

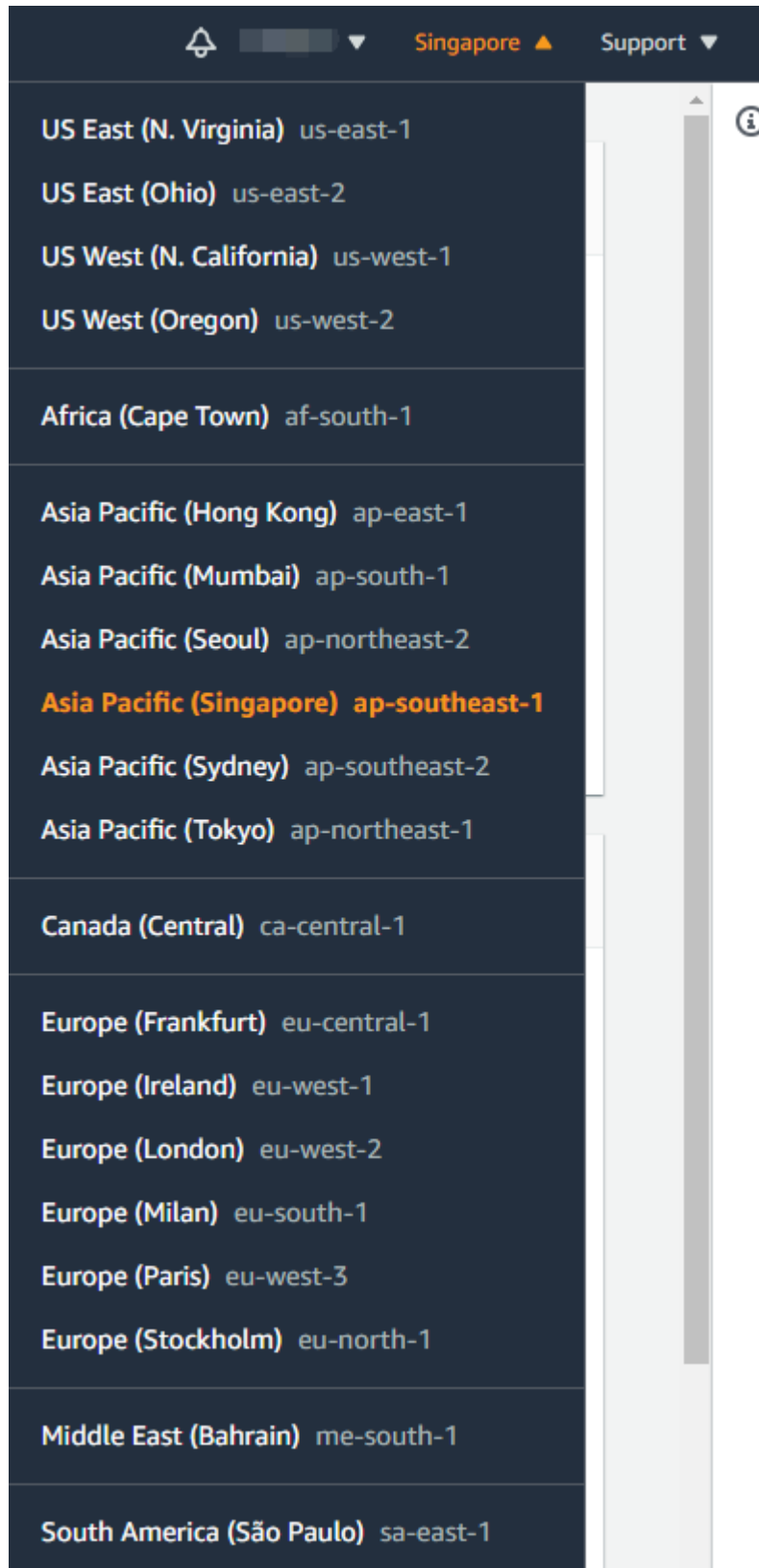
# How to Build M4 Bonding Server by AWS EC2

## For Ubuntu 18.04

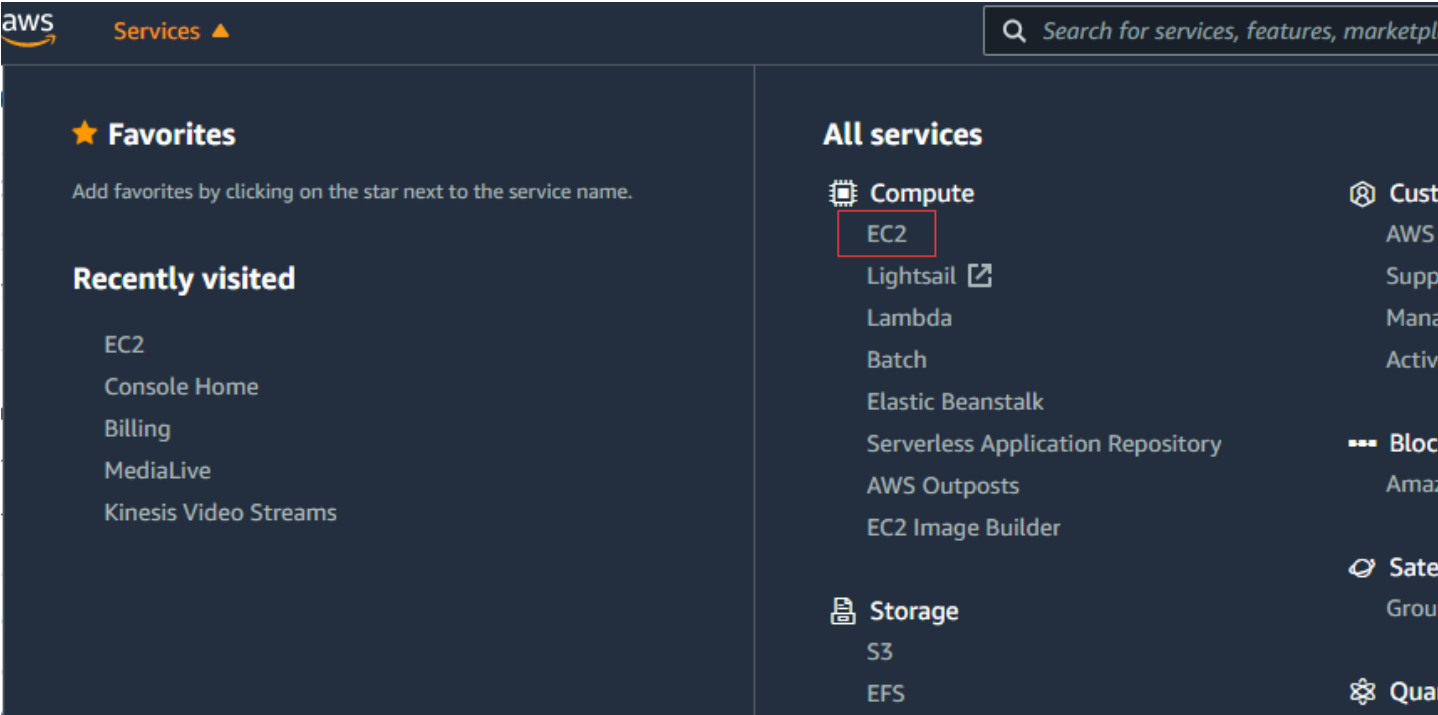
V1.2.2, May 26, 2023

1. Click <https://aws.amazon.com>, sign in and verify your account.

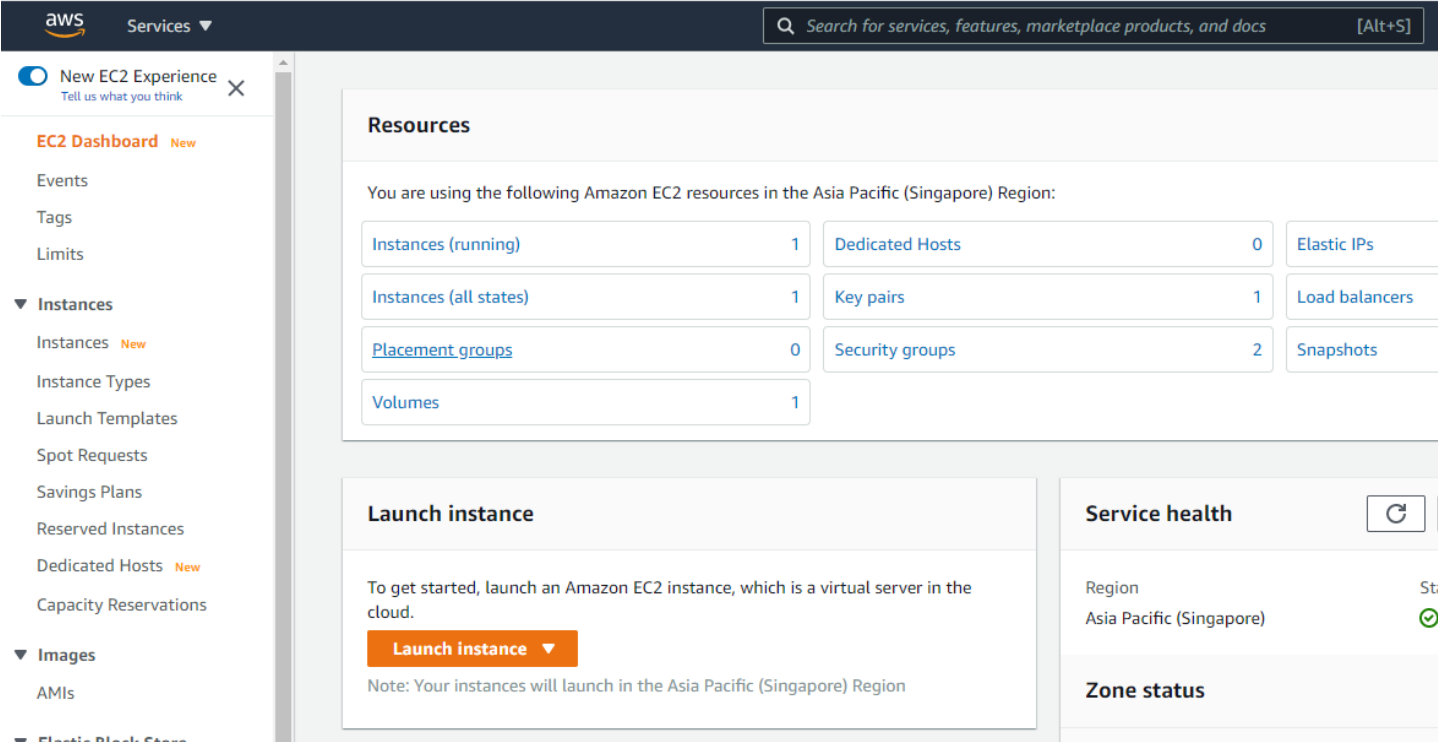
a. Select the **region** which best for you.



b. Pull down the Services, and click the EC2,



c. Launch instance



d. click the Browse more AMIs, by type **Ubuntu Server 18.04 amd64** and search it, then select the correct one,

EC2 > Instances > Launch an instance

## 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

[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

🔍 Search our full catalog including 1000s of application and OS images

Recents
Quick Start

🔍

**Quickstart AMIs (0)**  
Commonly used AMIs

**My AMIs (0)**  
Created by me

**AWS Marketplace AMIs (8)**  
AWS & trusted third-party AMIs

**Community AMIs (346)**  
Published by anyone

**Refine results**

Clear all filters

▼ Operating system

▼ Linux/Unix

- All Linux/Unix
- Amazon Linux
- CentOS
- Debian
- Fedora
- Gentoo

**ubuntu 18.04 amd64 (346 filtered, 346 unfiltered)**

**Community AMIs**

Community AMIs contain all AMIs that are public, therefore anyone can publish an AMI and it will show in this catalog. This catalog can also contain paid products. When using community AMIs it is best practice to ensure you know and trust the publisher before launching an AMI.

**Verified provider**

**ubuntu/images/hvm-ssd/ubuntu-bionic-18.04-amd64-server-20200729**

ami-0196dc340d1c4949b

Canonical, Ubuntu, 18.04 LTS, amd64 bionic image build on 2020-07-29

Platform: Ubuntu Architecture: x86\_64 Owner: 099720109477 Publish date: 2022-10-12 Root device type: ebs

Virtualization: hvm ENA enabled: Yes

**Select**

3

▼ **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

Q ubuntu 18.04 amd64

**AMI from catalog** | Recents | Quick Start

Amazon Machine Image (AMI)

ubuntu/images/hvm-ssd/ubuntu-bionic-18.04-amd64-server-20200729-ami-0196dc340d1c4949b

Verified provider

**Browse more AMIs**  
Including AMIs from AWS, Marketplace and the Community

Catalog	Published	Architecture	Virtualization	Root device type	ENA Enabled
Community AMIs	2022-10-12T03:35:47.00Z	x86_64	hvm	ebs	Yes

▼ **Instance type** [Info](#)

Instance type

t3.micro

Family: t3 2 vCPU 1 GiB Memory Current generation: true  
On-Demand SUSE pricing: 0.0114 USD per Hour  
On-Demand RHEL pricing: 0.0714 USD per Hour  
On-Demand Windows pricing: 0.0206 USD per Hour  
On-Demand Linux pricing: 0.0114 USD per Hour

Free tier eligible

All generations

[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*

Select

[Create new key pair](#)

▼ **Summary**

Number of instances [Info](#)

1

**Software Image (AMI)**

ubuntu/images/hvm-ssd/ubuntu-b...[read more](#)  
ami-0196dc340d1c4949b

**Virtual server type (instance type)**

t3.micro

**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 t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

**Launch instance**

[Review commands](#)

e. Select the exist Key pair or Create new key pair – Private key file format based on your demand, you can choose .pem or .ppk then download and save it. For windows pc by putty – select the ppk would be better.

▼ **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*

## Create key pair ✕

**Key pair name**  
Key pairs allow you to connect to your instance securely.

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

**Key pair type**

**RSA**  
RSA encrypted private and public key pair

**ED25519**  
ED25519 encrypted private and public key pair (Not supported for Windows instances)

**Private key file format**

**.pem**  
For use with OpenSSH

**.ppk**  
For use with PuTTY

**⚠** When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** [Learn more](#) [↗](#)

f. **Network settings** – click the edit to set Inbound rules, you can open all the ports or do it as your demands.

▼ **Network settings** [Info](#)
Edit

▼ **Network settings**

VPC - *required* [Info](#)

vpc-05f8c1e9c4e2d6f0b  
172.31.0.0/16
(default) ▼
↻

Subnet [Info](#)

No preference ▼
↻ [Create new subnet](#)

Auto-assign public IP [Info](#)

Enable ▼

**Firewall (security groups)** [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

Security group name - *required*

launch-wizard-2

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and `._-:/()#,@[]+=&;{}!$*`

Description - *required* [Info](#)

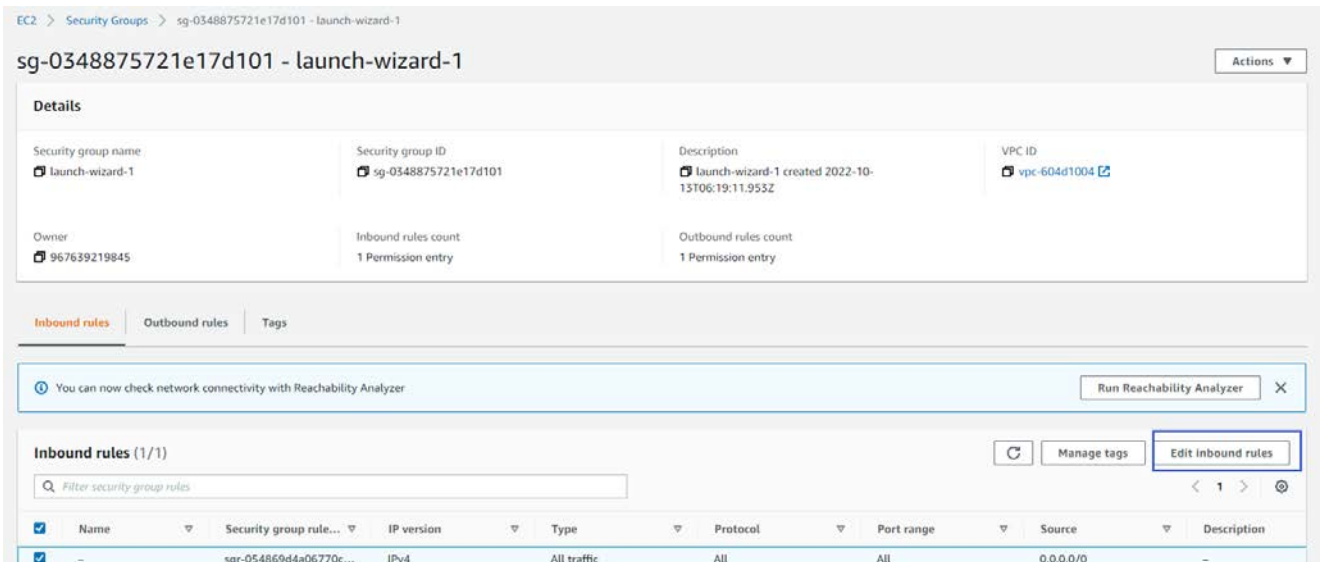
launch-wizard-2 created 2023-05-26T01:20:21.740Z

**Inbound security groups rules**

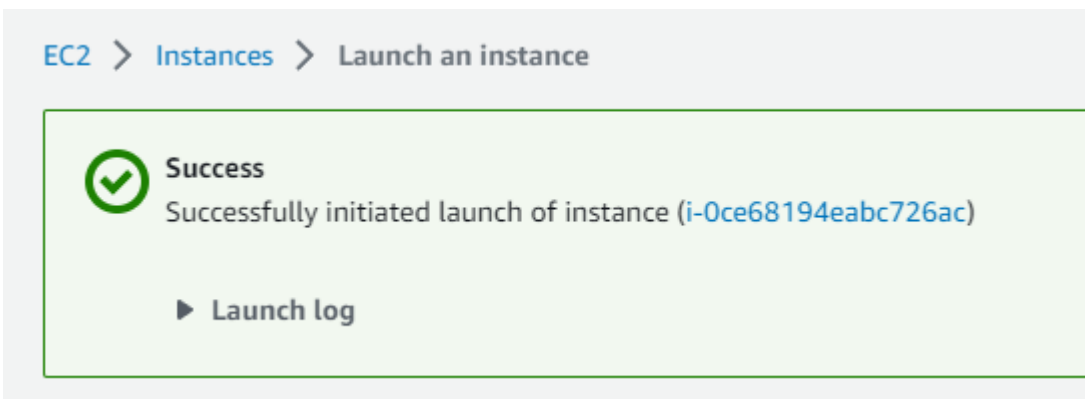
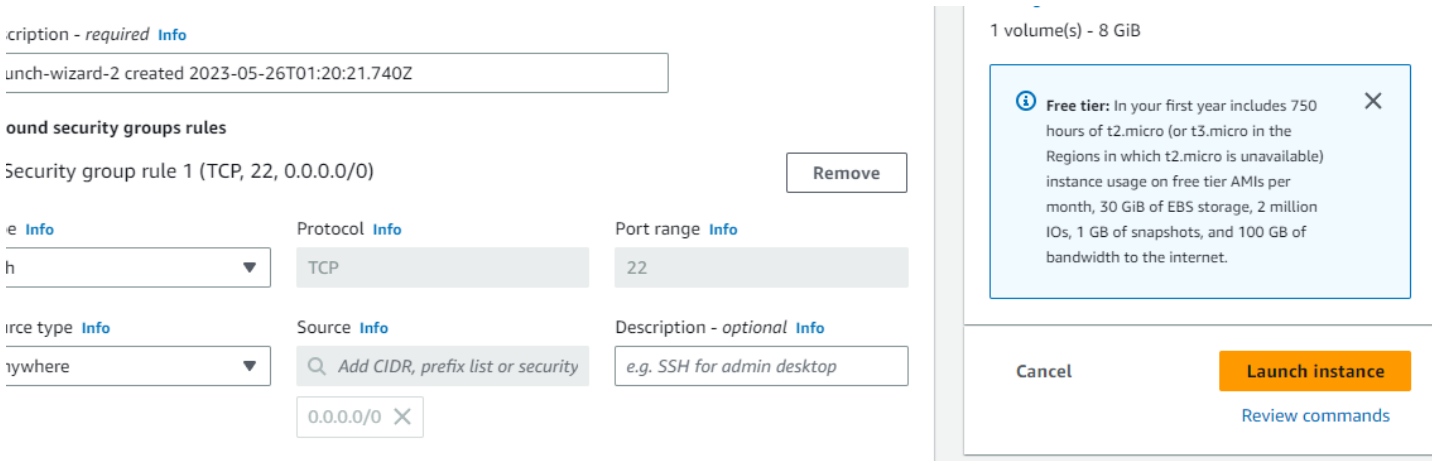
▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)
Remove

<p>Type <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>ssh ▼</span> </div>	<p>Protocol <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>TCP</span> </div>	<p>Port range <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>22</span> </div>
<p>Source type <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; display: flex; justify-content: space-between; align-items: center;"> <span>Anywhere ▼</span> </div>	<p>Source <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px;"> <span>🔍 <a href="#">Add CIDR, prefix list or security</a></span> </div> <div style="border: 1px solid #ccc; padding: 5px; display: flex; align-items: center; gap: 5px; margin-top: 5px;"> <span>0.0.0.0/0</span> <span>✕</span> </div>	<p>Description - <i>optional</i> <a href="#">Info</a></p> <div style="border: 1px solid #ccc; padding: 5px; min-height: 20px;">         e.g. SSH for admin desktop       </div>

for the inbound security groups rules, you can change them later when created the EC2,

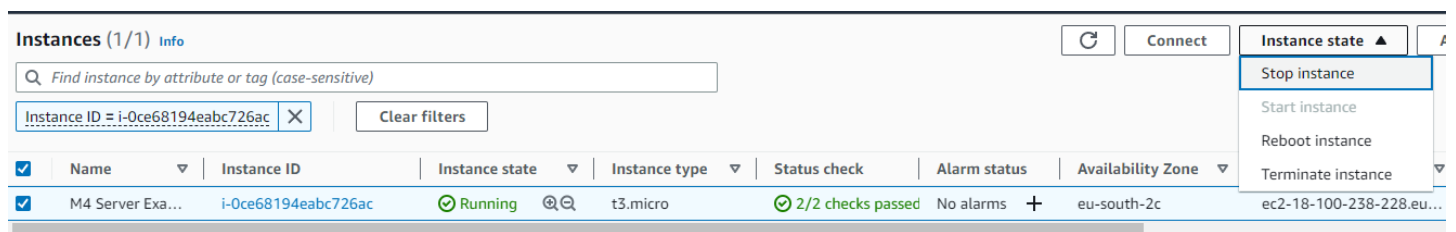


g. Launch Instance – then click the launched instance,



h. Start & Stop Terminate EC2

you can stop the instance to save your cost if you don't use the server all the time, to start it when you need to use the instance again, the server public IPv4 will be changed once restarted, keep your M4 server IP same as your EC2's instance.

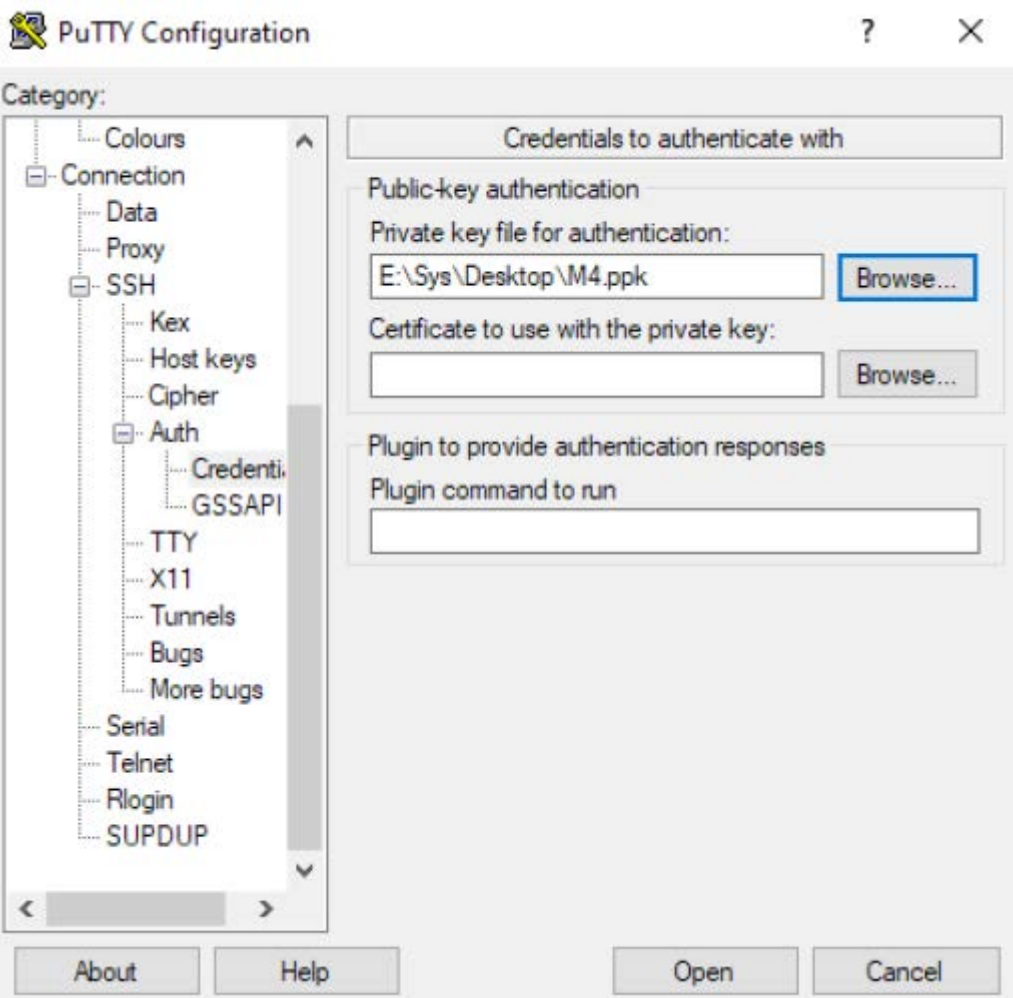
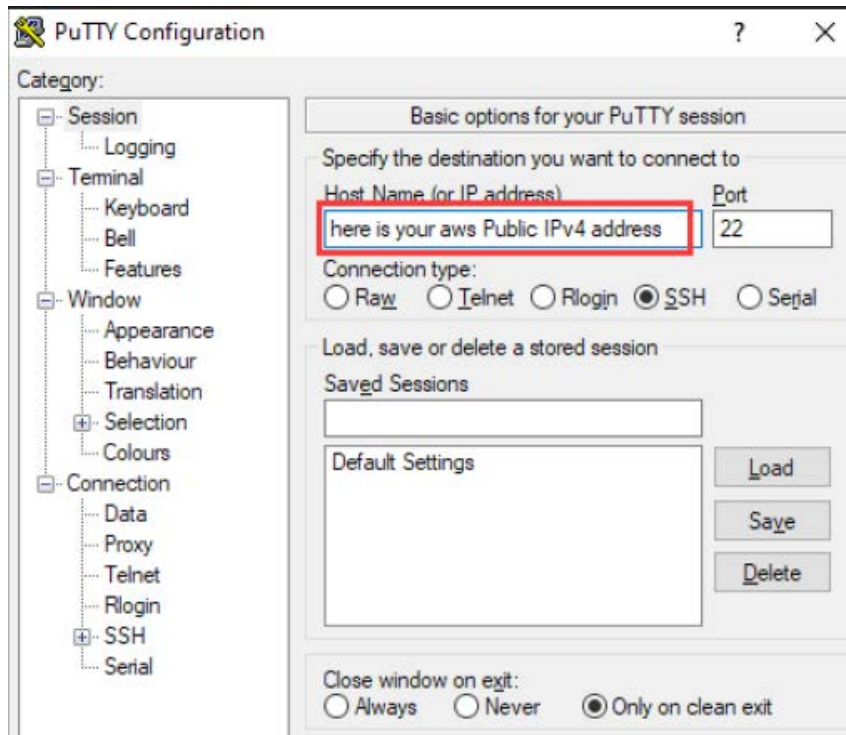


## 2. Connect to Your Amazon EC2 Instance & install the bonding software on it.

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AccessingInstances.html>

Here from Windows using PuTTY , you can download it here,

<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>





Click Open, login as **ubuntu**, type **sudo -s** to root, by below commands (this commands may update, please contact with the seller or our tech support to get the latest) to install the bonding software,

wget [https://gitee.com/link4all\\_admin/vps/raw/master/debian\\_ubuntu\\_install.sh](https://gitee.com/link4all_admin/vps/raw/master/debian_ubuntu_install.sh) -O debian\_ubuntu\_install.sh && sh debian\_ubuntu\_install.sh

```
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-12-224:~$ sudo -s
root@ip-172-31-12-224:/home/ubuntu# wget https://gitee.com/link4all_admin/vps/raw/master/debian_ubuntu_install.sh -O debian_u
```

when in installing, if any promotion, type Y and click Enter to continue

```
iptables-persistent netfilter-persistent
0 upgraded, 2 newly installed, 0 to remove and 3 not upgraded.
Need to get 13.8 kB of archives.
After this operation, 89.1 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

**Reboot** the EC2 server by **reboot** command after the bonding software installed.

```
install.sh: 99: echo Success, please allow TCP ports 59999, 60011 (for network bondin
root@ip-172-31-12-224:/home/ubuntu# reboot
```

To check your server 59999 port open status by <http://adminkit.net/telnet.aspx>

<input type="text" value="18.1"/>	<input type="text" value="59999"/>	<input type="button" value="Connect"/>
-----------------------------------	------------------------------------	----------------------------------------

Connection Status : **Connection to 18.1 on port 59999 was successfull**

### 3. M4 Router Setup

- a. Management URL is <http://192.168.11.1>, default password is **admin**, or by WiFi M4Pro-2.4G-xxx or M4Pro-5G-xxxx, wifi default password is **12345678**
- 1<sup>st</sup> Mwan Server select the Custom, 2<sup>nd</sup> Mwan Server is the installed M4 Server IP (IPv4 Public IP), port is 59999, others keep same as the default.

## 4G WIFI ROUTER

- [Home](#)
- [System Info](#)
- [Wireless Setting](#)
- [Network Setting](#)
- [System Admin](#)
- [Advance Setting](#)

Current Location: [Advance Setting](#) > [Multi-4G Setting](#)

### Multi-4G Setting

EnableUDPMwan Server:

EnableTCPMwan Server

Bonding Mode: 1 Default ▼

Mwan Server: Custom ▼

Mwan Server: 15.1

Port: 59999

Bonding Method: none

Password: hewenhao12345


[Save](#)


#### Bonding Mode:

- 1 Default - normal mode, it gives priority to the sim card(s) with better network speed.
- 2 Roundrobin - forced traffic balance mode, force each sim card use same network bandwidth, bandwidth will be limited by the speed of the card with the worst signal.
- 3 Redundant - redundancy mode, improved based on the mode 1, to avoid packet loss when network unstable.

When all settled, the SIM card still can't get network, maybe you need to setup the APN per your SIM provider, for the APN you can check here, <https://apn.how/>

# 4G WIFI ROUTER

 Home

 System Info

 Wireless Setting

 Network Setting

WAN Setting

LAN Setting


DHCP Setting


4G1 Setting

4G2 Setting

4G3 Setting

4G4 Setting

 System Admin

 Advance Setting

Current Location: Network Setting > 4G Setting

## 4G1 Setting

IP Address: 4G modem dail failure, not get IP !

Dail Mode: Gobinet

AT command device: /dev/ttyUSB2

APN Setting: 3gnet

Dail Number: \*99#

Auth Mode: None

User Name: Optional required

Password: Optional required

PIN Code: Optional required

Ping IP: 8.8.8.8

Save

All sim cards get IP, but can't do bonding?

- a) Ensure the bonding server works correct.
- b) Ensure the Multi 4G Settings - bonding server IP and port are correct.
- c) Ensure all the sim cards can get network properly on mobile phone.
- d) By write the Ping IP (such as 8.8.8.8, 1.1.1.1 or your bonding server IP) for 4G1-4G4 setting which will kick out the SIM card which can't go internet.

Connect with M4 but devices can't get network.

To set the DNS for LAN,

The screenshot shows a web browser interface for a 4G WiFi Router. The browser address bar displays "192.168.11.1/manage1.asp" with a "Not secure" warning. The page title is "4G WIFI ROUTER". The navigation menu on the left includes: Home, System Info, Wireless Setting, Network Setting (selected), WAN Setting, LAN Setting (highlighted), DHCP Setting, 4G1 Setting, 4G2 Setting, 4G3 Setting, 4G4 Setting, System Admin, and Advance Setting. The main content area shows the "LAN Setting" configuration page. The "Current Location" is "Network Setting > LAN Setting". The settings are as follows:

Field	Value
IP Address :	192.168.11.1
Net Mask :	255.255.255.0
DNS1 :	1.1.1.1
DNS2 :	8.8.8.8

A "Save" button is located at the bottom right of the settings area.