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Migrating into Cloud

* Promise of Cloud :

=> The Promise of Cloud computing refers to the advantage and potential benefits of Cloud.

1 Scalability : User can easily scale resources up or down based on demand.

2 Cost Efficiency : Reduce cost by paying only for the resource are used.

3 Accessibility : Access cloud service from anywhere with an internet connection.

4 Disater Recovery : Benefit from robust backup and recovery solutions provided by cloud provider.

5 Automatic Updates : Cloud Provider manage software Updates and maintances.

6 Enhanced Security : Cloud Provider provides data encryption and access control.

7 Faster Time to Market : Speed up to the development and deployment of applications and services.

8 Innovation : Allow to use all the tools and service including AI, machine learning.

9 Resource Optimization : Optimize resource utilization by allocating and deallocating resources.

10 Reduced IT Complexity : Simplify IT Management workload by offering infrastructure management.

* Migration of Cloud Model :

=> Cloud Migration is the process of moving application, data or infrastructure to cloud environment.

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Cloud Migration is a transformation from old traditional business operations to digital business operation.

That means data, application elements are moved into a cloud computing environment.

=> Cloud Migration Strategy:

5 R's represents the cloud Migration Strategy.

1 Rehost: Move the application to new cloud environment using the Infrastructure as a Service.

Rehost is commonly know as "lift and Shift".

This application is moved from on-primises to cloud infrastructure without altering its architecture.

2 Refactor: Adapt the application code and framework to run on Platform as a Service, optimizing its cloud environment.

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Involves modification of application's codebase to make better use of cloud features.

Can lead to better performance using PaaS Service and platform.

3 Revise: Extend or Enhance the application code and deploy it using their rehosting strategies.

Involves adding new feature or functionality to the existing application.

Requires careful planning to balance the need for new feature.

4 Rebuild: Redesign and reconstruct the application from scratch using a Platform as a Service.

Involves significant effort and resource to design and develop a new application.

Allows for the use of mordern cloud-native architecture.

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5 Replace: Swap the existing application with a new & cloud-based Software as a Service Solution.

Often quicker to implement compared to building or refactoring an application.

Shifts the maintence and updates responsibility to SaaS provider.

* Explain 7 Steps of Migrating Model in Cloud:

=> There are seven steps to follow when migrating a model to the cloud.

1 Assessment:

The First step to migrating a model into cloud is do Assessment of Service Provider.

Evaluate current Infrastructure, application and workload to understand suitability for the cloud.

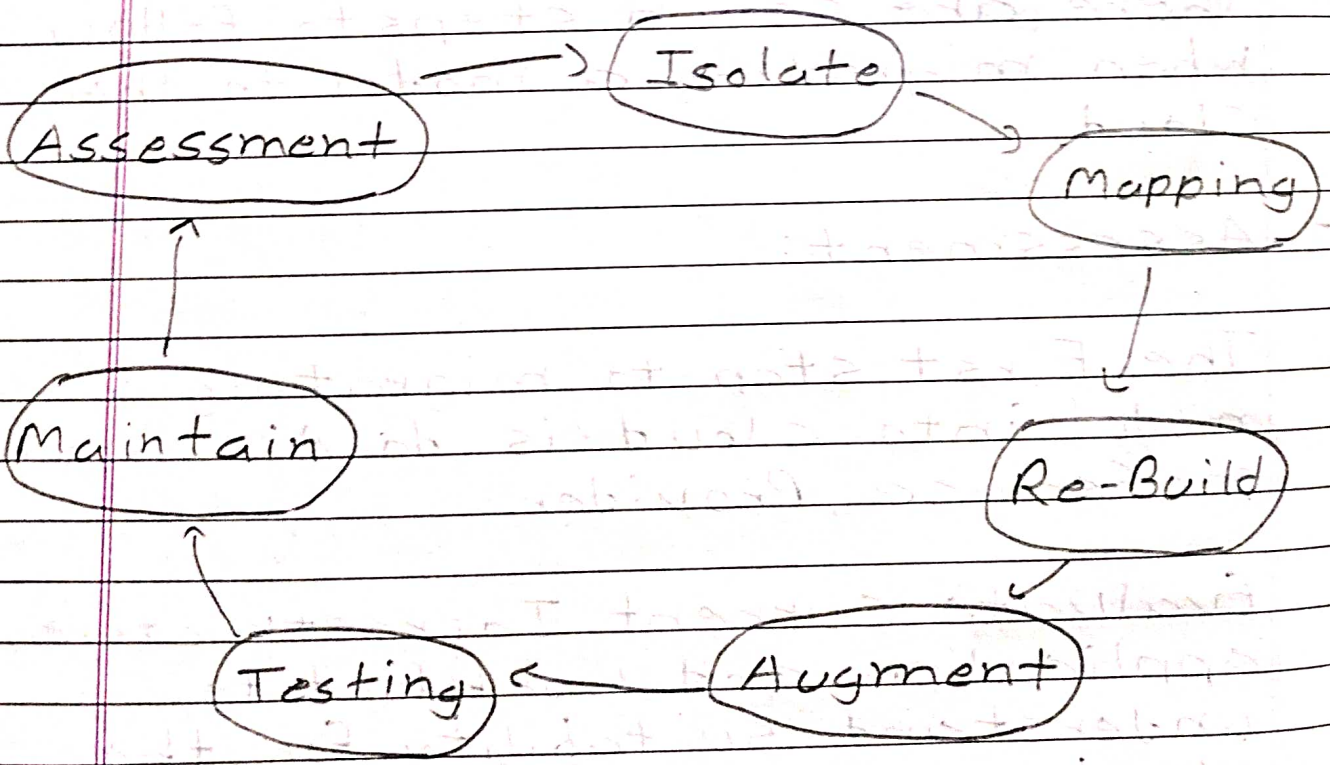
2 Isolation:

Identify and isolate the component that will be migrated first, will gives starting to migration.

Create a plan to decouple dependencies and minimize disruption to ongoing operation.

3 Mapping:

Develop a detailed migration plan that map on-premises resource to their cloud counterparts.



Define the sequence of migration to ensure a smooth and orderly transition.

4 Rebuild:

Rebuild or Refactor application to optimize them for the cloud environment.

Ensure that security meausures are integrated into the rebuild application.

5 Augment:

Enhance application by integrating additional cloud services such as AI, machine learning etc.

Use cloud-native tools to improve performance, scalability and reliability.

6 Testing:

Perform rigorous testing to ensure that migrated application function correctly in the cloud environment.

Conduct performance, security and stress tests to identify and resolve potential issues.

7 Maintain:

Establish a Robust cloud Management and monitoring framework to ensure ongoing performance and security.

Implement regular backups, disater recovery plan and compliance checks.