

- 1) Launch one ec2 using Amazon Linux 2 image and add script in user data to install Apache.

User data - optional [Info](#)

Upload a file with your user data or enter it in the field.


 Choose file

```
#!/bin/bash
sudo yum update -y
sudo yum install httpd -y
sudo systemctl start httpd
sudo systemctl enable httpd
echo "<h1> hello I am aslam, i am creating this website</h1>" >/var/www/html/index.html
```

☐ User data has already been base64 encoded

 CloudShell [Feedback](#)

```
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '13.219.72.175' (ED25519) to the list of known hosts.
```




```
#
#### Amazon Linux 2023
#####
###|
#/#
V~'
-.-
-/m/'
```

```
[ec2-user@ip-172-31-78-150 ~]$ sudo su
[root@ip-172-31-78-150 ec2-user]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Fri 2025-06-06 06:47:06 UTC; 7min ago
     Docs: man:httpd.service(8)
 Main PID: 3653 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
      Tasks: 177 (limit: 1111)
    Memory: 12.9M
       CPU: 280ms
    CGroup: /system.slice/httpd.service
            └─3653 /usr/sbin/httpd -DFOREGROUND
              └─3759 /usr/sbin/httpd -DFOREGROUND
                └─3761 /usr/sbin/httpd -DFOREGROUND
                  └─3762 /usr/sbin/httpd -DFOREGROUND
                    └─3763 /usr/sbin/httpd -DFOREGROUND

Jun 06 06:47:06 ip-172-31-78-150.ec2.internal systemd[1]: Starting httpd.service...
Jun 06 06:47:06 ip-172-31-78-150.ec2.internal systemd[1]: Started httpd.service.
Jun 06 06:47:06 ip-172-31-78-150.ec2.internal httpd[3653]: Server configured, listening on: port 80
lines 1-19/19 (END)...skipping...
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Fri 2025-06-06 06:47:06 UTC; 7min ago
     Docs: man:httpd.service(8)
 Main PID: 3653 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
      Tasks: 177 (limit: 1111)
    Memory: 12.9M
       CPU: 280ms
    CGroup: /system.slice/httpd.service
            └─3653 /usr/sbin/httpd -DFOREGROUND
              └─3759 /usr/sbin/httpd -DFOREGROUND
                └─3761 /usr/sbin/httpd -DFOREGROUND
                  └─3762 /usr/sbin/httpd -DFOREGROUND
                    └─3763 /usr/sbin/httpd -DFOREGROUND

Jun 06 06:47:06 ip-172-31-78-150.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Jun 06 06:47:06 ip-172-31-78-150.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Jun 06 06:47:06 ip-172-31-78-150.ec2.internal httpd[3653]: Server configured, listening on: port 80
```



# hello I am aslam, i am creating this website

2) Launch one ec2 using Ubuntu image and add script in user data to install Nginx.

User data - optional | Info

Upload a file with your user data or enter it in the field.

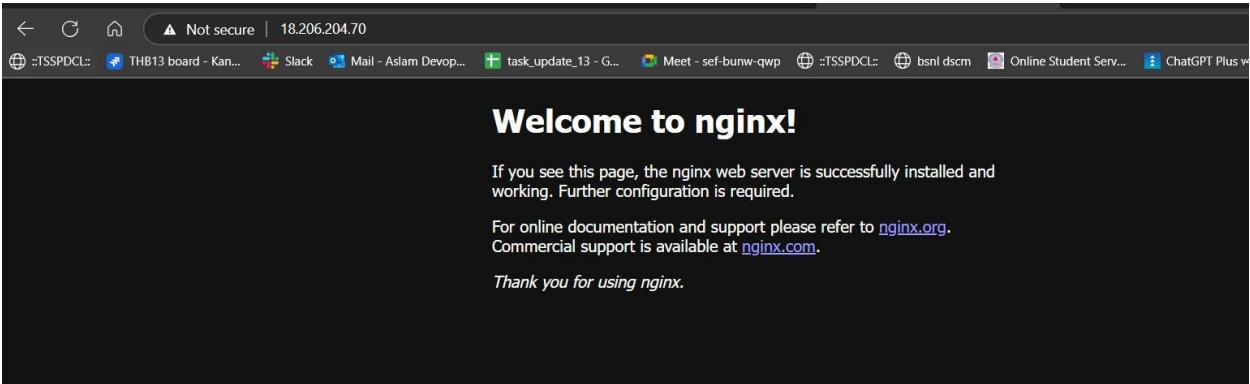
Choose file

```
#!/bin/bash
apt-get update -y && apt-get install -y nginx
systemctl start nginx && systemctl enable nginx
```

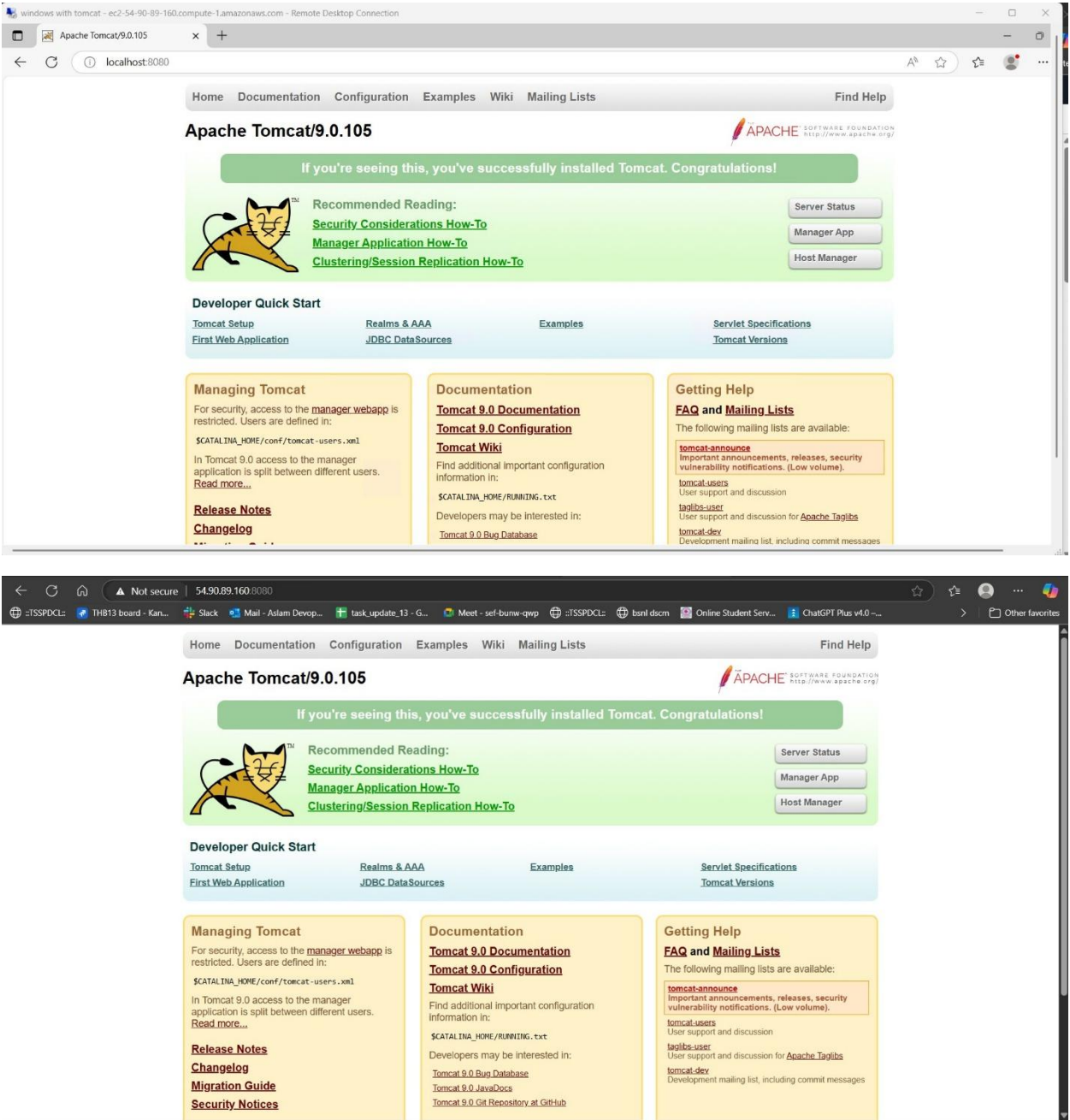
☐ User data has already been base64 encoded

```
ubuntu@ip-172-31-74-193: ~
ubuntu@ip-172-31-74-193:~$ systemctl status nginx
● nginx.service - A high performance web server and a reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; enabled; preset: en
   Active: active (running) since Fri 2025-06-06 07:28:57 UTC; 11min ago
     Docs: man:nginx(8)
   Main PID: 1514 (nginx)
    Tasks: 2 (limit: 1125)
   Memory: 1.7M (peak: 1.9M)
      CPU: 9ms
   CGroup: /system.slice/nginx.service
           └─1514 "nginx: master process /usr/sbin/nginx -g daemon on; master
             └─1515 "nginx: worker process"

Jun 06 07:28:57 ip-172-31-74-193 systemd[1]: Starting nginx.service - A high pe
Jun 06 07:28:57 ip-172-31-74-193 systemd[1]: Started nginx.service - A high per
lines 1-14/14 (END)
```



3) Launch one windows server and install tomcat in windows.



4) Take snapshot of the instanc created in Task 1.  
Before taking snapshot created directory and file and captured hostname with date and time

```
[ec2-user@ip-172-31-78-150 aslam]$ cd ..
[ec2-user@ip-172-31-78-150 ~]$ ls
aslam
[ec2-user@ip-172-31-78-150 ~]$ tree aslam
aslam
├── beforesnapshot.txt
└── 0 directories, 1 file
[ec2-user@ip-172-31-78-150 ~]$ date
Fri Jun 6 06:58:12 UTC 2025
[ec2-user@ip-172-31-78-150 ~]$ uname
Linux
[ec2-user@ip-172-31-78-150 ~]$ hostname
ip-172-31-78-150.ec2.internal
[ec2-user@ip-172-31-78-150 ~]$ |
```

AMIs

Create Template with AMILaunch Instance with AMI

Q Search for an AMI by entering a search term e.g. "Windows"

Quick Start AMIs (45)  
Commonly used AMIs

My AMIs (1)  
Created by me

AWS Marketplace AMIs (6574)  
AWS & trusted third-party AMIs

Community AMIs (500)  
Published by anyone

Refine results

Clear all filters

▼ Owner

☒ Owned by me

☐ Shared with me

▼ OS category

☐ All Linux/Unix

☐ All Windows

All products (1 filtered, 1 unfiltered)

aws

snapshotwithapache  
ami-0c3c9341a9fe370b6  
taking snapshot for 4 task  
OwnerAlias: — Platform: — Architecture: x86\_64 Owner: 147834559194 Publish date: 2025-06-06  
Root device type: ebs Virtualization: hvm ENA enabled: Yes Boot mode: uefi-preferred

Select



5) Assign password less authentication for ec2 created on Task 2.

Added the public key which I had generated for git hub in ubuntu to password less authentication

```
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIHgkeZmubmaroG7nDe06ZGm18VEZdSwSzaM+9GjYUhfT
masla@Hp1aptop|

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCuYb6QAfwvM8BVQAg2J3JKu2ssxXeproT6EI7q279
z2qZNVlcODK5j9fsx4ingn9jsBuVGiIYS3+AiygTYoKY/cTa6GmpBXviYocPM7JhoXuL1r0EAWH/MJTT
Avs11PkUw2dB6v1mbOMsAym6r/NEw1NrI2HxLn21Ts i4f0bXLoqJsDGDfG5F1QZHhP0jJGUmcJSp07tn
5AIU5CruXo3ma1Q4FoSkmgFjQkP2hwDGDWL7nNPJpcfbFgckOX60U3tk0W0kBFxcvDbrE2047jurNvF1
uTlrlprHb6c3L30mxWpndBaR01lCU/eCNTjkDD61g//3WgufqUDG+4R0F5VV scripting

-- INSERT -- 1,96 All
```

```
masla@Hp1aptop MINGW64 ~/Downloads
$ cat /c/Users/masla/.ssh/id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIHgkeZmubmaroG7nDe06ZGm18VEZdSwSzaM+9GjYUhfT
masla@Hp1aptop

masla@Hp1aptop MINGW64 ~/Downloads
$ ssh -i scripting.pem ubuntu@18.206.204.70
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jun  6 09:18:03 UTC 2025

System load:  0.02          Processes:           108
Usage of /:   29.0% of 6.71GB Users logged in:       0
Memory usage: 26%          IPv4 address for enX0: 172.31.74.193
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.
root@ip-172-31-74-193:/home/ubuntu/.ssh# cd
root@ip-172-31-74-193:~# ls
snap
root@ip-172-31-74-193:~# exit
exit
ubuntu@ip-172-31-74-193:~$ exit
logout
Connection to 18.206.204.70 closed.

masla@Hp1aptop MINGW64 ~/Downloads
$ ssh ubuntu@18.206.204.70
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Fri Jun  6 09:20:52 UTC 2025

System load:  0.0          Processes:           108
Usage of /:   29.0% of 6.71GB Users logged in:       0
Memory usage: 25%          IPv4 address for enX0: 172.31.74.193
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

2 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
```

6) Launch any ec2 using spot purchasing option.

We are able to connect spot instance even before initialization

Purchasing optionInfo

☐ None

☐ Capacity Blocks

☒ Spot instances

Launch instances for your active capacity blocks

Request Spot Instances at the Spot price, capped at the On-Demand price

Discard Spot instance options

Spot Instance OptionsInfo

Specify Spot Instance Options such as Maximum Price, Request type, expiration date and interruption behavior

Maximum priceInfo

☒ No maximum price

☐ Set your maximum price (per instance/hour)

Request typeInfo

Select

Valid toInfo

☒ No request expiry date

☐ Set your request expiry date

Interruption behaviorInfo

Select

Instance summary for i-0873130cf98d6f0ecInfo

Connect

Instance state

Actions

Updated less than a minute ago

Instance ID

i-0873130cf98d6f0ec

IPv6 address

-

Hostname type

IP name: ip-172-31-68-86.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

44.201.172.105 [Public IP]

IAM Role

-

IMDSv2

Required

Public IPv4 address

44.201.172.105 | open address

Instance state

Running

Private IP DNS name (IPv4 only)

ip-172-31-68-86.ec2.internal

Instance type

t2.micro

VPC ID

vpc-dac7f6bc

Subnet ID

subnet-6eaabb43

Instance ARN

arn:aws:ec2:us-east-1:147834559194:instance/i-0873

Private IPv4 addresses

172.31.68.86

Public DNS

ec2-44-201-172-105.compute-1.amazonaws.com | open address

Elastic IP addresses

-

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendation s. | Learn more

Auto Scaling Group name

-

Managed

false

masla@HpLaptop MINGW64 ~/Downloads

\$ ssh -i scripting.pem ec2-user@44.201.172.105

The authenticity of host '44.201.172.105 (44.201.172.105)' can't be established.

ED25519 key fingerprint is SHA256:cknFLYaYwmkVvbECvRI3q73EhgErDnbWEvEjbjBqvSk.

This key is not known by any other names.

Are you sure you want to continue connecting (yes/no/[fingerprint])? yes

Warning: Permanently added '44.201.172.105' (ED25519) to the list of known hosts

#####

#####

###|

##/

~'-'>

~.

~\_/\_/

~\_/\_/m/'

Amazon Linux 2023

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

[ec2-user@ip-172-31-68-86 ~]\$ |

spot

i-0873130cf98d6f0ec

Running

t2.micro

Initializing

View alarms +

us-east-1d

ec2-44-201-172-105

7) Enable Termination policy on ec2 created in Task 2.

Change termination (deletion) protection

To prevent your instance from being accidentally deleted, you can enable termination protection for the instance. [Learn more](#)

Instance ID

i-056a0b83b6d1387de

(nginx)

Termination protection

☐

Enable

Cancel

Save

Change termination (deletion) protection

To prevent your instance from being accidentally deleted, you can enable termination protection for the instance. [Learn more](#)

Instance ID

i-056a0b83b6d1387de

(nginx)

Termination protection

☒

Enable

Cancel

Save

Successfully enabled termination protection for instance i-056a0b83b6d1387de. The instance can't be deleted.

Instances (1/2)

Info

Last updated about 2 hours ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/>	nginx	i-056a0b83b6d1387de	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-18-20
<input type="checkbox"/>	apache	i-0afc78769278fdb4c	Terminated	t2.micro	-	View alarms +	us-east-1d	-

i-056a0b83b6d1387de (nginx)

Failed to terminate (delete) an instance: The instance 'i-056a0b83b6d1387de' may not be terminated. Modify its 'disableApiTermination' instance attribute and try again.

Notifications 1 0 1 0 0 0

Instances (1/2)

Info

Last updated about 2 hours ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/>	nginx	i-056a0b83b6d1387de	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-18-20
<input type="checkbox"/>	apache	i-0afc78769278fdb4c	Terminated	t2.micro	-	View alarms +	us-east-1d	-

i-056a0b83b6d1387de (nginx)

Successfully initiated termination (deletion) of i-056a0b83b6d1387de

Notifications 1 0 3 0 0 0

Instances (1/2)

Info

Last updated about 2 hours ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/>	nginx	i-056a0b83b6d1387de	Shutting-d...	t2.micro	2/2 checks passed	View alarms +	us-east-1d	ec2-18-20

i-056a0b83b6d1387de (nginx)

Successfully initiated termination (deletion) of i-056a0b83b6d1387de

Notifications 1 0 3 0 0 0

Successfully removed termination protection for instance i-056a0b83b6d1387de. The instance can be deleted.

Notifications 1 0 3 0 0 0

Failed to terminate (delete) an instance: The instance 'i-056a0b83b6d1387de' may not be terminated. Modify its 'disableApiTermination' instance attribute and try again.

Notifications 1 0 3 0 0 0

Successfully enabled termination protection for instance i-056a0b83b6d1387de. The instance can't be deleted.

Notifications 1 0 3 0 0 0



8) Launch one ec2 using Aws CLI.

```
masla@HpLaptop MINGW64 ~/Downloads
$ aws configure
AWS Access Key ID [*****V2I7]: AKIASE25ALLNFHKHND0U
AWS Secret Access Key [*****94M2]: 1KFde8qjPrILXdvrcIn+iJiLH0jAPSIygV
cSviA+
Default region name [us-east-1]: us-east-1
Default output format [text]: text

masla@HpLaptop MINGW64 ~/Downloads
$ aws ec2 create-key-pair --key-name MyKeyPair --query 'KeyMaterial' --output te
xt > MyKeyPair.pem

masla@HpLaptop MINGW64 ~/Downloads
```

```
masla@HpLaptop MINGW64 ~/Downloads
$ aws ec2 create-security-group --group-name my-sg --description "My security gr
oup"
sg-00459cf3e947de82b    arn:aws:ec2:us-east-1:147834559194:security-group/sg-004
59cf3e947de82b

147834559194    r-0b16e1f778c8a4004
INSTANCES      0    x86_64    a9cad62b-5ae8-47f7-91c6-cdd98d48f7e4    legacy-bios    False    True    xen    ami-0e9bbd70d26d7cf4f    i-0688e1b7129f76904    t2.micro    MyKeyPair    2025-06-06T13:29:5
7-00:00    ip-172-31-67-212.ec2.internal    172.31.67.212    /dev/xvda    ebs
CAPACITYRESERVATIONSPECIFICATION    open
CPUOPTIONS      1    1
ENCLAVEOPTIONS  False
MAINTENANCEOPTIONS    default
METADATAOPTIONS enabled disabled    1    optional    disabled    pending
MONITORING    disabled
NETWORKINTERFACES    interface    12:0d:b8:78:2e:65    eni-05db00c7d9072d7e3    147834559194    ip-172-31-67-212.ec2.internal    172.31.67.212    True    in-use    subnet-6eaabb43    vpc-dac7f6bc
ATTACHMENT      2025-06-06T13:29:57:00:00    eni-attach-091bd2dc5c992dfd    True    0    0    attaching
GROUPS    sg-00459cf3e947de82b    my-sg
OPERATOR    False
PRIVATEIPADDRESSES    True    ip-172-31-67-212.ec2.internal    172.31.67.212
OPERATOR    False
PLACEMENT    us-east-1d    default
-- More -- }
```

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
<input type="checkbox"/>		i-0688e1b7129f76904	Running	t2.micro	Initializing	<a href="#">View alarms +</a>	us-east-1d	ec2-1

```
masla@HpLaptop MINGW64 ~/Downloads
$ aws ec2 describe-instances
RESERVATIONS      147834559194    r-0b16e1f778c8a4004
INSTANCES      0    x86_64    a9cad62b-5ae8-47f7-91c6-cdd98d48f7e4    legacy-bios    False    True    xen    ami-0e9bbd70d26d7cf4f    i-0688e1b7129f76904    t2.micro    MyKeyPair    2025-06-06T13:29:5
7-00:00    ip-172-31-67-212.ec2.internal    172.31.67.212    /dev/xvda    ebs    True
2025-06-06T13:29:57:00:00    hvm    vpc-dac7f6bc
BLOCKDEVICEMAPPINGS    /dev/xvda
EBS      2025-06-06T13:29:58:00:00    True    attached    vol-0a6e3e0d04deb3fa0
CAPACITYRESERVATIONSPECIFICATION    open
CPUOPTIONS      1    1
ENCLAVEOPTIONS  False
HIBERNATIONOPTIONS    False
MAINTENANCEOPTIONS    default default
METADATAOPTIONS enabled disabled    1    optional    disabled    applied
MONITORING    disabled
NETWORKINTERFACES    interface    12:0d:b8:78:2e:65    eni-05db00c7d9072d7e3    147834559194    ip-172-31-67-212.ec2.internal    172.31.67.212    True    in-use    subnet-6eaabb43    vpc-dac7f6bc
ASSOCIATION      amazon    ec2-100-27-19-87.compute-1.amazonaws.com    100.27.19.87
ATTACHMENT      2025-06-06T13:29:57:00:00    eni-attach-091bd2dc5c992dfd    True    0    0    attached
GROUPS    sg-00459cf3e947de82b    my-sg
OPERATOR    False
PRIVATEIPADDRESSES    True    ip-172-31-67-212.ec2.internal    172.31.67.212
ASSOCIATION      amazon    ec2-100-27-19-87.compute-1.amazonaws.com    100.27.19.87
NETWORKPERFORMANCEOPTIONS    default
OPERATOR    False
PLACEMENT    us-east-1d    default
PRIVATEIPNAMEOPTIONS  False    False    ip-name
SECURITYGROUPS    sg-00459cf3e947de82b    my-sg
STATE    16    running

masla@HpLaptop MINGW64 ~/Downloads
$
```

```
masla@HpLaptop MINGW64 ~/Downloads
$ ssh -i MyKeyPair.pem ec2-user@100.27.19.87
The authenticity of host '100.27.19.87 (100.27.19.87)' can't be established.
ED25519 key fingerprint is SHA256:58x6ymyB5tLSnMji+1f187FN0z4K1GwEiZOFJBsS8R4.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '100.27.19.87' (ED25519) to the list of known hosts.

      #_
    ~\  #####      Amazon Linux 2
    ~\  #####\
    ~\  \###|
    ~\  \#/
    ~\  V~' '->
    ~\
    ~\.._
    ~\_/ _/
    _/m/'

A newer version of Amazon Linux is available!

Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-67-212 ~]$
```