

(Module 6 Lab - Introduction to Amazon EC2)

- Screenshot successfully launched Amazon EC2 instance 'Web Server' with termination protection enabled and user data script for web server deployment.

The screenshot shows the AWS Management Console interface for launching an EC2 instance. The breadcrumb navigation at the top indicates the path: **EC2** > **Instances** > **Launch an instance**. The page displays several configuration options for the instance, each with an 'Info' link. The 'Termination protection' option is highlighted with a red rectangular box, and its dropdown menu is set to 'Enable'. Other visible options include 'Hostname type' (set to 'IP name'), 'DNS Hostname' (with checkboxes for IPv4 and IPv6 DNS requests), 'Instance auto-recovery' (set to 'Select'), 'Shutdown behavior' (set to 'Stop'), and 'Stop - Hibernate behavior' (set to 'Select').

Configuration Option	Value
Hostname type	IP name
DNS Hostname	<input checked="" type="checkbox"/> Enable IP name IPv4 (A record) DNS requests <input type="checkbox"/> Enable resource-based IPv4 (A record) DNS requests <input type="checkbox"/> Enable resource-based IPv6 (AAAA record) DNS requests
Instance auto-recovery	Select
Shutdown behavior	Stop
Stop - Hibernate behavior	Select
Termination protection	Enable

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Account ID: 3598-8949-7250
voclabs/user4457947=Abubakr_Mel

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EC2 > Instances > Launch an instance

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⚠ For V2 requests, you must include a session token in all instance metadata requests. Applications or agents that use V1 for instance metadata access will break.

Metadata response hop limit

Info

2

Allow tags in metadata

Info

Select

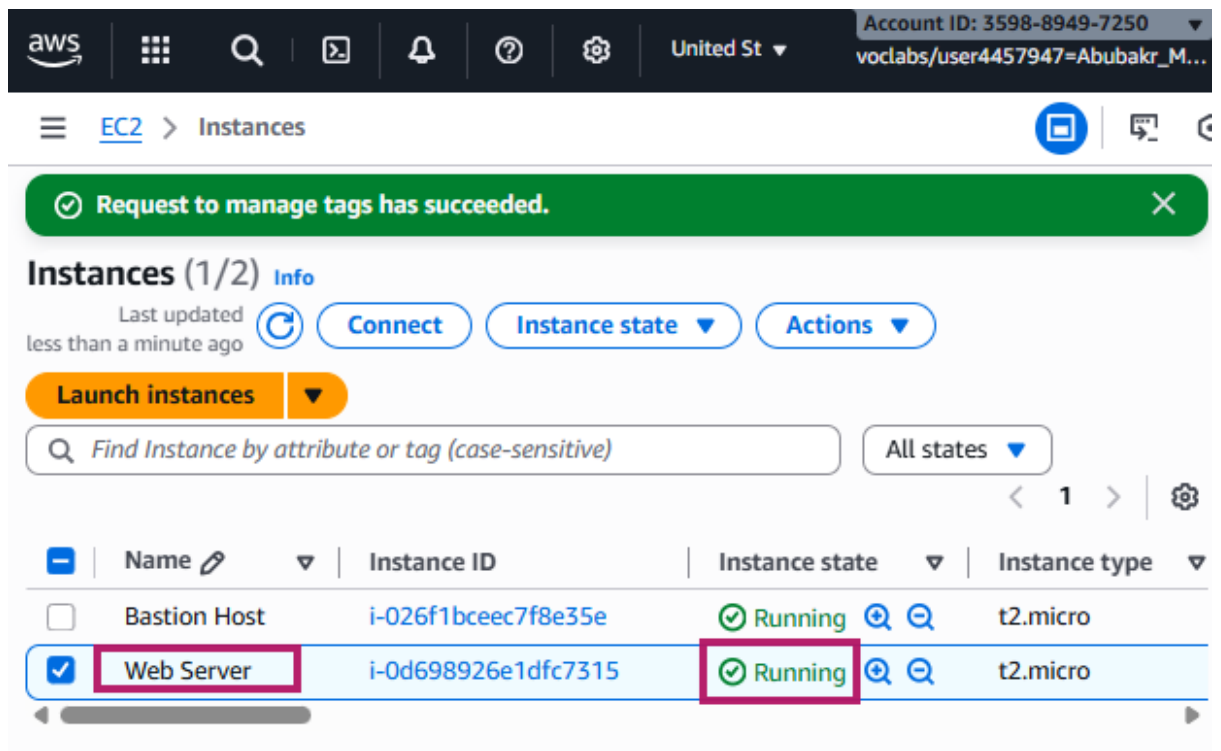
User data - optional

Info

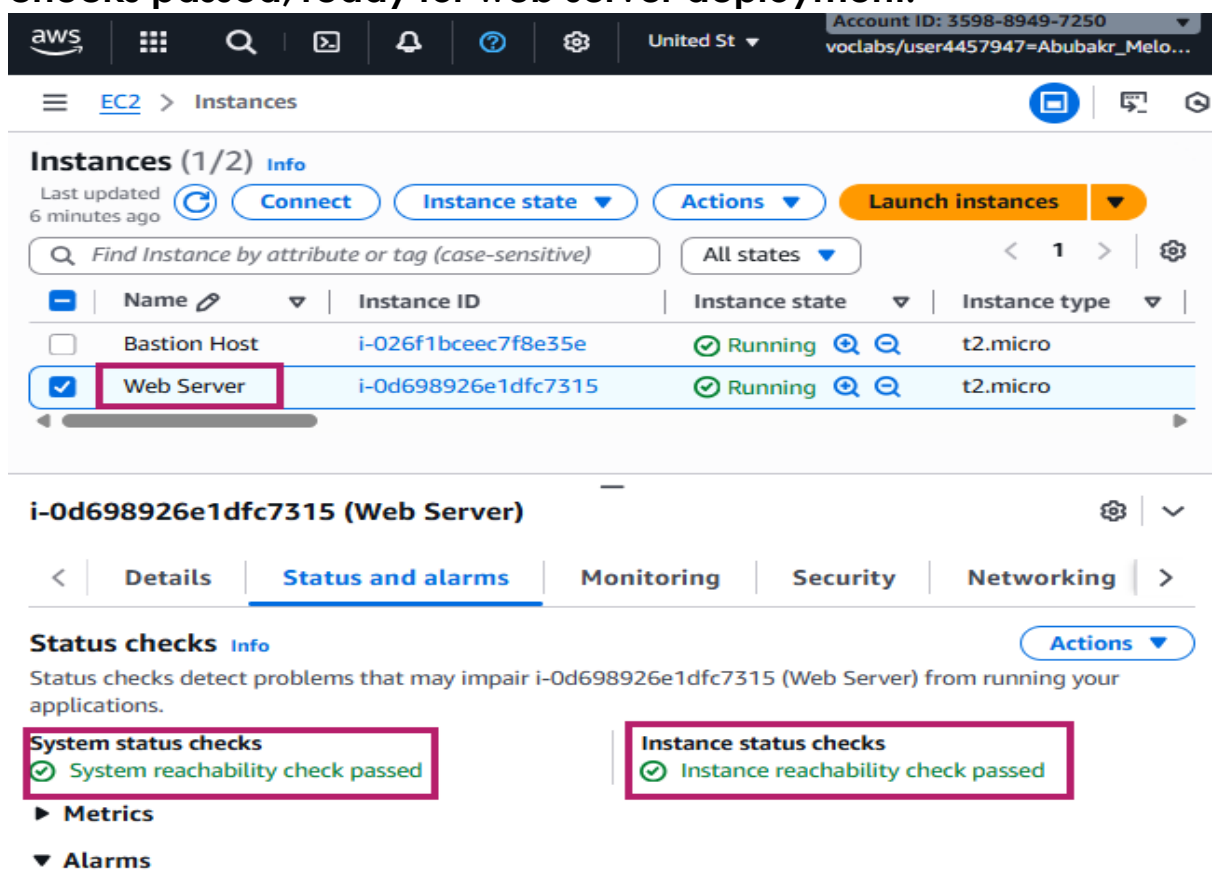
Upload a file with your user data or enter it in the field.

⬆ Choose file

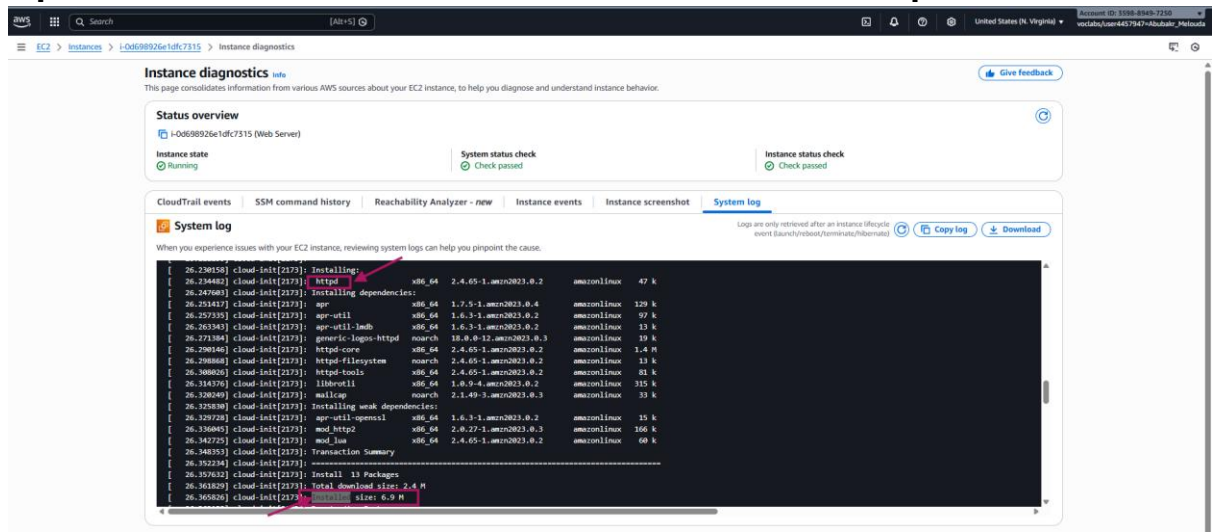
```
#!/bin/bash
dnf install -y httpd
systemctl enable httpd
systemctl start httpd
echo '<html><h1>Hello From Your Web Server!</h1></html>' > /var/www/html/index.html
```



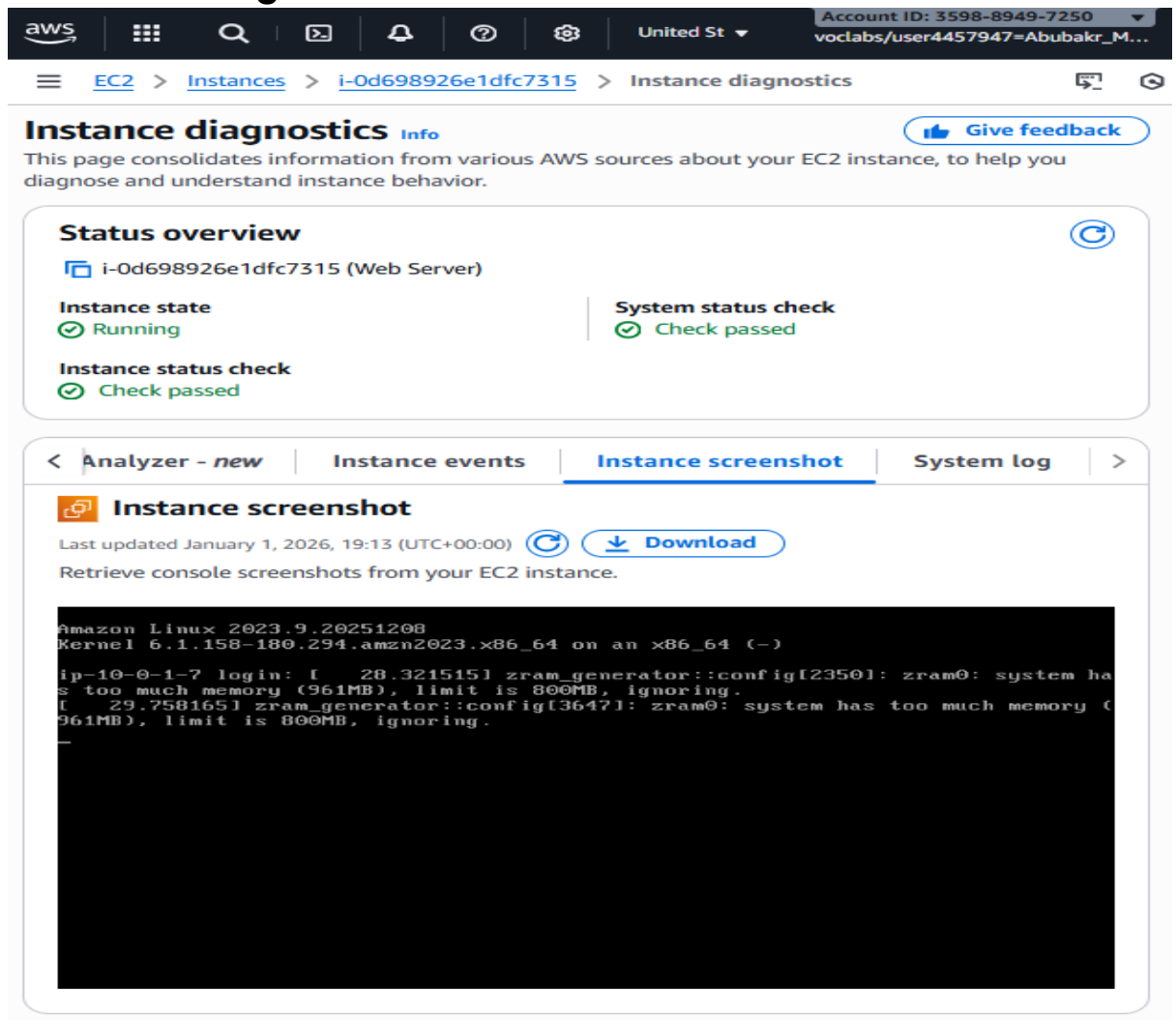
- Screenshot EC2 instance successfully running with all status checks passed, ready for web server deployment.



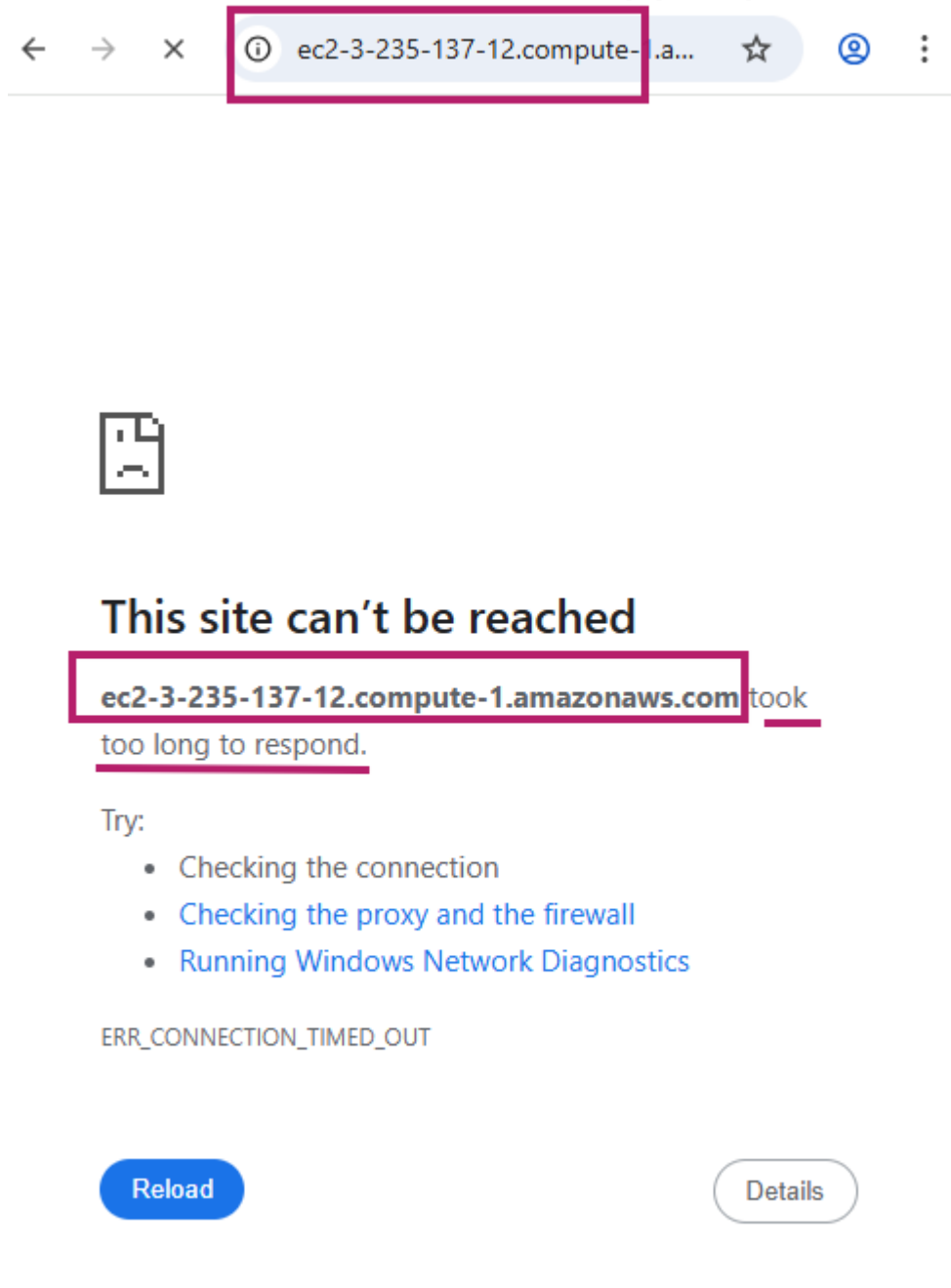
- Screenshot EC2 instance system log showing successful Apache HTTP server installation from user data script.



- Instance screenshot showing console output - useful for troubleshooting inaccessible instances.



- Screenshot initial security group configuration with no HTTP access - demonstrates default deny policy.



- Screenshot updated security group allowing HTTP traffic on port 80 from any IP address.

Security group before modification - no HTTP access allowed

The screenshot shows the AWS Management Console interface for Security Groups. At the top, the account ID is 3598-8949-7250. The breadcrumb navigation shows 'EC2 > Security Groups'. The page title is 'Security Groups (1/5) Info'. There are buttons for 'Actions', 'Export security groups to CSV', and 'Create security group'. A search bar is present with the placeholder text 'Find security groups by attribute or tag'. Below the search bar is a table of security groups:

Security group name	VPC ID	Description
default	vpc-0a06500a521c3d0b0	default
default	vpc-04e43607f4fa9b93a	default
Web Server security group	vpc-0a06500a521c3d0b0	Security group for Web Server
Ec2SecurityGroup	vpc-04e43607f4fa9b93a	VPC Security Group
default	vpc-0613d88547cab8e9f	default

Below the table, the selected security group 'sg-041f062b050591f7c - Web Server security group' is shown. The 'Inbound rules' tab is active, and it displays 'No security group rules found' in a red box. There are buttons for 'Manage tags' and 'Edit inbound rules'.

Security group updated to allow HTTP traffic on port 80

The screenshot displays the AWS Management Console interface. At the top, the navigation bar shows the AWS logo, search icons, and account information: Account ID: 3598-8949-7250, user: voclabs/user4457947=Abubakr_Melouda. The breadcrumb navigation indicates the path: EC2 > Security Groups.

The main section is titled "Security Groups (1/5) Info". It includes a search bar with the placeholder text "Find security groups by attribute or tag" and a "Create security group" button. Below this is a table listing security groups:

Security group name	VPC ID	Description
default	vpc-0a06500a521c3d0b0	default VPC securi
default	vpc-04e43607f4fa9b93a	default VPC securi
Ec2SecurityGroup	vpc-04e43607f4fa9b93a	VPC Security Grou
Web Server security group	vpc-0a06500a521c3d0b0	Security group for
default	vpc-0613d88547cab8e9f	default VPC securi

The "Web Server security group" row is highlighted with a red border. Below the table, the console shows the configuration for "sg-041f062b050591f7c - Web Server security group". The "Inbound rules" tab is selected, showing a single rule:

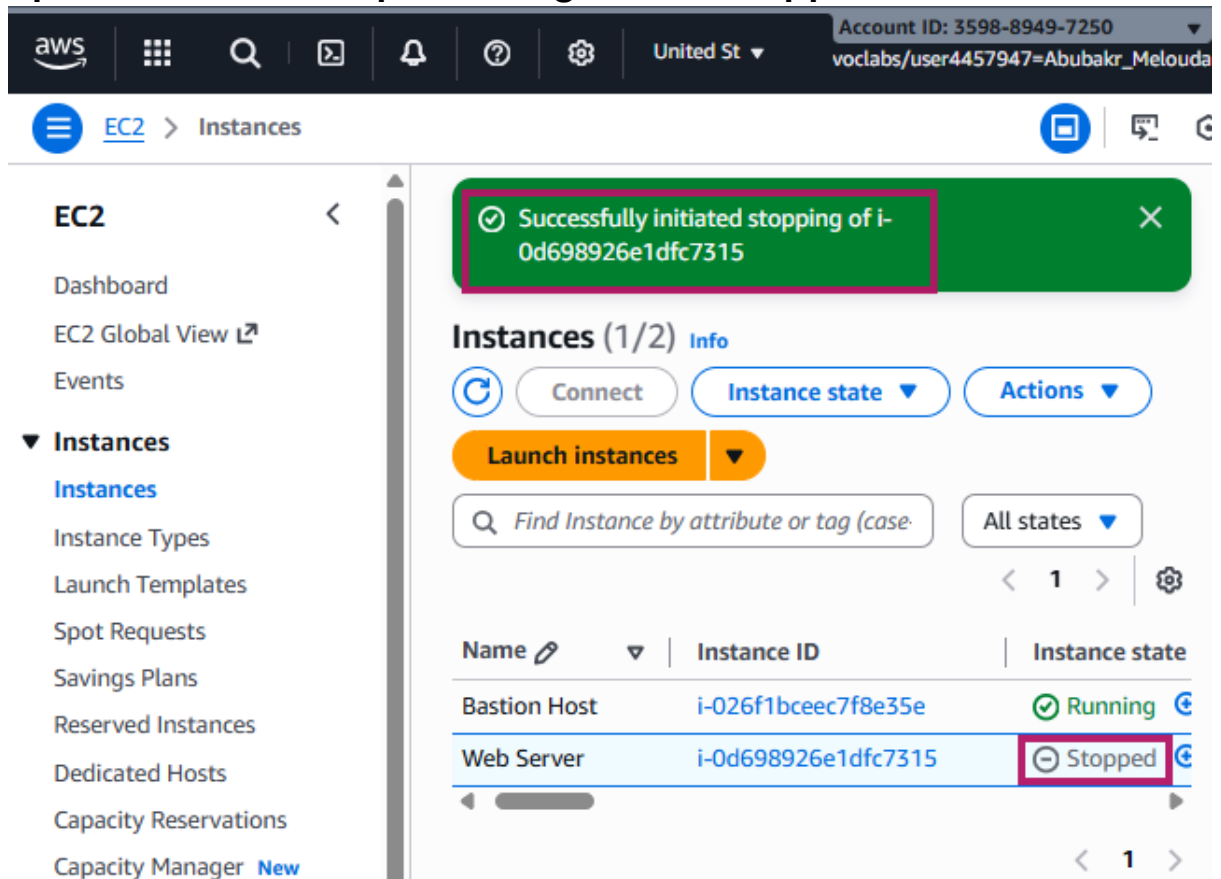
Type	Protocol	Port range	Source
HTTP	TCP	80	0.0.0.0/0

The rule row is highlighted with a red border.

- Screenshot web server successfully delivering content after security group configuration - demonstrates practical firewall rules application.

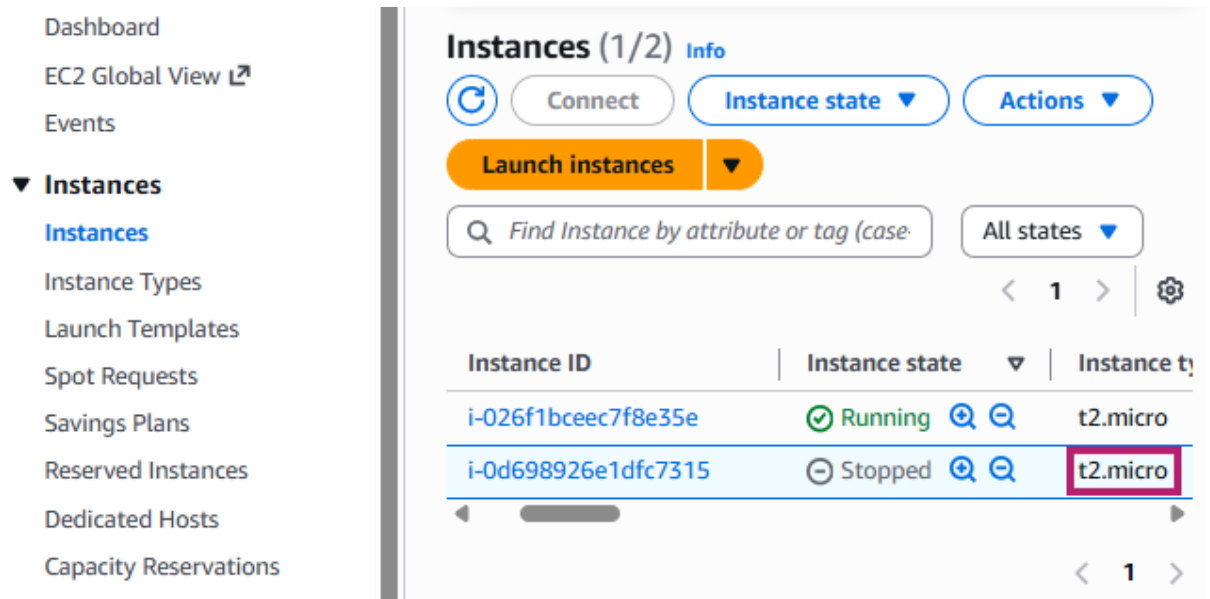


- Screenshot EC2 instance in stopped state before resizing operations - no compute charges while stopped.



- Screenshot changing instance type from t2.micro to t2.small for vertical scaling.

Before



Dashboard
EC2 Global View
Events

▼ **Instances**

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

Instances (1/2) Info

Connect Instance state Actions

Launch instances

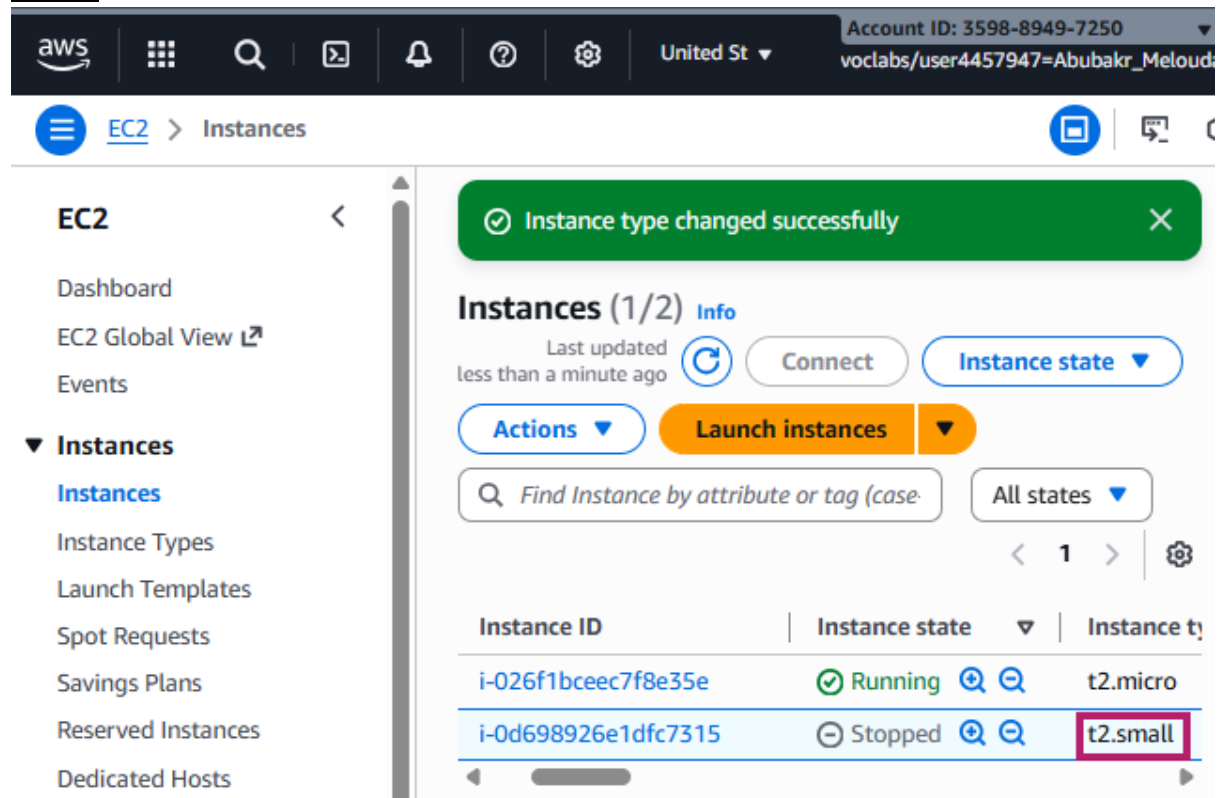
Find Instance by attribute or tag (case-sensitive) All states

< 1 >

Instance ID	Instance state	Instance type
i-026f1bceec7f8e35e	Running	t2.micro
i-0d698926e1dfc7315	Stopped	t2.micro

< 1 >

After



aws United States Account ID: 3598-8949-7250 voclabs/user4457947=Abubakr_Melouda

EC2 > Instances

EC2

- Dashboard
- EC2 Global View
- Events
- ▼ **Instances**
- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts

Instance type changed successfully

Instances (1/2) Info

Last updated less than a minute ago Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) All states

< 1 >

Instance ID	Instance state	Instance type
i-026f1bceec7f8e35e	Running	t2.micro
i-0d698926e1dfc7315	Stopped	t2.small

- Screenshot activating stop protection feature to prevent accidental instance stoppage - demonstrates instance-level safeguards.

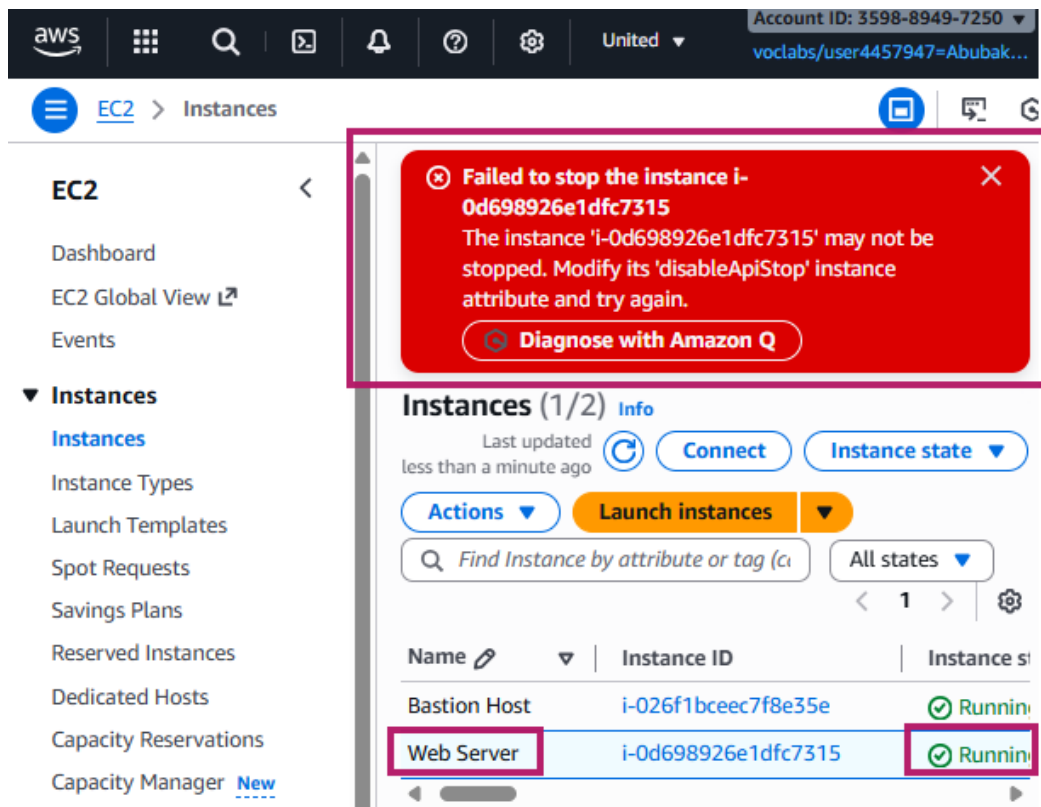
The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes EC2, Instances, Images, and Elastic Block Store. The main content area displays the 'Instances (1/2)' page. A modal dialog titled 'Change stop protection' is open, showing the 'Web Server' instance (ID: i-0d698926e1dfc7315). The 'Stop protection' checkbox is checked and highlighted with a red box. A red arrow points to the 'Save' button at the bottom right of the dialog.

Name	Instance ID	Instance state
Bastion Host	i-026f1bceec7f8e35e	Running
Web Server	i-0d698926e1dfc7315	Stopped

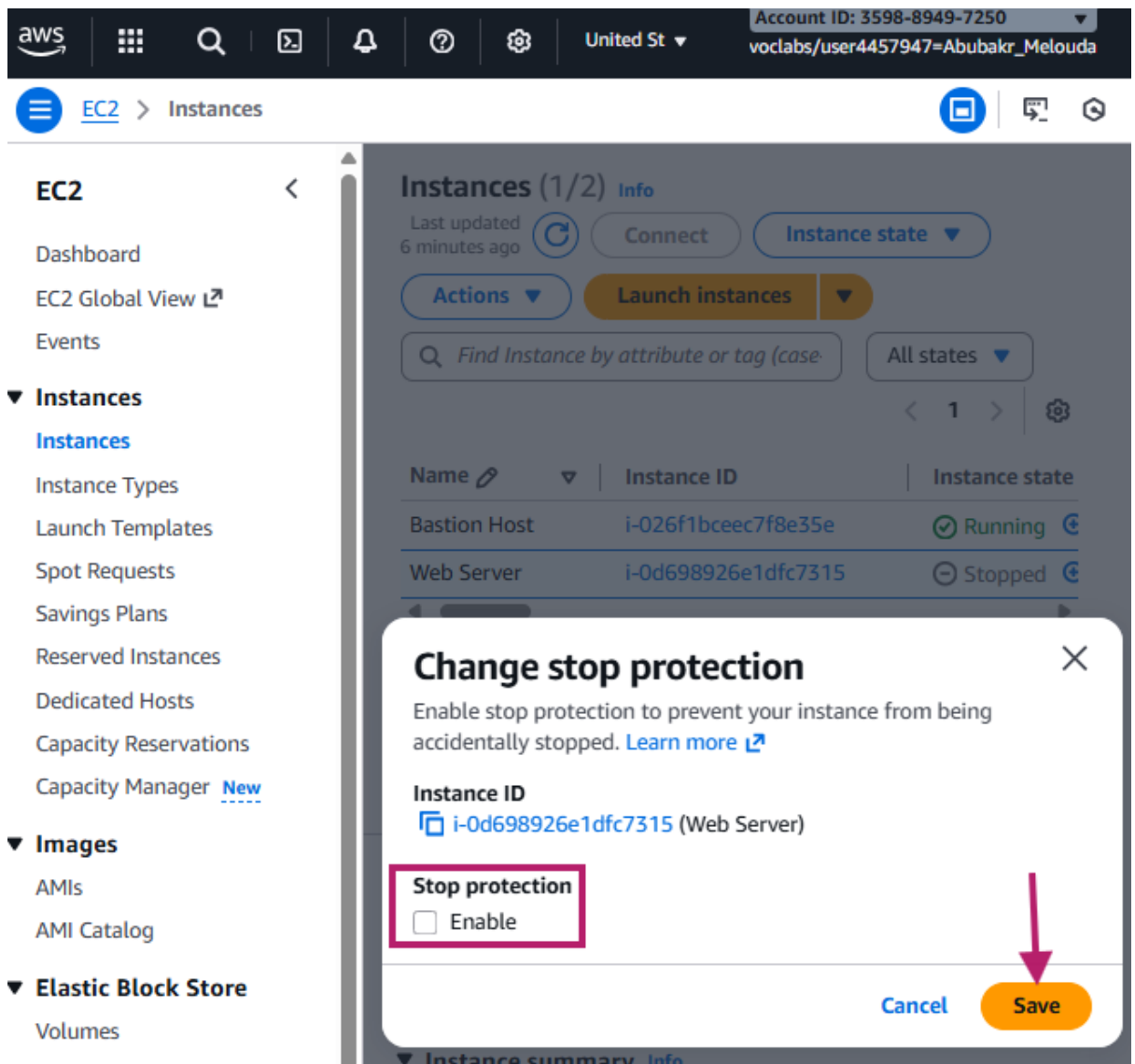
Test result showing instance successfully responding to no stop

The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes EC2, Instances, Images, and Elastic Block Store. The main content area displays the 'Instances (1/2)' page. A dropdown menu is open under the 'Instance state' button, showing the 'Stop instance' option highlighted with a red box. A red arrow points to the 'Stop instance' option.

Name	Instance ID	Instance state
Bastion Host	i-026f1bceec7f8e35e	Running
Web Server	i-0d698926e1dfc7315	Running



- Screenshot disabling stop protection to allow instance stoppage when needed.



- Screenshot increasing EBS root volume from 8 GB to 10 GB for additional storage capacity.

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EC2

Volumes

vol-0655061d8ef62d10f

Modify volume

Modify volume

Info

Modify the type, size, and performance of an EBS volume.

Volume details

Volume ID

vol-0655061d8ef62d10f

Volume type

Info

General Purpose SSD (gp3)

Size (GiB)

Info

10

Min: 1 GiB, Max: 65536 GiB.

IOPS

Info

3000

Min: 3000 IOPS, Max: 80000 IOPS.

Throughput (MiB/s)

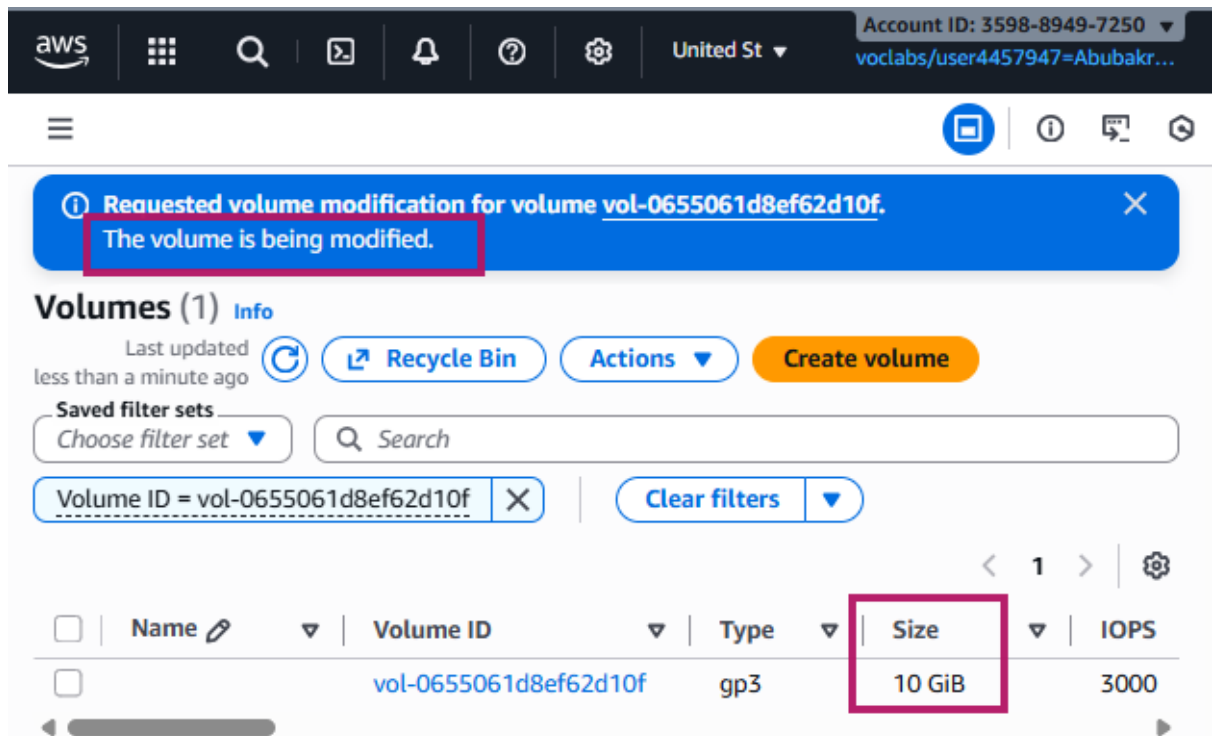
Info

125

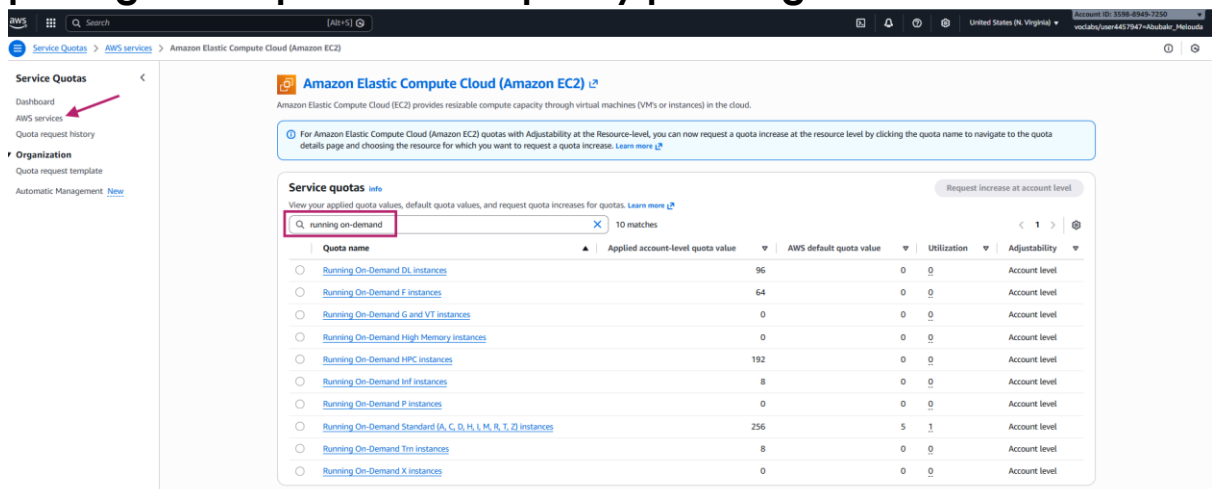
Min: 125 MiB, Max: 2000 MiB. Baseline: 125 MiB/s.

Cancel

Modify



- Screenshot AWS Service Quotas showing EC2 instance limits per region - important for capacity planning.



- Screenshot EC2 instance successfully stopped after all lab tasks completed - demonstrates full lifecycle management.

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Account ID: 3598-8949-7250

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EC2

> Instances

EC2

Dashboard

EC2 Global View

Events

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Successfully initiated stopping of i-0d698926e1dfc7315

Instances (1/2)

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-

All states

< 1 >

Name	Instance ID	Instance state
Bastion Host	i-026f1bceec7f8e35e	Running
Web Server	i-0d698926e1dfc7315	Stopped