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Compute Services

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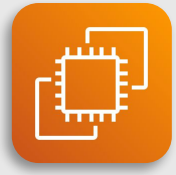
Compute services overview



Amazon Elastic Compute Cloud (Amazon EC2)

Virtual servers in the cloud

Amazon EC2 Auto Scaling

Add or remove compute capacity to meet changes in demand

AWS Lambda

Run code without thinking about servers

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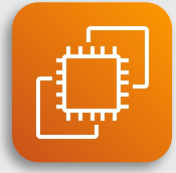
What is Amazon Elastic Compute Cloud (EC2) ?

Instance	vCPU*	CPU Credits/hour	Mem (GiB)	Storage
t3.nano	2	6	0.5	EBS-Only
t3.micro	2	12	1	EBS-Only
t3.small	2	24	2	EBS-Only
t3.medium	2	24	4	EBS-Only
t3.large	2	36	8	EBS-Only
t3.xlarge	4	96	16	EBS-Only
t3.2xlarge	8	192	32	EBS-Only



Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides **resizable** compute capacity in the cloud.

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Amazon EC2 Instance Types

General Purpose

- provide a balance of compute, memory and networking resources
- can be used for a variety of diverse workloads.
- ideal for applications that use these resources in equal proportions such as web servers and code repositories.

Compute Optimized

- suited for batch processing workloads, media transcoding, high performance web servers, scientific modeling, dedicated gaming servers and ad server engines, machine learning and other compute intensive applications.

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Amazon EC2 Instance Types

Memory Optimized

- designed to deliver fast performance for workloads that process large data sets in memory.

Accelerated Computing

- To perform functions, such as floating point number calculations, graphics processing, or data pattern matching, more efficiently than is possible in software running on CPUs.

Storage Optimized

- designed for workloads that require high, sequential read and write access to very large data sets on local storage.

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Instance Pricing Type

Spot instances are recommended for:

- Applications that have flexible start and end times
- Applications that are feasible only at very low compute prices
- Users with urgent computing needs for large amounts of additional capacity

On-Demand instances are recommended for:

- Users that prefer the low cost and flexibility of Amazon EC2 without any upfront payment or long-term commitment
- Applications with short-term, spiky, or unpredictable workloads that cannot be interrupted
- Applications being developed or tested on Amazon EC2 for the first time

Reserved Instances(Savings Plans)

- provide you with a significant discount (up to 72%) compared to On-Demand Instance pricing.

Dedicated Hosts

- help you reduce costs by allowing you to use your existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server
- help you meet compliance requirements

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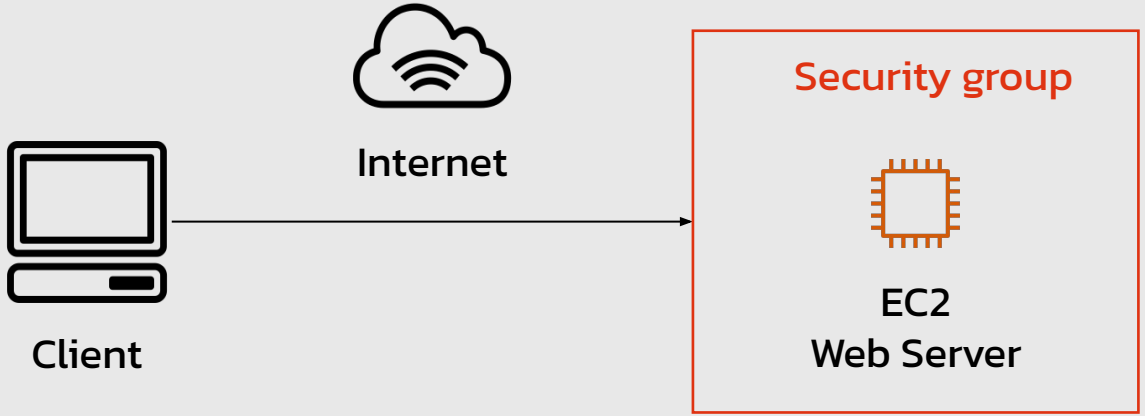
Use Case

Run cloud-native web applications



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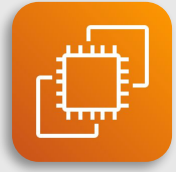
What is Amazon EC2 Auto Scaling ?

Scheduled Scaling

Dynamic Scaling

Predictive Scaling



Amazon EC2 Auto Scaling helps you maintain application availability and allows you to automatically add or remove EC2 instances according to conditions you define.

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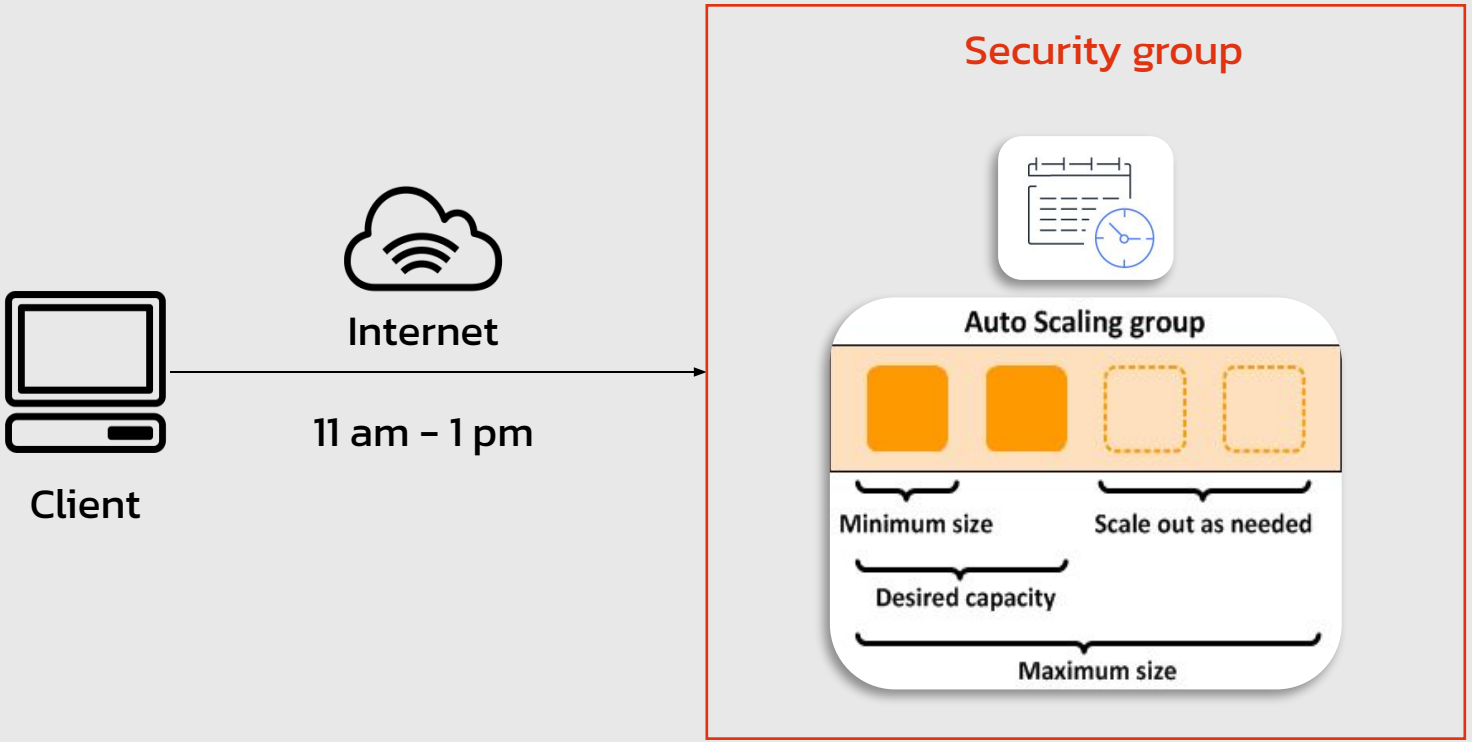
Use Case



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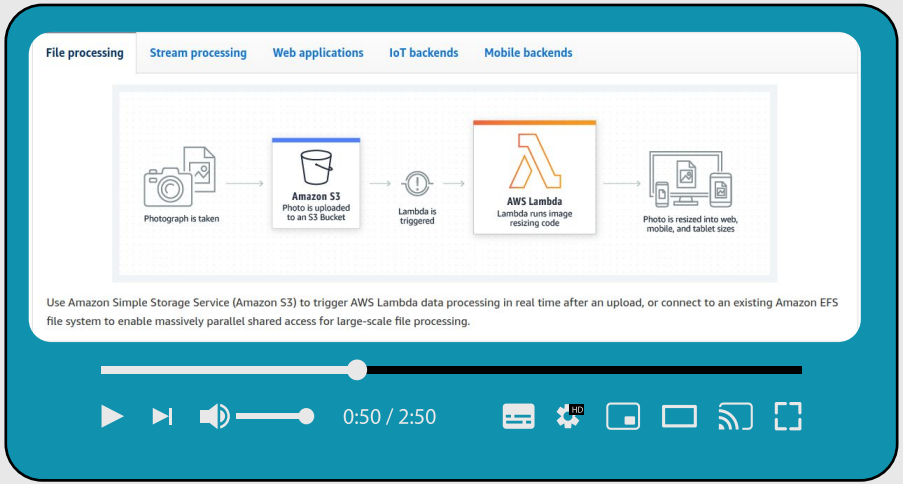
What is AWS Lambda?



AWS Lambda is a serverless compute service that runs your code in response to events and automatically manages the underlying compute resources for you.

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Use Case

File processing | Stream processing | Web applications | IoT backends | Mobile backends

Use Amazon Simple Storage Service (Amazon S3) to trigger AWS Lambda data processing in real time after an upload, or connect to an existing Amazon EFS file system to enable massively parallel shared access for large-scale file processing.

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Mini Workshop

Create AWS EC2 Instance

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Thank You

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