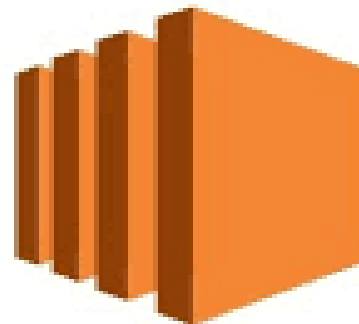


How to Launch EC2 Instance in AWS



Amazon Machine
Image (AMI)



Amazon EC2

Creating Instance in AWS

Log on to AWS open EC2 Select the region and click on launch instances

The screenshot displays the AWS Management Console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a search bar. The main content area is titled 'AWS services' and features a search bar with the placeholder text 'Find a service by name or feature (for example, EC2, S3 or VM, storage)'. Below the search bar, there are sections for 'Recently visited services' (listing EC2 and Billing) and 'All services'. The 'All services' section is organized into columns: 'Compute' (EC2, Lightsail, Elastic Container Service, EKS, Lambda, Batch, Elastic Beanstalk), 'Storage' (S3, EFS, Glacier, Storage Gateway), 'Database' (RDS, DynamoDB, ElastiCache), 'Management Tools' (CloudWatch, AWS Auto Scaling, CloudFormation, CloudTrail, Config, OpsWorks, Service Catalog, Systems Manager, Trusted Advisor, Managed Services), 'Media Services' (Elastic Transcoder, Kinesis Video Streams, MediaConvert, MediaLive, MediaPackage, MediaStore, MediaTailor), 'Mobile Services' (Mobile Hub, AWS AppSync, Device Farm, Mobile Analytics), 'AR & VR' (Amazon Sumerian), 'Application Integration' (Step Functions, Amazon MQ, Simple Notification Service, Simple Queue Service, SWF), and 'Customer Engagement' (Amazon Connect, Pinpoint). The right sidebar contains 'Helpful tips' (Manage your costs, Create an organization) and 'Explore AWS' (Machine Learning with Amazon SageMaker, Amazon Relational Database Service (RDS), AWS Fargate Runs Containers for You).

aws instance purchase op

elastic load balancing in

EC2 Management Console

Secure | https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#Home:

aws

Services

Resource Groups

deepak

Mumbai

Support

EC2 Dashboard

Events

Tags

Reports

Limits

INSTANCES

Instances

Launch Templates

Spot Requests

Reserved Instances

Dedicated Hosts

IMAGES

AMIs

Bundle Tasks

ELASTIC BLOCK STORE

Volumes

Snapshots

NETWORK & SECURITY

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

LOAD BALANCING

Resources

You are using the following Amazon EC2 resources in the Asia Pacific (Mumbai) region:

0 Running Instances

0 Elastic IPs

0 Dedicated Hosts

0 Snapshots

0 Volumes

0 Load Balancers

0 Key Pairs

1 Security Groups

0 Placement Groups

Learn more about the latest in AWS Compute from AWS re:Invent 2017 by viewing the EC2 Videos.

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 instance.

Launch Instance

Note: Your instances will launch in the Asia Pacific (Mumbai) region

Service Health

Service Status:

Asia Pacific (Mumbai):
This service is operating normally

Availability Zone Status:

ap-south-1a:
Availability zone is operating normally

ap-south-1b:

Scheduled Events

Asia Pacific (Mumbai):
No events

Account Attributes

Supported Platforms

VPC

Default VPC

vpc-b9b038d1

Resource ID length management

Console experiments

Additional Information

Getting Started Guide

Documentation

All EC2 Resources

Forums

Pricing

Contact Us

AWS Marketplace

Find free software trial products in the AWS Marketplace from the EC2 Launch Wizard. Or try these popular AMIs:

Barracuda CloudGen Firewall for AWS - PAYG

Provided by Barracuda Networks, Inc.

Rating ★★★★★

Starting from \$0.60/hr or from \$4,599/yr (12% savings) for software + AWS usage fees

View all Infrastructure Software

Feedback

English (US)

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Privacy Policy

Terms of Use

Windows Taskbar

5:12 PM

7/16/2018

Creating Instance in AWS

Selecting the requires Amazon Image (OS) -select Ubuntu or windows server 2012 base (Free tier)

The screenshot shows the AWS Management Console interface for creating an EC2 instance. The browser tabs include 'aws instance purchase', 'elastic load balancing in', and 'EC2 Management Console'. The URL is 'https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:'. The console header shows the AWS logo, navigation links for Services, Resource Groups, and a user profile for 'deepak' in 'Mumbai'. The wizard progress bar indicates the current step is '1. Choose AMI', followed by '2. Choose Instance Type', '3. Configure Instance', '4. Add Storage', '5. Add Tags', '6. Configure Security Group', and '7. Review'. The main content area is titled 'Step 1: Choose an Amazon Machine Image (AMI)' and includes a 'Cancel and Exit' link. A sidebar on the left shows a list of AMIs. The main list displays five AMIs, each with a 'Free tier eligible' label and a 'Select' button. The AMIs are:

- Ubuntu Server 16.04 LTS (HVM), SSD Volume Type** - ami-188fba77. Ubuntu Server 16.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>). 64-bit. Root device type: ebs. Virtualization type: hvm.
- Microsoft Windows Server 2016 Base with Containers** - ami-206a414f. Microsoft Windows 2016 Datacenter edition with Containers. [English]. 64-bit. Root device type: ebs. Virtualization type: hvm.
- Microsoft Windows Server 2012 R2 Base** - ami-e795bd88. Microsoft Windows 2012 R2 Standard edition with 64-bit architecture. [English]. 64-bit. Root device type: ebs. Virtualization type: hvm.
- Microsoft Windows Server 2012 Base** - ami-bc96bed3. Microsoft Windows 2012 Standard edition with 64-bit architecture. [English]. 64-bit. Root device type: ebs. Virtualization type: hvm.
- Microsoft Windows Server 2008 R2 Base** - ami-7db29812. Microsoft Windows 2008 R2 SP1 Datacenter edition, 64-bit architecture. [English]. 64-bit. Root device type: ebs. Virtualization type: hvm.

The footer of the console shows 'Feedback', 'English (US)', and copyright information: '© 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved.' It also includes links for 'Privacy Policy' and 'Terms of Use'. The system tray at the bottom shows the taskbar with various application icons and the system clock indicating '5:13 PM 7/16/2018'.

Creating Instance in AWS

Select t2.micro instance type to use free service

The screenshot shows the AWS Management Console interface for creating an EC2 instance. The 'Step 2: Choose an Instance Type' is active. The 't2.micro' instance type is selected and highlighted with a green 'Free tier eligible' badge. The table below lists various instance types with their specifications.

	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
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	m5.large	2	8	EBS only	Yes	Up to 10 Gigabit	Yes

Buttons at the bottom: Cancel, Previous, Review and Launch, Next: Configure Instance Details

Creating Instance in AWS

Select the required options , specially subnet-set ap-south-1b

The screenshot displays the AWS Management Console interface for the 'Launch Instance Wizard'. The browser tabs show 'aws instance purchase op...', 'elastic load balancing in...', and 'EC2 Management Console'. The address bar indicates the URL: <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard>. The console header includes the AWS logo, navigation links for 'Services', 'Resource Groups', and user information for 'deepak' in the 'Mumbai' region. The wizard progress bar shows seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance (active), 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review.

Step 3: Configure Instance Details

Purchasing option ⓘ ☐ Request Spot instances

Network ⓘ vpc-b9b038d1 (default) ⓘ [Create new VPC](#)

Subnet ⓘ subnet-d2e16dba | Default in ap-south-1a ⓘ [Create new subnet](#)
4091 IP Addresses available

Auto-assign Public IP ⓘ Use subnet setting (Enable) ⓘ

Placement group ⓘ ☐ Add instance to placement group.

IAM role ⓘ None ⓘ [Create new IAM role](#)

Shutdown behavior ⓘ Stop ⓘ

Enable termination protection ⓘ ☐ Protect against accidental termination

Monitoring ⓘ ☐ Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy ⓘ Shared - Run a shared hardware instance ⓘ
Additional charges will apply for dedicated tenancy.

T2 Unlimited ⓘ ☐ Enable ⓘ
Additional charges may apply

At the bottom right, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Add Storage'.

The footer of the console includes a 'Feedback' link, 'English (US)' language selection, and copyright information: © 2008 - 2018, Amazon Internet Services Private Ltd. or its affiliates. All rights reserved. It also links to 'Privacy Policy' and 'Terms of Use'.

The Windows taskbar at the bottom shows the system clock as 5:15 PM on 7/16/2018, along with icons for various applications and system utilities.

Creating Instance in AWS

Add disk if required otherwise go for next

The screenshot displays the AWS Management Console's 'Add Storage' step for creating an EC2 instance. The breadcrumb navigation at the top indicates the following steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage (current step), 5. Add Tags, 6. Configure Security Group, and 7. Review. The main heading is 'Step 4: Add Storage', followed by explanatory text about attaching EBS volumes and instance store volumes. Below this is a table showing the configuration for the root volume.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/sda1	snap-0974323426b3edbb3	30	General Purpose SSD (GP2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Below the table is an 'Add New Volume' button and a note: '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.'

At the bottom right, there are navigation buttons: 'Cancel', 'Previous', 'Review and Launch' (highlighted), and 'Next: Add Tags'. The footer includes 'Feedback', 'English (US)', copyright information for 2008-2018, and links to 'Privacy Policy' and 'Terms of Use'. The Windows taskbar at the very bottom shows the time as 5:17 PM on 7/16/2018.

Creating Instance in AWS

Click on add tags and type : Key = Name , Value = Windows server 2012 or Ubuntu

The screenshot displays the AWS Management Console interface during the 'Add Tags' step of the EC2 instance launch wizard. The browser address bar shows the URL: `https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:`. The console header includes the AWS logo, navigation tabs for 'Services' and 'Resource Groups', and user information for 'deepak' in 'Mumbai'. The wizard progress bar indicates the current step is '5. Add Tags', with previous steps being '1. Choose AMI', '2. Choose Instance Type', '3. Configure Instance', '4. Add Storage', and '6. Configure Security Group', and the next step being '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
Name	W-S-2012-2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

At the bottom of the wizard, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'.

The Windows taskbar at the bottom shows the system clock as 6:42 PM on 7/16/2018. Open applications include a file explorer with 'maxresdefault.jpg', two Remote Desktop connections to 'ec2-13-126-56-91.....rdp', and a file named 'Deepak-aws-key-1.pem'.

Tagging

Tagging is important to estimate the pricing for each resource used

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)
<input type="text" value="Name"/>	<input type="text" value="demo"/>
<input type="text" value="Owner"/>	<input type="text" value="Lokendra"/>
<input type="text" value="Env"/>	<input type="text" value="dev"/>
<input type="text" value="OS"/>	<input type="text" value="Linux"/>
<input type="text" value="Flavour"/>	<input type="text" value="RHEL"/>
<input type="text" value="App"/>	<input type="text" value="Nginx"/>

Creating Instance in AWS

- Creating New security group –select RDP and HTTP for Windows and SSH RDP for Linux Instance. In case of not knowing select All traffic and source anywhere ----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:

Description:

Type ⁱ	Protocol ⁱ	Port Range ⁱ	Source ⁱ	Description ⁱ
Custom TCP ^f	TCP	3389	Custom ^v 0.0.0.0/0	e.g. SSH for Admin Desktop ^x

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

Creating Instance in AWS

Create a new key pair – name: awskey –Download key pair

aws instance purchase console - Google Search - EC2 Management Console

Secure | https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:

aws Services Resource Groups

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

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to any previous step to make changes.

Improve your instances' security.
Your instances may be accessible from any IP address. You can also open additional ports in your instance's security groups.

AMIs Details

Microsoft Windows Server 2012 R2 Standard Edition
Free tier eligible
Root Device Type: x86_64
Initialization type: Standard

If you plan to use this AMI for an application that has a specific requirement, see the AMI documentation.

Instance Type

Instance Type	ECUs	VCPUs
t2.micro	Variable	1

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

Deepak-aws-key

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 after the instance is launched.

only
security groups

Edit AMI

Edit instance type

Network Performance

Low to Moderate

Creating Instance in AWS

Click on launch instance –then scroll down and click on view instance

The screenshot shows the AWS Management Console interface. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and user information (deepak, Mumbai, Support). The main content area is titled 'Launch Status' and features a green success message: 'Your instances are now launching'. Below this, a blue informational box suggests getting notified of estimated charges. The 'How to connect to your instances' section explains the 'running' state and provides a link to 'View Instances'. A 'Helpful resources' section lists links to the Amazon EC2 User Guide, Microsoft Windows Guide, and Discussion Forum. At the bottom, there are instructions on creating status check alarms. The footer contains feedback links, language settings (English (US)), and copyright information (© 2008 - 2018, Amazon Internet Services Private Ltd.). The taskbar at the very bottom shows various application icons and the system clock (6:45 PM, 7/16/2018).

EC2 Management Console x Gmail x elastic load balancing aw x How to create an Elastic x

Secure | <https://ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:>

aws Services Resource Groups

Launch Status

✓ Your instances are now launching
The following instance launches have been initiated: [i-085d0875a303065b4](#) [View launch log](#)

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 Windows instance
- Learn about AWS Free Usage Tier
- [Amazon EC2: User Guide](#)
- [Amazon EC2: Microsoft Windows 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)

Feedback English (US)

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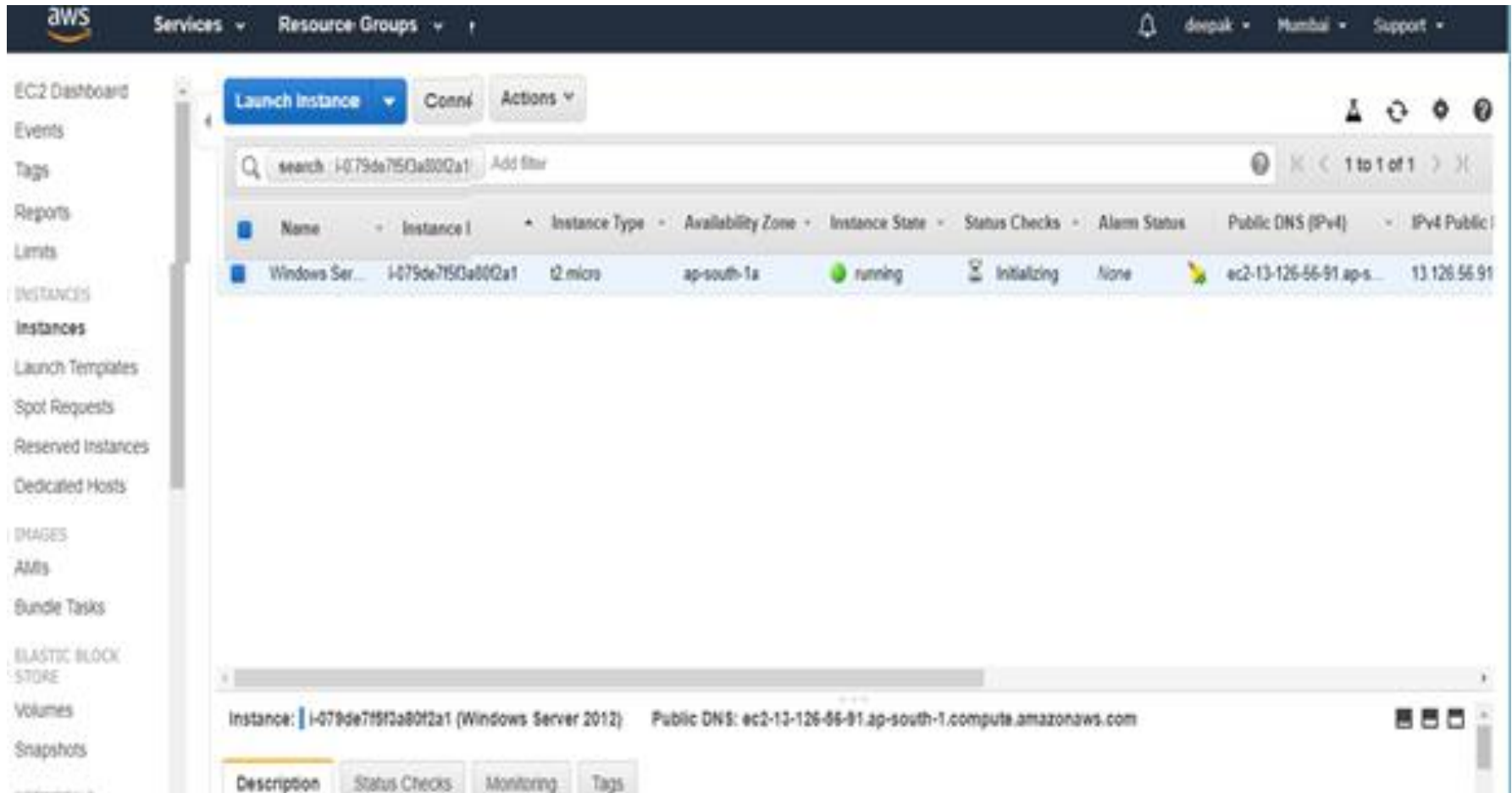
maxresdefault.jpg ec2-13-126-56-91.....rdp ec2-13-126-56-91.....rdp Deepak-aws-key-1.pem

Go to System in Control Panel to activate Windows Show all

6:45 PM 7/16/2018

Creating Instance in AWS

- Now instance is created and running. click on connect



The screenshot displays the AWS Management Console interface for the EC2 service. The left-hand navigation pane lists various EC2-related features, with 'Instances' currently selected. The main content area shows a table of EC2 instances. A single instance is listed with the following details:

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP
Windows Ser...	i-079de7f50a8002a1	t2.micro	ap-south-1a	running	Initializing	None	ec2-13-126-66-91.ap-s...	13.126.66.91

Below the table, the console provides details for the selected instance, including its ID, name, and public DNS address. At the bottom, there are tabs for 'Description', 'Status Checks', 'Monitoring', and 'Tags'.

Creating Instance in AWS

Select connection method EC2 instance connect ----connect

The screenshot displays the AWS Management Console interface. A modal dialog titled "Connect to your instance" is open in the center. The dialog contains the following elements:

- Connection method:** Three radio buttons are present:
 - ☐ A standalone SSH client
 - ☐ Session Manager
 - ☒ EC2 Instance Connect (browser-based SSH connection)
- Instructions:** "Connect using a custom user name, or default to the user name for the AMI used to launch the instance. [Learn more](#)"
- User name:** A text input field containing "ec2-user" with an information icon to its right.
- Buttons:** "Close" and "Connect" buttons at the bottom right.

The background shows the AWS console with the "Instances" page selected. The instance details for "i-03fd06624cf2b7562" are visible, including its Public DNS: "ec2-13-234-112-186.ap-south-1.compute.amazonaws.com". The instance is in a "running" state and is of type "t2.micro".

Tools to access AWS linux instance

From Linux terminal/Mac OS --

```
# chmod u+x aws.pem
```

```
# ssh -i awskey.pem ec2-user@InstancepublicIP
```

Or

```
# ssh -i awskey.pem ec2-user@InstancepublicIP
```

From Windows System use software

0) EC2 cloud shell

1) Putty

2) Gitbash

3) Mobaextrem

Default user name:

1) RHEL – ec2-user

2) Ubuntu: ubuntu

3) Windows : Administrator

IIS in Windows Server

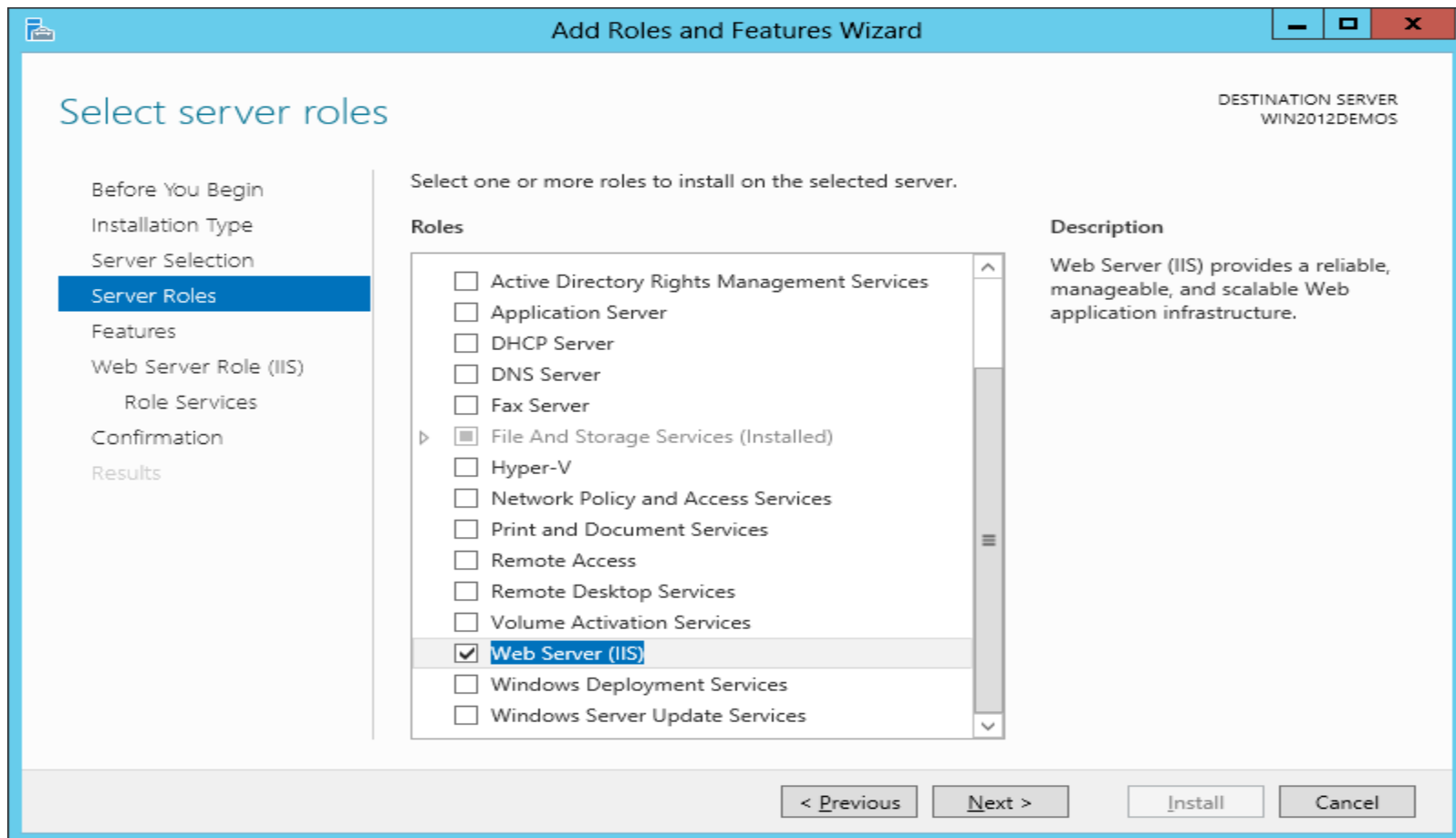
- Stands for "Internet Information Services." IIS is a web_server software package designed for Windows Server. It is used for hosting websites and other content on the Web.
- Microsoft's Internet Information Services provides a graphical user interface (GUI) for managing websites and the associated users. It provides a visual means of creating, configuring, and publishing sites on the web. The IIS Manager tool allows web administrators to modify website options, such as default pages, error pages, logging settings, security settings, and performance optimizations

IIS Web server in Windows

- 1) Launching Windows Instance
 - 2) Copy public IP and access the Instance through Remote Desktop connection
 - 3) Open Server manager – Add Roles and Feature –select and Install Web server (IIS) --- Close
 - 4) Check or create a new .html file in C:\inetpub\wwwroot\
 - 5) Access the web page in browser using Instance Public IP
- Note: Turn off the Windows VM firewall (If required)

Installing IIS

Open server manager –Add roles and features –next –next –next—
select web server (IIS)



Installing IIS

Next—next--

The screenshot shows the 'Add Roles and Features Wizard' window. The title bar reads 'Add Roles and Features Wizard'. The main heading is 'Select role services'. In the top right corner, it says 'DESTINATION SERVER WIN2012DEMOS'. On the left, a navigation pane lists the steps: 'Before You Begin', 'Installation Type', 'Server Selection', 'Server Roles', 'Features', 'Web Server Role (IIS)', 'Role Services' (which is highlighted), 'Confirmation', and 'Results'. The main area is titled 'Select the role services to install for Web Server (IIS)'. It contains a tree view of 'Role services'. The 'Web Server' role is selected and expanded, showing two sub-categories: 'Common HTTP Features' and 'Health and Diagnostics'. Both sub-categories are expanded, and all their respective services are checked. The 'Common HTTP Features' sub-category includes: 'Default Document', 'Directory Browsing', 'HTTP Errors', 'Static Content', 'HTTP Redirection', and 'WebDAV Publishing'. The 'Health and Diagnostics' sub-category includes: 'HTTP Logging', 'Custom Logging', 'Logging Tools', 'ODBC Logging', and 'Request Monitor'. On the right, a 'Description' box provides details about the Web Server role: 'Web Server provides support for HTML Web sites and optional support for ASP.NET, ASP, and Web server extensions. You can use the Web Server to host an internal or external Web site or to provide an environment for developers to create Web-based applications.' At the bottom, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'.

DESTINATION SERVER
WIN2012DEMOS

Select role services

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results

Select the role services to install for Web Server (IIS)

Role services

- ☒ **Web Server**
 - ☒ **Common HTTP Features**
 - ☒ Default Document
 - ☒ Directory Browsing
 - ☒ HTTP Errors
 - ☒ Static Content
 - ☒ HTTP Redirection
 - ☒ WebDAV Publishing
 - ☒ **Health and Diagnostics**
 - ☒ HTTP Logging
 - ☒ Custom Logging
 - ☒ Logging Tools
 - ☒ ODBC Logging
 - ☒ Request Monitor

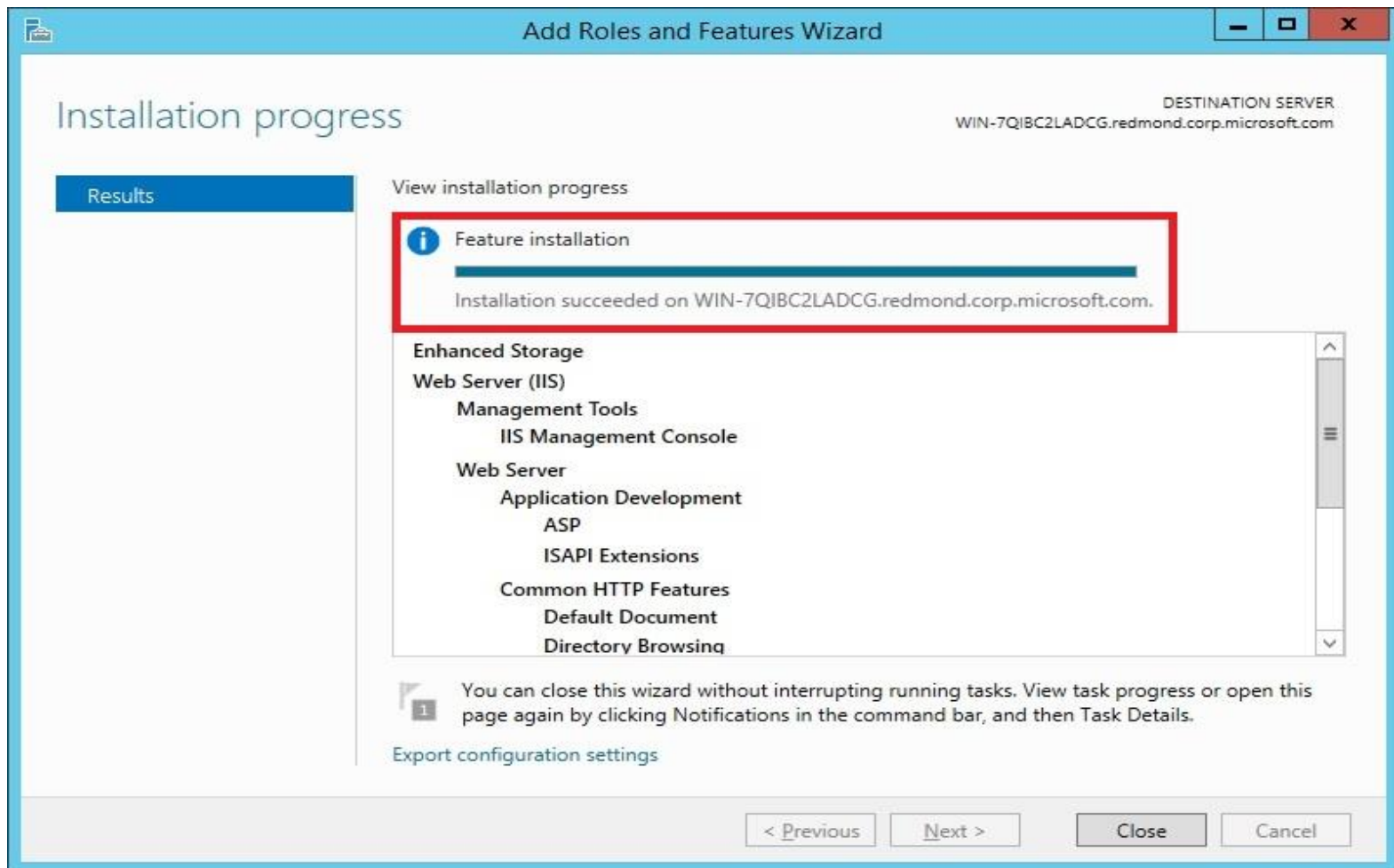
Description

Web Server provides support for HTML Web sites and optional support for ASP.NET, ASP, and Web server extensions. You can use the Web Server to host an internal or external Web site or to provide an environment for developers to create Web-based applications.

< Previous Next > Install Cancel

Installing IIS

Finally click on Install



Installing HTTP Web server in RHEL

```
# yum install httpd -y
```

```
# cd /var/www/html/
```

```
#ls
```

```
# nano index.html
```

```
<html>
```

```
<h1> Welcome to AWS training </h1>
```

```
</html>
```

```
# systemctl start httpd or service httpd start
```

```
# systemctl enable httpd or chkconfig httpd on
```

How to access : Open web browser and type :-

<http://instance-public-ip/mobile.html> or <http://instance-public-ip/mobile.html>

Installing Apache Web server in Ubuntu

```
# apt-get update
# apt install apache2
# cd /var/www/html/
# ls
# nano mobile.html
<html>
<h1> Welcome to Azure training </h1>
</html>
```

```
# systemctl start apache2
# systemctl enable apache2
# ufw disable
```

How to access : Open web browser and type :-

<http://instance-public-ip> or <http://instance-public-ip/mobile.html>



AWS Elastic IP

Elastic IP Addresses

- An Elastic IP address is a static IPv4 address designed for dynamic cloud computing. An Elastic IP address is associated with your AWS account. With an Elastic IP address, you can mask the failure of an instance or software by rapidly remapping the address to another instance in your account.
- An Elastic IP address is a public IPv4 address, which is reachable from the internet. If your instance does not have a public IPv4 address, you can associate an Elastic IP address with your instance to enable communication with the internet.

Why Elastic IP



Internet
www.mysite.com



Instance

Public IP
52.78.10.71

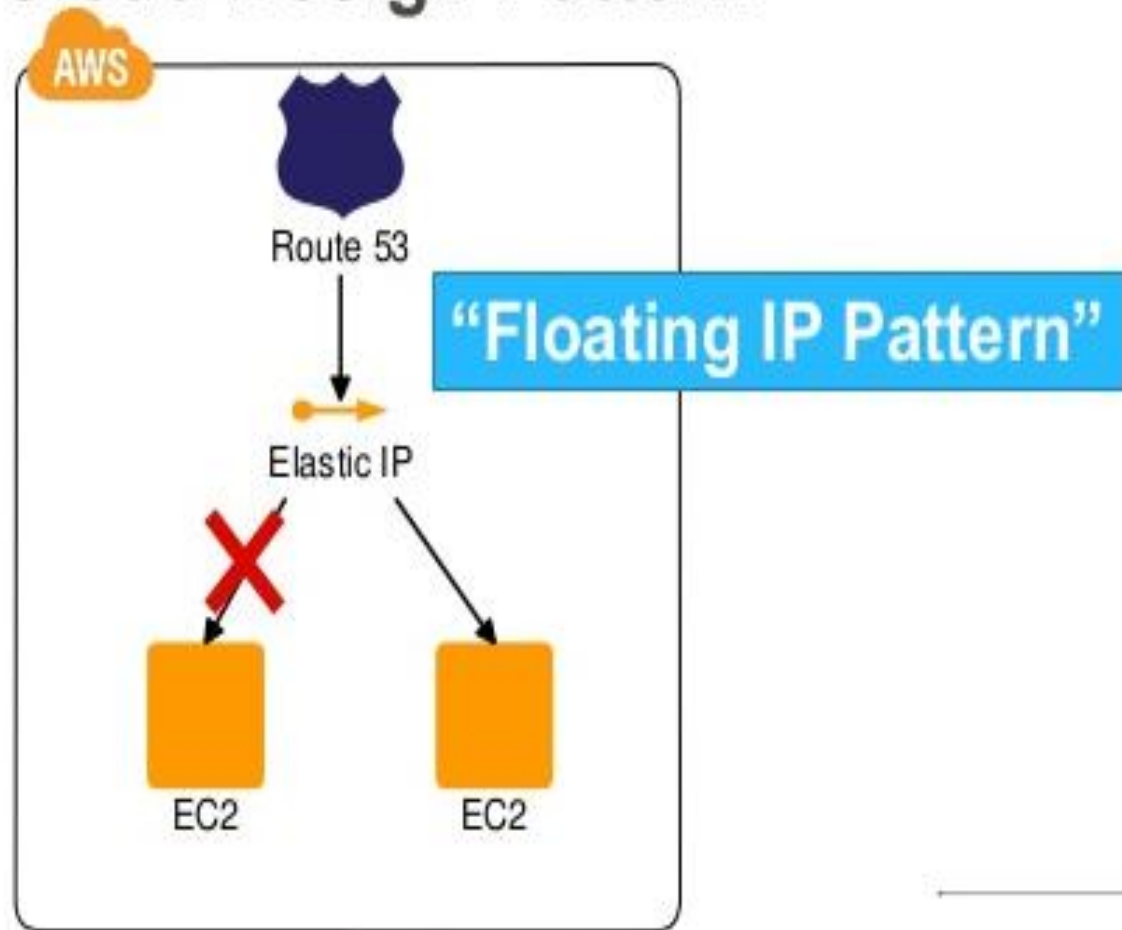


Public IP
52.78.10.72

Elastic IP Essentials

- Static IP that can be associated with an EC2 instance
- Can be moved from one EC2 instance to another
- Replaces existing public IP of an EC2 instance
- Scope limited to an individual AWS region

Example of “Cloud Design Pattern”



Elastic IP Address Basics

- 1)** To use an Elastic IP address, you first allocate one to your account, and then associate it with your instance or a network interface.
- 2)** When you associate an Elastic IP address with an instance or its primary network interface, the instance's public IPv4 address (if it had one) is released back into Amazon's pool of public IPv4 addresses. You cannot reuse a public IPv4 address.
- 3)** You can disassociate an Elastic IP address from a resource, and reassociate it with a different resource. Any open connections to an instance continue to work for a time even after you disassociate its Elastic IP address and reassociate it with another instance.
- 4)** A disassociated Elastic IP address remains allocated to your account until you explicitly release it.

How charge applied in Free tier

Elastic IP	Associate	Charges
Allocated	Associated with running Instance	No charge for 1 IP
Allocated	Associated with stopped Instance	Charged
Allocated	Not associated with any Instance	Charged

Lab—Check current dynamic IP

Check the current IP of Instance—Stop and start the Instance again and check the IP— IP changed



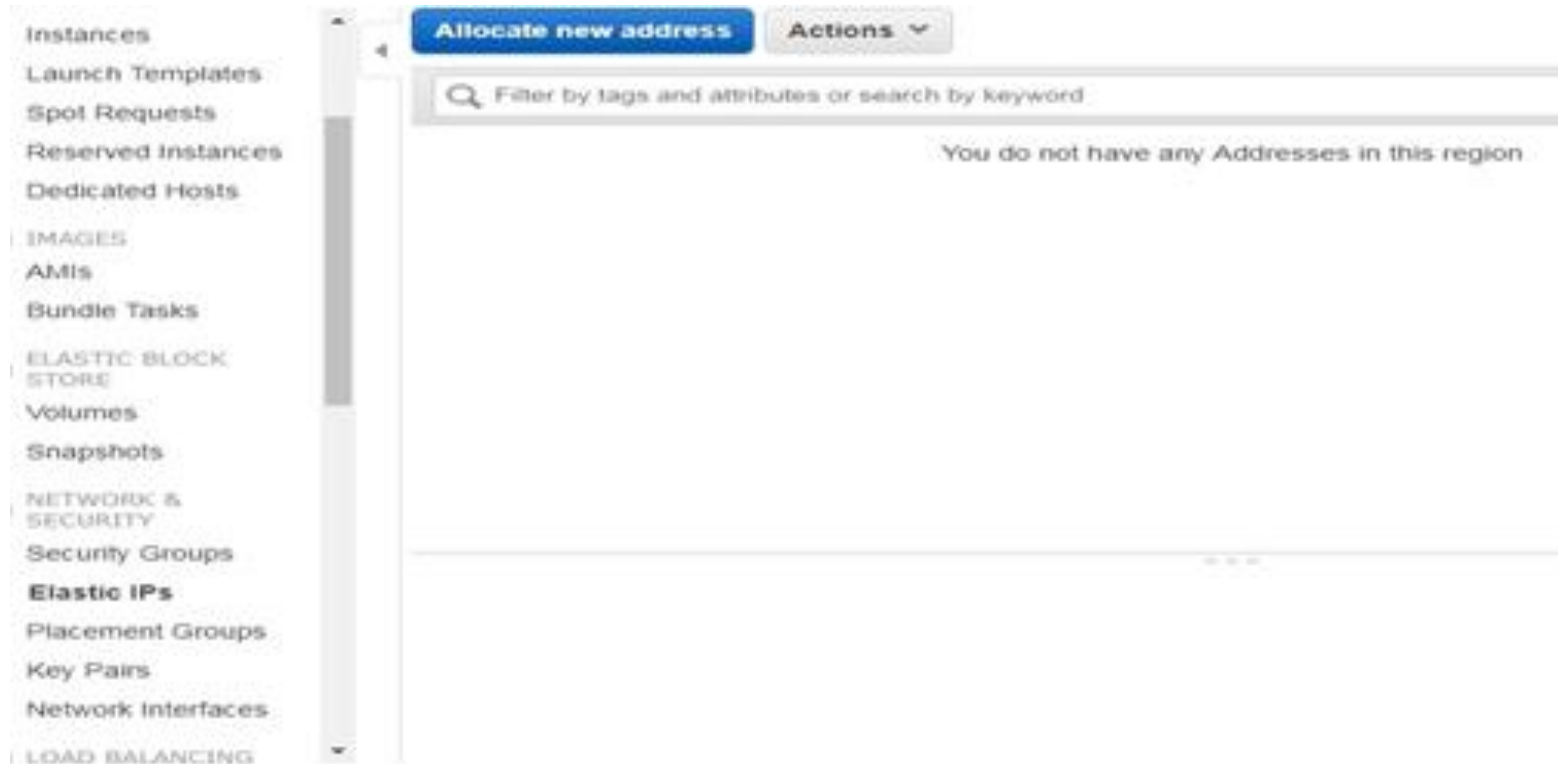
The screenshot displays the AWS Management Console interface for EC2 instances. At the top, there are buttons for 'Launch Instance', 'Connect', and 'Actions'. Below these is a search bar and a table of instances. The table has columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, and Status Checks. Two instances are listed: 'Windows Ser...' (running) and 'W-S-2012-2' (stopped). Below the table, the details for the 'running' instance are shown, including its Instance ID, state, type, and various IP addresses.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks
Windows Ser...	i-079de7f5f3a80f2a1	t2.micro	ap-south-1a	running	Initializing
W-S-2012-2	i-085d0875a303065...	t2.micro	ap-south-1b	stopped	

Instance ID	i-079de7f5f3a80f2a1	Public DNS (IPv4)	ec2-13-126-131-120.ap-south-1.compute.amazonaws.com
Instance state	running	IPv4 Public IP	13.126.131.120
Instance type	t2.micro	IPv6 IPs	-
Elastic IPs		Private DNS	ip-172-31-24-68.ap-south-1.compute.internal
Availability zone	ap-south-1a	Private IPs	172.31.24.68

Lab –Allocate Elastic IP

Click Elastic IP then Allocates new address



Lab –Allocate Elastic IP

Now click on Allocate--Close

[Addresses](#) > Allocate new address

Allocate new address

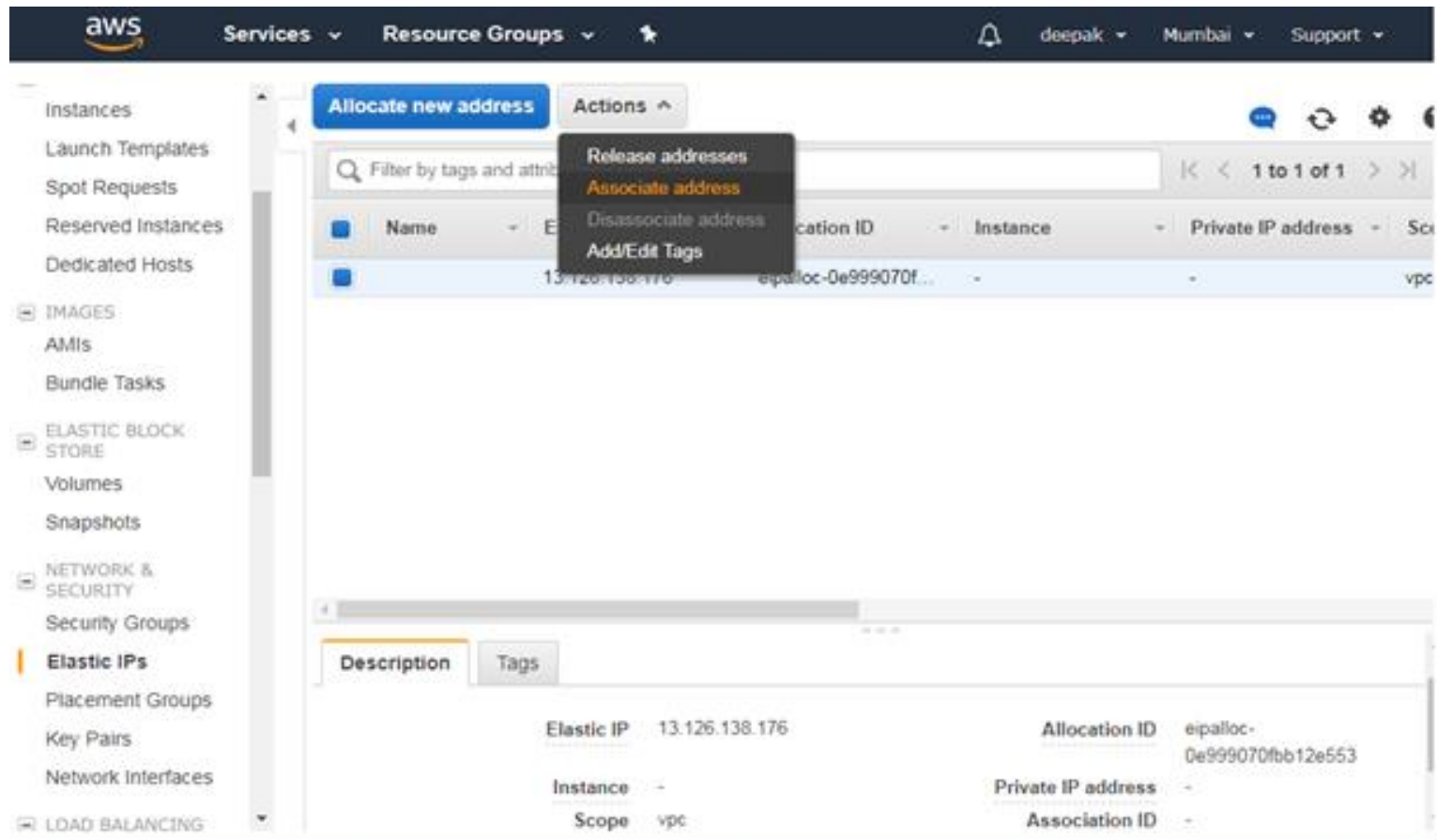
✓ New address request succeeded

Elastic IP 13.126.138.176

Close

Lab –Associate with Instance

Now click on action the Associate address



The screenshot displays the AWS Management Console interface. On the left, the navigation menu includes 'Instances', 'Launch Templates', 'Spot Requests', 'Reserved Instances', 'Dedicated Hosts', 'IMAGES', 'AMIs', 'Bundle Tasks', 'ELASTIC BLOCK STORE', 'Volumes', 'Snapshots', 'NETWORK & SECURITY', 'Security Groups', 'Elastic IPs' (highlighted), 'Placement Groups', 'Key Pairs', 'Network Interfaces', and 'LOAD BALANCING'. The main content area shows the 'Elastic IP' details for '13.126.138.176'. The 'Actions' dropdown menu is open, showing options: 'Release addresses', 'Associate address' (highlighted in orange), 'Disassociate address', and 'Add/Edit Tags'. Below the table, the 'Description' tab is active, showing details for the Elastic IP: 'Elastic IP: 13.126.138.176', 'Allocation ID: eipalloc-0e999070fbb12e553', 'Instance: -', 'Private IP address: -', 'Scope: vpc', and 'Association ID: -'.

Name	Elastic IP	Allocation ID	Instance	Private IP address	Scope
	13.126.138.176	eipalloc-0e999070fbb12e553	-	-	vpc

Description | Tags




Elastic IP: 13.126.138.176 Allocation ID: eipalloc-0e999070fbb12e553

Instance: - Private IP address: -

Scope: vpc Association ID: -


Lab –Associate with Instance


Select Instance and click on Associate



 Services ▾ Resource Groups ▾   deepak ▾ Mumbai ▾ Support ▾


Associate address


Select the instance OR network interface to which you want to associate this Elastic IP address (13.126.138.176)

Resource type ☒ Instance  ☐ Network Interface

Instance 

Private IP  

Reassociation ☐ Allow Elastic IP to be reassociated if already attached 

 **Warning**
If you associate an Elastic IP address with your instance, your current public IP address is released. [Learn more.](#)

► AWS Command Line Interface command

Cancel **Associate**

Lab –Associate with Instance

Now check the obtained Elastic IP—Stop the instance and start it again —We will get same IP

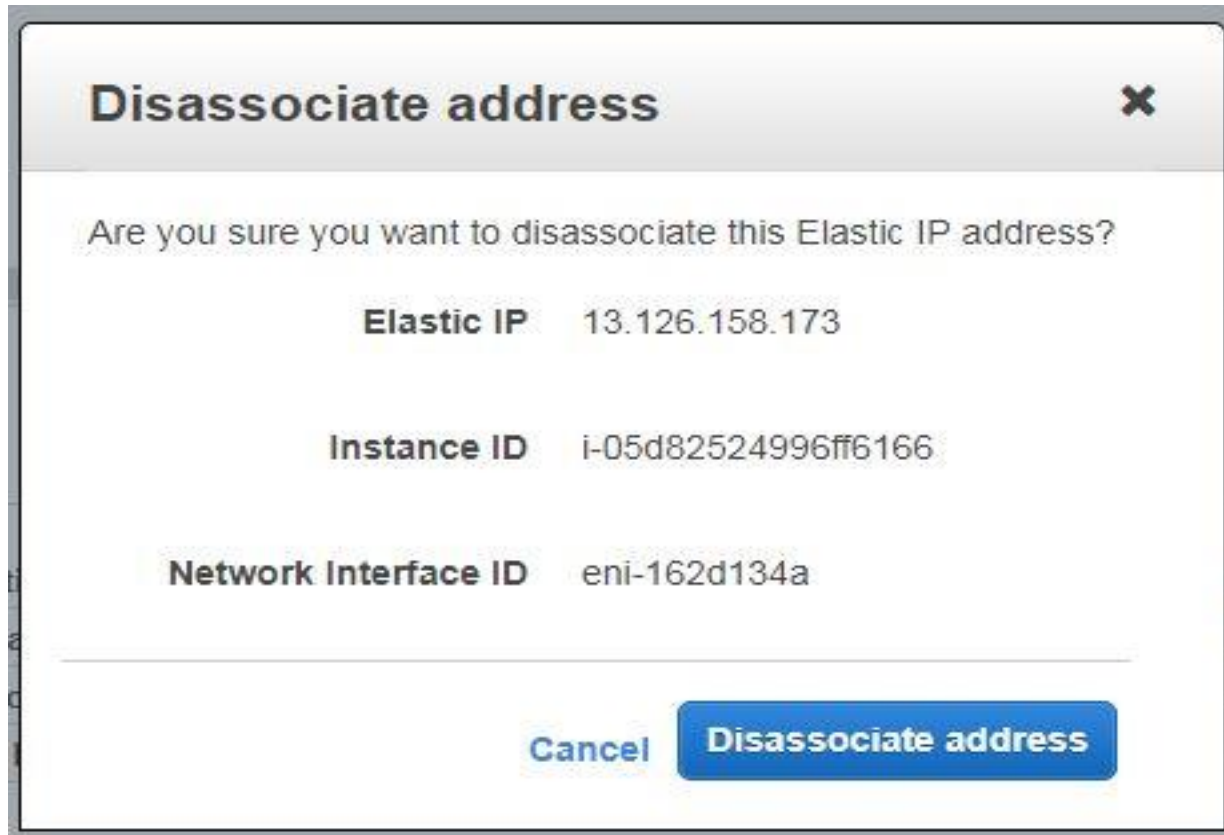
The screenshot displays the AWS Management Console interface. The left-hand navigation pane shows the 'Elastic IPs' option under the 'NETWORK & SECURITY' category. The main content area shows a table of Elastic IPs. The table has columns for Name, Elastic IP, Allocation ID, Instance, Private IP address, and State. One Elastic IP is listed with the address 13.126.138.176, Allocation ID eipalloc-0e999070fbb12e553, and is associated with instance i-079de7f5f3a80f2a1. Below the table, the 'Description' tab is active, showing details for the selected Elastic IP: Elastic IP 13.126.138.176, Allocation ID eipalloc-0e999070fbb12e553, Instance i-079de7f5f3a80f2a1, and Private IP address 172.31.24.68.

Name	Elastic IP	Allocation ID	Instance	Private IP address	State
	13.126.138.176	eipalloc-0e999070fbb12e553	i-079de7f5f3a80f2a1	172.31.24.68	vpc

Description	
Elastic IP	13.126.138.176
Allocation ID	eipalloc-0e999070fbb12e553
Instance	i-079de7f5f3a80f2a1
Private IP address	172.31.24.68

Lab –Disassociate and release IP

Elastic IP- select allocated IP –Action – Disassociate –again
select ---action --release

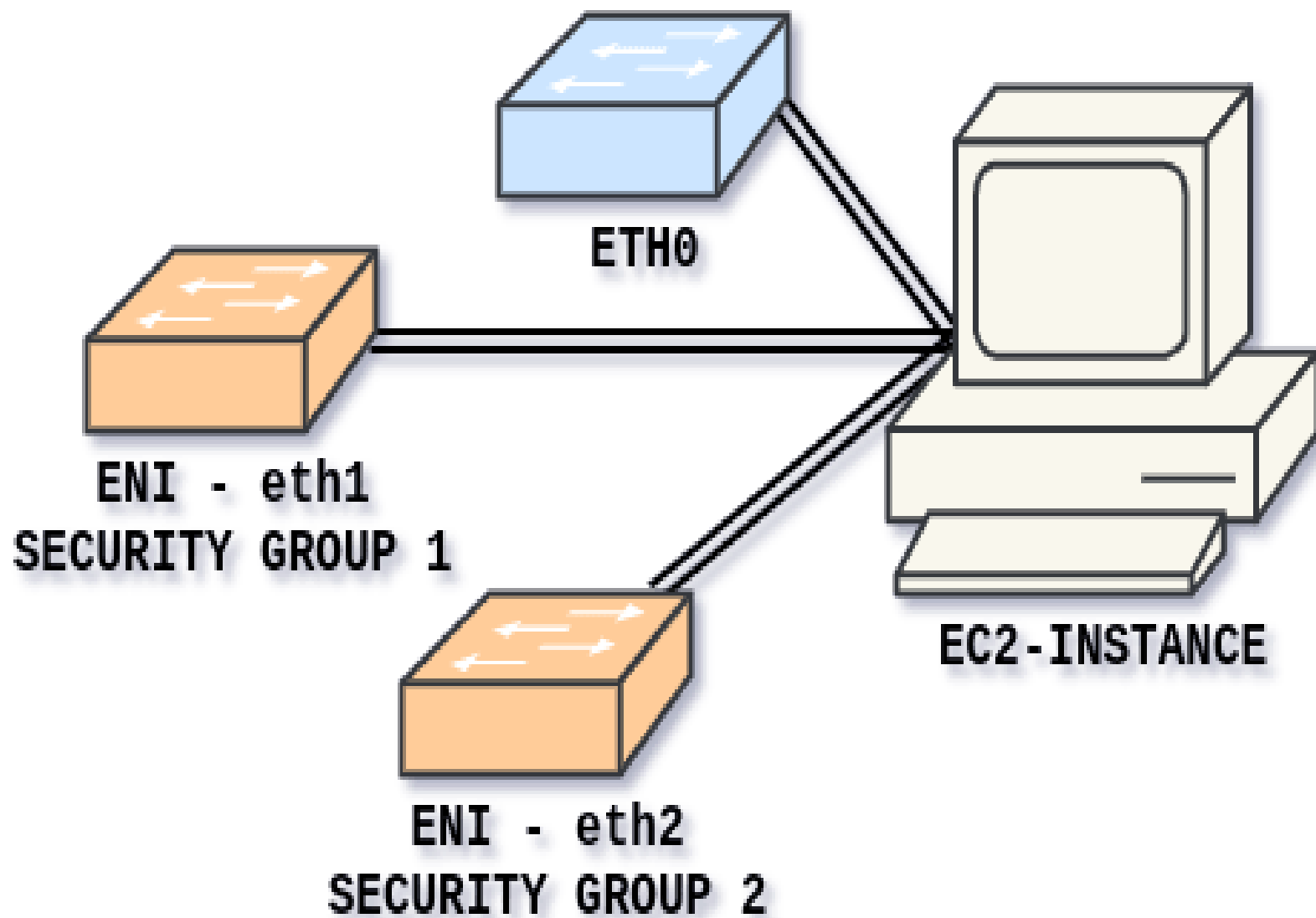




EC2 Elastic IP and Elastic Network Interfaces

ENI Basic

- You can create a network interface, attach it to an instance, detach it from an instance, and attach it to another instance. The attributes of a network interface follow it as it's attached or detached from an instance and reattached to another instance. When you move a network interface from one instance to another, network traffic is redirected to the new instance.
- You can also modify the attributes of your network interface, including changing its security groups and managing its IP addresses.
- Every instance in a VPC has a default network interface, called the *primary network interface*. You cannot detach a primary network interface from an instance. You can create and attach additional network interfaces. The maximum number of network interfaces that you can use varies by instance type.



ENI Lab

1) Open EC2 –Network Interface –Create a new interface –select subnet and select Security group -- and assign Elastic IP to it.—Then attach to any Instance

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups New

Elastic IPs New

Placement Groups New

Key Pairs New

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups

Create Network Interface

Attach

Detach

Del



Filter by tags and attributes or search by keyword



Name



Network interf



Subnet ID



eni-07da481ef...

subnet-fe3144b...



Network Interface: eni-07da481ef0fe4ba55

Create Network Interface



Description ⓘ

New NIC

Subnet ⓘ

subnet-6c10b821 us-east-2c | New Subnet ▼

Private IP ⓘ

auto assign

Security groups ⓘ

sg-ce4581a6 - Virtual LoadMaster BYOL Edition -LoadMaster- ADC- ▲
sg-33abb65a - Virtual LoadMaster Free Edition -LoadMaster- ADC- C
sg-2a5aba42 - Virtual LoadMaster Free Edition -LoadMaster- ADC- C
sg-713afe19 - Virtual LoadMaster Free Edition -LoadMaster- ADC- C ▼

Cancel

Yes, Create

Associate address

Select the instance OR network interface to which you want to associate this Elastic IP address (52.31.58.118)

Resource type



Instance



Network interface

Network interface

eni-415e9270 ▼



Private IP

20.0.1.25 ▼



Reassociation



Allow Elastic IP to be reassociated if already attached ⓘ

Security Group – Pre Configured

EC2—Security group —create Security group—give name and description--—Inbound rules —Add rule--select required port —change destination as anywhere —save.

While creating instance or any other compute resources we can add this security group.

Change security Security Group of running instance

Actions ^

Connect

Get Windows Password

Launch More Like This

Instance State ▶

Instance Settings ▶

Image ▶

Networking ▶

CloudWatch Monitoring ▶

Change Security Groups

Attach Network Interface

Instance Type ▼

Availability Zone ▼

medium

ap-southeast-1a

medium

ap-southeast-1a

Keypair Lab

EC2—keypair – create keypair –give keypair name—select format (.pem) – create

.PEM → Privacy-Enhanced Mail (**PEM**) is a de facto file format for storing and sending cryptographic keys, certificates, and other data,

.PPK → Putty private key(PPK) files are used by PuTTY, a free SSH and Telnet client.



Services ▾

Resource Groups ▾



Ohio ▾

Support ▾

EC2 Dashboard

Events

Tags

Reports

Limits

✚ INSTANCES

✚ IMAGES

✚ ELASTIC BLOCK STORE

☐ NETWORK & SECURITY

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

☐ LOAD BALANCING

Load Balancers

Target Groups

☐ AUTO SCALING GROUPS

Create Key Pair

Import Key Pair

Delete



Filter by attributes or search by keyword



None found



You do not have any Key Pairs in this region.

Click the "Create Key Pair" button to create your first Key Pair.

Create Key Pair

Select a key pair

