

SOS Ubuntu Installation Guide

Last updated: August 16th, 2023

Step 1: Create a Ubuntu 22.04 Installer

Download the Ubuntu .iso file

The currently supported operating system is Ubuntu 22.04 Desktop and can be obtained here:

<http://releases.ubuntu.com/jammy/>

It is necessary to download the “.iso” file that is the 64-bit version from the link labeled “64-bit PC (AMD64) desktop image” and NOT the 32-bit version. Ubuntu installation media are known “liveUSB’s”.

Create a Live USB Stick

On Ubuntu: <http://www.ubuntu.com/download/desktop/create-a-usb-stick-on-ubuntu>

On Windows: <http://www.ubuntu.com/download/desktop/create-a-usb-stick-on-windows>

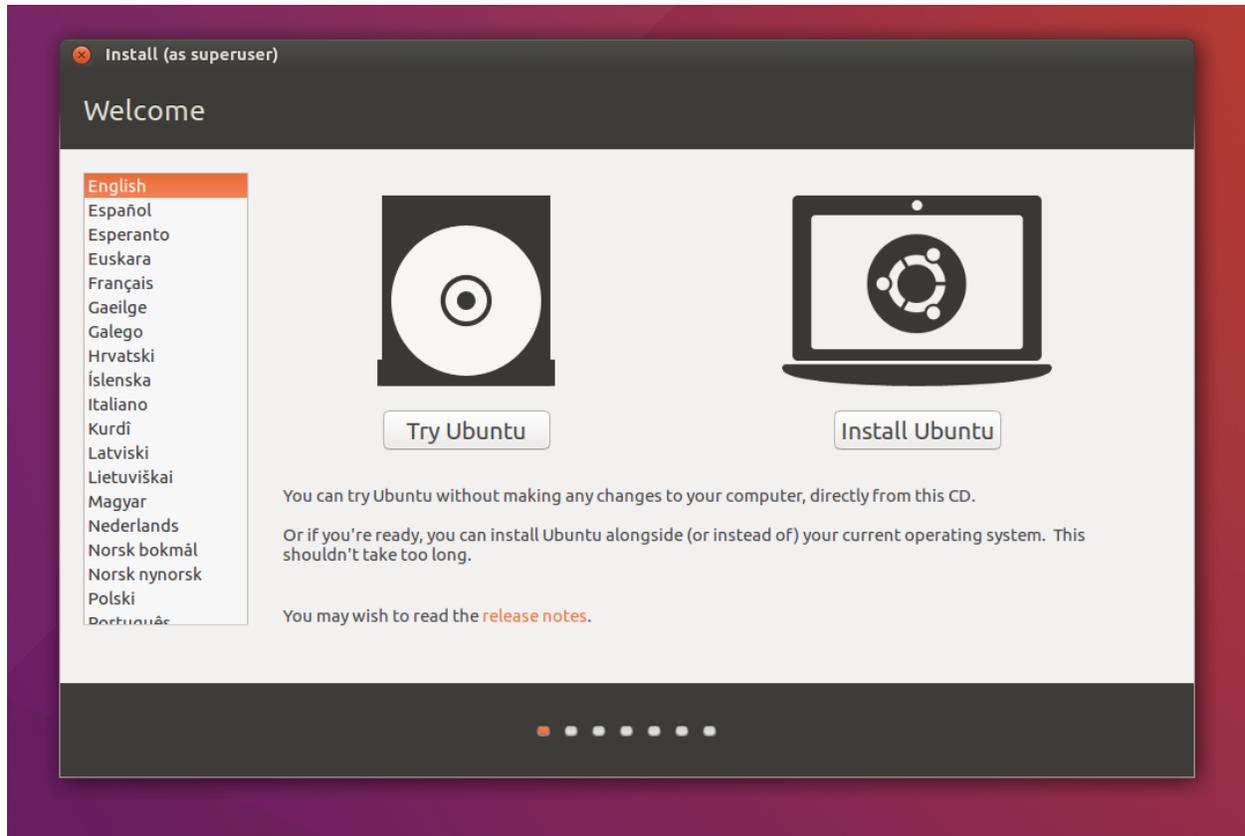
On Mac: <http://www.ubuntu.com/download/desktop/create-a-usb-stick-on-mac-osx>

Step 2: Install Ubuntu on the SOS Computer

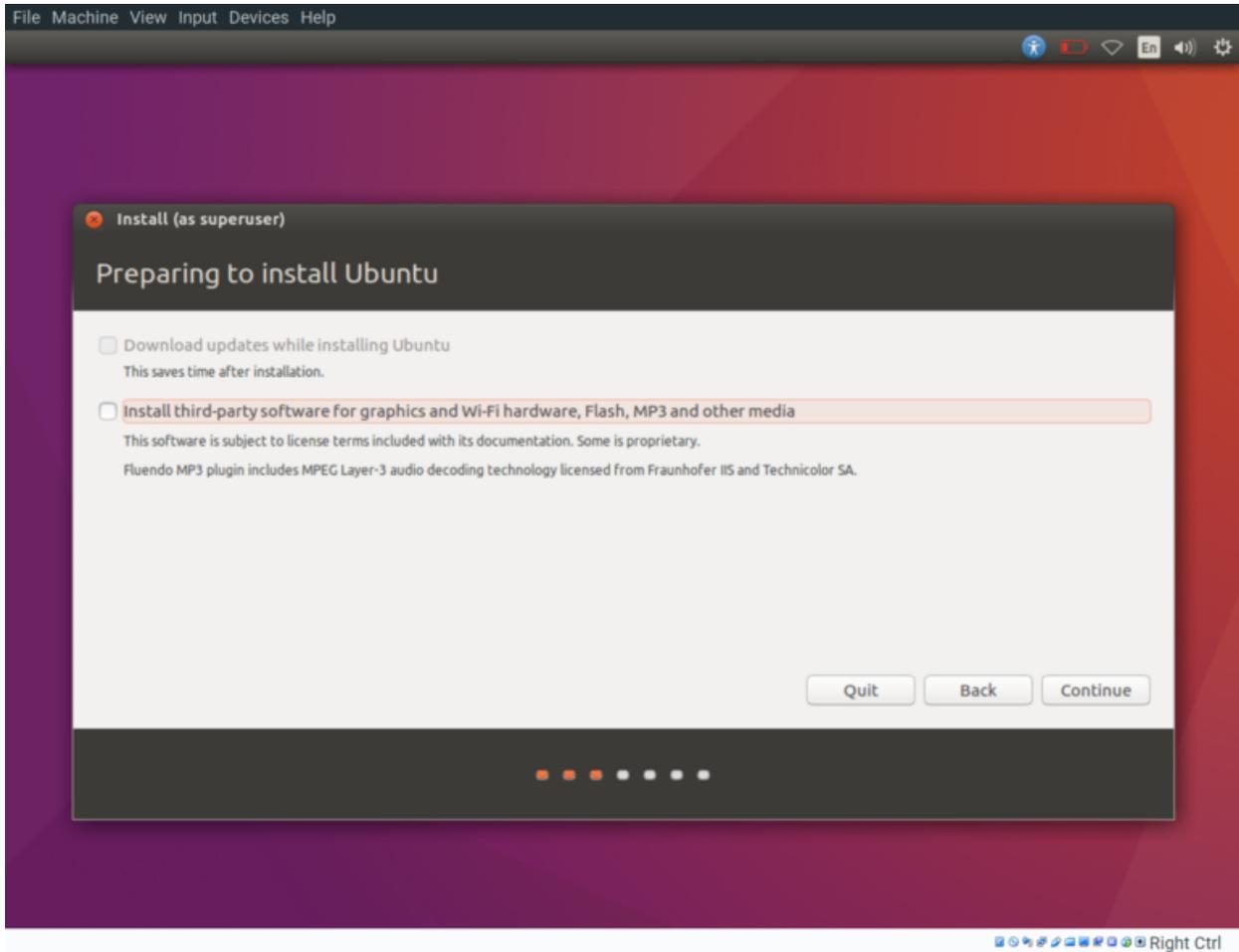
Ubuntu 22.04 Installation

Insert the Ubuntu 22.04 installation disk (a liveUSB) and restart the computer. You may need to press F12 to get the Boot Menu to appear and select to boot from the Flash Drive. The installation disk will automatically be started and you will see an Ubuntu loading screen for a few minutes. You will then see the below screens. For more information on what each screen means, you can look here: <https://help.ubuntu.com/community/GraphicalInstall>

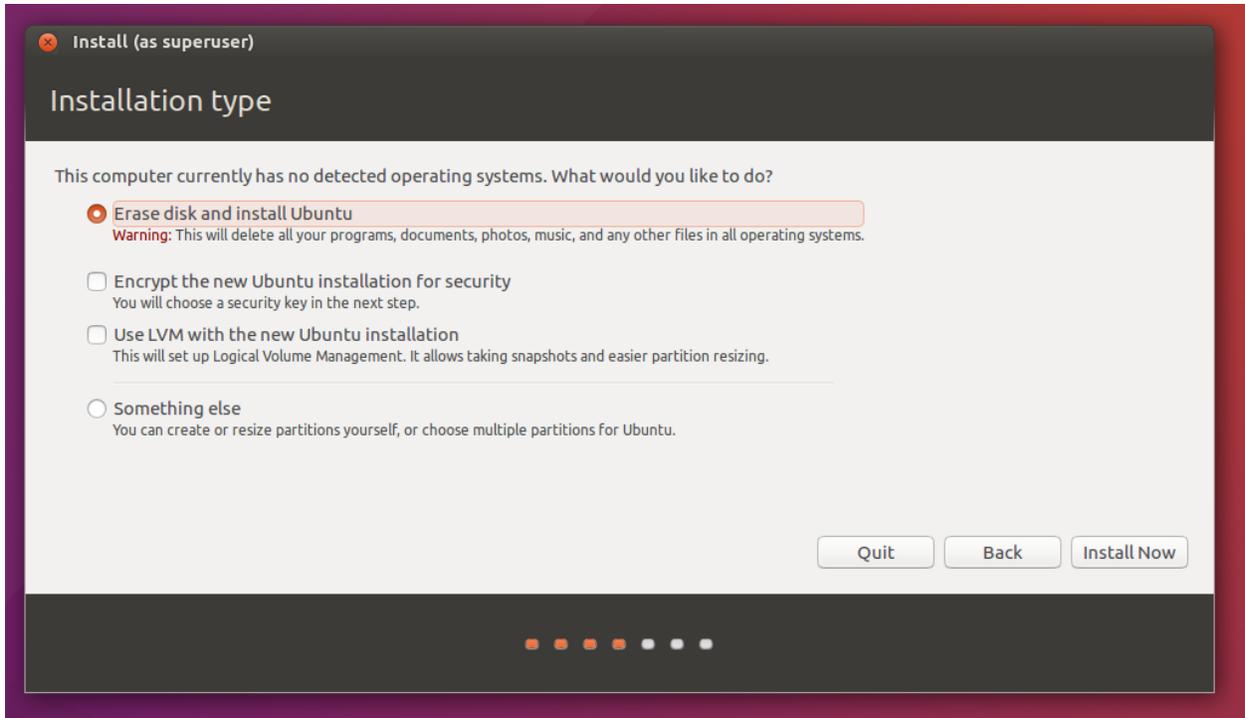
1. Select “Install Ubuntu”



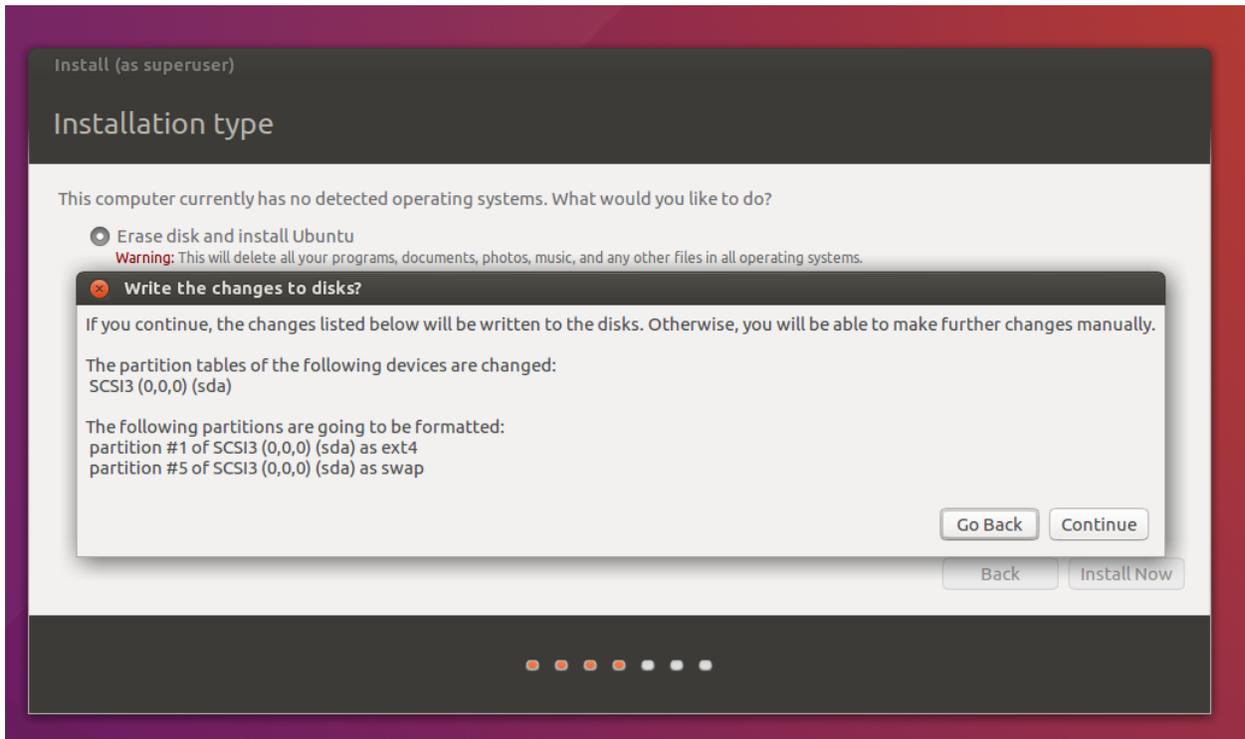
EXTREMELY IMPORTANT: IN THE FOLLOWING STEP, DO NOT SELECT EITHER OF THESE OPTIONS, “Download updates while installing Ubuntu” and “Install third-party software...”. This causes issues with the graphics driver and will cause issues with SOS.



3. Select "Erase disk and install Ubuntu." Note - this screen may vary depending on your system. Regardless, you will always want the "Erase disk and install Ubuntu" option.



4. A pop-up will appear. Select continue.



5. You can select appropriate options and click continue through the next two screens. (Timezone & Keyboard configuration).

6. You will then encounter the next screen. The SOS software requires that you set the “Your name” and “Pick a username” fields to “sos” like in the below image. You can choose any hostname you like as long as it ends in a “2” (for the backup computer) or a “1” (for the primary computer). We recommend using “sos1” for the primary PC and “sos2” for the backup.

This step will be creating the “sos” user account with administrative privileges. Our default admin password is “sos!”. You can choose whatever you’d like for the password. However, if it differs from the default, you will need to provide it to SOS Support in some support situations.

Install (as superuser)

Who are you?

Your name: ✓

Your computer's name: ✓
The name it uses when it talks to other computers.

Pick a username: ✓

Choose a password: Short password

Confirm your password: ✓

Log in automatically
 Require my password to log in
 Encrypt my home folder

Back Continue

Once the installation is complete, hit the “Restart Now” button. Then, eject/remove the installation when the computer tells you to, and then hit Enter. The computer will reboot into your new Ubuntu system!

Step 3: Prepare for the SOS Software

Set Up the Network

The next step is to set up the network interface. The network interface should be connected to the network switch, which is connected to the router. The router should be set to receive the building internet connection and then share that connection to the computers.

The internal network structure is defined in Table 1. Be sure to use the IP addresses listed in Table 1 for all of the hosts as some of our code relies on IP's instead of hostnames.

Sos1	Sos2	Projector 1	Projector 2	Projector 3	Projector 4	Kiosks*	Ipad
10.1.1.31	10.1.1.32	10.1.1.71	10.1.1.72	10.1.1.73	10.1.1.74	10.1.1.__	10.1.1.__

Table 1: Internal Network Configuration

** Kiosks are optional and can use any unused IP in the 10.1.1 space*

To change the settings of the network device:

1. Type “Network Connections” into the launcher search bar & launch the “Network Connections” program.
2. Click on “Add”, then select “Ethernet” and then click “Create”.
3. In the Ethernet tab, click on Device and select the ethernet card that you are using for the connection to the router. (If you are using more than one ethernet card) The dialog box will look like Illustration 9.

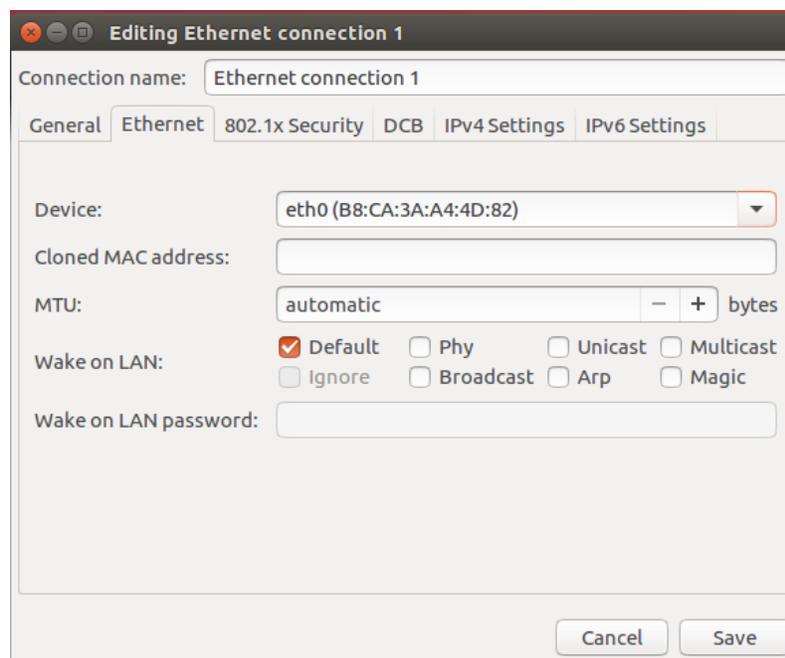


Illustration 9: Setting the Ethernet card for your Ethernet connection

4. Then select the “IPv4 Settings” tab. The dialog box will look like Illustration 10.

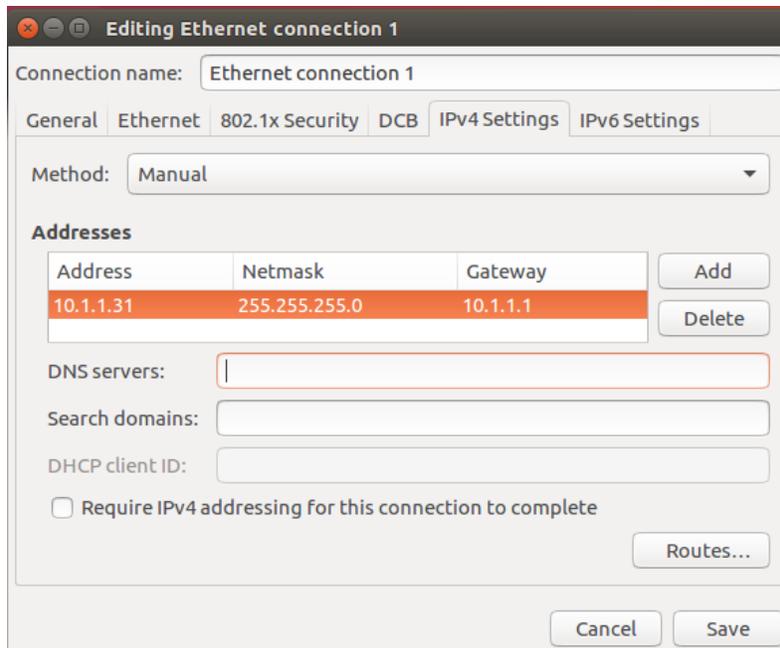


Illustration 10: Ethernet Connection Settings

5. Change the Method to Manual and then click on *Add*.
6. Click on the empty box under *Address* and type in the correct address. Be sure to click outside of the box so the settings will be saved.
7. Do the same for *Netmask* and *Gateway*, entering the information as shown in Illustration 10.
8. The *Address* is the only box that is different between the two computers.

Click and “Save” and the settings will be correct for your ethernet connection. (If you are using a standard SOS setup)

Step 4: Run Ubuntu Updates

Now that Ubuntu has been installed and configured, we need to update its software packages. Click the 'Activities' button in the upper left of the screen and type 'update'. The Update Manager should show up as in Illustration 11.

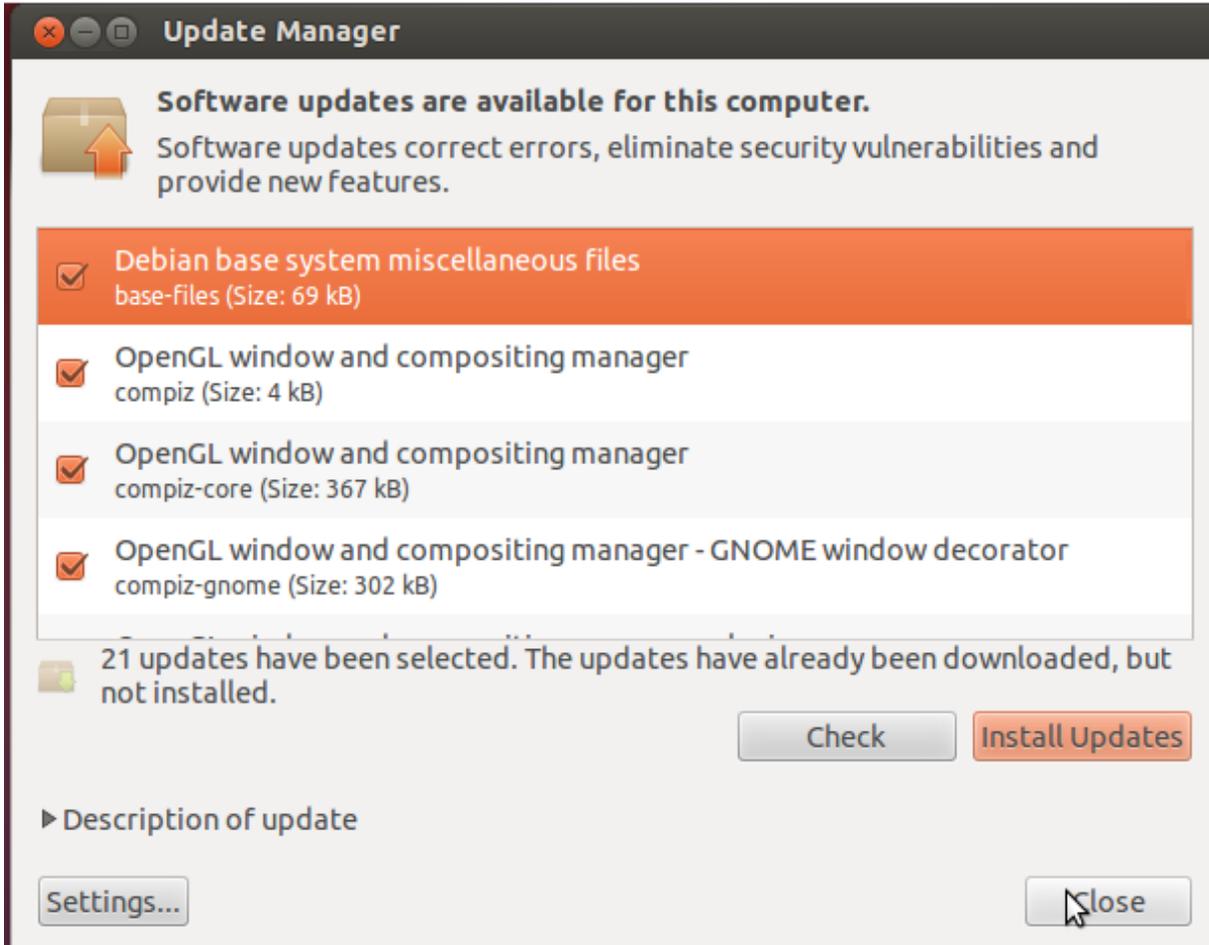


Illustration 11: Find the Update Manager

First we'll tell the Update Manager not to tell us about new Ubuntu versions. Upgrading to a new Ubuntu version is likely to break SOS software unless the Science On a Sphere[®] development team has tested it and announced that the upgrade is safe.

To do so:

1. Click the 'Settings...' button.
2. In the 'Updates' tab, find the 'Notify of a new Ubuntu version:' drop-down and select 'Never' (Illustration 12).
3. Click 'Close'.

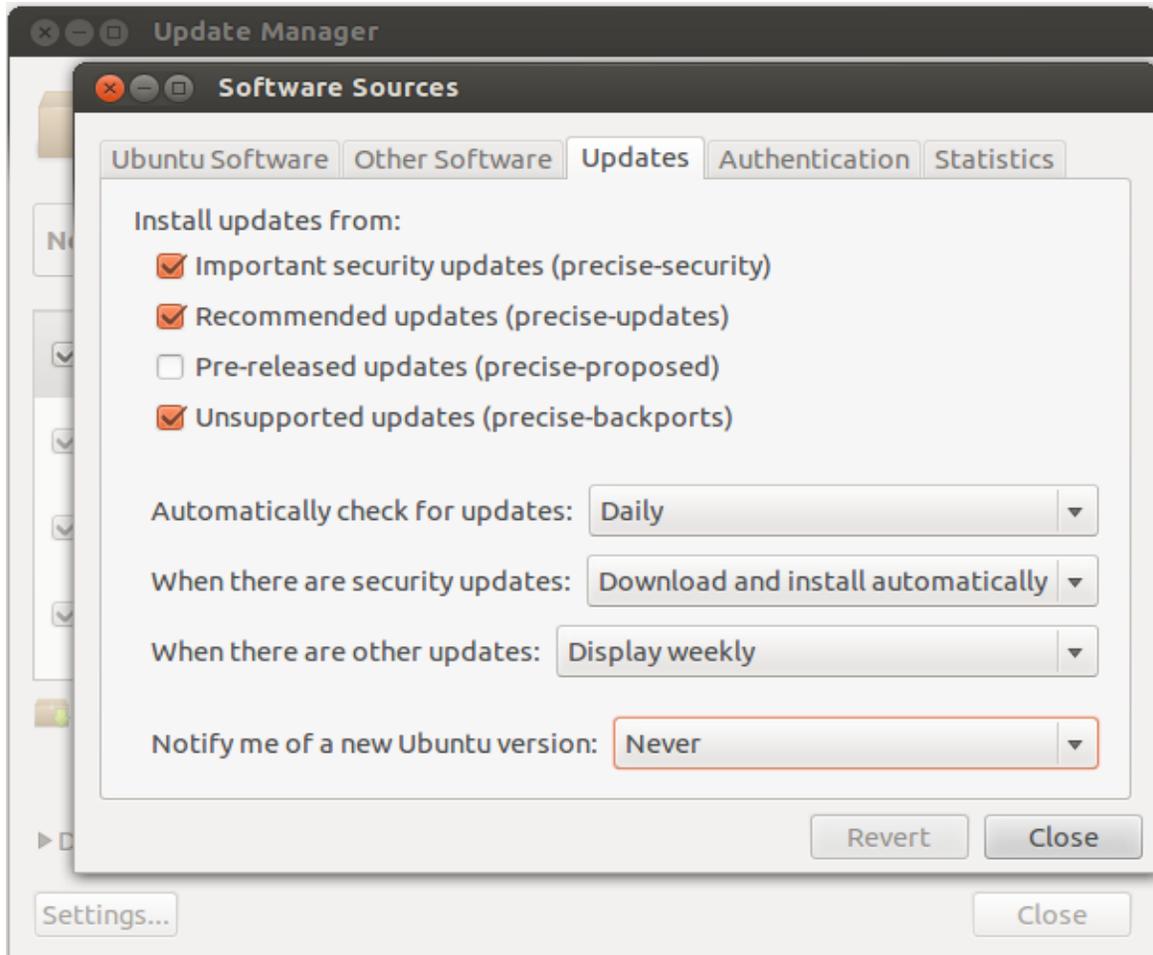


Illustration 12: Turn off new Ubuntu version notifications

Once that is done, you can run updates by:

Clicking the 'Check' button to make sure all the latest updates have been pulled in, then clicking the 'Install Updates' button. You will be prompted for the 'sos' user password – type it in and press Enter.

Now reboot the machine to complete the updates and remove the installation disc. If the computer boots to a black screen and complains that no bootable drive was found, we'll need to change the BIOS boot mode from 'Legacy' to 'UEFI'.

To do this, reboot the computer and hit F12 to enter the Boot Menu. Select 'BIOS Setup', then 'Boot Sequence'. Under the 'Boot List Option' section, select 'UEFI', then click 'Apply' at the bottom of the page (see Illustration 13). Reboot the computer and Ubuntu should load.

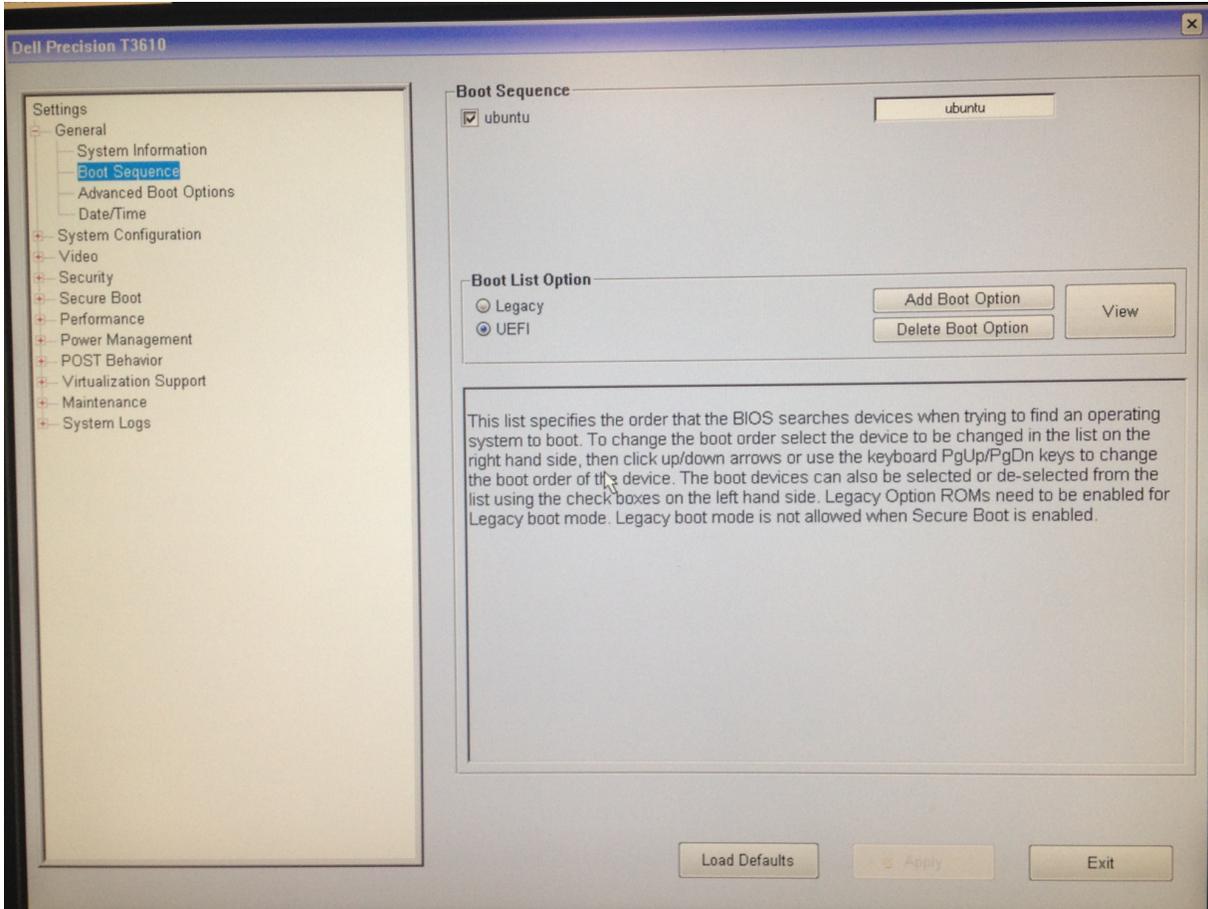


Illustration 13: BIOS Setup

Questions

Any questions regarding the installation process should be directed to sos.support@noaa.gov.