

# AWS EC2 SETUP

**EC2:-**An Amazon EC2 instance is a virtual server in Amazon's Elastic Compute Cloud (EC2) for running applications on the Amazon Web Services (AWS) infrastructure.

## CREATE EC2 INSTANCE:-

### STEP 1:- Chose AMI

#### **AMAZON MACHINE IMAGES (AMI):-**

An Amazon Machine Image (AMI) is a supported and maintained image provided by AWS that provides the information required to launch an instance

AWS offers a set of AMIs for OSes, including the following:

- Amazon Linux
- Ubuntu
- Apple macOS
- Red Hat Enterprise Linux
- Microsoft Windows

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Cancel and Exit

Step 1: Choose an Amazon Machine Image (AMI)  
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

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

Search by Systems Manager parameter


Quick Start1 to 45 of 45 AMIs>|

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only ⓘ

 **Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type** - ami-033b95fb8079dc481 (64-bit x86) / ami-0f7691f59fd7c47af (64-bit Arm)

Amazon Linux

Free tier eligible


Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebsVirtualization type: hvmENA Enabled: Yes

☒ 64-bit (x86)

☐ 64-bit (Arm)

Select

 **Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type** - ami-038b3df3312ddf25d (64-bit x86) / ami-0a200d3f40a2f6ca0 (64-bit Arm)

Amazon Linux

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebsVirtualization type: hvmENA Enabled: Yes

☒ 64-bit (x86)

☐ 64-bit (Arm)

Select

## STEP 2:- Chose Instance type

### INSTANCE TYPES

Instance Family	Current Generation Instance Types
General purpose	t2.nano   t2.micro   t2.small   t2.medium   t2.large   m4.large   m4.xlarge   m4.2xlarge   m4.4xlarge   m4.10xlarge   m3.medium   m3.large   m3.xlarge   m3.2xlarge
Compute optimized	c4.large   c4.xlarge   c4.2xlarge   c4.4xlarge   c4.8xlarge   c3.large   c3.xlarge   c3.2xlarge   c3.4xlarge   c3.8xlarge
Memory optimized	r3.large   r3.xlarge   r3.2xlarge   r3.4xlarge   r3.8xlarge
Storage optimized	i2.xlarge   i2.2xlarge   i2.4xlarge   i2.8xlarge   d2.xlarge   d2.2xlarge   d2.4xlarge   d2.8xlarge
GPU instances	g2.2xlarge   g2.8xlarge

They are grouped by characteristics in terms of compute, memory, storage and networking resources. Most instances are billed by the minute. Pricing is proportional to the resources allocated to it, such as memory, vCPUs, Elastic Block Store (EBS)/SSD storage and the network's data throughput rate

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 families Current generation Show/Hide Columns

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

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GiB)	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 Free tier eligible	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
<input type="checkbox"/>	t2	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t3	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

## STEP 3:- Configure Instance Details

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	<a href="#">Launch into Auto Scaling Group</a>
Purchasing option	<input type="checkbox"/> Request Spot instances	
Network	vpc-6e7f3517   default (default) <a href="#">Create new VPC</a>	
Subnet	No preference (default subnet in any Availability Zone) <a href="#">Create new subnet</a>	
Auto-assign Public IP	Use subnet setting (Enable)	
Hostname type	Use subnet setting (IP name)	
DNS Hostname	<input type="checkbox"/> Enable IP name IPv4 (A record) DNS requests <input checked="" type="checkbox"/> Enable resource-based IPv4 (A record) DNS requests <input type="checkbox"/> Enable resource-based IPv6 (AAAA record) DNS requests	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	Open	
Domain join directory	No directory <a href="#">Create new directory</a>	
IAM role	None <a href="#">Create new IAM role</a>	

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

## STEP 4:- Add storage

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/xvda	snap-0e8a7a7609c630051	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

[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.

#### Shared file systems

You currently don't have any file systems on this instance. Select "Add file system" button below to add a file system.

[Add file system](#)

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

## STEP 5:- Add tags

Specify a Name tag to easily identify the EC2 instance in the console after it's launched

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 (128 characters maximum)	Value (256 characters maximum)	Instances <sup>1</sup>	Volumes <sup>1</sup>	Network Interfaces <sup>1</sup>
Name	test-launch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

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

## STEP 6:- Configure security group

Security groups in AWS determine a set of access rules for both incoming and outgoing traffic in the EC2 instance . The settings include port ranges, IPs or security group IDs assigned to resources trying to access an EC2 instance. Limit incoming traffic to only the set of parameters strictly required to access an EC2 instance. Avoid generic rules that allow open access to a wide range of ports and IP addresses.

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

### 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:   
Description:

Type <sup>1</sup>	Protocol <sup>1</sup>	Port Range <sup>1</sup>	Source <sup>1</sup>	Description <sup>1</sup>
SSH	TCP	22	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](#)

## **STEP8:- Enable SSH access with a key**

The key is used to enable Secure Shell (SSH) access into the EC2 instance.

### 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

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

# ACCESS EC2 INSTANCES IN LINUX (SSH)

## Instance ID

[i-09d25d52c1ef541a0](#) (ec2-1)

1. Open an SSH client.
- 2.
3. Locate your private key file. The key used to launch this instance is ec2kp.pem
- 4.
5. Run this command, if necessary, to ensure your key is not publicly viewable.

```
chmod 400 ec2kp.pem
```

## Connect to your instance using its Public DNS:

ec2-52-87-98-119.compute-1.amazonaws.com

## Example:

```
ssh -i "ec2kp.pem"
```

ec2-user@ec2-52-87-98-119.compute-1.amazonaws.com

