

DEVOPS COURSE CONTENTS

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- ✓ Maven **GA V** explained

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- ✓ Docker Editions: Which Do I Use
 - Docker Version Format Change in Early 2017
- ✓ Docker Support for Different OS
 - Docker for Windows

- Docker for Mac
- Docker for Linux
- ✓ Docker for Linux Setup and Tips
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 - Download Docker Compose

Introduction to Docker Components

- ✓ Docker Hub (public repo)
- ✓ Docker Trusted Registry (Private repo)
- ✓ Docker Engine
- ✓ Docker Container
- ✓ Docker Image
- ✓ Docker Compose
- ✓ Docker Swarm
- ✓ Docker Services

Docker Images, How to build & where to find

- ✓ Image? What is it in Docker world
- ✓ Official Docker Image Specification
- ✓ Centre for Images: The Docker Hub (Public)
- ✓ List of Official Docker Images
- ✓ Working with Images: image layers, tagging, Pushing to Docker Hub
- ✓ Building Images: The Dockerfile Basics
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- ✓ Getting a Shell Inside Containers
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- ✓ Introduction to Swarm & Advantages
- ✓ How to create a swarm (cluster of nodes)
- ✓ How to add nodes to swarm
- ✓ How to deploy services/containers to swarm
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- ✓ Introduction to UCP (universal control pane)

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- ✓ Introduction
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- ✓ Ansible and Infrastructure Management
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AWS Course Content

INTRODUCTION TO CLOUD COMPUTING

- ✓ Introduction to cloud computing world
- ✓ History
- ✓ Cloud business models
- ✓ Public, Private and Hybrid cloud models
- ✓ Advantages of cloud computing

OVERVIEW

- ✓ AWS Regions and Availability zones.
- ✓ Tools to access services.
- ✓ Overview of the console

AWS EC2 (ELASTIC COMPUTE CLOUD)

- ✓ Introduction to EC2
- ✓ Pricing models On-demand vs Reserved vs Spot instances
- ✓ Using Amazon Machine Images (AMIs) to create the instances
- ✓ Public vs Private Images
- ✓ Sharing Images to other accounts
- ✓ Logging into instances using key pairs
- ✓ Converting pem files to ppk
- ✓ Volumes and types
- ✓ Using snapshots for backup

- ✓ Increasing the size of the volumes
- ✓ Backup and restore process of the EC2 instances
- ✓ Adding network interfaces
- ✓ Assigning static IPs using Elastic IPs
- ✓ Control access to instances using Security Groups

AWS S3 (SIMPLE STORAGE SERVICE)

- ✓ Introduction to Simple Storage Server (S3)
- ✓ Storage options (default vs reduced redundancy vs Glacier)
- ✓ Creating buckets using Console
- ✓ Uploading and downloading data to S3
- ✓ Building static websites using S3
- ✓ Enable version control on S3
- ✓ S3 access policies

ELASTIC LOAD BALANCER

- ✓ Introduction to Elastic Load Balancing
- ✓ Creating ELB from Console
- ✓ Attaching instances to ELB
- ✓ Configuring Ports, Protocols and health checks

CLOUD WATCH

- ✓ Introduction to Cloud Watch monitoring service
- ✓ Monitoring CPU, Memory and network utilization of different resources
- ✓ Creating notifications

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- ✓ Introduction to Managed database
- ✓ Creating RDS instances using AWS console
- ✓ Choosing an RDS engine and version
- ✓ Public vs Private database instances
- ✓ Multi-AZ setup
- ✓ Backup using snapshots and point in restore
- ✓ Parameter Group
- ✓ Options Group
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- ✓ Overview
- ✓ Creating launch configuration
- ✓ Creating auto-scaling group

- ✓ Auto-scaling policies

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- ✓ Introduction to IAM
- ✓ Access controls using IAM
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- ✓ Assigning policies
- ✓ Inline vs Managed policies

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- ✓ Introduction
- ✓ Choosing a network design and CIDR
- ✓ Design a simple network
- ✓ Creating Subnets and setup routing as per the design
- ✓ Using IGW to enable internet access
- ✓ Access controls using Network ACLs. Network ACLs vs Security Groups
- ✓ Creating Private connections from data centre to AWS
- ✓ Enabling VPC peering between VPCs

Logging – Splunk

- ✓ What Is Splunk
- ✓ About Machine Data
- ✓ What does Splunk Do?
- ✓ Why Splunk
- ✓ Understanding Splunk Architecture & its Components
- ✓ Splunk Search

Infrastructure Monitoring – Nagios

- ✓ Infrastructure monitoring
- ✓ How Nagios help to monitor infrastructure