SOS Ubuntu Installation Guide

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

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"

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ki	Try Obdited			
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r i i	You can try Ubuntu without making any c	hanges to your compute	er, directly from this CD.	
lands bokmål	Or if you're ready, you can install Ubuntu	alongside (or instead of)) your current operating system. This	s
nynorsk	shouldn't take too long.			
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r lands bokmāl nynorsk	You can try Ubuntu without making any c Or if you're ready, you can install Ubuntu shouldn't take too long.	hanges to your compute alongside (or instead of)	er, directly from this CD. ;) your current operating s	ystem. Thi

EXTREMELY IMPORTANT: IN THE FOLLOWING STEP, DO <u>NOT</u> 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.

Install (as superuser)
Installation type
This computer currently has no detected operating systems. What would you like to do?
 Erase disk and install Ubuntu Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
Encrypt the new Ubuntu installation for security You will choose a security key in the next step.
 Use LVM with the new Ubuntu installation This will set up Logical Volume Management. It allows taking snapshots and easier partition resizing.
O Something else You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.
Quit Back Install Now

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

Install (as superuser)	
Installation type	
This computer currently has no detected operating systems. What would you like to do?	
Erase disk and install Ubuntu Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systemetry.	·ms.
😣 Write the changes to disks?	
If you continue, the changes listed below will be written to the disks. Otherwise, you will be a	ble to make further changes manually.
The partition tables of the following devices are changed: SCSI3 (0,0,0) (sda)	
The following partitions are going to be formatted: partition #1 of SCSI3 (0,0,0) (sda) as ext4 partition #5 of SCSI3 (0,0,0) (sda) as swap	
	Go Back Continue
	Back Install Now
00000	

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 <u>requires</u> 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:	sos
Your computer's name:	sos2
	The name it uses when it talks to other computers.
Pick a username:	sos
Choose a password:	Short password
Confirm your password:	
	○ Log in automatically
	O 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.

😣 🖻 🗉 Editing Etherne	et connection 1		
Connection name: Ethe	rnet connection 1		
General Ethernet 802	.1x Security DCB IPv4 Settings IPv6 Settings		
Device:	eth0 (B8:CA:3A:A4:4D:82)		
Cloned MAC address:			
MTU:	automatic – + bytes		
Wake on LAN:	✓ Default Phy Unicast Multicast Ignore Broadcast Arp Magic		
Wake on LAN password:			
L			
	Cancel Save		

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.

😣 🖻 🗊 Editin	ig Ethernet connectio	n 1	
Connection nam	ne: Ethernet connect	ion 1	
General Ethe	ernet 802.1x Security	DCB IPv4 Settings	IPv6 Settings
Method: Ma	anual		•
Addresses			
Address	Netmask	Gateway	Add
10.1.1.31	255.255.255.0	10.1.1.1	Delete
DNS servers	:		
Search doma	ains:		
DHCP client	ID:		
Require	IPv4 addressing for this	connection to comple	te
			Routes
			Cancel Save

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.

😣 🗖 🗊 Update Manager
Software updates are available for this computer. Software updates correct errors, eliminate security vulnerabilities and provide new features.
Debian base system miscellaneous files base-files (Size: 69 kB)
OpenGL window and compositing manager compiz (Size: 4 kB)
OpenGL window and compositing manager compiz-core (Size: 367 kB)
OpenGL window and compositing manager - GNOME window decorator compiz-gnome (Size: 302 kB)
21 updates have been selected. The updates have already been downloaded, but not installed. Check Install Updates
▶ Description of update
Settings

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'.

80	Update Manager
	🗴 🗖 🗉 Software Sources
-	Ubuntu Software Other Software Updates Authentication Statistics
	Install updates from:
	Important security updates (precise-security)
	Recommended updates (precise-updates)
	Pre-released updates (precise-proposed)
V	Unsupported updates (precise-backports)
	Automatically check for updates: Daily
	When there are security updates: Download and install automatically 💌
	When there are other updates: Display weekly
	Notify me of a new Ubuntu version: Never 🔹
►D	Revert Close
Sett	ings 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.