SETTING UP YOUR FIRST LINUX SERVER

Things you'll need:

- 1. Either a PC tower or virtual machine.
- 2. A copy of Ubuntu Server OS.
- 3. A USB stick with at least 16GB of storage or more. (If using PC Tower)
- 4. Software for burning the ISO into a USB stick.

The first thing you need to decide:

- Install it on a virtual machine. (If using this option, create VM, load ISO, and then skip to step 10)
- Install it on separate hardware.

If you're going to install it on separate hardware:

- 1. Begin by inserting a USB Stick into your computer.
- 2. Load the ISO burning software (I'm using BalenaEtcher, but you can use whatever suits you best)



- 3. Click on "Flash from File" (or open ISO on your preferred ISO burner)
- 4. Find the Ubuntu Server ISO file and click on it to load it.

😂 Open				×
← → ~ ↑	> Search Results in Downloads >	~ C	ubuntu	
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File n	ame		OS Images (*.bin;*.bz/	¦;*.dmg;*. ∨ Cancel

5. Once you have the ISO selected, you want to go ahead and select what device you're going to burn it to.



- 6. You should see the USB stick that you inserted back in Step 1 here. Go ahead and select that USB drive. (NOTE: Proceeding with this will erase everything on your USB drive. Please make sure there is nothing on that USB drive that you want to lose.)
- 7. Click on Flash and wait for it to be completed.
- 8. Remove the USB from your computer and insert it into the target computer where you want to install the server OS.
- 9. Boot into the USB drive that you inserted. This usually requires you to click F2 or Delete when the computer turns on. (This will depend mostly on the computer but those two are the most common.)
- 10. You should see a menu like below if done properly. Using the keyboard, highlight "Try or Install Ubuntu Server" and hit enter.

GNU GRUB version 2.06	
WTry or Install Ubuntu Server Ubuntu Server with the HWE kernel Test memory	
Use the ↑ and ↓ keys to select which entry is highlighted. Press enter to boot the selected OS, `e' to edit the commands before booting or `c' for a command-line. The highlighted entry will be executed automatically in 22s.	

11. Select your language of choice. (I'm using English for this)

12. If you are using an older ISO file, you will get this screen here. It is up to you whether you choose to update or not. I'm going to run the update and use the newer installer.

Installer update available	[Help]
Version 23.04.2 of the installer is now available (23.02.1 is currently running).	
You can read the release notes for each version at:	
https://github.com/canonical/subiquity/releases	
If you choose to update, the update will be downloaded and the installation will continue from here.	
[Update to the new installer] [Continue without updating] [Back]	

13. Select keyboard variants and layout. For most folks, the default will work here.

Please select your keyboard layout below, or select	"Identify keyboard" to detect your layout automatically.
Layout: [English (US)	
tening, f Pauliak (19)	- 1
variant; [English (US)	
	[Identify keyboard]
	[Done] [Back]

14. This is where you will select which version of Ubuntu Server you want to install. The two options are the Ubuntu Server and the minimized version of Ubuntu Server. For most systems, regular Ubuntu Server will work just fine.

Choo	se type of install [Help]
Choo	se the base for the installation.
	Ubuntu Server
	Ubuntu Server (minimized)
Addi	tional options
	Search for third-party drivers
	[Done]
	(Back)

15. Next you should be on the network connection page. This will show your network interface, IP address (NOTE: This usually defaults to DHCPv4, which means the Internal IP address is assigned by default. If you want to make the Internal IP address static, there are 2 ways to do it. It can be done either from the server itself or from your local router configuration.), and MAC address. Defaults should be fine here as well. Click done and proceed.

Configure at least one interface this server can use to talk to other machines, and which preferably provides sufficient access for updates.	int
NHME TYPE NOTES • 1 CHCPV4 152.156.12.207/24 • 1 SC20022455161862 / Hed Hatt, Inc. / Virtio network device • 1	
[Bone] [Back]	

16. A page should appear next asking about configuring a proxy connection. For most people, proxy connections are not needed. You can just click done and move on to the next step.

I	If this system requires a proxy to connect to the internet, enter its details here.
	Yroxy address: If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.
	The proxy information should be given in the standard form of "http://[[user][:pass]0]host[:port]/".
	[Back]

17. On this page here you should not have to alter anything. It'll run a short test to make sure you can run updates. Go ahead and click done.

If you use an alternative mirror for Ubuntu, enter its details here.	
Mirror address: <u>http://us.archive.ubuntu.com/ubuntu</u> You may provide an archive mirror that will be used instead of the default.	
This mirror location passed tests.	
Hiti Shtor/de.achiwa ukartu canudantu canudantu jamg Johianan Biti Shtor/de.achiwa ukartu canudantu jamg-bahapan Biti Mtor/de.achiwa ukartu canudantu jamg-bahaparta Tnelesse [100 K8] Biti Mtor/de.achiwa ukartu canudantu jamg-bahaparta Tnelesse [100 K8] Biti Mtor/de.achiwa ukartu canudantu jamg-bacurity Inelesse [100 K8] Petined 307 K8 in 15 (325 K0/s) Reading peking pista.	
[Done] [Back]	

18. This page will talk about storage configuration. If you're using either a VM or a computer tower with nothing on the hard drive, then the defaults here will work just fine. This is set to use the entire disk for the server.

Guided storage configuration [Help]	
Configure a guided storage layout, or create a custom one:	
(X) Use an entire disk	
[OQEMU_QEMU_HARODISK_drive-scsi0 local disk 400.0006 v]	
[X] Set up this disk as an LVW group	
[] Encrypt the LVM group with LUKS	
() Custom storage layout	
L Doné] [Back]	

19. This is the summary page for the storage. It will show you what was allocated for each part of the system and what is left after everything is installed. Highlight done and click enter.

FILE SYSTEM SUMMARY			
MOUNT POINT SIZE TYPE DEVICE [/ 100.000G new ext4 new Ly [/boot 2.000G new ext4 new pa	TYPE M logical volume ►] rrtition of local disk ►]		
AVAILABLE DEVICES			
DEVICE [ubuntu-vg (new) free space	TYPE SI LVM volume group 397. 297.1	ZE 9966 ►] 9966 ►	
USED DEVICES			
DEVICE [ubuntu-vg (new) ubuntu-lv new, to be formatted as ext	TYPE SI LVM volume group 397. 4, mounted at / 100.4	ZE 9966 ►] 0006 ►	
[OQEMU_QEMU_HARDDISK_drive-scsio partition 1 new, BIOS grub spacer partition 2 new, to be formatted as ext partition 3 new, PV of LVM volume group	local disk 400. 1. 4, mounted at /boot 2. ubuntu-vg 397.	000G •] 000M • 000G • 997G •	
	[Done		
	[Reset [Back		

20. This next page will ask you to configure the user and server identifiers. It'll ask for your name, server name, username, and password. This part is completely up to you regarding what is entered. Once you enter what you like, go ahead, and click done.

Profile setup	
Enter the username and password yo password is still needed for sudo.	u will use to log in to the system. You can configure SSH access on the next screen but a
Your name:	
Your server's name:	t uses when it talks to other computers.
Pick a username:	
Choose a password:	
Confirm your pessuord:	
	f cone

21. This will ask you about ubuntu pro. You can skip over this.

	1
Uograde this machine to Ubuntu Pro for security updates on a much wider range of packages, until 2032. Assists with FedRAMP, FIPS, STIG, HIPAA and other compliance or hardening requirements.	
(About Ubuntu Pro 🕨)	
() Enable Ubuntu Pro	
(X) Skip for now	
(Continue)	
[Back]	

22. The next page will ask you about SSH. This is important because if you're going to run this server without a monitor and keyboard attached, you want to be able to access it. Highlight the spot next to where it says "Install OpenSSH server" and hit enter. An "X' should be next to it indicating that we want to install the service. Go back to the bottom where it says done and hit enter.



23. This is a list of extra services that you can install while getting ubuntu server installed. You can highlight and select which ones suit you best based on your needs. For this guide, the only one we need is docker. Using the arrow keys, highlight over docker and hit space bar to select it. Scroll back to the bottom and highlight done and click enter.

Featured Server Snaps		()	elp]
These are popular snaps publisher and versions	in server environments available.	. Select or deselect with SPACE, press ENTER to see more details of the par	kage,
[alcrekis rectCloud restCloud siste.nontainers siste.nontainers constant.sisters constant.sisters rockettain-server constant.sisters rockettain-server rock	canonical' nerticloud/ xet7 canonical: canonical: rocketchat/ morealite/ ckingkernel-tools swippen estimation swippen estimation output swippen aus/ swippen aus/ swippen estimation aus/ swippen estimation aus/ child keepalive/ keepalive/ canonical/ canonical/ canonical/ canonical/ canonical/ canonical/	kubernets for sorkstations and applicable Mexical Server - A safe how for all your data The open-cource kanham Buill Lightein the two iseanlessly plug into the containers ecosystem and the open-cource kanham control Livepatch Linet Rocket.Cat server Buill Server Four Server Buill Server Sector Cat server Sector Cat server The open-cource is settem tool to load and stress a computer Sector Cat server Sector Cat server Sector Cat server Sector Cat Sector Cat Sector Sector Sector Cat Sector Cat Sector Sector Cat Sector Sector Cat Sector Sector Cat Sector Sector Cat Sector Sector Sector Sector Cat Sector Sector Sector Sector Sector Sector Cat Sector	
		[Done] [Back]	

24. Now all you have to do now is sit back and wait for it to finish installing everything. This can take several minutes to finish. Please be patient and wait for it to be completed.

25. Once the Install is complete, it will say "Install Complete", and you'll need to reboot the system. Using the arrow keys, scroll down until you highlight "Reboot now" and hit enter. This will reboot the system.



- 26. After the system reboots, login using the credentials that you created back in step 20. Once logged in, go ahead and type in "sudo apt update" and hit enter. It'll prompt for your sudo password. Enter the password you made back in step 20 and hit enter. If done correctly, it should tell you the number of packages that can be upgraded.
- 27. Type in "sudo apt upgrade" and hit enter. It should update every package. This will take some time. Wait for it to finish. If it asks you a question, just type y and hit enter. If it asks you about which services should be restarted. Leave the defaults and hit tab until you highlight "ok". Hit enter.
- 28. Now that we updated and got the ubuntu server installed, we need to go ahead and install docker and portainer. Type in "sudo apt install docker.io". If this asks about restarting services, hit tab until you highlight ok and hit enter.
- 29. The next step is to get portainer installed. Type in "docker volume create portainer_data". This will prep your machine for the portainer installation.
- 30. Now that you get your server prepped for portainer. Type in "sudo docker run -d -p 8000:8000 -p 9443:9443 --name portainer --restart=always -v /var/run/docker.sock:/var/run/docker.sock -v portainer_data:/data portainer/portainer-ce:latest" and hit enter. (NOTE: The newer versions of portainer now run on port 9443 using the https protocol. If you want to use the http option, add "-p 9000:9000" to the command in between the -p 8000:8000 and -p 9443:9443 spots in the command. If this is done correctly, it should pull the latest version of portainer. You can also verify the installation with the "sudo docker ps" command.
- 31. Restart your machine. You can type "sudo reboot" and it'll reboot your machine.

32. Once your machine has restarted, open your internet browser and type in the local IP address for your machine in the address bar. It should be (localip:9000). Once you hit enter, it should open the portainer page to allow you to create a username and password. Go ahead and enter a username and password and click create user.

	portainer.io	
V New Portainer installation		
Username	admin	
Password		
Confirm password		
Restore Portainer from backup		

- 33. Click on get started and you should see something like below. If you click on the area where it says local, it will take you to the local dashboard where you can navigate the menu options for your containers. At this point, your server is ready to go. All you have to do is install the containers that you wish to run on your server. There are a few options.
 - a. You can use the terminal and create docker-compose files.
 - b. Go to docker hub and grab images and configure them through the terminal.
 - c. Use a template and install pre-configured templates that are ready to install in portainer.

The easiest way is to use a template that has preconfigured images ready to go. I'll show you how to do it using the pi hosted template.

Opgrade to Business Edition	
portainer.io *	Home 2 (2) (2) 8 admin ~
@ Hime Incal X Destilocard	Latest New Front Portialer & XX-row off topological patient for formation, distantiate and/out-when, and topological patient for the point digity PS/parameter. The point digity PS/parameter is the format for the point digity PS/parameter is the point of the point digity PS/parameter is the point
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B Volumes O Events B Host ~	Note 100 100 200
Settings	
🖨 Environments 🗸 🗸	
N Registries	
Authentication logs ~	
(b) Settings	

34. On the menu on the left, click on settings and where it says URL, paste this into the field next to URL:

https://raw.githubusercontent.com/pi-hosted/pi-hosted/master/template/portainer-v2amd64.json

Click save after you pasted the URL into the field.

This will load all the pi-hosted templates that you'll be able to deploy with minimal effort.

Opgrade to Business Edition	Bettings			
	Settings		0 8 admin ~	
© Home *	Application settings			
👉 local 🛛 🕅	Snepshot interval			
E Destboard	Edge sgent defeuit poli frequency	5 seconds		
E App Templates V	Use custom logo	•		
@ Stacks	Allow the collection of anonymous			
@ Containers	You can find more information about this in-	Mr anners prices		
 Networks 	Login screen benner	C Business Edition Feature		
El Volumes				
G Events	App Templates			
E Host 🗸		In the second seco		
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Settings	Save application settings			
先 Users ~				
Environments	A 100 000 00000000000000000000000000000			
P Authentication Inner	Kubernetes settings			
0 Notifications	Helm Repository			
8 Settings ^	You can specify the LIRE to your own herm repository here. See the difficul documentation for more details.			
Authentication	URL	https://charts.bimami.com/bitnami		
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