

TABLE OF CONTENTS

AWS Cloud Setup Guide

Amazon Web Services (AWS)

- ☐ How to create a free AWS Cloud Account
- ☐ How to create an Ubuntu VM machine
- ☐ Open Port from VPC Networks
- ☐ Run commands on the Ubuntu VM

Summary

Topics covered

- ☐ Road ahead

☐

What is AWS?

Amazon Web Services (AWS) is a comprehensive, evolving cloud computing platform provided by Amazon. AWS can be defined as a huge set of on-demand services provided to the customers on cloud with pay-as-you-go pricing model. The technology allows subscribers to have, at their disposal, a virtual cluster of computers, available all the time, through the Internet. Whether it is about configuring a server or running an application, AWS lets you execute your operations on cloud in a similar manner as you would do on a physical computer.

AWS is the pioneer of the cloud computing technology. Way back in 2006, it first offered its cloud solutions and today is way ahead of its competitors. AWS competes primarily with Microsoft Azure, Google and IBM in the public IaaS market. Amazon's internal IT resource management built AWS, which expanded and grew into an innovative and cost-effective cloud solution provider.

Back in 2006, cloud might still have been a relatively new phenomenon, but today it is critical to the survival of any business enterprise. Cloud is offering some incredible advantages that on-premise technology just cannot compete with. With this cloud, we need not plan for servers and other IT infrastructure which consumes lot of time in advance. Instead, these services can instantly spin up hundreds or thousands of servers in minutes and deliver results faster. We pay only for what we use with no up-front investment and no long-term commitments, which makes AWS cost efficient.

Today, AWS powers multitude of businesses in 190 countries around the world. AWS offers flexible, reliable, scalable, easy-to-use, and cost-effective solutions and allows enterprises to focus on their core competencies while Amazon takes care of the IT and cloud related issues. Let us understand the impact through an example - Netflix is a popular video streaming service which the whole world uses today. Back in 2008, Netflix suffered a major database corruption, and for three days their operations were halted. The problem was scaling, that is when they realized the need for a highly reliable, horizontally scalable, distributed system in the cloud. They started using AWS, and since then their growth has been off the charts.

AWS provides a mix of infrastructure as a service (IaaS), platform as a service (PaaS) and packaged software as a service (SaaS) offerings. More than 100 services comprise the Amazon Web Services portfolio, including those for compute, databases, infrastructure management, application development and security.

What are the top AWS products?

Amazon **EC2** and Amazon **S3** are the two core Infrastructure as a Service (IaaS) services,

EC2 : An EC2 instance is nothing but a virtual server in Amazon Web services terminology. It stands for Elastic Compute Cloud. It is a web service where an AWS subscriber can request and provision a compute server in AWS cloud. EC2 provides you configuration capacity in a seamless manner. With EC2 you have complete control of your computing environment along with high availability, scalability, and cost-effectiveness.

An on-demand EC2 instance is an offering from AWS where the subscriber/user can rent the virtual server per hour and use it to deploy his/her own applications. The instance will be charged per hour with different rates based on the type of the instance chosen. AWS provides multiple instance types for the respective business needs of the user. Thus, you can rent an instance based on your own CPU and memory requirements and use it as long as you want. You can terminate the instance when it's no more used and save on costs. This is the most striking advantage of an on-demand instance.

S3 : This is the Amazon Simple Storage. AWS S3 lets you seamlessly store and retrieve huge amounts of data anytime, anywhere through the web interface. It allows software developers to have access to the data quickly in an inexpensive, reliable and highly scalable manner. You can store all sorts of folders,

files, and documents on the AWS S3.

RDS : This is the Amazon Relational Database Service. The Amazon RDS is a highly scalable relational database service. It offers a simple, cost-efficient database in the cloud that also automatically does database setup, hardware provisioning, backup and patching. Its advantages include high availability, fast performance, security and compatibility.

DynamoDB : This is the Amazon NoSQL database in the cloud that provides extremely high latency at any scale. It offers highly reliable service that is fully managed, has built-in security, in-memory caching, backup and restoration.

VPC : This is the Amazon Virtual Private Cloud which can be thought of as a cloud data center for deploying all your resources. VPC lets you isolate all your resources on the Amazon cloud and thus offer very high security. It gives you complete freedom to work within your virtual networking environment, along with selection of IP addresses, creating subnets, configuring route tables and network gateways. AWS VPC offers logically isolated provisioning on the cloud wherein you can launch your AWS resources.

Why should you learn AWS?

Some of the top reasons why you should learn AWS are as follows:

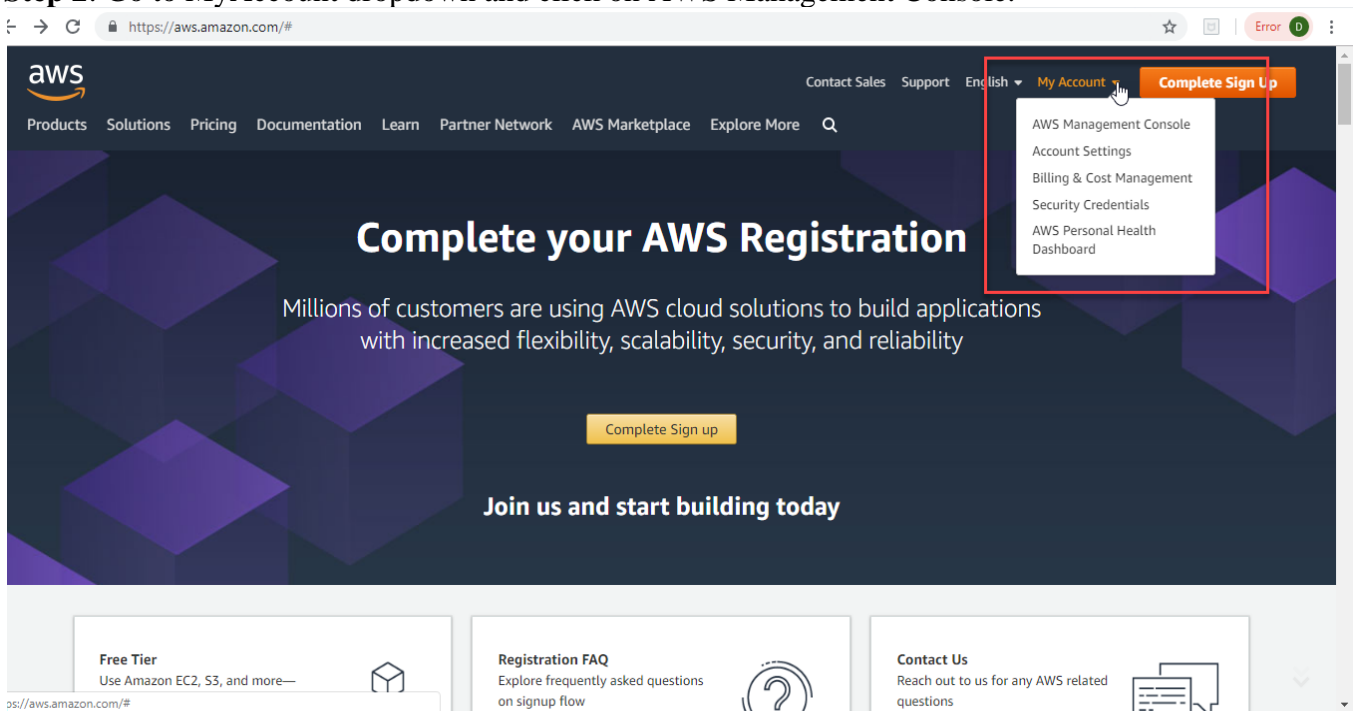
- AWS is an amazing standard of cloud computing and is slowly becoming synonymous with the cloud itself.
- The salaries of AWS professionals are among the best in the IT industry.
- Getting AWS certified is not a big deal; all you need is the right training in AWS.
- There is a huge shortage of certified AWS professionals - thanks to the rapid deployment of AWS.
- There are no prerequisites to learn AWS as anybody can master this top technology.
- AWS is a very vast domain, and anybody can find their niche and excel in their careers.

How to create a free AWS cloud account?

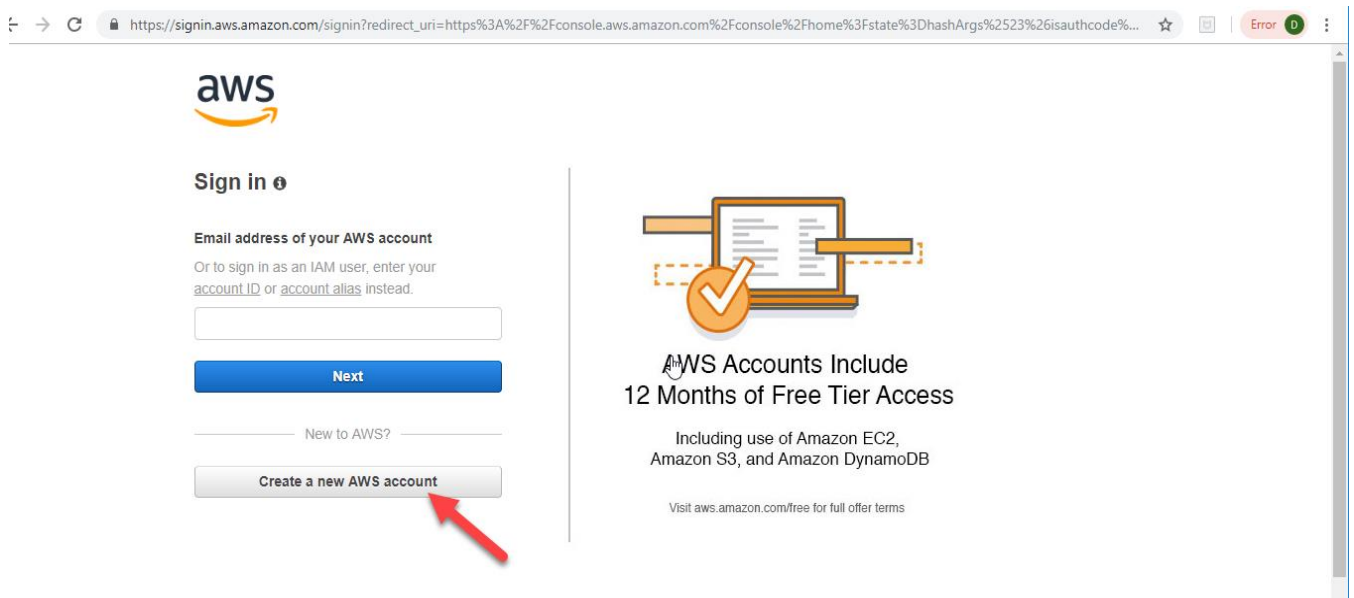
Step 1: Navigate to <https://aws.amazon.com/>. The first screen you will view:



Step 2: Go to MyAccount dropdown and click on AWS Management Console.



Step 3: You landup on this screen to sign in. Click on Create a new AWS account.



Step 4: Enter the details below and click Continue.

aws

English

Create an AWS account

AWS Accounts Include
12 Months of Free Tier Access

Including use of Amazon EC2, Amazon S3, and Amazon DynamoDB
Visit aws.amazon.com/free for full offer terms

Email address

Password

Confirm password

AWS account name

Continue

[Sign in to an existing AWS account](#)

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[Privacy Policy](#) | [Terms of Use](#)

Step 5: Select the Account type as Personal and enter the details. Select your Country from the

dropdown.

https://portal.laws.amazon.com/billing/signup#/account

Contact Information

All fields are required.

Please select the account type and complete the fields below with your contact details.

Account type ⓘ

☐ Professional ☒ Personal

Full name

Phone number

Country/Region

India

* If you select India, your country/region selection cannot be changed after creating the account

Address

City

State / Province or region

Step 6: Enter the details and click the check here checkbox and Create Account and Continue.

https://portal.laws.amazon.com/billing/signup#/account

City

State / Province or region

Postal code

Amazon Internet Services Pvt. Ltd. Customer Agreement

Customers with an India contact address are now required to contract with Amazon Internet Service Private Ltd. (AISPL). AISPL is the local seller for AWS infrastructure services in India.

☒ Check here to indicate that you have read and agree to the terms of the AISPL Customer Agreement

Create Account and Continue

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[Privacy Policy](#) | [Terms of Use](#) | [Sign Out](#)

Step 7: Complete the Payment Information. Though, it is a free trial account, you need to enter a card details for identification/verification purpose.

Payment Information

Please type your payment information so we can verify your identity. We will not charge you unless your usage exceeds the [AWS Free Tier Limits](#). Review [frequently asked questions](#) for more information.

As part of our card verification process we will charge INR 2 on your card when you click the "Secure Submit" button below. This will be refunded once your card has been validated. Your bank may take 3-5 business days to show the refund. Mastercard/Visa customers may be redirected to your bank website to authorize the charge.

Credit/Debit card number

Expiration date

Cardholder's name

CVV

Billing address

☒ Use my contact address

Step 8: Fill the required information and click Secure Submit.

Cardholder's name

CVV

Billing address

☒ Use my contact address

☐ Use a new address

Do you have a PAN?

You can go on the [Tax Settings Page](#) on Billing and Cost Management Console to update your PAN information.

☒ Yes ☐ No

Secure Submit

Step 9: Once the payment process is completed, you will view this screen. Fill in the appropriate details

and click Contact me.

https://portal.aws.amazon.com/billing/signup?redirect=success&x-awsbc-xrf-token=eU1PQjdLNjdtbmU1Mnk1OXFrTzI0VEgyQlZJdjVBczQxRVNFYXIFSkFqb3w... Error

Confirm your identity

Before you can use your AWS account, you must verify your phone number. When you continue, the AWS automated system will contact you with a verification code.

How should we send you the verification code?

☒ Text message (SMS) ☐ Voice call

Country or region code

India (+91)

Phone number

Security check

5yngpn

Contact me

Step 10: Enter the verification code as received on the given mobile number and click Verify code.

Enter verification code

Enter the 4-digit verification code that you received on your phone.

5002

Verify Code

Having trouble? Sometimes it takes up to 10 minutes to receive a verification code. If it's been longer than that, [return to the previous page](#) and enter your number again.

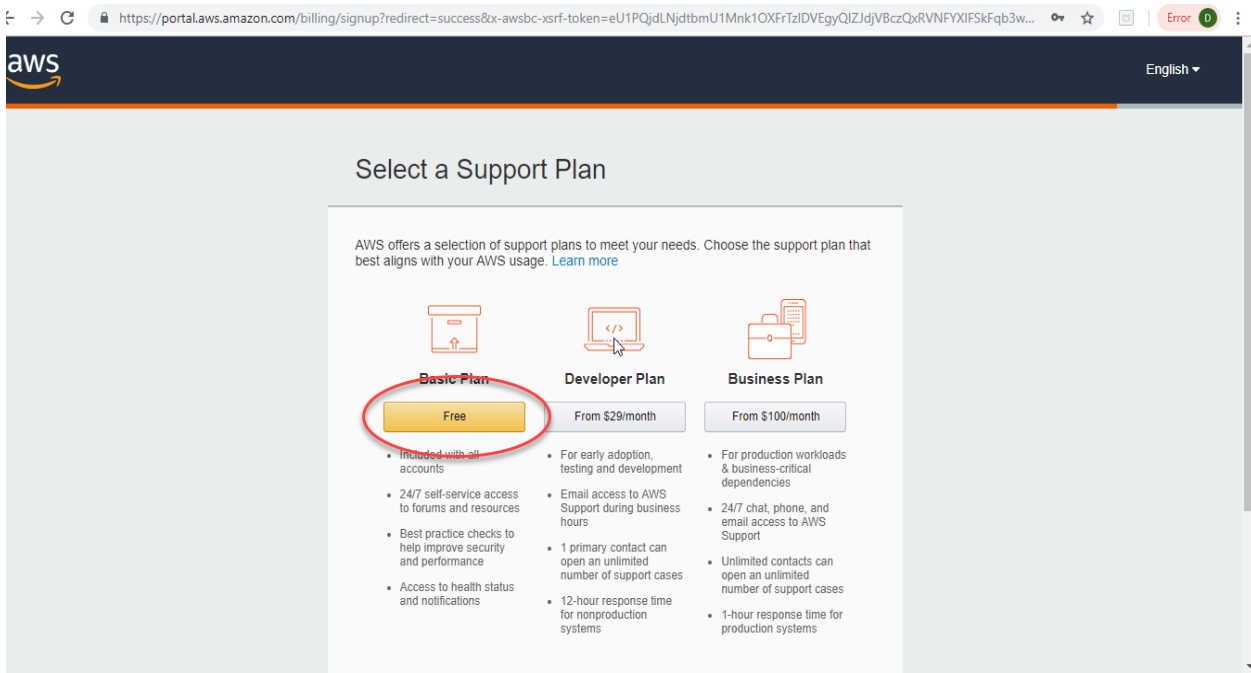
Step 11: You will view the below screen.

✓

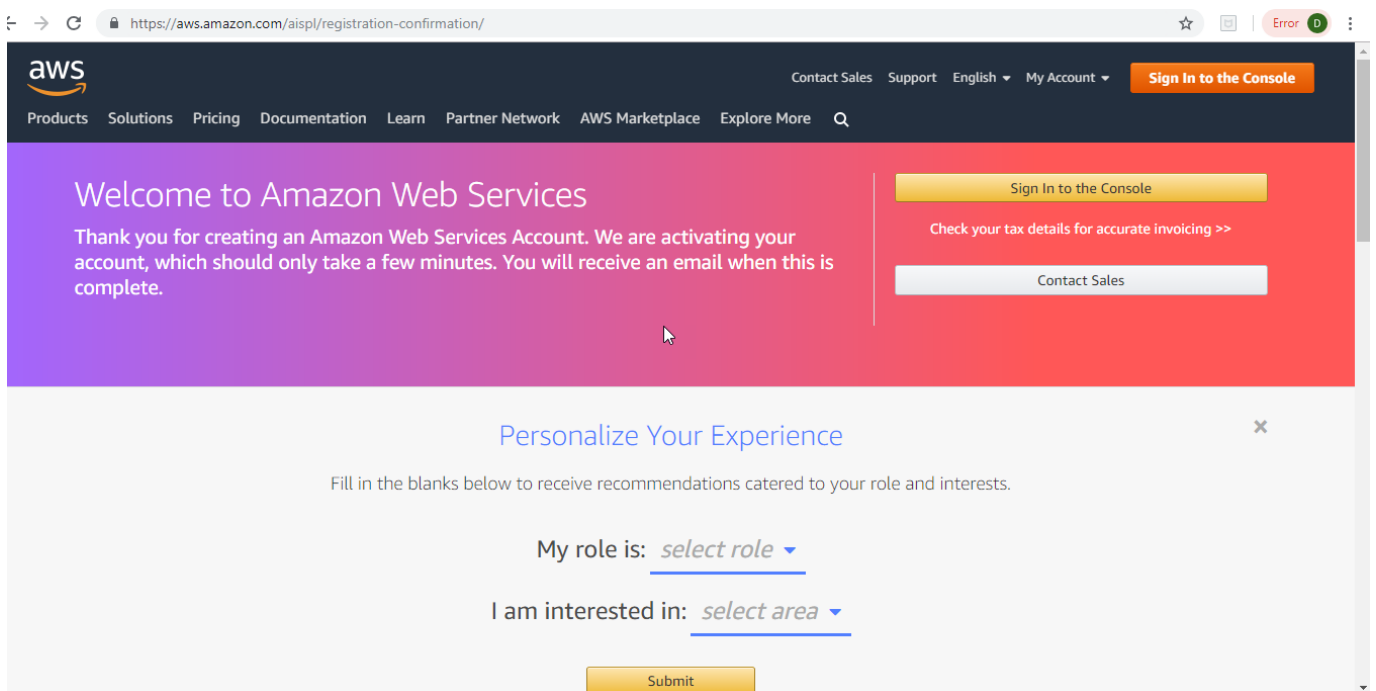
Your identity has been verified successfully.

Continue

Step 12: Choose the Basic Plan by clicking Free button on the screen as below.



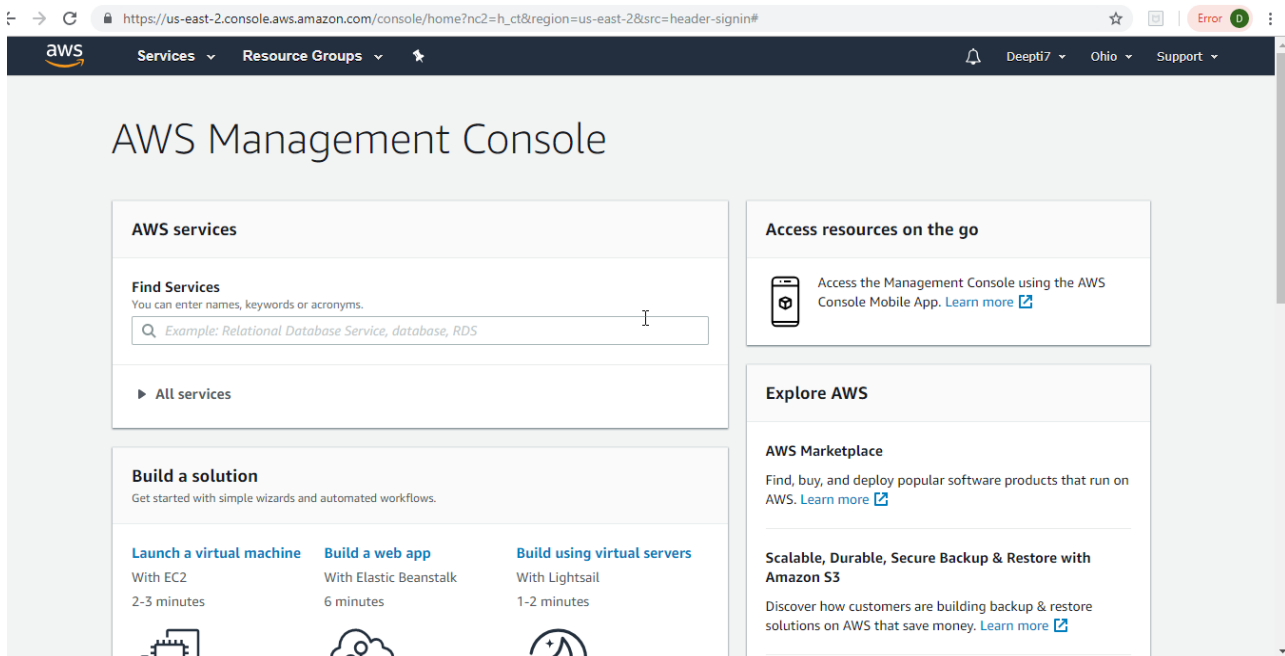
Step 13: You have successfully created your AWS free account. You should see this welcome screen.



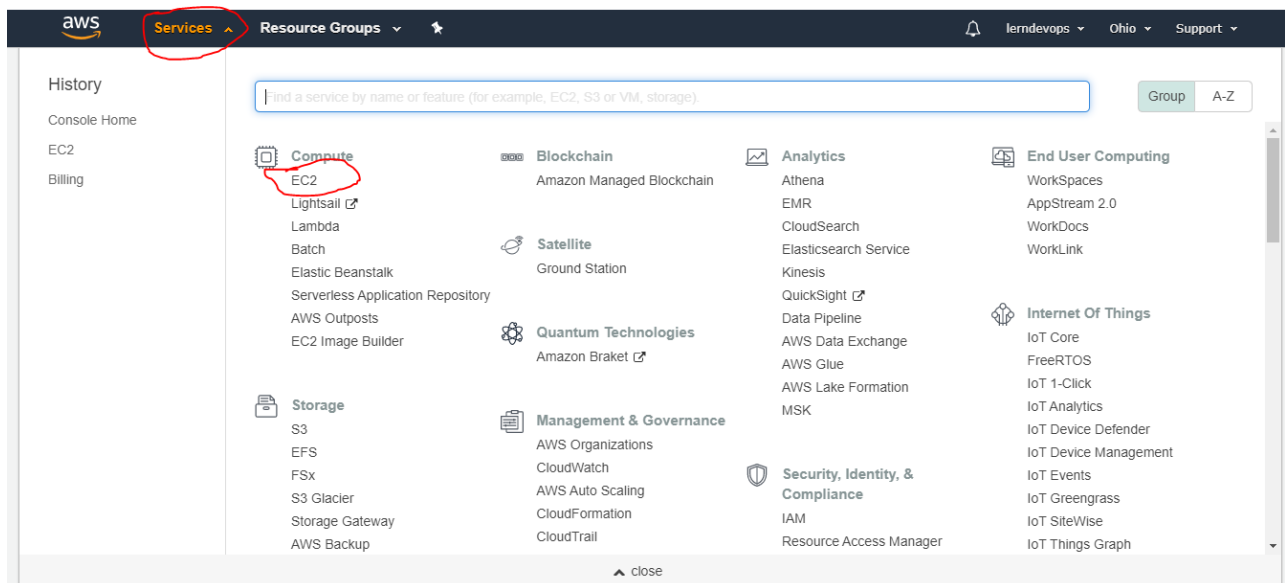
How to create a new Ubuntu Virtual Machine

Now, let's create a new VM instance on AWS.

Step 1: Once you login to the console clicking the Sign in to the console button on the welcome screen above using your credentials, you view the AWS console.



Step 2: Click on Services & Then on EC2 Service.



Step 3: Once you click EC2 Service, you will view the below screen, now on the left side menu Scroll down to see Network & Security Section then Click on Security Groups

The screenshot displays the AWS Management Console for the EC2 service. On the left, the navigation menu includes sections like IMAGES, ELASTIC BLOCK STORE, and NETWORK & SECURITY. The 'NETWORK & SECURITY' section is highlighted with a red box, and 'Security Groups' is listed as a new feature. The main content area shows the 'Resources' section for EC2 in the US East (Ohio) Region, listing various resources like Running instances, Elastic IPs, and Security groups. A 'Launch instance' button is visible in the 'Launch instance' section.

Step 4: once we click on Security group we will see below screen, Now click on Create Security Group (you may see only default Security Group as you are doing it for first time)

The screenshot displays the AWS Management Console for the 'Security Groups' page. The 'Create security group' button is highlighted with a red box. The table lists several security groups, including the 'default' group which is selected. The table columns include Security group ID, Security group name, VPC ID, Description, Owner, and Inbound rules count.

	Security group ID	Security group name	VPC ID	Description	Owner	Inbound rules count
<input type="checkbox"/>	sg-0077dfc0a49659929	mysecgroup	vpc-96bf59fd	mysecgroup	666385686561	4 Permission entries
<input type="checkbox"/>	sg-012bf9611da478476	workshop	vpc-96bf59fd	workshop	666385686561	4 Permission entries
<input checked="" type="checkbox"/>	sg-03ae6063	default	vpc-96bf59fd	default VPC security gr...	666385686561	1 Permission entry
<input type="checkbox"/>	sg-04348ad5aa13b55cf	eduxample	vpc-96bf59fd	launch-wizard-1 create...	666385686561	3 Permission entries
<input type="checkbox"/>	sg-047584a5f36062f92	intellidemo	vpc-96bf59fd	intellidemo	666385686561	4 Permission entries
<input type="checkbox"/>	sg-06b6dc0d5a4dcff8f	edulabs	vpc-96bf59fd	edulabs	666385686561	4 Permission entries
<input type="checkbox"/>	sg-06dbd6f6cc4640531	intellipat	vpc-96bf59fd	intellipat	666385686561	4 Permission entries
<input type="checkbox"/>	sg-0ee079be1610f98b1	Test	vpc-96bf59fd	launch-wizard-1 create...	666385686561	3 Permission entries

Step 5: after clicking on Create Security Group you will see below Screen. You can create the Security Group as below

Basic Deatails:

you can enter any name (ex: demo)

you can enter any descript (ex: demo)

VPC: leave it as it is don't change anything

Inbound Rules: configure as you see in screen shot.

Add rule → All traffic (source → change to anywhere)

Add rule → SSH (source → change to anywhere)

Outbout Rules: keep the default

After updating all, Create Security Group at the bottom right corner.

EC2 > Security Groups > Create security group

Create security group [info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

Security group name [info](#)
demo
Name cannot be edited after creation.

Description [info](#)
demo

VPC [info](#)
vpc-96bf59fd

Inbound rules [info](#)

Type	Protocol	Port range	Source	Description - optional	
All traffic	All	All	Anywhere		Delete
SSH	TCP	22	Anywhere		Delete

Outbound rules [info](#)

Type	Protocol	Port range	Destination	Description - optional	
All traffic	All	All	Custom		Delete

[Add rule](#)

[Cancel](#) [Create security group](#)

Ensure the Security Group Create Successfully & rules updated Accordingly.

Security group (sg-0075b0b5056a1d88b) (demo) was created successfully

EC2 > Security Groups > sg-0075b0b5056a1d88b - demo

sg-0075b0b5056a1d88b - demo

[Delete security group](#) [Copy to new security group](#)

Details

Property	Value
Security group name	demo
Security group ID	sg-0075b0b5056a1d88b
Description	demo
VPC ID	vpc-96bf59fd
Owner	666385686561
Inbound rules count	4 Permission entries
Outbound rules count	1 Permission entry

Inbound rules [Edit inbound rules](#)

Type	Protocol	Port range	Source	Description - optional
All traffic	All	All	0.0.0.0/0	-
All traffic	All	All	:::0	-
SSH	TCP	22	0.0.0.0/0	-
SSH	TCP	22	:::0	-

Step6: Now Lets Satart Creating the Ubuntu Instance

From above Screen, left side Menu Scroll Up and click on EC2 DashBoard New, you will see below Screen, then click on Launch Instance button as seen in below screen shot.

The screenshot shows the AWS Management Console. In the left sidebar, the 'EC2 Dashboard New' link is highlighted with a red box. The main content area displays the 'Launch instance' button, also highlighted with a red box. The 'Resources' section shows a summary of EC2 resources in the US East (Ohio) Region:

Resource	Count
Running instances	1
Elastic IPs	0
Dedicated Hosts	0
Snapshots	0
Volumes	1
Load balancers	0
Key pairs	9
Security groups	9
Placement groups	0

Step 7: after Clicking on Launch Instance you will see below screen, choose Ubuntu 18.04 LTS & Click on Select button on Right side

The screenshot shows the 'Choose an Amazon Machine Image (AMI)' step in the AWS Management Console. The 'Ubuntu Server 18.04 LTS (HVM), SSD Volume Type' AMI is highlighted with a red box. The 'Select' button for this AMI is also highlighted with a red box.

AMI	Architecture	Root Device Type	Virtualization Type	ENA Enabled	Select
Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-0f7919c33c90f5b58 (64-bit x86) / ami-050d581a8c1d4a570 (64-bit Arm)	64-bit x86 / 64-bit Arm	ebs	hvm	Yes	Select
Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-097834fcb3081f51a	64-bit x86	ebs	hvm	Yes	Select
Red Hat Enterprise Linux 8 (HVM), SSD Volume Type - ami-0520e698dd500b1d1 (64-bit x86) / ami-0099847d600887c9f (64-bit Arm)	64-bit x86 / 64-bit Arm	ebs	hvm	Yes	Select
SUSE Linux Enterprise Server 15 SP1 (HVM), SSD Volume Type - ami-04c5bab51cc146925 (64-bit x86) / ami-02e73902018018171 (64-bit Arm)	64-bit x86 / 64-bit Arm	ebs	hvm	Yes	Select
Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-0fc20dd1da406780b (64-bit x86) / ami-0959e8feedaf156bf (64-bit Arm)	64-bit x86 / 64-bit Arm	ebs	hvm	Yes	Select

Step 8: Choose an Instance type. Let the default selection remain and click Configure Instance Details.

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Step 9: you will see below screen & leave the default values as they are & click on Next: Add Storage.

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1 Launch into Auto Scaling Group

Purchasing option ☐ Request Spot instances

Network vpc-96bf59fd (default) Create new VPC

Subnet No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP Use subnet setting (Enable)

Placement group ☐ Add instance to placement group

Capacity Reservation Open Create new Capacity Reservation

IAM role None Create new IAM role

Cancel Previous Review and Launch Next: Add Storage

Step 10: you will see below screen & leave the default values as they are & click on Next: Add Tags.

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/sda1	snap-085c8383cc8833286	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

[Add New Volume](#)

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Tags](#)

Step 11: you will see below screen & leave the default values as they are & click on Next: Configure Security Group.

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key	Value	Instances	Volumes
This resource currently has no tags			

Choose the [Add tag](#) button or [click to add a Name tag](#).
Make sure your [IAM policy](#) includes permissions to create tags.

[Add Tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)

Step 12: you will see below screen, As below Select existing Security Group radio button & from list below choose the security group you created earlier. Then click on Review and Launch at the right bottom & on the next screen Click on Launch button

Step 6: Configure Security Group
A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

Security Group ID	Name	Description	Actions
sg-03ae6063	default	default VPC security group	Copy to new
sg-0075b0b5056a1d88b	demo	demo	Copy to new
sg-06b6dc0d5a4dcff8f	edulabs	edulabs	Copy to new

Type	Protocol	Port Range	Source	Description
All traffic	All	All	0.0.0.0/0	
All traffic	All	All	:::0	
SSH	TCP	22	0.0.0.0/0	
SSH	TCP	22	:::0	

Cancel Previous **Review and Launch**

Step 13: once you click on Launch button you will see a popup as below,

From the first Drop Down, Select Create a New key pair then below Key Pair Name field enter any name & then click on Download Key Pair Button
Ensure the Key Pair (demo.pem as below) downloaded successfully

Once the Key Pair is successfully downloaded Click on Launch Instance

Step 7: Review Instance Launch
Please review your instance launch details. You can edit details before the launch process.

Improve your instances' security
Your instances may be accessible from the Internet. You can also open additional ports in your instance.

AMI Details
Ubuntu Server 18.04 LTS (HVM), Free tier eligible
Root Device Type: ebs Virtualization type: paravirtual

Instance Type
Instance Type: ECUs

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Create a new key pair
Key pair name: demo
Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. Store it in a **secure and accessible location**. You will not be able to download the file again after it's created.

Cancel **Launch Instances**

demo.pem

Launch

Step 14: after clicking on Launch Instance you will see below Screen, Click on View Instances button on bottom right corner

Launch Status

✓ Your instances are now launching
The following instance launches have been initiated: i-018ae553594c6eb42 [View launch log](#)

ℹ Get notified of estimated charges
Create [billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances. Click [View Instances](#) to monitor your instances' status. Once your instances are in the running state, you can connect to them from the Instances screen. [Find out](#) how to connect to your instances.

▼ Here are some helpful resources to get you started

- How to connect to your Linux instance
- Learn about AWS Free Usage Tier
- Amazon EC2: User Guide
- Amazon EC2: Discussion Forum

While your instances are launching you can also

- Create [status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)
- Create and attach additional [EBS volumes](#) (Additional charges may apply)
- Manage [security groups](#)

[View Instances](#)

Step 15: then we will land on below page, wait for couple of minutes you should see your instance in running state.

Select the instance and go through the details below what are all the details it shows up.

New EC2 Experience
Tell us what you think

EC2 Dashboard **New**

Events **New**

Tags

Reports

Limits

INSTANCES

Instances

Instance Types

Launch Templates **New**

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts **New**

Capacity Reservations

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	Key Name	Security Groups
	i-0590c1305098ee8...	t2.micro	us-east-2a	terminated	None			devops	
	i-018ae553594c6eb42	t2.micro	us-east-2b	running	None	ec2-3-136-106-1-us-east-2.compute.amazonaws.com	3.136.106.1	demo	demo

Description Status Checks Monitoring Tags

Instance ID i-018ae553594c6eb42

Instance state running

Instance type t2.micro

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

Private DNS ip-172-31-27-102.us-east-2.compute.internal

Private IPs 172.31.27.102

Secondary private IPs

VPC ID vpc-9b6bf59d

Subnet ID subnet-507a3a2a

Network interfaces eth0

Public DNS (IPv4) ec2-3-136-106-1-us-east-2.compute.amazonaws.com

IPv4 Public IP 3.136.106.1

Elastic IPs

Availability zone us-east-2b

Security groups demo. [view inbound rules](#). [view outbound rules](#)

Scheduled events No scheduled events

AMI ID ubuntu/images/hvm-ssd/ubuntu-bionic-18.04-amd64-server-2020112 (ami-0fc20dd1da406780b)

Platform details -

Usage operation -

Feedback English (US)

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Step 16: Click on Connect on the screen below.

The screenshot shows the AWS Management Console interface. The 'Connect' button in the top navigation bar is circled in red. Below the navigation bar, there is a table of instances. The first instance is highlighted, showing its details in a pop-up window. The instance is named 'i-025eec3b8a3c9b060', has an instance type of 't2.micro', and is in the 'us-east-2c' availability zone. Its state is 'running'. The public DNS (IPv4) is 'ec2-52-14-107-171.us-east-2.compute.amazonaws.com'. The 'Connect' button is also visible in the top left of the instance details window.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4
	i-025eec3b8a3c9b060	t2.micro	us-east-2c	running	Initializing	None	ec2-52-14-107-171.us-...	52.14

Instance: i-025eec3b8a3c9b060 Public DNS: ec2-52-14-107-171.us-east-2.compute.amazonaws.com

Description Status Checks Monitoring Tags

Instance ID i-025eec3b8a3c9b060 Public DNS (IPv4) ec2-52-14-107-171.us-east-2.compute.amazonaws.com

Instance state running IPv4 Public IP 52.14.107.171

Step 17: You will view this popup – Connect to your instance. To connect to the VM, follow the instructions, Copy the ssh line as highlighted below, then click on close

The screenshot shows the 'Connect to your instance' popup window. The 'Connection method' is set to 'A standalone SSH client'. The 'To access your instance:' section lists four steps: 1. Open an SSH client. (find out how to [connect using PuTTY](#)) 2. Locate your private key file (demo.pem). The wizard automatically detects the key you used to launch the instance. 3. Your key must not be publicly viewable for SSH to work. Use this command if needed: `chmod 400 demo.pem` 4. Connect to your instance using its Public DNS: `ec2-3-136-106-1.us-east-2.compute.amazonaws.com` The 'Example:' section shows the command: `ssh -i "demo.pem" ubuntu@ec2-3-136-106-1.us-east-2.compute.amazonaws.com` This command is highlighted with a red circle. Below the command, it says: 'Note that in most cases the command above will be correct, however, please ensure that you read your AMI usage instructions to ensure that the AMI owner has not changed the default AMI username.' At the bottom, it says: 'If you need any assistance connecting to your instance, please see our [connection documentation](#).' The 'Close' button is in the bottom right corner.

Connect to your instance

Connection method ☒ A standalone SSH client ☐ Session Manager ☐ EC2 Instance Connect (browser-based SSH connection)

To access your instance:

1. Open an SSH client. (find out how to [connect using PuTTY](#))
2. Locate your private key file (demo.pem). The wizard automatically detects the key you used to launch the instance.
3. Your key must not be publicly viewable for SSH to work. Use this command if needed:
`chmod 400 demo.pem`
4. Connect to your instance using its Public DNS:
`ec2-3-136-106-1.us-east-2.compute.amazonaws.com`

Example:

```
ssh -i "demo.pem" ubuntu@ec2-3-136-106-1.us-east-2.compute.amazonaws.com
```

Note that in most cases the command above will be correct, however, please ensure that you read your AMI usage instructions to ensure that the AMI owner has not changed the default AMI username.

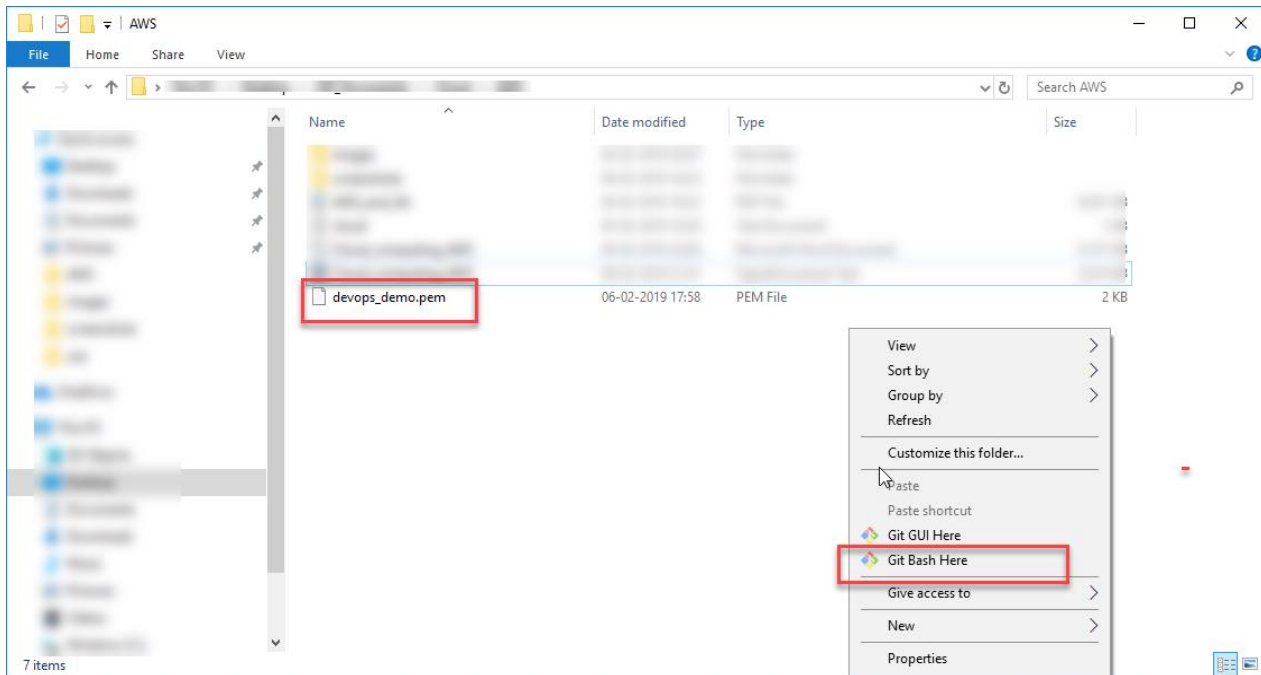
If you need any assistance connecting to your instance, please see our [connection documentation](#).

Close

Step 18: Download & Install Git Bash on your System (you can search “download gitbash in google” & click on the link <https://git-scm.com/downloads>)

Click on Windows if you are using windows, it will download an .exe file; install the Git Bash with default setting. After that

Go to the folder where you saved the .pem file and do right click and run GitBash Here.

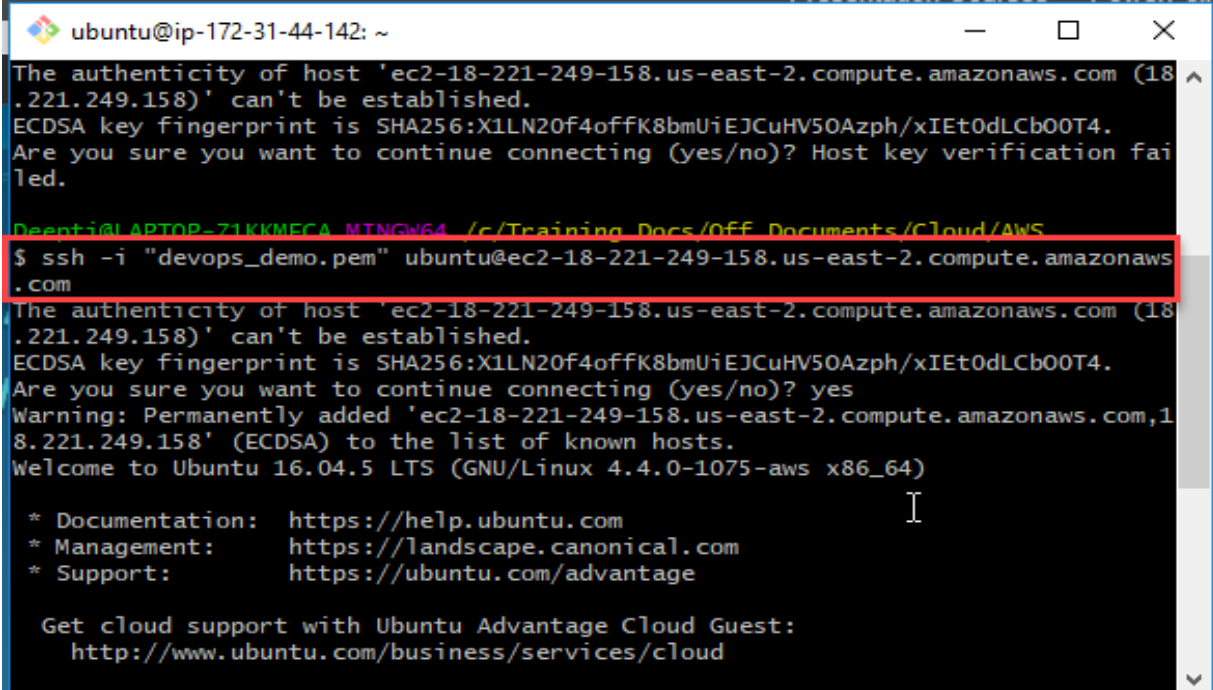


Note: git bash is required only for windows machine user only. Mac Users can use the terminal on Mac directly

Step 19: Once GitBash opens, run the following command to the public VM instance you created.

`ssh -i "demo.pem" ubuntu@ec2-18-221-249-158.us-east-2.compute.amazonaws.com`

The connection is established.

A screenshot of a terminal window titled 'ubuntu@ip-172-31-44-142: ~'. The terminal shows a failed SSH attempt with the message 'The authenticity of host 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com (18.221.249.158)' can't be established. ECDSA key fingerprint is SHA256:X1LN20f4offK8bmUiEJCuHV50Azph/xIEt0dLCb00T4. Are you sure you want to continue connecting (yes/no)? Host key verification failed.' Below this, a red rectangular box highlights the command '\$ ssh -i "devops_demo.pem" ubuntu@ec2-18-221-249-158.us-east-2.compute.amazonaws.com'. After the command, the terminal shows a successful connection: 'The authenticity of host 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com (18.221.249.158)' can't be established. ECDSA key fingerprint is SHA256:X1LN20f4offK8bmUiEJCuHV50Azph/xIEt0dLCb00T4. Are you sure you want to continue connecting (yes/no)? yes. Warning: Permanently added 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com,18.221.249.158' (ECDSA) to the list of known hosts. Welcome to Ubuntu 16.04.5 LTS (GNU/Linux 4.4.0-1075-aws x86_64)'. This is followed by system information: '* Documentation: https://help.ubuntu.com', '* Management: https://landscape.canonical.com', '* Support: https://ubuntu.com/advantage'. At the bottom, it says 'Get cloud support with Ubuntu Advantage Cloud Guest: http://www.ubuntu.com/business/services/cloud'. A cursor is visible on the line following the support information.

```
ubuntu@ip-172-31-44-142: ~  
The authenticity of host 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com (18.221.249.158)' can't be established.  
ECDSA key fingerprint is SHA256:X1LN20f4offK8bmUiEJCuHV50Azph/xIEt0dLCb00T4.  
Are you sure you want to continue connecting (yes/no)? Host key verification failed.  
Deepti@LAPTOP-71KKMECA-MINGW64 /c/Training_Docs/Off_Documents/Cloud/AWS  
$ ssh -i "devops_demo.pem" ubuntu@ec2-18-221-249-158.us-east-2.compute.amazonaws.com  
The authenticity of host 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com (18.221.249.158)' can't be established.  
ECDSA key fingerprint is SHA256:X1LN20f4offK8bmUiEJCuHV50Azph/xIEt0dLCb00T4.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added 'ec2-18-221-249-158.us-east-2.compute.amazonaws.com,18.221.249.158' (ECDSA) to the list of known hosts.  
Welcome to Ubuntu 16.04.5 LTS (GNU/Linux 4.4.0-1075-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
Get cloud support with Ubuntu Advantage Cloud Guest:  
http://www.ubuntu.com/business/services/cloud
```