
























AWS Compute Services

- Compute services are also known as Infrastructure-as-a-Service (IaaS). Compute platforms, such as AWS Compute, **supply a virtual server instance and storage and APIs that let users migrate workloads to a virtual machine.**

AWS compute services

Category	Service description	AWS service
Instances (virtual machines)	Secure and resizable compute capacity (virtual servers) in the cloud	 Amazon Elastic Compute Cloud (EC2)
	Run fault-tolerant workloads for up to 90% off	 Amazon EC2 Spot
	Automatically add or remove compute capacity to meet changes in demand	 Amazon EC2 Autoscaling
	Easy-to-use cloud platform that offers you everything you need to build an application or website	 Amazon Lightsail
	Fully managed batch processing at any scale	 AWS Batch
Containers	Highly secure, reliable, and scalable way to run containers	 Amazon Elastic Container Service (ECS)
	Run containers on customer-managed infrastructure	 Amazon ECS Anywhere
	Easily store, manage, and deploy container images	 Amazon Elastic Container Registry (ECR)
	Fully managed Kubernetes service	 Amazon Elastic Kubernetes Service (EKS)
	Create and operate Kubernetes clusters on your own infrastructure	 Amazon EKS Anywhere
	Serverless compute for containers	 AWS Fargate
	Build and run containerized applications on a fully managed service	 AWS App Runner

Serverless	Run code without thinking about servers. Pay only for the compute time you consume	 AWS Lambda
Edge and hybrid	Run AWS infrastructure and services on premises for a truly consistent hybrid experience	 AWS Outposts
	Collect and process data in rugged or disconnected edge environments	 AWS Snow Family
	Deliver ultra-low latency application for 5G devices	 AWS Wavelength
	Preferred service for all vSphere workloads to rapidly extend and migrate to the cloud	 VMware Cloud on AWS
	Run latency sensitive applications closer to end-users	 AWS Local Zones
Cost and capacity management	Flexible pricing model that provides savings of up to 72% on AWS compute usage	 AWS Savings Plan
	Recommends optimal AWS compute resources for your workloads to reduce costs and improve performance	 AWS Compute Optimizer
	Easy-to-use service for deploying and scaling web applications and services	 AWS Elastic Beanstalk
	Build and maintain secure Linux or Windows Server images	 EC2 Image Builder
	Automatically distribute incoming application traffic across multiple targets	 Elastic Load Balancing (ELB)

Amazon EC2

- Amazon Elastic Compute Cloud (Amazon EC2) offers the broadest and deepest compute platform, with over 750 instances and choice of the latest processor, storage, networking, operating system, and purchase model to help you best match the needs of your workload.

Use cases

1. Run cloud-native and enterprise applications
2. Scale for HPC applications
3. Develop for Apple platforms
4. Train and deploy ML applications

AWS Pricing

- AWS offers you a pay-as-you-go approach for pricing for the vast majority of our cloud services.

Amazon Elastic Container Service (ECS)

- It provides a highly scalable, high performance container management service that supports Docker containers and allows you to easily run

applications on a managed cluster of Amazon EC2 instances.

- Amazon ECR is integrated with Amazon EC2 Container Service (ECS).

AWS Lambda

- **Run code without thinking about servers or clusters**
- AWS Lambda is a compute service that runs your code in response to events and automatically manages the compute resources, making it the fastest way to turn an idea into a modern, production, serverless applications.

Benefits of AWS Lambda

1. No need for managing servers
2. Automatic scaling
3. Pay-as-you-go pricing
4. Performance optimization

Amazon LightSail

- Build applications and websites fast with low-cost, pre-configured cloud resources
- Amazon Lightsail offers easy-to-use virtual private server (VPS) instances, containers, storage, databases, and more at a cost-effective monthly price.
- Amazon LightSail is one of the newest services in the AWS Compute suite of products. Amazon LightSail is great for users who do not have deep AWS technical expertise as it makes it very easy to provision compute services.

Use cases

1. Launch simple web applications
2. Create custom websites
3. Build small business applications
4. Spin up test environments

AWS Elastic Beanstalk

- Deploy and scale web applications

- Elastic Beanstalk is a service for deploying and scaling web applications and services. Upload your code and Elastic Beanstalk automatically handles the deployment—from capacity provisioning, load balancing, and auto scaling to application health monitoring.

Use cases

1. Quickly launch web applications
2. Create mobile API backends for your applications
3. Replatform critical business applications

AWS Batch

- Batch processing, ML model training, and analysis at any scale
- AWS Batch is a fully managed batch computing service that plans, schedules, and runs your containerized batch or ML workloads across the full range of AWS compute offerings, such as Amazon ECS, Amazon EKS, AWS Fargate, and Spot or On-Demand Instances.

Use cases

1. Run financial services analyses
2. Screen for drugs and sequence genomes
3. Render visual effects
4. Train ML models