

## **ECS (Elastic Container Service)**

**Duration:** 2 Days (8Hours Per Day)

**Hands-On Format:** This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

### **Module 1 – Containers Basics - Docker**

Introduction to Container  
Docker Concepts  
Docker Architecture  
Creating and Running Container with Docker  
Building Image with Dockerfile

### **Module 2 – Understand Clusters, Task Definitions, Tasks and Services**

ECS and Fargate Introduction  
Pre-requisites – Create a VPC  
Create ECS EC2 Linux and Fargate Clusters  
Cluster Features  
Task Definition – Introduction  
Create Task Definition  
Create Service  
Run a New Task  
Revise ECS Objects

### **Module 3 – Elastic Container Registry (ECR) - Integration**

Elastic Container Registry Introduction  
Understand ECR Terminology  
ECR Repository Creation – AWS Management Console and Command Line  
Docker Build Container and Push to AWS ECR Repository  
Create ECS Task Definition, Service using Image Push to ECR

### **Module 4 – Load Balancing and Autoscaling**

Load Balancing and Autoscaling – Introduction  
Create Docker Images  
Create Application Load Balancer  
Create Task Definitions for Fargate and EC2 ECS Launch Types  
Create Application ECS Service with LaunchType as EC2 as Fargate  
Autoscaling – Implement Target Tracking policy

### **Module 5 – AWS ECS – Monitoring and Logging**

Monitor Cluster, Service  
Logs – Capture Application/Container Logs using CloudWatch