

Primary Capability	High Level Topic	Training - Topic
DevOps	Overview of Linux	Linux OS - Overview
		user management and passwordless login
		cronjobs--editing, setting, deleting
		software/package installation ---different ways (assuming on
		Logging in/out and the su command
		Transferring files
		Linux Directory Structure
		Basic linux commands (awk, sed, grep, piping of commands etc,
		Basic troubleshooting including network troubleshooting
		Shell scripting
		Section Assessment
DevOps	CI Basics	Version Control using Git: Basic commands, concepts of
		CI: What is CI
		Introduction to Jenkins: Installation, basic configuration, master-
		Overview of Microservices wrt builds and deployemnts
		Overview of Sonarqube
		OWASP Top 10,OWASP Vulnerabilities, Running a ZAP scan,
		Quick overview of DOJO services: BitBucket, Bamboo, Jira,
		MS Build, Octopus Deploy
		Section Assessment
DevOps	AWS Cloud Overview	Cloud Computing Roles,Cloud Computing Benefits,Define Cloud
		Computing, Drivers for Cloud Computing, Cloud Essential
		Characteristics, Cloud Deployment Models, Cloud Deployment
		AWS Fundamentals covering core services VPC, IAM, S3, EBS,
DevOps	Azure Cloud Overview	Introduction to AWS DevOps tools
		Section Assessment
		High level tour and understanding of various Azure services
		Equivalent Azure Services for AWS services
DevOps	Containerisation Concepts using Docker	Working with with basic services like Compute, Web and Databases
		Introduction to Azure DevOps tools
		Section Assessment
		Introduction to Docker : what are containers, why use
		Local setup
		Containers overview and Container Management commands
		Docker networking and volume management basics
		Creating images: Dockerfile Directives
		Basic docker file scanning tools (Snyk, ECR scanning, Docker
		Image registry options and how to use in a setup (ECR, JFrog,
		AWS Elastic Container Service
		Docker compose
		Section Assessment
		build and deployment on AEM
		basic administration

DevOps	AEM Overview	dispatcher configurations
		AEM architecture and deployment topologies (single author, Section Assessment
DevOps	Infra as Code	IaaS overview and general tools
		Terraform overview
		Introduction to CloudFormation
		Azure Resource Manager
		Demo and exercises on deploying an n tier infrastructure and Section Assessment
DevOps	Kubernetes	Kubernetes Overview
		Introduction to core concepts: what on master, what on worker
		kubectl overview
		namespace, label selectors, pods, types of service, Configmaps and secrets
		Autoscaling
		Healthcheck probes
		init and sidecar containers: when to use
		Deployment strategies: rolling, blue green, canary
		ECS, EKS Introduction, Kubernetes & in general container security
		Section Assessment
DevOps	Networking Fundament	TCP/IP concepts: bitmasks, subnetting, gateways, IP addresses composition
		VLANs
		NAT and Private IP Addressing
		Firewalls
		How does Subnetting work?
		CIDR
		VPN
		Firewalls – Host-based, network-based and virtual
		Windows - Host Based Firewalls - Windows Firewall
		Windows - Host Based Firewalls - Windows Firewall Control (WFC)
		Windows - Host Based Firewalls - Third Party
		Linux - Host Based Firewalls - iptables
		Linux - Host Based Firewalls - UFW, gufw & nftables
		Mac - Host based Firewalls - Application Firewall & PF
		Mac - Host based Firewalls - pflist, Icfloor & Murus
		Mac - Host based Firewalls - Little Snitch
		Network based firewalls - Routers - DD-WRT
		Basic Linux network troubleshooting: Troubleshooting network
		Section Assessment
		Software Configuration & Management using Ansible
		Overview of YAML and JSON
		Overview of Ansible

DevOps	Ansible	Ansible Tower overview
		Overview of Roles
		Ansible playbooks with demo
		Typical practical use cases.
		Deployment of artifacts using Ansible on EC2 from within
		Section Assessment
DevOps	Apache HTTPD webserver	Installation and upgradation of Apache from source and rpm with various options
		Compiling and Configuring dynamic modules and enabling it with apache (mod deflate, mod evasive)
		Different types of virtual hosting and how to configure the same in apache.
		Apache proxy settings
		Setting up apache load balancing and integrating application servers like Tomcat
		Section Assessment
DevOps	Tomcat App Server	Tomcat Application Server: why needed
		Tomcat Application Server pre-requisites, installation and configuration
		Starting, stopping instances
		Application deployment
		Configuring JVM, Environment Variables, data source, connection pool etc.
		Multiple instances setup and managing ports
DevOps	SSL Certificates	Section Assessment
		Security Certificates, SSL installation, configuration
		Types of SSL - single domain, multiple domain, wildcard, self-signed
		SSL certificate formats (PEM, DER, PFX)
		How to generate different forms of certificates
		Section Assessment
		What is monitoring?
		Types of monitoring
		Observability
		Infrastructure and Network monitoring
		Infrastructure monitoring Tools
		Dashboards for Infrastructure monitoring
		Miscellaneous Configurations for Infrastructure monitoring
		Application Monitoring
		Application Monitoring Tools
		Dashboards for Application Monitoring
		Configurations and plug-ins

DevOps	Logging, Monitoring Tools overview using Grafana, Prometheus, ELK, Cloudwatch, Splunk, Datadog, Appdynamics as examples	<b>Serverless Monitoring</b> Tools for Serverless Monitoring Concepts of serverless monitoring How to setup alerts, monitor and take corrective actions <b>Synthetic Monitoring</b> Tools for Synthetic Monitoring Understanding of the user journey and transactions Understanding of different application requirements Dashboards for Synthetic Monitoring Understanding of various configurations and plug-ins <b>Logs Monitoring</b> Tools Understand how to utilize the tool for monitoring alerts, acknowledge alerts and take action based on alerts different log pattern <b>Security Monitoring</b> Understanding of DoS, DDoS security incidents Understanding of IDS/IPS/WAF Understanding of security monitoring aspects and what to monitor Awareness on PCI/PII, GDPR Compliance <b>End User Availability Monitoring</b> Understanding of the end user requirements Understanding and configuration of Dashboards Understanding of plug-in configuration
DevOps	CI Advanced	Build and Release management Continuous Integration, Continuous Delivery and Deployment Branching strategy: Gitflow Build Management: Introduction to Maven & Grunt as build Build process using traditional tomcat based and docker Build best practices Sonarqube integration in CI pipeline, administration CI concepts and typical phases and talk on How Jenkins fits in here: Static security check (Checkmarx), unit testing (junit for java, jasmine for frontend etc), code coverage, Sonarqube code quality, functional testing automation, performance testing Section Assessment