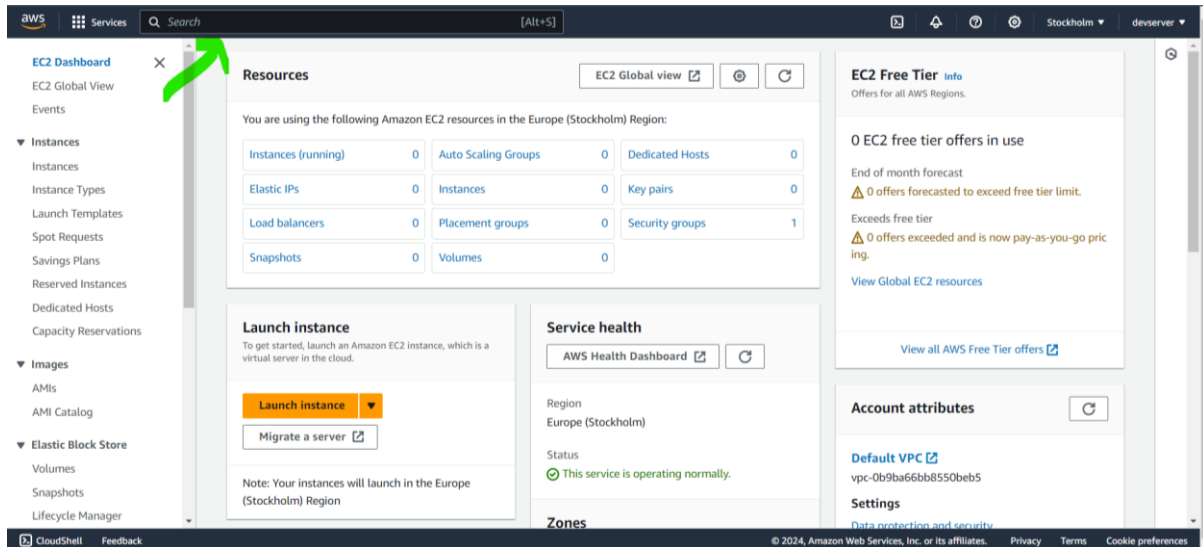


Minecraft Serve Guide

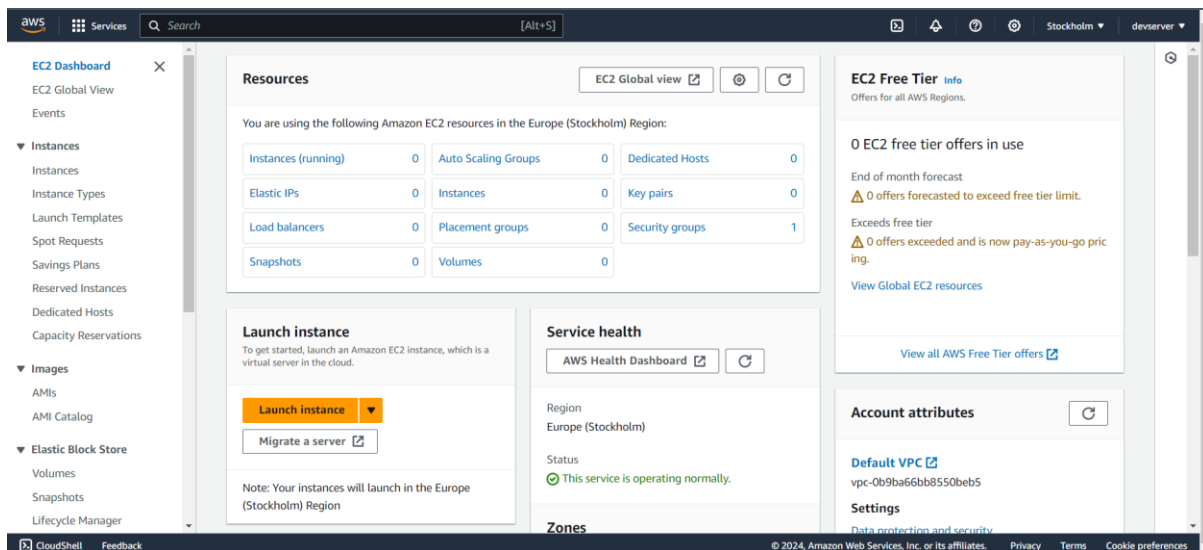
Here is a simply guide to create aws server that will host a Mine Craft server. In this case we will be using aws free tire EC2 server. It's like aws own version on Linux. So let get into it.

Creating a Mine Craft Serve

First thing that we want to do is create aws account, once your account is setup in the search box search for "EC2".



Once the search is complete you will come across this page, fill in the server detail on this page as regard the spec of the server that you want on your server.



In the process also create a pair key, this a important part as you will need this pair key to connect to the serve.

Devon Holmes

On-Demand Linux base pricing: 0.0432 USD per Hour
On-Demand Windows base pricing: 0.0616 USD per Hour
On-Demand SUSE base pricing: 0.0995 USD per Hour
Additional costs apply for AMIs with pre-installed software

[Compare instance types](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required
devmine.server [Create new key pair](#)

▼ Network settings [Info](#) [Edit](#)

Network [Info](#)
vpc-0b9ba66bb8550beb5

Subnet [Info](#)
No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)
Enable

▼ Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0249211c9916306f8

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which)

[Cancel](#) [Launch instance](#) [Review commands](#)

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Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name
devs.server.mine [Add additional tags](#)

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

[Quick Start](#)

▼ Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0249211c9916306f8

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which)

[Cancel](#) [Launch instance](#) [Review commands](#)

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After all the spec have been entered in, you can now click “Launch” to start up the server.

EC2 Dashboard [×](#)

EC2 Global view [↗](#) [🔄](#)

Resources

You are using the following Amazon EC2 resources in the Europe (Stockholm) Region:

| | | | | | |
|---------------------|---|---------------------|---|-----------------|---|
| Instances (running) | 0 | Auto Scaling Groups | 0 | Dedicated Hosts | 0 |
| Elastic IPs | 0 | Instances | 0 | Key pairs | 0 |
| Load balancers | 0 | Placement groups | 0 | Security groups | 1 |
| Snapshots | 0 | Volumes | 0 | | |

Launch instance
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

[Launch instance](#) [Manage a server](#)

Note: Your instances will launch in the Europe (Stockholm) Region

Service health
[AWS Health Dashboard](#) [🔄](#)

Region
Europe (Stockholm)

Status
🟢 This service is operating normally.

Zones

EC2 Free Tier [Info](#)
Offers for all AWS Regions.

0 EC2 free tier offers in use

End of month forecast
⚠️ 0 offers forecasted to exceed free tier limit.

Exceeds free tier
⚠️ 0 offers exceeded and is now pay-as-you-go pricing.

[View Global EC2 resources](#)

[View all AWS Free Tier offers](#)

Account attributes [🔄](#)

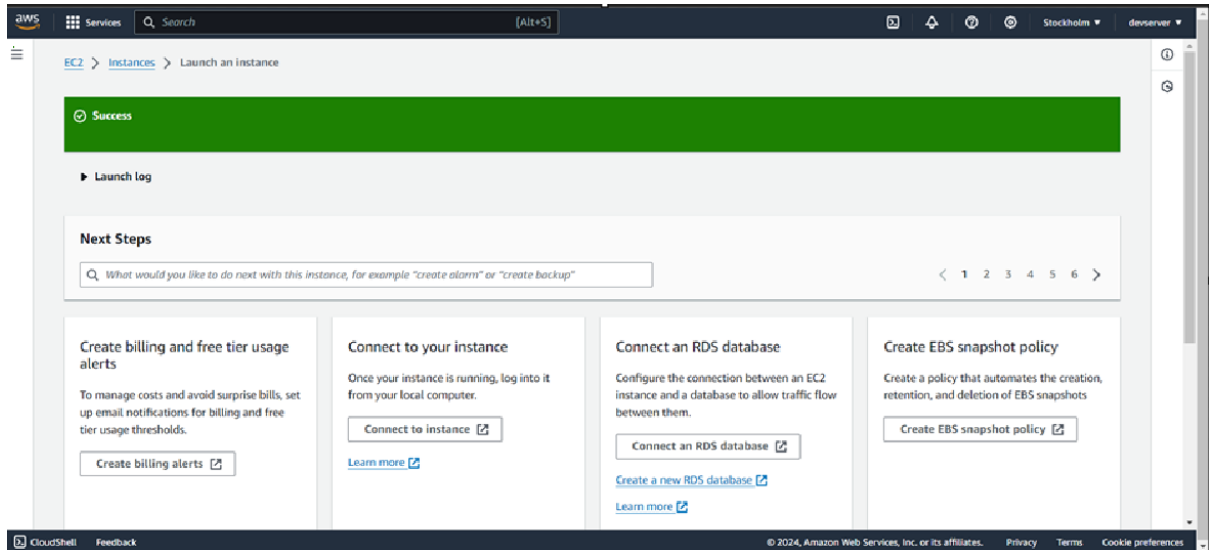
[Default VPC](#)
vpc-0b9ba66bb8550beb5

Settings
[Data protection and security](#)

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Once you hit the Launch button it will create the server which will atomically start running. When you launch your server your pair key will also atomically download, take this pair key and insert in the file on your desktop that you will create called "Minecraft Server".



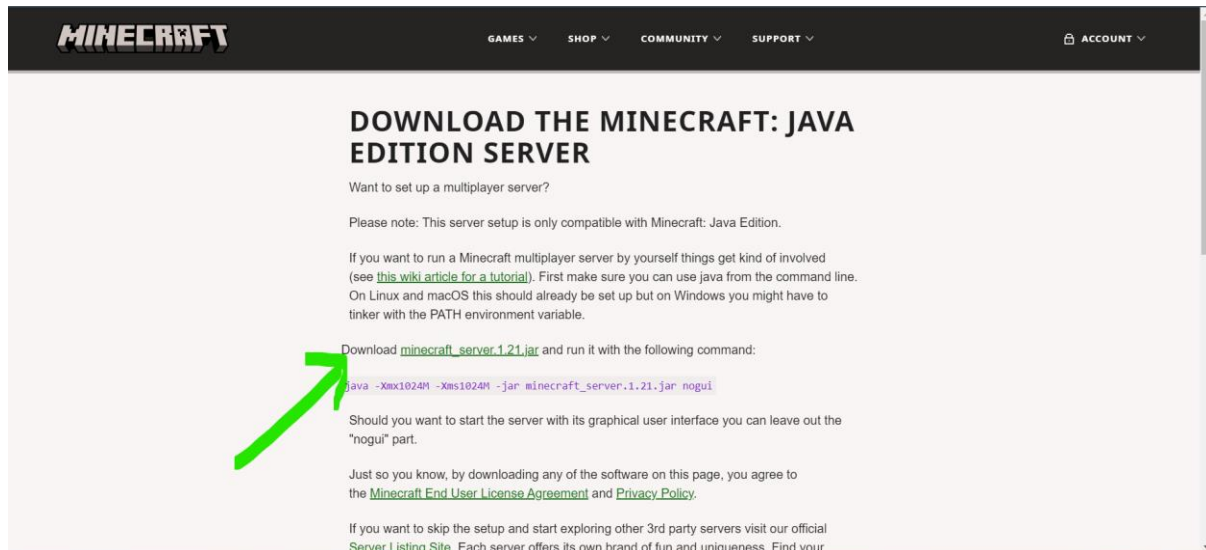
Devon Holmes

The Mine Craft side of things.

Now go to your browser and search for the mine craft server. Or use the link provided.

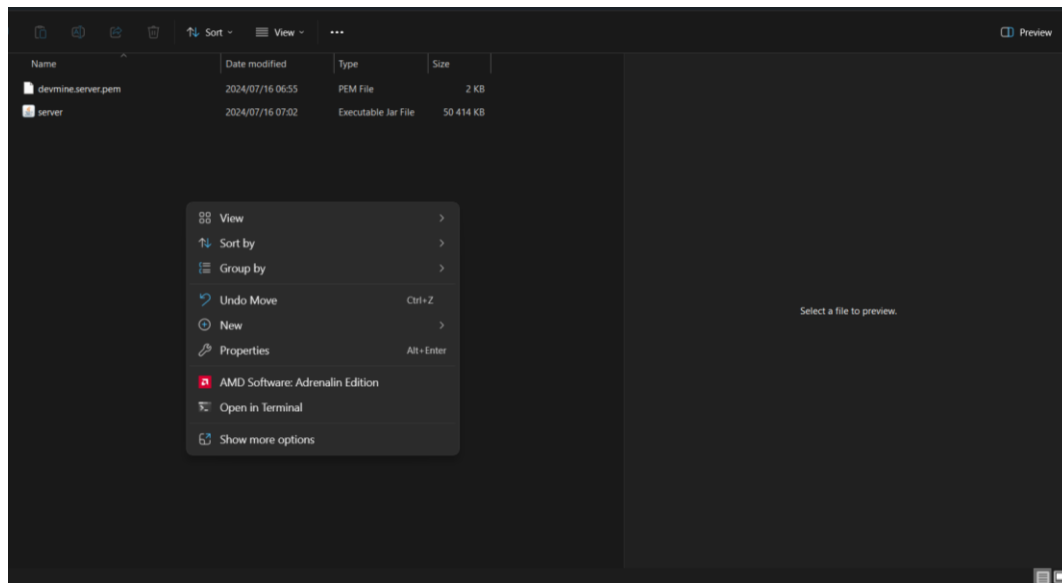
Once there download the minecraft server “minecraft Server 1.21.jar”

<https://www.minecraft.net/en-us/download/server>



Then take the download mine craft server file and paste in the MineCraft Server. File on your desktop.

Then from there, open the cmd. Or open the file in the terminal, like this. You can do this by just right clicking in the file explore and click on “Open in Terminal”.

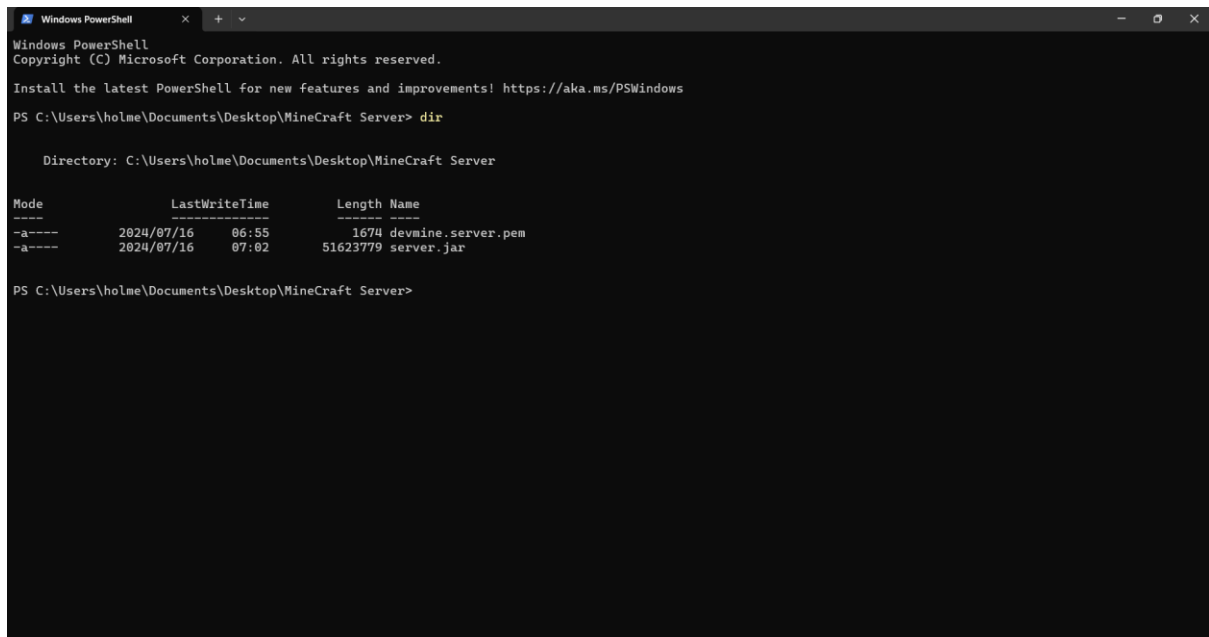


Devon Holmes

When in the terminal, perform the following command.

Command: dir

To see all the file in that folder of which you will see the following.



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\holme\Documents\Desktop\MineCraft Server> dir

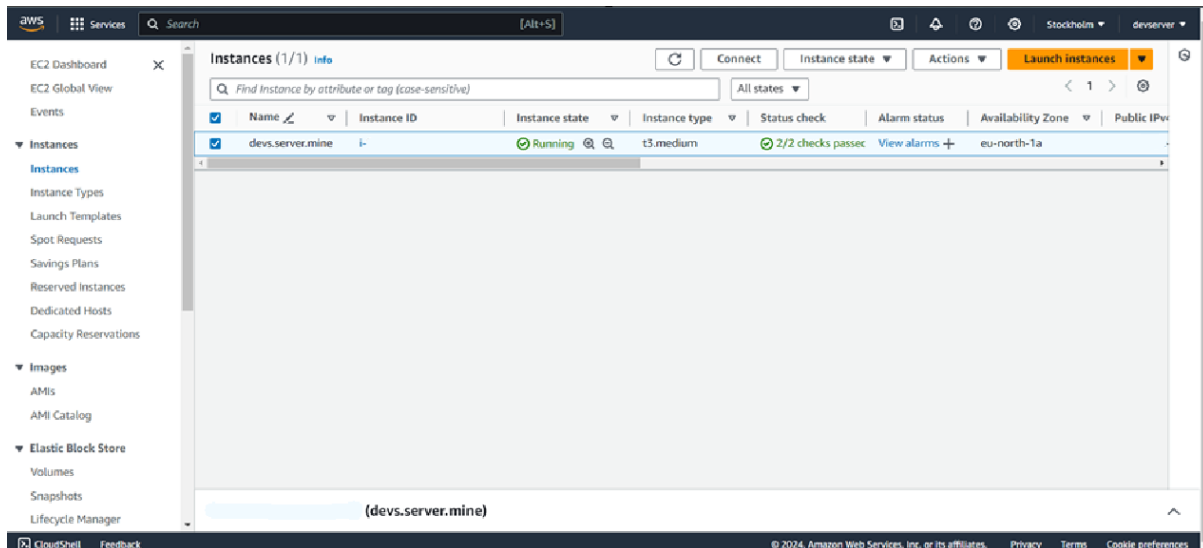
    Directory: C:\Users\holme\Documents\Desktop\MineCraft Server

Mode                LastWriteTime         Length Name
----                -
-a-----         2024/07/16    06:55           1674 devmine.server.pem
-a-----         2024/07/16    07:02       51623779 server.jar

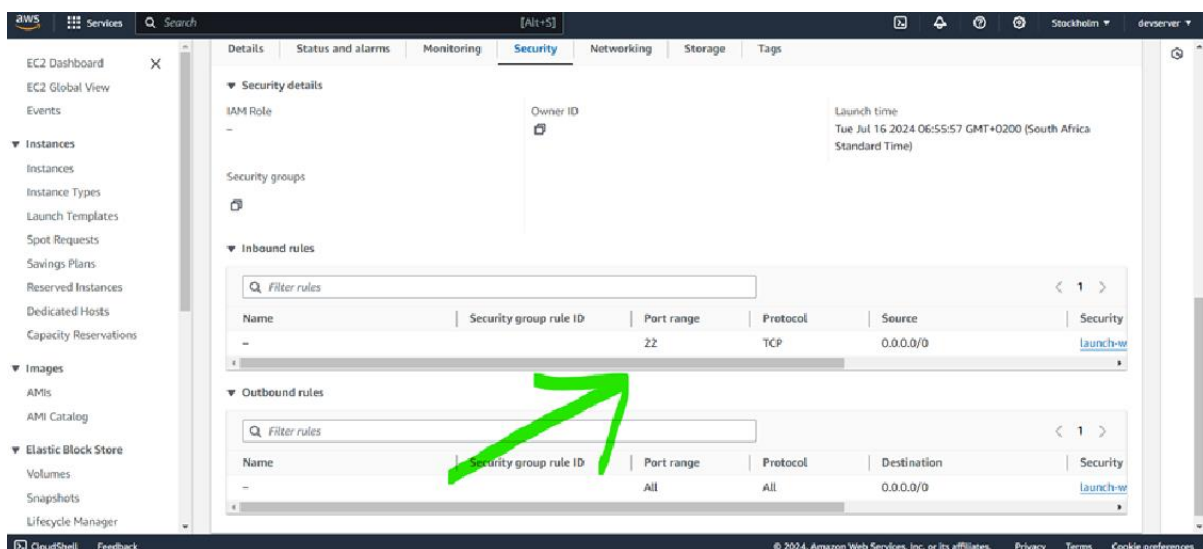
PS C:\Users\holme\Documents\Desktop\MineCraft Server>
```

Devon Holmes

Now we head back to the server on the AWS dashboard where we will see the following. Our server is running.

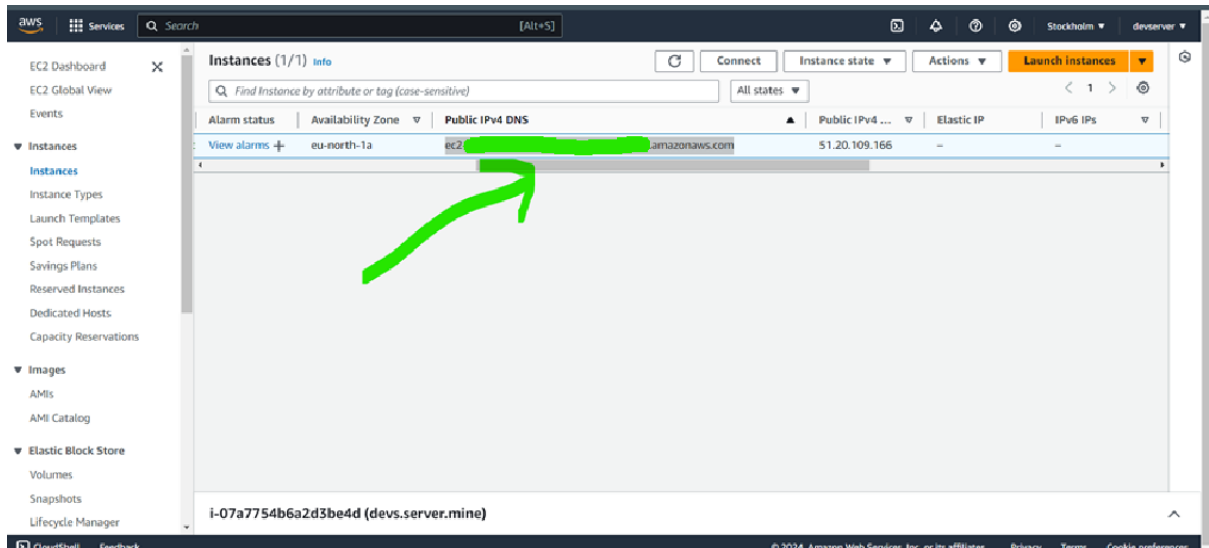


Then to make sure our server connection detail we go to the "Security" tab to find the IP address and the port number. Important for our remote connection.



Devon Holmes

Here the address that we are interested in is the IP DNS IPv4 information of which we copy.



There after go to our windows terminal and ssh it using this command here.

Command: `ssh -i .\devmine.server.pem ec2-user@#####.amazonaws.com` (your own link)

Followed by tab to complete the name. (CMD is so powerful that if you just type in only the first part of the name and then click the "tab" key it will auto complete.)

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\holme\Documents\Desktop\MineCraft Server> dir

Directory: C:\Users\holme\Documents\Desktop\MineCraft Server

Mode                LastWriteTime         Length Name
----                -
-a-----         2024/07/16   06:55         1674 devmine.server.pem
-a-----         2024/07/16   07:02       51623779 server.jar

PS C:\Users\holme\Documents\Desktop\MineCraft Server> ssh -i .\devmine.server.pem ec2-user@ec2-51-20-109-166.eu-north-1.compute.amazonaws.com
The authenticity of host 'ec2-51-20-109-166.eu-north-1.compute.amazonaws.com (51.20.109.166)' can't be established.
ED25519 key fingerprint is SHA256:wBj+3f5JEVIXmmIh6Ur1Dwh2VuuXFp6VijqLFi5PvkE.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? |
```

Devon Holmes

Tip: This same command can be used to reconnect you back to the server each time the connection goes out.

Tip: Use the right click on the mouse to insert copied text.

Congratulation your server is running and can be accessed. This you can see once see the wired looking terminal bird.

```

ec2-user@ip-172-31-23-48:~
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\holme\Documents\Desktop\MineCraft Server> dir

Directory: C:\Users\holme\Documents\Desktop\MineCraft Server

Mode                LastWriteTime         Length Name
----                -
-a----             2024/07/16      06:55          1674 devmine.server.pem
-a----             2024/07/16      07:02        51623779 server.jar

PS C:\Users\holme\Documents\Desktop\MineCraft Server> ssh -i .\devmine.server.pem ec2-user@ec2-51-20-109-166.eu-north-1.compute.amazonaws.com
The authenticity of host 'ec2-51-20-109-166.eu-north-1.compute.amazonaws.com (51.20.109.166)' can't be established.
ED25519 key fingerprint is SHA256:wBj+3f5JEVIXmmIh6Ur1Dwh2VuuXFp6VijqlFI5PvkE.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added 'ec2-51-20-109-166.eu-north-1.compute.amazonaws.com' (ED25519) to the list of known hosts.
Connection closed by 51.20.109.166 port 22
PS C:\Users\holme\Documents\Desktop\MineCraft Server> ssh -i .\devmine.server.pem ec2-user@ec2-51-20-109-166.eu-north-1.compute.amazonaws.com

#_
~\  ####_      Amazon Linux 2023
~~ \#####\
~~  \###|
~~  \#/  _--
~~  V~'  '-> https://aws.amazon.com/linux/amazon-linux-2023
~~~
~~~.  _  /
~~  _/  _/
~~  _/m/'

[ec2-user@ip-172-31-23-48 ~]$

```

Know time to create the folder or directory. We do this by using this command.

```
PS C:\Users\holme\Documents\Desktop\MineCraft Server> ssh -i .\devmine.server.pem ec2-user@ec2-51-20-109-166.eu-north-1.compute.amazonaws.com
```

```
#_
~\_ ##### Amazon Linux 2023
~~ \_#####\
~~ \###|
~~ \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
~~ V~' '->
    ~~~
      ~~-._.-/_-/
        _/_/'
```

```
Last login: Tue Jul 16 05:55:24 2024 from 41.145.195.247
[ec2-user@ip-172-31-23-48 ~]$ mkdir minecraft-server
[ec2-user@ip-172-31-23-48 ~]$ ls
minecraft-server
[ec2-user@ip-172-31-23-48 ~]$
```

Command: `sudo yum install java-1.8.0`

```
#_
~\#####-      Amazon Linux 2023
~~~\#####\
~~~~\###|
~~~~\#/----- https://aws.amazon.com/linux/amazon-linux-2023
~~~~V~' '->
~~~~~
~~~~_. _ 
~-/_ -/_ /
~/m/'
```

Last login: Tue Jul 16 05:55:24 2024 from 41.145.195.247
[ec2-user@ip-172-31-23-48 ~]\$ mkdir minecraft-server
[ec2-user@ip-172-31-23-48 ~]\$ ls
minecraft-server
[ec2-user@ip-172-31-23-48 ~]\$ sudo yum install java-1.8.0

Java is known installed.

```
ec2-user@ip-172-31-23-48:~  
libepoxy-1.5.9-1.amzn2023.0.2.x86_64  
libglvnd-1:1.3.4-1.amzn2023.0.2.x86_64  
libglvnd-glx-1:1.3.4-1.amzn2023.0.2.x86_64  
libgusb-0.3.8-1.amzn2023.0.2.x86_64  
libicu-67.1-7.amzn2023.0.3.x86_64  
libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64  
libpciaccess-0.16-4.amzn2023.0.2.x86_64  
libpng-2:1.6.37-10.amzn2023.0.6.x86_64  
libproxy-0.4.15-30.amzn2023.0.5.x86_64  
libsoup-2.72.0-6.amzn2023.0.2.x86_64  
libstemmer-0-16.585svn.amzn2023.0.2.x86_64  
libthai-0.1.28-6.amzn2023.0.2.x86_64  
libtiff-4.4.0-4.amzn2023.0.18.x86_64  
libtracker-sparql-3.1.2-1.amzn2023.0.2.x86_64  
libusbx-1.0.24-2.amzn2023.0.2.x86_64  
libwayland-client-1.22.0-1.amzn2023.0.2.x86_64  
libwayland-cursor-1.22.0-1.amzn2023.0.2.x86_64  
libwayland-egl-1.22.0-1.amzn2023.0.2.x86_64  
libwebp-1.2.4-1.amzn2023.0.6.x86_64  
libxcb-1.13.1-7.amzn2023.0.2.x86_64  
libxkbcommon-1.3.0-1.amzn2023.0.2.x86_64  
libxshmfence-1.3-8.amzn2023.0.2.x86_64  
llvm-libs-15.0.7-3.amzn2023.0.1.x86_64  
mesa-dri-drivers-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-filesystem-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-libGL-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-libglapi-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-va-drivers-22.3.3-1140.amzn2023.0.3.x86_64  
pango-1.48.10-1.amzn2023.0.3.x86_64  
pixman-0.40.0-3.amzn2023.0.3.x86_64  
shared-mime-info-2.2-2.amzn2023.0.1.x86_64  
tracker-3.1.2-1.amzn2023.0.2.x86_64  
xkeyboard-config-2.33-1.amzn2023.0.2.noarch  
xml-common-0.6.3-56.amzn2023.0.2.noarch  
  
Complete!  
[ec2-user@ip-172-31-23-48 ~]$ java -version  
openjdk version "1.8.0_412"  
OpenJDK Runtime Environment Corretto-8.412.08.1 (build 1.8.0_412-b08)  
OpenJDK 64-Bit Server VM Corretto-8.412.08.1 (build 25.412-b08, mixed mode)  
[ec2-user@ip-172-31-23-48 ~]$
```

Now we open a new terminal and there we insert a command to transfer of server mine craft server to the EC2 desktop. To do this use the following command.

Wait for the upload to complete.

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\holme\Documents\Desktop\MineCraft Server> -i .\devmine.server.pem server.jar ec2-user@ec2-51-20-109-166.eu-n
orth-1.compute.amazonaws.com:/home/ec2-user/minecraft-server
-i : The term '-i' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ -i .\devmine.server.pem server.jar ec2-user@ec2-51-20-109-166.eu-nort ...
+ ~~~
+ CategoryInfo          : ObjectNotFound: (~i:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\holme\Documents\Desktop\MineCraft Server> scp -i .\devmine.server.pem server.jar ec2-user@ec2-51-20-109-166.
eu-north-1.compute.amazonaws.com:/home/ec2-user/minecraft-server
server.jar                                                    100%  49MB 117.2KB/s   07:10
PS C:\Users\holme\Documents\Desktop\MineCraft Server>
```

```
ec2-user@ip-172-31-23-48:~/ \ + v  
libxcb-1.13.1-7.amzn2023.0.2.x86_64  
libxkbcommon-1.3.0-1.amzn2023.0.2.x86_64  
libxshmfence-1.3-8.amzn2023.0.2.x86_64  
llvm-libs-15.0.7-3.amzn2023.0.1.x86_64  
mesa-dri-drivers-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-filesystem-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-libGL-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-libglapi-22.3.3-1140.amzn2023.0.3.x86_64  
mesa-vulkan-drivers-22.3.3-1140.amzn2023.0.3.x86_64  
pango-1.48.10-1.amzn2023.0.3.x86_64  
pixman-0.40.0-3.amzn2023.0.3.x86_64  
shared-mime-info-2.2-2.amzn2023.0.1.x86_64  
tracker-3.1.2-1.amzn2023.0.2.x86_64  
xkeyboard-config-2.33-1.amzn2023.0.2.noarch  
xml-common-0.6.3-56.amzn2023.0.2.noarch
```

Complete!

```
[ec2-user@ip-172-31-23-48 ~]$ java -version  
openjdk version "1.8.0_412"  
OpenJDK Runtime Environment Corretto-8.412.08.1 (build 1.8.0_412-b08)  
OpenJDK 64-Bit Server VM Corretto-8.412.08.1 (build 25.412-b08, mixed mode)
```

[ec2-user@ip-172-31-23-48 ~]\$ client_loop: send disconnect: Connection reset

```
PS C:\Users\holme\Desktop\MineCraft> ssh -i .\devmine.server.pem ec2-user@ec2-51-20-109-166.eu-north-1.compute.amazonaws.com
```

```
#_  
#####  
~~~\_#####\  
~~~~_\####|  
~~~~_\#/____>  
~~~~_\#/'--->  
~~~~_\#/'--->  
~~~~_\#/'--->  
~~~~_\#/'--->
```

Amazon Linux 2023

<https://aws.amazon.com/linux/amazon-linux-2023>

```
Last login: Tue Jul 16 06:16:22 2024 from 41.145.195.247  
[ec2-user@ip-172-31-23-48 ~]$ ls  
minecraft-server  
[ec2-user@ip-172-31-23-48 ~]$ cd minecraft-server  
[ec2-user@ip-172-31-23-48 minecraft-server]$ ls  
server.jar  
[ec2-user@ip-172-31-23-48 minecraft-server]$
```

Once the transfer is complete ls into the file and see the server is there.

Challenge

Overcome the biggest challenge to update the ec2.

Man it was a change but I finally came up with the solution.

Download the package in the terminal. Using the `wget` to download from the link.

So to install the lastest Java pack. Go to the java website and copy the x64rpm package link. So that it looks like this:

```
wget https://download.oracle.com/java/21/latest/jdk-21\_linux-aarch64\_bin.rpm
```

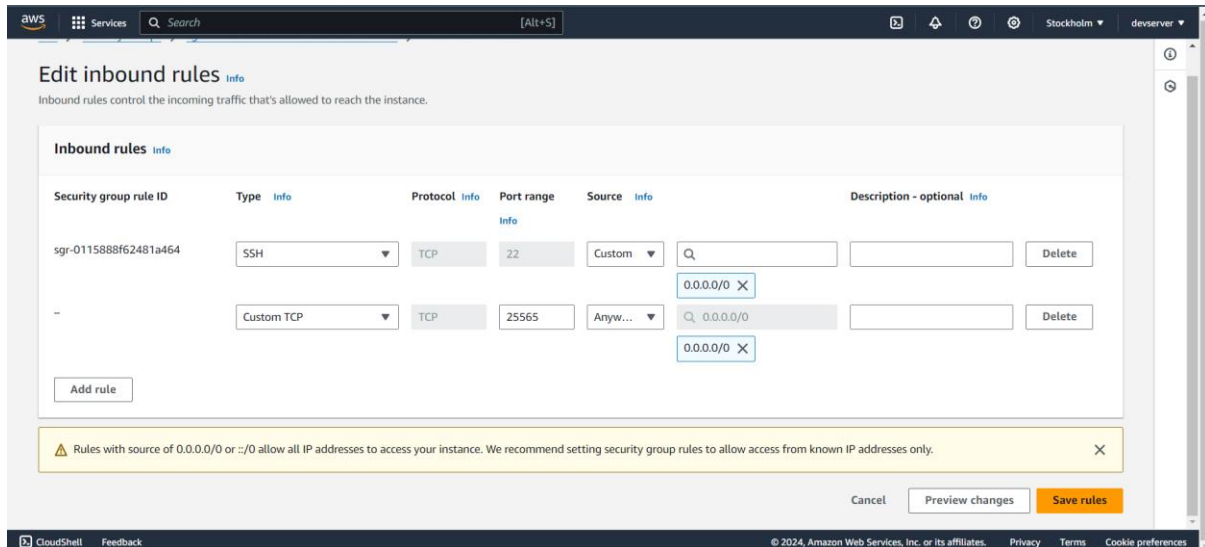
Then hit enter and then run the java file which will install the newest version of java.

Devon Holmes

Then to make the server accessible make sure to enable the server security settings. This by adding inbound rule. This we do by adding an inbound rule under security settings.

And ensure the following security settings are in places.

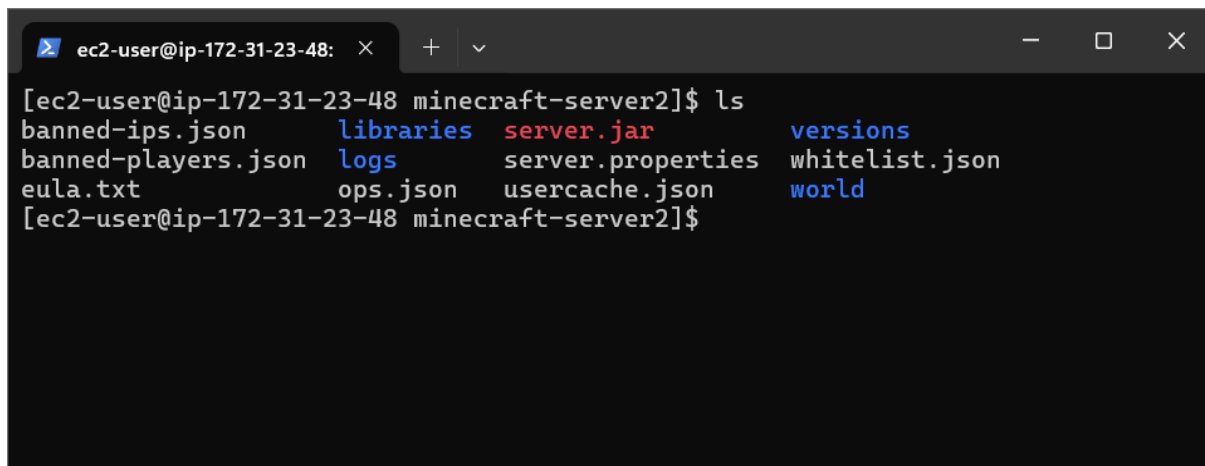
Security setting for the server



Starting the mine craft server. Go back to the windows terimal and type in the following command.

Command: `java -Xmx2G -Xms2G -jar server.jar nogui`

After which you will get an error, saying that you need to agree to the eula.txt. Then ls to see the files in the minecraft file you will see some additional file.

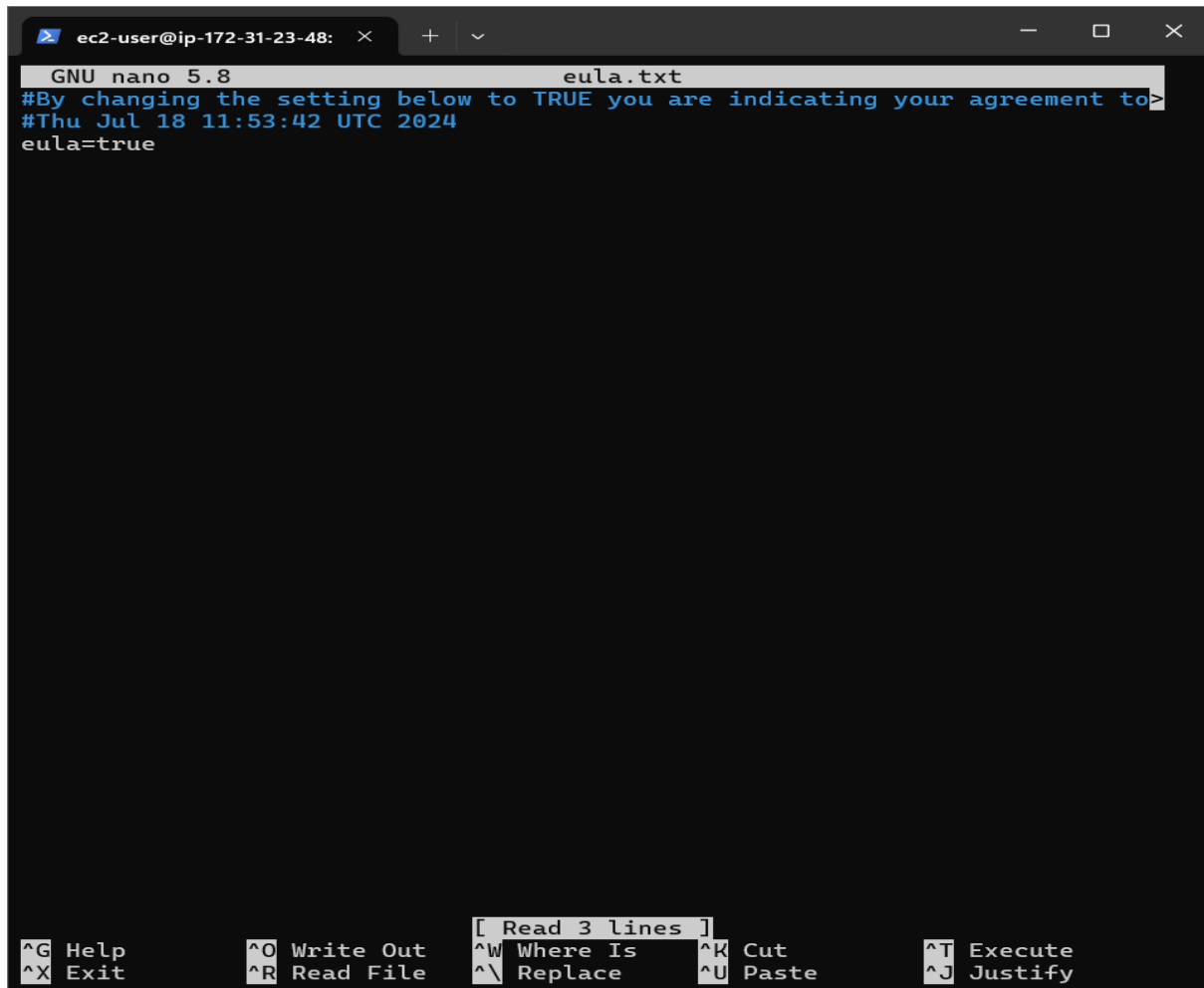


Devon Holmes

This mean that we need to agree to the terms and conditions in that file before we strata the server to do this we need to vi or nano into that file, like to use nano because it more easy to read and use. Use this command to do so.

Command: nano eula.txt

Then change the text for" false" to "true".



```
ec2-user@ip-172-31-23-48: x + v
GNU nano 5.8 eula.txt
#By changing the setting below to TRUE you are indicating your agreement to>
#Thu Jul 18 11:53:42 UTC 2024
eula=true

[ Read 3 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify
```

The press Ctrl X to exist and the y for yes.

The server should start.

Know there server is running. Well done.

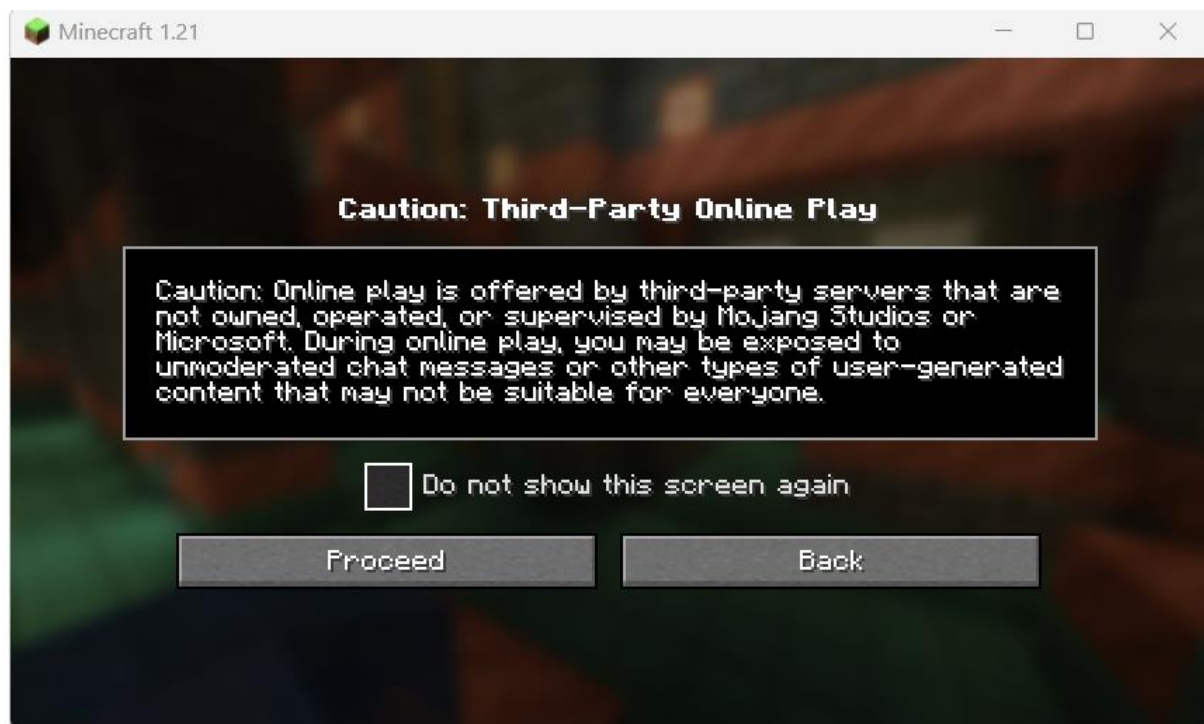
```
ec2-user@ip-172-31-23-48: x + v
[ec2-user@ip-172-31-23-48 minecraft-server2]$ ls
banned-ips.json      libraries  server.jar      versions
banned-players.json logs       server.properties whitelist.json
eula.txt             ops.json  usercache.json  world
[ec2-user@ip-172-31-23-48 minecraft-server2]$ nano eula.txt
[ec2-user@ip-172-31-23-48 minecraft-server2]$ java -Xmx2G -Xms2G -jar server
.jar nogui
Starting net.minecraft.server.Main
[07:40:40] [ServerMain/INFO]: Environment: Environment[sessionHost=https://s
essionserver.mojang.com, servicesHost=https://api.minecraftservices.com, nam
e=PROD]
[07:40:43] [ServerMain/INFO]: Loaded 1290 recipes
[07:40:44] [ServerMain/INFO]: Loaded 1399 advancements
[07:40:45] [Server thread/INFO]: Starting minecraft server version 1.21
[07:40:45] [Server thread/INFO]: Loading properties
[07:40:45] [Server thread/INFO]: Default game type: SURVIVAL
[07:40:45] [Server thread/INFO]: Generating keypair
[07:40:45] [Server thread/INFO]: Starting Minecraft server on *:25565
[07:40:45] [Server thread/INFO]: Using epoll channel type
[07:40:45] [Server thread/INFO]: Preparing level "world"
[07:40:56] [Server thread/INFO]: Preparing start region for dimension minecr
aft:overworld
[07:40:57] [Worker-Main-1/INFO]: Preparing spawn area: 0%
[07:40:57] [Worker-Main-1/INFO]: Preparing spawn area: 0%
[07:40:57] [Server thread/INFO]: Time elapsed: 944 ms
[07:40:57] [Server thread/INFO]: Done (12.248s)! For help, type "help"
```

There after go to your mine craft launcher navigate to the Java edition.

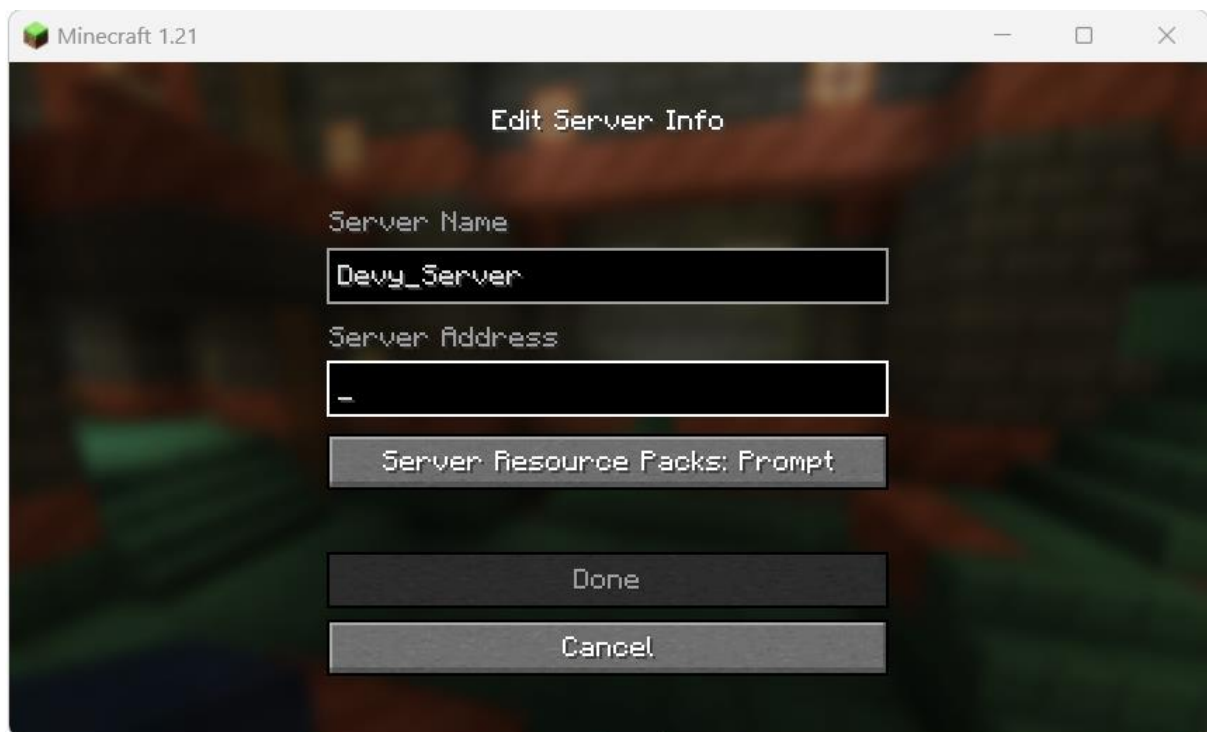


Devon Holmes

Click on multiplayer then click processes.



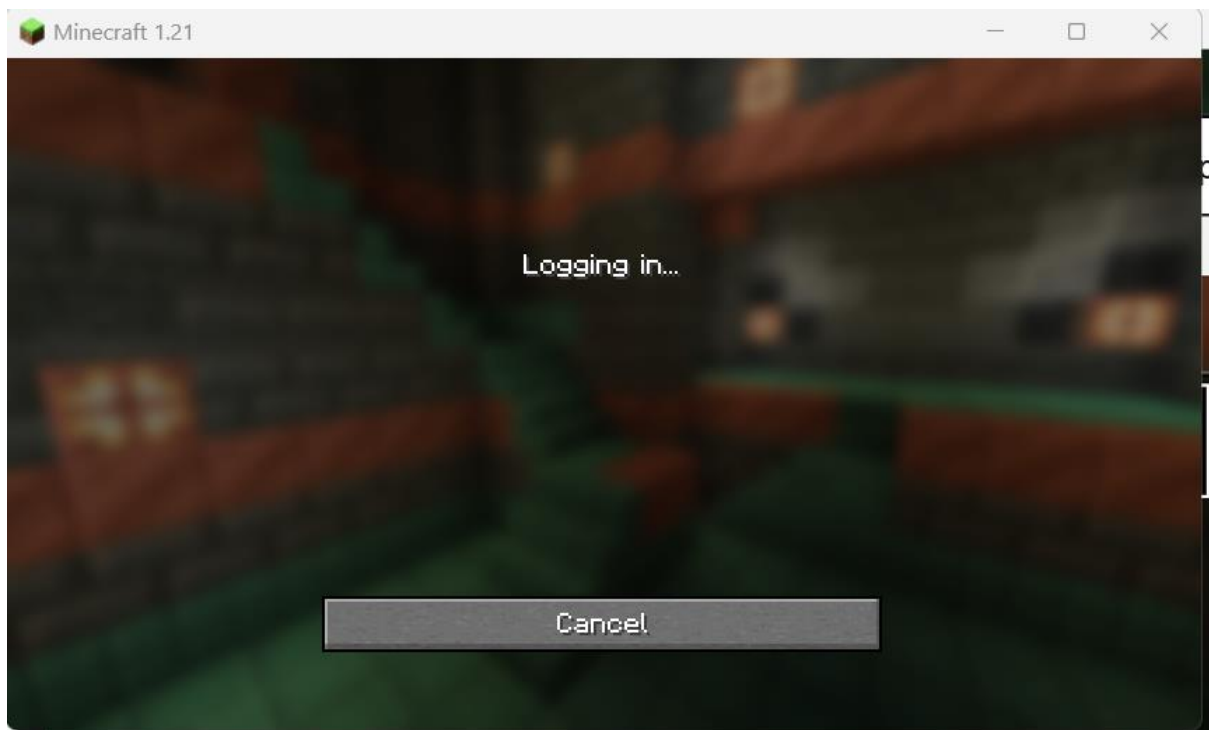
Then Name your server and add the detail of your server namely your IP address.



Know your server is online, to access your server double click on it and it will open.



See connecting to the server.



Which mean you are in the server and waiting to setup your world.

Devon Holmes

Even the server knows that you that you are logged in show in the green.

```
ec2-user@ip-172-31-23-48: x + v
[ec2-user@ip-172-31-23-48 minecraft-server2]$ ls
banned-ips.json  eula.txt  logs  server.jar  usercache.json  whitelist.json
banned-players.json  libraries  ops.json  server.properties  versions  world
[ec2-user@ip-172-31-23-48 minecraft-server2]$ java -Xmx2G -Xms2G -jar server.jar nogui
Starting net.minecraft.server.Main
[11:56:53] [ServerMain/INFO]: Environment: Environment[sessionHost=https://sessionserver.mojang.com, servicesHost=https://api.minecraftservices.com, name=PROD]
[11:56:56] [ServerMain/INFO]: Loaded 1290 recipes
[11:56:57] [ServerMain/INFO]: Loaded 1399 advancements
[11:56:57] [Server thread/INFO]: Starting minecraft server version 1.21
[11:56:57] [Server thread/INFO]: Loading properties
[11:56:57] [Server thread/INFO]: Default game type: SURVIVAL
[11:56:57] [Server thread/INFO]: Generating keypair
[11:56:58] [Server thread/INFO]: Starting Minecraft server on *:25565
[11:56:58] [Server thread/INFO]: Using epoll channel type
[11:56:58] [Server thread/INFO]: Preparing level "world"
[11:57:10] [Server thread/INFO]: Preparing start region for dimension minecraft:overworld
[11:57:10] [Worker-Main-1/INFO]: Preparing spawn area: 0%
[11:57:10] [Worker-Main-1/INFO]: Preparing spawn area: 0%
[11:57:11] [Server thread/INFO]: Time elapsed: 936 ms
[11:57:11] [Server thread/INFO]: Done (12.430s)! For help, type "help"
[11:58:55] [User Authenticator #1/INFO]: UUID of player DEvon152345 is ffbddbae-49d1-47db-8be5-d188fd6fc740
[11:59:06] [Server thread/INFO]: DEvon152345[/41.116.102.162:3143] logged in with entity id 60 at (37.54197251381376, 66.0, 598.4909330694182)
[11:59:06] [Server thread/INFO]: DEvon152345 joined the game
[11:59:13] [Server thread/WARN]: Can't keep up! Is the server overloaded? Running 2149ms or 42 ticks behind
```

And that is it. To stop the server just type "stop" then it will stop. Then to start it use the follow command again

Command: java -Xmx2G -Xms2G -jar server.jar nogui

References

For more detail on the setup please visit the following below.

<https://www.youtube.com/watch?v=Jtwu9kn6g8Y>