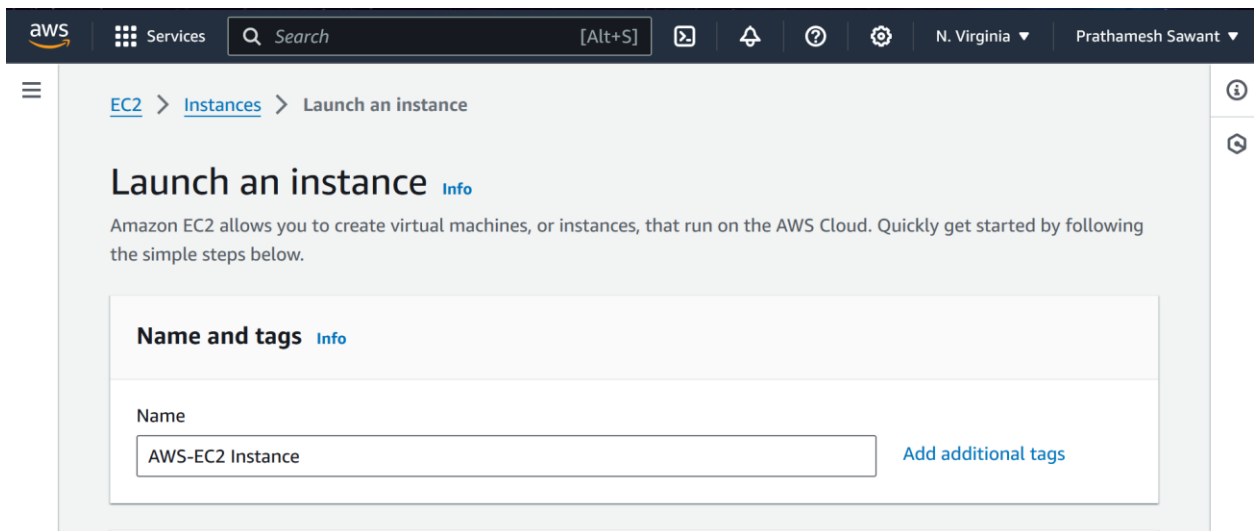


Assignment 1

Launch an EC2 instance using the below Requirements

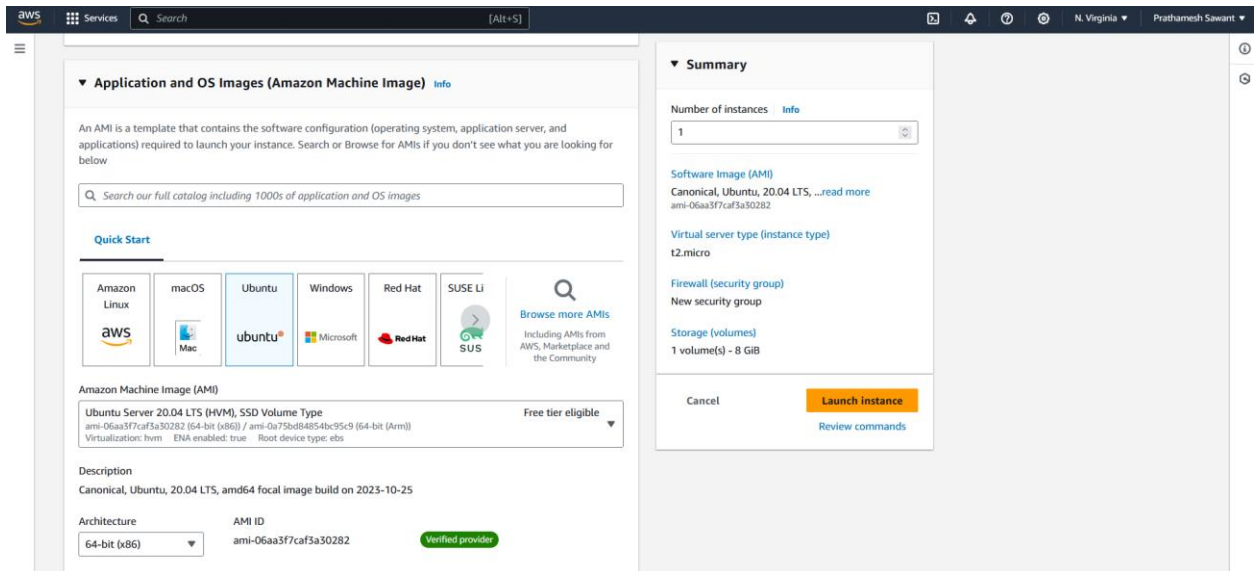
1. Instance Image: Ubuntu 20.04
2. Instance Name: AWS-EC2 Instance
3. Instance should accept incoming request over HTTP protocol on all the ports.
4. Instance should accept SSH connection on port 22.
5. Instance should have 8 GB of General Purpose SSD attached

1. Launch an EC2 instance using console

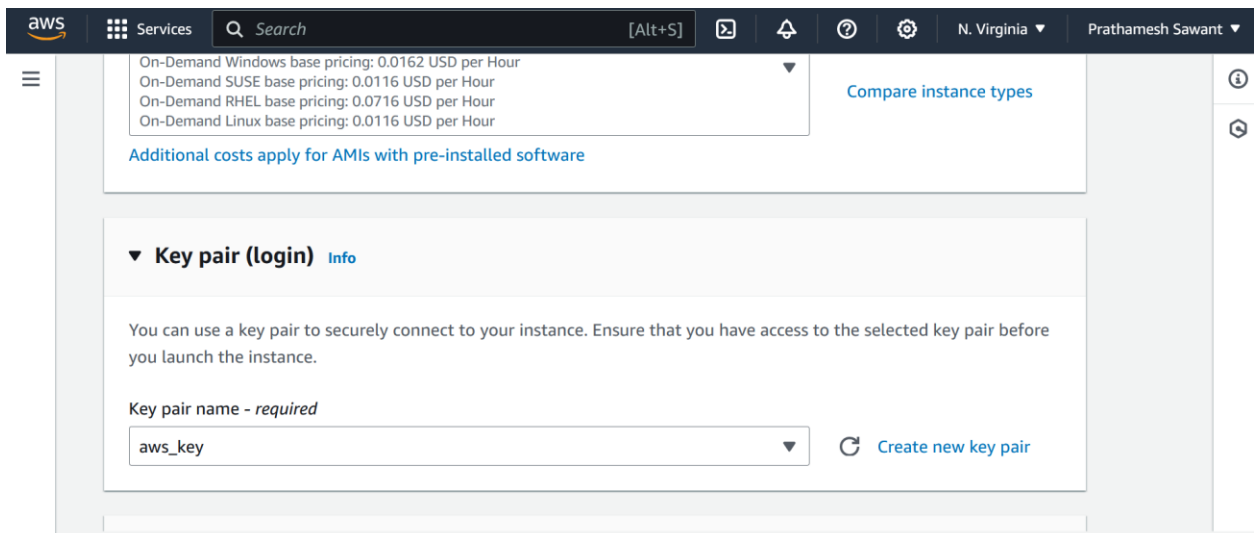


The screenshot shows the AWS Management Console interface for launching an EC2 instance. The top navigation bar includes the AWS logo, 'Services', a search bar, and the user's name 'Prathamesh Sawant' in the N. Virginia region. The main content area is titled 'Launch an instance' with a breadcrumb trail 'EC2 > Instances > Launch an instance'. Below the title, there is a brief description of Amazon EC2. The 'Name and tags' section is highlighted, showing a text input field with the value 'AWS-EC2 Instance' and a link to 'Add additional tags'.

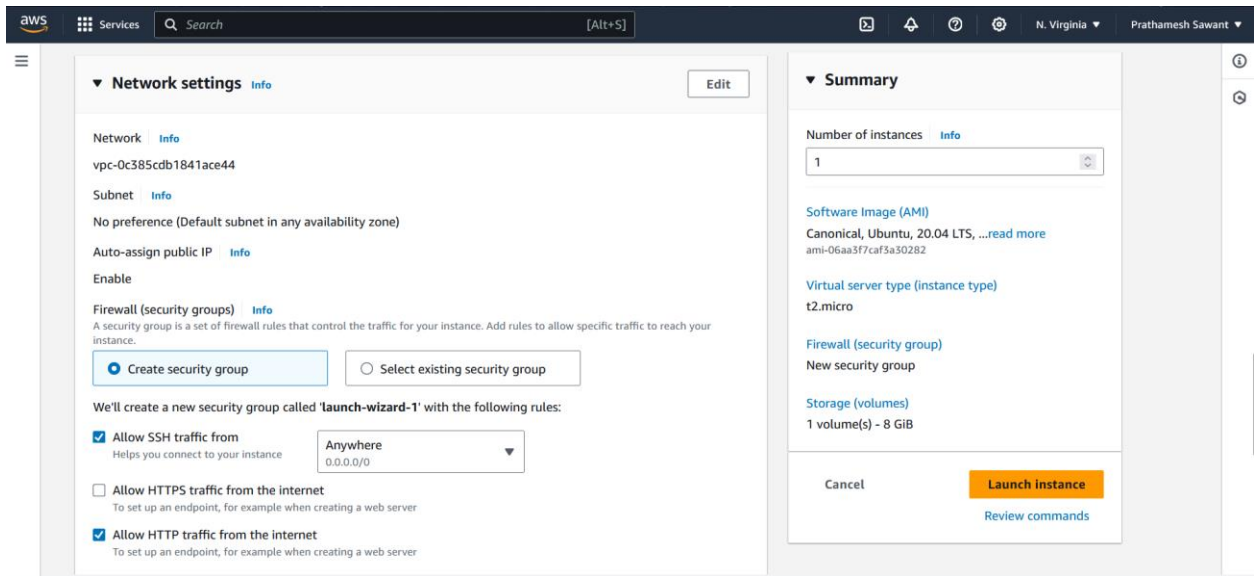
Instance Name



Instance Image



Key Pairs



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

Network [Info](#)
vpc-0c385cdb1841ace44

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

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

We'll create a new security group called 'launch-wizard-1' with the following rules:

- ☒ Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0
- ☐ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server
- ☒ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Canonical, Ubuntu, 20.04 LTS, ...[read more](#)
ami-06aa3f7caf3a30282

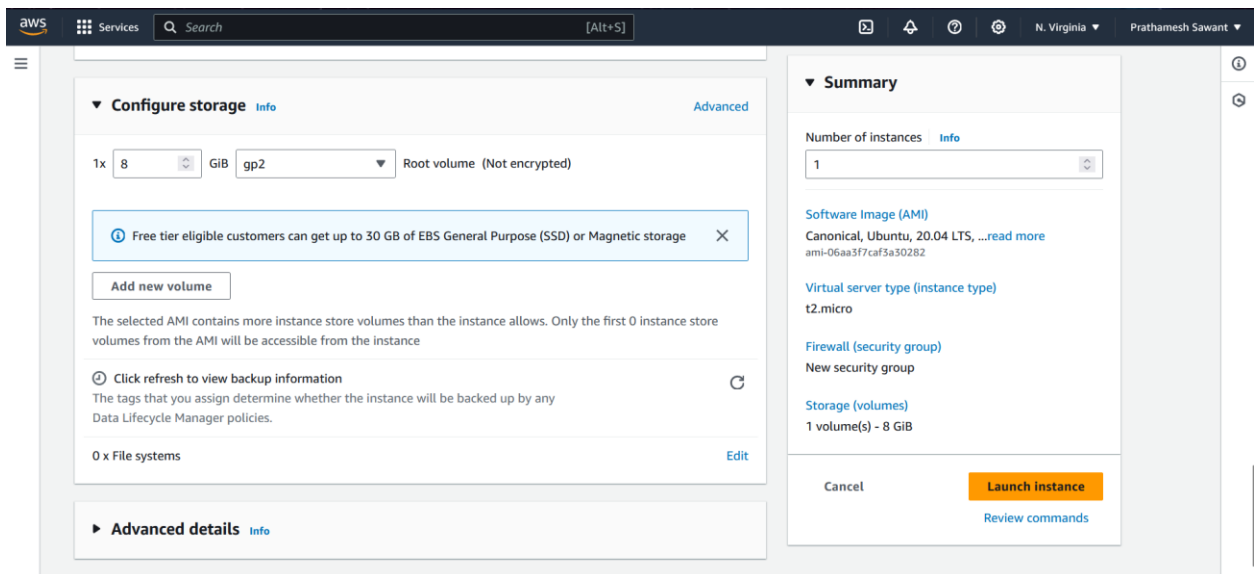
Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

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

Configuring Security Groups



Configure storage [Info](#) [Advanced](#)

1x 8 GiB gp2 Root volume (Not encrypted)

[Free tier eligible customers can get up to 30 GB of EBS General Purpose \(SSD\) or Magnetic storage](#) [X](#)

[Add new volume](#)

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

[Click refresh to view backup information](#)
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems [Edit](#)

Advanced details [Info](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Canonical, Ubuntu, 20.04 LTS, ...[read more](#)
ami-06aa3f7caf3a30282

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

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

Storage

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Name

I-04e5618856851db98

Instance ID

I-04e5618856851db98

Instance state

Running

Instance type

t2.micro

Status check

Initializing

Alarm status

View alarms

Availability Zone

us-east-1d

Public IPv4 DNS

ec2-34-228-6-194.com...

Public IPv4 ...

34.228.6.194

Elastic IP

-

Instance: i-04e5618856851db98 (AWS-EC2 Instance)

Instance ID

i-04e5618856851db98 (AWS-EC2 Instance)

IPv6 address

-

Hostname type

IP name: ip-172-31-31-191.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

34.228.6.194 [Public IP]

IAM Role

-

IMDSv2

Required

Public IPv4 address

34.228.6.194 [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-31-191.ec2.internal

Instance type

t2.micro

VPC ID

vpc-0c385cdb1841ace44

Subnet ID

subnet-01f1641f653a0d197

Private IPv4 addresses

172.31.31.191

Public IPv4 DNS

ec2-34-228-6-194.compute-1.amazonaws.com [open address](#)

Elastic IP addresses

-

AWS Compute Optimizer finding

[Opt-in to AWS Compute Optimizer for recommendations.](#) [Learn more](#)

Auto Scaling Group name

-

Instance State

sg-011f3bb024b4fa60a - launch-wizard-1

Actions

Details

Security group name

launch-wizard-1

Security group ID

sg-011f3bb024b4fa60a

Description

launch-wizard-1 created 2024-01-19T15:05:24.449Z

VPC ID

vpc-0c385cdb1841ace44

Owner

139017485331

Inbound rules count

2 Permission entries

Outbound rules count

1 Permission entry

Inbound rules

Outbound rules

Tags

Inbound rules (2)

Manage tags

Edit inbound rules

Name

Security group rule...

IP version

Type

Protocol

Port range

Source

Description

-

sg-022270c1486252...

IPv4

SSH

TCP

22

0.0.0.0/0

-

-

sg-0905e8e1bda2f5eb6

IPv4

HTTP

TCP

80

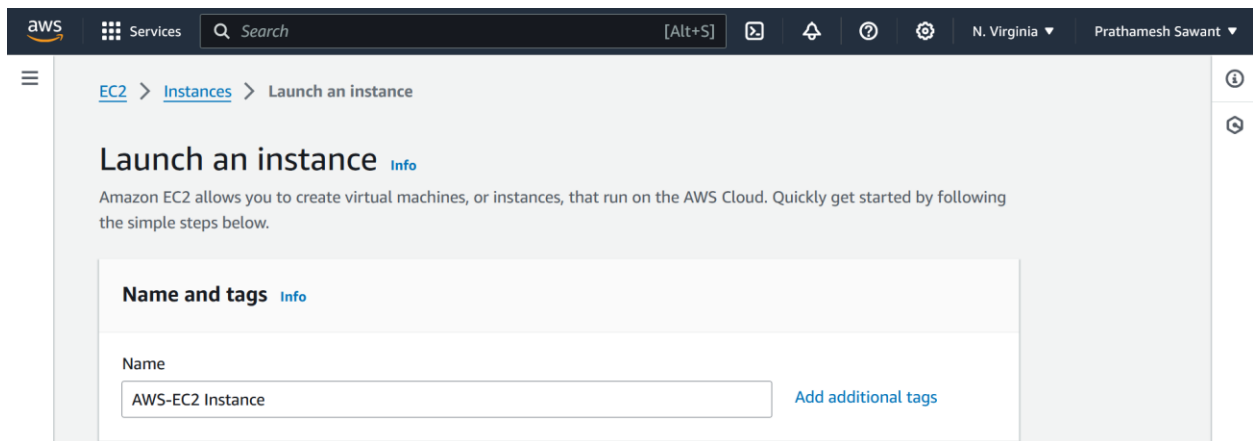
0.0.0.0/0

-

Security Groups Configuration

Launch an EC2 instance on AWS environment as per below instructions.

1. Instance Image: Ubuntu 20.04
2. Instance Name: AWS-EC2 Instance
3. Instance Type: t2.micro
4. Configure Security Group:
 - a. It should accept the http request on port 80 only from the client's IP address only.
 - b. It should accept the SSH request on port 22 only from the client's IP address only.
5. Instance should have 8 GB of General Purpose SSD attached.
6. Change the name of the instance to test-server
7. Launch the instance
8. SSH into the launched instance



aws Services Search [Alt+S] N. Virginia Prathamesh Sawant

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

AWS-EC2 Instance [Add additional tags](#)

Instance name

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

Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux

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

Amazon Machine Image (AMI)

Ubuntu Server 20.04 LTS (HVM), SSD Volume Type
ami-06aa3f7caf3a30282 (64-bit (x86)) / ami-0a75b084854bc95c9 (64-bit (ARM))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description
Canonical, Ubuntu, 20.04 LTS, amd64 focal image build on 2023-10-25

Architecture
64-bit (x86)

AMI ID
ami-06aa3f7caf3a30282

Verified provider

Summary

Number of instances Info
1

Software image (AMI)
Canonical, Ubuntu, 20.04 LTS, ...read more
ami-06aa3f7caf3a30282

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

Cancel Launch instance
Review commands

AMI

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 before you launch the instance.

Key pair name - required
aws_key

Create new key pair

Key Pairs

Network settings Info Edit

Network Info
vpc-0c385cdb1841ace44

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

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

We'll create a new security group called 'launch-wizard-1' with the following rules:

☒ Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0

☐ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server

☒ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

Summary

Number of instances Info
1

Software image (AMI)
Canonical, Ubuntu, 20.04 LTS, ...read more
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Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

Cancel Launch instance
Review commands

Network Settings

aws

Services

Search

[Alt+S]

N. Virginia

Prathamesh Sawant

▼ Configure storage Info

Advanced

1x 8 GiB gp2 Root volume (Not encrypted)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems

Edit

► Advanced details Info

▼ Summary

Number of instances Info

1

Software Image (AMI)

Canonical, Ubuntu, 20.04 LTS, ...read more

ami-06aa3f7caf5a30282

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel

Launch instance

Review commands

Storage

aws

Services

Search

[Alt+S]

N. Virginia

Prathamesh Sawant

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive)

Connect

Instance state

Actions

Launch instances

< 1 >

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input checked="" type="checkbox"/>	AWS-EC2 Insta...	i-0a96994d66411a5dc	Running	t2.micro	-	View alarms +	us-east-1d	ec2-3-91-81-213.comp...	3.91.81.213	-
<input type="checkbox"/>	AWS-EC2 Insta...	i-04e5618856851db98	Terminated	t2.micro	-	View alarms +	us-east-1d	-	-	-

Instance: i-0a96994d66411a5dc (AWS-EC2 Instance)

Instance ID

i-0a96994d66411a5dc (AWS-EC2 Instance)

IPv6 address

-

Hostname type

IP name: ip-172-31-16-245.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

3.91.81.213 [Public IP]

IAM Role

-

IMDSv2

Required

Public IPv4 address

3.91.81.213 [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-16-245.ec2.internal

Instance type

t2.micro

VPC ID

vpc-0c385c8b1841ace44 [open address](#)

Subnet ID

subnet-01f1641f653a0d197 [open address](#)

Private IPv4 addresses

172.31.16.245

Public IPv4 DNS

ec2-3-91-81-213.compute-1.amazonaws.com [open address](#)

Elastic IP addresses

-

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Auto Scaling Group name

-

Instance state

aws Services Search [Alt+S] N. Virginia Prathamesh Sawant

EC2 > Security Groups > sg-08d7c5a43086f219a - launch-wizard-1

sg-08d7c5a43086f219a - launch-wizard-1

Actions

Details

Security group name launch-wizard-1	Security group ID sg-08d7c5a43086f219a	Description launch-wizard-1 created 2024-01-19T15:30:21.807Z	VPC ID vpc-0c385cdb1841ace44
Owner 139017485331	Inbound rules count 2 Permission entries	Outbound rules count 1 Permission entry	

Inbound rules Outbound rules Tags

Inbound rules (2)

Manage tags Edit inbound rules

Search

	Name	Security group rule...	IP version	Type	Protocol	Port range	Source	Description
<input type="checkbox"/>	-	sg-0b532008af8cf5afb	IPv4	SSH	TCP	22	0.0.0.0/0	-
<input type="checkbox"/>	-	sg-0be9a2ea981a4307c	IPv4	HTTP	TCP	80	0.0.0.0/0	-

Security configurations

aws Services Search [Alt+S] N. Virginia Prathamesh Sawant

Instances [1/2] Info

Find Instance by attribute or tag (case-sensitive)

Connect Instance state Actions Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input checked="" type="checkbox"/>	test-server	i-0a96994d66411a5dc	Running	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-3-91-81-213.comp...	3.91.81.213	-
<input type="checkbox"/>	AWS-EC2 Insta...	i-04e5618856851db98	Terminated	t2.micro	-	View alarms	us-east-1d	-	-	-

Instance: i-0a96994d66411a5dc (test-server)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Instance ID i-0a96994d66411a5dc (test-server)	Public IPv4 address 3.91.81.213	Private IPv4 addresses 172.31.16.245
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-91-81-213.compute-1.amazonaws.com
Hostname type IP name: ip-172-31-16-245.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-16-245.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A) 3.91.81.213 [Public IP]	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations.
Auto-assigned IP address	VPC ID vpc-0c385cdb1841ace44	Auto Scaling Group name
IAM Role	Subnet ID	

Instance name change to test-server


```
ubuntu@ip-172-31-16-245: ~  
The authenticity of host '3.91.81.213 (3.91.81.213)' can't be established.  
ED25519 key fingerprint is SHA256:6QISB/vhelaUavv5LF35sReNhjdLgewCvb8t63jTJSO.  
This key is not known by any other names  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
Warning: Permanently added '3.91.81.213' (ED25519) to the list of known hosts.  
Welcome to Ubuntu 20.04.6 LTS (GNU/Linux 5.15.0-1048-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
System information as of Fri Jan 19 15:58:52 UTC 2024  
  
System load:  0.0      Processes:      96  
Usage of /:   21.0% of 7.57GB   Users logged in:  0  
Memory usage: 21%      IPv4 address for eth0: 172.31.16.245  
Swap usage:   0%  
  
Expanded Security Maintenance for Applications is not enabled.  
  
0 updates can be applied immediately.  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
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-172-31-16-245:~$
```

SSH