

Task 13: Launch an EC2 instance (Linux and Windows) along with a web server. Then, create an EBS volume of 5 GB, attach it to an EC2 machine (Linux and Windows), and take a snapshot. Finally, create an EBS volume using the taken snapshot.

1. Launch an EC2 instance (amazon Linux) along with a web server:

[EC2](#) > [Instances](#) > Launch an instance

Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name

webserv-er-volume snapchar

[Add additional tags](#)

Quick Start

Amazon Linux
aws


macOS
Mac

Ubuntu
ubuntu

Windows
Microsoft

Red Hat
Red Hat

SUSE Li
SUSE


[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-01376101673c89611 (64-bit (x86), uefi-preferred) / ami-0740aeaa53d2ea48a (64-bit (Arm), uefi)
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible ▼

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Architecture
64-bit (x86) ▼

Boot mode
uefi-preferred

AMI ID
ami-01376101673c89611

Verified provider

Firewall (security groups) | Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group

☐ Select existing security group

We'll create a new security group called 'launch-wizard-1' with the following rules:

- ☐ Allow SSH traffic from
Helps you connect to your instance
- ☒ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server
- ☐ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

Edit inbound rules info
Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules info

Security group rule ID	Type <small>info</small>	Protocol <small>info</small>	Port range <small>info</small>	Source <small>info</small>	Description - optional <small>info</small>
sgr-0692ffc2e59f0f5d7	HTTPS	TCP	443	Custom	<div><div>Q</div><div>0.0.0.0/0 X</div></div>

Add rule

Inbound rules

Outbound rules

Tags

Inbound rules (2)

Q Search

< 1 > ⚙

<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-00606d54ef1587b...	IPv4	HTTPS	TCP	443

Instances (1/3) info

Q Find Instance by attribute or tag (case-sensitive)

All states

< 1 > ⚙

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	windowssw	i-073dc0eb17845873a	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-233...
<input checked="" type="checkbox"/>	webserver-vol...	i-0ccfb398bdea837ea	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-121...
<input type="checkbox"/>	linuxwebserver	i-058387bbec90d47d8	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-15-206...

i-0ccfb398bdea837ea (webserver-volume snapchar)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance summary info

Instance ID
i-0ccfb398bdea837ea (webserver-volume snapchar)

Public IPv4 address
13.126.152.49 | [open address](#)

Private IPv4 addresses
172.31.37.166

```
[ec2-user@ip-172-31-37-166 ~]$ sudo yum update
Last metadata expiration check: 0:25:29 ago on Tue Jul 9 10:40:15 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-37-166 ~]$ sudo yum install httpd
Last metadata expiration check: 0:25:58 ago on Tue Jul 9 10:40:15 2024.
Dependencies resolved.
```


Package	Architecture	Version	Repository	Size
Installing: httpd	x86_64	2.4.59-2.amzn2023	amazonlinux	47 k
Installing dependencies:				
apr	x86_64	1.7.2-2.amzn2023.0.2	amazonlinux	129 k
apr-util	x86_64	1.6.3-1.amzn2023.0.1	amazonlinux	98 k
generic-logos-httpd	noarch	18.0.0-12.amzn2023.0.3	amazonlinux	19 k
httpd-core	x86_64	2.4.59-2.amzn2023	amazonlinux	1.4 M
httpd-filesystem	noarch	2.4.59-2.amzn2023	amazonlinux	14 k
httpd-tools	x86_64	2.4.59-2.amzn2023	amazonlinux	81 k
libbrotli	x86_64	1.0.9-4.amzn2023.0.2	amazonlinux	315 k
mailcap	noarch	2.1.49-3.amzn2023.0.3	amazonlinux	33 k
Installing weak dependencies:				
apr-util-openssl	x86_64	1.6.3-1.amzn2023.0.1	amazonlinux	17 k
mod_http2	x86_64	2.0.27-1.amzn2023.0.2	amazonlinux	166 k
mod_lua	x86_64	2.4.59-2.amzn2023	amazonlinux	61 k

```
Installing      : mod_http2-2.0.27-1.amzn2023.0.2.x86_64
Installing      : mod_lua-2.4.59-2.amzn2023.x86_64
Installing      : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
Installing      : httpd-2.4.59-2.amzn2023.x86_64
Running scriptlet: httpd-2.4.59-2.amzn2023.x86_64
Verifying       : apr-1.7.2-2.amzn2023.0.2.x86_64
Verifying       : apr-util-1.6.3-1.amzn2023.0.1.x86_64
Verifying       : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
Verifying       : generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch
Verifying       : httpd-2.4.59-2.amzn2023.x86_64
Verifying       : httpd-core-2.4.59-2.amzn2023.x86_64
Verifying       : httpd-filesystem-2.4.59-2.amzn2023.noarch
Verifying       : httpd-tools-2.4.59-2.amzn2023.x86_64
Verifying       : libbrotli-1.0.9-4.amzn2023.0.2.x86_64
Verifying       : mailcap-2.1.49-3.amzn2023.0.3.noarch
Verifying       : mod_http2-2.0.27-1.amzn2023.0.2.x86_64
Verifying       : mod_lua-2.4.59-2.amzn2023.x86_64

Installed:
apr-1.7.2-2.amzn2023.0.2.x86_64          apr-util-1.6.3-1.amzn2023.0.1.x86_64      apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch  httpd-2.4.59-2.amzn2023.x86_64      httpd-core-2.4.59-2.amzn2023.x86_64
httpd-filesystem-2.4.59-2.amzn2023.noarch          httpd-tools-2.4.59-2.amzn2023.x86_64      libbrotli-1.0.9-4.amzn2023.0.2.x86_64
mailcap-2.1.49-3.amzn2023.0.3.noarch              mod_http2-2.0.27-1.amzn2023.0.2.x86_64      mod_lua-2.4.59-2.amzn2023.x86_64

Complete!
[ec2-user@ip-172-31-37-166 ~]$ sudo service httpd start
Redirecting to /bin/systemctl start httpd.service
[ec2-user@ip-172-31-37-166 ~]$
```

```
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Wed 2024-07-10 05:13:36 UTC; 51s ago
     Docs: man: httpd.service(8)
    Main PID: 26055 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served/sec: 0 B/sec"
    Tasks: 177 (limit: 1114)
   Memory: 12.9M
    CPU: 92ms
```



Not secure 13.126.152.49

It works!

2. Launch an EC2 instance (windows) along with a web server:

[EC2](#) > [Instances](#) > Launch an instance

Launch an instance [Info](#)

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags [Info](#)

Name

[Add additional tags](#)

▼ Application and OS Images (Amazon Machine Image) [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Recents

Quick Start

Amazon
Linux



macOS



Ubuntu



Windows



Red Hat



SUSE Li



[Browse more AMIs](#)

Including AMIs from
AWS, Marketplace and
the Community

Subnet | [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP | [Info](#)

Enable

Additional charges apply when outside of [free tier allowance](#)

Firewall (security groups) | [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group

☐ Select existing security group

We'll create a new security group called '**launch-wizard-2**' with the following rules:

☒ Allow RDP traffic from
Helps you connect to your instance

Anywhere
0.0.0.0/0

☐ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server

☐ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

Instances (1/3) [Info](#)

Find Instance by attribute or tag (case-sensitive)

All states

Refresh

Connect

Instance state

Actions

Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv
<input checked="" type="checkbox"/>	windowsws	i-073dc0eb17845873a	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1a	ec2-13-23
<input type="checkbox"/>	webserver-vol...	i-0ccfb398bdea837ea	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1a	ec2-13-12
<input type="checkbox"/>	linuxwebserver	i-058387bbec90d47d8	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1a	ec2-15-20

i-073dc0eb17845873a (windowsws)

Details

Status and alarms

Monitoring

Security

Networking

Storage

Tags

▼ Instance summary [Info](#)

Instance ID

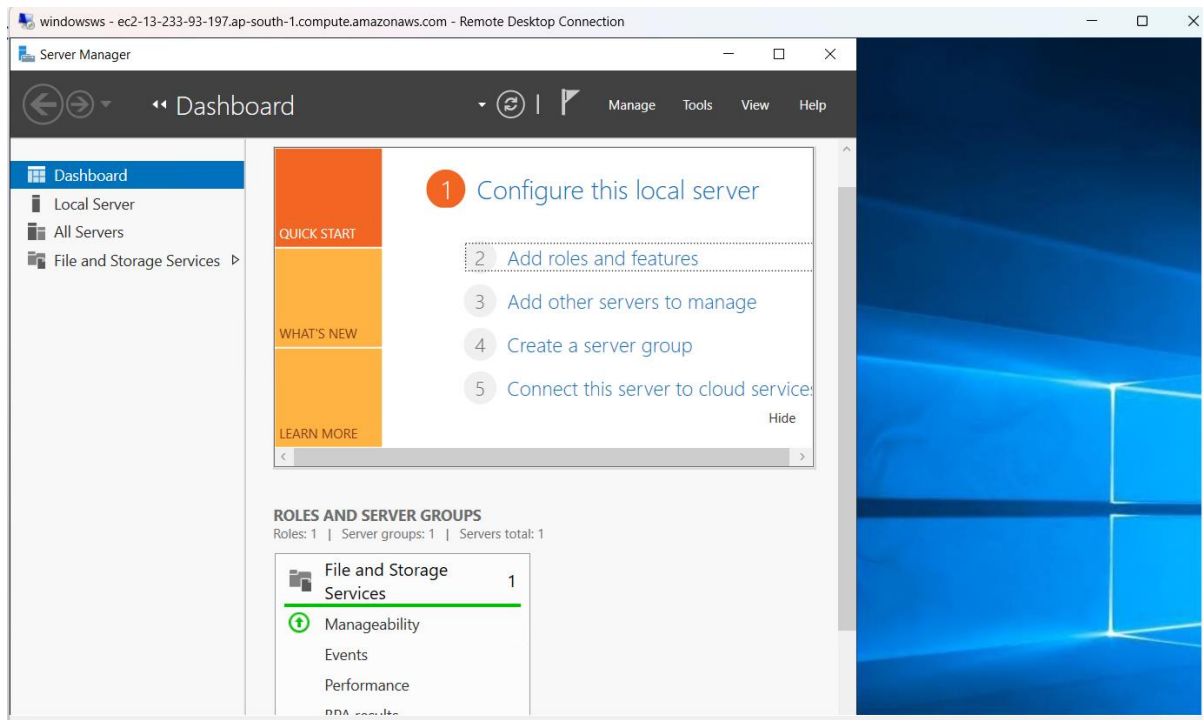
Public IPv4 address

Private IPv4 addresses

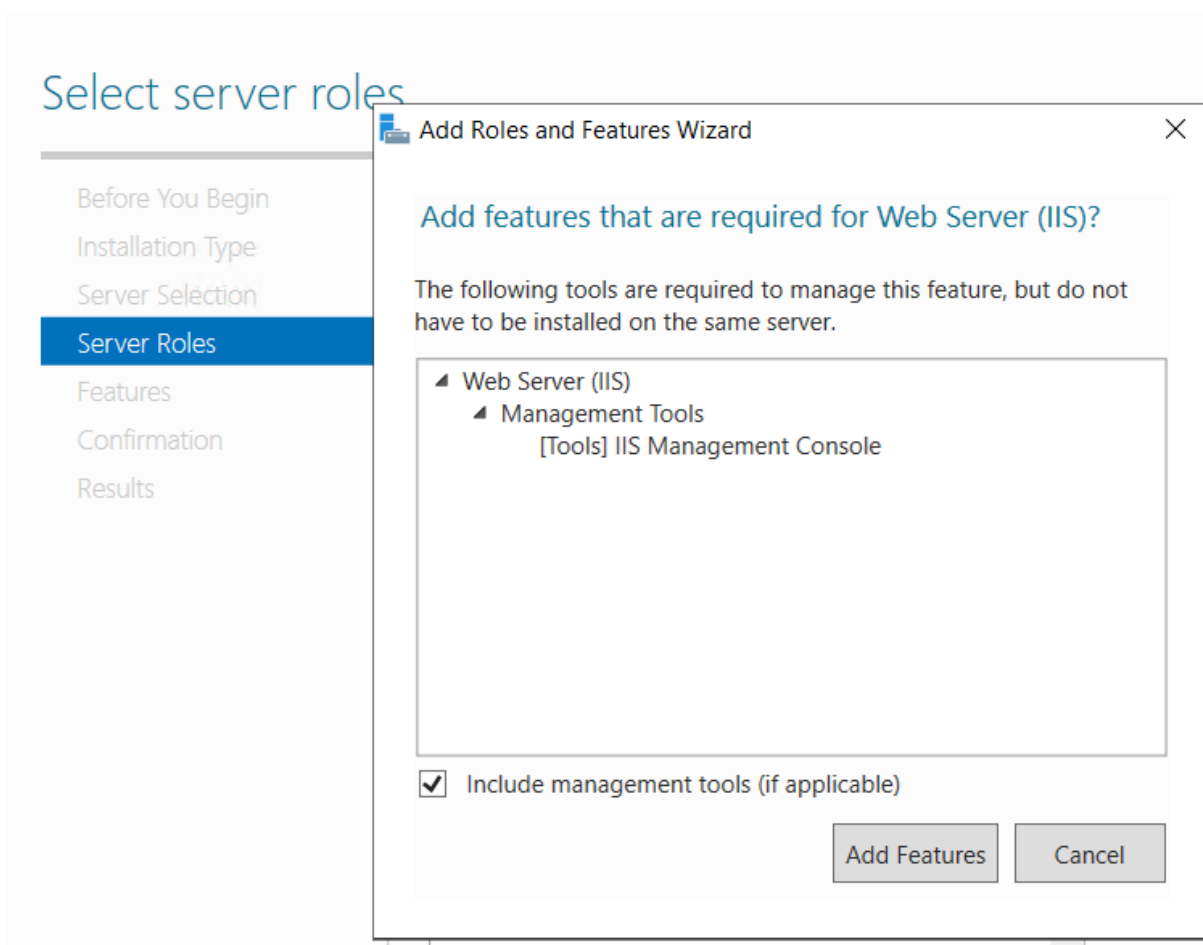
i-073dc0eb17845873a (windowsws)

13.233.93.197 | [open address](#)

172.31.36.127



Add Roles and Features Wizard



Select server roles

DESTINATION SERVER
EC2AMAZ-NR2GR84

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

Select one or more roles to install on the selected server.

Roles

- ☐ Active Directory Certificate Services
- ☐ Active Directory Domain Services
- ☐ Active Directory Federation Services
- ☐ Active Directory Lightweight Directory Services
- ☐ Active Directory Rights Management Services
- ☐ Device Health Attestation
- ☐ DHCP Server
- ☐ DNS Server
- ☐ Fax Server
- ▶ ☒ File and Storage Services (1 of 12 installed)
- ☐ Host Guardian Service
- ☐ Hyper-V
- ☐ Network Controller
- ☐ Network Policy and Access Services
- ☐ Print and Document Services
- ☐ Remote Access
- ☐ Remote Desktop Services
- ☐ Volume Activation Services
- ☒ Web Server (IIS)
- ☐ Windows Deployment Services

Description

Web Server (IIS) provides a reliable, manageable, and scalable Web application infrastructure.

< Previous

Next >

Install

Cancel

Confirm installation selections

DESTINATION SERVER
EC2AMAZ-NR2GR84

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Web Server Role (IIS)

Role Services

Confirmation

Results

To install the following roles, role services, or features on selected server, click Install.

☐ Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.

Web Server (IIS)

- Management Tools
 - IIS Management Console
- Web Server
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
 - Health and Diagnostics
 - HTTP Logging

[Export configuration settings](#)
[Specify an alternate source path](#)

< Previous

Next >

Install

Cancel

Installation progress

DESTINATION SERVER
EC2AMAZ-NR2GR84

Before You Begin

Installation Type

Server Selection

Server Roles

Features


Web Server Role (IIS)

Role Services

Confirmation

Results


View installation progress

 Feature installation

Installation succeeded on EC2AMAZ-NR2GR84.

Web Server (IIS)

- Management Tools
 - IIS Management Console
- Web Server
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - Static Content
 - Health and Diagnostics
 - HTTP Logging

 You can close this wizard without interrupting running tasks. View task progress or open this page again by clicking Notifications in the command bar, and then Task Details.

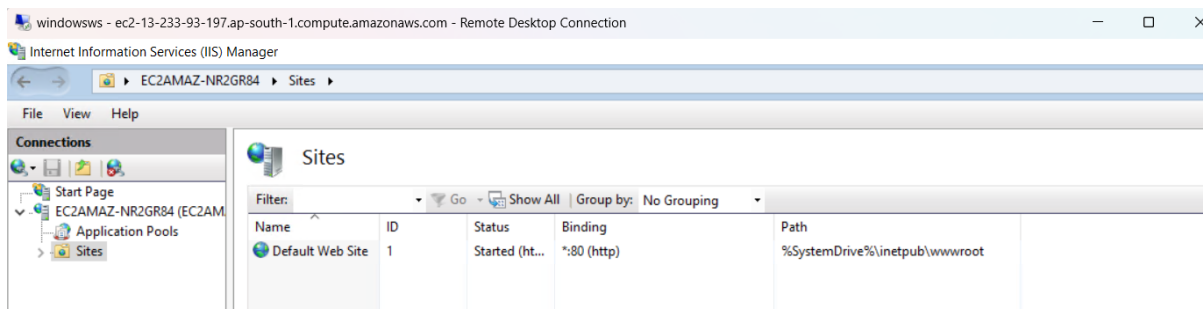
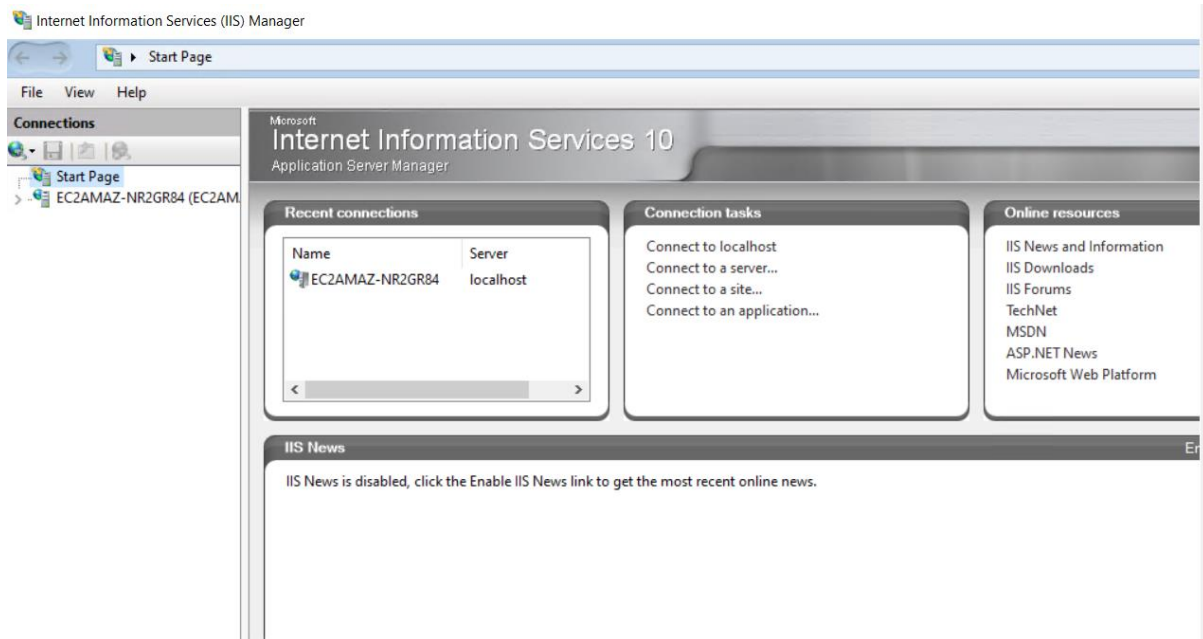
[Export configuration settings](#)

< Previous

Next >

Close

Cancel



3. create an EBS volume of 5 GB, attach it to an EC2 machine (Linux):

[EC2](#) > [Volumes](#) > [vol-0a5bbd8ae6cd6f057](#) > Attach volume

Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

i-0ccfb398bdea837ea (webserver-volume snapchar) (running)	✓
i-073dc0eb17845873a (windowsws) (running)	
i-058387bbec90d47d8 (linuxwebserver) (running)	
i-0ccfb398bdea837ea	▲

Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

Select a device name ▼

Recommended device names for Linux: `/dev/xvda` for root volume. `/dev/sd[f-p]` for data volumes.

Newer Linux kernels may rename your devices to `/dev/xvdf` through `/dev/xvdp` internally, even when the device name entered here (and shown in the details) is `/dev/sdf` through `/dev/sdp`.

Basic details

Volume ID

 vol-0a5bbd8ae6cd6f057 (5gib-volume)

Availability Zone

ap-south-1a

Instance [Info](#)

i-0ccfb398bdea837ea




Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

/dev/sdf

Recommended device names for Linux: /dev/xvda for root volume. /dev/sd[f-p] for data volumes.

 Newer Linux kernels may rename your devices to **/dev/xvdf** through **/dev/xvdp** internally, even when the device name entered here (and shown in the details) is **/dev/sdf** through **/dev/sdp**.

Cancel

Attach volume

Successfully attached volume vol-0a5bbd8ae6cd6f057 to instance i-0ccfb398bdea837ea.

Volumes (4) [Info](#)



Actions

Create volume

< 1 > 

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	-	vol-0ad824550a8d89234	gp3	8 GiB	3000	125	snap-0f7a56a...	2024/07/09 16:17 GMT+5:...
<input type="checkbox"/>	-	vol-02be1d4f22aa916db	gp2	30 GiB	100	-	snap-05c7be9...	2024/07/09 16:21 GMT+5:...
<input type="checkbox"/>	-	vol-02fb5cdd53900c581	gp3	8 GiB	3000	125	snap-0f7a56a...	2024/07/09 16:56 GMT+5:...
<input type="checkbox"/>	5gib-volume	vol-0a5bbd8ae6cd6f057	gp3	5 GiB	3000	125	-	2024/07/09 18:20 GMT+5:...

Volumes (1) [Info](#)



Actions

Create volume

< 1 > 

<input type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	5gib-volume	vol-0a5bbd8ae6cd6f057	gp3	5 GiB	3000	125	-	2024/07/09 18:20 GMT+5:...

<input checked="" type="checkbox"/>	5gib-volume	vol-0a5bbd8ae6cd6f057	gp3	5 GiB	3000	125	-	2024/07/09 18:20 GMT+5:...
-------------------------------------	-------------	-----------------------	-----	-------	------	-----	---	----------------------------

Volume ID: vol-0a5bbd8ae6cd6f057 (5gib-volume)

Details	Status checks	Monitoring	Tags
Volume ID vol-0a5bbd8ae6cd6f057 (5gib-volume)	Size 5 GiB	Type gp3	Volume status Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more	Volume state Available	IOPS 3000	Throughput 125
Encryption Not encrypted	KMS key ID -	KMS key alias -	KMS key ARN -

Instances (1/3) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input checked="" type="checkbox"/> webserver-vol...	i-0ccfb398bdea837ea	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1a	ec2-13-232
<input type="checkbox"/> windowsws	i-073dc0eb17845873a	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1a	ec2-43-204
<input type="checkbox"/> linuxwebserver	i-058387bbec90d47d8	Stopped	t2.micro	-	View alarms	ap-south-1a	-



i-0ccfb398bdea837ea (webserver-volume snapchar)

<input type="checkbox"/>	vol-0a5bbd8ae6cd6f057	/dev/sdf	5	Attached	2024/07/09 18:23 GMT+5:30	No	-
--------------------------	-----------------------	----------	---	----------	---------------------------	----	---

4. create an EBS volume of 5 GB, attach it to an EC2 machine (windows):

Volume type [Info](#)

General Purpose SSD (gp3) ▼

 General Purpose SSD gp3 is now the default selection. gp3 provides up to 20% lower cost per GB than gp2. [Learn More](#) 

Size (GiB) [Info](#)

5

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)

3000

Min: 3000 IOPS, Max: 16000 IOPS. The value must be an integer.

Throughput (MiB/s) [Info](#)

125

Min: 125 MiB, Max: 1000 MiB. Baseline: 125 MiB/s.

Availability Zone [Info](#)

ap-south-1a ▼

Snapshot ID - optional [Info](#)

Don't create volume from a snapshot ▼



Attach volume Info

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Q |

i-0ccfb398bdea837ea
(webserver-volume snapchar) (running)

i-073dc0eb17845873a
(windowssws) (running) ✓

i-058387bbec90d47d8
(linuxwebserver) (stopped)

i-073dc0eb17845873a ▲

↺

Only instances in the same Availability Zone as the selected volume are displayed.

Device name Info

Select a device name ▼

Recommended device names for Windows: /dev/sda1 for root volume, xvd[f-p] for data volumes.

Cancel

Attach volume

<input checked="" type="checkbox"/>	5gib-windows...	vol-0088eafdae46b521a	gp3	5 GiB	3000	125	-	2024/07/10 07:59 GMT+5:
-------------------------------------	-----------------	-----------------------	-----	-------	------	-----	---	-------------------------

Volume ID: vol-0088eafdae46b521a (5gib-windowssvol)

Details | Status checks | Monitoring | Tags

Volume ID vol-0088eafdae46b521a (5gib-windowssvol)	Size 5 GiB	Type gp3	Volume status Insufficient data
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more	Volume state In-use	IOPS 3000	Throughput 125

Instances (1/3) Info

Find Instance by attribute or tag (case-sensitive)

All states ▼

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	webserver-vol...	i-0ccfb398bdea837ea	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-232
<input checked="" type="checkbox"/>	windowssws	i-073dc0eb17845873a	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-43-204
<input type="checkbox"/>	linuxwebserver	i-058387bbec90d47d8	Stopped	t2.micro	-	View alarms +	ap-south-1a	-

i-073dc0eb17845873a (windowssws)

<input type="checkbox"/>	vol-0088eafdae46b521a	xvdp	5	Attached	2024/07/10 08:04 GMT+5:30	No	-
--------------------------	-----------------------	------	---	----------	---------------------------	----	---

5. snapshot for Linux & Windows:

Volumes (1/5) Info

Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
<input type="checkbox"/>	-	vol-0ad824550a8d89234	gp3	8 GiB	3000	125	snap-0f7a5
<input type="checkbox"/>	-	vol-02be1d4f22aa916db	gp2	30 GiB	100	-	snap-05c7
<input type="checkbox"/>	-	vol-02fb5cdd53900c581	gp3	8 GiB	3000	125	snap-0f7a5
<input checked="" type="checkbox"/>	5gib-volume	vol-0a5bbd8ae6cd6f057	gp3	5 GiB	3000	125	-
<input type="checkbox"/>	5gib-windows...	vol-0088eafdae46b521a	gp3	5 GiB	3000	125	-

Actions

Create volume

Modify volume

Create snapshot

Create snapshot lifecycle policy

Delete volume

Attach volume

Detach volume

Force detach volume

Manage auto-enabled I/O

Manage tags

Fault injection

EC2 > Snapshots > snap-0f2317358777fc475

snap-0f2317358777fc475

Delete

Actions

Snapshot ID

891377228959

Volume size

5 GiB

Progress

Unavailable

99%

Snapshot status

Pending

Owner

891377228959

Volume ID

vol-0a5bbd8ae6cd6f057

Started

Wed Jul 10 2024 08:17:50 GMT+0530 (India Standard Time)

Product codes

-

Encryption

Not encrypted

KMS key ID

-

KMS key alias

-

KMS key ARN

-

Fast snapshot restore

-

Description

linuxsnapchat

EC2 > Snapshots > snap-069a8e6aa080e5ef2

snap-069a8e6aa080e5ef2

Delete

Actions

Snapshot ID

891377228959

Volume size

5 GiB

Progress

Available (100%)

Snapshot status

Completed

Owner

891377228959

Volume ID

vol-0088eafdae46b521a

Started

Wed Jul 10 2024 08:20:14 GMT+0530 (India Standard Time)

Product codes

-

Encryption

Not encrypted

KMS key ID

-

KMS key alias

-

KMS key ARN

-

Fast snapshot restore

-

Description

windowssnapchat

Snapshots (1/2) Info

Owned by me

Search

Recycle Bin

Actions

Create snapshot

< 1 > ⚙

	Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
<input type="checkbox"/>	linuxsnapchat	snap-069a8e6aa080e5ef2	5 GiB	windowssnapchat	Standard	Completed	2024/07/10 08:20 G
<input checked="" type="checkbox"/>	windowssn...	snap-0f2317358777fc475	5 GiB	linuxsnapchat	Standard	Completed	2024/07/10 08:17 G