

**Lab 1****Cloud Infrastructure Management****Date: 05-01-2024****CARRY OUT AN EXPERIMENT TO CREATE AND DEMONSTRATE THE WORKING STATIC WEB SERVER.**

1. Install apache2 and check the status with below commands

- sudo apt update
- sudo apt install apache2
- sudo ufw app list
- sudo ufw allow 'Apache'
- sudo systemctl status apache2

```
mtech@dslab-pc: ~
To run a command as administrator (user "root"), use "sudo <commands>".
See "man sudo_root" for details.

mtech@dslab-pc: $ sudo apt update
[sudo] password for mtech:
Hit:1 https://download.docker.com/linux/ubuntu jammy InRelease [5,931 B]
Hit:2 https://packages.microsoft.com/repos/ms-teams stable InRelease [5,931 B]
Hit:3 http://security.ubuntu.com/ubuntu jammy-security InRelease
Hit:4 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:5 https://ppa.launchpadcontent.net/gns3/ppa/ubuntu jammy InRelease
Hit:6 https://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:7 https://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Fetched 125 kB in 2s (50.2 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
41 packages can be upgraded. Run 'apt list --upgradable' to see them.
mtech@dslab-pc: $ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
 libflashrom1 liblfd0
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
 libaprutil1-dbd-sqlite3 libaprutil1-ldap
Suggested packages:
 apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
 libaprutil1-dbd-sqlite3 libaprutil1-ldap
0 upgraded, 8 newly installed, 0 to remove and 41 not upgraded.
Need to get 1,919 kB of archives.
After this operation, 7,711 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1:7.0.0~ubuntu0.22.04.1 [168 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1~ubuntu0.22.04.2 [92.8 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1~ubuntu0.22.04.2 [11.3 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1-ldap amd64 1.6.1~ubuntu0.22.04.2 [9,178 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-bin amd64 2.4.52~ubuntu4.7 [1,346 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-data all 2.4.52~ubuntu4.7 [165 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2-utils amd64 2.4.52~ubuntu4.7 [88.8 kB]
Get:8 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 apache2 amd64 2.4.52~ubuntu4.7 [97.8 kB]
Get:9 1919 B in 0s (0 B/s)
Selecting previously unselected package libapr1:amd64.
(Reading database ... 299217 files and directories currently installed.)
Preparing to unpack .../0-libapr1:1.7.0~ubuntu0.22.04.1_amd64.deb ...
Unpacking libapr1:amd64 (1.7.0~ubuntu0.22.04.1) ...
Selecting previously unselected package libaprutil1:amd64.
Preparing to unpack .../1-libaprutil1:1.6.1~ubuntu0.22.04.2_amd64.deb ...
Unpacking libaprutil1:amd64 (1.6.1~ubuntu0.22.04.2) ...
mtech@dslab-pc:~/230913014$ sudo ufw app list
Available applications:
 Apache
 Apache Full
 Apache Secure
 CUPS
mtech@dslab-pc:~/230913014$ sudo ufw allow 'Apache'
Skipping adding existing rule
Skipping adding existing rule (v6)
mtech@dslab-pc:~/230913014$ sudo ufw status
Status: active
To                         Action      From
--                         ----      --
Apache                      ALLOW      Anywhere
Apache (v6)                  ALLOW      Anywhere (v6)

mtech@dslab-pc:~/230913014$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
     Active: active (dead) since Fri 2024-01-05 10:43:23 IST; 57s ago
       Docs: https://httpd.apache.org/docs/2.4/
    Process: 8825 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
   Process: 9061 ExecStop=/usr/sbin/apachectl graceful-stop (code=exited, status=0/SUCCESS)
 Main PID: 8829 (code=exited, status=0/SUCCESS)
    CPU: 38ms
```

2. To obtain system IP type below command

- hostname -l

**172.25.187.85**

3. Start the apache server. Open chrome tab and enter the system ip. Default page will load

4. To start reload and stop use below commands

- sudo systemctl stop apache2
- sudo systemctl start apache2
- sudo systemctl restart apache2
- sudo systemctl reload apache2

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should [replace this file](#) (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

### Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is [fully documented in /usr/share/doc/apache2/README.Debian.gz](#). Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the [manual](#) if the apache2-doc package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   '-- ports.conf
|-- mods-enabled
|   '-- *.Load
|   '-- *.conf
|-- conf-enabled
|   '-- *.conf
|-- sites-enabled
|   '-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`, `a2disite`, and `a2enconf`, `a2disconf`. See their respective man pages for detailed information.
- The binary is called `apache2` and is managed using `systemd`, so to start/stop the service use `systemctl start apache2` and `systemctl stop apache2`, and use `systemctl status apache2` and `journald -u apache2` to check status. `system` and `apache2ctl` can also be used for service management if desired. [Calling /usr/bin/apache2 directly will not work](#) with the default configuration.

### Document Roots

By default, Ubuntu does not allow access through the web browser to any file outside of those located in `/var/www`, [`public\_html`](#) directories (when enabled) and `/usr/share` (for web applications). If your site is using a web document root located elsewhere (such as in `/srv`) you may need to whitelist your document root directory in `/etc/apache2/apache2.conf`.

The default Ubuntu document root is `/var/www/html`. You can make your own virtual hosts under `/var/www`.

### Reporting Problems

Please use the `ubuntu-bug` tool to report bugs in the Apache2 package with Ubuntu. However, check [existing bug reports](#) before reporting a new bug.

Please report bugs specific to modules (such as PHP and others) to their respective packages, not to the web server itself.

5.To create new static page create new folder with domain name

- `sudo mkdir /var/www/172.25.187.85`

6.Create index.html in the newly created folder

`sudo nano /var/www/172.25.187.85/index.html`

```
<html>
<head>
<title>Welcome to your_domain!</title>
</head>
```

```
<body>
<h1>Success! The your_domain virtual host is working!</h1>
</body>
</html>
```

#### 7. Create new configuration file

```
sudo nano /etc/apache2/sites-available/172.25.187.85.conf
<VirtualHost *:80>
ServerAdmin webmaster@localhost
ServerName 172.25.187.85
ServerAlias www. 172.25.187.85
DocumentRoot /var/www/172.25.187.85
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

#### 8. Disable default conf

- sudo a2dissite 000-default.conf

```
mtech@dslab-pc:~/23091301$ sudo a2dissite 000-default.conf
Site 000-default already disabled
mtech@dslab-pc:~/23091301$ sudo apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this message
Syntax OK
mtech@dslab-pc:~/23091301$ systemctl restart apache2
```

#### 9. Enable 172.25.187.85.conf

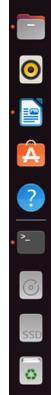
- sudo a2ensite 172.25.187.85.conf
- sudo apache2ctl configtest

#### 10. Restart apache

- sudo systemctl restart apache2

```
mtech@dslab-pc:~$ sudo a2ensite 172.25.187.85.conf
mtech@dslab-pc:~$ apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this message
Syntax OK
mtech@dslab-pc:~$ sudo systemctl restart apache2
mtech@dslab-pc:~$
```

**Success! The your\_domain virtual host is working!**



**Lab 2****Cloud Infrastructure Management**

Date: 12-01-24

Carry out an experiment to create and demonstrate the working dynamic Web Server.

**1.Update Package Lists:**

```
mtech@dslab-pc:~$ sudo apt update
[sudo] password for mtech:
Get:1 https://download.docker.com/linux/ubuntu jammy InRelease [48.8 kB]
Get:2 https://packages.microsoft.com/repos/ms-teams stable InRelease [5,931 B]
Hit:3 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:4 https://download.docker.com/linux/ubuntu jammy/stable amd64 Packages [26.1 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Hit:6 https://packages.cloud.google.com/apt cloud-sdk InRelease
Get:7 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:8 https://ppa.launchpadcontent.net/gns3/ppa/ubuntu jammy InRelease
Hit:9 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [560 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,326 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [268 kB]
]
Get:13 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [686 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,042 kB]
Fetched 4,190 kB in 7s (627 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
140 packages can be upgraded. Run 'apt list --upgradable' to see them.
mtech@dslab-pc:~$
```

**2. Install Apache, PHP, and MySQL:**

- sudo apt-get install apache2 php libapache2-mod-php php-mysql mysql-server mysql-client

```
mtech@dslab-pc:~$ sudo apt-get update -y
[sudo] password for mtech:
Get:1 https://download.docker.com/linux/ubuntu jammy InRelease [48.8 kB]
Get:2 https://packages.microsoft.com/repos/ms-teams stable InRelease [5,931 B]
Hit:3 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:6 https://ppa.launchpadcontent.net/gns3/ppa/ubuntu jammy InRelease
Hit:7 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:8 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [826 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,277 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [549 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [261 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe i386 Packages [678 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,023 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [228 kB]
Fetched 5,126 kB in 8s (679 kB/s)
Reading package lists... Done
mtech@dslab-pc:~$ sudo apt-get install apache2 php libapache2-mod-php php-mysql mysql-server mysql-client
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.52-1ubuntu4.7).
The following packages were automatically installed and are no longer required:
  libflashrom1 libfdt1:2
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libapache2-mod-php8.1 libcglib-fast-perl libcglib-bin libfcgi-perl libfcgi0ldbl libhtml-template-perl libmecab2 mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0 php-common php8.1 php8.1-cll php8.1-common php8.1-mysql php8.1-opcache php8.1-readline
Suggested packages:
  php-pear liblpc-sharedcache-perl mailx tinyca
The following NEW packages will be installed:
  libapache2-mod-php libapache2-mod-php8.1 libcglib-fast-perl libcglib-bin libfcgi-perl libfcgi0ldbl libhtml-template-perl libmecab2 mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-common mysql-server-8.0 mysql-server-core-8.0 php php-common php-mysql php8.1 php8.1-cll php8.1-common php8.1-mysql php8.1-opcache
  php8.1-readline
0 upgraded, 28 newly installed, 0 to remove and 72 not upgraded.
Need to get 34.3 MB of archives.
After this operation, 263 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 mysql-common all 5.8+1.0.8 [7,212 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-core-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [2,682 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-client-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [22.7 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libmecab2 amd64 0.996.14build9 [199 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [17.6 MB]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 mysql-server-8.0 amd64 8.0.35-0ubuntu0.22.04.1 [1,438 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 php-common all 2:92ubuntu1 [12.4 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-common amd64 8.1.2-1ubuntu2.14 [1,127 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-opcache amd64 8.1.2-1ubuntu2.14 [365 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-readline amd64 8.1.2-1ubuntu2.14 [13.6 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 php8.1-cll amd64 8.1.2-1ubuntu2.14 [1,834 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapache2-mod-php8.1 amd64 8.1.2-1ubuntu2.14 [1,766 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libapache2-mod-php all 2:8.1+92ubuntu1 [2,898 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libcglib1-0.10 amd64 0.10.5 [188 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi0ldbl amd64 2.4.2-2build2 [28.0 kB]
Get:16 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-perl amd64 0.82+ds-1build1 [22.8 kB]
Get:17 http://in.archive.ubuntu.com/ubuntu jammy/main amd64 libfcgi-fast-perl all 1:2.15-1 [10.5 kB]
```

**3. Clone the repo sudo**

- git clone <https://github.com/sreepathysois/phpmysql-app.git>

```
Cloning into 'phpmysql-app'...
remote: Enumerating objects: 331, done.
remote: Counting objects: 100% (43/43), done.
remote: Compressing objects: 100% (29/29), done.
remote: Total 331 (delta 24), reused 21 (delta 11), pack-reused 288
Receiving objects: 100% (331/331), 13.80 MiB | 8.46 MiB/s, done.
Resolving deltas: 100% (63/63), done.
```

#### 4. Navigate to the Application Directory

- cd phpmysql-app/php/online-shopping-system

#### 5. Copy Application Files to Apache Document Root

- sudo cp -rf \* /var/www/html/.

#### 6. Start MySQL and Create Database and User:

- sudo mysql -u root -p

```
mtech@dlab-pc:~/phpmysql-app/php/online-shopping-system$ sudo cp -rf * /var/www/html/
mtech@dlab-pc:~/phpmysql-app/php/online-shopping-system$ sudo mysql -u root -p #####
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 8
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
mysql>
[1]+  Stopped                  sudo mysql -u root -p
mtech@dlab-pc:~/phpmysql-app/php/online-shopping-system$ sudo mysql -u root -p #####
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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```

#### 7. Execute below db queries

- create database ecomm;
- CREATE USER 'mahese'@'localhost' IDENTIFIED BY 'mahese@123';
- GRANT ALL PRIVILEGES ON ecomm.\* TO 'mahese'@'localhost';

```
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.35-0ubuntu0.22.04.1 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database ecomm;
Query OK, 1 row affected (0.18 sec)

mysql> CREATE USER 'mahese'@'localhost' IDENTIFIED BY 'mahese@123';
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> GRANT ALL PRIVILEGES ON database_name.* TO 'mahese'@'localhost';
Query OK, 0 rows affected (0.13 sec)
```

**8. use ecomm**

```
mysql> use ecomm;
Database changed
```

**9. source database/onlineshop.sql;**

```
mysql> source database/onlineshop.sql;
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected, 1 warning (1.02 sec)

Query OK, 1 row affected (0.06 sec)

Query OK, 0 rows affected, 1 warning (0.92 sec)

Query OK, 6 rows affected (0.00 sec)
Records: 6  Duplicates: 0  Warnings: 0
```

**10. Restart Apache server**

- sudo systemctl restart apache2

Carry out an experiment to create Virtual Box and run python/C program on Windows or Linux Platform using this .

**Step1: Create VirtualBox :**

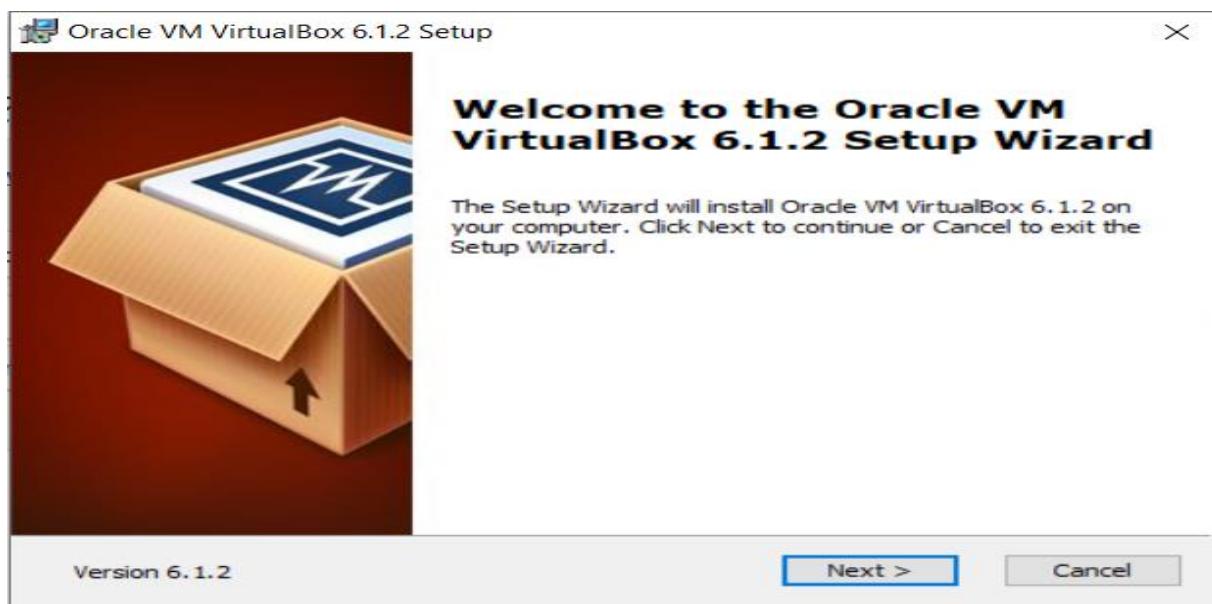
To download VirtualBox, go to the official site [virtualbox.org](https://www.virtualbox.org) and download the latest version for windows.



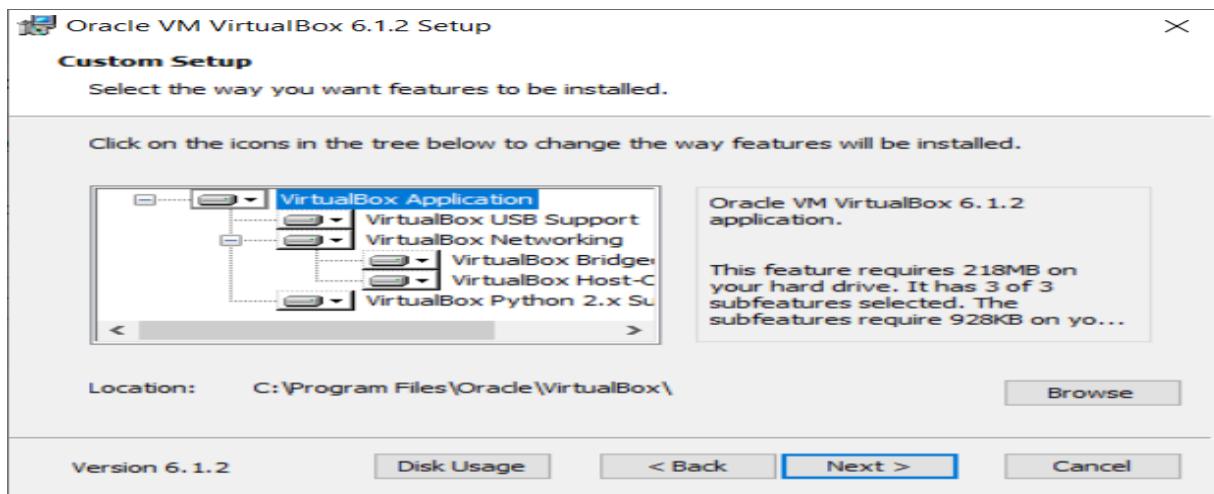
The screenshot shows the official VirtualBox download page. At the top, there's a navigation bar with links for 'About', 'Screenshots', 'Downloads', 'Documentation', 'End-user docs', 'Technical docs', 'Contribute', and 'Community'. On the right side of the header, there are links for 'search...', 'Login', 'Preferences', 'Start Page', 'Index', and 'History'. The main content area is titled 'Download VirtualBox'. It contains a sub-section titled 'VirtualBox binaries' with a note about accepting the license terms. Below that is a list of 'VirtualBox 7.0.14 platform packages' for various host operating systems. There's also a note about the GPL version 3 and a link to the changelog. A 'Note' section mentions upgrading guest additions. Further down are sections for 'VirtualBox 7.0.14 Oracle VM VirtualBox Extension Pack' and 'VirtualBox 7.0.14 Software Developer Kit (SDK)'. At the bottom, there's a 'User Manual' section with a note about its availability. The overall layout is clean and organized, typical of a software download website.

**Beginning with the Installation:**

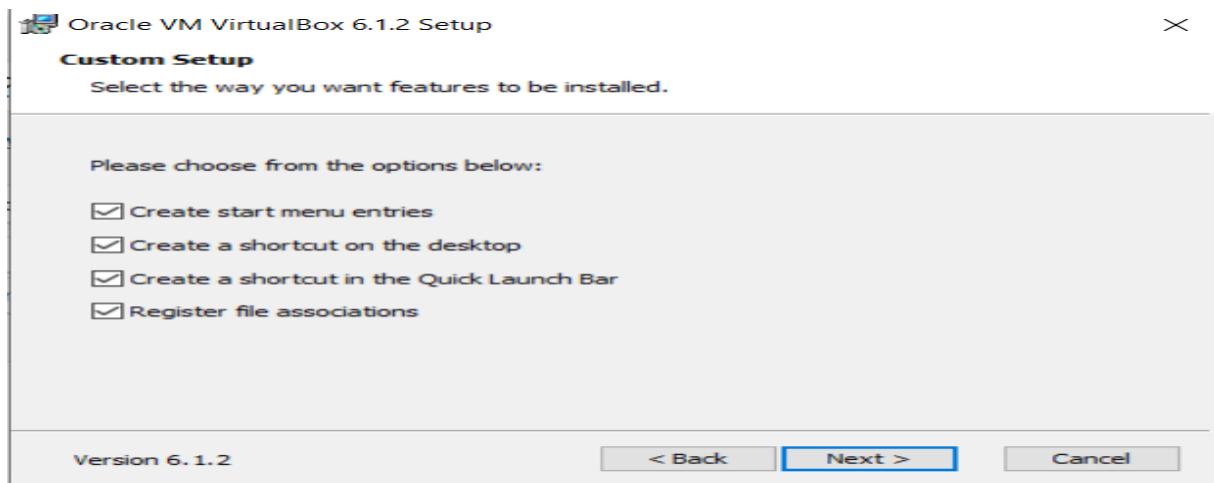
- **Getting Started:**

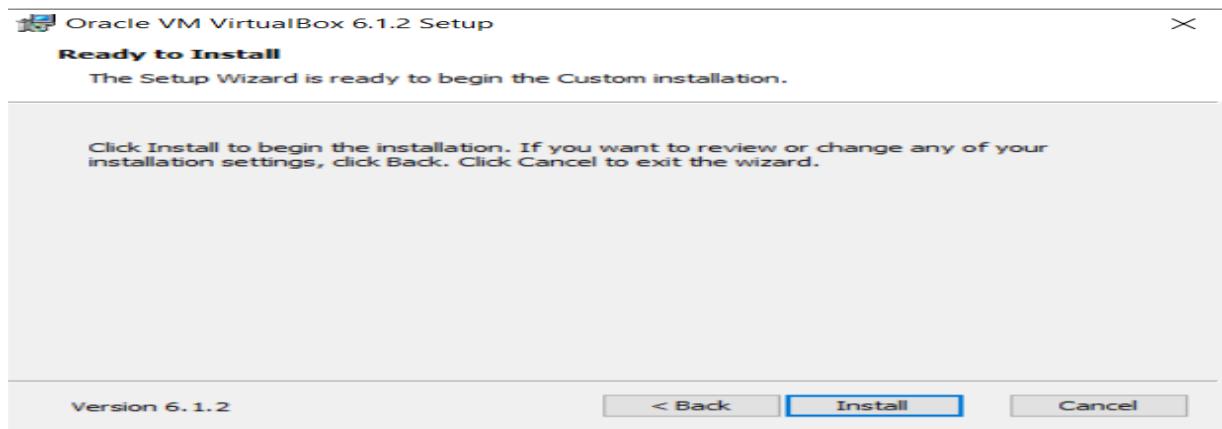


- Select Installation Location:

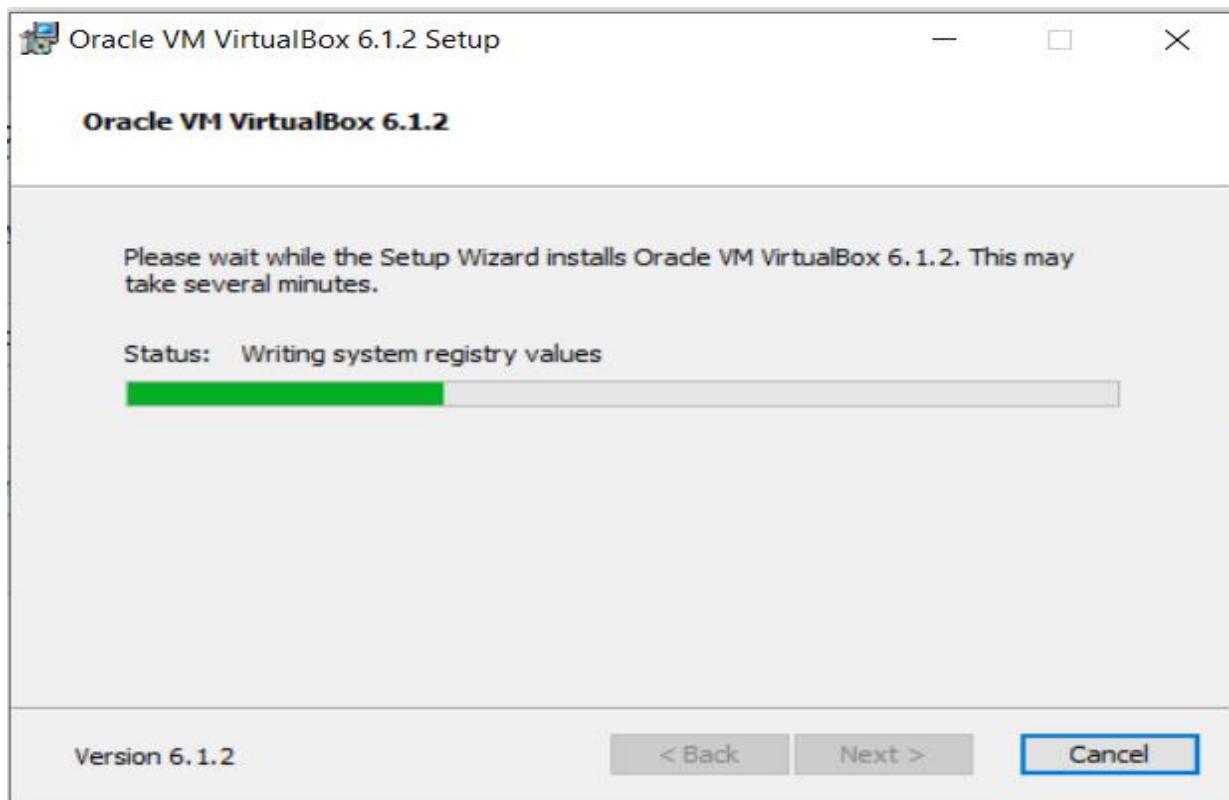


- Creating Entries and Shortcuts:

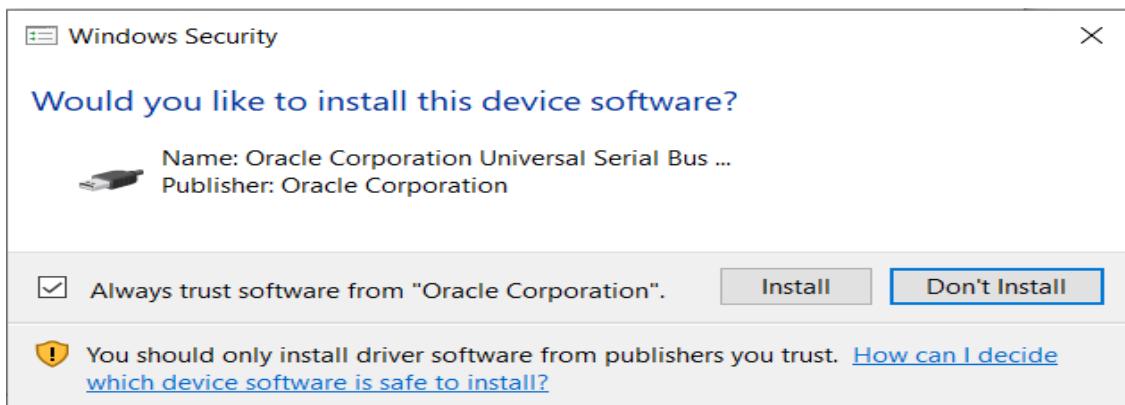




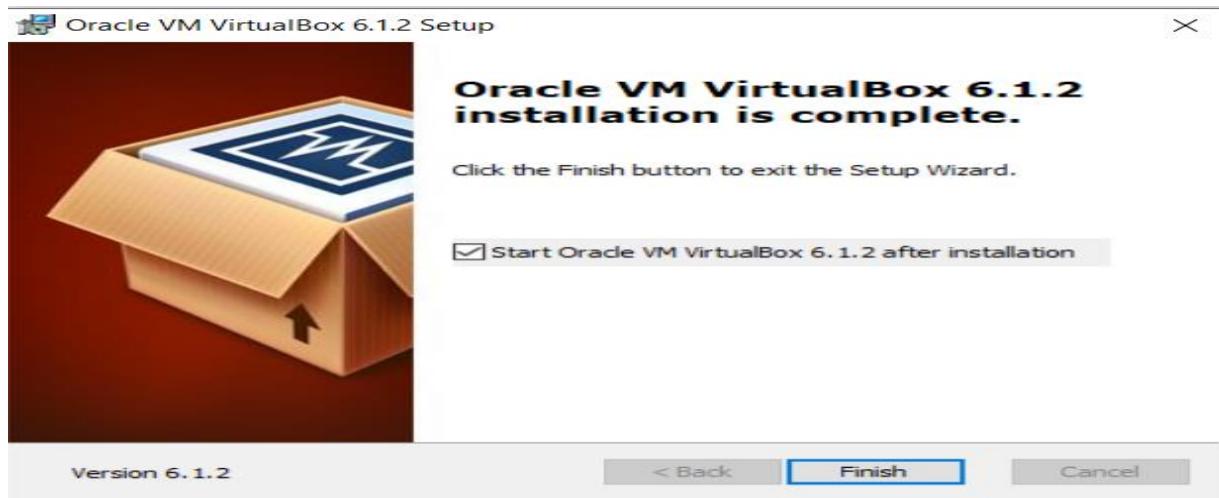
- Ready to Install:
- Installing Files and packages:



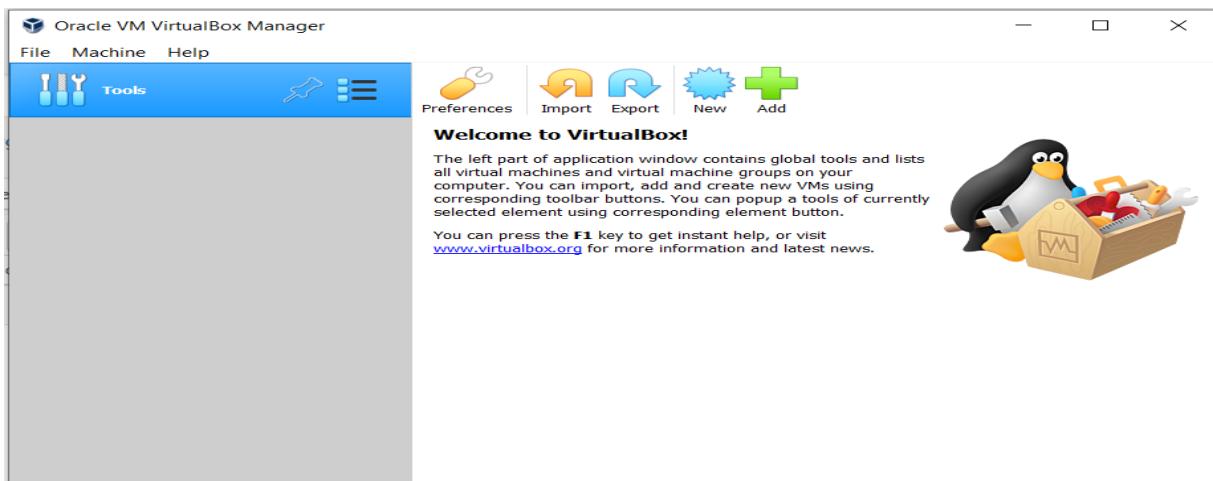
- Installing Certificates:



- Finished Installation:

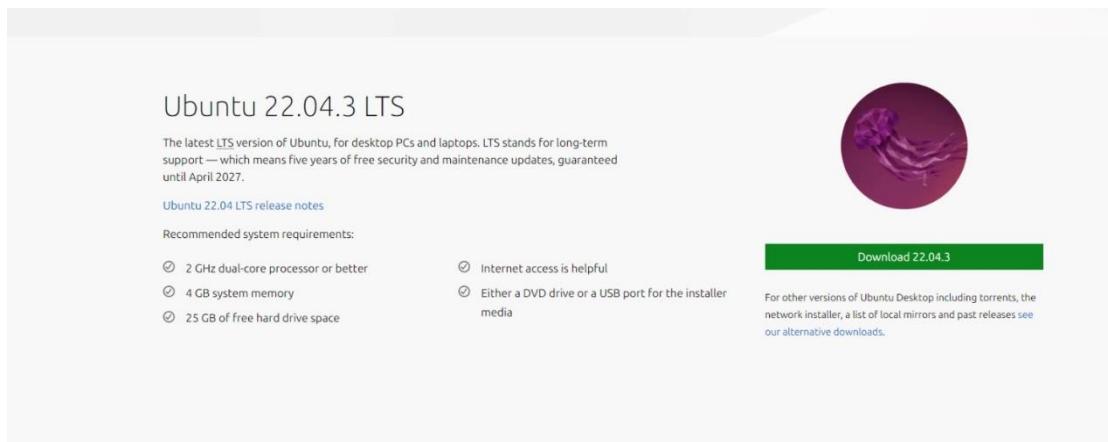


- When you will open virtualbox it will look like as shown below:



#### Step2: Install Windows/Linux in it :

- Download Ubuntu ISO file



- Give a Name to your Virtual Machine and select the Location for it to install.

The image shows the Oracle VM VirtualBox Manager interface with two overlapping dialog boxes for creating a new virtual machine.

**Top Dialog: Virtual machine Name and Operating System**

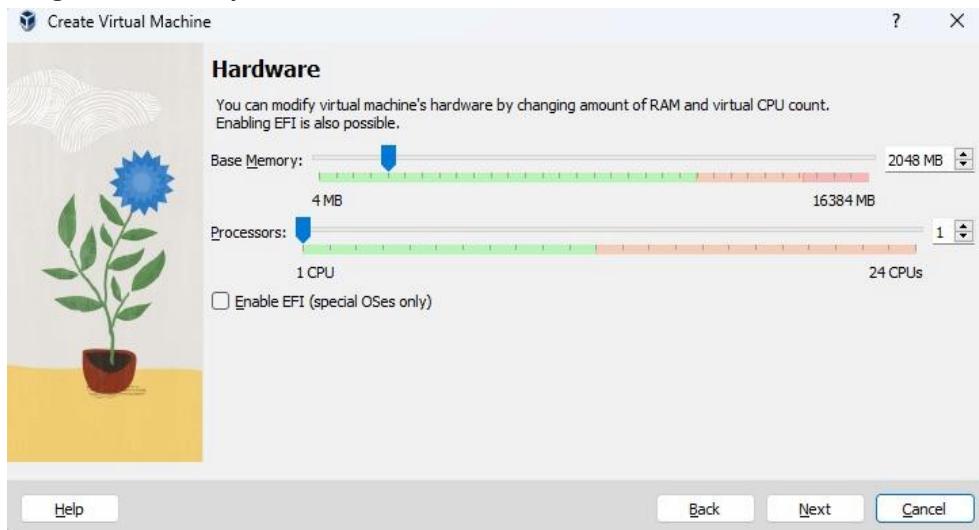
- Name: [Empty input field]
- Folder: C:\Users\Administrator\VirtualBox VMs
- ISO Image: <not selected>
- Edition:
- Type: Microsoft Windows
- Version: Windows 10 (64-bit)
- Skip Unattended Installation
- (Info) No ISO image is selected, the guest OS will need to be installed manually.

**Bottom Dialog: Unattended Guest OS Install Setup**

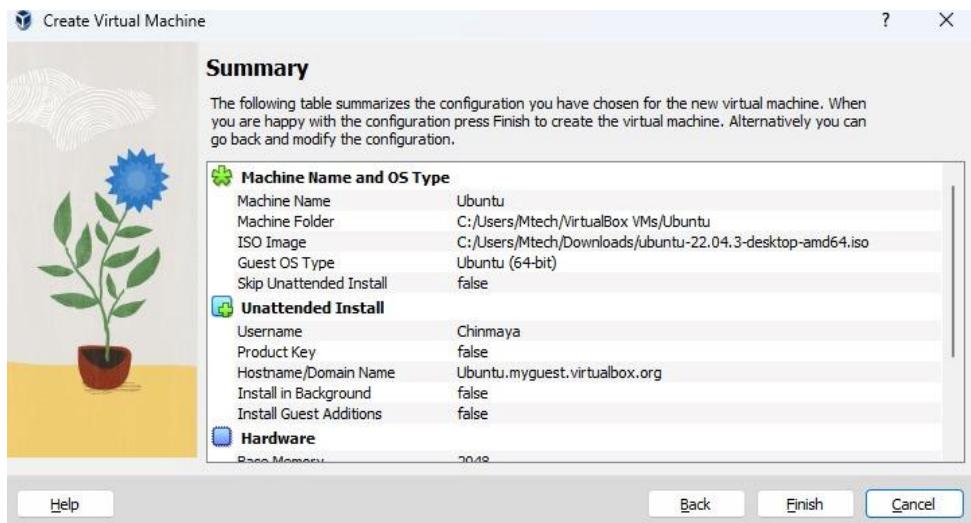
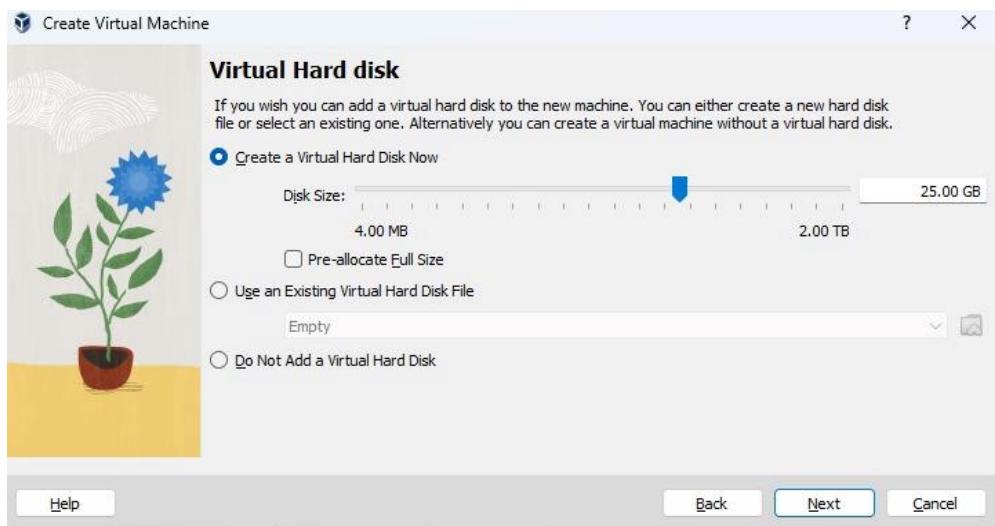
You can configure the unattended guest OS install by modifying username, password, and hostname. Additionally you can enable guest additions install. For Microsoft Windows guests it is possible to provide a product key.

- Username and Password**
  - Username: [Empty input field]
  - Password: [Redacted input field]
  - Repeat Password: [Redacted input field]
- Additional Options**
  - Product Key: #####-#####-#####-#####
  - Hostname: Ubuntu
  - Domain Name: myguest.virtualbox.org
  - Install in Background
- Guest Additions**
  - Guest Additions
  - Guest Additions ISO: C:\Program Files\Oracle\VirtualBox\VBoxGuestAdditions.iso

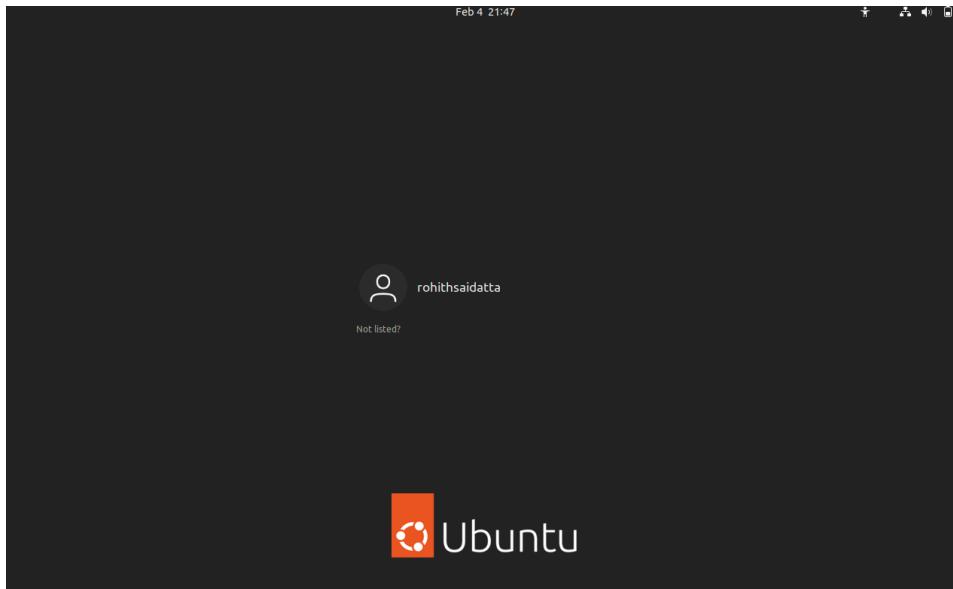
- Assign RAM Size to your Virtual Machine.



- Create a Virtual Hard Disk for the machine to store files.

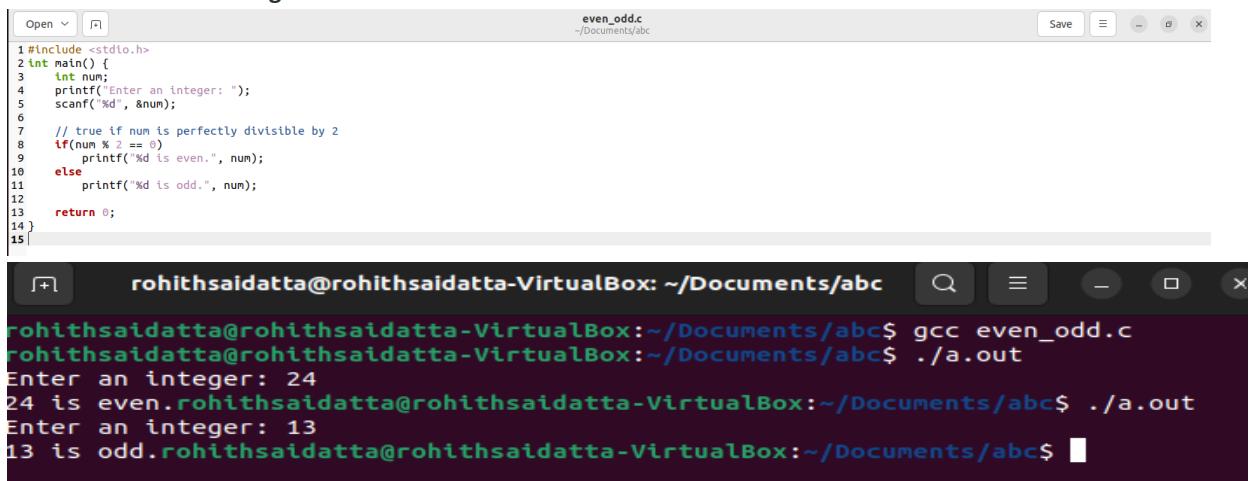


- Proceed with the installation file and wait for further options.



### Step3:Run a C/Python program in this platform:

- write a C code using text editor and run it.



A screenshot of a terminal window titled "even\_odd.c" showing the execution of a C program. The terminal output shows the program being compiled with gcc and run, with user input and output demonstrating its functionality.

```
even_odd.c
~/Documents/abc
rohithsaidatta@rohithsaidatta-VirtualBox: ~/Documents/abc$ gcc even_odd.c
rohithsaidatta@rohithsaidatta-VirtualBox: ~/Documents/abc$ ./a.out
Enter an integer: 24
24 is even.rohithsaidatta@rohithsaidatta-VirtualBox: ~/Documents/abc$ ./a.out
Enter an integer: 13
13 is odd.rohithsaidatta@rohithsaidatta-VirtualBox: ~/Documents/abc$
```

## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

# Cloud Infrastructure Management

Carry out an experiment to make your own Website and host it in cloud.

1. Login to the Azure account in the browser and click on “Create a resource”

The screenshot shows the Azure portal's main dashboard. At the top, there's a navigation bar with 'Azure services' and various icons for Subscriptions, Resource groups, All resources, Quickstart Center, Virtual machines, App Services, Storage accounts, SQL databases, and More services. Below this is a section titled 'Resources' with tabs for 'Recent' and 'Favorite'. It lists three resources: 'my-first-web-app\_group' (Resource group), 'vishu' (App Service), and 'Testing1' (Resource group). At the bottom left, there's a link 'See all'.

2. Search for “Static Web App” and hit “Enter”

The screenshot shows the 'Create a resource' search interface. A red oval highlights the search bar where 'Static Web App' has been typed. Below the search bar, there are sections for 'Popular Azure services' and 'Popular Marketplace products'. Under 'Popular Azure services', there are links for 'Virtual machine', 'Web App', 'SQL Database', 'Function App', 'Key Vault', and 'Data Factory'. Under 'Popular Marketplace products', there are links for 'Windows Server 2019 Datacenter', 'Windows 11 Pro, version 21H2', 'Ubuntu Server 20.04 LTS', 'Ubuntu Server 22.04 LTS', 'Red Hat Enterprise Linux 7.4', and 'Essentials 50K'.

## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

# Cloud Infrastructure Management

3. Select the “Static Web App” from the marketplace and click on “Create”

The screenshot shows the Azure Marketplace search results for 'Static Web App'. The search bar at the top has 'Static Web App' entered. Below the search bar are several filter options: Pricing: All, Operating System: All, Publisher Type: All, Product Type: All, and Publisher name: All. There is also a checkbox for 'Azure services only' which is unchecked. The results section displays six items:

- Static Web App** (Microsoft) - This item is circled in red. It is described as an Azure Service that offers secure and flexible development, deployment, and scaling options for web apps.
- WordPress App Service with MySQL in-app** (FRWX) - Framework Technology, Azure Application. Starts at ₹1,250.156/month.
- Strapi on Azure App Service** (QuickDeploy) - Azure Application. Starts at ₹3.229/hour.
- Enterprise Web Content Management Integrated** (VMLAB INC.) - Virtual Machine. Starts at ₹0.269/hour.
- Secured Drop Things on Windows 2012 R2** (Cognosys) - Virtual Machine. Starts at ₹1 cent/hr in Windows 2012 R2.

The screenshot shows the product page for 'Static Web App' by Microsoft. At the top, there is a navigation bar with 'Static Web App' and a 'Create' button. Below the navigation bar, there is a section titled 'Static Web App' with a Microsoft logo and a '4.1 (98 ratings)' rating. A red circle highlights the 'Create' button in the 'Plan' section. The page then displays the 'Overview' tab, which contains information about App Service Static Web Apps being a streamlined solution for static web apps. It also shows sections for 'Plans', 'Usage Information + Support', 'Ratings + Reviews', and 'More products from Microsoft'.

## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

# Cloud Infrastructure Management

4. Enter the details which are marked as \* as given in the image

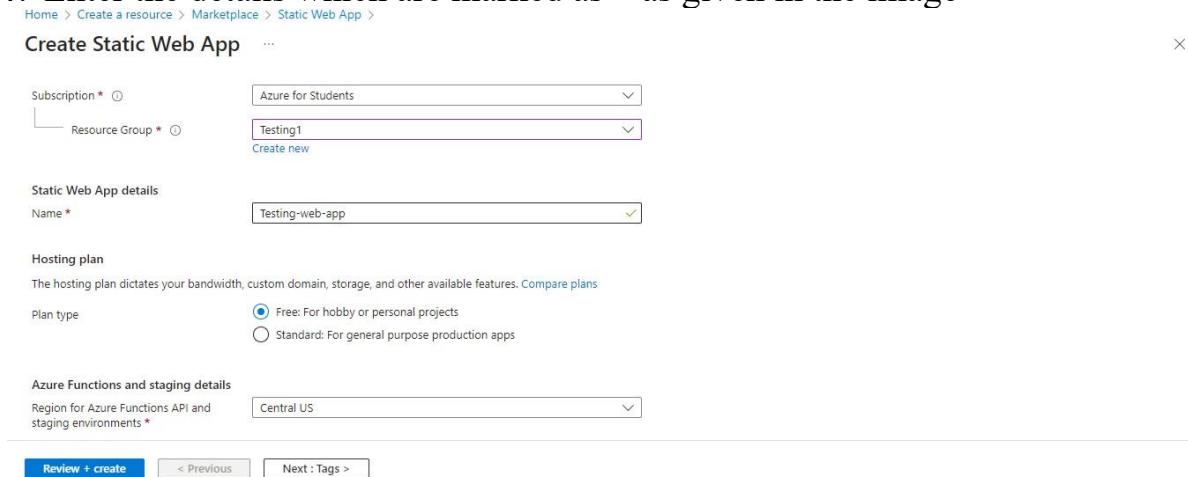
Home > Create a resource > Marketplace > Static Web App > Create Static Web App ...

Subscription \*  Resource Group \*

Static Web App details  
Name \*

Hosting plan  
The hosting plan dictates your bandwidth, custom domain, storage, and other available features. Compare plans.  
Plan type  Free: For hobby or personal projects  Standard: For general purpose production apps

Azure Functions and staging details  
Region for Azure Functions API and staging environments \*



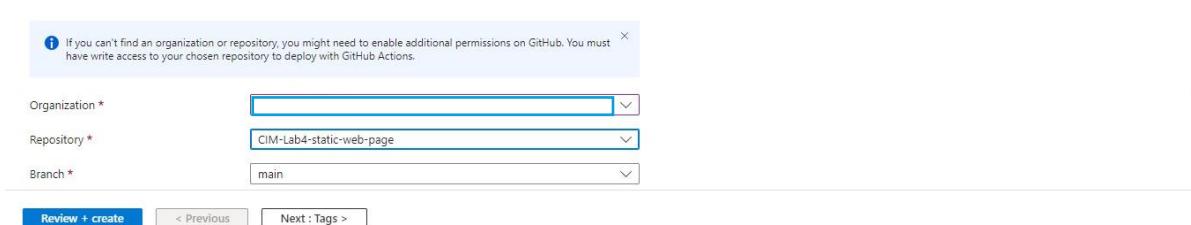
5. Select Source as “Github” and login to your github account or change your github account.

\* The account should contain a repository with the html code to host it in cloud.

Then select the Organization, Repository and Branch where the web page code is present

If you can't find an organization or repository, you might need to enable additional permissions on GitHub. You must have write access to your chosen repository to deploy with GitHub Actions.

Organization \*  Repository \*  Branch \*



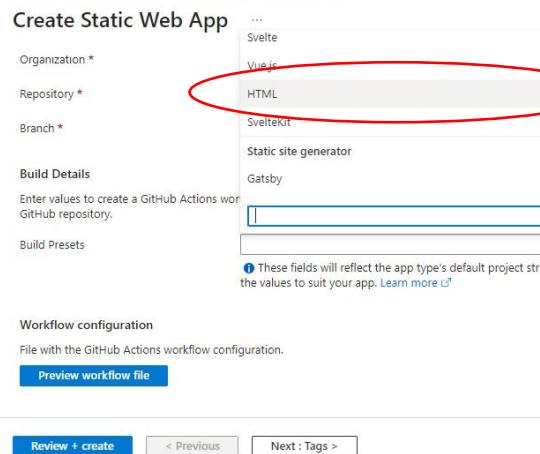
## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

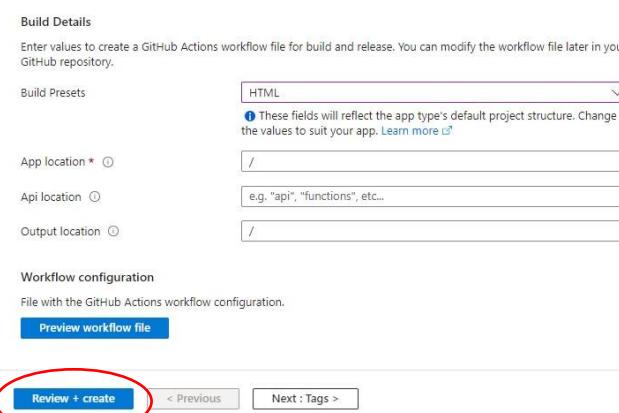
# Cloud Infrastructure Management

6. Choose the build stack as HTML from the dropdowns.



Leave everything as it is and click on “Review + Create”

Create Static Web App ...



Click on “Create”

## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

# Cloud Infrastructure Management

Click on “Go to Resources”

The screenshot shows the Microsoft Azure portal's "Overview" page for a static web app named "Microsoft.Web-StaticApp-Portal-0eac44a6-91ef". The main content area displays a green checkmark indicating "Your deployment is complete". Below this, under "Deployment details", it shows the deployment name, subscription, correlation ID, and resource group. A red circle highlights the "Next steps" section, which contains a blue button labeled "Go to resource". To the right of the main content, there are several promotional cards: "Cost management", "Microsoft Defender for Cloud", and "Free Microsoft tutorials". At the bottom left, there are links for "Give feedback" and "Tell us about your experience with deployment".

7. Now our web page is deploying, when it shows “Ready” in “View your application” tab click on “Visit Your Site”  
It'll open-up into new tab where we can see the web page hosted.

The screenshot shows the Microsoft Azure portal's "Overview" page for a static web app named "Testing-web-app". The left sidebar lists various settings like Configuration, Application Insights, and APIs. The main content area displays the "Essentials" section with deployment details such as Resource group, Subscription, Location, and Sku. Below this is the "Get started" section, which includes a "View your application" card. This card shows a status icon with "Ready" and a "Visit your site" button, which is also highlighted with a red circle. To the right of the card, it shows the URL, source, deployment history, edit workflow, domain, and hosting plan.

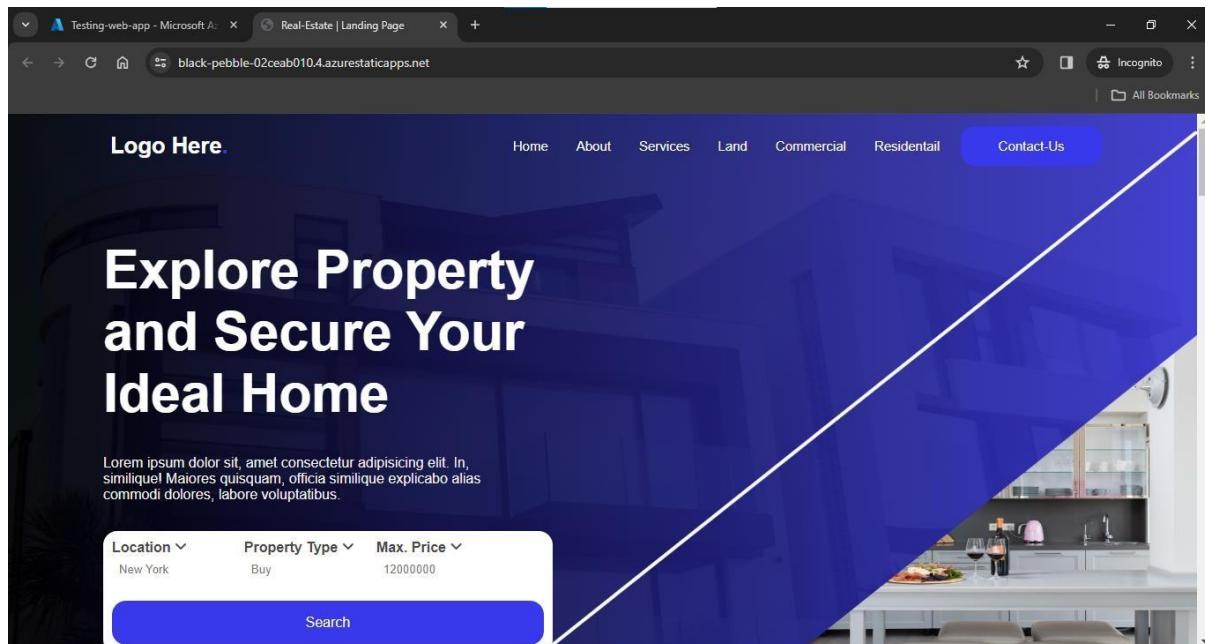
## Lab:- 4

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
09-02-2024

# Cloud Infrastructure Management

It is successfully hosted the static web app developed using HTML, CSS and JS



## Lab:- 5

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
16-02-2024

# Cloud Infrastructure Management

Carry out experiment to create VM on Linux Platform and check its working in the Server.

Login to the Azure account and click on to “Create a resource” button.

The screenshot shows the Azure services dashboard. At the top, there's a navigation bar with icons for Create a resource, Subscriptions, All resources, Resource groups, Quickstart Center, Virtual machines, App Services, Storage accounts, SQL databases, and More services. Below this is a section titled 'Resources' with tabs for Recent and Favorite. It lists three resources: 'Azure for Students' (Subscription, a few seconds ago), 'CIM-lab4-static-web-page' (Static Web App, 34 minutes ago), and 'Testing1' (Resource group, 7 days ago). A 'See all' link is at the bottom.

Search for the Virtual Machine and click on “create”

The screenshot shows the 'Create a resource' search results page. The search bar at the top contains 'Virtual machine'. The results are categorized under 'Popular Azure Services' and 'Popular Marketplace products'. Under 'Popular Azure Services', there are icons for Virtual machine, Web App, SQL Database, Function App, Key Vault, Data Factory, Template deployment (deploy using custom templates), Logic App, Automation, and Public IP address. Under 'Popular Marketplace products', there are icons for Windows Server 2019 Datacenter, Windows 11 Pro, version 21H2, Ubuntu Server 20.04 LTS, Ubuntu Server 22.04 LTS, Red Hat Enterprise Linux 7.4, Essentials SOK, MongoDB Atlas (pay-as-you-go), Standard, Microsoft Defender for Endpoint, and Azure Backup + AVS.

Give the suitable information for the virtual machine and choose and image file for the virtual machine

The screenshot shows the 'Create a virtual machine' wizard. The 'Basics' tab is selected. It displays a summary of the configuration: Subscription is 'Azure for Students', Resource group is 'Testing1', Virtual machine name is 'myVM', Region is '(US) East US', Availability options is 'No infrastructure redundancy required', Security type is 'Standard', and Image is 'Ubuntu Server 22.04 LTS - x64 Gen2'. Below the summary, there's a note about compatibility with additional security features. At the bottom, there are 'Review + create' and 'Next : Disks >' buttons.

Click on “Create and Review” button.

Home > Create a resource >

Create a virtual machine ...

VM architecture  Arm64  x64

Run with Azure Spot discount

Size \*  Standard\_B1s - 1 vcpu, 1 GiB memory (₹645.03/month) (free services eligible)  See all sizes

Enable Hibernation (preview)   
To enable hibernation, you must register your subscription. [Learn more](#)

Administrator account

Authentication type  SSH public key  Password  
Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username \*

SSH public key source  Generate new key pair  See all keys

Key pair name \*

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports \*  None  Allow selected ports

Select inbound ports \*  HTTP (80), SSH (22)

[Review + create](#) [< Previous](#) [Next : Disks >](#) [Give feedback](#)

After successful of validation, click on “create” button.

Home > Create a resource >

Create a virtual machine ...

Validation passed

Basics Disks Networking Management Monitoring Advanced Tags [Review + create](#)

[Cost given below is an estimate and not the final price. Please use \[Pricing calculator\]\(#\) if for all your pricing needs.](#)

Price  
1 X Standard B1s by Microsoft [Subscription credits apply](#)  0.8836 INR/hr [Pricing for other VM sizes](#)

TERMS  
By clicking “Create”, I (a) agree to the legal terms and privacy statements associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

Name

Preferred e-mail address

Preferred phone number

[⚠ You have set SSH port\(s\) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.](#)

Review [Create](#) [< Previous](#) [Next >](#) Download a template for automation [Give feedback](#)

It will ask you for the Generation of new Key, click on “Download private key and create resource”

Home > Create a resource >

Create a virtual machine ...

Validation passed

Basics Disks Networking Management Monitoring Advanced Tags [Review + create](#)

[Cost given below is an estimate and not the final price. Please use \[Pricing calculator\]\(#\) if for all your pricing needs.](#)

Price  
1 X Standard B1s by Microsoft [Subscription credits apply](#)  0.8836 INR/hr [Pricing for other VM sizes](#)

TERMS  
By clicking “Create”, I (a) agree to the legal terms and privacy statements associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

Name

Preferred e-mail address

[Submit deployment...](#) [Submitting the deployment template for resource group 'Testing1'](#)

[Generate new key pair](#)  
An SSH key pair contains both a public key and a private key. [Azure doesn't store the private key](#). After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

[Download private key and create resource](#) [Return to create a virtual machine](#)

After successful creation of virtual machine click on “Goto resource”

Come back to Azure, click on connect button and it will pop up the window for authentication, Then it will open the terminal

Choose the subscription in the terminal shown below.

The screenshot shows the Azure portal interface for connecting to a virtual machine named 'myVM'. On the left, there's a sidebar with various settings like networking, disks, and size. The main area shows connection methods: 'SSH using Azure CLI' (recommended) and 'Native SSH' (most common). A modal window is overlaid, stating 'You have no storage mounted' and providing instructions to create a new storage account. The top right corner shows a detailed configuration for connecting via SSH using Azure CLI, listing prerequisites such as system-assigned managed identity and port 22 access.

It will start the terminal.

The screenshot shows the terminal session within the Azure portal. The terminal window displays the standard Ubuntu boot message, including the copyright notice and the warning about no warranty. The command line shows the user has run 'sudo su' to become root.

Enter the given command to update and install the certain packages.

The screenshot shows the Azure portal interface for a virtual machine named 'myVM'. In the top navigation bar, the path is 'Home > CreateVm-canonical.0001-com-ubuntu-server-jammy-2-20240216101116 | Overview > myVM'. On the left sidebar, under 'Settings', the 'Connect' option is selected. A central panel displays connection information: 'Connecting using Public IP address | 52.168.6.41'. It shows 'Admin username' as 'azureuser', 'Port (change)' as '22', and 'Just-in-time policy' as 'Unsupported by plan'. Below this, two connection methods are listed: 'SSH using Azure CLI' (recommended) and 'Native SSH' (most common). Both methods are described as requiring no additional software and using private keys. To the right, a modal window titled 'SSH using Azure CLI' provides step-by-step instructions for configuring prerequisites, including enabling system-assigned managed identities and using Azure AD SSH login. The 'Prerequisites configured' section is checked. At the bottom of the modal are 'Close' and 'Give feedback' buttons.

After the successful execution of the commands copy up the public ip address which is provided in the overview section of the virtual machine.

This is the result which is opted when we run the ip address.

The screenshot shows a web browser window displaying the Nginx 'Welcome to nginx!' page. The URL in the address bar is '52.168.6.41'. The page content includes the title 'Welcome to nginx!', a message about successful installation, links to online documentation and commercial support, and a thank you note for using nginx.

```
>Welcome to nginx!
If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.
For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.
Thank you for using nginx.
```

## Lab:- 6

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
23-02-2024

# Cloud Infrastructure Management

Carry out experiment to demonstrate the Docker working in cloud and compare its performance with VM

Open Microsoft Azure:

The screenshot shows the Microsoft Azure portal homepage. At the top, there's a navigation bar with 'Azure services' and various icons for creating a resource, viewing all resources, subscriptions, projects, DevOps organizations, Apache Kafka, resource groups, quickstart center, virtual machines, and more services. Below this is a section titled 'Resources' with tabs for 'Recent' and 'Favorite'. It lists several resources: vpCloudContainerRegistry (Container registry), Testing1 (Resource group), cloud-shell-storage-centralindia (Resource group), Azure for Students (Subscription), and CIM-lab4-static-web-page (Static Web App). Each item has a small icon, a name, a type, and a 'Last Viewed' timestamp.

Create a resource:

The screenshot shows the 'Create a resource' page within the Azure portal. On the left, there's a sidebar with categories like Blockchain, Compute, Containers (which is selected and highlighted in grey), Databases, Developer Tools, DevOps, Identity, Integration, Internet of Things, IT & Management Tools, Media, Migration, Mixed Reality, and Monitoring & Diagnostics. To the right, there's a grid of resource creation cards. Under the 'Containers' category, the cards include: 'Batch Service' (Create | Docs | MS Learn), 'Kubernetes - Azure Arc' (Create | Docs | MS Learn), 'Container App' (Create | Docs), 'Container Instances' (Create | Learn more | MS Learn), 'Container Registry' (Create | Docs), and 'Service Fabric Cluster' (Create | Docs). Further down the page, other cards are visible: 'Docker Engine Community on Ubuntu 20.04 LTS' (Create | Learn more), 'Docker Compose Server on Windows Server 2016' (Create | Learn more), 'Pay-as-You-Go' (Set up + subscribe | Learn more), 'Portainer 2.19 on Ubuntu 22.04' (Create | Learn more), 'Docker Compose Server on Ubuntu Server 20.04' (Create | Learn more), and 'Docker on Ubuntu 20.04 LTS' (Create | Learn more).

# Lab:- 6

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
23-02-2024

## Create container instance:

Home > Create a resource >

### Create container instance

Basics Networking Advanced Tags Review + create

Azure Container Instances (ACI) allows you to quickly and easily run containers on Azure without managing servers or having to learn new tools. ACI offers per-second billing to minimize the cost of running containers on the cloud.  
[Learn more about Azure Container Instances](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ Azure for Students

Resource group \* ⓘ Testing1  
Create new

Container details

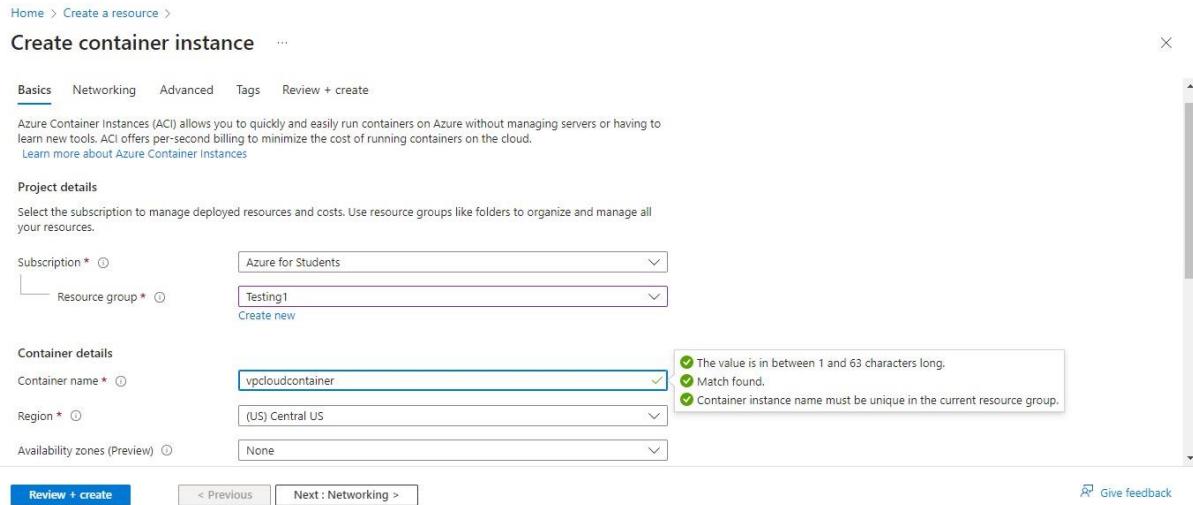
Container name \* ⓘ vpcloudcontainer

The value is in between 1 and 63 characters long.  
Match found.  
Container instance name must be unique in the current resource group.

Region \* ⓘ (US) Central US

Availability zones (Preview) \* ⓘ None

**Review + create** < Previous Next : Networking > Give feedback



Home > Create a resource >

### Create container instance

SKU Standard

Standard SKU is available for all regions. Confidential SKU is only available for specific regions. [Learn more](#)

Image source \* ⓘ Quickstart images

Quickstart images  
 Azure Container Registry  
 Other registry

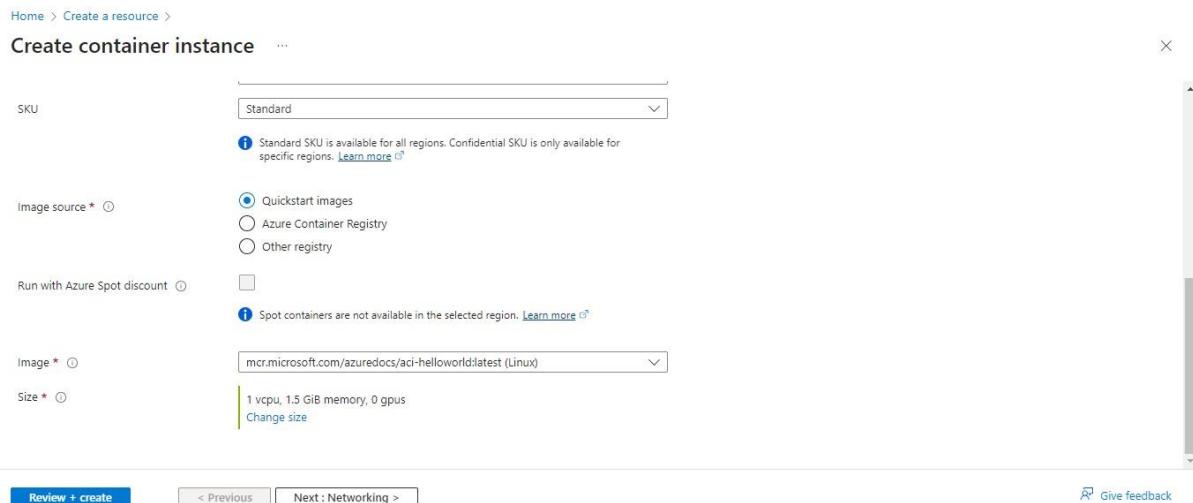
Run with Azure Spot discount ⓘ

Spot containers are not available in the selected region. [Learn more](#)

Image \* ⓘ mcr.microsoft.com/azuredocs/aci-helloworld:latest (Linux)

Size \* ⓘ 1 vcpu, 1.5 GB memory, 0 gpus  
Change size

**Review + create** < Previous Next : Networking > Give feedback



## Lab:- 6

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
23-02-2024

Home > Create a resource >

### Create container instance

Choose between three networking options for your container instance:

- 'Public' will create a public IP address for your container instance.
- 'Private' will allow you to choose a new or existing virtual network for your container instance.
- 'None' will not create either a public IP or virtual network. You will still be able to access your container logs using the command line.

Networking type  Public  Private  None

DNS name label  ✓

DNS name label scope reuse \*

Ports

Ports	Ports protocol
80	TCP

[Review + create](#) [< Previous](#) [Next : Advanced >](#) [Give feedback](#)

Home > Create a resource >

### Create container instance

Validation passed

Basics Networking Advanced Tags [Review + create](#)

**Basics**

Subscription	Azure for Students
Resource group	Testing1
Region	Central US
Container name	vpcloudcontainer
SKU	Standard
Image type	Public
Image	mcr.microsoft.com/azuredocs/aci-helloworld:latest
OS type	Linux
Memory (GiB)	1.5
Number of CPU cores	1
GPU type (preview)	None

[Create](#) [< Previous](#) [Next >](#) [Download a template for automation](#) [Give feedback](#)

## Deployment of Container Instances:

Home >

### Microsoft.ContainerInstances-20240225140107 | Overview

Deployment

Search  Delete Cancel Redeploy Download Refresh

Overview   
Inputs   
Outputs   
Template

Your deployment is complete

Deployment name : Microsoft.ContainerInstances-202402... Start time : 2/25/2024, 2:05:34 PM  
Subscription : Azure for Students Correlation ID : 7697b9d9-2d9a-415a-a1a9-a398718...

Deployment details   
Next steps

[Go to resource](#)

Give feedback [Tell us about your experience with deployment](#)

Deployment succeeded  
Deployment 'Microsoft.ContainerInstances-20240225140107' to resource group 'Testing1' was successful.

Go to resource Pin to dashboard

**Cost management**  
Get notified to stay within your budget and prevent unexpected charges on your bill.  
Set up cost alerts >

**Microsoft Defender for Cloud**  
Secure your apps and infrastructure  
[Go to Microsoft Defender for Cloud >](#)

**Free Microsoft tutorials**  
[Start learning today >](#)

**Work with an expert**  
Azure experts are service provider partners who can help manage your create...

## Lab:- 6

Name: Pasupuleti Rohithsaidatta

Reg no :230913003  
23-02-2024

Vpccloudcontainer:

Home > Microsoft.ContainerInstances-20240225202938 | Overview >

**vpcloudcontainer** Container instances

Search ...

Start Restart Stop Delete Refresh Give feedback

Overview Activity log Access control (IAM) Tags

Containers Identity Properties Locks

Monitoring Metrics Alerts Automation CLI / PS

Essentials

Resource group (move) : Testing1 SKU : Standard

Status : Running OS type : Linux

Location : Central US IP address (Public) : 4.249.160.38

Subscription (move) : Azure for Students FQDN : vpcloudcontainer.eqafbwawewe4esc7.centralus.azurecontai...

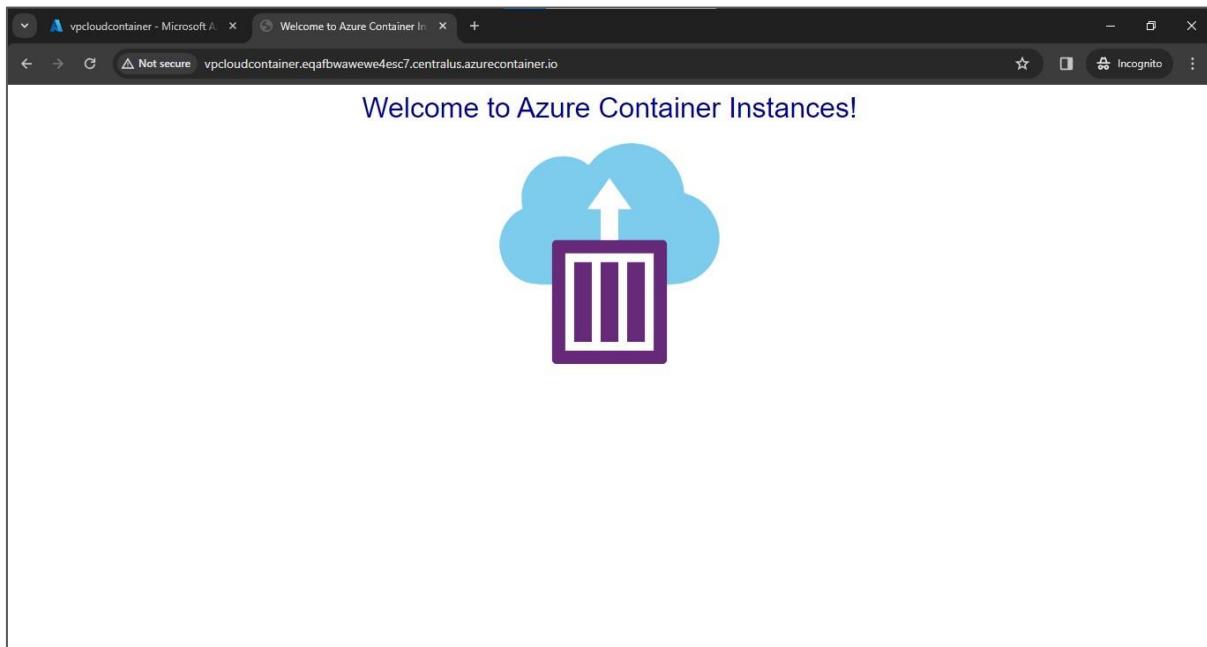
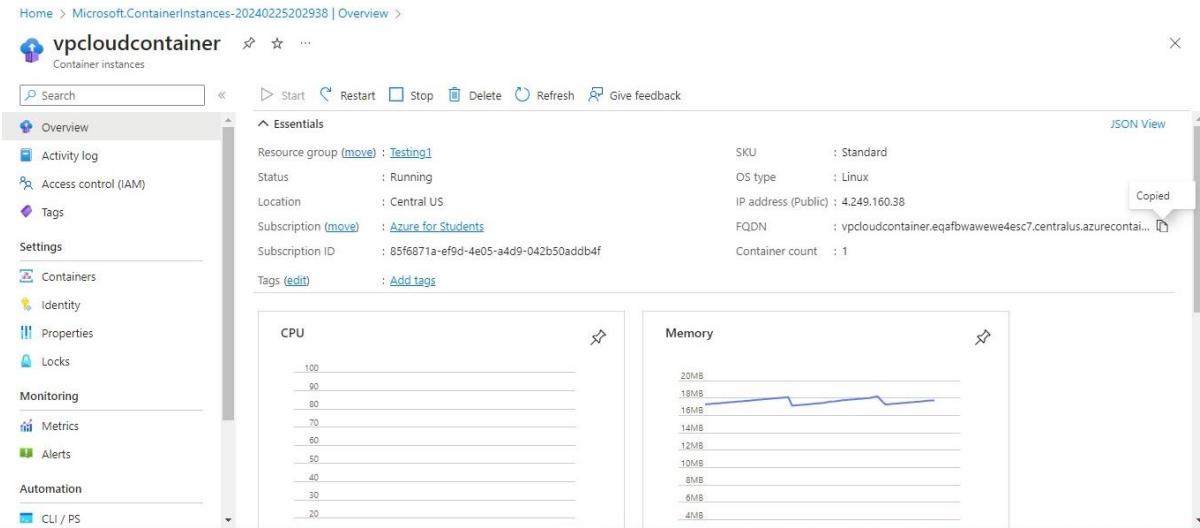
Subscription ID : 85f6871a-ef9d-4e05-a4d9-042b50addb4f Container count : 1

Tags (edit) : Add tags

CPU

Memory

JSON View Copied



Lab 7

Cloud Infrastructure Management

Date: 5/3/2024

**CARRY OUT AN EXPERIMENT TO CREATE AN API AND EXPLORE****CREATE API MANAGEMENT CONSOLE**

Home &gt; Create a resource &gt;

**Marketplace** ...

- [Get Started](#)
- [Service Providers](#)
- Management**
- [Private Marketplace](#)
- [Private Offer Management](#)
- My Marketplace**
- [Favorites](#)
- [My solutions](#)
- [Recently created](#)
- [Private plans](#)
- Categories**
- [IT & Management Tools \(266\)](#)
- [Security \(148\)](#)
- [Analytics \(103\)](#)

New! Get AI-generated suggestions for your search.  
Ask AI to suggest products, articles, and solutions for what you need.

**View suggestions**

api management X Pricing : All X Operating System : All X Publisher Type : All X

Azure services only

Showing 1 to 20 of 692 results for 'api management'. [Clear search](#)

**API Management**  
 Microsoft  
 Azure Service  
 Publish APIs hosted anywhere, secure and protect against abuse, gain insights into usage and health.

**API Center**  
 Microsoft  
 Azure Service  
 Develop and maintain a structured and organized inventory of your organization's APIs.

**From Legacy APIs to Azure API Management (APIM)**  
 TwoConnect - App Modernizatio...  
 SaaS  
 From Legacy APIs to Azure API Management (APIM) - TwoConnect

**Axway Amplify API Management Platform**  
 AXWAY  
 SaaS  
 Only open, independent platform for unifying APIs across teams, hybrid cloud, third-party ecosystems

Home &gt; Create a resource &gt; Marketplace &gt;

**API Management** ...

Microsoft

**API Management** Add to Favorites

Microsoft | Azure Service  
★ 3.9 (225 ratings)

Plan API Management Create

[Overview](#) [Plans](#) [Usage Information + Support](#) [Ratings + Reviews](#)

Create an API gateway and developer portal in minutes.

Turnkey solution for publishing APIs to external and internal consumers. Quickly create consistent and modern API gateways for existing backend services hosted anywhere.

- Provide API documentation and an interactive console
- Throttle, rate limit and quota your APIs
- Monitor health of your APIs and quickly identify errors
- Bring modern formats like JSON and REST to existing APIs
- Connect to APIs hosted anywhere on the Internet or on-premises and publish globally
- Gain analytic insights on how your APIs are being used
- Manage your service via the Azure portal, REST API, PowerShell, or Git repository

**Give all important information regarding API management and Click Create**

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Home > Create a resource > Marketplace >

**Create API Management service** ...

API Management service

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* (Azure for Students) Resource group \* (New) cloudstorage Create new

Instance details

Region \* (US) Central US Resource name \* rohitptest Organization name \* rohit Administrator email \* pasupuletirohit.hsaidatta03@gmail.com

Name: Pasupuleti Rohithsaidatta

Reg no: 230913003

The screenshot shows the Microsoft Azure Marketplace interface. A modal window titled 'Initialize deployment...' is open, stating 'Initializing template deployment to resource group 'cloudstorage''. The main page shows the 'Create API Management service' wizard with the 'Review + install' step selected. The 'Basic' configuration is shown:

Subscription	Azure for Students
Resource group	cloudstorage
Region	Central US
Resource name	rohitptest

Buttons at the bottom include 'Create', '< Previous', 'Next >', and 'Download a template for automation'.

The screenshot shows the Azure API Management service overview page for the resource group 'cloudstorage'. A deployment named '6601a73ce0e50afce0f7832a' is currently in progress. Deployment details are listed:

Deployment name:	6601a73ce0e50afce0f7832a
Subscription:	Azure for Students
Resource group:	cloudstorage

Deployment status: Deployment is in progress. Start time: 25/03/2024, 22:03:15. Correlation ID: bbfa7fde-9aa0-46e1-a20b-15d6877eeb3e.

Deployment details table:

Resource	Type	Status	Operation details
rohitptest	Microsoft.ApiManage...	Created	<a href="#">Operation details</a>

Right sidebar features:

- Microsoft Defender for Cloud**: Secure your apps and infrastructure. [Go to Microsoft Defender for Cloud >](#)
- Free Microsoft tutorials**: [Start learning today >](#)

Goto API management dashboard, Goto API section to create new API

The screenshot shows the Azure API Management service dashboard for the resource group 'rohitptest'. The left sidebar has sections like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Events, Settings, Platform migration, Properties, and Locks. The main area shows the 'API' section with a message: 'Service is being activated'. The 'Essentials' table includes:

Resource group ( <a href="#">move</a> ) cloudstorage	Developer portal URL ---
Status Activating	Gateway URL <a href="https://rohitptest.azure-api.net">https://rohitptest.azure-api.net</a>
Location Central US	Tier Premium
Subscription ( <a href="#">move</a> ) Azure for Students	Virtual IP (VIP) addresses ---
Subscription ID 9ecfe53c-5d03-4bc1-ac66-4ca155dffbec	Platform version undetermined
Tags ( <a href="#">edit</a> ) ---	

[JSON View](#) button is visible in the top right of the essentials table.

### Create new HTTP API with the following details

The screenshot shows the 'Define a new API' section of the Azure API Management portal. It features a grid of four cards: 'HTTP' (Manually define an HTTP API), 'WebSocket' (Streaming, full-duplex communication with a WebSocket server), 'GraphQL' (Access the full capabilities of your data from a single endpoint), and 'gRPC' (High performance, universal Remote Procedure Call framework). Below this, there's a section titled 'Create from definition' with four more cards: 'OpenAPI' (green), 'WADL' (grey), 'WSDL' (purple), and 'OData' (orange).

Configure the API endpoint with relevant information.

#### Create from OpenAPI specification

Basic  Full

\* OpenAPI specification  
https://conferenceapi.azurewebsites.net?format=json   
(maximum size 4 MiB)

Include required query parameters in operation templates

\* Display name: Demo Conference API

\* Name: demo-conference-api

Description: A sample API with information related to a technical conference. The available resources include "Speakers", "Sessions" and "Topics". A single write operation is available to provide feedback on a session.

URL scheme:  HTTP  HTTPS  Both

API URL suffix: conference

\* Display name: Demo Conference API

\* Name: demo-conference-api

Description: A sample API with information related to a technical conference. The available resources include "Speakers", "Sessions" and "Topics". A single write operation is available to provide feedback on a session.

URL scheme:  HTTP  HTTPS  Both

API URL suffix: conference

Tags: e.g. Booking

Products: Unlimited

Gateways: Managed

Version this API?

Name: Pasupuleti Rohithsaidatta

Reg no: 230913003

Check the new create API section and test its working.

The screenshot shows the Microsoft Azure API Management interface. On the left, there's a sidebar with options like 'Search APIs', 'Filter by tags', 'Group by tag', '+ Add API', and 'All APIs'. Under 'All APIs', 'Demo Conference API' is selected, indicated by a blue background. Below it is 'Echo API'. The main area is titled 'REVISION 1' and shows 'CREATED Mar 8, 2024, 11:05:32 AM'. It has tabs for 'Design', 'Settings', 'Test', 'Revisions (1)', and 'Change log'. The 'Design' tab is active. In the center, there's a diagram illustrating the API flow between 'Frontend', 'Inbound processing', 'Backend', and 'Outbound processing'. The 'Frontend' section shows a 'GET /speakers' operation with query parameters 'dayno' (integer) and 'speakername' (string). The 'Backend' section shows an 'HTTP(s) endpoint' at 'https://conferenceapi.azurewebsites.net'. Policies are defined for both inbound and outbound processing. The 'Definitions' section shows a successful response code '200 OK'.