

Get Started with Amazon EC2 Linux Instances

Use this tutorial to get started with Amazon Elastic Compute Cloud (Amazon EC2). You'll learn how to launch, connect to, and use an Amazon EC2 Linux instance. An instance is a virtual server in the AWS Cloud. With Amazon EC2, you can set up and configure the operating system and applications that run on your instance.

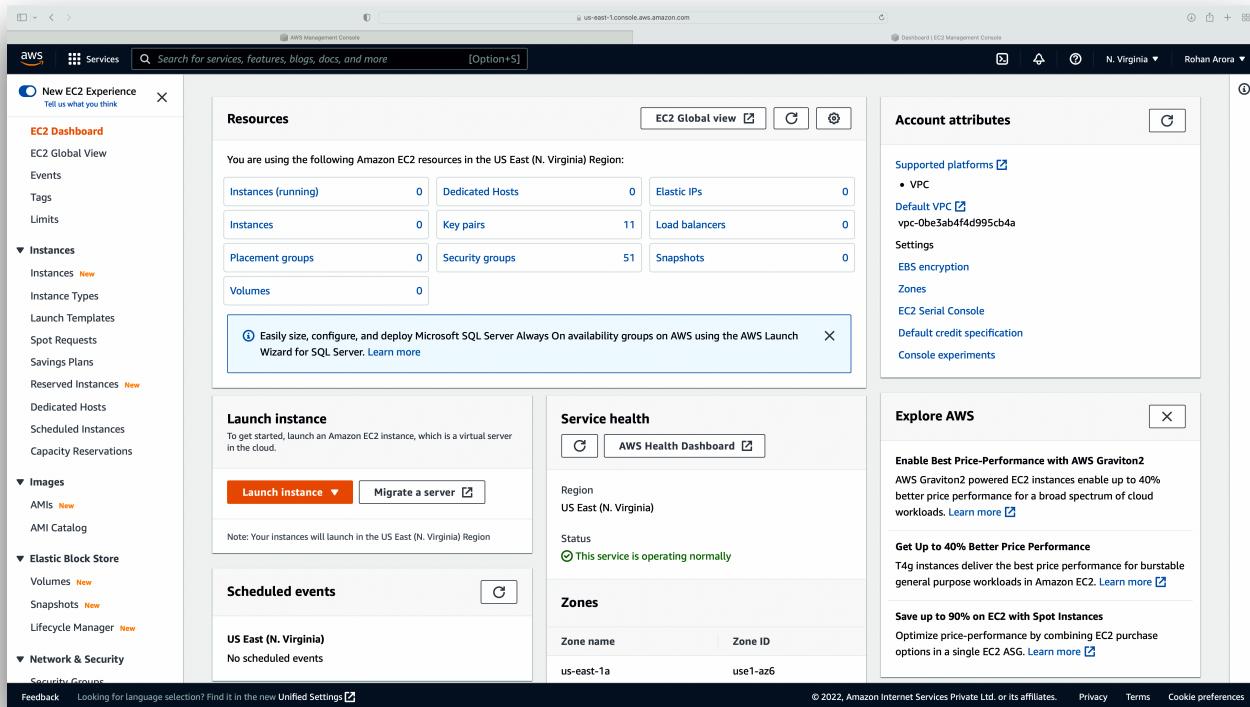
In this hands-on, you will launch an instance using defined parameters. You can accept any or all of the defaults, or configure an instance by specifying your own values for each parameter. The parameters are grouped in the launch instance wizard. The following instructions take you through each parameter group.

Parameters for instance configuration

- Initiate instance launch
- Name and tags
- Application and OS Images (Amazon Machine Image)
- Instance type
- Key pair (login)
- Network settings
- Configure storage
- Advanced details
- Summary

Initiate instance launch

1. Open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/>.



2. In the navigation bar at the top of the screen, the current AWS Region is displayed (for example, US East (N.Virginia)). Select a Region in which to launch the instance. This choice is important because some Amazon EC2 resources can be shared between Regions, while others can't.

The screenshot shows the AWS EC2 console dashboard. At the top, the navigation bar displays "aws Services Search for services, features, blogs, docs, and more [Option+S]" and "Rohan Arora". The sidebar on the left contains sections for New EC2 Experience, EC2 Dashboard, Instances, Images, Elastic Block Store, and Network & Security. A red box highlights the "Region" dropdown in the top right corner, which is set to "N. Virginia".

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	0	Dedicated Hosts	0	Elastic IPs	0
Instances	0	Key pairs	11	Load balancers	0
Placement groups	0	Security groups	51	Snapshots	0
Volumes	0				

(i) Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health

Region: US East (N. Virginia)
Status: This service is operating normally

Scheduled events

US East (N. Virginia)
No scheduled events

Zones

Zone name	Zone ID
us-east-1a	use1-a26

Feedback Looking for language selection? Find it in the new Unified Settings [\[\]](#)

© 2022, Amazon Internet Services Private Ltd. or its affiliates. Privacy Terms Cookie preferences

3. From the Amazon EC2 console dashboard, choose **Launch instance**.

The screenshot shows the same AWS EC2 console dashboard as above, but with a red box highlighting the "Launch instance" button in the "Launch instance" section. The "Launch instance" button is orange with white text, while the "Migrate a server" button is grey.

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	0	Dedicated Hosts	0	Elastic IPs	1
Instances	0	Key pairs	12	Load balancers	0
Placement groups	0	Security groups	52	Snapshots	0
Volumes	0				

(i) Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health

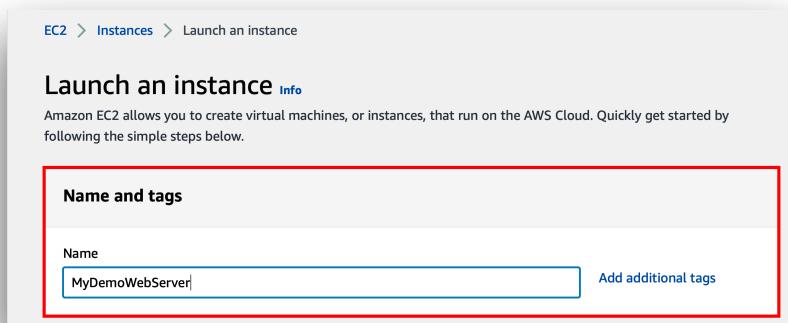
Region: US East (N. Virginia)
Status: This service is operating normally

Name and tags

The instance name is a tag, where the key is **Name**, and the value is the name that you specify. You can tag the instance, the volumes, and elastic graphics. For Spot Instances, you can tag the Spot Instance request only.

4. Specifying an instance name and additional tags is optional.

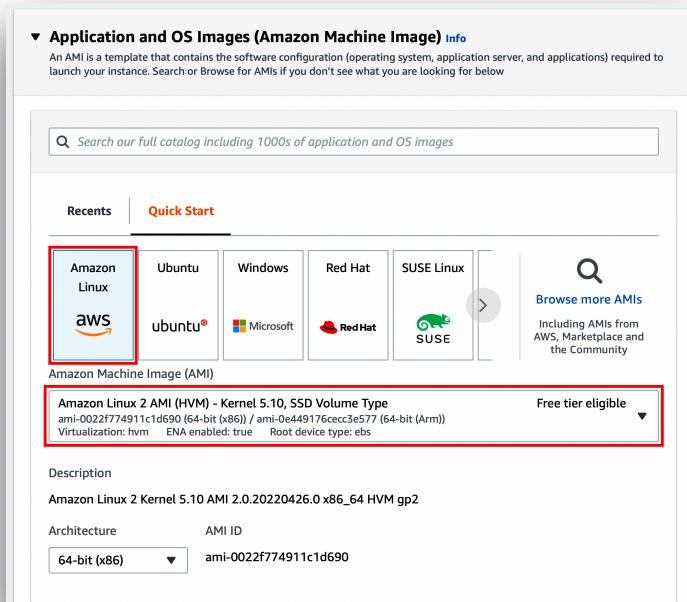
- For **Name**, enter a descriptive name for the instance. If you don't specify a name, the instance can be identified by its ID, which is automatically generated when you launch the instance.
- To add additional tags, choose **Add additional tags**. Choose **Add tag**, and then enter a key and value, and select the resource type to tag. Choose **Add tag** again for each additional tag to add.



Application and OS Images (Amazon Machine Image)

An Amazon Machine Image (AMI) contains the information required to create an instance. For example, an AMI might contain the software that's required to act as a web server, such as Linux, Apache, and your website.

5. Under **Application and OS Images (Amazon Machine Image)**, choose **Quick Start**, and then choose the **Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type** for your instance.



Instance type

The instance type defines the hardware configuration and size of the instance. Larger instance types have more CPU and memory.

6. For **Instance type**, select the instance type for the instance.

If your AWS account is less than 12 months old, you can use Amazon EC2 under the Free Tier by selecting the **t2.micro** instance type (or the **t3.micro** instance type in Regions where **t2.micro** is unavailable).

The screenshot shows the 'Instance type' section of a configuration page. It includes a dropdown menu with the current selection 't2.micro' and a link to 'Compare instance types'. Below the dropdown, there is detailed information about the t2.micro instance type, including its family (t2), vCPUs (1), memory (1 GiB), and pricing for On-Demand Linux and Windows.

Family: t2	1 vCPU	1 GiB Memory
On-Demand Linux pricing: 0.0116 USD per Hour		
On-Demand Windows pricing: 0.0162 USD per Hour		

Compare instance types: You can compare different instance types by the following attributes: number of vCPUs, architecture, amount of memory (GiB), amount of storage (GB), storage type, and network performance.

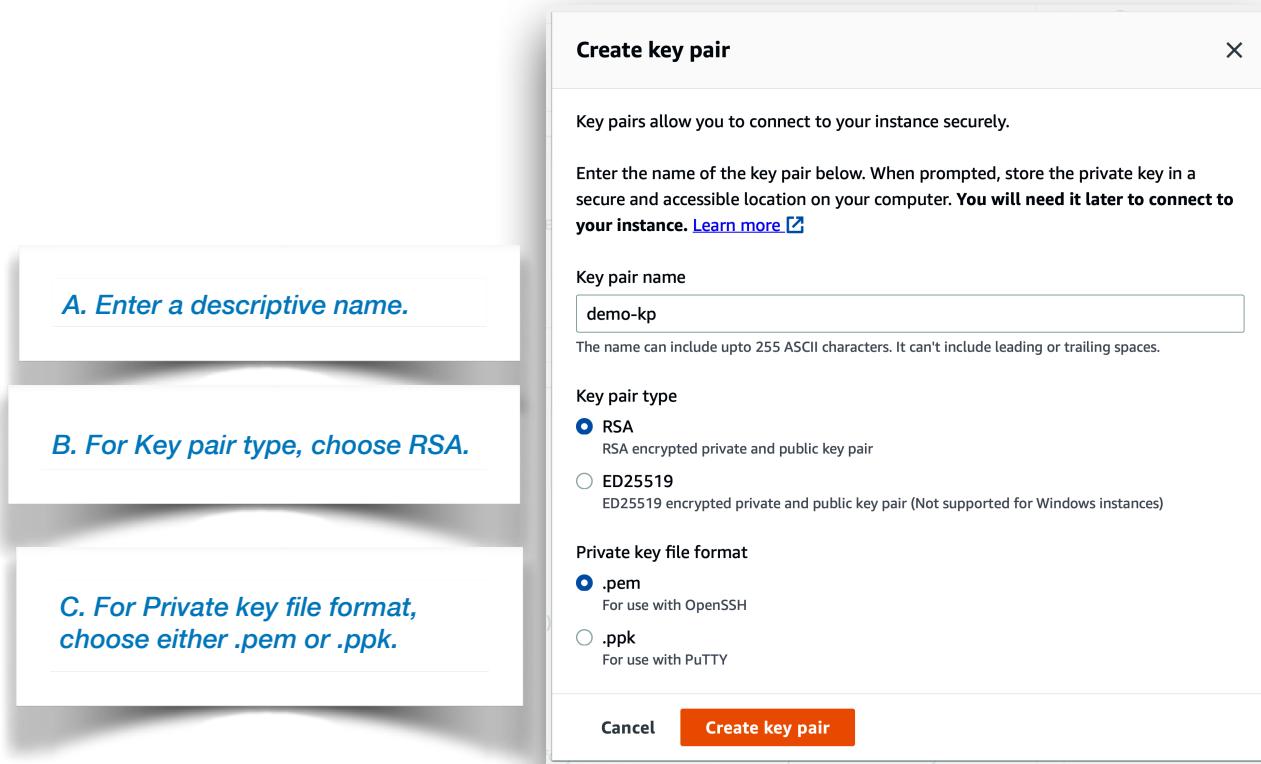
Key pair (login)

7. For **Key pair name**, choose an existing key pair, or choose **Create new key pair** to create a new one.

The screenshot shows the 'Key pair (login)' section. It includes a note about using a key pair for secure connection and a dropdown menu for selecting an existing key pair. A red box highlights the 'Create new key pair' button.

- For **Name**, enter a descriptive name for the key pair. Amazon EC2 associates the public key with the name that you specify as the key name. A key name can include up to 255 ASCII characters. It can't include leading or trailing space
- For **Key pair type**, choose either **RSA** or **ED25519**.
- For **Private key file format**, choose the format in which to save the private key. To save the private key in a format that can be used with OpenSSH, choose **pem**. To save the private key in a format that can be used with PuTTY, choose **ppk**.

- Choose **Create key pair**.



- The private key file is automatically downloaded by your browser. The base file name is the name that you specified as the name of your key pair, and the file name extension is determined by the file format that you chose. Save the private key file in a safe place.

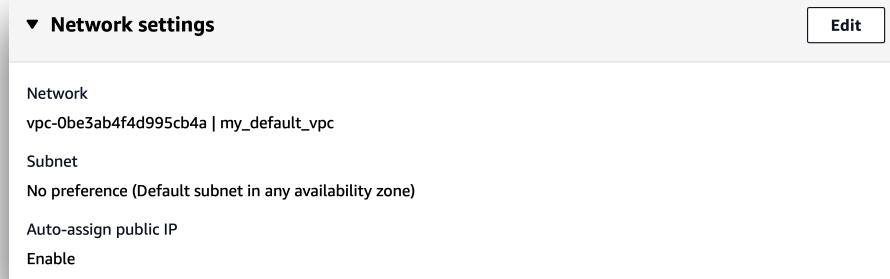


Network settings

- Configure the networking settings as following:

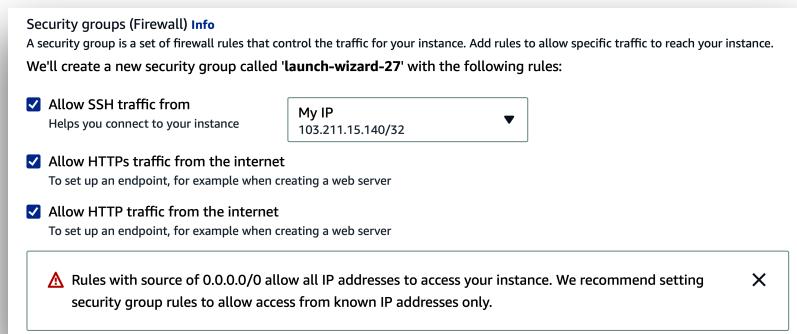
- Network:** Here the default VPC is selected automatically. You will be launching this EC2 instance in the same default VPC of the region you're working in.
- Subnet:** You can launch an instance in a subnet associated with an Availability Zone, Local Zone, Wavelength Zone, or Outpost. For this hands-on, keep Subnet to **No preference (Default subnet in any availability zone)**.

- **Auto-assign Public IP:** Specify whether your instance receives a public IPv4 address. By default, instances in a default subnet receive a public IPv4 address, and instances in a non-default subnet don't. You can select **Enable** or **Disable** to override the subnet's default setting. For this hands-on, keep **Auto-assign public IP** to **Enable**.



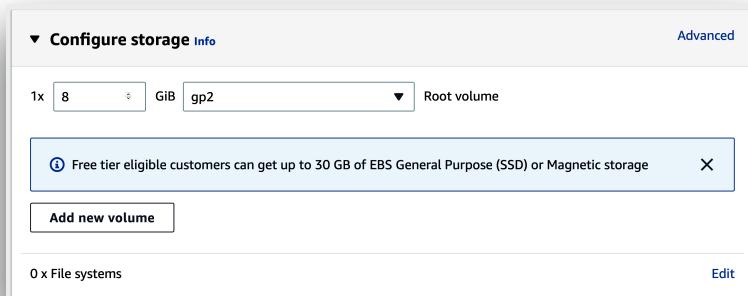
9. The launch instance wizard automatically defines the **launch-wizard-x** security group and creates an inbound rule to allow you to connect to your instance over SSH (port 22). Include the inbound rules as following:

- To let the launch instance wizard add your computer's public IP address, choose **My IP**. However, if you are connecting through an ISP or from behind your firewall without a static IP address, you need to find out the range of IP addresses used by client computers.
- Select **Allow HTTPS traffic from the internet** and **Allow HTTP traffic from the internet** rules to allow internet traffic.



Configure storage

10. The AMI you selected includes one or more volumes of storage, including the root volume. By default, an 8 GiB of General Purpose SSD volume is attached to an Amazon Linux instance. For this hands-on, accept default values.



Advanced Details

11. For **Advanced details**, expand the section to view the fields and specify any additional parameters for the instance.

▼ Advanced details [Info](#)

Purchasing option [Info](#)
 Request Spot Instances
Request Spot Instances at the Spot price, capped at the On-Demand price

IAM instance profile [Info](#)
Select [Create new IAM profile](#)

Hostname type [Info](#)
IP name

DNS Hostname [Info](#)
 Enable IP name IPV4 (A record) DNS requests
 Enable resource-based IPV4 (A record) DNS requests
 Enable resource-based IPV6 (AAAA record) DNS requests

Instance auto-recovery [Info](#)
Select

Shutdown behavior [Info](#)
Select

- Accept all default parameters here except for **User data**. You can specify user data to configure an instance during launch, or to run a configuration script.
- Click [here](#) to download the bash script which will be used launch an Apache PHP web application on this EC2 instance.
- Copy and paste the contents of the download script within User data field.

Allow tags in metadata [Info](#)
Select

User data [Info](#)

```
#!/bin/bash
yum update -y
yum install httpd -y
service httpd start
chkconfig httpd on
cd /var/www/html
echo "<html><h1>Congratulations! You've just deployed your first web server</h1></html>" > index.html
```

User data has already been base64 encoded

Summary

12. Use the **Summary** panel to specify the number of instances to launch, to review your instance configuration, and to launch your instances.

- Keep all settings to default and choose **Launch instance**.

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2 Kernel 5.10 AMI... [read more](#)
ami-0022f774911c1d690

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet

User data [Info](#)

```
#!/bin/bash
yum update -y
yum install httpd -y
service httpd start
chkconfig httpd on
cd /var/www/html
echo "<html><h1>Congratulations! You've just deployed your first web server on an Amazon EC2 instance.</h1></html>" > index.html
```

User data has already been base64 encoded

Cancel Launch instance

Review and test

After launching the instance, review and go through its details, and test the web server deployed on it.

13. Click the Instance ID of the launched instance.

EC2 > Instances > Launch an instance

Success
Successfully initiated launch of instance [i-08625d7e8b9943c29](#) Instance ID

[Launch log](#)

Next Steps

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 instance
Your instance is launching and it might be a few minutes until it is in the running state, when it will be ready for you to use
[Click View Instances](#) to monitor your instance's status. Once your instance is in the 'running' state, you can connect to it from the Instances screen. Find out [how to connect to your instance](#)

[View more resources to get you started](#)

View all instances

14. You will be straightaway sent to the **Instances** dashboard. Select the launched instance and look for **Public IPv4 address** and **Public IPv4 DNS** within **Details**.

The screenshot shows the AWS EC2 Instances dashboard. On the left, there's a sidebar with various navigation options like EC2 Dashboard, EC2 Global View, Events, Tags, Limits, Instances (selected), Images, AMIs, and Elastic Block Store. The main area shows a table of instances. A single instance, "MyDemoWebServer" with Instance ID "i-00aad3823ab9550b6", is selected. The "Details" tab is active in the sub-navigation. Under "Instance summary", the "Public IPv4 address" field contains "3.95.38.112" with a link to "open address". To the right, under "Public IPv4 DNS", it shows "ec2-3-95-38-112.compute-1.amazonaws.com" with a link to "open address". Both of these fields are highlighted with red boxes.

15. Now, access the website using either the public IPv4 address or public IPv4 DNS name and you should get the following output.

The screenshot shows a web browser window with the URL "Not Secure — 3.95.38.112". The page content is a single line of text: "Congratulations! You've just deployed your first web server on an Amazon EC2 instance." There are no other visible elements or links.

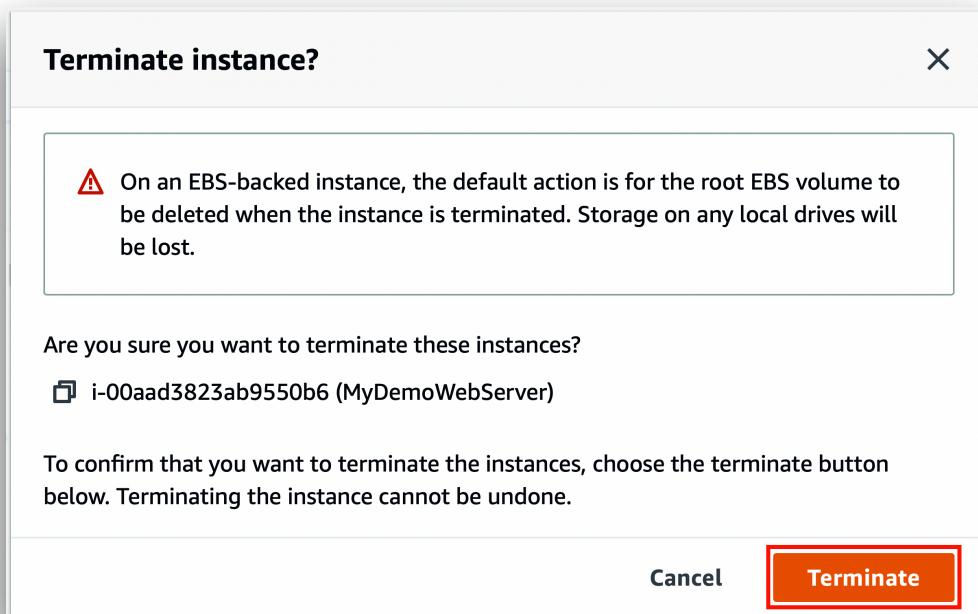
Terminate your instance

You can delete your instance when you no longer need it. This is referred to as *terminating* your instance. As soon as the state of an instance changes to *shutting-down* or *terminated*, you stop incurring charges for that instance.

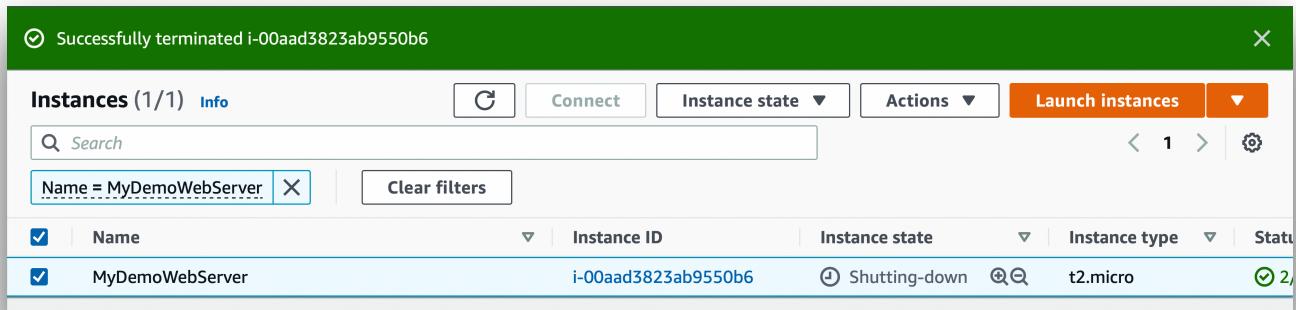
16. Select the instance, and choose **Instance state, Terminate instance**.

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with various navigation options like EC2 Dashboard, Events, Tags, Limits, Instances (with sub-options like Instances, Instance Types, Launch Templates, etc.), and Images. The main area shows a table with one instance listed: "MyDemoWebServer" (i-00aad3823ab9550b6). The "Actions" column for this instance has a dropdown menu open, with the "Terminate instance" option highlighted by a red box. Below the table, there's a detailed view for the selected instance, showing its ID, public IP (3.95.38.112), private IP (172.31.22.144), state (Running), and DNS information (ec2-3-95-38-112.compute-1.amazonaws.com).

17. Choose **Terminate** when prompted for confirmation.



After you terminate an instance, it remains visible in the console for a short while, and then the entry is automatically deleted. You cannot delete the terminated instance entry yourself. After an instance is terminated, resources such as tags and volumes are gradually disassociated from the instance and may no longer be visible on the terminated instance after a short while.



The screenshot shows the AWS EC2 Instances page with a green header bar indicating "Successfully terminated i-00aad3823ab9550b6". Below the header, there's a search bar and a filter section where "Name = MyDemoWebServer" is selected. The main table lists one instance:

Name	Instance ID	Instance state	Instance type	Status
MyDemoWebServer	i-00aad3823ab9550b6	Shutting-down	t2.micro	2

When an instance terminates, the data on any instance store volumes associated with that instance is deleted.

Summary

This completes the hands-on exercise on launching of an Amazon EC2 Linux instance. You also used a bootstrap script to install an Apache web server on it and later tested the website successfully. After testing, the instance was terminated to clean up and avoid any unexpected charges.