

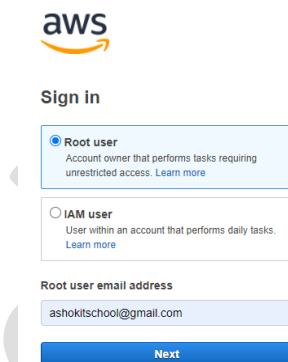
What IS EC2

- **EC2** stands for **Amazon Elastic Compute Cloud**
- Amazon EC2 is most well-known services, offers businesses the ability to run applications on the public cloud
- EC2 provides resizable computing capacity in the cloud so developers can enjoy great scalability for building applications
- Instead of purchasing your own hardware and connecting it to a network, Amazon gives you nearly unlimited virtual machines to run your applications while they take care of the hardware.
- AWS supports multiple operating systems from Windows to many flavors of Linux etc. As a customer, you are also able to bring your own custom OS and run it on their platform.

IN OTHER WORDS, A custom rubber band that can stretch for building applications.

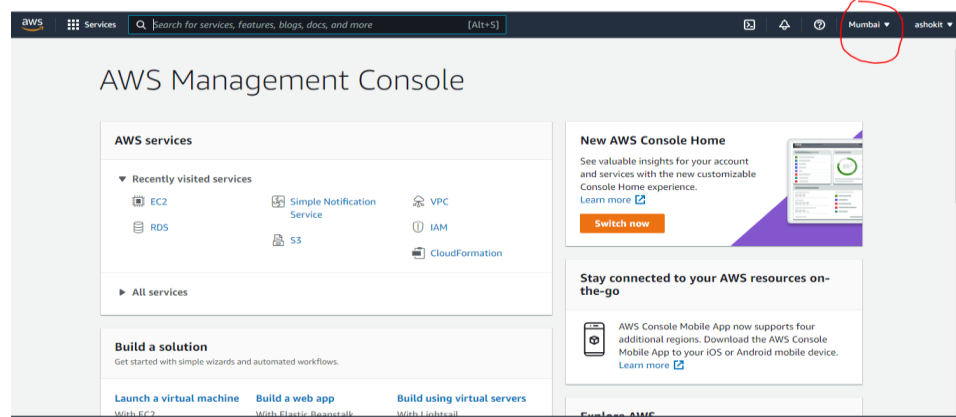
Launching Windows Machine Using AWS EC2

- 1) **Create Account in AWS** (URL: <https://portal.aws.amazon.com/billing/signup#/start>)
- 2) **Login into AWS Account using your credentials**

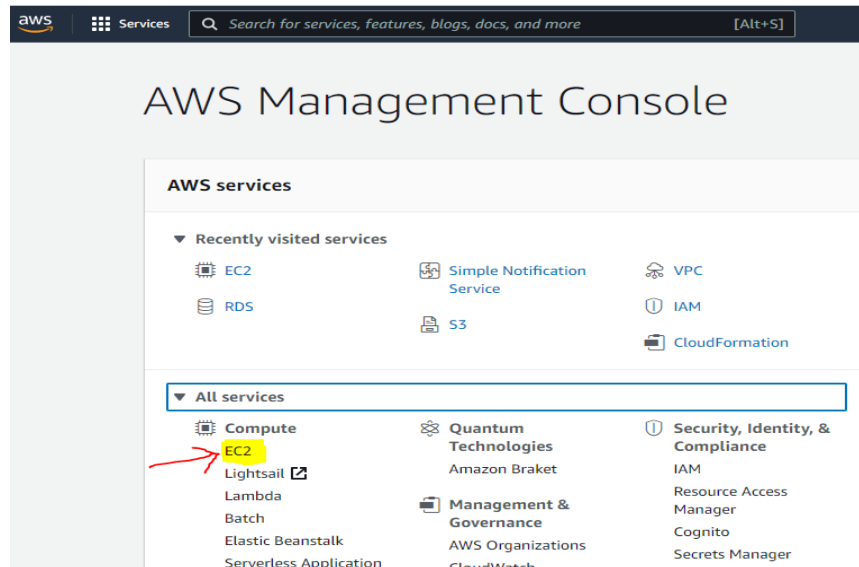


The image shows the AWS Sign in page. At the top is the AWS logo. Below it is the 'Sign in' heading. There are two radio button options: 'Root user' (selected) and 'IAM user'. The 'Root user' option has a description: 'Account owner that performs tasks requiring unrestricted access. Learn more'. The 'IAM user' option has a description: 'User within an account that performs daily tasks. Learn more'. Below these options is a text input field for 'Root user email address' containing 'ashokitschool@gmail.com'. At the bottom is a blue 'Next' button.

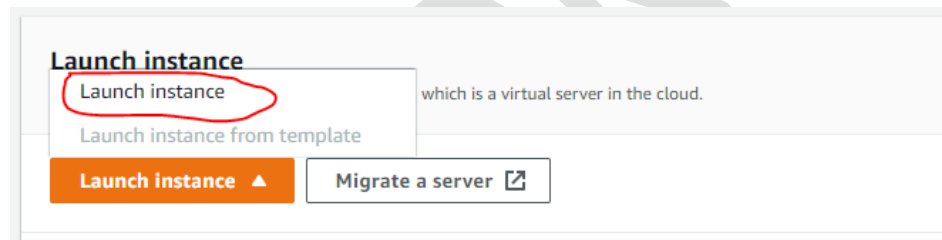
- 3) **Choose region which is near to you (For Me Asia Pacific - Mumbai)**



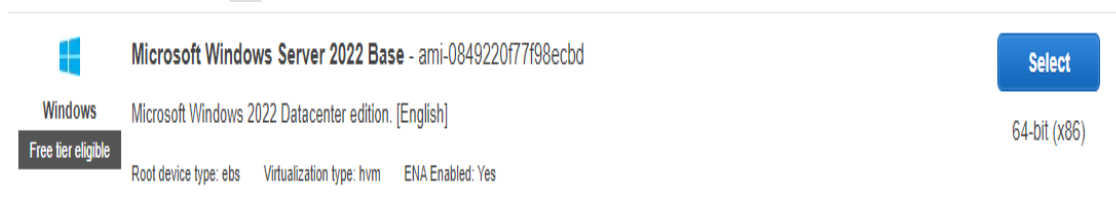
4) Go to services and Select EC2 and Click on Launch Instance



5) Click on Launch Instance



**6) Choose an Amazon Machine Image (AMI) (Note: select free tier eligible)
Ex: Select Windows Image (Ex: Microsoft Windows Server 2022 Base)**



7) Select Instance Type (t2.micro and click on Next)

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 families** **Current generation** **Show/Hide Columns**

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.xlarge	4	16	EBS only	-	Moderate	Yes

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Instance Details](#)

8) Configure Instance Details and Click on Next (Default value 1 instance)

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 [Launch into Auto Scaling Group](#)

Purchasing option ☐ Request Spot instances

Network [Create new VPC](#)

Subnet [Create new subnet](#)

Auto-assign Public IP

Hostname type

DNS Hostname ☐ Enable IP name (A record) DNS requests
☒ Enable resource-based IPv4 (A record) DNS requests
☐ Enable resource-based IPv6 (AAAA record) DNS requests

Placement group ☐ Add instance to placement group

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

9) Add Storage and click on Next (Default 30)

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	Snapshot-02aa8939b324601be	<input type="text" value="30"/>	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 GiB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Shared file systems

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

10) Add Tag and click on Next

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	Network Interfaces
Name	WindowsVM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

11) Configure Security Group and Click on 'Review and Launch'

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 name: launch-wizard-2
Description: launch-wizard-2 created 2022-02-17T11:38:14.765+05:30

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

[Add Rule](#)

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

[Cancel](#) [Previous](#) [Review and Launch](#)

12) Review Instance Launch and click on Launch

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Warning
Improve your instances' security. Your security group, launch-wizard-2, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

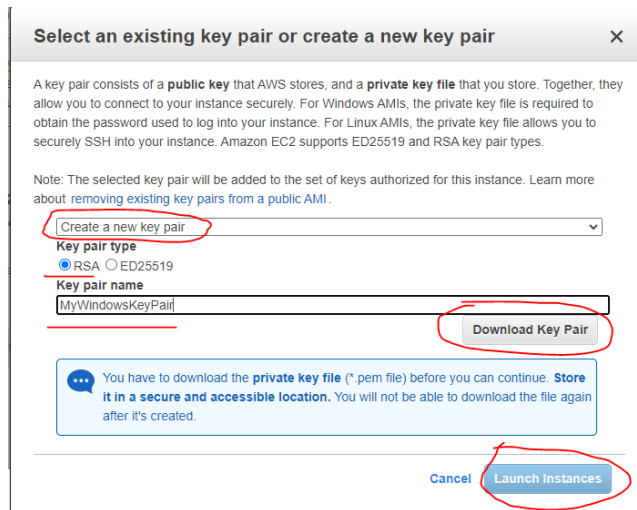
AMI Details

 **Microsoft Windows Server 2022 Base - ami-0849220f77f98ecbd**
Microsoft Windows 2022 Datacenter edition. [English]
Root Device Type: ebs Virtualization type: hvm
If you plan to use this AMI for an application that benefits from Microsoft License Mobility, fill out the [License Mobility Form](#). [Don't show me this again](#)

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

[Cancel](#) [Previous](#) [Launch](#)

13) Select New Key Pair --> Choose Name --> Download Key Pair**(Store that key-pair file because we need that file to connect to VM)**

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. Amazon EC2 supports ED25519 and RSA key pair types.

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 type
☒ RSA ☐ ED25519

Key pair name
MyWindowsKeyPair

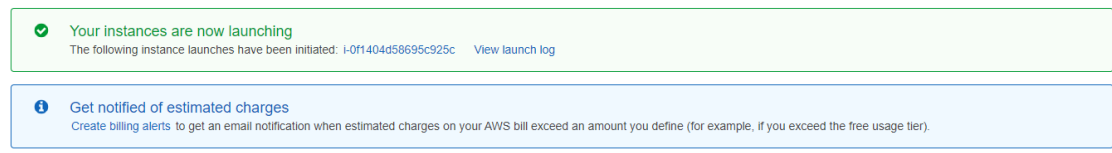
Download Key Pair

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

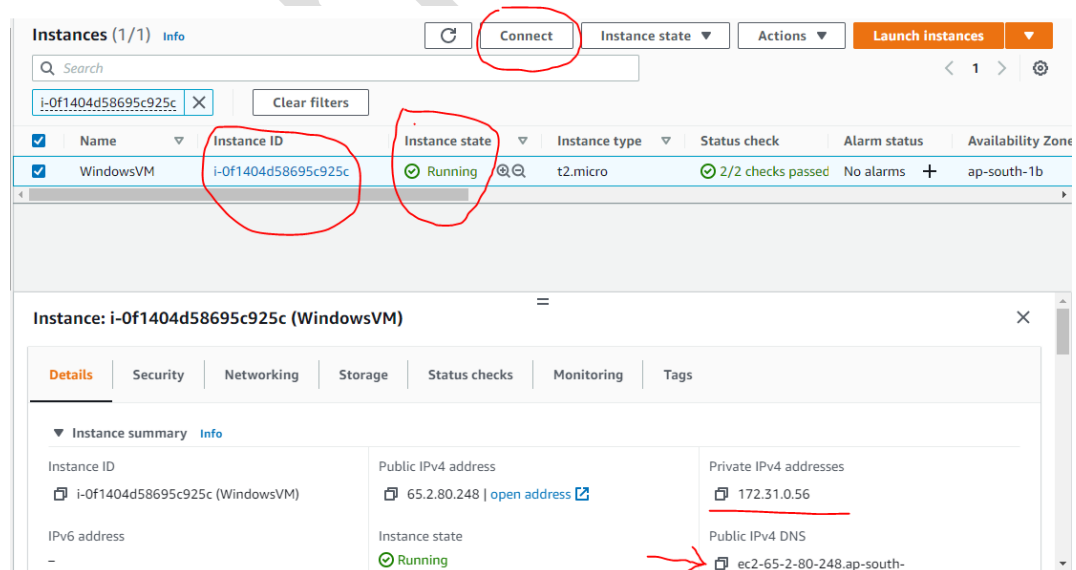
14) Once Instance launched you can see below message

Launch Status



✓ Your instances are now launching
The following instance launches have been initiated: i-0f1404d58695c925c 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).

15) Go to EC2 Dashboard and see Instance Status

Instances (1/1) Info

Search

i-0f1404d58695c925c Clear filters

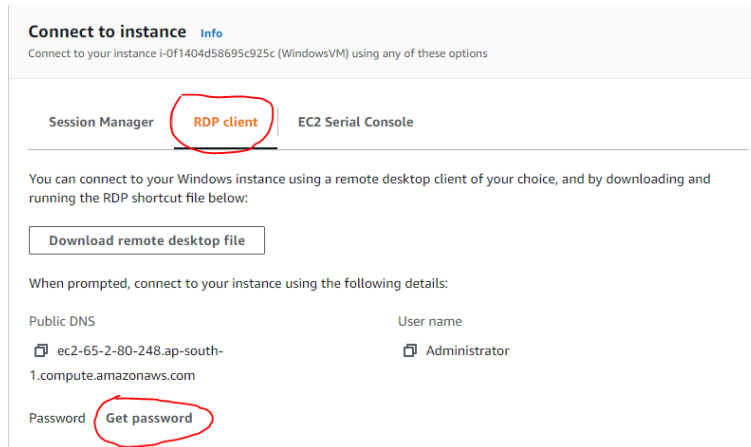
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
WindowsVM	i-0f1404d58695c925c	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1b

Instance: i-0f1404d58695c925c (WindowsVM)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-0f1404d58695c925c (WindowsVM)	Public IPv4 address 65.2.80.248 open address	Private IPv4 addresses 172.31.0.56
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-65-2-80-248.ap-south-

16) Select Instance and Click on Connect -> Go To RDP Client -> Click on 'Get Password'

Connect to instance [Info](#)

Connect to your instance i-Of1404d58695c925c (WindowsVM) using any of these options

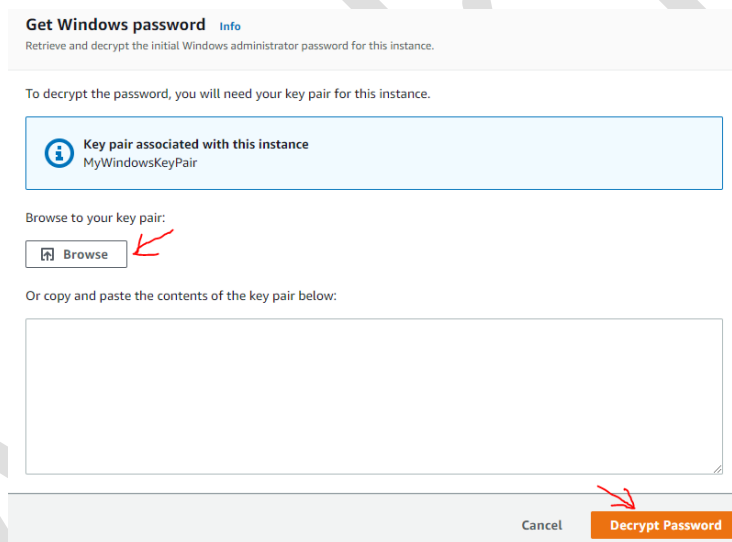
Session Manager **RDP client** EC2 Serial Console

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following details:

Public DNS	User name
ec2-65-2-80-248.ap-south-1.compute.amazonaws.com	Administrator
Password	Get password

17) Click on Browse and Upload Key-Pair file which we have downloaded and Click on 'Decrypt Password'

Get Windows password [Info](#)

Retrieve and decrypt the initial Windows administrator password for this instance.

To decrypt the password, you will need your key pair for this instance.

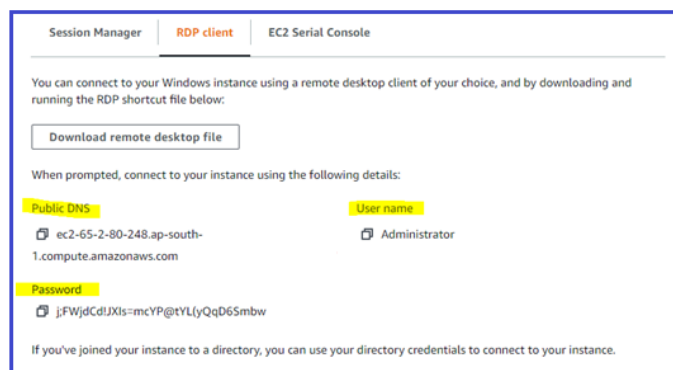
Key pair associated with this instance
MyWindowsKeyPair

Browse to your key pair:

[Browse](#)

Or copy and paste the contents of the key pair below:

[Cancel](#) [Decrypt Password](#)

18) You can see Password like below (Copy Username, Password From this Screen)

Session Manager **RDP client** EC2 Serial Console

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

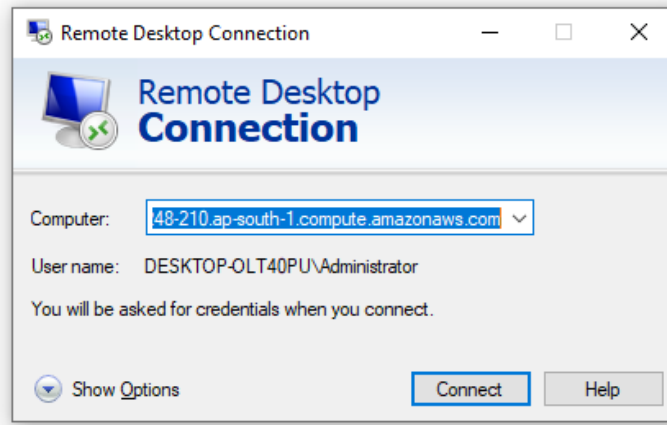
[Download remote desktop file](#)

When prompted, connect to your instance using the following details:

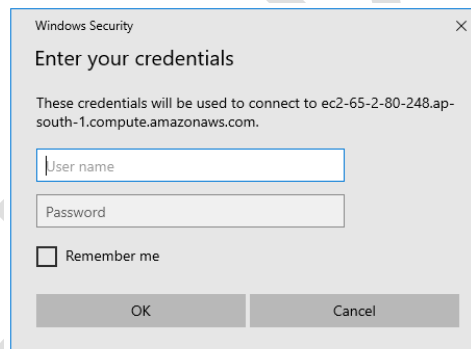
Public DNS	User name
ec2-65-2-80-248.ap-south-1.compute.amazonaws.com	Administrator
Password	
jFWjdCdJXIs=mcYP@tYLLyQqD6Smbw	

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

19) Open Remote Desktop Connection From your machine (From Start Menu) and Enter EC2 Instance DNS name like below and click on 'Connect' button



20) Enter EC2 instance Credentials in below screen and Click on 'OK'



21) If you enter correct credentials then you can see below Windows Machine which is launched in AWS



22) You can copy some files from your local machine and paste in EC2 Machine (That's all)

23) Once you have practiced, you can terminate instance from EC2 Dashboard to avoid billing

=== Learn Here.. Lead Anywhere..!! ===