

Atria Institute of Technology



Department of Information Science and Engineering

Big Data Analytics (18CS72)

Assignment-1

SUBMITTED BY

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Section: 'B'

Submission Date: 23-11-2023

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Sl. No	Description
1	1. create an EC2 Linux instance in AWS Cloud /Any cloud INSTANCE NAME - YOUR NAME INSTANCE TYPE - t2.micro/any other also. key pair name- your name storage - 10 GB Take the screenshot of instance running status Mention the private IP address and Public IP address. (Execute this program/concept and take a screenshot of the output)
2	Execute the basic Linux commands/ simple program on the instance (Execute this program and take a screenshot of the output)
3	Create the GitHub Account with your credentials, Same things stored in public repository in Github. Share the assignment in github link.

Note:

1. Minimum 10 Screenshots with proper explanation
2. Minimum no of pages – 10
3. Submit your Assignment soft copy (Word & PDF) to anandakumar.ks@atria.edu.
Subject Line in mail: Student_Name_USN_BDA_Assignment1
4. Share your assignment Github link in Assignment Document.
5. Submit Assignment on or before **27th Nov 2023**.

Instance Creation-01

Step 1: Create an Oracle Cloud account

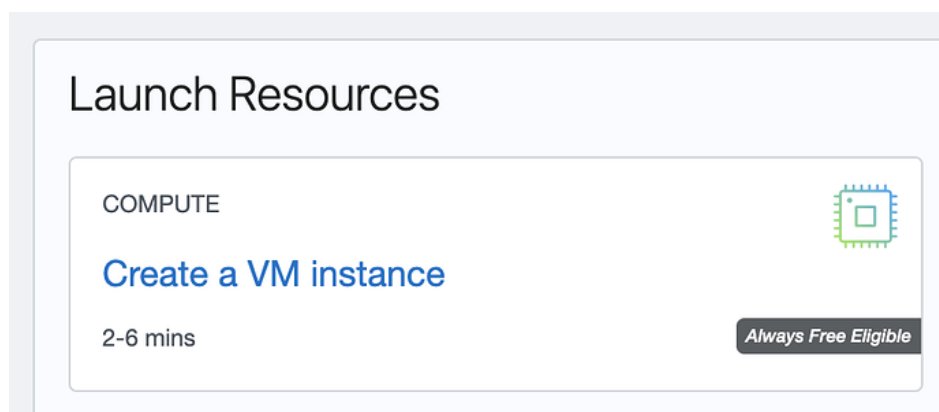
Head over to [Oracle Cloud](#) and create a new account.

Expect to have to provide a Credit/Debit Card in order to create an account.

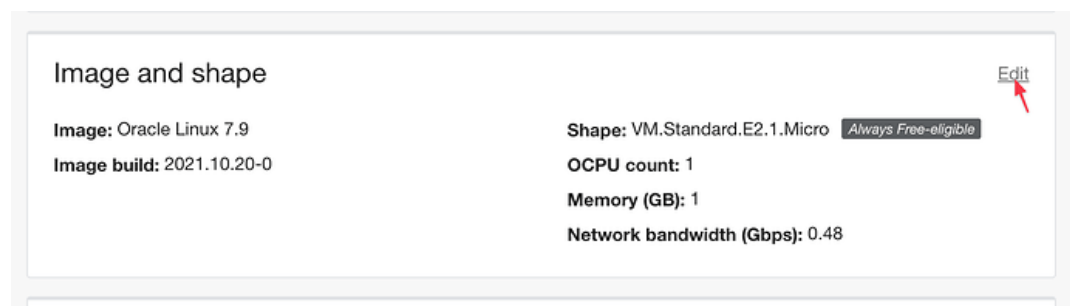
Expect to get contacted via email and phone by an Oracle rep.

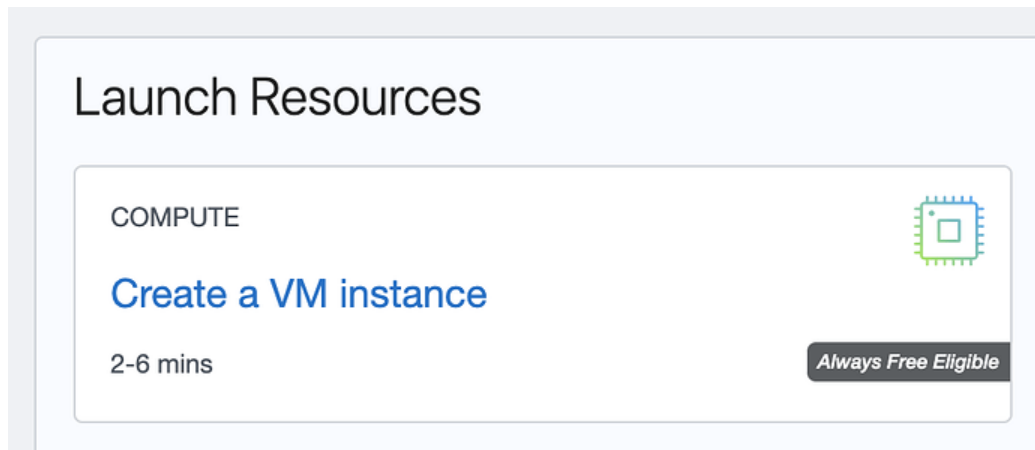
Step 2: Add a new VPS instance

Once signed up, on the getting started page, launch a new VM instance.

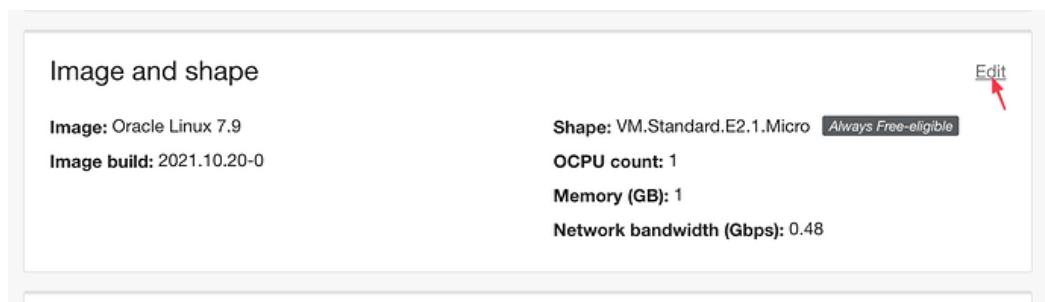


On the Image and shape card, click edit. You'll need to select the Canonical Ubuntu: 20.04 instance.





Add your SSH key (you'll need to SSH into the new server in the next steps).




Finally, click on Create. This will provision the server on Oracle's side.

Step 4 - open port 80 and 443

Port 80 and 443 will be closed by default. Assuming you plan to add websites to the server, open port 80 and 443 by clicking on Virtual Cloud Network from the server instance details screen.

Compute » Instances » Instance details



RUNNING

instance-20211122-1445 Always Free

Start Stop Reboot Edit More Actions

Instance information
Shielded instance
Oracle Cloud Agent
Tags

General information

Availability domain: AD-1
Fault domain: FD-3
Region: us-sanjose-1
OCID: ...pc6cgq [Show](#) [Copy](#)
Launched: Mon, Nov 22, 2021, 21:47:07 UTC
Compartment: adammiedema (root)
Capacity type: On-demand

Instance details

Virtual cloud network: [vcn-20211122-1445](#)

Instance account

You [connect to a running instance](#). You'll need to use the instance's [public IP address](#) to create the connection.

Public IP address: 10.0.0.1
Username: ubuntu

Primary VNIC

Private IP address: 10.0.0.1
Network security group: [nsg-20211122-1445](#)
Subnet: [subnet-20211122-1445](#)
Private DNS record: [instance-20211122-1445](#)

Click Security List on the left menu.

Resources
Subnets

Subnets (1)

CIDR Blocks (1)

Route Tables (1)

Internet Gateways (1)

Dynamic Routing Gateways Attachments (0)

Network Security Groups (0)

Security Lists (1)

DHCP Options (1)

Local Peering Gateways (0)

NAT Gateways (0)

Service Gateways (0)

VLANs (-)

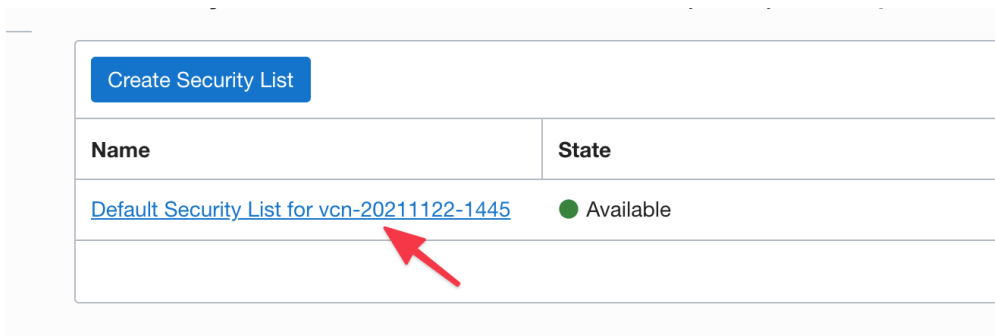
Work Requests (0)

Create Subnet

Name

[subnet-20211122](#)

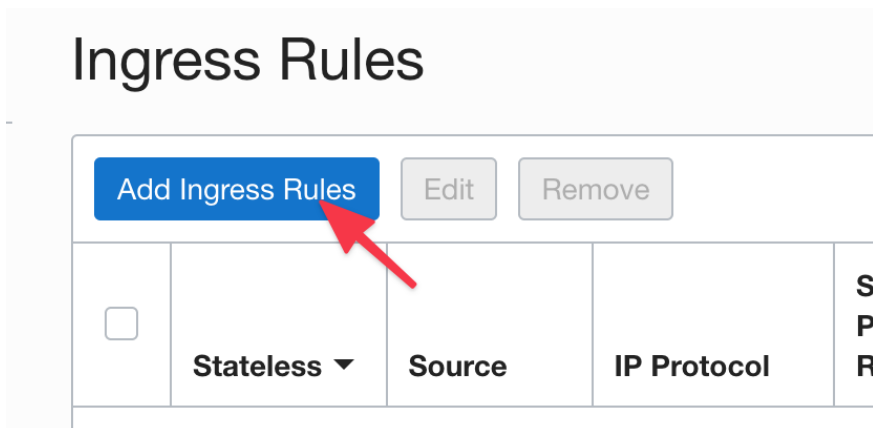
Click on the security list



Create Security List

Name	State
Default Security List for vcn-20211122-1445	● Available

Click Add Ingress Rules

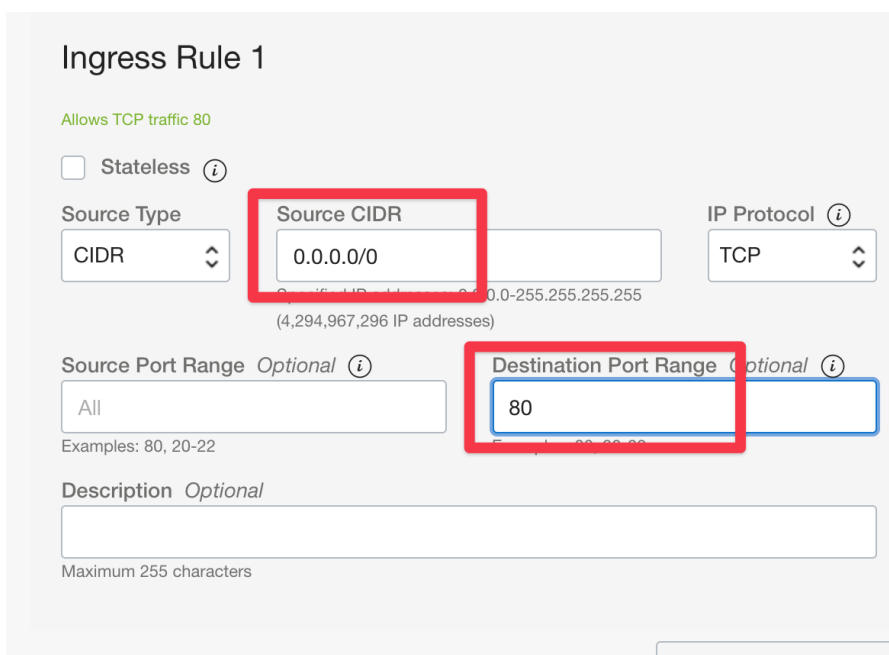


Ingress Rules

Add Ingress Rules Edit Remove

	Stateless ▾	Source	IP Protocol	S P R
--	-------------	--------	-------------	-------------

Add the following source and port –



Ingress Rule 1

Allows TCP traffic 80

☐ Stateless ⓘ

Source Type CIDR ▾

Source CIDR 0.0.0.0/0

IP Protocol ⓘ TCP ▾

Source Port Range Optional ⓘ All

Destination Port Range ⓘ 80

Description ⓘ

Maximum 255 characters

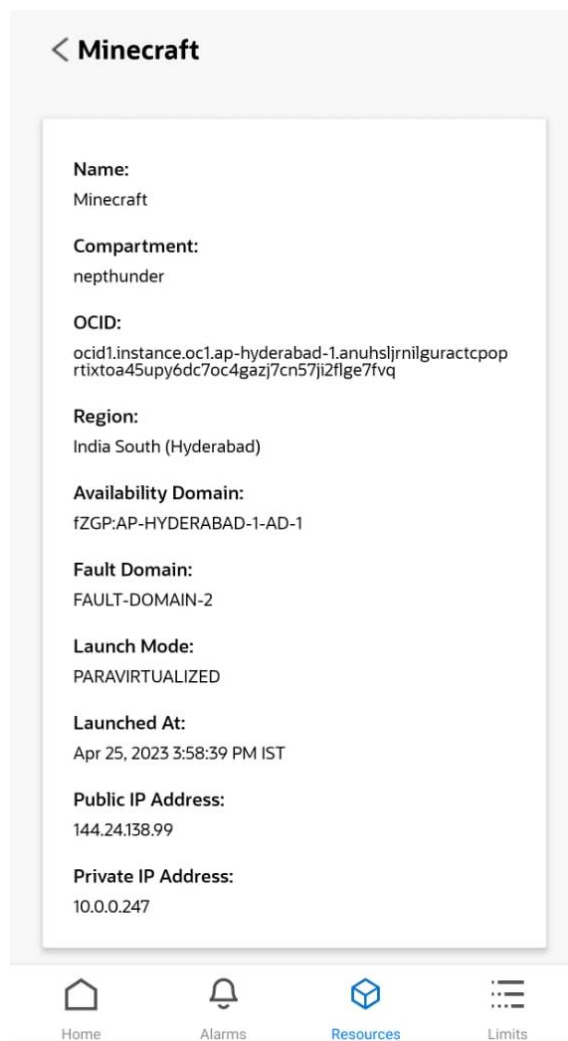
Add the ingress rule for port 80. Do the same process for port 443.

Step 5: Update Oracle iptables

On the server terminal via SSH, run the following commands one-by-one:

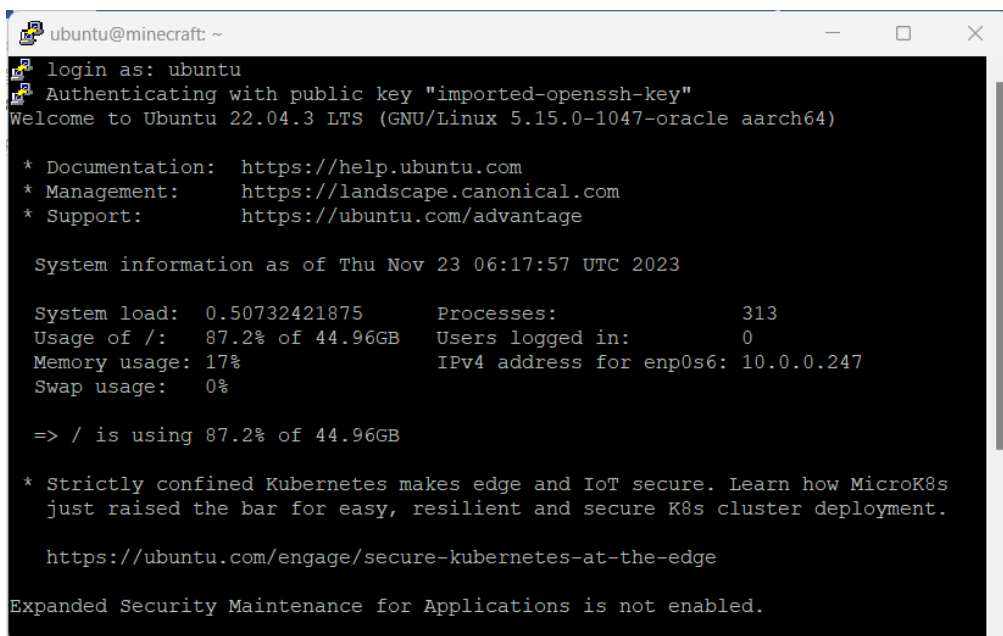
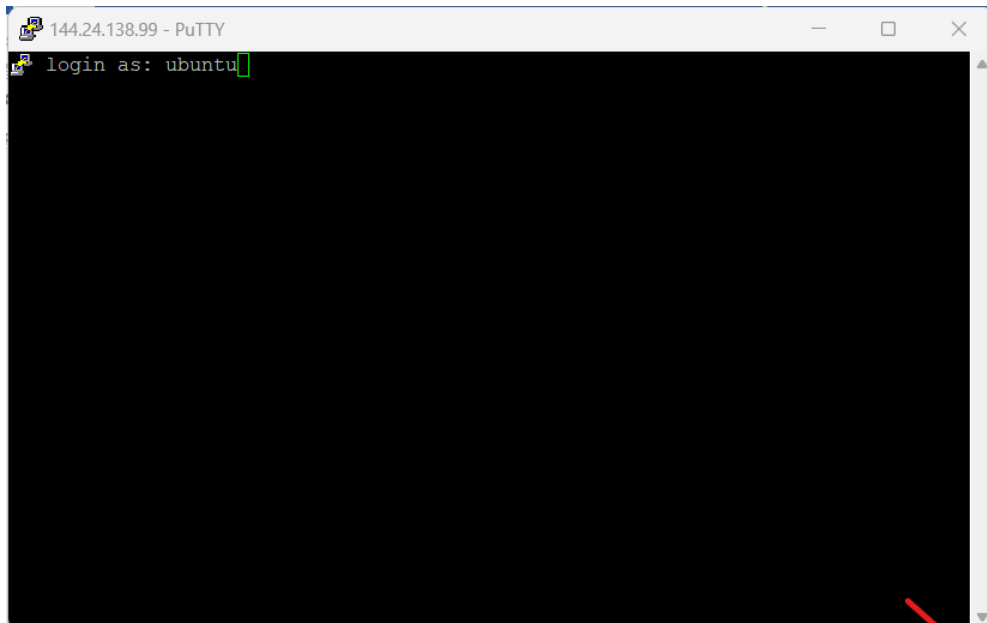
1. `sudo iptables -I INPUT 6 -m state --state NEW -p tcp --dport 443 -j ACCEPT`
2. `sudo iptables -I INPUT 6 -m state --state NEW -p tcp --dport 80 -j ACCEPT`
3. `sudo netfilter-persistent save`

VPS Server Details Screenshot:



Running sample Program on Linux Instance

Step 1: Login to the server through PuTTY software using ssh key



Step 2: Go to the Minecraft directory

```
ubuntu@minecraft: ~  
Usage of /: 87.2% of 44.96GB  Users logged in: 0  
Memory usage: 17%          IPv4 address for enp0s6: 10.0.0.247  
Swap usage: 0%  
  
=> / is using 87.2% of 44.96GB  
  
* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s  
just raised the bar for easy, resilient and secure K8s cluster deployment.  
  
https://ubuntu.com/engage/secure-kubernetes-at-the-edge  
  
Expanded Security Maintenance for Applications is not enabled.  
  
42 updates can be applied immediately.  
1 of these updates is a standard security update.  
To see these additional updates run: apt list --upgradable  
  
3 additional security updates can be applied with ESM Apps.  
Learn more about enabling ESM Apps service at https://ubuntu.com/esm  
  
*** System restart required ***  
Last login: Tue Nov 21 04:30:41 2023 from 152.58.209.98  
ubuntu@minecraft:~$ cd minecraft
```

Run 'ls' command to list the files inside the Minecraft directory

```
ubuntu@minecraft: ~/minecraft  
  
https://ubuntu.com/engage/secure-kubernetes-at-the-edge  
  
Expanded Security Maintenance for Applications is not enabled.  
  
42 updates can be applied immediately.  
1 of these updates is a standard security update.  
To see these additional updates run: apt list --upgradable  
  
3 additional security updates can be applied with ESM Apps.  
Learn more about enabling ESM Apps service at https://ubuntu.com/esm  
  
*** System restart required ***  
Last login: Tue Nov 21 04:30:41 2023 from 152.58.209.98  
ubuntu@minecraft:~$ cd minecraft  
ubuntu@minecraft:~/minecraft$ ls  
banned-ips.json      journeymap      run.sh          world  
banned-players.json libraries       server.properties world.zip  
config              logs           user_jvm_args.txt world1  
defaultconfigs      mods          usercache.json  
eula.txt            ops.json       usernamecache.json  
forge_installer.jar.log run.bat        whitelist.json  
ubuntu@minecraft:~/minecraft$
```

Step 6: Run './run.sh' command to initiate the server

```

06:21:42 [main/INFO] [minecraft] [pack?]: Dispatching Module Step LOAD_COMPLETE
06:21:43 [Forge Version Check/INFO] [ne.mi.fm.VersionChecker/]: [forge] Found status: OUTDATED Current: 43.2.0 Target: 43.3.0
06:21:43 [Forge Version Check/INFO] [ne.mi.fm.VersionChecker/]: [gravestone] Starting version check at https://maxhenkel.de/update/gravestone.json
06:21:44 [main/INFO] [mojang/TypeSafeAuthenticationService/]: Environment: authHost="https://authserver.mojang.com", accountsHost="https://api.mojang.com", sessionHost="https://sessionserver.mojang.com", servicesHost="https://api.minecraftservices.com", name="1200"
06:21:44 [Forge Version Check/INFO] [ne.mi.fm.VersionChecker/]: [gravestone] Found status: UP TO DATE Current: 1.19.2-0.1 Target: null
06:21:44 [Forge Version Check/INFO] [ne.mi.fm.VersionChecker/]: [journeymap] Starting version check at https://forge.curseupdate.com/32274/journeymap
06:21:45 [Forge Version Check/INFO] [ne.mi.fm.VersionChecker/]: [journeymap] Found status: OUTDATED Current: 9.9.0 Latest Target: 9.9.5
06:21:46 [main/WARN] [minecraft/VanillaPackResources/]: Assets URL 'union/home/ubuntu/minecraft/libraries/net/minecraft/server/1.19.2-20220805.130853/server-1.19.2-20220805.130853-arg.jar'
06:21:49/assets/mcassetsroot' uses unexpected schema
06:21:46 [main/WARN] [minecraft/VanillaPackResources/]: Assets URL 'union/home/ubuntu/minecraft/libraries/net/minecraft/server/1.19.2-20220805.130853/server-1.19.2-20220805.130853-arg.jar'
06:21:49/data/mcassetsroot' uses unexpected schema
06:21:48 [main/INFO] [minecraft/RecipeManager/]: Loaded 7 recipes
06:21:48 [main/INFO] [pack?]: [Automatic Recipe Unlock] Received 1166 recipe advancements
06:21:49 [main/INFO] [minecraft/AdvancementList/]: Loaded 103 advancements
06:21:49 [Server thread/INFO] [minecraft/DedicatedServer/]: Starting minecraft server version 1.19.2
06:21:49 [Server thread/INFO] [minecraft/DedicatedServer/]: Loading properties
06:21:49 [Server thread/INFO] [minecraft/DedicatedServer/]: Default game type: SURVIVAL
06:21:49 [Server thread/INFO] [minecraft/MinecraftServer/]: Generating keypair
06:21:50 [Server thread/INFO] [minecraft/MinecraftServer/]: Starting Minecraft server on *:25565
06:21:50 [Server thread/INFO] [minecraft/ServerConnectionListeners/]: Using epoll channel type
06:21:50 [Server thread/WARN] [minecraft/DedicatedServer/]: *** SERVER IS RUNNING IN OFFLINE/INSECURE MODE!
06:21:50 [Server thread/WARN] [minecraft/DedicatedServer/]: The server will make no attempt to authenticate usernames. Beware.
06:21:50 [Server thread/WARN] [minecraft/DedicatedServer/]: While this makes the game possible to play without internet access, it also opens up the ability for hackers to connect with any
username they choose.
06:21:50 [Server thread/WARN] [minecraft/DedicatedServer/]: To change this, set "online-mode" to "true" in the server.properties file.
06:21:50 [Server thread/INFO] [journeymap/]: Loading JourneyMap Forge Configs
06:21:51 [Server thread/INFO] [minecraft/DedicatedServer/]: Preparing level "world"
06:21:51 [Server thread/INFO] [minecraft/DedicatedServer/]: Preparing start region for dimension minecraft:overworld
06:21:56 [Worker-Main-2/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
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06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-1/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 0%
06:21:56 [Worker-Main-2/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 36%
06:21:57 [Worker-Main-2/INFO] [minecraft/LoggerChunkProgressListener/]: Preparing spawn area: 49%
06:21:57 [Server thread/WARN] [ne.mi.co.vo.ForgeChunkManager/]: Found chunk loading data for mod mekanism which is currently not available or active - it will be removed from the level as
we
06:21:57 [Server thread/INFO] [minecraft/LoggerChunkProgressListener/]: Time elapsed: 6594 ms
06:21:57 [Server thread/INFO] [minecraft/DedicatedServer/]: Done (7.521s) for help, type "help"
06:21:57 [Server thread/INFO] [ne.mi.se.pe.PermissionAPI/]: Successfully initialized permission handler forge:default_handler

```

Once, the server is completely initiated, the server is ready to be joined through public ip address.

GitHub Link.

The Gaming Server is accessible through ip address: 144.24.138.99. Alternatively, the server is accessible through DNS: 'suscookies.ddns.net'. The server is not a vanilla version i.e. it contains mod files which are necessary to have in the mods folder of the Minecraft software to join the gaming server. The mods files can be found in the GitHub repo. from the following link: [NepThunder/ModFiles \(github.com\)](https://github.com/NepThunder/ModFiles)

Gaming server information:

Minecraft version: Forge 1.19.2

RAM: 24 GB

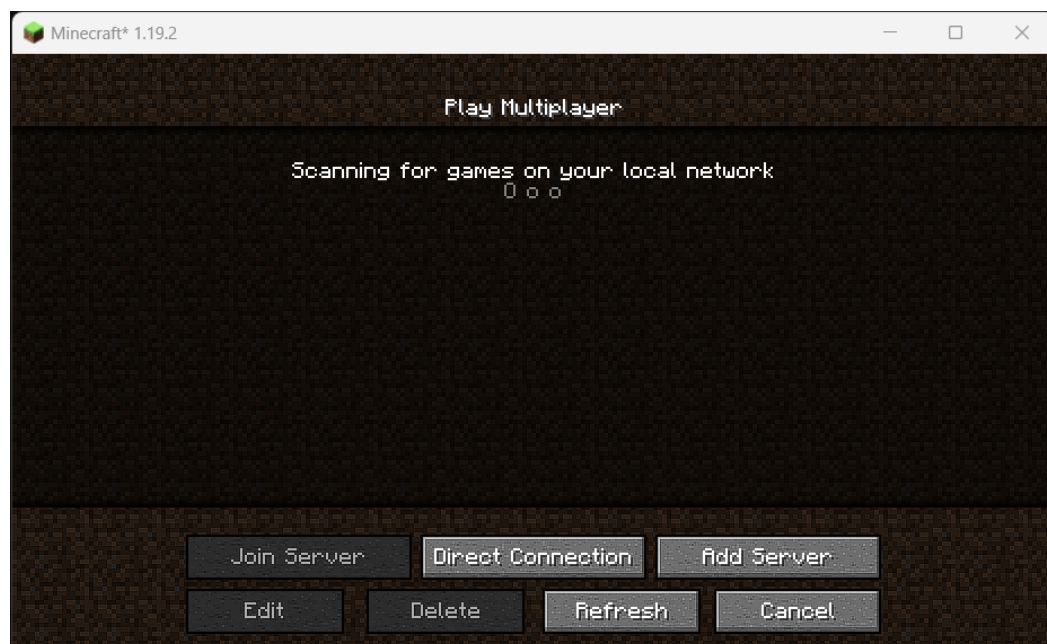
Storage: 200 GB

Access: Public

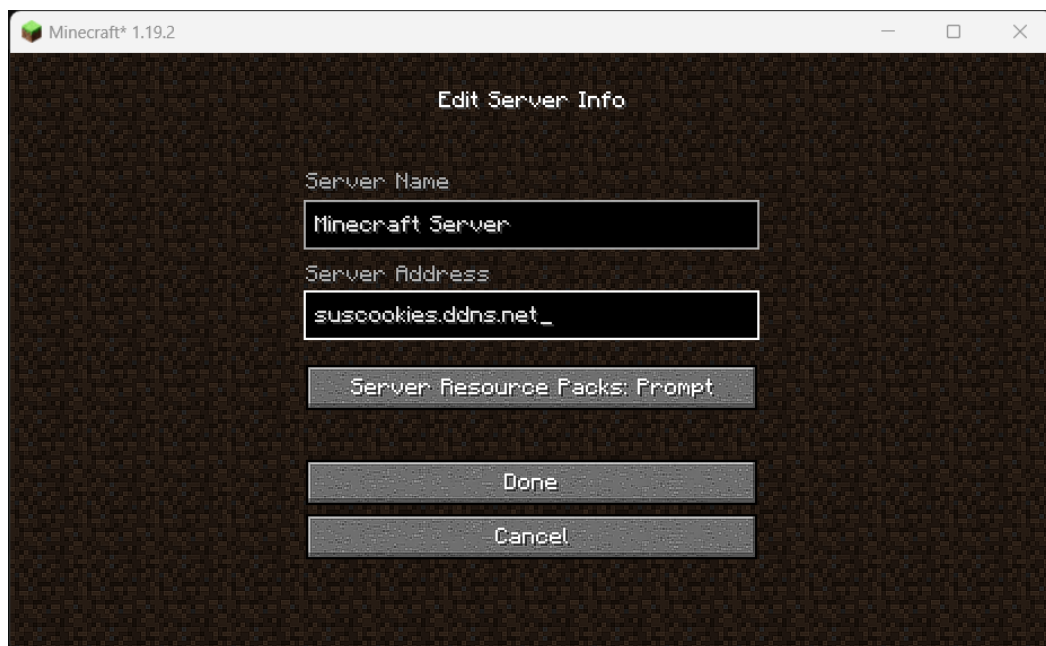
Mods: [NepThunder/ModFiles \(github.com\)](https://github.com/NepThunder/ModFiles)

Step 1: Open the Minecraft software and go to Multiplayer mode.

You will be presented with the following screen.



Step 2: Click on the Add Server Button.



Enter the server ip address or dns: 144.24.138.99 or suscookies.ddns.net

Click on Done.

Step 3: Double click on the server to join.



Note: I was spawned at the last location where I logged out from.

