

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 (MGN)  
→ Database Migration service (DMS)  
→ Data transfer tools: DataSync, Transfer Family, Snow 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 as-is to AWS (no code change)
- ② Relocate → Move VMs/containers to cloud without redesign (e.g. VMware to AWS)
- ③ Replatform (Lift, Tinker & Shift) - Minor cloud optimization, no core code change (e.g. MySQL → RDS)



- ④ Refactor (Re-architect) - Rewrite application for cloud benefits (highest effort, most change)
- ⑤ Repurchase (Drop & Shop) - Replace with new SaaS / cloud product (Change vendor)
- ⑥ Retain - Keep on-prem (not ready to migrate yet).
- ⑦ Redire - Decommission unused applications.

### #3 AWS Migration Services

#### ① Migration Evaluator

Phase: Assess

→ cost analysis, savings estimate, business case, banana

#### ② AWS Application Discovery Service

Phase: Mobilize

→ servers, apps, dependencies discover karta hai for planning.

#### ③ AWS Application Migration Service

Phase: Migrate & Modernize

→ Actual lift and shift migration with minimal downtime.



## ⑦ AWS Migration Hub

Phase: Mobilize + Migrate

→ Migration process track karta hai across tools

## #4 Database Migration

### ① AWS Database Migration Service (DMS)

→ Moves actual data from source DB to AWS (minimal downtime)

Used for: Ongoing replication + live migration

### ② 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

### ① AWS DataSync

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

→ Automated encrypted, fast transfer

### ② AWS Transfer Family

→ Managed SFTP / FTPS / FTR service

→ Traditional file transfer protocols into S3/EFS

## III) 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