

**Introduction to Amazon EKS (Elastic Kubernetes Service)**

**Course Number:** EKS-102
**Duration:** 2 days

**Overview**

This Introduction to Amazon EKS (Elastic Kubernetes Service) training teaches attendees to leverage this managed service to automatically launch EKS Kubernetes clusters, secure EKS clusters, deploy the Fargate Launch Type, and much more.

**Prerequisites**

All students must have taken Accelebrate's [half-day EKS for Beginners workshop](file:////training/amazon-eks-workshop-beginners), or have the equivalent knowledge.

**Materials**

All EKS training students receive comprehensive courseware.

**Software Needed on Each Student PC**

Each attendee must have their own AWS account. In the first session, we can assist in the setup if needed. For other courses in the series, you will use your same AWS account.

**Objectives**

* Set up a Kubernetes client environment
* Launch EKS Kubernetes clusters
* Deploy the Kubernetes Dashboard and Helm
* Test auto-scaling applications
* Secure your EKS cluster
* Assign pods to specific nodes

**Outline**

* Introduction
* Setting up a K8s Client Environment on AWS’ Cloud9 IDE
	+ ssh keys, secret/access keys, kubectl, and eksctl setup
* Launching EKS Kubernetes Clusters using eksctl
* Deploying the Kubernetes Dashboard
	+ Sample microservices using an AWS elastic Load Balancer
* Deploying Helm v3
	+ Adding Chart Repositories to the Helm setup
* Testing Auto-Scaling Applications
* Role-Based Access Control
	+ Creating IAM roles for service accounts
* Securing EKS cluster for Production use with Network Policies
* Assigning Pods to Specific Nodes and Setting Affinity
* Spotting Instances to On-Demand EKS Cluster Setup
* Creating Stateful Sets
* Deploying the Fargate Launch Type (previous use was EC2 launch type)
* Encrypting and Managing Secrets
	+ AWS Key Management System and Keymaps
* Conclusion