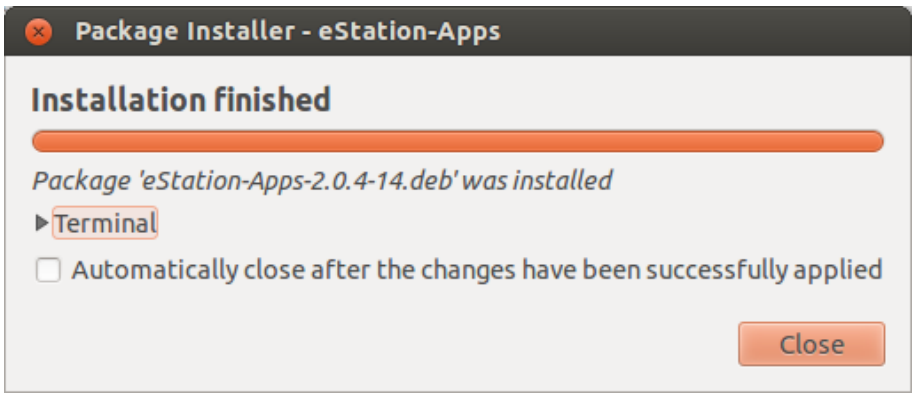

Figure 39. The package "eStation-Apps" is installed.

Click on right mouse over the USB icon displayed and there is a "**Safely Remove"** option which powers the hard drive off (fig.40).

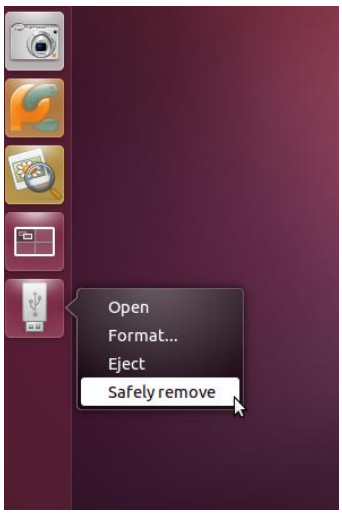

Figure 40. Option "Safely Remove".

4. POST-INSTALLATION CUSTOMIZATION

4.1 POST INSTALLATION VERIFICATIONS

In order to verify that the installation was ok, please perform the following actions

4.1.1 Install log files

Check if the following files exist (fig.41):

/var/log/eStation2/eStation-Apps_<version>_preinst.log

/var/log/eStation2/eStation-Apps_<version>_postinst.log

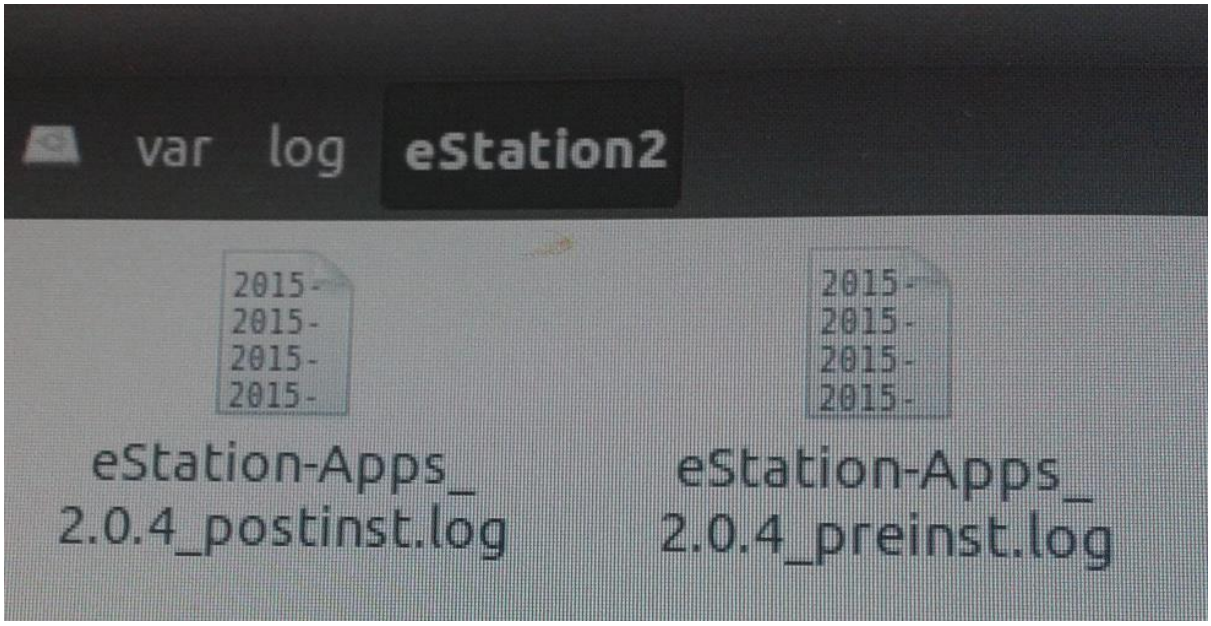

Figure 41. Install log files.

The estation-apps pre/postinst scripts themselves can be found on the 'target' machine under /var/lib/dpkg/info/, and used to perform specific actions (fig.42).

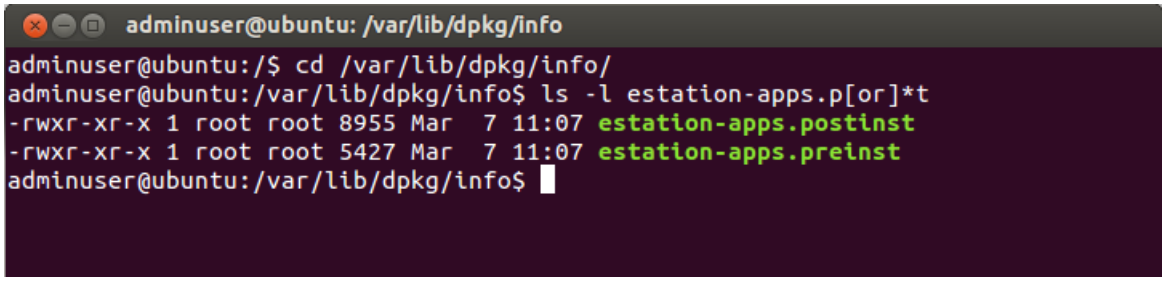

Figure 42. The estation-apps pre/postinst scripts.

4.1.2 Verification of the packages Installed:

Type the following commands on a terminal and see their status (fig.43):

service apache2 status
service postgresql status

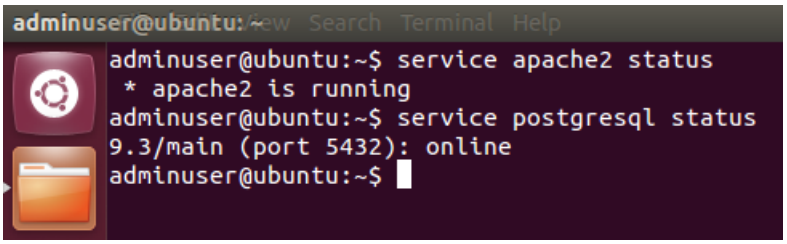

Figure 43. Check the status of the services **apache2** and **postgresql**.

Type the following command on a terminal and QGIS should start (fig.44) and open (fig.45):

qgis

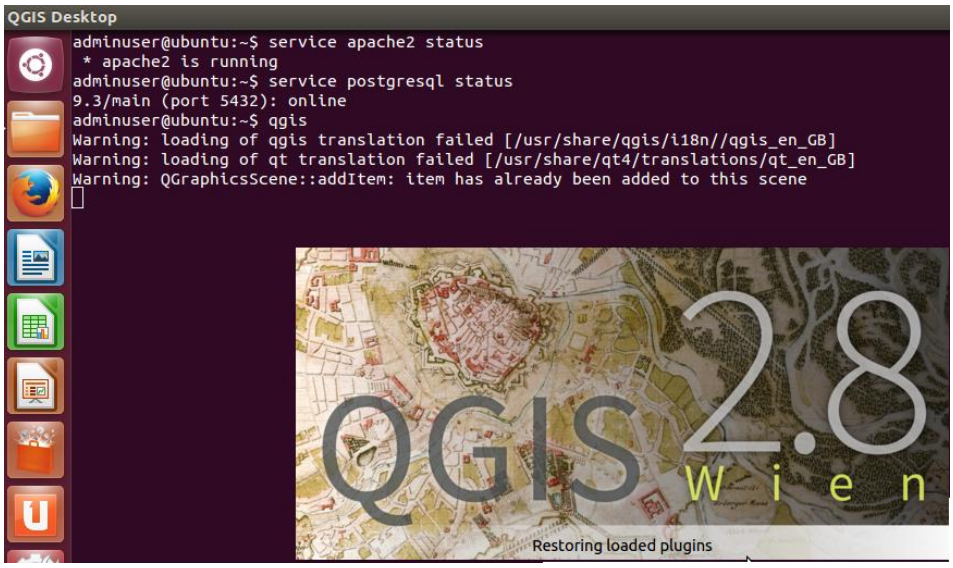

Figure 44. Start QGIS application if installed.

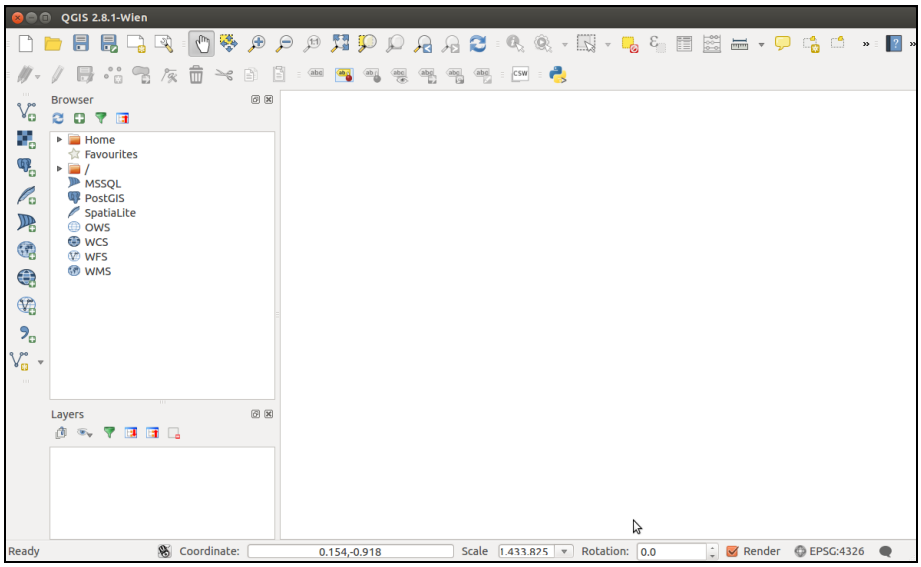

Figure 45. QGIS application opened if installed properly.

Then type the following commands on a terminal (fig. 46):

grass

GRASS application should start and run. When the message “Hit RETURN to continue”, press key “Enter” (fig.46):

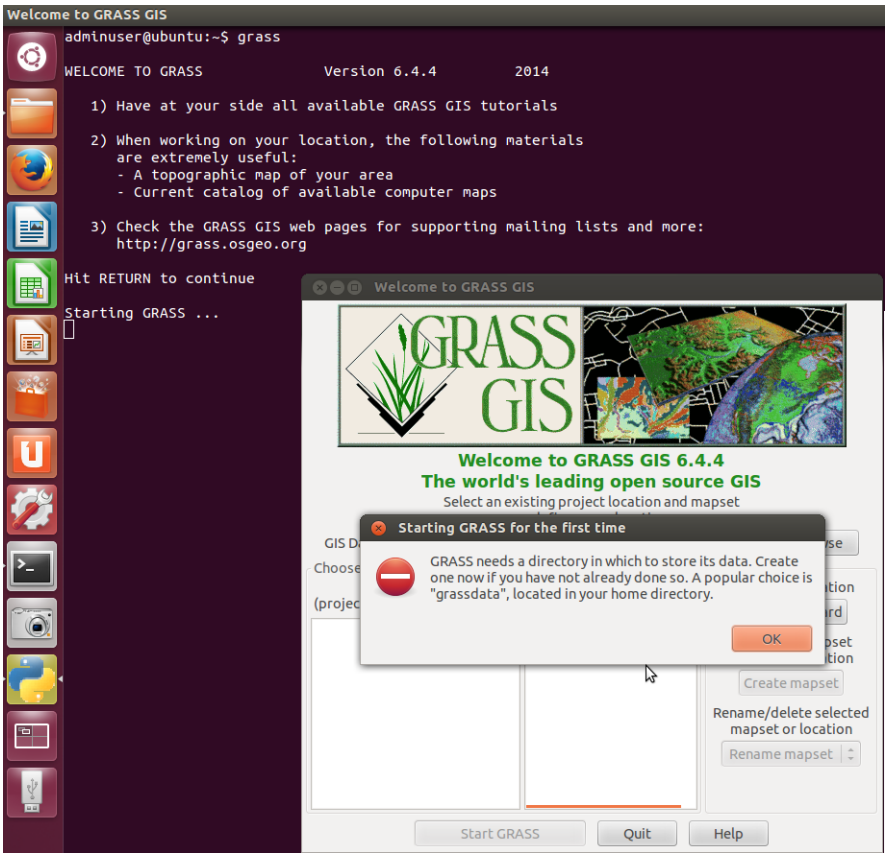

Figure 46. Start GRASS application if installed.

4.1.3 Verify the eStation2 User Interface

Open firefox and enter the address: localhost/esapp/. See fig.47.

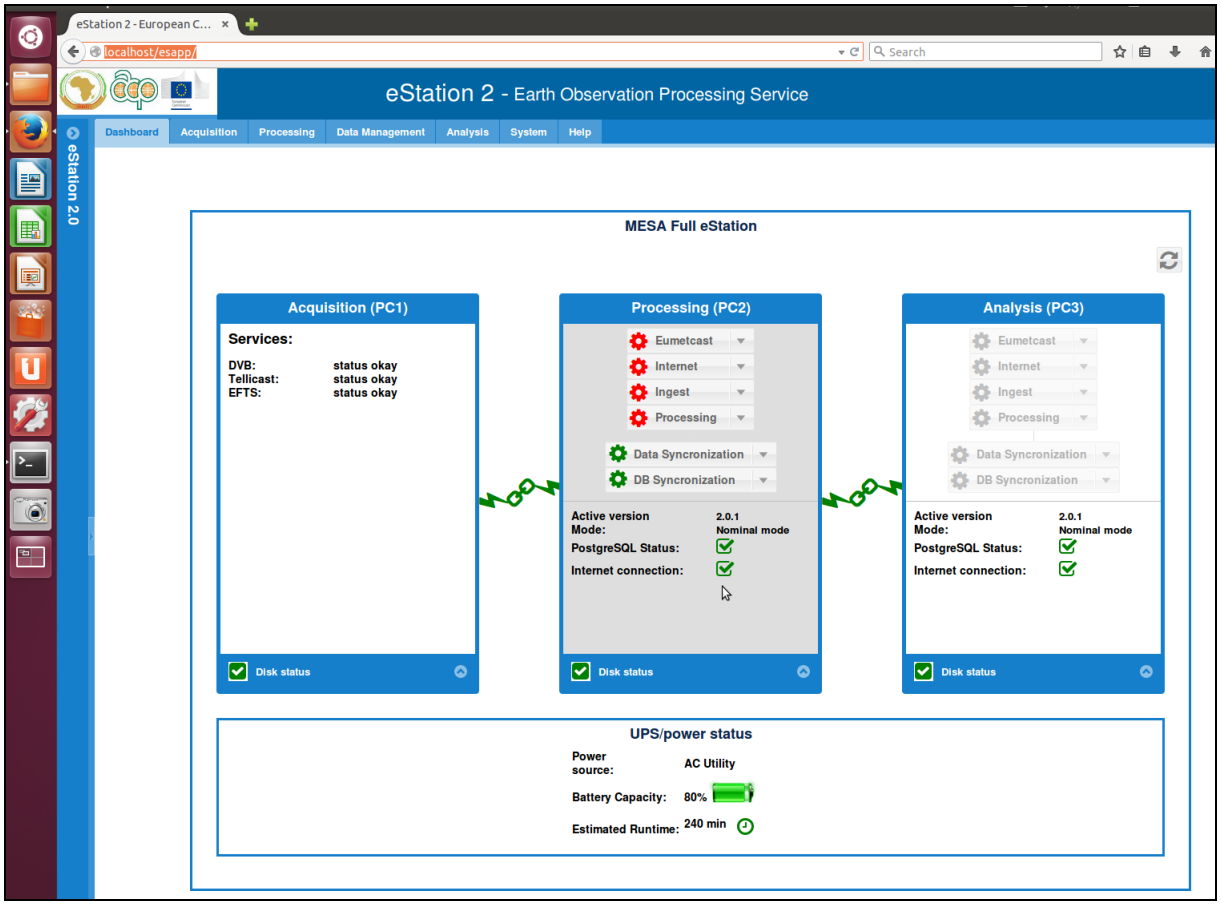

Figure 47. The eStation2 User Interface.

END OF DOCUMENT