**Assignment 3**

**Considerations:**

* The application handles production workloads.
* Application is hosted in an On-Premises datacenter.
* AWS offers many managed services to migrate data to cloud. However many 3rd party vendors provides tools and services to migrate data to cloud. I am considering we have to use AWS managed services.

**Pre-Migration steps:**

* Create a VPC (ideally in the region nearest to your datacenter). The VPC should have a non-overlapping CIDR block with respect to the CIDR of your datacenter.
* VPC should have at least 2 publiic subnets (in different AZ’s) and 1 private subnet.
* Attach Virtual gateway to your VPC and customer gateway to your on-prem network and update routes of routing table.

**Migration Steps:**

* Use AWS VM Import/Export to import VM image (AMI) to the selected region. The AMI should contain Apache web server, Apache tomcat and Active MQ and related data.
* Use Auto scaling launch configuration select the imported AMI, subnets. Further define the scaling policy.
* In auto scaling group select an Application load balancer, Configure the listener and health check policies.
* Use AWS Data Migration service to migrate Oracle database to RDS with Multi AZ configuration and Mongo DB to Dynamo DB.
* Failover the RDS instance to private subnet to VPC.

Note:- Active MQ could have been replaced by SQS but it requires development of cloud native application.

**Post-Migration Steps:**

* Update the entries of DNS server to point to EC2 instances.
* Do DR planning if required for region failure.