Virtual Machines Setup

1. Installing VirtualBox and Windows 10 virtual machine

• Naivagte to VirtualBox.org website - https://www.virtualbox.org/wiki/Downloads.

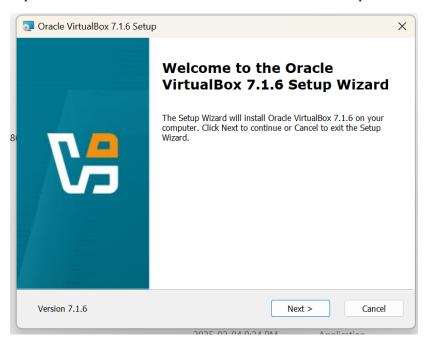
₩ VirtualBox



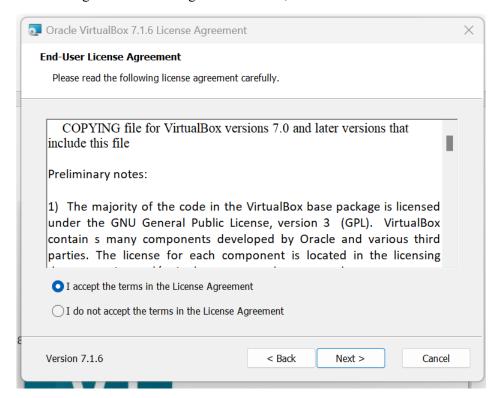
• After Downloading the Windows hosts, It will show a win file. Click on it and you will see a prompt to make changes on your device.



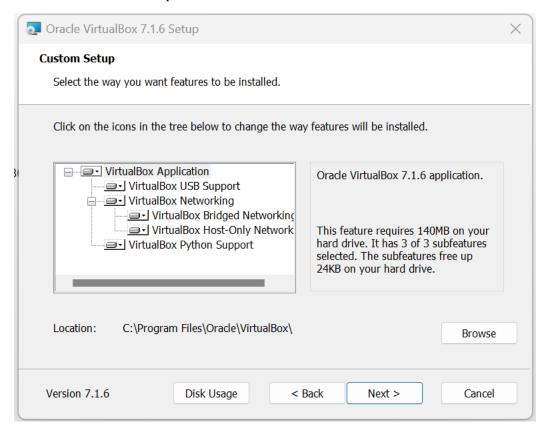
• Setup screen will be shown click Next as shown in below snapshot.



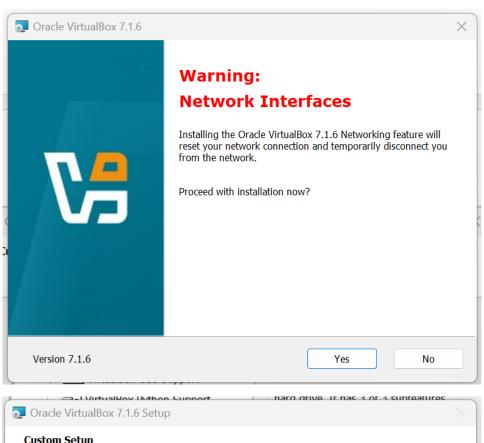
• In the Agree the License agreement screen, Click Next.

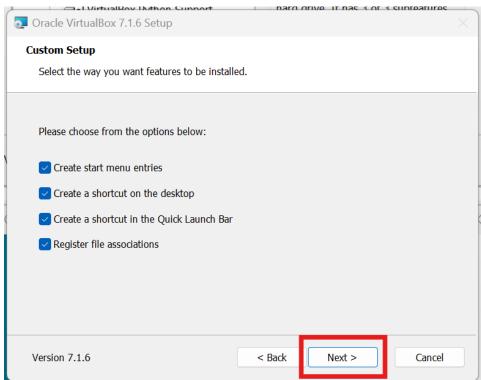


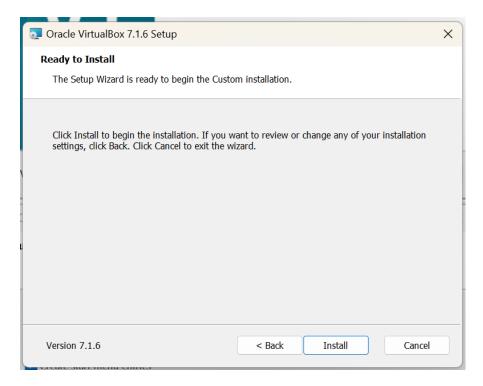
• In the custom setup click next.



• Click Next and Finish the installation \rightarrow VirtualBox setup will be installed successfully.







VirtualBox will be installed successfully.

2. Installing Windows 10 Machine

- Naivagate to (https://www.microsoft.com/en-ca/software-download/windows10) Windows 10 website.
- Click Download Now.



Create Windows 10 installation media

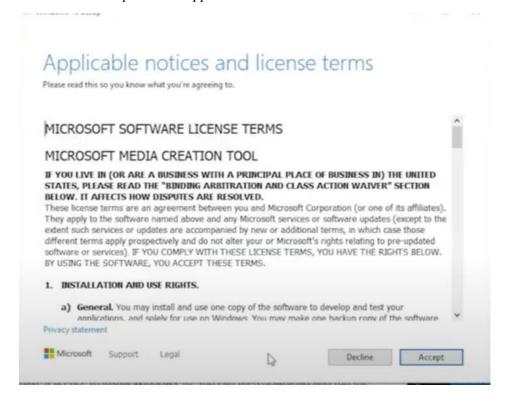
To get started, you will first need to have a licence to install Windows 10. You can then download and run the media creation tool. For more information on how to use the tool, see the instructions below



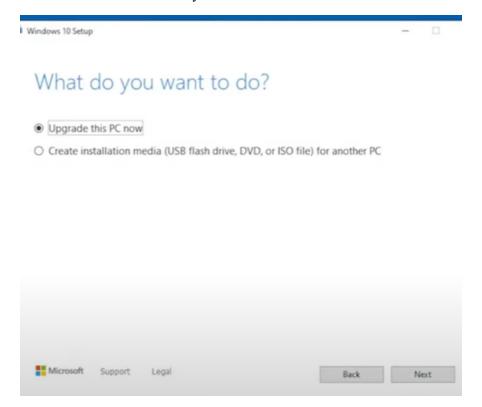
• Double click to open the downloaded file name: MediaCreationTool_22H2. Click yes when prompted the below dialog box.



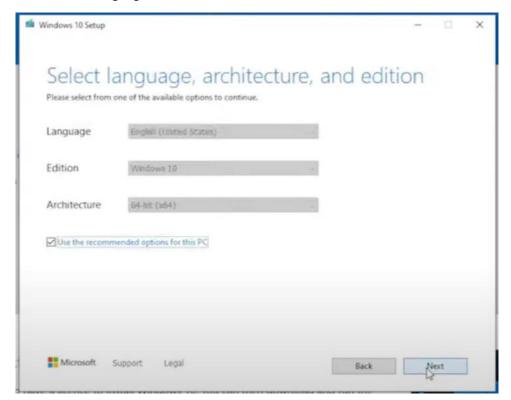
• Click on Accept term in Applicable notices and license terms.



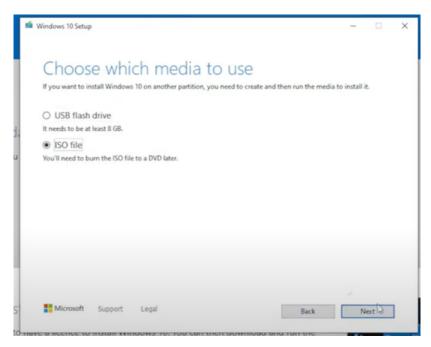
• In below wizard in What do you want to do click on create installation media.



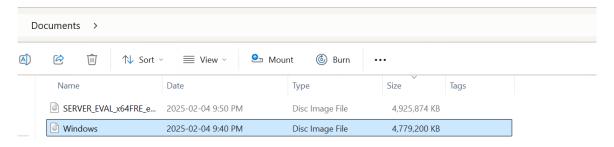
• In select language click next.



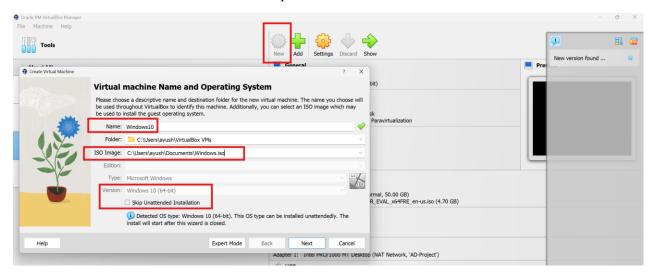
• Select the iso file in choose which media to use screen as shown below.



• Iso image would be downloaded as Windows as shown in below snippet as Disc image file.



• Click on New in VirtualBox → Give name as Windows10 → Select the ISO image downloaded → Select the skip unattended installation.



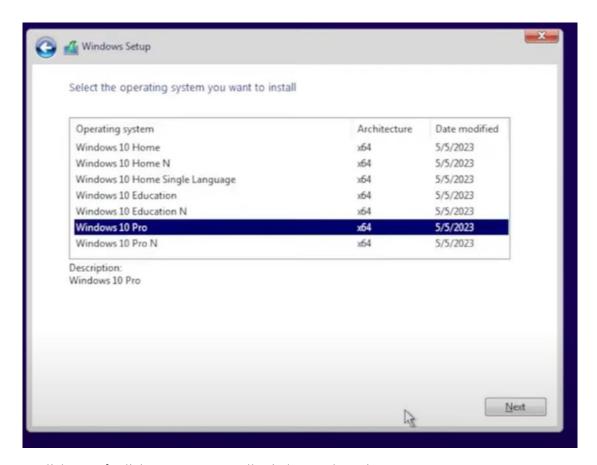
- Next screen will be shown of Hardware and and Virtual Hard Disk which vary according to machine. Provide details or leave as it is and click next.
- Windows 10 machine will be shown in VirtualBox and to power it on, click Show.



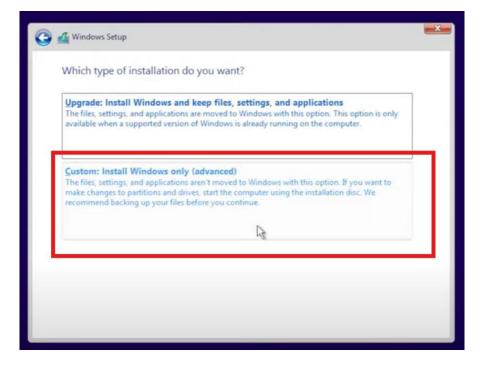
• After starting, Windows Setup screen would be shown click Next → Hit Install now → Activation windows screen shows → Click on I don't have a product key.



• Once you click on I don't have a product key → select operating system screen shows → select Windows 10 Pro.



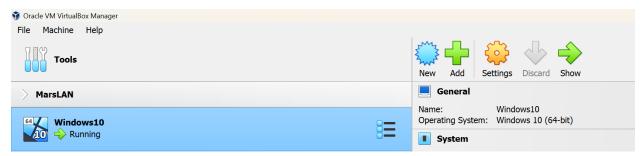
• Click Next→ click on Custom Install Windows only option.



• It will show Installing Windows as shown in below screenshot.



• Windows 10 is successfully installed. To power on the machine click Show.

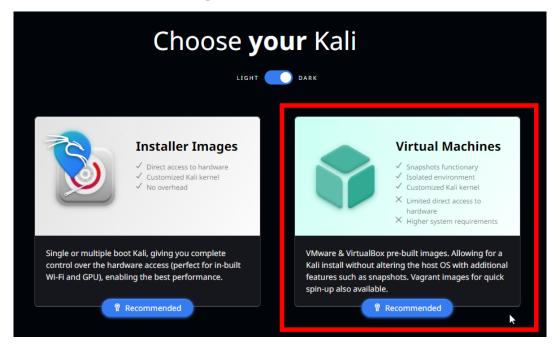


3. Installing Kali Linux

• Go to https://kali.org, and click on "Download".



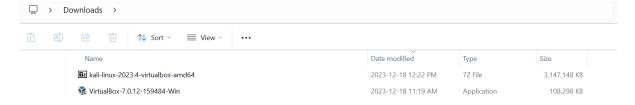
• Choose the **Virtual Machines** option.



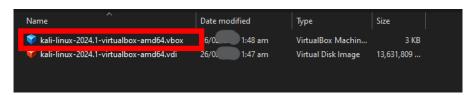
• Choose the 32-bit or 64-bit VirtualBox option, according to your PC specs.



• Extract the downloaded kali-linux-2023.4-virtualbox-amd64 zip file.

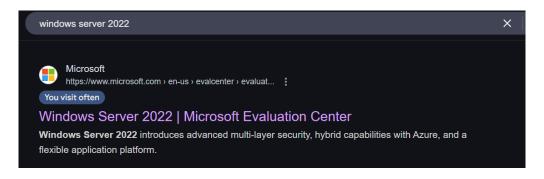


• Once you extract the download → double click the vbox file it will automatically get exported in Kali.



4. Installing Windows Server

• Go to (https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2022) website.



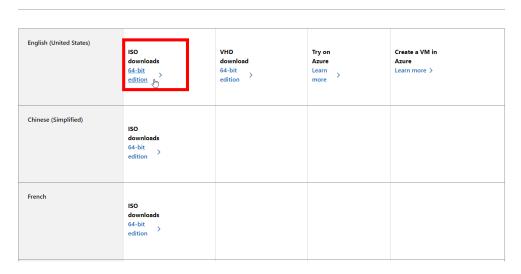
• Click on Download the ISO. \rightarrow User will be asked to fill a free trial form \rightarrow Click download.

Windows Server 2022 Overview Get started for free Description Prerequisites Resources Supporting products Overview In addition to your trial experience of Windows Server 2022, you can more easily add and manage languages and Features on Demand with the new Languages and Optional Features ISO. Download this ISO. This ISO is only available on Windows Server 2022 and combines the previously separate Features on Demand and Language Packs ISOs, and can be used as a FOD and Language, pack repository. To learn about Features on Demand, see Features on Demand. To learn about adding languages, see Add Languages. Get started for free **Evaluate Windows Server 2022** Register for your free trial today Windows Server 2022 introduces advanced multi-layer security, hybrid capabilities with Azure, and a flexible application platform. Run business-critical workloads with Windows Complete the form below. Apply advanced multi-layer protection against threats with secured-core server. Run SQL Server with confidence using 48TB of memory, 64 sockets, and 2048 logical Use Windows Admin Center for improved VM management, enhanced event viewer, and to connect to Azure through Azure Arc. This new release also includes significant improvements to Windows containers, such as smaller image sizes for faster download, simplified network policy implementation and containerization tools for .NET applications. * Company name Learn more about the features of Windows Server 2022. * Company size Company size

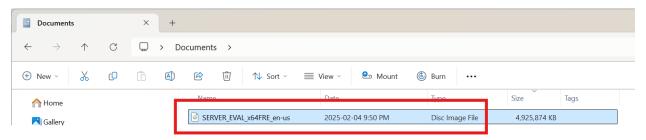
Country Code * V

* Please complete required fields

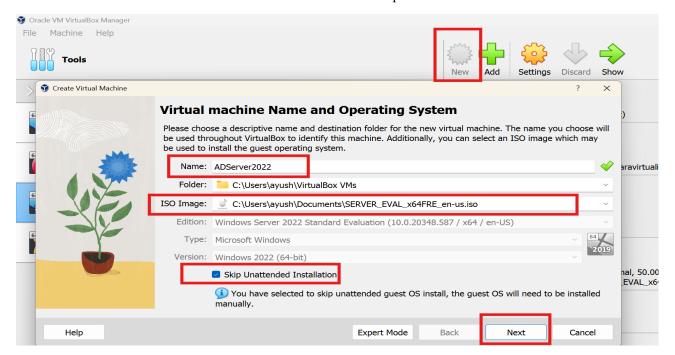
• Select the ISO downloads 64-bit.



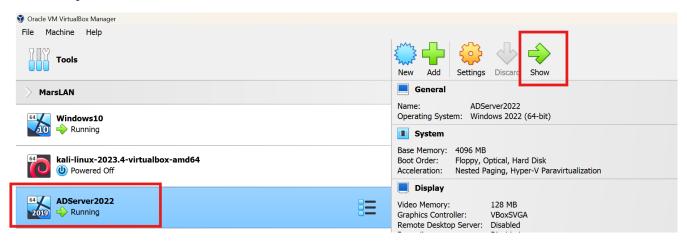
• The iso file gets downloaded as shown below.



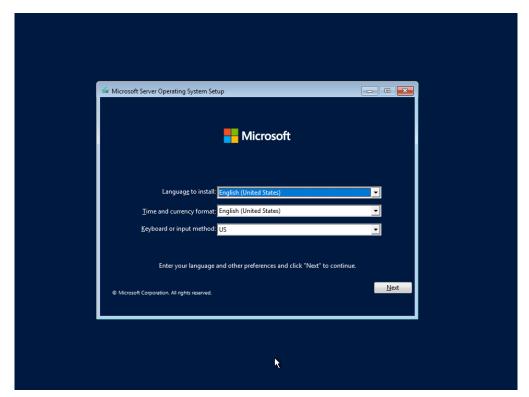
• Click on New icon in VirtualBox to add the Windows Server 2022 → Name the server ADServer2022 → Select the iso file downloaded → Skip unattended installation → click finish.



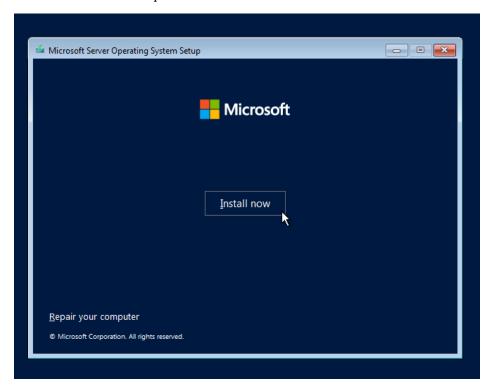
• To power on the Windows Server 2022 click on Show.



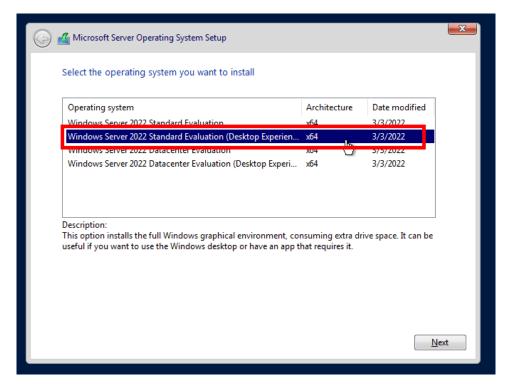
• Once the machine is started \rightarrow click next as shown below screenshot.



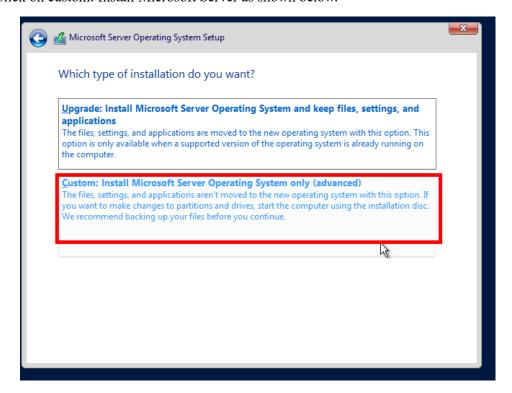
• Click Install now on the Setup screen.



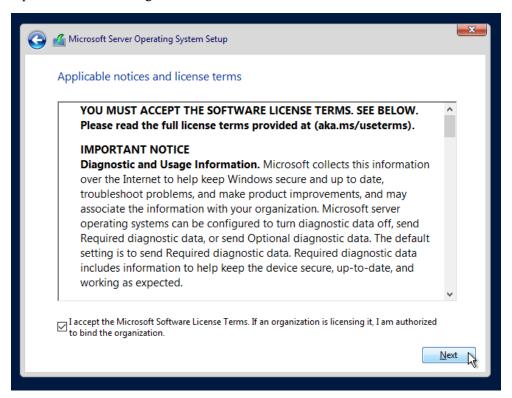
• Select the Windows Server 2022 as shown below. Click Next.



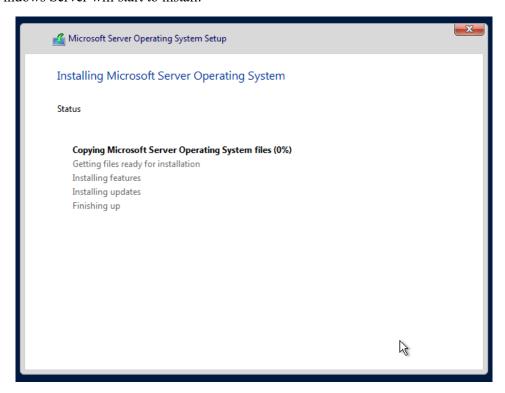
• Click on custom: Install Microsoft Server as shown below.



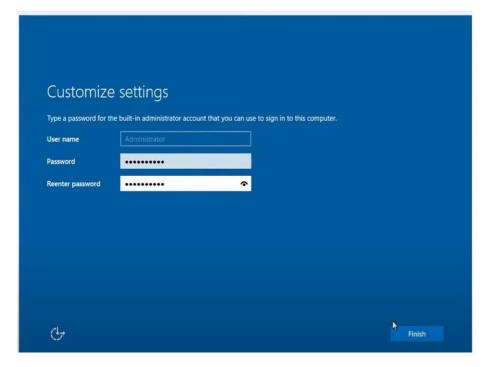
• Accept the License term agreement. Click Next.



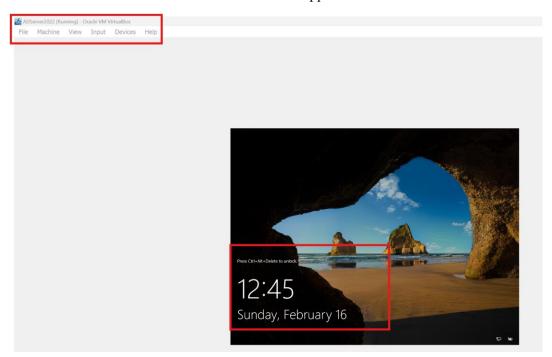
• Windows Server will start to install.



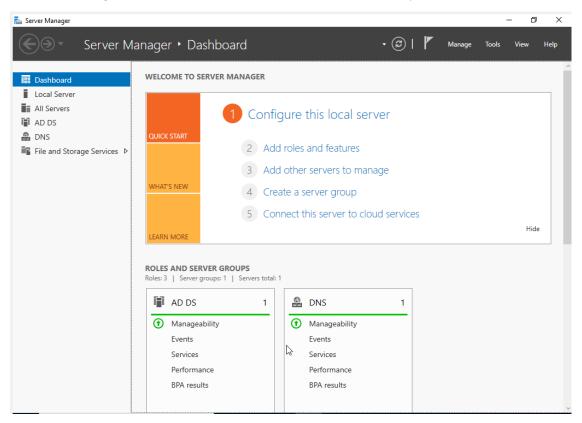
• Provide the password for Administrator account and click Finish.



• Windows Server is installed as shown in below snippet.

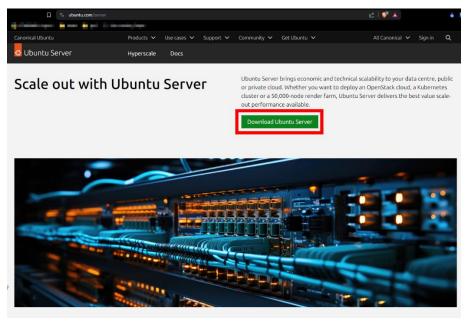


• Server Manager is shown which is used to install Active Directory.



5. Installing Ubuntu 22.04 Server for Splunk

• Go to https://ubuntu.com/server and click the download button.

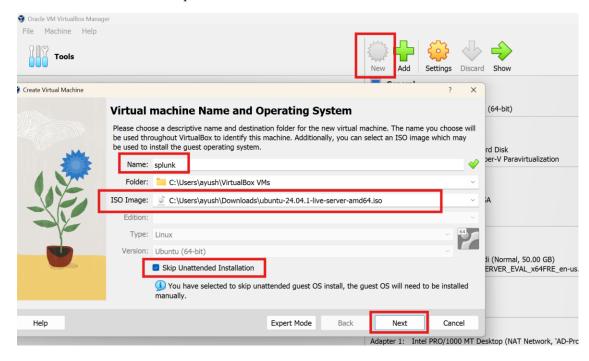




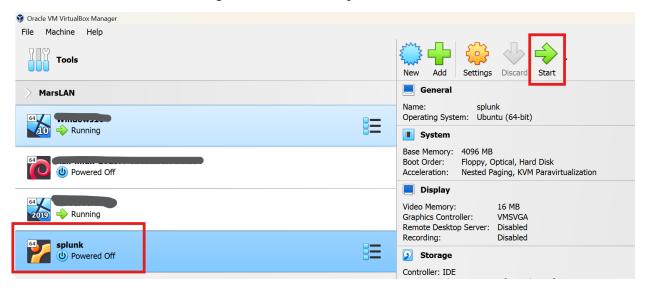
- In VirtualBox, click the **New** button and name the new machine as "Splunk". Choose the destination folder and select the ISO file we downloaded earlier.
- Keep the "Skip Unattended Installation" checked.



• Click on New in VirtualBox → provide Name "splunk" → Provide iso image which we downloaded and click skip attended installation → click Next.



• Ubuntu machine is showing in VitrualBox → To power on the machine click start.



• Select "Try or Install Ubuntu Server" and press Enter.

GNU GRUB version 2.06

```
*Try 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 23s.

```
Starting Tell Plymouth To Write Out Runtime Data...
Starting Load AppArmor profiles managed internally by snapd...
Starting Set Up Additional Binary Formats...
Starting Create Volatile Files and Directories...
Starting Uncomplicated firewall...

[ OK ] Finished Create final runtime dir for shutdown pivot root.
Mounting Arbitrary Executable File Formats File System...

[ OK ] Finished Uncomplicated firewall.

[ OK ] Finished Set console font and keymap.

[ OK ] Mounted Arbitrary Executable File Formats File System.

[ OK ] Started Rule-based Manager for Device Events and Files.

[ OK ] Started Rule-based Manager for Device Events and Files.

[ OK ] Reached target Local Encrypted Volumes.

[ OK ] Finished Set Up Additional Binary Formats.

[ OK ] Finished Create Volatile Files and Directories.
Starting Network Time Synchronization...
Starting Record System Boot/Shutdown in UTMP...
Starting Record System Boot/Shutdown in UTMP.

[ OK ] Finished Record System Boot/Shutdown in UTMP.

[ OK ] Reached target System Time Set.

[ OK ] Listening on Load/Save RF Kill Switch Status /dev/rfkill Watch.

[ OK ] Reached target System Time Set.

[ OK ] Finished Load AppArmor profiles managed internally by snapd.

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[ OK ] Finished Load AppArmor profiles managed internally by snapd.

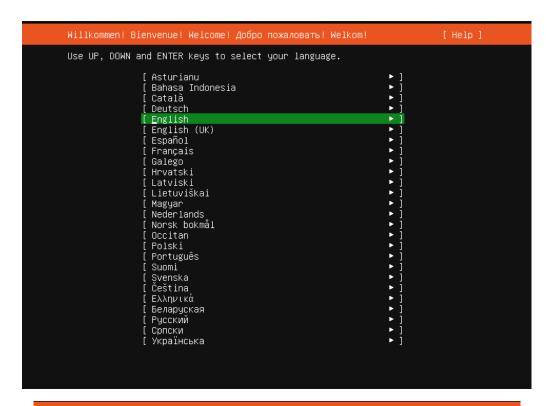
[ OK ] Finished Load AppArmor profiles managed internally by snapd.

[ OK ] Finished Network Configuration...

[ OK ] Started Network Name Resolution...

[ OK ] Finished Wait for Network to be Configured...
Starting Initial cloud-init job (metadata service crawler)...

[ OK ] Reached target Network Name Ecokups.
```



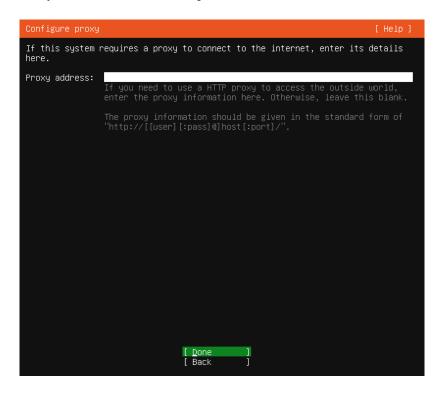
| | Keyboard configuration | | [Help] |
|--|------------------------|----------------|------------------------|
| Please select your keyboard layout below, or select "Identify keyboard" to detect your layout automatically. | | | "Identify keyboard" to |
| | Layout: | [English (US) | *] |
| | Variant: | [English (US) | * 1 |
| | [Identify keyboard] | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | [Done] | |
| | | [Back] | |

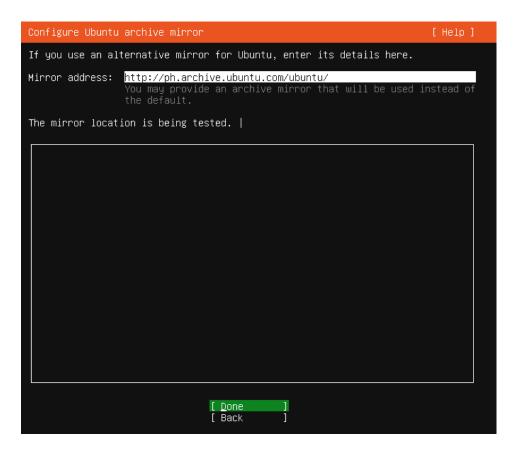
Choose type of install Choose the base for the installation. (X) Ubuntu Server The default install contains a curated set of packages that provide a comfortable experience for operating your server. () Ubuntu Server (minimized) This version has been customized to have a small runtime footprint in environments where humans are not expected to log in. Additional options [] Search for third-party drivers This software is subject to license terms included with its documentation. Some is proprietary. Third-party drivers should not be installed on systems that will be used for FIPS or the real-time kernel.

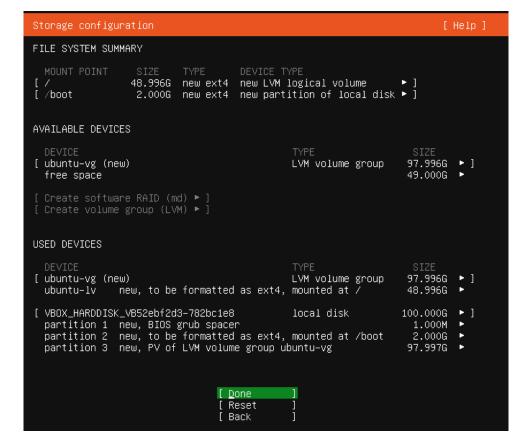
[<u>D</u>one [Back



• Leave the Proxy address field blank and press Enter.



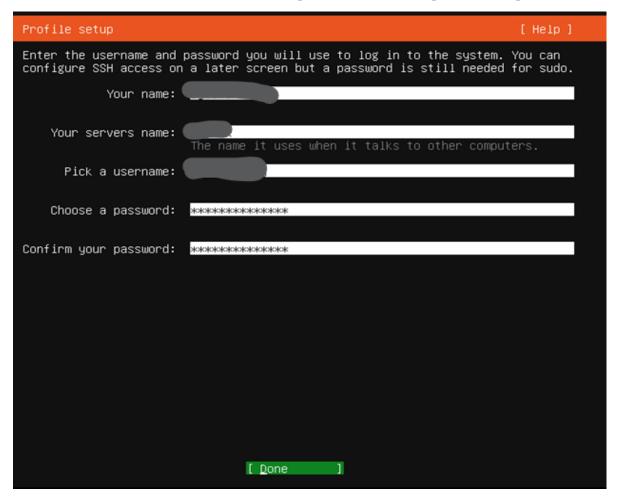


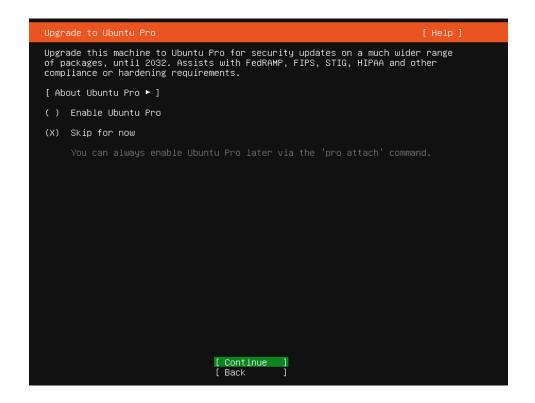


• Navigate to Continue option with down arrow key

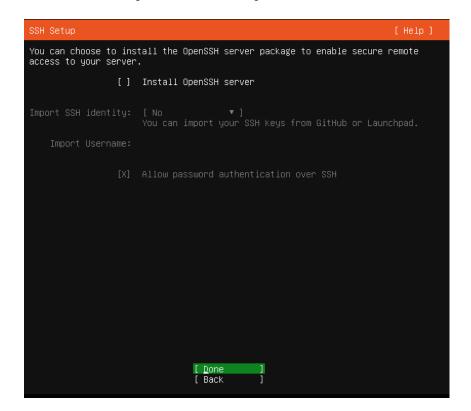


• Provide the name, server name, username, password and confirm password and press done.

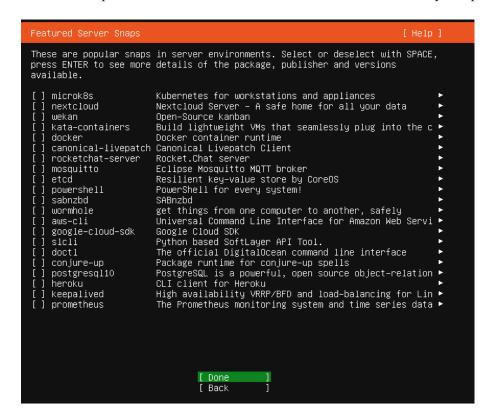




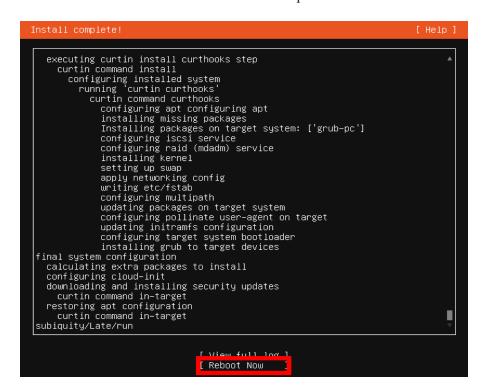
• Leave the Install OpenSSH Server and press Enter.



• Leave these options unchecked, select "Done" with the down arrow key and press Enter.



- When you see the "**Reboot Now**" option \rightarrow it means that the server has finished installing.
- Select "Reboot Now" with the down button → press Enter.



• Just press Enter when you encounter this screen.

```
[FAILED] Failed unmounting /cdrom.
Please remove the installation medium, then press ENTER:
[FAILED] Failed unmounting /cdrom.
```

• Provide the Login and password as shown below snippet.

• After logging in, we will be updating the files and dependencies with sudo apt-get update && apt-get upgrade -y.

```
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 5.15.0–100–generic x86_64)
 * Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro
  System information as of Thu Mar 14 10:18:39 AM UTC 2024
  System load: 0.0
                                             Processes:
  Usage of /: 14.4% of 47.93GB Users logged in:
Memory usage: 2% IPv4 address for
                                             IPv4 address for enp0s3: 10.0.2.15
  Swap usage: 0%
 xpanded Security Maintenance for Applications is not enabled.
 updates can be applied immediately.
To see these additional updates run: apt list ——upgradable
Enable ESM Apps to receive additional future security updates.
Gee https://ubuntu.com/esm or run: sudo pro status
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Jbuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
           ■ |@splunk:~$<mark>sudo apt-get update && sudo apt-get upgrade -y</mark>
```

• Just press Enter when you encounter this screen. After that, the setup is now complete.



• The Ubuntu Server is successfully running.