

## MODULE 2: Billing and Economy

### 1. Fundamentals of pricing

AWS has 3 pricing models:

- Compute: charged per hour or per second. It is for linux only.
- Storage: charged per GB.
- Data transfer: outbound is aggregated and charged. Inbound has no charge. It is typically charged per GB.

3 ways to pay for AWS:

- Pay for what you use: no upfront fees.
- Pay less when you reserve : save upto 75%. 3 options: All Upfront Reserved Instances gives largest discount (AURI), Partial URI (PURI) = Lower discount, No Upfront payment RI (NURI) = smaller discount
- Pay less when you use more and as AWS grows. You realise volume based discount. Savings as usage increases. Tiered pricing for services (S3, EBS, EFS), the more you use the less you pay per GB. Multiple storage services deliver lower storage cost based on needs.
- Pay even less as AWS grows. AWS focuses on lowering the cost of business. Since 2006, AWS has lowered pricing 75 times. Future higher performing resources replace current resources for no extra charge.

AWS Free Tier

- It enables you to gain free hands-on experience on the AWS platform, product and services.
- Free for one year for new customers.

Services with no charge:

- AMAZON VPC
- Elastic Beanstalk
- Auto Scaling
- AWS CloudFormation
- AWS IAM

There is no charge for inbound data transfer and data transfer between services within the same AWS region.

No long term contracts are required in AWS.

### 1. Total Cost of Ownership

It is the financial estimate to help identify direct and indirect costs of a system.

Use of it:

- To compare the cost of running an entire infrastructure environment or specific workload on premise vs on AWS
- To budget and build the business to moving to the cloud

TCO Considerations:

- Server cost:
- Storage cost:
- Network cost:
- IT labour cost:

On premises vs all in cloud :

- You could save upto 96% a year by moving your infrastructure to AWS.

AWS pricing Calculator: <https://calculator.aws/#/>

- Estimate monthly cost
- Identify opportunity to reduce monthly cost
- Model your solutions before building them
- Explore price points and calculation behind your estimate
- Find the available instance types and contract terms that meet your needs.

How to read your estimate:

- Your estimate is broken into the first 12 months total.
- Total upfront
- Total monthly

Additional benefit considerations:

- Hard benefits: reduced spending on computer storage, networking and security. Reduction in hardware and software purchases: CAPEX ( capital expenditures) Reduction in operational cost, backup and disaster recovery.
- Soft benefits: increased developer productivity. Improved customer satisfaction. Increasing global reach. Reuse of services and applications of the same cloud services.

## 2. AWS Organisations

Benefits of AWS Organisations:

- Policy based account management
- Group based account management
- API's that automate account management
- Consolidated Billing

## Security with AWS

- IAM has a control access policy.
- Service Control Policy enables you to allow or deny access to AWS services for individual or groups accounts in an OU

## Steps to create organisations:

- Create organisation
- Create organisational units
- Create SCP
- Test restrictions

## Limits of AWS organisations :

- Number of route can only be one
- Number of OU: 1000
- Number of policies: 1000
- Invitations sent per day: 20

## Way to access AWS

- AWS Management console
- AWS CLI Tools
- SDKs
- HTTPS query API

## 3. AWS Billing and Cost Management

### AWS Billing Dashboard:

- Cost explorer
- Billing Details

### Tools:

- AWS budget
- AWS cost and Usage Reports
- AWS cost explorer

## 4. Technical Support

### AWS Support is provided for 3 things:

- Experimenting the AWS
- Production use of AWS
- Business critical use of AWS

### The support in AWS Support

Proactive guidance provided by Technical Account Manager

Best Practises - AWS trusted advisor helps  
Account assistance - AWS support concierge

#### AWS support plan

- Basic support: resource centre access, service health dashboard, products FAQs, discussions forums, support for health check
- Developer support supports for early development for AWS
- Business support customers that runs production workloads
- Enterprise Support: customers that business workloads

#### Response time:

- no support in basic
- Developer plan, if your case is less severe, within 12h to 24h of business hours.
- Business, max 1h to 24 hours
- Enterprise, max 15 min to 24 hours.