



Introduction to Amazon Cloud

Amazon EC2 Overview

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Amazon Web Services



What is AWS?

AWS provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers millions of businesses in over 245 countries and territories around the world.

Benefits

- Low Cost
- Elasticity & Agility
- Open & Flexible
- Secure
- Global Reach



What sets AWS apart?



Security

Fine-grained identity and access control;
Build with the Highest Standards for Privacy and Data Security



Service Breadth & Depth; Pace of Innovation

200+ fully featured services to support any cloud workload; AWS released 3,332 significant features and services in 2022



Experience: 1M+ customers

Building and managing cloud since 2006



Global Footprint

105 Availability Zones within 33 geographic Regions, 41 Local Zones, 600+ Points of Presence and 13 regional edge caches in 245 countries and territories



Machine Learning

More machine learning happens on AWS than anywhere else.
Machine learning in the hands of every developer and data scientist.



Ecosystem

100,000+ APN partners from over 150 countries. The AWS Marketplace
12,000+ Products across 65 Categories



Enterprise leader

AWS positioned as a Leader in the Gartner Magic Quadrant for Cloud Infrastructure and Platform Services

Pricing Philosophy

High volume / low margin businesses are in our core DNA

Trade capital
expense for variable
expense

Pay for what
you use

Our economies of
scale provide us
with lower costs

129 price
reductions
since 2006

Pricing model choice
to support variable
and stable
workloads

On-demand
Savings Plans
Reserved Instances
Spot

Save more money as
you grow bigger

Tiered pricing
Volume discounts
Custom pricing

Customer obsessed



90%
of roadmap originates with customer requests and
are designed to meet specific needs



“ We were able to easily support the jump from 30 billion records to 70 billion records a day because of the flexibility and scalability of Amazon S3 and Amazon Redshift. ”

– Robert Hunt, Vice President of Software Engineering, Nasdaq

It's **greener** in the cloud.

AWS's infrastructure is

3.6x more energy efficient

than the median of the surveyed U.S. enterprise data centers

AWS performs the same task with an

80% lower carbon footprint

Source: 451 Research, 2019, all rights reserved



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AWS Global Reach

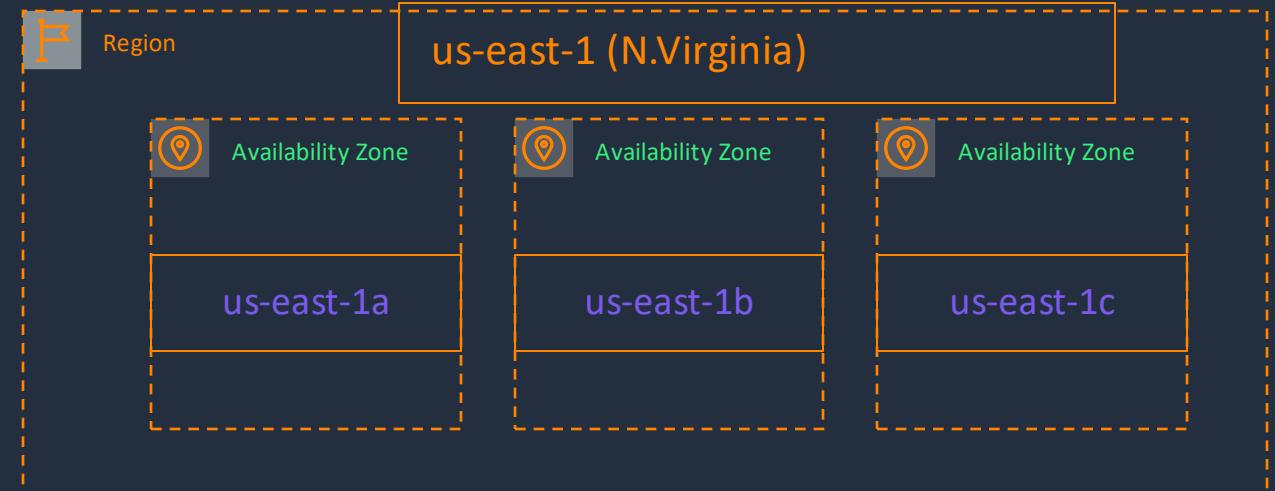


33
Regions



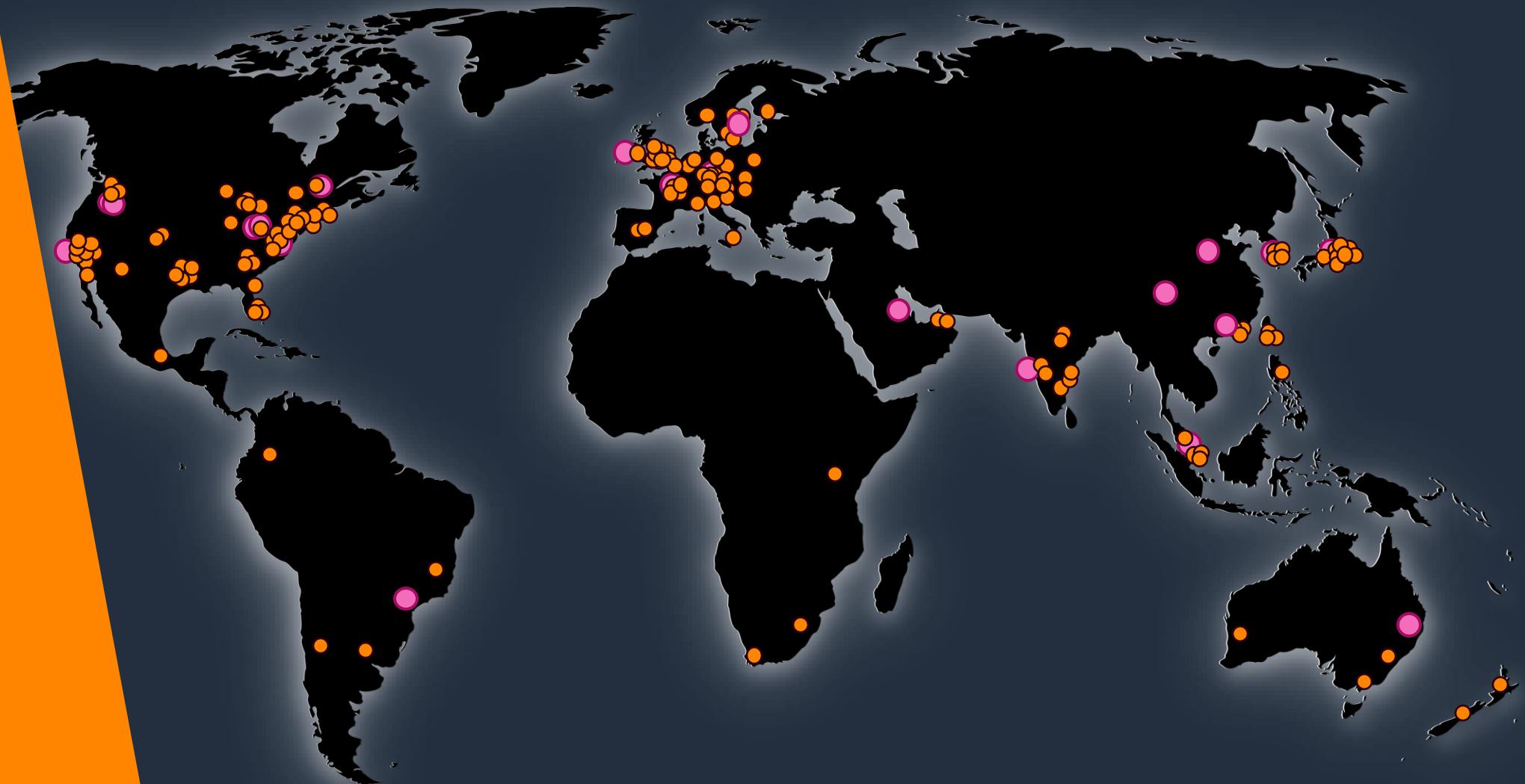
Availability Zones

- Each AWS Region consists of multiple, isolated, and physically separate AZs within a geographic area
- An Availability Zone (AZ) is one or more discrete data centers with redundant power, networking, and connectivity in an AWS Region
- High throughput, low latency (< 10 ms) network between Availability Zones
- All traffic between AZs is encrypted
- Physical separation within 100 km (60 miles)



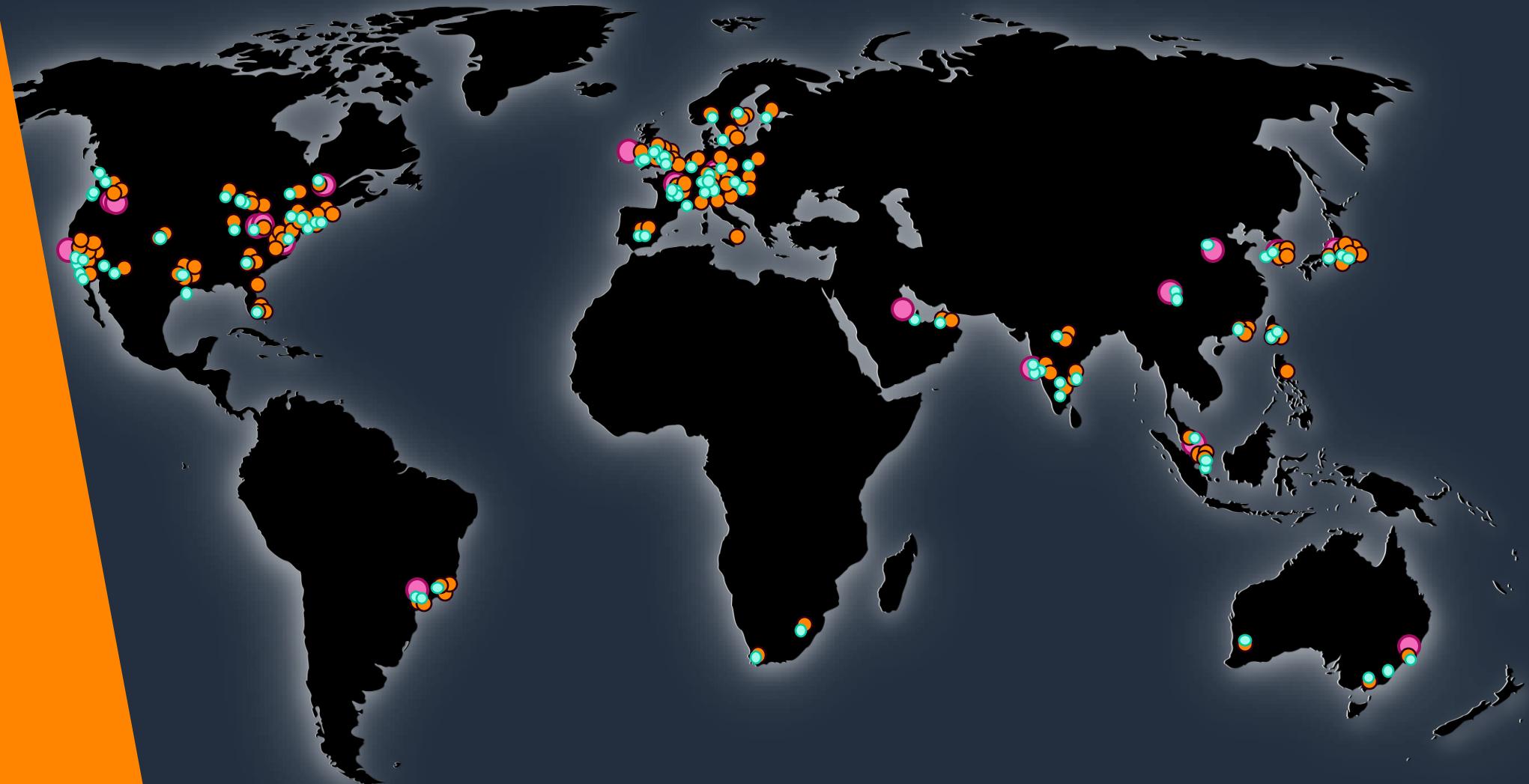
600+

Amazon
CloudFront
Points of
Presence

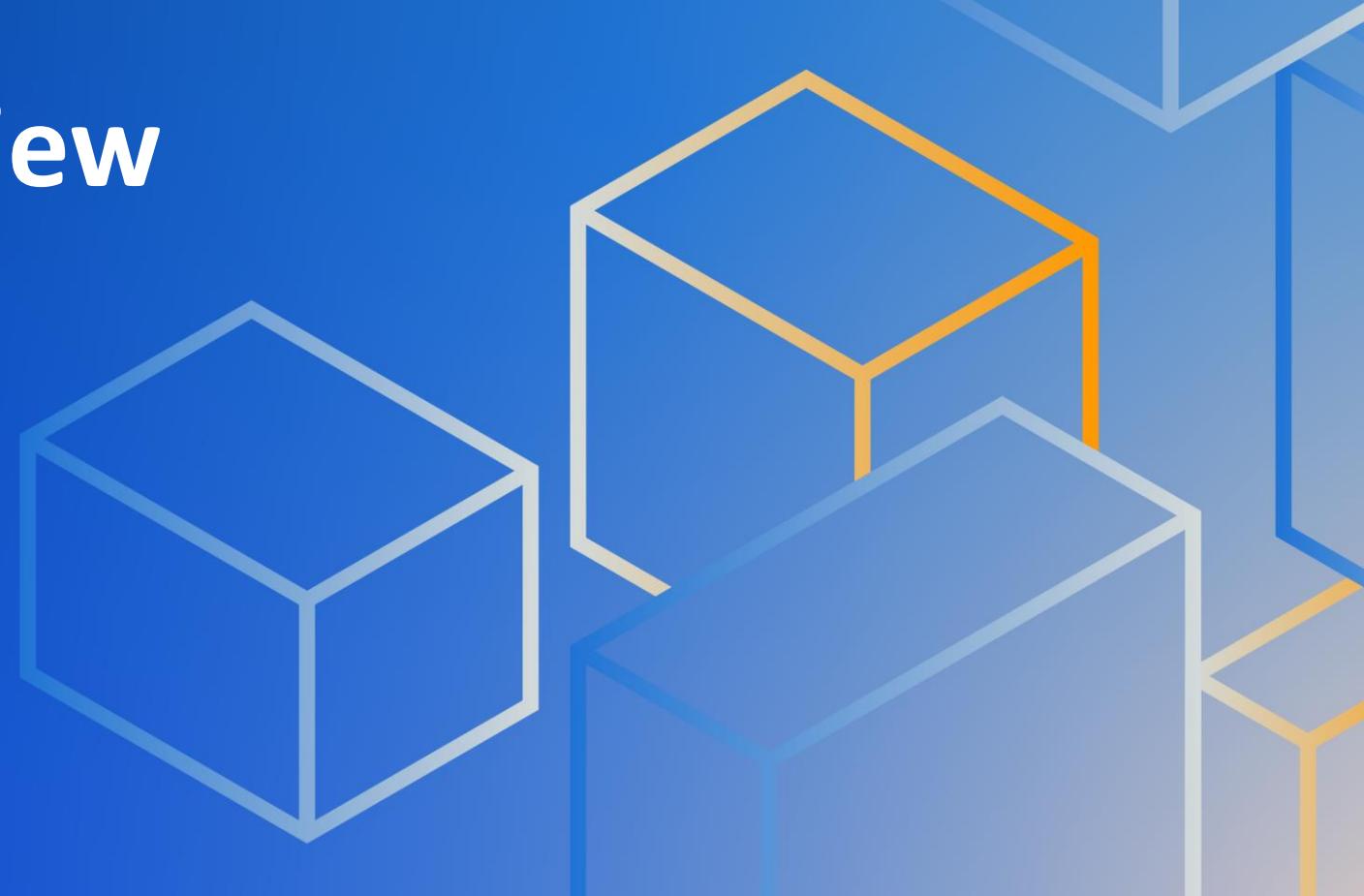


135

AWS Direct
Connect
locations

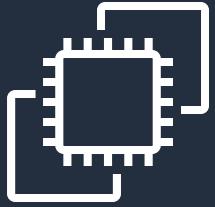


Amazon EC2 Overview



Choices for Compute

World-class performance, security, and innovation



AMAZON EC2

Virtual server instances
in the cloud



AMAZON ECS, EKS, and FARGATE*

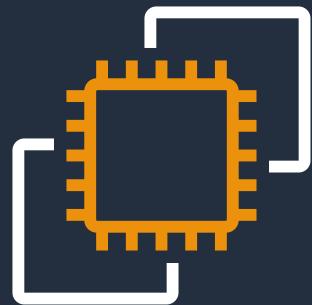
Container management service
for running
Docker on a managed
cluster of EC2



AWS LAMBDA

Serverless compute
for stateless code execution in
response to triggers

Amazon Elastic Compute Cloud (Amazon EC2)



AMAZON EC2

Linux | Windows | Mac

Arm and x86 architectures

General purpose and workload optimized

Bare metal, disk, networking capabilities

Packaged | Custom | Community AMIs

Multiple purchase options: On-Demand, Spot instances, Reserved Instances, Savings Plans, Dedicated Hosts

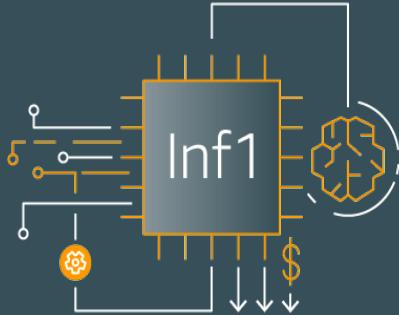
Instance Types

	General Purpose		Compute Optimized		Memory Optimized			Accelerated Computing			Storage Optimized			
	Burstable performance	General Purpose	Compute Intensive	Compute + network up to 100 Gbps*	Memory Optimized	In-memory	Memory Intensive	Compute and Memory Intensive	Graphics Intensive	General Purpose GPU	FPGA	High I/O	Dense Storage	Big Data Optimized
	T3	M5	C5	C5n	R5	X1	X2iedn		G3	P2	F1	I3en	D3	H1
Local storage (NVMe SSD)		M5d	C5d		R5d		Z1d					I3		
	T3a	M5a			R6a				G5					
metal		M5	C5		R5	u-24tb1	Z1d					I3		
AWS Graviton	T4g	M7g	C7g	C7gn	R7g	X2gd			G5g			Im4gn		



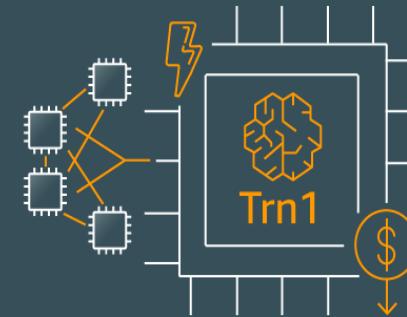
AWS chips optimized for deep learning

AWS Inferentia



Lowest cost inference in
the cloud for running deep
learning models—
up to 70% lower cost
than GPU instances

AWS Trainium



The most cost-efficient
high performance DL
training instance

Instance Naming

Instance generation

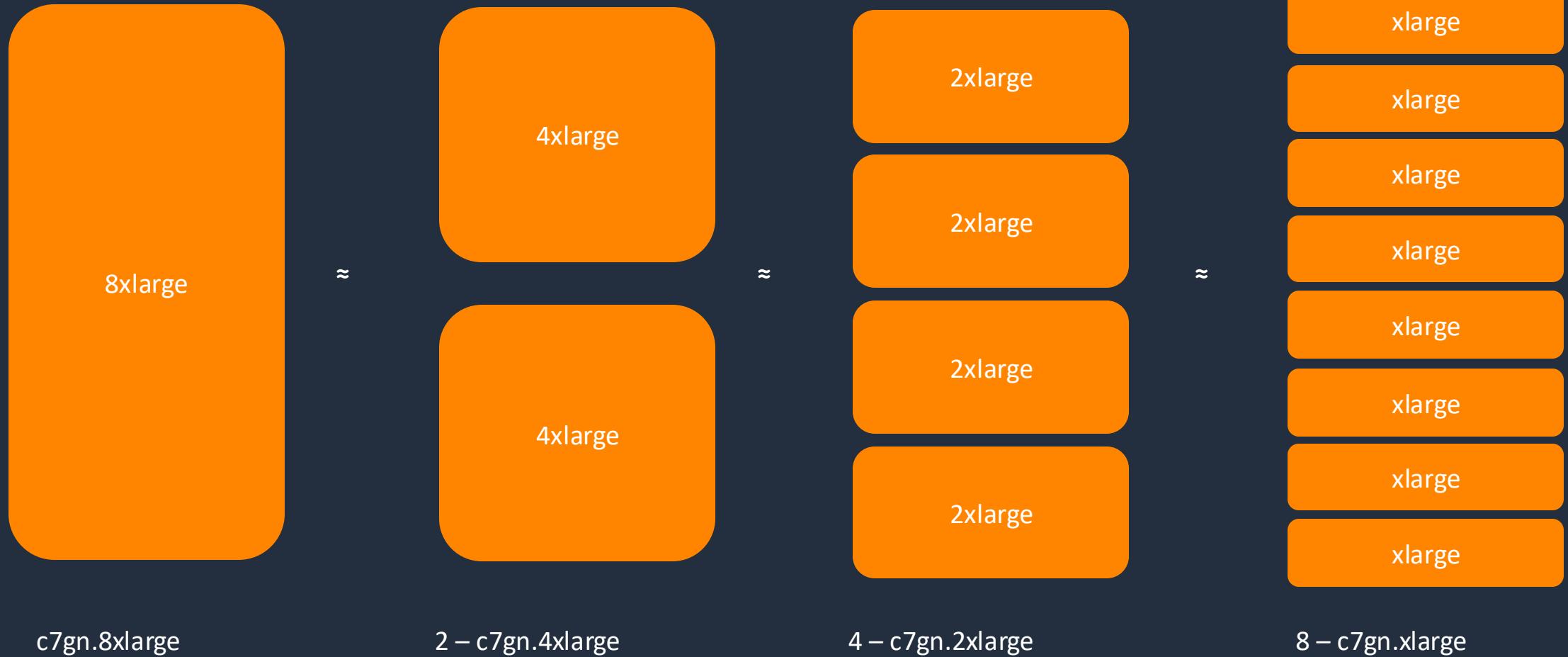
c7gn.xlarge

Instance
family

Attribute(s)

Instance size

Instance Sizing



Choose your processor and architecture



Intel® Xeon® Scalable (Skylake)
processor



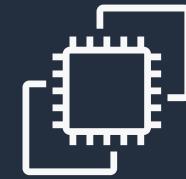
NVIDIA B100
Tensor Core GPUs



AMD EPYC processor



AWS Graviton
Processor (arm)



FPGAs for custom
hardware acceleration

Right compute for the right application and workload

AWS Graviton Processor

Enabling the best price/performance for your cloud workloads

Graviton2 Processor



7x performance, 4x compute cores, and 5x faster memory



Built with 64-bit Arm Neoverse cores with AWS-designed silicon using 7 nm manufacturing technology

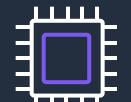


Up to 64 vCPUs, 25 Gbps enhanced networking, 19 Gbps EBS bandwidth

Graviton3/3E Processor



25% higher performance, 2x higher floating-point performance, 2x faster cryptographic performance



DDR5 memory provides 50% more memory bandwidth compared to DDR4



Support for bfloat16 and delivers up to 3x better performance for ML workloads

Broadest and deepest platform choice

Categories	Capabilities	Options
General purpose	Choice of processor (AWS Graviton, Intel, AMD)	
Burstable	Fast processors (up to 4.5 GHz)	
Compute intensive	High memory footprint (up to 24 TiB)	Elastic Block Store (EBS)
Memory intensive	Instance storage (HDD and SSD)	Elastic Fabric Adapter
Storage (High I/O)	Accelerated computing (GPUs, FPGA & ASIC)	
Dense storage	Networking (up to 800 Gbps)	Linux, Unix, Windows, macOS
GPU compute	Bare Metal	
Graphics intensive	Size (Nano to 48xlarge)	

700+
instance types
for virtually every workload and business need

Memory and Storage

What's a GiB?

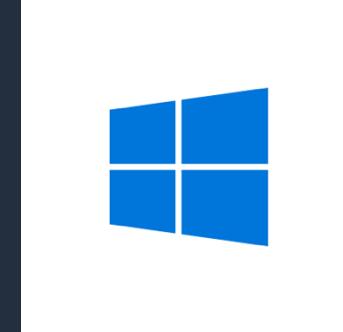
- Memory is presented as GibiBytes (GiB) and not Gigabytes (GB)
- $256 \text{ GiB} = 275 \text{ GB}$

What about storage?

- Storage is independent of compute
- You allocate drives known as Amazon Elastic Block Store (EBS) volumes
- Amazon EBS volumes support up to 64 TiB per volume
- Some instance types provide physically attached (ephemeral) storage

EC2 Operating Systems

- Windows Server 2016/2019/2022 (2012 EOL in Oct. 2023)
- Amazon Linux (NEW: Amazon Linux 2023)
- Debian
- SUSE
- CentOS
- Red Hat Enterprise Linux (RHEL)
- Ubuntu
- Mac, including M1 Mac instances



Visit the AWS Marketplace for more Operating Systems

What is an Amazon Machine Image (AMI)?

- Provides the information required to launch an instance
- Launch multiple instances from a single AMI with the same configuration
- An AMI includes the following:
 - One or more Amazon Elastic Block Store (Amazon EBS) snapshots, or a template for the root volume (operating system, applications)
 - Launch permissions that control which AWS accounts can use the AMI
 - Block device mapping that specifies volumes to attach to the instance

Choosing an AMI

AWS Console

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.

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Free tier only (i)

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-04681a1dbd79675a5

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 29.1, and the latest software packages through extras.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-0ff8a9110777f867

The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit

Red Hat Enterprise Linux 7.5 (HVM), SSD Volume Type - ami-6871a115

Red Hat Enterprise Linux version 7.5 (HVM), EBS General Purpose (SSD) Volume Type

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit

AWS Marketplace

aws marketplace

View Categories (i)

Migration Mapping Assistant

Your Saved List

Sell in AWS Marketplace

Amazon Web Services Home

Help

Operating Systems (336 results) showing 1 - 10

1 2 3 4 5 ... 34 ►

CentOS 7 (x86_64) - with Updates HVM

★★★★★ (58) | Version 1805_01 | Sold by Centos.org

This is the Official CentOS 7 x86_64 HVM image that has been built with a minimal profile, suitable for use in HVM instance types only. The image contains just enough packages...

Linux/Unix, CentOS 7 - 64-bit Amazon Machine Image (AMI)

CentOS 6 (x86_64) - with Updates HVM

★★★★★ (33) | Version 1805_01 | Sold by Centos.org

This is the Official CentOS 6 x86_64 HVM image that has been built with a minimal profile. The image contains just enough packages to run within AWS, bring up an SSH Server...

Linux/Unix, CentOS 6 - 64-bit Amazon Machine Image (AMI)

Debian GNU/Linux 8 (Jessie)

★★★★★ (86) | Version 8.7 | Sold by Debian

Debian is a computer operating system composed of software packages released as free and open source software primarily under the GNU General Public License along with other...

Linux/Unix, Debian 8.6+1 - 64-bit Amazon Machine Image (AMI)

CentOS 6.5 (x86_64) - Release Media

★★★★★ (55) | Version 6.5 - 2013-12-01 | Sold by Centos.org

This is the Official CentOS 6.5 x86_64 image that has been built with a minimal profile. The image contains just enough packages to run within AWS, bring up an SSH Server...

Use the AMI ID to launch through the API or AWS Command Line Interface (AWS CLI)

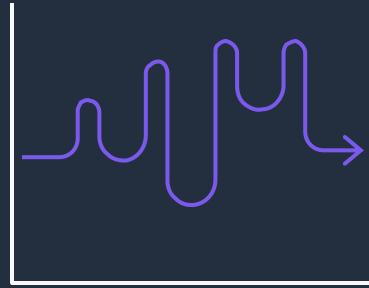
```
aws ec2 run-instances --image-id ami-04681a1dbd79675a5 --instance-type c4.8xlarge --count 10 --key-name MyKey
```



Amazon EC2 purchase options

On-Demand

Pay for compute capacity by **the second** with no long-term commitments



Spiky workloads,
to define needs

Reserved Instances

Make a 1 or 3 year commitment and receive a **significant discount** off On-Demand prices



Committed and
steady-state usage

Savings Plans

Same great discounts as Amazon EC2 RIs with **more flexibility**



Committed flexible
access to compute

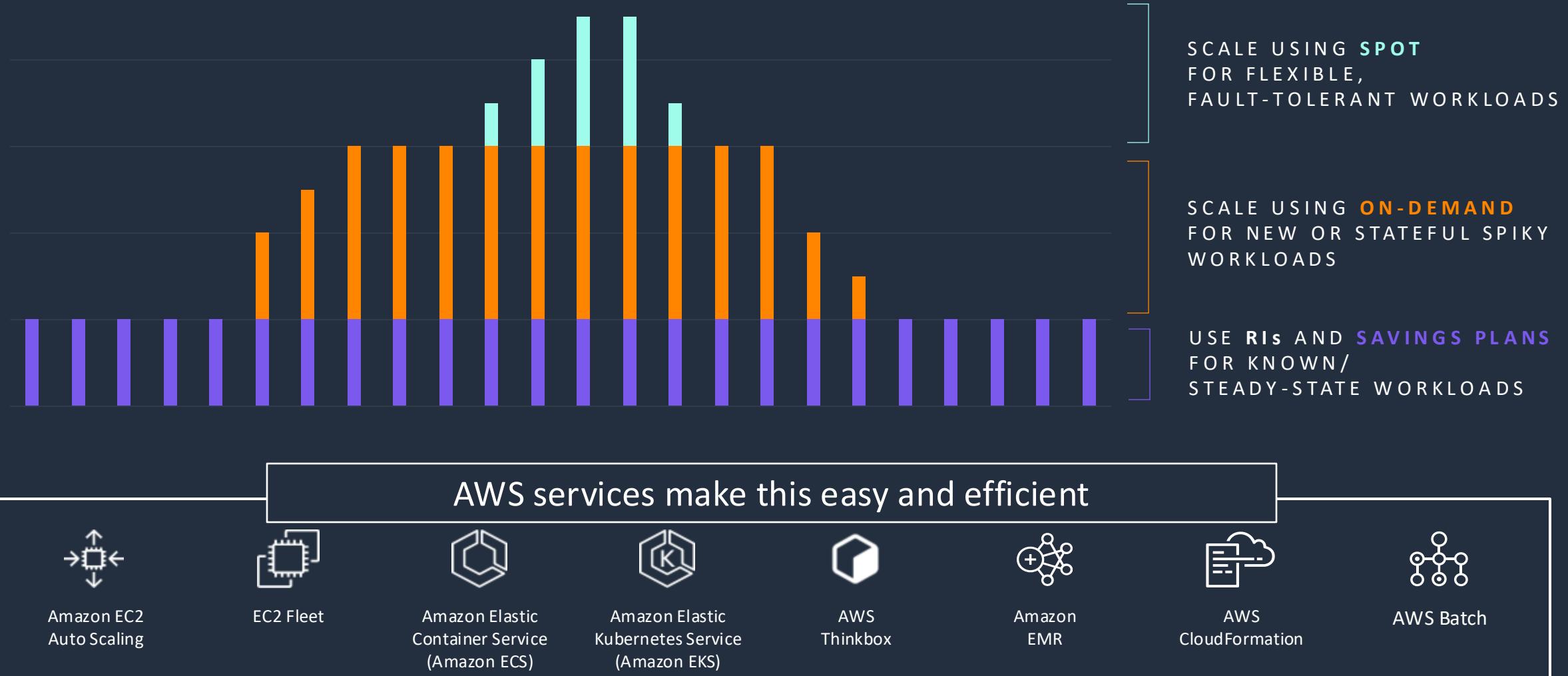
Spot Instances

Spare Amazon EC2 capacity at **savings of up to 90%** off On-Demand prices



Fault-tolerant, flexible,
stateless workloads

Simplifying capacity and cost optimization



EC2 Security Groups

- Virtual firewall
- Security Group Rules
 - Security Group name
 - Description
 - Protocol
 - Port range
 - IP address, IP range

Basic details

Security group name [Info](#)
MyWebServerGroup
Name cannot be edited after creation.

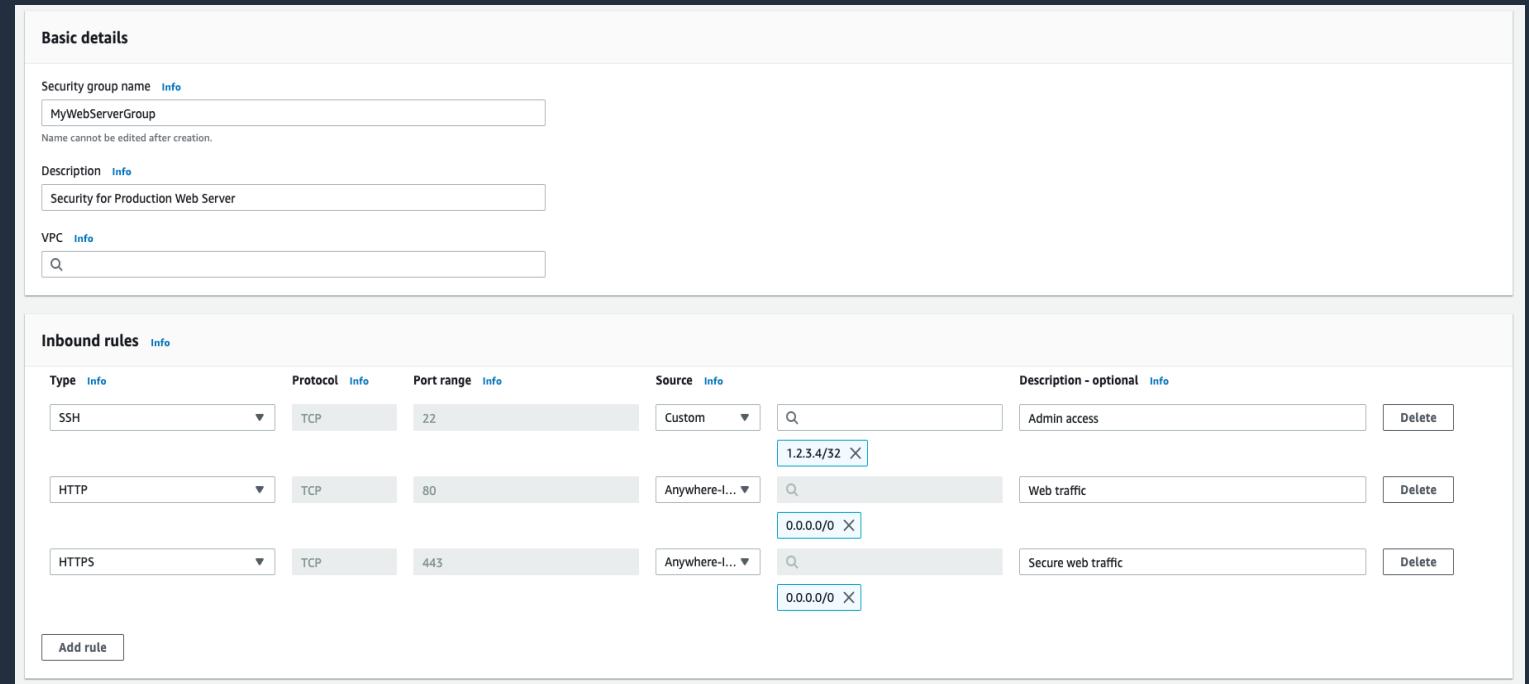
Description [Info](#)
Security for Production Web Server

VPC [Info](#)
Q

Inbound rules [Info](#)

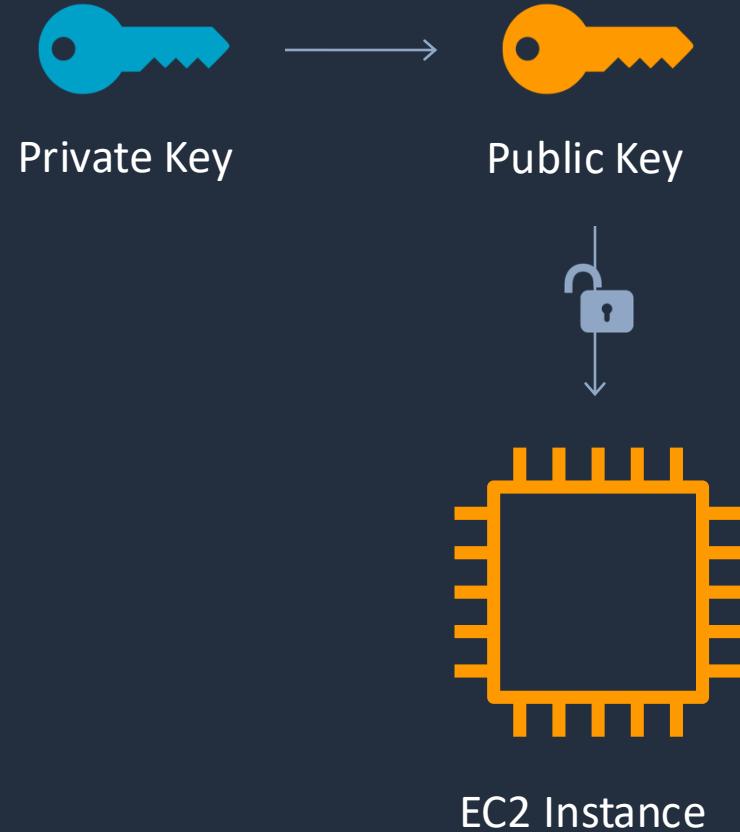
Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info
SSH	TCP	22	Custom	Admin access
HTTP	TCP	80	Anywhere-Int...	Web traffic
HTTPS	TCP	443	Anywhere-Int...	Secure web traffic

Add rule



EC2-Specific Credentials

- EC2 key pairs
 - Linux – SSH key pair for first-time host login
 - Windows – Retrieve Administrator password
- Standard SSH RSA key pair
 - Public/Private Keys
 - Private keys are not stored by AWS
- AWS approach for providing **initial** access to a generic OS
 - Secure
 - Personalized
 - Non-generic (NIST, PCI DSS)

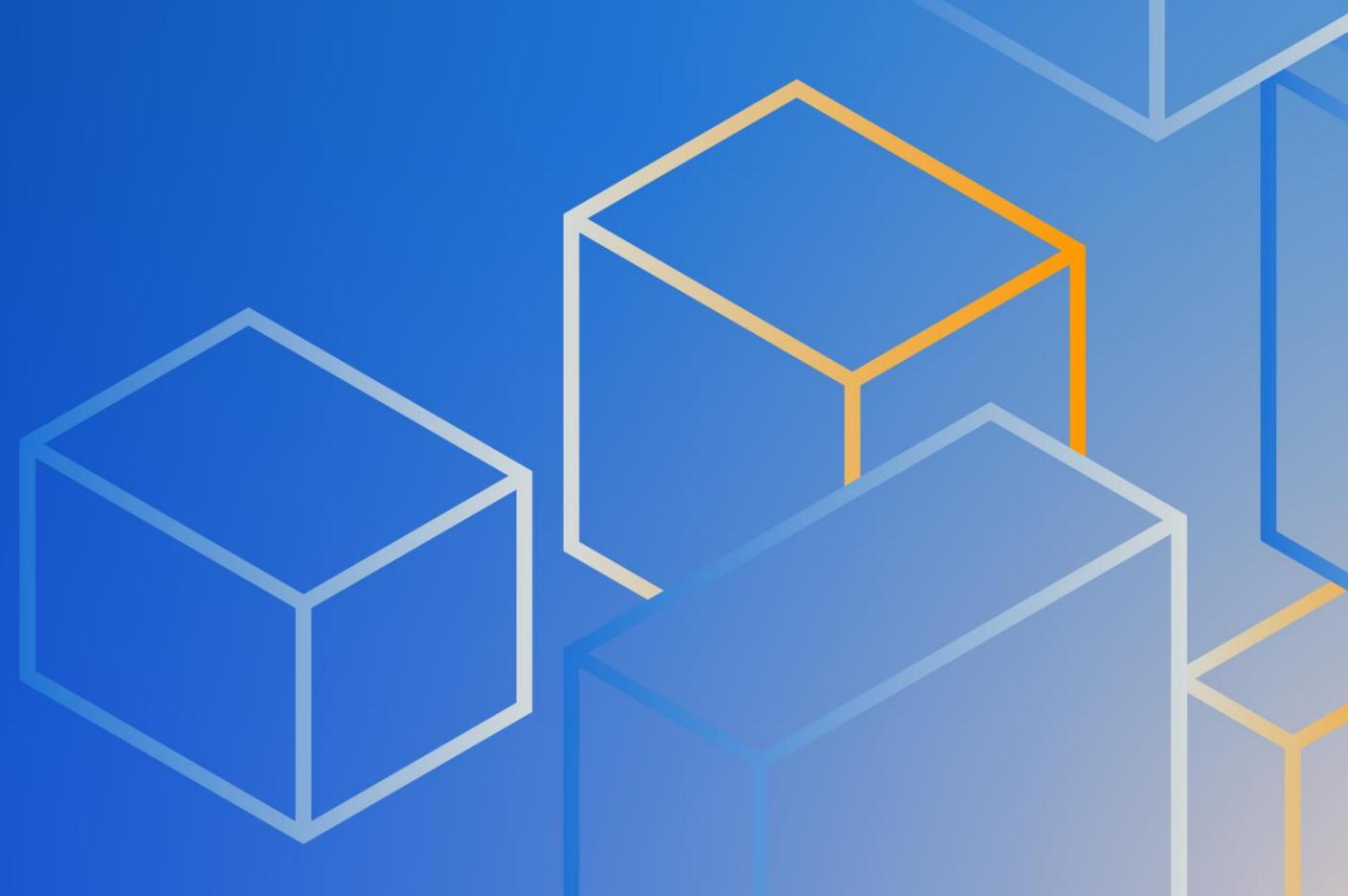




Thank you!

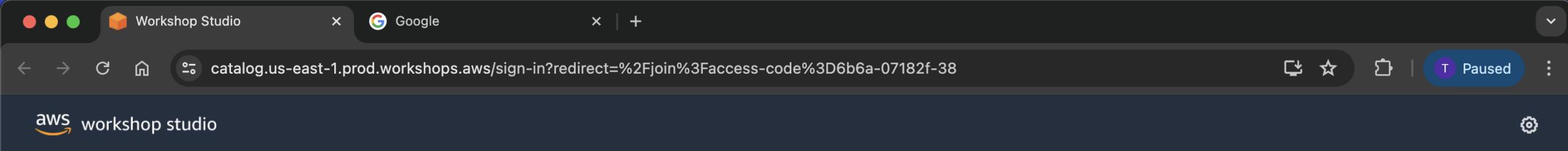
Michael Lin

linmicht@amazon.com



<https://reurl.cc/ZVr4vA>





[Workshop Studio](#) > Sign in

Sign in

Choose a preferred sign-in method

Email one-time password (OTP)

Enter your personal or corporate email to receive a one-time password

AWS Builder ID

Login with AWS Builder ID, a new personal profile for builders

Amazon employee

Login with your Amazon Corporate account. Only for Amazon Employees.

One-time email passcode Google

login.us-east-1.auth.skillbuilder.aws/otp/input/response?redirect_uri=https%3A%2F%2Fgandalf-prod.auth.us-east-1.amazoncognito.com%2Foauth2%... ☆

T Paused

aws training and certification

English

One-time email passcode

Send a passcode to the email below.

Email

[Back](#)[Send passcode](#)[Get help signing in](#)

Verify one-time email passcode X Mail - Michael Lin - Outlook X +

← → G ⌂ login.us-east-1.auth.skillbuilder.aws/otp/challenge?redirect_uri=https%3A%2F%2Fgandalf-prod.auth.us-east-1.amazoncognito.com%2Foauth2%2Fid... ☆ | Paused | :

aws training and certification

English ▾

One-time email passcode

We sent a passcode to michael_tw_lin@msn.com. You should receive it within 5 minutes.

Passcode (9-digit) [Resend passcode](#)

[Back](#) [Sign in](#)

[Get help signing in](#)

- Step 1
Enter event access code
- Step 2
Review and join

Review and join

Event details

Name
general-id-20240720

Start time
7/20/2024 03:55 PM

Duration
72 hours

Level
100

Description
general-id-20240720

Terms and Conditions

Read and accept before joining the event

Read and accept before joining the event:

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Country or region	Minimum age
All countries or regions not listed below (including the United States, Brazil, the United Kingdom, and India)	13
Canada, China, Republic of Korea (South Korea)	14
Australia	15



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Cancel

Previous

Join event

general-id-20240720 Mail - Michael Lin - Outlook catalog.us-east-1.prod.workshops.aws/event/dashboard/en-US Paused

aws workshop studio michael_tw_lin

general-id-20240720 < X i

AWS General Immersion Day
► Before Starting the Workshop...
► Basic Modules
Advanced General Immersion day

▼ AWS account access
[Open AWS console \(us-east-1\)](#) 
[Get AWS CLI credentials](#)

▼ Content preferences
Language English
Exit event

Event ends in 2 days 20 hours 23 minutes.

Event dashboard > AWS General Immersion Day

general-id-20240720

Event information

Start time 7/20/2024 03:55 PM	Duration 72 hours	Accessible regions us-east-1
Description general-id-20240720		

Workshop Get started >

Title General Immersion Day - Basic	Complexity level 100	AWS services Amazon EC2 Auto Scaling, Amazon Elastic File System (Amazon EFS), Amazon Simple Storage Service (Amazon S3)	Topics Compute, Databases, Networking & Content Delivery, Storage
--	-------------------------	---	--

Description
The content contained in the module is considered foundational, 100 level labs covering AWS core services.

Red arrow pointing to the "Open AWS console (us-east-1)" link in the sidebar.

general-id-20240720 X Console Home | Console Home +

us-east-1.console.aws.amazon.com/console/home?region=us-east-1#

Paused

aws Services Search [Option+S]

N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Console Home Info

Reset to default layout + Add widgets

Recently visited Info

-  Simple Notification Service
-  EC2
-  CloudWatch

[View all services](#)

Applications (0) Info

Region: US East (N. Virginia)

us-east-1 (Current Region) Find applications

No applications

Get started by creating an application.

[Create application](#)

[Go to myApplications](#)

Welcome to AWS

Getting started with AWS 

Learn the fundamentals and best practices for AWS services.

AWS Health Info

Open issues 0 Past 7 days

Cost and usage Info

Current month costs **\$0.03** Cost (\$)

0

catalog.us-east-1.prod.workshops.aws/workshops/f3a3e2bd-e1d5-49de-b8e6-dac361842e76/en-US/basic-modules/10-ec2

Paused

aws workshop studio

AWS General Immersion Day

Before Starting the Workshop...

Basic Modules

Compute - Amazon EC2

- EC2 Linux Hands on Lab
- EC2 Windows Hands on Lab
- Auto Scaling on AWS

Network - Amazon VPC

Security - AWS IAM

Monitoring - Amazon CloudWatch

Database - Amazon RDS

Storage - Amazon S3 & EFS

Provisioning - AWS CloudFormation

Advanced General Immersion day

Content preferences

Language: English

AWS Compute

Instance	Containers	Serverless	Edge and hybrid	Cost and capacity management
 Amazon EC2	 Amazon ECS	 AWS Lambda	 AWS Outposts	 AWS Savings Plan
 Amazon EC2 Spot	 Amazon ECR		 AWS Snow Family	 AWS Compute Optimizer
 Amazon EC2 Autoscaling	 Amazon EKS		 AWS Wavelength	 AWS Elastic Beanstalk
 Amazon Lightsail	 AWS Fargate		 Vmware Cloud on AWS	 EC2 Image Builder
			 AWS Edge	 AWS CloudWatch Metrics

AWS General Immersion Day



EC2 Linux Hands on Lab

► Before Starting the Workshop...

▼ Basic Modules

▼ Compute - Amazon EC2

▼ EC2 Linux Hands on Lab

Create a new Key Pair

Launch a Web Server Instance

Connect to your Linux instance using Session Manager (Optional)

Connect to your Linux instance

Connect to EC2 Instance using PuTTY (Optional)

Clean Up Resources

▼ EC2 Windows Hands on Lab

Create a New Key Pair

Launch a Web Server Instance

Connecting to your

▼ Content preferences

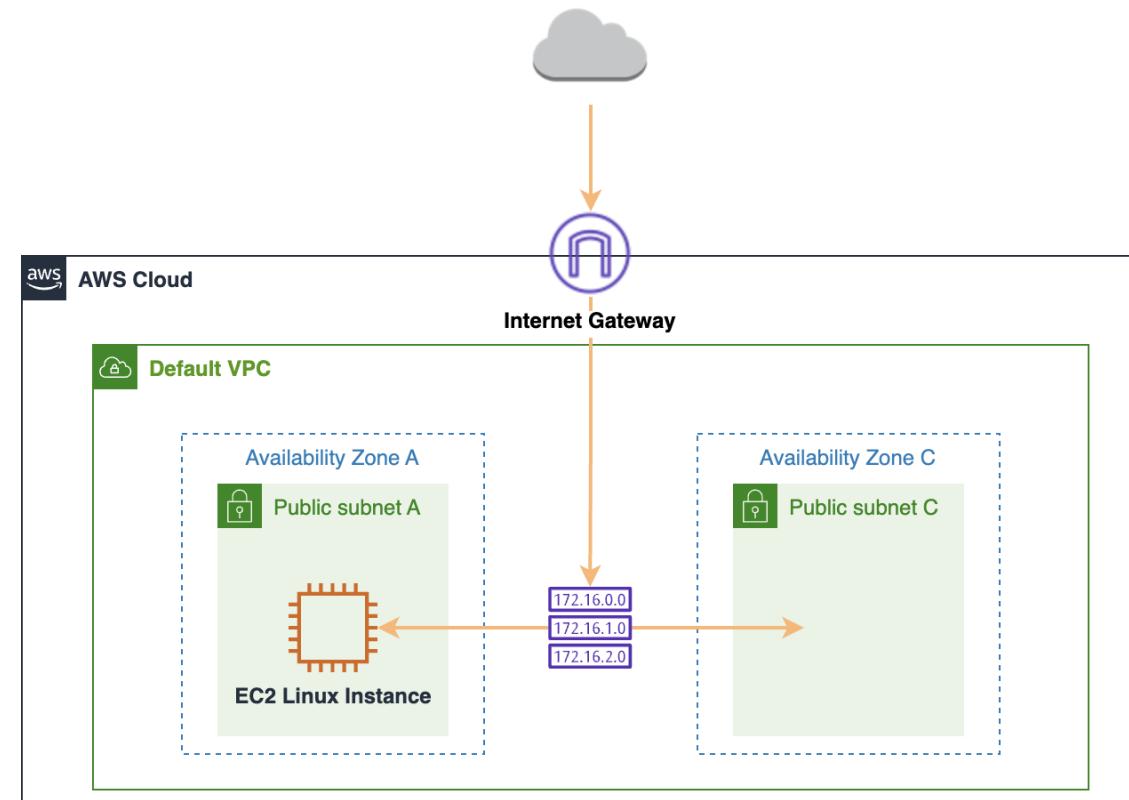
Language

English



Amazon EC2 Overview

Amazon EC2 provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.



Console

Services (13)

Recent

Features (59)

Resources New

Simple

Documentation (30,453)

EC2

Knowledge Articles (617)

Cloud

Marketplace (3,811)

Blogs (2,189)

Events (32)

Tutorials (19)

Search results for 'ec2'

Services

See all 13 results ▶



EC2 ☆

Virtual Servers in the Cloud



EC2 Image Builder ☆

A managed service to automate build, customize and deploy OS images



Recycle Bin

Protect resources from accidental deletion



Amazon Inspector ☆

Continual vulnerability management at scale

Features

See all 59 results ▶

Dashboard

EC2 feature

EC2 Instances

CloudWatch feature

AMIs

EC2 feature

Default layout

+ Add widgets

Create application

⋮

Ans

< 1 >

on

Originating account

application.

S

⋮

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Welcome



get the most out of AWS.

general-id-20240720 | General Immersion Day - Bas... | Dashboard | EC2 | us-east-1 | + | us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Home: | Paused | ...

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Resources

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

Instances (running)	0
Dedicated Hosts	0
Instances	0
Load balancers	0
Security groups	2
Volumes	0
Auto Scaling Groups	0
Elastic IPs	0
Key pairs	0
Placement groups	0
Snapshots	0

Launch instance

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

Service health

AWS Health Dashboard

Region: US East (N. Virginia)

Status: ✔ This service is operating normally.

Account attributes

Default VPC [vpc-80473bfd](#)

Settings

Data protection and security

Zones

EC2 Serial Console

Default credit specification

EC2 console preferences

Explore AWS

Enable Best Price-Performance with AWS Graviton2

AWS Graviton2 powered EC2 instances enable up to 40% better price performance for a broad spectrum of cloud workloads. [Learn more](#)

10 Things You Can Do Today to Reduce AWS Costs

Explore how to effectively manage your AWS costs without compromising on performance or capacity. [Learn more](#)



general-id-20240720 | General Immersion Day - Bas... | Dashboard | EC2 | us-east-1 | + | us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Home: | Paused | ...

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Images

- AMIs
- AMI Catalog

Elastic Block Store

- Volumes
- Snapshots
- Lifecycle Manager

Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs** 
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups
- Trust Stores 

Auto Scaling

- Auto Scaling Groups
- Settings

Resources

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

Instances (running)	0	Auto Scaling Groups	0
Dedicated Hosts	0	Elastic IPs	0
Instances	0	Key pairs	0
Load balancers	0	Placement groups	0
Security groups	2	Snapshots	0
Volumes	0		

EC2 Global View   

Account attributes 

Default VPC    

vpc-80473bfd

Settings

- Data protection and security
- Zones
- EC2 Serial Console
- Default credit specification
- EC2 console preferences

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general-id-20240720 X | General Immersion Day - Basic X Key pairs | EC2 | us-east-1 X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#KeyPairs:

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security Security Groups Elastic IPs Placement Groups Key Pairs Network Interfaces Load Balancing Load Balancers Target Groups Trust Stores New Auto Scaling Auto Scaling Groups

Key pairs Info

Find Key Pair by attribute or tag

Name Type Created Fingerprint ID

No key pairs to display

Actions Create key pair

A red arrow points to the "Create key pair" button.

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateKeyPair:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Key pairs > Create key pair

Create key pair Info

Key pair
A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type Info

RSA ED25519

Private key file format

.pem
For use with OpenSSH

.ppk
For use with PuTTY

Tags - optional
No tags associated with the resource.

[Add new tag](#)
You can add up to 50 more tags.

general-id-20240720 X | General Immersion Day - Basic X Create key pair | EC2 | us-east-1 X 訂單已接受 | Uber Eats 優食 X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateKeyPair:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Key pairs > Create key pair

Create key pair Info

Key pair
A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name
AWS-ImmersionDay 
The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type Info
 RSA ED25519

Private key file format
 .pem
For use with OpenSSH
 .ppk
For use with PuTTY

Tags - optional
No tags associated with the resource.
[Add new tag](#)
You can add up to 50 more tags.

general-id-20240720 General Immersion Day - Basic Key pairs | EC2 | us-east-1 訂單已接受 | Uber Eats 優食

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#KeyPairs:

AWS-ImmersionDay.pem
1,678 B • Done

EC2 Dashboard Services Search [Option+S] AWS ImmersionDay.pem Paused

EC2 Global View Services

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Console-to-Code Preview

Instances Instances

Instance Types

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Dedicated Hosts

Capacity Reservations

Images AMIs

AMI Catalog

Elastic Block Store Volumes

Snapshots

Lifecycle Manager

Network & Security

Successfully created key pair

Key pairs (1) Info

Find Key Pair by attribute or tag

C Actions Create key pair

< 1 > 

Name	Type	Created	Fingerprint	ID
AWS-ImmersionDay	rsa	2024/07/20 20:33 GMT+8	3c:49:a6:c3:80:2f:e7:ce:5d:37:11:68:76:37...	key-0d539...

general-id-20240720 | General Immersion Day - Bas... | Home | EC2 | us-east-1 | Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Home:

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard ←

EC2 Global View

Events

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Instances

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- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
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- AMI Catalog

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Network & Security

Resources

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

Instances (running)	0	Auto Scaling Groups	0
Dedicated Hosts	0	Elastic IPs	0
Instances	0	Key pairs	1
Load balancers	0	Placement groups	0
Security groups	2	Snapshots	0
Volumes	0		

Launch instance

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

Service health

AWS Health Dashboard

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

Account attributes

Default VPC [vpc-80473bfd](#)

Settings

- Data protection and security
- Zones
- EC2 Serial Console
- Default credit specification
- EC2 console preferences

Explore AWS

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general-id-20240720 | General Immersion Day - Bas... | Home | EC2 | us-east-1 | Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Home:

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

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EC2 Global View

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Launch instance 

Migrate a server

Note: Your instances will launch in the US East (N. Virginia) Region

general-id-20240720 X | General Immersion Day - Basic X Launch an instance | EC2 | us X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances: Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

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

Search our full catalog including 1000s of application and OS images

Recents My AMIs Quick Start

Amazon macOS Ubuntu Windows Red Hat SUSE Li

Summary

Number of instances Info 1

Software Image (AMI)
Amazon Linux 2023.5.2... read more
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

general-id-20240720 | General Immersion Day - Bas... | Launch an instance | EC2 | us | Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

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.

Search our full catalog including 1000s of application and OS images

Recents My AMIs Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Li  Browse more AMIs Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI ami-0b72821e2f351e396 (64-bit (x86), uefi-preferred) / ami-07fa59ce6da2fe3fe (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 Boot mode AMI ID

64-bit (x86) uefi-preferred ami-0b72821e2f351e396 Verified provider

Summary

Number of instances Info 1

Software Image (AMI) Amazon Linux 2023 AMI 2023.5.2... read more ami-0b72821e2f351e396

Virtual server type (instance type) t2.micro

Firewall (security group) New security group

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

i **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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

Cancel Launch instance

general-id-20240720 X | General Immersion Day - Basic X Launch an instance | EC2 | us +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Instance type Info | Get advice

Instance type

t2.micro Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

AWS-ImmersionDay  Create new key pair

Network settings Info

Network Edit

vpc-80473bdf

Summary

Number of instances 1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 

▼ Network settings [Info](#)Network [Info](#)

vpc-80473bfd

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 SSH traffic from
Anywhere
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

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.

Edit

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

Cancel

Launch instance

Review commands

general-id-20240720 | General Immersion Day - Bas... | Launch an instance | EC2 | us... | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Network settings [Info](#)

VPC - required [Info](#)

vpc-80473bfd (default) 172.31.0.0/16

Subnet [Info](#)

No preference Create new subnet [Create new subnet](#)

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

Security group name - required

launch-wizard-2

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$*

Description - required [Info](#)

launch-wizard-2 created 2024-07-20T12:34:25.310Z

Inbound Security Group Rules

Security group rule 1 (TCP, 22, 0.0.0.0/0) Remove

Summary

Number of instances [Info](#)

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2... [read more](#) ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

Cancel [Launch instance](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Paused

Services Search [Option+S]

N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Network settings

VPC - required Info

vpc-80473bfd (default) 172.31.0.0/16

Subnet Info

No preference Create new subnet ↗

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

Security group name - required

Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$*

Description - required Info

launch-wizard-2 created 2024-07-20T12:34:25.310Z

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0) Remove

Summary

Number of instances Info

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...read more ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

Cancel Launch instance



Services

Search

[Option+S]



N. Virginia

WSParticipantRole/Participant @ 5448-7167-4289

▼ Network settings InfoVPC - required Infovpc-80473bfd
172.31.0.0/16

(default) ▾

Subnet Info

No preference



Create new subnet

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

Security group name - required

Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$^*

Description - required Info

Immersion Day - Web Server



Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)

Remove

▼ Summary

Number of instances Info

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

Cancel

Launch instance

general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us-east-1 X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Security group name - required
Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$^*

Description - required Info
Immersion Day - Web Server

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 123.194.153.168/32) Remove

Type Info Protocol Info Port range Info
ssh TCP 22

Source type Info Name Info Description - optional Info
My IP 0.0.0.0/0 Add CIDR, prefix list or security e.g. SSH for admin desktop

123.194.153.168/32 X

Add security group rule

Configure storage Info Advanced

1x 8 GiB gp3 Root volume (Not encrypted)

▼ Summary

Number of instances Info 1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...read more
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs. 1 GB of snapshots, and

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us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Security group name - required
Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$^*

Description - required Info
Immersion Day - Web Server

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 123.194.153.168/32) Remove

Type Info Protocol Info Port range Info
ssh TCP 22

Source type Info Name Info Description - optional Info
My IP 0.0.0.0/0 Add CIDR, prefix list or security e.g. SSH for admin desktop
123.194.153.168/32 X

Add security group rule

Configure storage Info Advanced

1x 8 GiB gp3 Root volume (Not encrypted)

▼ Summary

Number of instances Info
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...read more
ami-0b72821e2f351e396

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

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

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general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us-east-1 X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Security group name - required
Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$^*

Description - required Info
Immersion Day - Web Server

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 123.194.153.168/32) Remove

Type	Protocol	Port range
ssh	TCP	22

Source type Info Name Info Description - optional Info
My IP Add CIDR, prefix list or security e.g. SSH for admin desktop

123.194.153.168/32 X

▼ Security group rule 2 (TCP, 80) Remove

Type	Protocol	Port range
HTTP	TCP	80

Source type Info Source Info Description - optional Info
Custom Add CIDR, prefix list or security e.g. SSH for admin desktop

▼ Summary

Number of instances Info 1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...read more
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs. 1 GB of snapshots. and X

general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Security group name - required
Immersion Day - Web Server

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and ._-:/()#@[]+=&;!\$^*

Description - required Info
Immersion Day - Web Server

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 123.194.153.168/32) Remove

Type Info Protocol Info Port range Info
ssh TCP 22

Source type Info Name Info Description - optional Info
My IP Add CIDR, prefix list or security e.g. SSH for admin desktop
123.194.153.168/32 X

▼ Security group rule 2 (TCP, 80, 123.194.153.168/32) Remove

Type Info Protocol Info Port range Info
HTTP TCP 80

Source type Info Name Info Description - optional Info
My IP 0.0.0.0/0 Add CIDR, prefix list or security e.g. SSH for admin desktop

▼ Summary

Number of instances Info
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...read more
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs. 1 GB of snapshots. and X

Source type [Info](#)

My IP

Name [Info](#)

Add CIDR, prefix list or security

123.194.153.168/32 [X](#)

e.g. SSH for admin desktop

[Add security group rule](#)

▼ Configure storage [Info](#)

Advanced

1x GiB [gp3](#) [▼](#) Root volume (Not encrypted)

[X](#)

[i](#) Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage

[Add new volume](#)

[i](#) Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems [Edit](#)

► Advanced details [←](#)

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...[read more](#)

ami-0b72821e2f351e396

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[Cancel](#) [Launch instance](#) [Review commands](#)

general-id-20240720 X | General Immersion Day - Basic X Launch an instance | EC2 | us +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Advanced details [Info](#)

Domain join directory [Info](#)
Select [Create new directory](#)

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](#)
Stop

Stop - Hibernate behavior [Info](#)
Select

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396

Virtual server type (instance type)
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general-id-20240720 X | General Immersion Day - Bas... X Launch an instance | EC2 | us... X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Metadata version [Info](#)
V2 only (token required)

⚠️ 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 [Info](#)
Upload a file with your user data or enter it in the field.
[Choose file](#)

▼ Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396

Virtual server type (instance type)
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i **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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and



AWS General Immersion Day

► Before Starting the Workshop...

▼ Basic Modules

▼ Compute - Amazon EC2

▼ EC2 Linux Hands on Lab

Create a new Key Pair

[Launch a Web Server Instance](#)

Connect to your Linux instance using Session Manager (Optional)

Connect to your Linux instance

Connect to EC2 Instance using PuTTy (Optional)

Clean Up Resources

▼ EC2 Windows Hands on Lab

Create a New Key Pair

Launch a Web Server Instance

Connecting to your

▼ Content preferences

Language

English

Enter the following values in the **User data** field and select **Launch instance**.

```
1  #!/bin/sh
2
3  #Install a LAMP stack
4  dnf install -y httpd wget php-fpm php-mysqli php-json php php-devel
5  dnf install -y mariadb105-server
6  dnf install -y httpd php-mbstring
7
8  #Start the web server
9  chkconfig httpd on
10 systemctl start httpd
11
12 #Install the web pages for our lab
13 if [ ! -f /var/www/html/immersion-day-app-php7.zip ]; then
14     cd /var/www/html
15     wget -O 'immersion-day-app-php7.zip' 'https://static.us-east-1.prod.workshops.aws/public/c24ac6ac-839f-4709-a061-eaee28af255e/assets'
16     unzip immersion-day-app-php7.zip
17 fi
18
19 #Install the AWS SDK for PHP
20 if [ ! -f /var/www/html/aws.zip ]; then
21     cd /var/www/html
22     mkdir vendor
23     cd vendor
24     wget https://docs.aws.amazon.com/aws-sdk-php/v3/download/aws.zip
25     unzip aws.zip
26 fi
27
28 # Update existing packages
29 dnf update -y
```

Copied!



7. Click the **View Instances** button in the lower right hand portion of the screen to view the list of EC2 instances. Once your instance has launched, you

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/sh

#Install a LAMP stack
dnf install -y httpd wget php-fpm php-mysqli php-json php php-devel
dnf install -y mariadb105-server
dnf install -y httpd php-mbstring

#Start the web server
chkconfig httpd on
systemctl start httpd

#Install the web pages for our lab
if [ ! -f /var/www/html/immersion-day-app-php7.zip ]; then
  cd /var/www/html
  wget -O 'immersion-day-app-php7.zip' 'https://static.us-east-
```

 User data has already been base64 encoded

▼ Summary

Number of instances | [Info](#)

1

[Software Image \(AMI\)](#)Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396[Virtual server type \(instance type\)](#)

t2.micro

[Firewall \(security group\)](#)

New security group

[Storage \(volumes\)](#)

1 volume(s) - 8 GiB

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Cancel

Launch instance

[Review commands](#)

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/sh

#Install a LAMP stack
dnf install -y httpd wget php-fpm php-mysqli php-json php php-devel
dnf install -y mariadb105-server
dnf install -y httpd php-mbstring

#Start the web server
chkconfig httpd on
systemctl start httpd

#Install the web pages for our lab
if [ ! -f /var/www/html/immersion-day-app-php7.zip ]; then
  cd /var/www/html
  wget -O 'immersion-day-app-php7.zip' 'https://static.us-east-
```

 User data has already been base64 encoded

▼ Summary

Number of instances | [Info](#)

1

[Software Image \(AMI\)](#)Amazon Linux 2023 AMI 2023.5.2...[read more](#)
ami-0b72821e2f351e396[Virtual server type \(instance type\)](#)

t2.micro

[Firewall \(security group\)](#)

New security group

[Storage \(volumes\)](#)

1 volume(s) - 8 GiB

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Cancel

Launch instance

[Review commands](#)

general-id-20240720 X | General Immersion Day - Basic X Launch an instance | EC2 | us +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > Launch an instance

Launching instance
Creating security group rules 21%

► Details

Please wait while we launch your instance.
Do not close your browser while this is loading.

general-id-20240720 X | General Immersion Day - Basic X Launch an instance | EC2 | us-east-1 X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > Launch an instance

Success Successfully initiated launch of instance (i-03c85538a2f275b95)

▶ Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

< 1 2 3 4 5 6 >

Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

[Create billing alerts](#)

Connect to your instance
Once your instance is running, log into it from your local computer.

[Connect to instance](#)

[Learn more](#)

Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow between them.

[Connect an RDS database](#)

[Create a new RDS database](#)

[Learn more](#)

Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots.

[Create EBS snapshot policy](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-03c85538a2f275b95

Paused

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

Instances

Instances

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Search [Option+S]

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

C Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

Instance ID = i-03c85538a2f275b95 [X](#) Clear filters

Name Instance ID Instance state Instance type Status check Alarm status Availability Zone

Web server for... i-03c85538a2f275b95 Pending t2.micro - View alarms us-east-1a

i-03c85538a2f275b95 (Web server for IMD)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary [Info](#)

Instance ID	Public IPv4 address	Private IPv4 addresses
i-03c85538a2f275b95 (Web server for IMD)	3.92.187.98 open address	172.31.91.51
IPv6 address	Instance state	Public IPv4 DNS
-	Pending	ec2-3-92-187-98.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

general-id-20240720 | General Immersion Day - Bas... | Launch an instance | EC2 | us... | Instances | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-03c85538a2f275b95

Paused

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-03c85538a2f275b95 Clear filters

Instance state ▾ Actions ▾ Launch instances ▾

Name Instance ID Instance state Instance type Status check Alarm status Availability Zone

Web server for... i-03c85538a2f275b95 Pending t2.micro - View alarms + us-east-1a

i-03c85538a2f275b95 (Web server for IMD)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID: i-03c85538a2f275b95 (Web server for IMD)

IPv6 address: -

Hostname type:

Public IPv4 address: 3.92.187.98 | open address ↗

Instance state: Pending

Private IPV4 DNS: ec2-3-92-187-98.compute-1.amazonaws.com | open address ↗

Private IPV4 DNS name (IPv4 only):

Public IPv4 DNS copied

A screenshot of a web browser window showing an EC2 instance's metadata page. The URL in the address bar is `ec2-3-92-187-98.compute-1.amazonaws.com`. A red arrow points to the "Not Secure" warning icon in the address bar.

The page displays the following content:

powered by **aws**

LOAD TEST **RDS**

Meta-Data	Value
InstanceId	<code>i-03c85538a2f275b95</code>
Availability Zone	<code>us-east-1a</code>

Current CPU Load: **0%**

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:

Successfully attached SSMInstanceProfile to instance i-03c85538a2f275b95

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

[Name](#) [Instance ID](#) [Instance state](#) [Instance type](#) [Status check](#) [Alarm status](#) [Availability Zone](#)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Web server for...	i-03c85538a2f275b95	Running	t2.micro	2/2 checks passed	View alarms	us-east-1a

i-03c85538a2f275b95 (Web server for IMD)

[Details](#) [Status and alarms](#) [Monitoring](#) [Security](#) [Networking](#) [Storage](#) [Tags](#)

Instance summary [Info](#)

Instance ID	Public IPv4 address	Private IPv4 addresses
i-03c85538a2f275b95 (Web server for IMD)	3.92.187.98 open address	172.31.91.51
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-3-92-187-98.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

EC2 Dashboard EC2 Global View Events Console-to-Code [Preview](#)

Instances

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

Images

- AMIs
- AMI Catalog

Elastic Block Store

- Volumes
- Snapshots
- Lifecycle Manager

Network & Security

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-03c85538a2f275b95

Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Instances i-03c85538a2f275b95 Connect to instance

Connect to instance Info

Connect to your instance i-03c85538a2f275b95 (Web server for IMD) using any of these options

EC2 Instance Connect **Session Manager** **SSH client** **EC2 serial console**

Instance ID
 [i-03c85538a2f275b95](#) (Web server for IMD)

Connection Type

Connect using EC2 Instance Connect
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

Connect using EC2 Instance Connect Endpoint
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address
 [3.92.187.98](#)

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

⚠ You have insufficient IAM permissions to connect to an instance using EC2 Instance Connect
To connect to an instance via EC2 Instance Connect, you must have an attached IAM policy that grants the following permissions:

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-03c85538a2f275b95

Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Instances i-03c85538a2f275b95 Connect to instance

Connect to instance Info

Connect to your instance i-03c85538a2f275b95 (Web server for IMD) using any of these options

EC2 Instance Connect | Session Manager | **SSH client** ← EC2 serial console

Instance ID

i-03c85538a2f275b95 (Web server for IMD)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is AWS-ImmersionDay.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
 chmod 400 "AWS-ImmersionDay.pem"
4. Connect to your instance using its Public DNS:
 ec2-3-92-187-98.compute-1.amazonaws.com

Example:

ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

```
ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.co
→ Desktop ls *.pem ←
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem"
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```



```
→ Desktop ls *.pem
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem" ←
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```



```
→ Desktop ls *.pem
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem"
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com ←
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```



```
→ Desktop ls *.pem
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem"
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes ←
```

```
→ Desktop ls *.pem
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem"
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-92-187-98.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
```

```
,      #
~\_\_ #####_      Amazon Linux 2023
~~ \_\#\#\#\#\_
~~ \#\#\#|
~~ \#/ / ___   https://aws.amazon.com/linux/amazon-linux-2023
~~ V~' '-'>
~~~ /
~~ ._. / /
~/m/'
```

```
[ec2-user@ip-172-31-91-51 ~]$ _
```

```
→ Desktop ls *.pem
AWS-ImmersionDay.pem
→ Desktop chmod 400 "AWS-ImmersionDay.pem"
→ Desktop ssh -i "AWS-ImmersionDay.pem" ec2-user@ec2-3-92-187-98.compute-1.amazonaws.com
The authenticity of host 'ec2-3-92-187-98.compute-1.amazonaws.com (3.92.187.98)' can't be established.
ED25519 key fingerprint is SHA256:N5MxWemngAQKwmbgkAVM60uTTTeChWh7a7Q4TEeTLF8.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-92-187-98.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
```

```
,      #
~\_\_ #####_      Amazon Linux 2023
~~ \_\#####\
~~ \#\#\#|
~~ \#/ / ___ https://aws.amazon.com/linux/amazon-linux-2023
~~   V~' '-'>
~~~ /
~~ ._. / /
~/ / / /
~/m/'
```

```
[ec2-user@ip-172-31-91-51 ~]$ ls
```

```
[ec2-user@ip-172-31-91-51 ~]$ pwd ←
```

```
/home/ec2-user
```

```
[ec2-user@ip-172-31-91-51 ~]$ _
```

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances (1/1) Info Find Instance by attribute or tag (case-sensitive)

Instance state = running All Instance state Instance type

Name: Web server for... Instance ID: i-03c85538a2f275b95 State: Running Type: t2.micro

Action dropdown menu: Stop instance, Start instance, Reboot instance, Hibernate instance, Terminate instance (highlighted with a red arrow).

Launch instances

i-03c85538a2f275b95 (Web server for IMD)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Instance ID: i-03c85538a2f275b95 (Web server for IMD) Public IPv4 address: 3.92.187.98 | open address

IPv6 address: - Instance state: Running

Hostname type Private IP DNS name (IPv4 only)

Private IPv4 addresses: 172.31.91.51

Public IPv4 DNS: ec2-3-92-187-98.compute-1.amazonaws.com | open address

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running

Services Search [Option+S]

EC2 Dashboard EC2 Global View Events Console-to-Code Preview

Instances

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

Images

AMIs AMI Catalog

Elastic Block Store

Volumes Snapshots Lifecycle Manager

Hostname type Private IP DNS name (IPv4 only)

Public IPv4 DNS ec2-3-92-187-98.compute-1.amazonaws.com | open address

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

Instance state = running Clear filters

Instances (1/1) Info

Instance ID: i-03c85538a2f275b95 Instance state: Running Instance type: t2.micro Status check: 2/2 checks passed Alarm status: View alarms Availability Zone: us-east-1a

Terminate instance?

On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

Instance ID	Termination protection
i-03c85538a2f275b95 (Web server for IMD)	Disabled

To confirm that you want to terminate the instances, choose the terminate button below. Instances with termination protection enabled will not be terminated. Terminating the instance cannot be undone.

Cancel **Terminate**

Successfully initiated termination of i-03c85538a2f275b95

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

Find Instance by attribute or tag (case-sensitive)

All states

Instance state = running [X](#) Clear filters

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Web server for...	i-03c85538a2f275b95	Shutting-down	t2.micro	2/2 checks passed	View alarms	us-east-1a

i-03c85538a2f275b95 (Web server for IMD)

[Details](#) [Status and alarms](#) [Monitoring](#) [Security](#) [Networking](#) [Storage](#) [Tags](#)

Instance summary [Info](#)

Instance ID	Public IPv4 address	Private IPv4 addresses
i-03c85538a2f275b95 (Web server for IMD)	3.92.187.98 open address	172.31.91.51
IPv6 address	Instance state	Public IPv4 DNS
-	Shutting-down	ec2-3-92-187-98.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running All states

Name Instance ID Instance state Instance type Status check Alarm status Available

No matching instances found

Select an instance

AWS General Immersion Day

► Before Starting the Workshop...

▼ Basic Modules

▼ Compute - Amazon EC2

► EC2 Linux Hands on Lab

▼ EC2 Windows Hands on Lab

Create a New Key Pair

Launch a Web Server Instance

Connecting to your Windows Instance

Connect to your Windows instance using Session Manager (Optional)

Change EC2 Instance Type (Optional)

Elastic IPs (Optional)

Clean Up Resources

▼ Auto Scaling on AWS

▼ EC2 Auto Scaling

Lab Prerequisites

▼ Content preferences

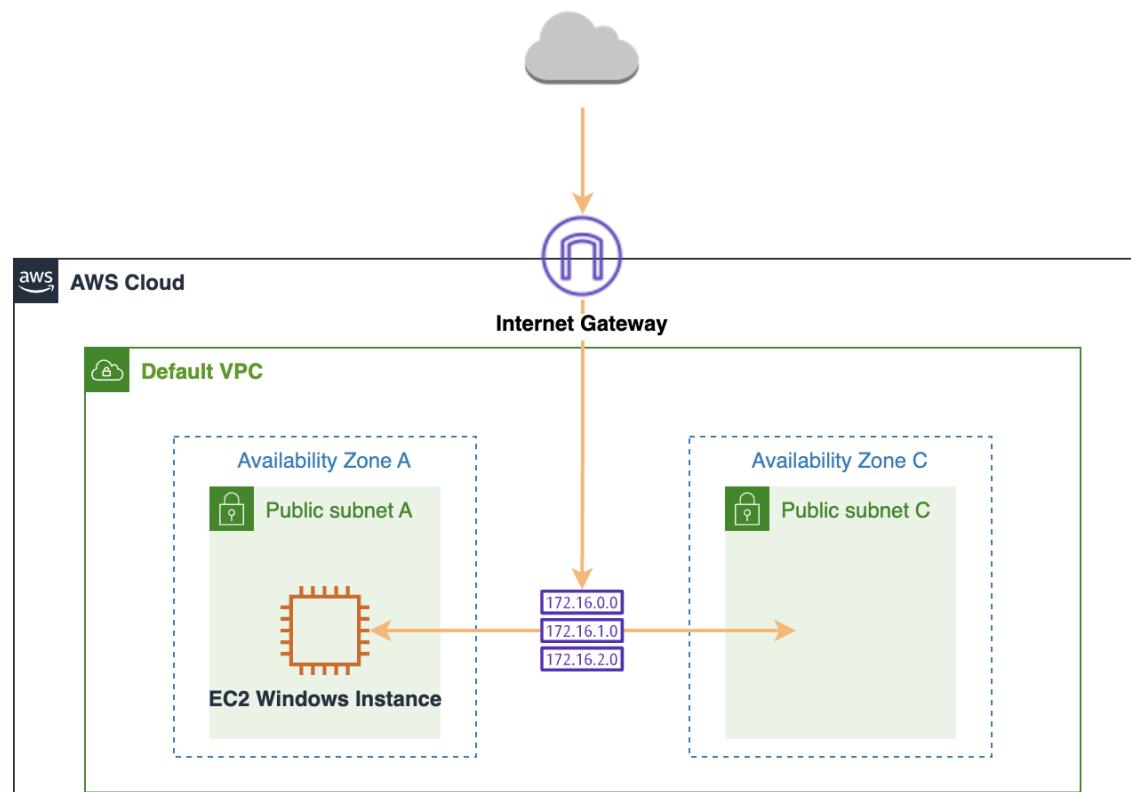
Language

English

EC2 Windows Hands on Lab

Amazon EC2 Overview

Amazon EC2 provides scalable computing capacity in the Amazon Web Services (AWS) Cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.



Launch

Amazon EC2 allows you to launch and manage virtual servers in the cloud following the principles of Infrastructure as Code.

Name and description

Name

e.g. My Web Server

Application

An AMI is a pre-configured Amazon Machine Image (AMI) that contains an application and its dependencies. You can launch multiple instances of the AMI below.

Search

Recent

Amazon Linux 2024.03.01

aws

Search results for 'ec2'

Services

See all 13 results ▶



EC2 ☆

Virtual Servers in the Cloud

Top features

[Dashboard](#) [Launch templates](#) [Instances](#) [Spot Instance requests](#) [Savings plans](#)



EC2 Image Builder ☆

A managed service to automate build, customize and deploy OS images



Recycle Bin

Protect resources from accidental deletion



Amazon Inspector ☆

Continual vulnerability management at scale

Features

See all 59 results ▶

Dashboard

⌚ EC2 feature

EC2 Instances

⌚ CloudWatch feature



▼ Images

AMIs

AMI Catalog

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

▼ Load Balancing

Load Balancers

Target Groups

Trust Stores New

▼ Auto Scaling

Auto Scaling Groups

Settings

Resources

EC2 Global View



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

Instances (running)

0

Auto Scaling Groups

0

Dedicated Hosts

0

Elastic IPs

0

Instances

1

Key pairs

1

Load balancers

0

Placement groups

0

Security groups

3

Snapshots

0

Volumes

0

Launch instance

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

Launch instance

Migrate a server

Note: Your instances will launch in the US East (N. Virginia) Region

Service health

AWS Health Dashboard



Region

US East (N. Virginia)

Status

ⓘ This service is operating normally.

Account attributes

Default VPC

vpc-80473bfd

Settings

Data protection and security

Zones

EC2 Serial Console

Default credit specification

EC2 console preferences

Explore AWS



Get Up to 40% Better Price Performance

T4g instances deliver the best price performance for burstable general purpose workloads in Amazon EC2. [Learn more](#)

Save up to 90% on EC2 with Spot Instances

Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. [Learn more](#)

Enable Best Price-Performance with AWS Graviton2



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#KeyPairs:

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Key pairs (1) Info

Find Key Pair by attribute or tag

<input type="checkbox"/>	Name	Type	Created	Fingerprint	ID
<input type="checkbox"/>	AWS-ImmersionDay	rsa	2024/07/20 20:33 GMT+8	3c:49:a6:c3:80:2f:e7:ce:5d:37:11:...	key-0d53931011207d798

Actions Create key pair

Images

- AMIs
- AMI Catalog

Elastic Block Store

- Volumes
- Snapshots
- Lifecycle Manager

Network & Security

- Security Groups
- Elastic IPs
- Placement Groups
- Key Pairs** 
- Network Interfaces

Load Balancing

- Load Balancers
- Target Groups
- Trust Stores New

Auto Scaling

- Auto Scaling Groups

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateKeyPair:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Key pairs > Create key pair

Create key pair Info

Key pair
A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type Info

RSA ED25519

Private key file format

.pem
For use with OpenSSH

.ppk
For use with PuTTY

Tags - optional
No tags associated with the resource.

[Add new tag](#)
You can add up to 50 more tags.

general-id-20240720 X | General Immersion Day - Basic X Create key pair | EC2 | us-east-1 X Welcome to the AWS IMD X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateKeyPair:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Key pairs > Create key pair

Create key pair Info

Key pair
A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name
My-AWS-ImmersionDay-KeyPair 

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type Info

RSA ED25519

Private key file format

.pem
For use with OpenSSH

.ppk
For use with PuTTY

Tags - optional
No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

general-id-20240720 x | General Immersion Day - Basic x Key pairs | EC2 | us-east-1 x Welcome to the AWS IMD x +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#KeyPairs:

AWS Services Search [Option+S] Paused

EC2 Dashboard X

EC2 Global View

Events

Console-to-Code Preview

Instances ▼

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

Images ▼

- AMIs
- AMI Catalog

Elastic Block Store ▼

- Volumes
- Snapshots
- Lifecycle Manager

Network & Security

Successfully created key pair

Key pairs (2) Info

Find Key Pair by attribute or tag

<input type="checkbox"/>	Name	Type	Created	Fingerprint	ID
<input type="checkbox"/>	My-AWS-ImmersionDay-KeyPair	rsa	2024/07/20 21:30 GMT+8	9b:b8:e6:72:77:e6:e5:66:09:59:88:2a:6b:3...	key-02e3f...
<input type="checkbox"/>	AWS-ImmersionDay	rsa	2024/07/20 20:33 GMT+8	3c:49:a6:c3:80:2f:e7:ce:5d:37:11:68:76:37...	key-0d539...

My-AWS-ImmersionDay-KeyPair.pem
1,674 B • Done

AWS-ImmersionDay.pem
1,678 B • 57 minutes ago

Create key pair

167-4289

general-id-20240720 General Immersion Day - Bas Instances | EC2 | us-east-1 Welcome to the AWS IMD

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... Paused

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running Clear filters

No matching instances found

Select an instance

Launch instances

A red arrow points to the "Launch instances" button at the top right of the main content area.

general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us X | Welcome to the AWS IMD X | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

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 | My AMIs **Quick Start**

Amazon | macOS | Ubuntu | Windows | Red Hat | SUSE Li

Summary

Number of instances Info
1

Software Image (AMI)
Amazon Linux 2023.5.2...[read more](#)
ami-0b72821e2f351e396

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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us X | Welcome to the AWS IMD X | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

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

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Search our full catalog including 1000s of application and OS images

Recents My AMIs Quick Start

Amazon macOS Ubuntu Windows Red Hat SUSE Li

Summary

Number of instances Info 1

Software Image (AMI)
Amazon Linux 2023.5.2... read more
ami-0b72821e2f351e396

Virtual server type (instance type)
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Firewall (security group)
New security group

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us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Recents My AMIs Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Li

Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Machine Image (AMI)

Microsoft Windows Server 2022 Base ami-07d9456e59793a7d5 (64-bit (x86)) Virtualization: hvm ENA enabled: true Root device type: ebs

Description Microsoft Windows 2022 Datacenter edition. [English]

Architecture 64-bit (x86) AMI ID ami-07d9456e59793a7d5 Verified provider

Instance type Info Get advice

Summary

Number of instances 1

Software Image (AMI) Microsoft Windows Server 2022 ...read more ami-07d9456e59793a7d5

Virtual server type (instance type) t2.micro

Firewall (security group) New security group

Storage (volumes) 1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs. 1 GB of snapshots, and

general-id-20240720 X | General Immersion Day - Basic X | Launch an instance | EC2 | us X | Welcome to the AWS IMD X | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Instance type Info | Get advice

Instance type t3.medium 

Family: t3 2 vCPU 4 GiB Memory Current generation: true
On-Demand SUSE base pricing: 0.0979 USD per Hour
On-Demand Windows base pricing: 0.06 USD per Hour
On-Demand Linux base pricing: 0.0416 USD per Hour
On-Demand RHEL base pricing: 0.0704 USD per Hour

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required Select Create new key pair

For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

Network settings Info Edit

Summary

Number of instances 1

Software Image (AMI)
Microsoft Windows Server 2022 ...[read more](#)
ami-07d9456e59793a7d5

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 



Services

Search

[Option+S]



N. Virginia

WSParticipantRole/Participant @ 5448-7167-4289



▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

My-AWS-ImmersionDay-KeyPair



Create new key pair

For Windows instances, you use a key pair to decrypt the administrator password. You then use the decrypted password to connect to your instance.

▼ Network settings [Info](#)

Edit

Network [Info](#)

vpc-80473bfd

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:

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)
ami-07d9456e59793a7d5

Virtual server type (instance type)

t3.medium

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 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, 750 hours of
public IPv4 address usage per
month, 30 GiB of EBS storage, 2
million IOs, 1 GB of snapshots, and



Cancel

Launch instance

▼ Network settings [Info](#)

[Edit](#)[Network \[Info\]\(#\)](#)

vpc-80473bfd

[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

⚠️ 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.

▼ Summary

[Number of instances \[Info\]\(#\)](#)

1

[Software Image \(AMI\)](#)[Microsoft Windows Server 2022 ...\[read more\]\(#\)](#)
ami-07d9456e59793a7d5[Virtual server type \(instance type\)](#)

t3.medium

[Firewall \(security group\)](#)

New security group

[Storage \(volumes\)](#)

1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

[Cancel](#)[Launch instance](#)[Review commands](#)

▼ Network settings [Info](#)

[Edit](#)[Network](#) | [Info](#)

vpc-80473bfd

[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

⚠️ 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.

▼ Summary

[Number of instances](#) | [Info](#)

1

[Software Image \(AMI\)](#)[Microsoft Windows Server 2022 ...\[read more\]\(#\)](#)
ami-07d9456e59793a7d5[Virtual server type \(instance type\)](#)

t3.medium

[Firewall \(security group\)](#)

New security group

[Storage \(volumes\)](#)

1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

[Cancel](#)[Launch instance](#)[Review commands](#)



To set up an endpoint, for example when creating a web server

⚠️ 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. **X**

▼ Configure storage [Info](#)

[Advanced](#)

1x GiB Root volume (Not encrypted)

ⓘ Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage **X**

[Add new volume](#)

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

ⓘ Click refresh to view backup information

The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.

0 x File systems

[Edit](#)

▶ Advanced details 

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)
ami-07d9456e59793a7d5

Virtual server type (instance type)

t3.medium

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

[Cancel](#)[Launch instance](#)[Review commands](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Advanced details [Info](#)

Domain join directory [Info](#)
Select [Create new directory](#)

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](#)
Stop

Stop - Hibernate behavior [Info](#)
Select

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Microsoft Windows Server 2022 ...[read more](#)
ami-07d9456e59793a7d5

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 30 GiB

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us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Metadata version [Info](#)
V1 and V2 (token optional)

⚠ EC2 recommends using metadata version 2 unless you explicitly require metadata version 1.

Metadata response hop limit [Info](#)
2

Allow tags in metadata [Info](#)
Select

User data [Info](#) 
Upload a file with your user data or enter it in the field.
[Choose file](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Microsoft Windows Server 2022 ...[read more](#)
ami-07d9456e59793a7d5

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 30 GiB

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[Create a new Key Pair](#)[Launch a Web Server Instance](#)[Connect to your Linux instance using Session Manager \(Optional\)](#)[Connect to your Linux instance](#)[Connect to EC2 Instance using PuTTY \(Optional\)](#)[Clean Up Resources](#)

▼ EC2 Windows Hands on Lab

[Create a New Key Pair](#)[Launch a Web Server Instance](#)[Connecting to your Windows Instance](#)[Connect to your Windows instance using Session Manager \(Optional\)](#)[Change EC2 Instance Type \(Optional\)](#)[Elastic IPs \(Optional\)](#)[Clean Up Resources](#)

▼ Content preferences

Language

English

You can expand the section below and copy it by clicking the Copy icon to the right.

▼ User Data

```
1 <powershell>
2 Install-WindowsFeature -name Web-Server -IncludeManagementTools
3
4 $instanceId = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-data/instance-id -UseBasicParsing).content
5 $instanceAZ = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-data/placement/availability-zone -UseBasicParsing).content
6
7 New-Item -Path C:\inetpub\wwwroot\index.html -ItemType File -Force
8 Add-Content -Path C:\inetpub\wwwroot\index.html "<title>Windows EC2 Lab</title>"
9 Add-Content -Path C:\inetpub\wwwroot\index.html "<font face = `\"Verdana`\" size = `\"5`\">"
10 Add-Content -Path C:\inetpub\wwwroot\index.html "<center><img src=`\"https://d0.awsstatic.com/logos/powerd-by-aws.png`\" alt=`\"Powered by AWS\"/></center>"
11 Add-Content -Path C:\inetpub\wwwroot\index.html "<center><h1>Windows EC2 Lab</h1></center>"
12 Add-Content -Path C:\inetpub\wwwroot\index.html "<hr>"
13 Add-Content -Path C:\inetpub\wwwroot\index.html "<center> <b>EC2 Instance Metadata</b> </center>"
14 Add-Content -Path C:\inetpub\wwwroot\index.html "<center> <b>Instance ID:</b> $instanceId </center>"
15 Add-Content -Path C:\inetpub\wwwroot\index.html "<center> <b>AWS Availability Zone:</b> $instanceAZ </center>"
16 Add-Content -Path C:\inetpub\wwwroot\index.html "</font>"
17 </powershell>
```



10. Verify your selections are correct and then choose **Launch instance**.

▼ Summary

Number of instances | [Info](#)

1

metadata version 1.

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

```
<powershell>
Install-WindowsFeature -name Web-Server -IncludeManagementTools

$instanceId = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-
data/instance-id -UseBasicParsing).content
$instanceAZ = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-
data/placement/availability-zone -UseBasicParsing).content

New-Item -Path C:\inetpub\wwwroot\index.html -ItemType File -Force
Add-Content -Path C:\inetpub\wwwroot\index.html "<title>Windows EC2
Lab</title>"
Add-Content -Path C:\inetpub\wwwroot\index.html "<font face = `"Verdana`" size
= `"5`">"
Add-Content -Path C:\inetpub\wwwroot\index.html "<center><img
src=`"https://d0.awsstatic.com/logos/powerd-by-aws.png`" alt=`"Powered by
AWS`">"
```

 User data has already been base64 encoded

▼ Summary

Number of instances | [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)

ami-07d9456e59793a7d5

Virtual server type (instance type)

t3.medium

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 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, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and

[Cancel](#)[Launch instance](#)[Review commands](#)

metadata version 1.

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

```
<powershell>
Install-WindowsFeature -name Web-Server -IncludeManagementTools

$instanceId = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-
data/instance-id -UseBasicParsing).content
$instanceAZ = (Invoke-WebRequest -Uri http://169.254.169.254/latest/meta-
data/placement/availability-zone -UseBasicParsing).content

New-Item -Path C:\inetpub\wwwroot\index.html -ItemType File -Force
Add-Content -Path C:\inetpub\wwwroot\index.html "<title>Windows EC2
Lab</title>"
Add-Content -Path C:\inetpub\wwwroot\index.html "<font face = `"Verdana`" size
= `"5`">"
Add-Content -Path C:\inetpub\wwwroot\index.html "<center><img
src= `"https://d0.awsstatic.com/logos/powerd-by-aws.png`" alt= `"Powered by
AWS`">"
```

 User data has already been base64 encoded

▼ Summary

Number of instances | [Info](#)

1

Software Image (AMI)

Microsoft Windows Server 2022 ...[read more](#)

ami-07d9456e59793a7d5

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t3.medium

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 30 GiB

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Cancel

Launch instance

[Review commands](#)

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > Launch an instance

Launching instance
Creating security groups

14%

► Details

Please wait while we launch your instance.

Do not close your browser while this is loading.

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances:

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > Launch an instance

 Success
Successfully initiated launch of instance (i-0f28699a31a91aa6a) 

▶ Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"  < 1 2 3 4 5 6 >

Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.
[Create billing alerts](#)

Connect to your instance
Once your instance is running, log into it from your local computer.
[Connect to instance](#) 
[Learn more](#)

Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow between them.
[Connect an RDS database](#) 
[Create a new RDS database](#) 
[Learn more](#)

Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots.
[Create EBS snapshot policy](#) 

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-0f28699a31a91aa6a

Paused

AWS Services Search [Option+S]

EC2 Dashboard EC2 Global View Events Console-to-Code Preview

Instances Instances

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

Images AMIs AMI Catalog

Elastic Block Store Volumes Snapshots Lifecycle Manager

Network & Security

Instances (1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-0f28699a31a91aa6a Clear filters

<input type="checkbox"/>	Name <input type="button" value="Edit"/>	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
<input type="checkbox"/>	OU Windows ...	i-0f28699a31a91aa6a	<input checked="" type="checkbox"/> Running	t3.medium	<input checked="" type="checkbox"/> Initializing	View alarms +	us-east-1

Select an instance

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-0f28699a31a91aa6a

Paused

AWS Services Search [Option+S]

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-0f28699a31a91aa6a X Clear filters

Instance state ▾ Actions ▾ Launch instances ▾

1 / 1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone
OU Windows ...	i-0f28699a31a91aa6a	Running	t3.medium	Initializing	View alarms +	us-east-1

i-0f28699a31a91aa6a (OU Windows Web Server)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0f28699a31a91aa6a (OU Windows Web Server)	18.209.34.49 open address ↗	172.31.40.52
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-18-209-34-49.compute-1.amazonaws.com open address ↗
Hostname type	Private IP DNS name (IPv4 only)	

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-0f28699a31a91aa6a

Paused

EC2 Dashboard

EC2 Global View

Events

Console-to-Code Preview

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Search [Option+S]

Instances (1/1) Info

Find Instance by attribute or tag (case-sensitive)

Instance ID = i-0f28699a31a91aa6a Clear filters

Instance state ▾ Actions ▾ Launch instances ▾

Instance ID Name Instance ID Instance state Instance type Status check Alarm status Available

i-0f28699a31a91aa6a OU Windows ... i-0f28699a31a91aa6a Running t3.medium Initializing View alarms + us-east-1

i-0f28699a31a91aa6a (OU Windows Web Server)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Info

Instance ID: i-0f28699a31a91aa6a (OU Windows Web Server)

IPv6 address: -

Hostname type:

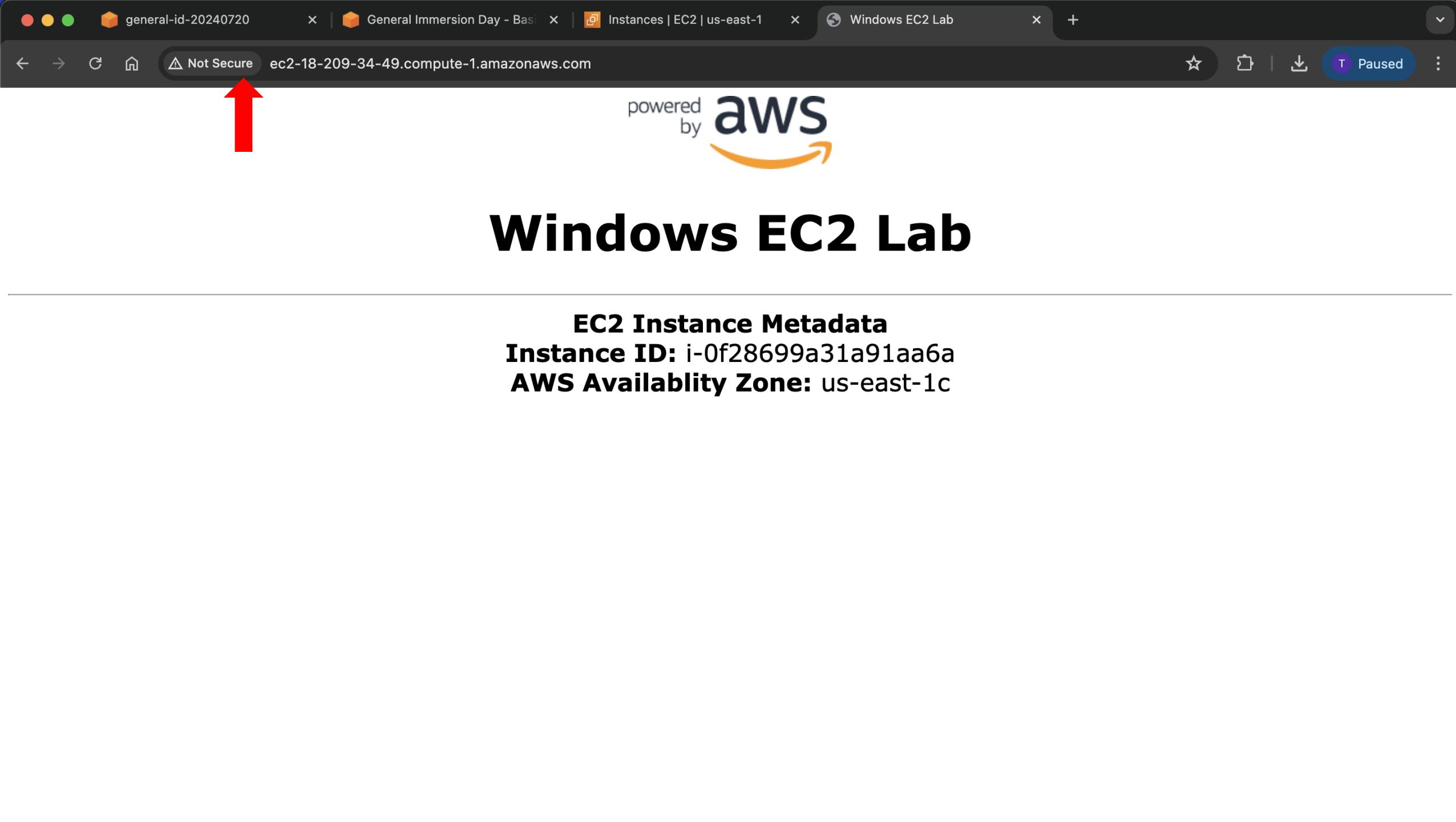
Public IPv4 address: 18.209.34.49 | open address ↗

Instance state: Running

Private IPv4 addresses: 172.31.40.52

Public IPv4 DNS: ec2-18-209-34-49.compute-1.amazonaws.com | open address ↗

A red arrow points from the Public IPv4 DNS field to the right.



The screenshot shows the AWS EC2 Instances page. On the left, a sidebar menu is open under the 'Instances' section, with 'Instances' highlighted and a red arrow pointing to it. The main content area displays a table of instances. One instance is listed with the following details:

Instance ID	Name	Instance state	Instance type	Status check	Alarm status	Availability zone
i-0f28699a31a91aa6a	OU Windows ...	Running	t3.medium	Initializing	View alarms	us-east-1

Below the table, a detailed view for the instance i-0f28699a31a91aa6a is shown. The 'Details' tab is selected. The 'Instance summary' section contains the following information:

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0f28699a31a91aa6a (OU Windows Web Server)	18.209.34.49 open address	172.31.40.52
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-18-209-34-49.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager **RDP client** **EC2 serial console**

 **SSM Agent is not online**
The SSM Agent was unable to connect to a Systems Manager endpoint to register itself with the service.

Session Manager usage:

- Connect to your instance without SSH keys, a bastion host, or opening any inbound ports.
- Sessions are secured using an AWS Key Management Service key.
- You can log session commands and details in an Amazon S3 bucket or CloudWatch Logs log group.
- Configure sessions on the Session Manager [Preferences](#) page.

Cancel **Connect**

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager **RDP client** EC2 serial console

Instance ID
i-0f28699a31a91aa6a (OU Windows Web Server)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager
To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS
ec2-18-209-34-49.compute-1.amazonaws.com

Username Info

Get password



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

Session Manager RDP client EC2 serial console

Instance ID
i-0f28699a31a91aa6a (OU Windows Web Server)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager
To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS
ec2-18-209-34-49.compute-1.amazonaws.com

Username Info
Administrator

Password [Get password](#) ←

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

general-id-20240720 x | General Immersion Day - Bas... x Get windows password | EC2 x Windows EC2 Lab x | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#GetWindowsPassword:instanceId=i-0f28699a31a91aa6a;previousPlace=Conn... ☆

aws Services Search [Option+S] N. Virginia ▾ WSParticipantRole/Participant @ 5448-7167-4289 ▾ Paused :

EC2 > Instances > i-0f28699a31a91aa6a > Get Windows password

Get Windows password Info

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID

[i-0f28699a31a91aa6a \(OU Windows Web Server\)](#)

Key pair associated with this instance

[My-AWS-ImmersionDay-KeyPair](#)

Private key

Either upload your private key file or copy and paste its contents into the field below.



Private key contents - optional

Private key contents

Cancel Decrypt password



Services

Search

[Option+S]



N. Virginia ▾

WSParticipantRole/Participant @ 5448-7167-4289 ▾

EC2 > Instances > i-0f28699a31a91aa6a > Get Windows password

Get Windows password Info

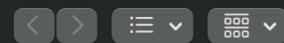
Favorites

[mba](#)[Applications](#)[Downloads](#)[On My Mac](#)

iCloud

[iCloud Drive](#)[Documents](#)[Desktop](#)[Shared](#)

Locations

[Network](#)

Desktop — iCloud



Name	Date Modified	Size	Kind
------	---------------	------	------

aws Services [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Get Windows password

Get Windows password

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID
 i-0f28699a31a91aa6a (OU Windows Web Server)

Key pair associated with this instance
 My-AWS-ImmersionDay-KeyPair

Private key
Either upload your private key file or copy and paste its contents into the field below.

Upload private key file

My-AWS-ImmersionDay-KeyPair.pem
1.674KB

Private key contents - *optional*

```
-----BEGIN RSA PRIVATE KEY-----  
MIIEowlBAAKCAQEAhkitczg6WFtqOyL2w9UAFItTWJu8EduA62zKyhwfs7QR+PkA  
hPK51z92QB/ORosK6WaO09M+SRt8aTFYs7ONfHGneJDvJ7Gf6v3tTlj3xafbodEm  
hurQoUGKfDyqu3xiB692gwTbgH6Dkb+jW/0ulWefXNUQjHBH6uwH7HdlX2ZVD/zX  
gN+MgBEq8CgZz4VgYYiClnXWL35sJFmoK3bRf3PTF/uWG6UhCylzu0ZanLIWtrfD  
8gtJHjFL9D/FPPWm8UUhDQVidbMzqt+mJfeprZ+15o6h5Cl3VG/Ks+3lmtnptSeF  
tK7DjFqSBGK6eDLeer+qOUyDb66jlKOKnZxV4wIDAQABaoIBAA5a6p/snOAhNaQI  
wtSAirfZH3nTfDF0g72nLa6ZfxlY5+rzw4hy4kcOc7e7LrP/3TTCT/Z5GKl8FLqy
```

Cancel Decrypt password

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager RDP client EC2 serial console

Instance ID

[i-0f28699a31a91aa6a \(OU Windows Web Server\)](#)

Connection Type

Connect using RDP client

Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager

To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS

[ec2-18-209-34-49.compute-1.amazonaws.com](#)

Username Info

Password

[TOLJei2JUJ7a2Yh0%hJa.@dG\\$7xxhkzF](#)



us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Paused

aws Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager | **RDP client** | EC2 serial console

Instance ID
 i-0f28699a31a91aa6a (OU Windows Web Server)

Connection Type

Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Connect using Fleet Manager
To connect to the instance using Fleet Manager Remote Desktop, the SSM Agent must be installed and running on the instance. For more information, see [Working with SSM Agent](#)

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[!\[\]\(c4d900a6ac3a158759b672ba88803b6b_img.jpg\) Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS
 ec2-18-209-34-49.compute-1.amazonaws.com

Password copied

Username Info
 Administrator ▾

TOLJeI2JUJ7a2Yh0%hJa.@dG\$7xxhkzF 

general-id: 20240720 | General Immersion Day - Bas... | Connect to instance | EC2 | Windows EC2 Lab | Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager RDP client EC2 serial console

Instance ID: [i-0f28699a31a91aa6a \(OU Windows Web Server\)](#)

Connection Type: Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Enter Your User Account
This user account will be used to connect to ec2-18-209-34-49.compute-1.amazonaws.com (remote PC).

Username:

Password: Show password

Cancel Continue

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS: [ec2-18-209-34-49.compute-1.amazonaws.com](#)

Username Info: [Administrator](#)

Password: [TOLUei2JUJ7a2Yh0%hJa.@dG\\$7xxhkzF](#)

general-id: 20240720 | General Immersion Day - Bas... | Connect to instance | EC2 | Windows EC2 Lab | Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager RDP client EC2 serial console

Instance ID: [i-0f28699a31a91aa6a \(OU Windows Web Server\)](#)

Connection Type: Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

Enter Your User Account
This user account will be used to connect to ec2-18-209-34-49.compute-1.amazonaws.com (remote PC).

Username:

Password: Show password

Cancel Continue

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download remote desktop file](#)

When prompted, connect to your instance using the following username and password:

Public DNS: [ec2-18-209-34-49.compute-1.amazonaws.com](#)

Username Info: [Administrator](#)

Password: [TOLUei2JUJ7a2Yh0%hJa.@dG\\$7xxhkzF](#)

general-id-20240720 X | General Immersion Day - Bas X Connect to instance | EC2 | us X Windows EC2 Lab X +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ConnectToInstance:instanceId=i-0f28699a31a91aa6a

Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 > Instances > i-0f28699a31a91aa6a > Connect to instance

Connect to instance Info

Connect to your instance i-0f28699a31a91aa6a (OU Windows Web Server) using any of these options

Session Manager RDP client EC2 serial console

Instance ID i-0f28699a31a91aa6a (OU Windows Web Server)

Connection Type Connect using RDP client
Download a file to use with your RDP client and retrieve your password.

You are connecting to the RDP host "ec2-18-209-34-49.compute-1.amazonaws.com". The certificate couldn't be verified back to a root certificate. Your connection may not be secure. Do you want to continue?

?

Show Certificate Cancel Continue

on the instance. For more information, see Working with SSM Agent ↗

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

When prompted, connect to your instance using the following username and password:

Public DNS ec2-18-209-34-49.compute-1.amazonaws.com

Username Info

Password



Recycle Bin

Q



EC2

Feedback

!



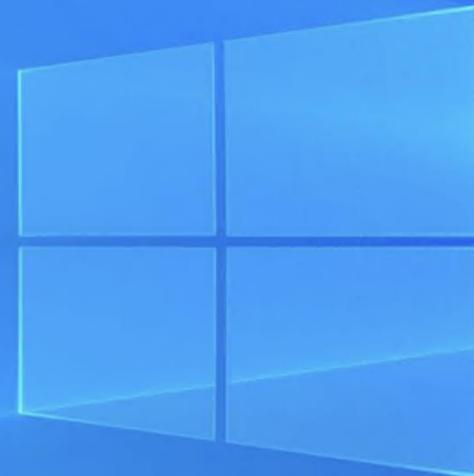
EC2

Micros...



Microsoft

Edge



general-id-20240720 General Immersion Day - Bas Instances | EC2 | us-east-1 Windows EC2 Lab Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard Services Search [Option+S] EC2 Global View Events Console-to-Code Preview Instances Instances Instances Instances Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances (1/1) Info Find Instance by attribute or tag (case-sensitive) Instance state = running X Clear filters Name Instance ID Instance state OU Windows ... i-0f28699a31a91aa6a Running Terminate instance

i-0f28699a31a91aa6a (OU Windows Web Server)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary Instance ID: i-0f28699a31a91aa6a (OU Windows Web Server) Public IPv4 address: 18.209.34.49 | open address Instance state: Running Private IPv4 addresses: 172.31.40.52 IPv6 address: - Public IPv4 DNS: ec2-18-209-34-49.compute-1.amazonaws.com | open address Hostname type: Private IP DNS name (IPv4 only)

general-id-20240720 X | General Immersion Day - Bas... X Instances | EC2 | us-east-1 X Windows EC2 Lab X | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... ☆

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security Hostname type Private IP DNS name (IPv4 only)

Instances (1/1) Info Find Instance by attribute or tag (case-sensitive) Instance state = running Clear filters All states Instance ID i-0f28699a31a91aa6a Instance state Running Instance type t3.medium Status check 2/2 checks passed Alarm status View alarms Available us-east-1

Terminate instance?

⚠ On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

Instance ID	Termination protection
i-0f28699a31a91aa6a (OU Windows Web Server)	Disabled

To confirm that you want to terminate the instances, choose the terminate button below. Instances with termination protection enabled will not be terminated. Terminating the instance cannot be undone.

Cancel Terminate

Red arrow pointing to the "Terminate" button.

general-id-20240720 General Immersion Day - Bas Instances | EC2 | us-east-1 Windows EC2 Lab Paused

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard Services Search [Option+S] X

Successfully initiated termination of i-0f28699a31a91aa6a

Instances (1/1) Info C Connect Instance state Actions Launch instances

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

Instance state = running X Clear filters

< 1 > 

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone
OU Windows ...	i-0f28699a31a91aa6a	Shutting-down	t3.medium	2/2 checks passed	View alarms +	us-east-1

i-0f28699a31a91aa6a (OU Windows Web Server)

Details Status and alarms Monitoring Security Networking Storage Tags

Instance summary

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0f28699a31a91aa6a (OU Windows Web Server)	18.209.34.49 open address	172.31.40.52
IPv6 address	Instance state	Public IPv4 DNS
-	Shutting-down	ec2-18-209-34-49.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	

general-id-20240720 X | General Immersion Day - Basic X Instances | EC2 | us-east-1 X Windows EC2 Lab X | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceState=running;v=3;\$case=tags:true%5C,client:false;\$regex... Paused

AWS Services Search [Option+S] N. Virginia WSParticipantRole/Participant @ 5448-7167-4289

EC2 Dashboard EC2 Global View Events Console-to-Code Preview Instances Instances Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances Dedicated Hosts Capacity Reservations Images AMIs AMI Catalog Elastic Block Store Volumes Snapshots Lifecycle Manager Network & Security

Instances Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running All states

Name Instance ID Instance state Instance type Status check Alarm status Available

No matching instances found

Select an instance

Paused



Thank you!

Michael Lin

linmicht@amazon.com

