MODULE 2   Cloud economics and billing

I. Fundamentals of pricing

Three fundamentals drivers of cost with AWS

① Compute → Computation is charged per hours/ seconds
    · It varies by instance type.

② Storage → charged per GB

③ Data Transfer →
    ↳ Inbound (keeping and storing data with the same cloud environment) has no charge
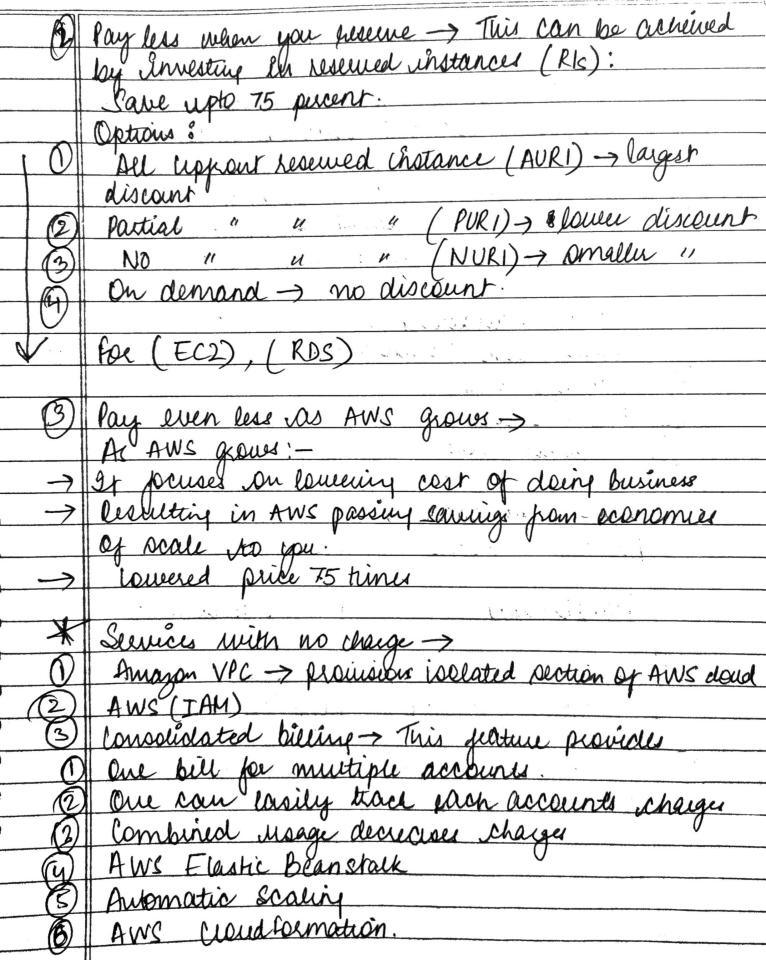   ↳ Outbound is charged
    ↳ charged based on GB.

How you pay?

① Pay for what you use
② Pay less when you reserve
③ Pay less when you use more and AWS grows

① ~~Volume~~ based discounts → (Pay less by using more
① Savings as usage increases.
② Tiered pricing for services like ~~F~~ (S3), (EBS), (EFS).
③ multiple storage service deliver lower storage costs based on needs.

② Pay less when you reserve → This can be achieved by Investing in reserved instances (RIs):
  Save upto 75 percent.
  Options:
① All upfront reserved instance (AURI) → largest discount
② Partial " " " (PURI) → lower discount
③ NO " " " (NURI) → Smaller "
④ On demand → no discount.

for (EC2), (RDS)

③ Pay even less as AWS grows →
  As AWS grows:-
→ It focuses on lowering cost of doing business
→ resulting in AWS passing savings from economies of scale to you.
→ lowered price 75 times

✳ Services with no charge →
① Amazon VPC → provisions isolated section of AWS cloud
② AWS (IAM)
③ Consolidated billing → This feature provides
① One bill for multiple accounts.
② One can easily track each accounts charges
② Combined usage decreases charges
④ AWS Elastic Beanstalk
⑤ Automatic Scaling
⑥ AWS cloudformation.

II. Total Cost of Ownership →

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

Why?
1. To compare the costs of running an entire infrastru environment or specific workload.
2. Build the business case.

TCO considerations →
1. Server costs for hardware, software and facilities
2. Storage costs " " " "
3. Network - cost " " " "
4. IT labor costs " " " "

AWS Calculator →
First 12 moths broken into

Hard benefits	Soft benefits
1. Reduced cost on compute, storage, networking	Reuse of service and application
2. Reduction in hardware and software purchases	Increased developer productivity

AWS Organizations →

- It is used for consolidated billing of multiple accounts.
- It is basically for account management services which helps us to put multiple Aws accounts together into an tree with each branch. (OU)
- Four support models are → Basic, developer, Enterprise & Business