

Day	Agenda	Training Topic
Day 1	Introduction to ITIL	Incident Management Service Request Management Change Management Problem Management and RCA's Understanding of SLIs, SLAs and SLOs Overview of ticketing tools like Servicenow, JIRA Overview of Critical Incident Management
		Assessment Day 1 Q&A
Day 2	Windows OS Overview	Working with Windows Misc. windows Services Security Networking Powershell scripting Active Directory, User management Windows update and patching Event Viewer Logs and Alerts Resource Monitor Memory & Crash Dump (debug diag)
	Security Certificates	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
		Assessment Day 2 Q&A
Day 3	Overview of Linux	Linux OS - Overview User management and passwordless login Cronjobs--editing, setting, deleting Software/package installation ---different ways (assuming on CentOS/RHEL) Logging in/out and the su command Transferring files Linux Directory Structure Basic linux commands (awk, sed, grep, piping of commands etc, disk usage) Basic troubleshooting including network troubleshooting Shell scripting
		Assessment Day 3 Q&A
Day 4	Networking	TCP/IP concepts: bitmasks, subnetting, gateways, IP addresses composition VLANs NAT and Private IP Addressing How does Subnetting work? CIDR VPN

		<p>Troubleshooting network issues Troubleshooting DNS issues Network scanning tools</p> <p>Assessment Day 4</p> <p style="text-align: right;">Q&A</p>
		<p>Firewalls</p> <p>Firewalls – Host-based, network-based and virtual Windows Host Based Firewalls - Windows Firewall, Windows Firewall Cont Linux Host Based Firewalls - iptables, UFW, gufw & nftables Mac - Host based Firewalls - Application Firewall & PF, pflist, Icefloor & Mu Network based firewalls - Routers - DD-WRT Network based firewalls - Hardware Network based firewalls - pfSense, Smoothwall and Vyos</p> <p>Assessment Day 5</p> <p style="text-align: right;">Q&A</p>
Day 6	Architecture	<p>Introduction to N tier architecture Introduction to Microservices architecture Introduction to Messaging Difference between application servers and webservers</p> <p>Working with Tomcat</p> <p>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 Configuring Clusters SSL configuration Performance monitoring, parameters tuning and troubleshooting</p> <p>Assessment Day 6</p> <p style="text-align: right;">Q&A</p>
	Application and Web servers	<p>Apache Webserver</p> <p>Installation and upgradation of Apache from source and rpm with various options Compiling and Configuring dynamic modules and enabling it with apache (mod d 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 Configuring Rewrite rules</p> <p>Internet Information Services (IIS)</p> <p>Understanding and Installing Internet Information Services Configuring and Managing Application Pools Bindings Creating Additional Websites Configuring Website and Web Application Support Managing Certificates</p>
Day 7		

		<ul style="list-style-type: none"> Using Rewrite rules Monitoring IIS Backing Up and Restoring IIS IIS HTTP Logs analysis and Tools
		<p>Assessment Day 7</p> <p style="text-align: right;">Q&A</p>
Day 8	Databases	<ul style="list-style-type: none"> Overview of Relational Databases Overview of SQL Introduction to NoSQL and MongoDB Installing SQL Server SQL Server Management Studio Running SQL Queries Performing tasks like DB backup, restore User management Introduction to SQL Profiler Logs analysis
		<p>Assessment Day 8</p> <p style="text-align: right;">Q&A</p>
Day 9	Monitoring	<ul style="list-style-type: none"> What is monitoring? Types of monitoring Observability Infrastructure and Network monitoring <ul style="list-style-type: none"> Infrastructure monitoring Tools Dashboards for Infrastructure monitoring Miscellaneous Configurations for Infrastructure monitoring Application Monitoring <ul style="list-style-type: none"> Application Monitoring Tools Dashboards for Application Monitoring Configurations and plug-ins Serverless Monitoring <ul style="list-style-type: none"> Tools for Serverless Monitoring Concepts of serverless monitoring How to setup alerts, monitor and take corrective actions
		<p>Assessment Day 9</p> <p style="text-align: right;">Q&A</p>
Day 10		<ul style="list-style-type: none"> Synthetic Monitoring <ul style="list-style-type: none"> 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 Logs Monitoring <ul style="list-style-type: none"> Tools Understand how to utilize the tool for monitoring alerts, acknowledge alerts and

		<p>Knowledge of monitoring tool usage and configuring to capture different log patterns</p> <p>Security Monitoring</p> <ul style="list-style-type: none"> 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 <p>End User Availability Monitoring</p> <ul style="list-style-type: none"> Understanding of the end user requirements Understanding and configuration of Dashboards Understanding of plug-in configuration <p>Demo of Logging, Monitoring Tools overview using various tools Grafana, Prometheus, ELK, Cloudwatch, Splunk, Datadog, Appdynamics as examples</p> <p>Assessment Day 10</p> <p style="text-align: right;">Q&A</p>
Day 10	Cloud	<p>What is Cloud?</p> <p>Advantages of cloud services</p> <p>Various services offered</p> <p>AWS Fundamentals</p> <ul style="list-style-type: none"> Hands-on of cloud services Amazon Elastic Compute Cloud (EC2), Amazon Virtual Private Cloud (VPC), Amazon S3 Amazon Simple Storage Service (S3), Auto Scaling, and Load Balancers (ELB, ALB) <p style="text-align: right;">Q&A</p>
Day 11		<p>Launching EC2 instances, creating snapshots, instance types, using snapshots for booting</p> <p>Key concepts of AWS Identity and Access Management (IAM)</p> <p>Introduction to CloudFormation, Lambda with examples</p> <p>Introduction of AWS database services, including Amazon Relational Database Service (RDS)</p> <p>Understand AWS management tools, including Amazon CloudWatch, CloudTrail and AWS Config</p> <p>Assessment Day 11</p> <p style="text-align: right;">Q&A</p>
Day 12		<p>Azure Fundamentals</p> <ul style="list-style-type: none"> High level tour and understanding of various Azure services Equivalent Azure Services for AWS services Working with with basic services like Compute, Web and Databases <p style="text-align: right;">Q&A</p>
Day 13		<p>Working with with basic services like IAM, Networking, Security</p> <p>Working with with basic services like Containers, Storage</p> <p>Assessment Day 13</p> <p style="text-align: right;">Q&A</p>
Day 14		<p>GCP Fundamentals</p>

		<p>High level tour and understanding of various GCP Services such as Resource hierarchies, GCE, Service accounts, GCE firewall rules, logging and monitoring, services overview such as IAM, IAM, IAP etc., Cloud functions, cloud pub sub, Data Services, architectural patterns</p> <p>Working with with basic services like Compute, Web and Databases Introduction to GCP Devops tools</p>
		Assessment Day 14
		Q&A
Day 15	Build and Release Engineering	<p>Overview of Build and Release Management</p> <ul style="list-style-type: none"> Concepts of Continuous Integration and Continuous Delivery/Deployments Versioning and version control Version control terminologies Version control life cycle Exploring Branching, Merging and Tagging Performing, Reviewing & Updating changes Working with GIT Working with MSBuild Working with Jenkins Working with Octopus Deploy Working with Sonarqube
		Assessment Day 15
		Q&A

Day 16		<p>Branching strategy: Gitflow</p> <p>Build Management: Introduction to Maven & Grunt as build tools with examples</p> <p>Build process using traditional tomcat based and docker container based</p> <p>Build best practices</p> <p>Sonarqube integration in CI pipeline, administration</p> <p>CI concepts and typical phases and talk on How Jenkins fits in here: Static security (junit for java, jasmine for frontend etc), code coverage, Sonarqube code quality, functional testing automation, accessibility testing automation, dynamic security testing</p>
Assessment Day 16		Q&A
Day 17	DevOps	<p>Introduction to DevOps</p> <p>Introduction to AWS DevOps tools</p> <p>Introduction to Azure DevOps tools</p>
Assessment Day 17		Q&A
Day 18	Containers	<p>Containers, Dockers</p> <p>What is Docker?</p> <p>What are containers?</p> <p>Why use containers?</p> <p>Terminology</p> <p>Prerequisites</p>

		<ul style="list-style-type: none"> Setting up docker on your computer Hello World application Docker Run Static Sites Docker Images, Dockerfile Directives Creating your first Image Dockerfile Storing Docker image on AWS Multi Container Environments Docker Network Docker Compose Development Workflow Docker networking and volume management basics Basic docker file scanning tools (Snyk, ECR scanning, Docker image scan) Image registry options and how to use in a setup (ECR, JFrog, Nexus, Dockerhub) AWS Elastic Container Service
		<p>Assessment Day 18</p> <p style="text-align: right;">Q&A</p>
Day 19	Content Delivery Network	<p>What is a CDN?</p> <ul style="list-style-type: none"> Uses of CDN Popular CDNs like Akamai, CloudFront, Cloudflare Additional features like WAF, DDOS, Bot management
	Content Management Systems	<ul style="list-style-type: none"> Introduction to CMS Types of CMS Common CMS tools
Day 20	Content Management Systems	<p>Sitecore</p> <ul style="list-style-type: none"> Sitecore as a CMS tool Sitecore architecture (Experience Manager, Experience Platform) Experience Manager Components Experience Platform Components Sitecore Databases Content Manager, Publishing, Sitecore Indexes Integration with Azure Search, SOLR Cloud
Day 21		<p>AEM</p> <ul style="list-style-type: none"> Introduction to AEM AEM Architecture, Deployment topologies (single author, multi author, dispatcher) Role of Author, Publisher, Dispatcher Installing and configuring Author, Publisher, Dispatcher OSGI and Sling Build and deployment on AEM

		<p>AEM administration</p> <p>Dispatcher configurations</p> <p>Assessment Day 21</p> <p>Q&A</p>
Day 22	Security	<p>Security testing and its importance</p> <ul style="list-style-type: none"> Vulnerability Scanning API Security Testing Penetration Testing Web Application Security Testing Security Audits Risk assessment <p>Security Testing Tools</p> <ul style="list-style-type: none"> Static Application Security Testing Dynamic Application Security Testing <p>Assessment Day 22</p> <p>Q&A</p>
Day 23	IaC	<p>Infrastructure as Code</p> <ul style="list-style-type: none"> What is IaC? Benefits of IaC Working with CloudFormation Working with Terraform Working with Azure Resource Manager

Demo and exercises on deploying an n tier infrastructure and middleware
terraform, Ansible, CFT and Jenkins

Assessment Day 23

Q&A

Day 24

Kubernetes

Kubernetes Overview

Introduction to core concepts: what on master, what on worker nodes
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

Assessment Day 24

Q&A