

Day 12/13

M12: Migrating to the AWS cloud

Date _____
DELTA Pg No. _____

Cloud Migration refers to the process of moving your organisation's digital assets, IT resources, applications and databases from on-premises infrastructure to the AWS cloud.

AWS migration has 3 phases:

- ① Assess - Evaluate readiness and plan migration
 - Migration Evaluator
- ② Mobilize - Discover resources and track migration
 - Application Discovery service
 - Migration Hub
- ③ Migrate and Modernize - Move applications, databases and data
 - Application Migration Service (AMS)
 - Database Migration Service (DMS)
 - Data transfer tools: DataSync, Transfer Family, Show Family

#1 AWS Cloud Adoption Framework (CAF)
A framework that helps organisations plan and manage their cloud adoption strategy across business and technical areas

6 Perspectives of AWS CAF

- ① Business → Align cloud with business goals and ROI
- ② People - Skills training and organizational change
- ③ Governance - Policies, risk, compliance and cost control
- ④ Platform Infrastructure, Architecture and technical foundation
- ⑤ Security → Identify, protection, compliance, risk management
- ⑥ Operations - Monitoring, incident response, day to day management

#2 Seven Migration Strategies

- ① Rehost (Lift & Shift) - Move apps to AWS (no code change)
- ② Relocate → Move VMs / containers to cloud without redesign (e.g. VM-ware to AWS)
- ③ Replatform (Lift, Tinker & Shift) → Minor Cloud optimization, no core code change (e.g. MySQL → RDS)

- ① Refactor (Re-architect) - Rewrite application for cloud benefits (highest effort, most change)
- ② Repurchase (Drop & Shop) - Replace with new SaaS/cloud product (change vendor)
- ③ Retain - Keep on-prem (not ready to migrate yet)
- ④ Retire - Decommission unused applications.

#3 AWS Migration Services

- ① Migration Evaluator
Phase: Assess
→ cost analysis, savings estimate, business case.
- ② AWS Application Discovery Service
Phase: Mobi lize
→ servers, apps, dependencies discover karta hai for planning.

③ AWS Application Migration Service

- Phase: Migrate & Modernize
→ Actual lift and shift migration with minimal downtime.

⑨ AWS Migration Hub
Phase: Mobilize + Migrate

→ Migration process track Karta hai across tools

4 Database Migration

⑩ AWS Database Migration Service (DMS)
→ Moves actual data from source DB to AWS (minimal downtime)

Used for: Ongoing replication + live migration.

⑪ AWS SCT (Schema Conversion Tool)
→ Converts database schema / code (tables, procedures) to compatible AWS DB format

Used when source and target DB engines are different (e.g. Oracle → Aurora)

5 Online Data Transfer

⑫ AWS DataSync

→ Large-scale data transfer (on-prem to storage like S3 / EFS FSx)

→ Automated encrypted, fast transfer

⑬ AWS Transfer Family

→ Managed SFTP / FTPS / FTR service

→ Traditional file transfer protocols into S3 / EFS

⑩ AWS Direct Connect

- Dedicated private network connection to AWS
- High bandwidth + low latency
- use when: Stable, consistent enterprise connectivity needed

6 Offline Data Transfer

- Offline physical device for large data migration
- used when internet bandwidth is low or not available
- supports multi-TB/PB scaled data transfer