



Cloud Computing project  
Deploy a web server on a public cloud

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Present to

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# VPC: Security Groups

Name: WebServer

Security Groups (1/2) info

Filter security groups

Name	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count	Outbound rules count
-	sg-0b1b00b804c3996e3	default	vpc-0cbbc11f6659d1f52	default VPC security gr...	852297628513	1 Permission entry	1 Permission entry
-	sg-0939c8c5d7765428a	WebServer	vpc-0cbbc11f6659d1f52	Allow access on ports ...	852297628513	2 Permission entries	1 Permission entry

sg-0939c8c5d7765428a - WebServer

Details Inbound rules Outbound rules Tags

You can now check network connectivity with Reachability Analyzer [Run Reachability Analyzer](#)

**Details**

Security group name WebServer	Security group ID sg-0939c8c5d7765428a	Description Allow access on ports 80 and 22	VPC ID vpc-0cbbc11f6659d1f52
Owner 852297628513	Inbound rules count 2 Permission entries	Outbound rules count 1 Permission entry	

sg-0939c8c5d7765428a - WebServer

Details Inbound rules Outbound rules Tags

You can now check network connectivity with Reachability Analyzer [Run Reachability Analyzer](#)

**Inbound rules (2)**

Filter security group rules

Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
-	sg-008708186d3f513...	IPv4	HTTP	TCP	80	0.0.0.0/0	-
-	sg-0be28042c76edc55f	IPv4	SSH	TCP	22	110.168.238.93/32	-

We created a new security group called "WebServer" and added two HTTP and SSH authorization entries to incoming rules. We configured SSH to accept just our IP address since we wanted to be the only ones who could connect to the EC2 instance and because we meant to install our web server on HTTP with any IPv4 address.

## Key pair

Key pairs (1) info

Search

Name	Type	Created	Fingerprint	ID
myec2key	rsa	2022/12/23 02:30 GMT+7	ce:9d:c8:85:64:8f:c7:88:20:5a:a7:7c:7b:e...	key-009652306af888a0b

We create a key pair with the name "myec2key" with a .ppk file extension that enables us to securely access SSH security credentials using Amazon Linux and Putty.

# Instance

Instance: i-0a04b63c057ed238e (WebServer)		
Details	Security	Networking
<b>▼ Instance summary</b> <a href="#">info</a>		
Instance ID i-0a04b63c057ed238e (WebServer)	Public IPv4 address 54.144.195.125   <a href="#">open address</a>	Private IPv4 addresses 172.31.80.10
IPv6 address -	Instance state <b>Running</b>	Public IPv4 DNS ec2-54-144-195-125.compute-1.amazonaws.com   <a href="#">open address</a>
Hostname type IP name: ip-172-31-80-10.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-80-10.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding <a href="#">Opt-in to AWS Compute Optimizer for recommendations.</a>   <a href="#">Learn more</a>
Auto-assigned IP address 54.144.195.125 [Public IP]	VPC ID vpc-0cbbc11f6659d1f52	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-00e52b7547459772b	
<b>▼ Instance details</b> <a href="#">info</a>		
Platform Amazon Linux (Inferred)	AMI ID ami-0b5eea76982371e91	Monitoring disabled
Platform details Linux/UNIX	AMI name amzn2-ami-kernel-5.10-hvm-2.0.20221210.1-x86_64-gp2	Termination protection Disabled
Stop protection Disabled	Launch time Fri Dec 23 2022 02:30:57 GMT+0700 (Indochina Time) (about 3 hours)	AMI location amazon/amzn2-ami-kernel-5.10-hvm-2.0.20221210.1-x86_64-gp2

A new instance with the name "WebServer" was launched. We choose Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type as our AMI because it is free. We used the t2. micro instance type, which is the default. Additionally, the "myec2key" that we generate to upload the webserver to Amazon Linux using Putty is used in the key pair. We chose "WebServer" as our security group in the network settings because we had already created it.

# Networking

Instance: i-0a04b63c057ed238e (WebServer)

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

▼ Security details

IAM Role

-

Owner ID

852297628513

Launch time

Fri Dec 23 2022 02:30:57 GMT+0700 (Indochina Time)

Security groups

sg-0939c8c5d7765428a (WebServer)

▼ Inbound rules

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Filter rules

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Name	Security group rule ID	Port range	Protocol	Source	Security groups	Description
-	sg-008708186d3f513e2	80	TCP	0.0.0.0/0	<div>WebServer</div>	-
-	sg-0be28042c76edc55f	22	TCP	110.168.238.93/32	<div>WebServer</div>	-

▼ Outbound rules

Q

Filter rules

<

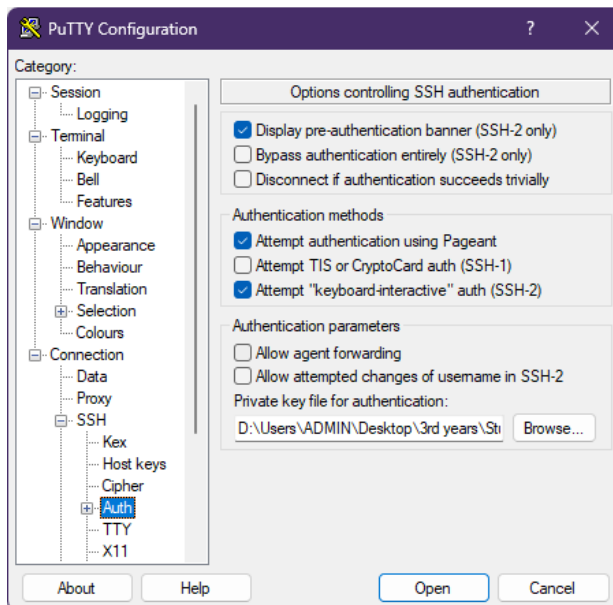
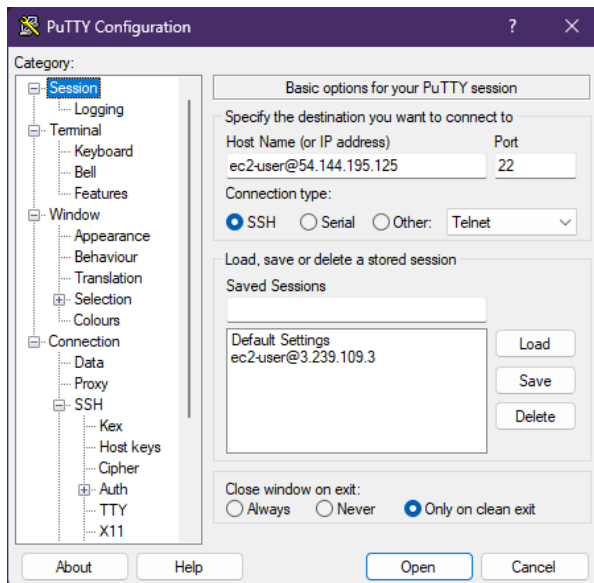
1

>

Name	Security group rule ID	Port range	Protocol	Destination	Security groups	Description
-	sg-083f3e2afae884fe3	All	All	0.0.0.0/0	<div>WebServer</div>	-

In terms of networking, we used the Public IPv4 address 54.144.195.125 and the availability zone "us-east-1c". In addition, the public IPv4 DNS is ec2-54-144-195-125.compute-1.amazonaws.com and the private IPv4 address is 172.31.80.10

# Putty



# Putty Console

```
⚠ Authenticating with public key "myec2key"
Last login: Thu Dec 22 21:25:43 2022 from ppp-110-168-238-93.revip5.asianet.co.th

      _ _ _ _ _
     _ _ ( _ _ _ )
    _ _ | \ _ _ | _ _
   _ _ | \ _ _ | _ _

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-80-10 ~]$ sudo su
[root@ip-172-31-80-10 ec2-user]# cd /var/www/html
[root@ip-172-31-80-10 html]# wget https://github.com/Ohmmyome/ohmmekday/archive/
refs/heads/main.zip
--2022-12-22 21:30:28-- https://github.com/Ohmmyome/ohmmekday/archive/refs/head
s/main.zip
Resolving github.com (github.com)... 140.82.113.3
Connecting to github.com (github.com)|140.82.113.3|:443... connected.
HTTP request sent, awaiting response... 404 Not Found
2022-12-22 21:30:28 ERROR 404: Not Found.

[root@ip-172-31-80-10 html]# rm -rf *
[root@ip-172-31-80-10 html]# wget https://github.com/Ohmmyomemy/ohmmekday/archiv
e/refs/heads/main.zip
--2022-12-22 21:31:09-- https://github.com/Ohmmyomemy/ohmmekday/archive/refs/he
ads/main.zip
Resolving github.com (github.com)... 140.82.113.4
Connecting to github.com (github.com)|140.82.113.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://codeload.github.com/Ohmmyomemy/ohmmekday/zip/refs/heads/main [
following]
--2022-12-22 21:31:09-- https://codeload.github.com/Ohmmyomemy/ohmmekday/zip/re
fs/heads/main
Resolving codeload.github.com (codeload.github.com)... 140.82.112.9
Connecting to codeload.github.com (codeload.github.com)|140.82.112.9|:443... con
nected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [application/zip]
Saving to: 'main.zip'

[ <=> ] 326,874 --.-K/s in 0.02s

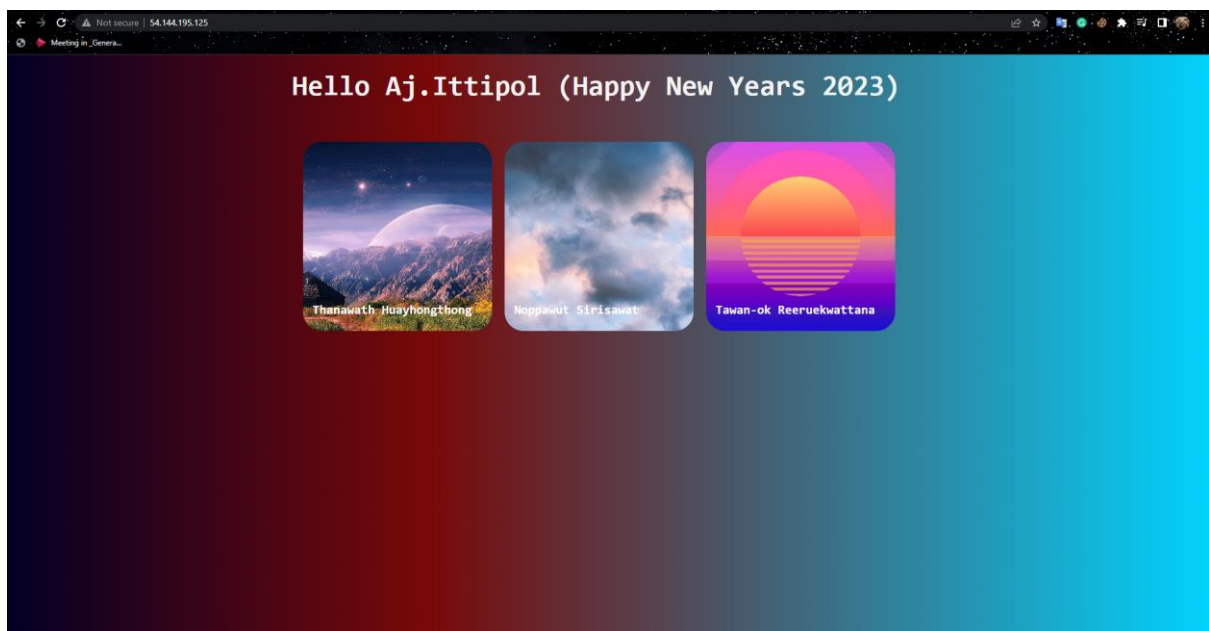
2022-12-22 21:31:09 (15.2 MB/s) - 'main.zip' saved [326874]

[root@ip-172-31-80-10 html]# unzip main.zip
Archive: main.zip
40db5a5ead46b9890f97e010d55ee9c251688532
  creating: ohmmekday-main/
  extracting: ohmmekday-main/README.md
  creating: ohmmekday-main/assets/
  creating: ohmmekday-main/assets/css/
  inflating: ohmmekday-main/assets/css/home.css
  creating: ohmmekday-main/assets/image/
  inflating: ohmmekday-main/assets/image/cloud.jpg
  inflating: ohmmekday-main/assets/image/mountain.jpg
  inflating: ohmmekday-main/assets/image/sun.jpg
  inflating: ohmmekday-main/index.html
[root@ip-172-31-80-10 html]# cp -r Senyai-main/* /var/www/html/
cp: cannot stat 'Senyai-main/*': No such file or directory
[root@ip-172-31-80-10 html]# cp -r ohmmekday-main/* /var/www/html/
[root@ip-172-31-80-10 html]# rm -rf ohmmekday-main main.zip
[root@ip-172-31-80-10 html]# systemctl enable httpd
[root@ip-172-31-80-10 html]# systemctl start httpd
[root@ip-172-31-80-10 html]#
```

Command that we use to upload our web server

```
sudo su
yum update -y
yum install -y httpd
cd /var/www/html
wget https://github.com/Ohmmyome/ohmmekday/archive/refs/heads/main.zip
unzip main.zip
cp -r ohmmekday-main/* /var/www/html/
rm -rf ohmmekday-main main.zip
systemctl enable httpd
systemctl start httpd
```

Screenshot of our Webserver



Link to our Webserver

Link: <http://54.144.195.125/>

Video link

Link: <https://www.youtube.com/watch?v=Pb8rXVY0XDo>