AWS Account Management, Billing & Support

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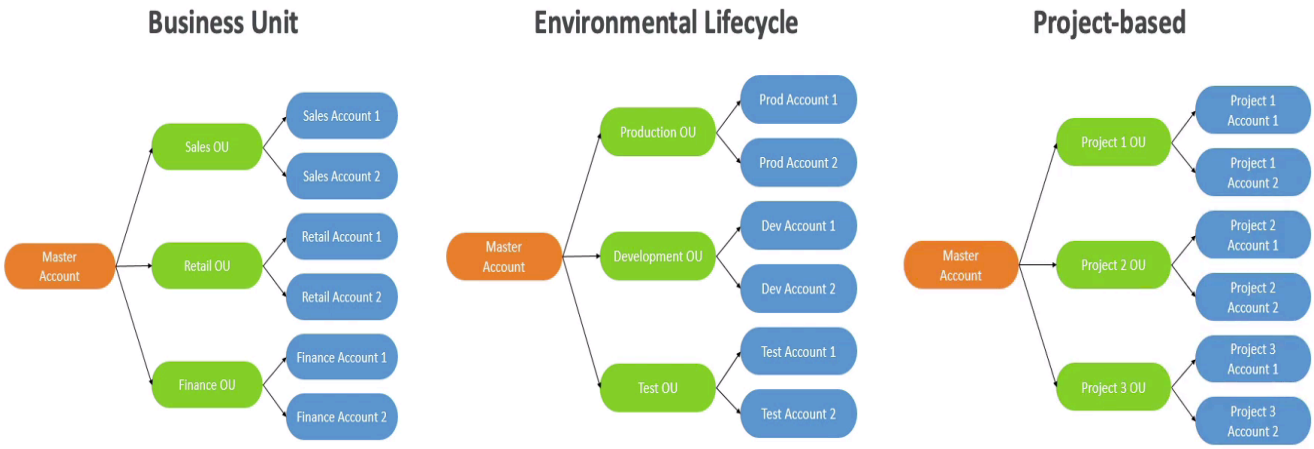
Organizational Units (OU) - Examples



Pricing Model

Pricing Models in AWS

- AWS has 4 pricing models:
- **Pay as you go:** pay for what you use, remain agile, responsive, meet scale demands
- **Save when you reserve:** minimize risks, predictably manage budgets, comply with long-terms requirements
  - Reservations are available for EC2 Reserved Instances, DynamoDB Reserved Capacity, ElastiCache Reserved Nodes, RDS Reserved Instance, Redshift Reserved Nodes
- **Pay less by using more:** volume-based discounts
- **Pay less as AWS grows**

Free services & free tier in AWS

- IAM
- VPC
- Consolidated Billing
- Elastic Beanstalk
- CloudFormation
- Auto Scaling Groups

⚠ **You do pay for the resources created**

- Free Tier: https://aws.amazon.com/free/
  - EC2 t2.micro instance for a year
  - S3, EBS, ELB, AWS Data transfer

Compute Pricing – EC2

- Only charged for what you use
- Number of instances
- Instance configuration:
  - Physical capacity
  - Region
  - OS and software
  - Instance type
  - Instance size
- ELB running time and amount of data processed
- Detailed monitoring

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Compute Pricing – EC2

- On-demand instances:
  - Minimum of 60s
  - Pay per second (Linux) or per hour (Windows)
- Reserved instances:
  - Up to 75% discount compared to On-demand on hourly rate
  - 1- or 3-years commitment
  - All upfront, partial upfront, no upfront
- Spot instances:
  - Up to 90% discount compared to On-demand on hourly rate
  - Bid for unused capacity

Compute Pricing – EC2

- Saving Plans:
  - Up to 72% discount compared to On-demand
  - Commit to usage of individual instance families in a region (in $ per hour)
  - Regardless of AZ, size, OS or tenancy
  - 1 or 3 years commitment
  - All upfront, partial upfront, no upfront
- Dedicated Host:
  - On-demand
  - Reserved
  - Saving Plans

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Compute Pricing – Lambda & ECS

- Lambda:
  - Pay per call
  - Pay per duration
- ECS:
  - EC2 Launch Type Model: No additional fees, you pay for AWS resources stored and created in your application
- Fargate:
  - Fargate Launch Type Model: Pay for vCPU and memory resources allocated to your applications in your containers

Storage Pricing – S3

- Storage class: S3 Standard, S3 Infrequent Access, S3 One-Zone IA, S3 Intelligent Tiering, S3 Glacier and S3 Glacier Deep Archive
- Number and size of objects: Price can be tiered (based on volume)
- Number and type of requests
- Data transfer OUT of the S3 region
- S3 Transfer Acceleration
- Lifecycle transitions
- Similar service: EFS (pay per use, has infrequent access & lifecycle rules)

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Storage Pricing - EBS

- Volume type (based on performance)
- Storage volume in GB per month **provisionned**
- IOPS:
  - General Purpose SSD: Included
  - Provisioned IOPS SSD: Provisionned amount in IOPS
  - Magnetic: Number of requests
- Snapshots:
  - Added data cost per GB per month
- Data transfer:
  - Outbound data transfer are tiered for volume discounts
  - Inbound is free

Database Pricing - RDS

- Per hour billing
- Database characteristics:
  - Engine
  - Size
  - Memory class
- Purchase type:
  - On-demand
  - Reserved instances (1 or 3 years) with required up-front
- Backup Storage: There is no additional charge for backup storage up to 100% of your total database storage for a region.

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Database Pricing - RDS

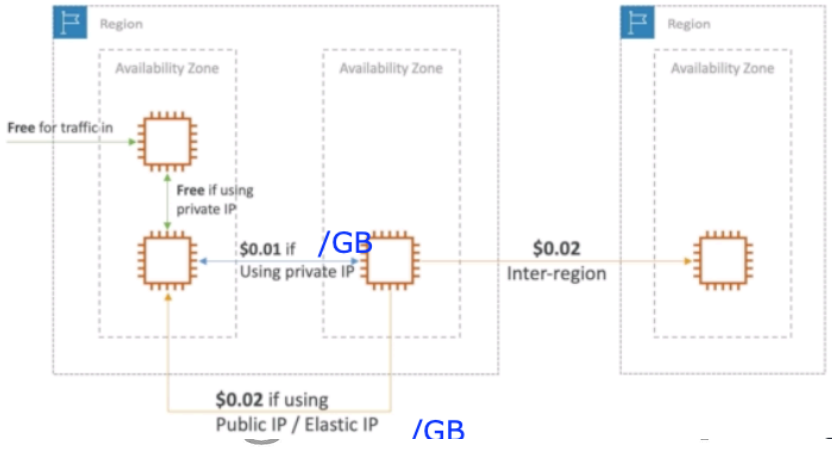
- Additional storage (per GB per month)
- Number of input and output requests per month
- Deployment type (storage and I/O are variable):
  - Single AZ
  - Multiple AZs
- Data transfer:
  - Outbound data transfer are tiered for volume discounts
  - Inbound is free

Content Delivery – CloudFront

- Pricing is different across different geographic regions
- Aggregated for each edge location, then applied to your bill
- Data Transfer Out (volume discount)
- Number of HTTP/HTTPS requests

Input Is always Free

Networking Costs in AWS per GB - Simplified



- Use Private IP instead of Public IP for good savings and better network performance
- Use same AZ for maximum savings (at the cost of high availability)

Billing and Costing Tools

- Estimating costs in the cloud:
  - TCO Calculator
  - Simple Monthly Calculator / Pricing Calculator
- Tracking costs in the cloud:
  - Billing Dashboard
  - Cost Allocation Tags
  - Cost and Usage Reports
  - Cost Explorer
- Monitoring against costs plans:
  - Billing Alarms
  - Budgets

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