



Compute Services

Amazon Web Services

AWS Compute Services

- Elastic Compute Cloud (EC2), EBS & EFS
- Elastic Load Balancer & Auto Scaling
- Lightsail
- Lambda
- Elastic Container Service (ECS) & Elastic Container Registry (ECR)
- Elastic Container Service for Kubernetes (EKS)
- AWS Batch
- AWS Serverless Application Repository
- Additional Compute Services



Elastic Compute Cloud (EC2) Part 1

Amazon Web Services

Amazon Elastic Compute Cloud EC2

Amazon Elastic Compute Cloud (Amazon EC2) is a computing service with scalable capacity in the AWS cloud. You can use Amazon EC2 to launch virtual servers (Instances) as required for your business, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in demand, reducing your need to forecast traffic.

Amazon Elastic Compute Cloud EC2

Key Benefits

Applications, Web and Database Servers

Choice of OS – Windows or Linux

Range of Instance Specifications – HW/SW

Regional Specific

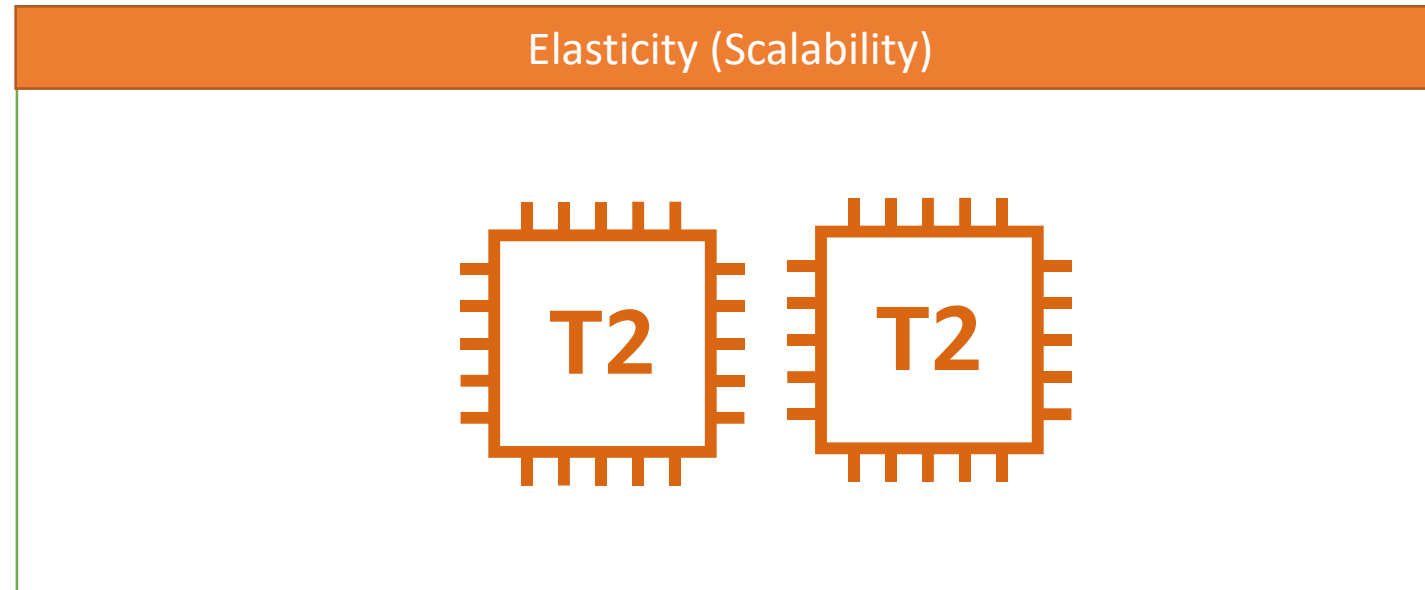
CAPEX vs. OPEX

Amazon Elastic Compute Cloud EC2

Instances are grouped into 'families' to enable you to choose the right instance based on the workload you wish to deploy - <https://aws.amazon.com/ec2/instance-types/>

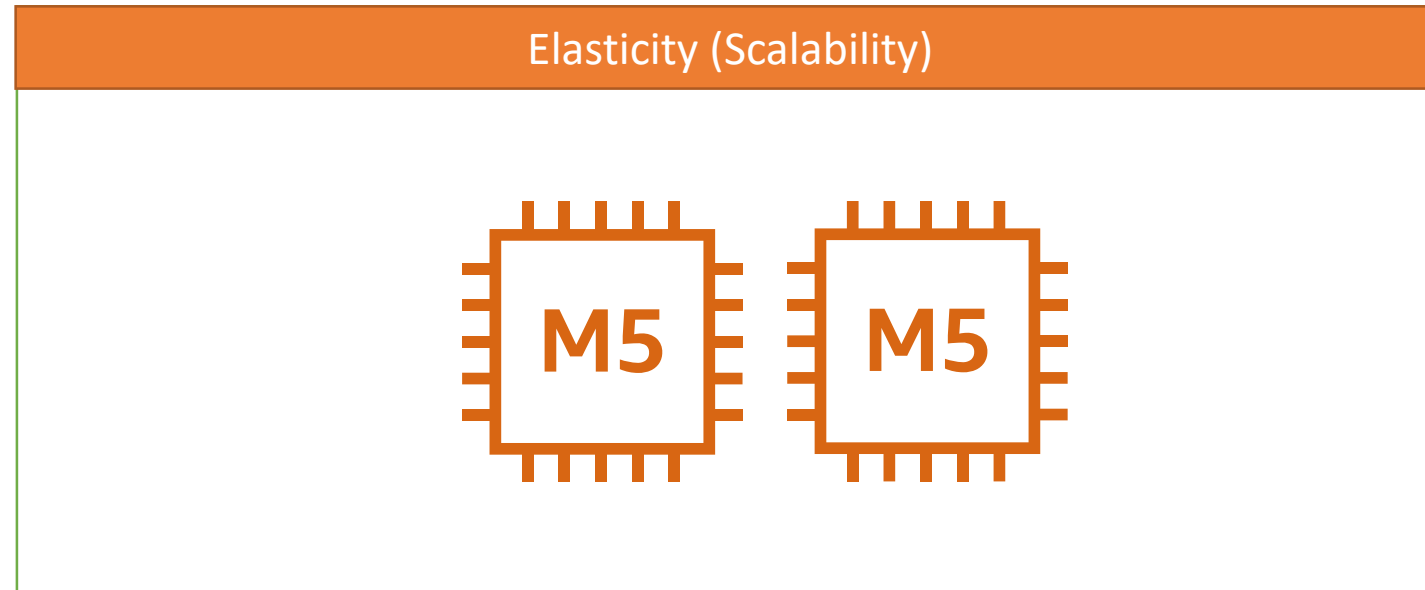
Amazon Elastic Compute Cloud EC2

Key Benefits



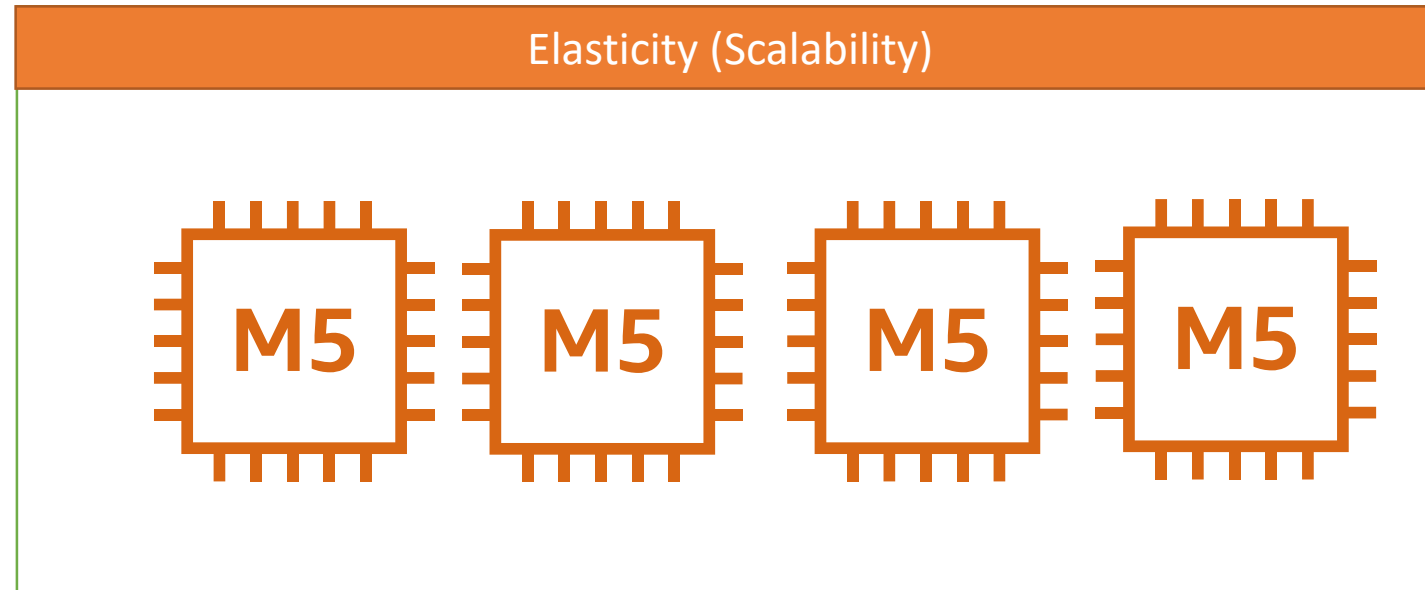
Amazon Elastic Compute Cloud EC2

Key Benefits



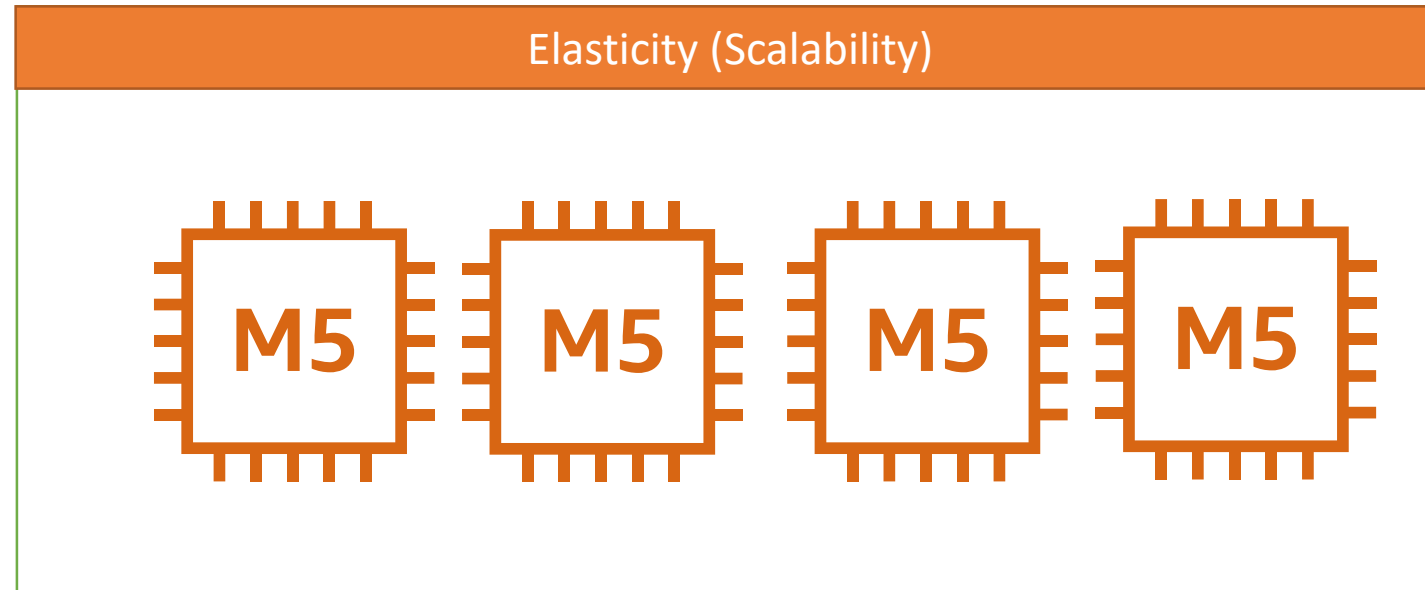
Amazon Elastic Compute Cloud EC2

Key Benefits



Amazon Elastic Compute Cloud EC2

Key Benefits



Amazon EC2 - Pricing Options

On Demand Instances – pay a fixed rate by the hour based on instance size. This is for users who want low cost and yet the flexibility to turn on/off instances on demand. These instances do not have any long term commitment requirements and are ideal for hosting applications with short term unpredictable workloads b



Amazon EC2 - Pricing Options

Reserved Instances – you reserve capacity and obtain a large discount for an instance. Reserved instances are signed up for 1 or 3 years. Used for steady state computing needs and where you do not want any interruption to allocated compute capacity.

- You are charged at a discounted rate for the entire duration of the contract
- Sell unused reserved instances on the EC2 Reserved Instance Marketplace
 - Instance must be active for at least 30 days
 - At least one month remaining in the term of Reserved Instance listing



Amazon EC2 - Pricing Options

Reserved Instances – Standard vs. Convertible

Standard Reserved Instance

One-year to three-year term

Enables you to modify Availability Zone, scope, network platform, and instance size (within the same instance type) of your Reserved Instance.

Can be sold in the Reserved Instance Marketplace.

Convertible Reserved Instance

One-year to three-year term

Enables you to exchange one or more Convertible Reserved Instances for another Convertible Reserved Instance with new attributes. These attributes include instance family, instance type, platform, scope, and tenancy, if the exchange results in the creation of a Reserved Instance of equal or greater value.

Cannot be sold in the Reserved Instance Marketplace.

Amazon EC2 - Pricing Options

Spot Instances – enables you to bid on whatever price you want for instance capacity. The price of spot instances fluctuates based on demand and supply. If your bid price is equal to or greater than the spot price, you will purchase the instance. Amazon EC2 can interrupt your Spot Instance when:

- Spot price exceeds your maximum price
- Supply of Spot Instances decreases
- Default interruption behavior is to terminate the instance
 - Stop Spot Instances
 - Hibernate Spot Instances



Amazon EC2 – Pricing Options

Dedicated Hosts - An Amazon EC2 Dedicated Host is a physical server with EC2 instance capacity fully dedicated to your use. Dedicated Hosts can help you address compliance requirements and reduce costs by allowing you to use your existing server-bound software.

- Can be purchased On-Demand (hourly).
- Can be purchased as a Reservation for up to 70% off the On-Demand price.



Amazon EC2 – Per Second Pricing

Amazon offers per-second billing, which takes cost of unused minutes and seconds in an hour off of the bill, so you can focus on improving your applications instead of maximizing usage to the hour. Especially, if you manage instances running for irregular periods of time, such as dev/testing, data processing, analytics, batch processing and gaming applications.

Per-second billing is available for:

- On-Demand, Reserved and Spot form
- All regions and Availability Zones
- Amazon Linux and Ubuntu



Next Video

Elastic Compute Cloud (EC2) Part 2