KM SOLUTIONS
Inspiring towards success

AWS

DEVOPS
COURSE

Duration: **80**hrs

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ABOUT KM SOLUTIONS

With 28+ years of expertise, Team of KM sets the standard for the Certified IT Technical / Functional, Management and Soft-skills/Behavioural Training's.

In KM, we train & build the human infrastructure that's essential for corporate success with cost-effective solutions that are customized for each client's needs.

KM meets the demands of today's fast-paced global business world and exceeds the expectations of clients and candidates. KM is an established provider of above solutions to enterprises across India and the globe.

Our Training Self-Service Tool gives you complete control over the process of evaluating trainers and setting up your training program.

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ABOUT COURSE

What Is DevOps?

In these fast-paced times, we see more emphasis being laid on faster delivery of software deployment. Because in order to stay competitive in the market the companies are expected to deploy quality software in defined timelines. Hence the roles of software developer and system admin have become very important. A lot of juggling of responsibilities happens between the two teams.

What Is AWS?

If you go back a decade, the scenario of handling or more precisely storing data was different. Companies preferred storing data using their private servers. However, with more and better usage of internet, the trend has seen a paradigm shift for companies, as they are moving their data to cloud. This enables companies to focus more on core competencies and stop worrying about the storing and computation. These two points below talk about the significance of cloud

AWS DEVOPS-
AWS is one of the best cloud service provider and DevOps on the other hand is the 'need of the hour' implementation of software development lifecycle.

This course teaches you all the essentials to get your started as a AWS and would also help you prepare and plan for further certifications

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PROGRAM CURRICULUM

1. Introduction to DevOps
   - Introduction to the definition, value, history, building blocks.
   - Introduction to how Agile software development process applies to DevOps.
   - The importance of integrating source control in DevOps.
   - How automation is applied to DevOps.

2. DevOps concepts
   - Application Servers (referring WAS) and Deployment.
   - Web Servers Cloud Computing.
   - Virtualization.
   - Containerization.
   - Monitoring, Alerting and Trending Configuration Management.
   - Test and Build System

3. How to choose the right DevOps tools
   - Plan.
   - Build.
   - Continuous integration.
   - Deploy.
   - Operate.
   - Continuous feedback

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4. Devops Course Content.
- Linux Basics -
  Working knowledge of Linux.
  How to navigate through major Linux distributions?
  System configurations and graphical interface of Linux.
  Basic command line operations.
  Common applications of Linux.

5. AWS Basics
- What is Cloud?
- What is "AWS"?
- Why Cloud is required for DevOps?
- How to provision Server- EC2?
- How to connect the Servers and install DevOps Tools?'

6. Terraform -
- HashiCorp Terraform enables you to safely and predictably create, change, and improve infrastructure.
- It is an open source tool that codifies APIs into declarative configuration files that can be shared amongst team members, treated as code, edit, review, and version.

7. Introduction to Terraform, Scripting, Configuration Management, Integration with AWS

8. Hands-on Exercise – Script for server provisioning, Cluster management

9. Git (Source Control)
- Introduction to Git, Concepts of Version Control Systems, Git as SCM, Git Command Line, Git setup with CI tool Jenkins, Trunk based approach for.
- Hands-on Exercise – Create a git project, Checkout a branch, create a file and add to git, Edit file, Commit the code, Set up Jenkins and integrate with Git

10. Maven -
- Maven is a build automation tool used primarily for Java projects.
- Maven addresses two aspects of building software: first, it describes how software is built, and second, it describes its dependencies.

11. Ansible -
- Automate apps and IT infrastructure.
- Application Deployment Configuration Management + Continuous Delivery.
- Introduction to Ansible, Configuration, Writing Ansible Playbooks, Ansible based Configuration Management, Different Roles and Command Line usage.
- Hands-on Exercise – Write Ansible playbook, Assign different roles in configuration tool.

12. Puppet -
- Puppet centralizing and automating configuration management.
- Configuration management - detailed recording and updating information for an enterprise's hardware and software.
- Hood.
- Puppet Enterprise, Puppet Server.
- PuppetDB.
- Facter.
- Hiera

13. Jenkins (Automating Build and Test) -
- Continuous Integration and Continuous Delivery.
- The extensible automation server, Simple CI server.
- Pipeline.
- Easy Installation.
- Easy Upgrades.
- Scriptability.
- View Filters.
- Amazon EC2.
- HTML Publisher.
- Throttle Builds.
- Join.
- Green Balls

14. Automating Builds with Maven and Ant, Building Delivery Pipeline in Jenkins (CI/CD), Test Automation, Security, Notification System in Jenkins

15. Hands-on Exercise –
- Create a Maven Project, Edit pom.xml file to install a version of junit, Set up build delivery pipeline, Set up notification alerts in Jenkins, Configure test plan in Jenkins

16. Docker -
- Create, deploy, and run applications by using containers.
- Develop to package using libraries and other dependencies and ship it all out as one package.
- Docker the virtual machine.
- Linux kernel

17. Docker Container Management -
- What are Containers, Difference between VM and Container, Docker Fundamentals, Creating & Running Docker Images, Image Distribution, Creating Docker Registry, Compose Scripts, Remote Docker Image

18. Hands-on Exercise – Configure a Docker, create an image in Docker and run it

19. Docker Commands and Best Practices -
- Networking concepts in Docker, Using Docker Volume and Creation of a Dockerfile, a text file to contain the commands to create an image

20. Hands-on Exercise –
- Create a dockerfile with the commands to create an image, Create the image

21. Kubernetes -
- Containerization with Kubernete, Understand the open-source system for automating deployment, scaling, and management of containerized applications.
- Kubernetes (aka k8s) in Google, standard for container scheduling, and biggest deployments or down to a cluster of Raspberry Pi boards.

22. Introduction to Kubernetes, the cluster architecture of Kubernetes, creating a Kubernetes cluster, what is YAML, creating YAML with Kubernetes deployment, Kubernetes service, dashboard installation, Kubernetes rolling updates, using an app with the dashboard.

23. Jira -
- Plan, track, and manage your agile and software development projects in Jira.
- Customize your workflow, collaborate, and release great software.
- Process, Versions and Labels.

24. Nagios –
- Performance and Automated Monitoring.
- Nagios provides enterprise-class Open Source IT monitoring, network monitoring, server and applications monitoring.
- Monitoring.
- Response.
- Maintenance

25. Introduction of Nagios, Nagios Setup, Commands, Objects, notifications, Configure Nagios to monitor webserver, Load Balancer (HAProxy, NginX), + Project 1 & project 2

26. Hands-on Exercise – Perform Nagios and Netdata monitoring, Monitor the performance with Grafana, Setup Syslog and verify the logs are getting generated, Configure HAProxy server

27. Continuous Integration (CI) -
   • Merge code to a shared repository after which automated builds and tests are run using Jenkins.
   • Hands-on Exercise – Commit code and check if Jenkins runs the build scripts and tests the code using automation script

28. Agile Process & Other Tools -
   • Devops insync with Agile.
   • PagerDuty Alerting tool.
   • Jira Project Management Tool.
   • Slack – Continuous communication tool

DEMAND OF THIS COURSE
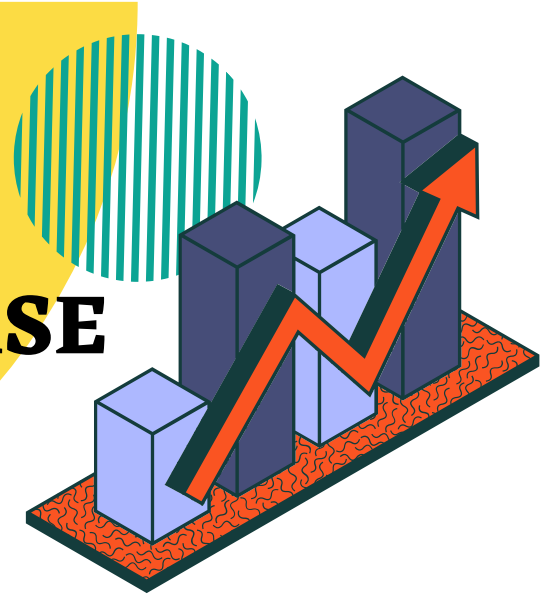
AWS or Amazon Web Services DevOps engineers are in high demand this year. AWS has a share of more than 33 percent in the cloud market. If you are a software engineer well-versed with AWS, it's the right time to apply to high-paying remote software engineering jobs in the US.

What is the future of AWS DevOps engineer?

As more companies adopt DevOps, the demand will increase. Hence, the demand for DevOps Engineers gets automatically increased and after all these, we can say, the future is very promising for this role. DevOps Engineers lead the list of in-demand positions, with more than 60% of organizations hiring DevOps Engineers.

Minimum 5 DevOps jobs that are in Demand

AWS

AZURE

GOOGLE CLOUD PLATFORM

DOCKER

KUBERNETES

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ELIGIBILITY CRITERIA & ADMISSION PROCESS

Eligibility - Web Development skills, Linux knowledge required.

Visit our website kmsolutions.in if you have any queries or you can contact on 7888055661

select the course check eligibility and proceed for payment

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CERTIFICATE

CERTIFICATE
of COMPLETION

WE ARE PROUDLY PRESENT THIS TO

Kimberly Thompson

WHO HAS COMPLETED AWS DEVOPS COURSE FROM
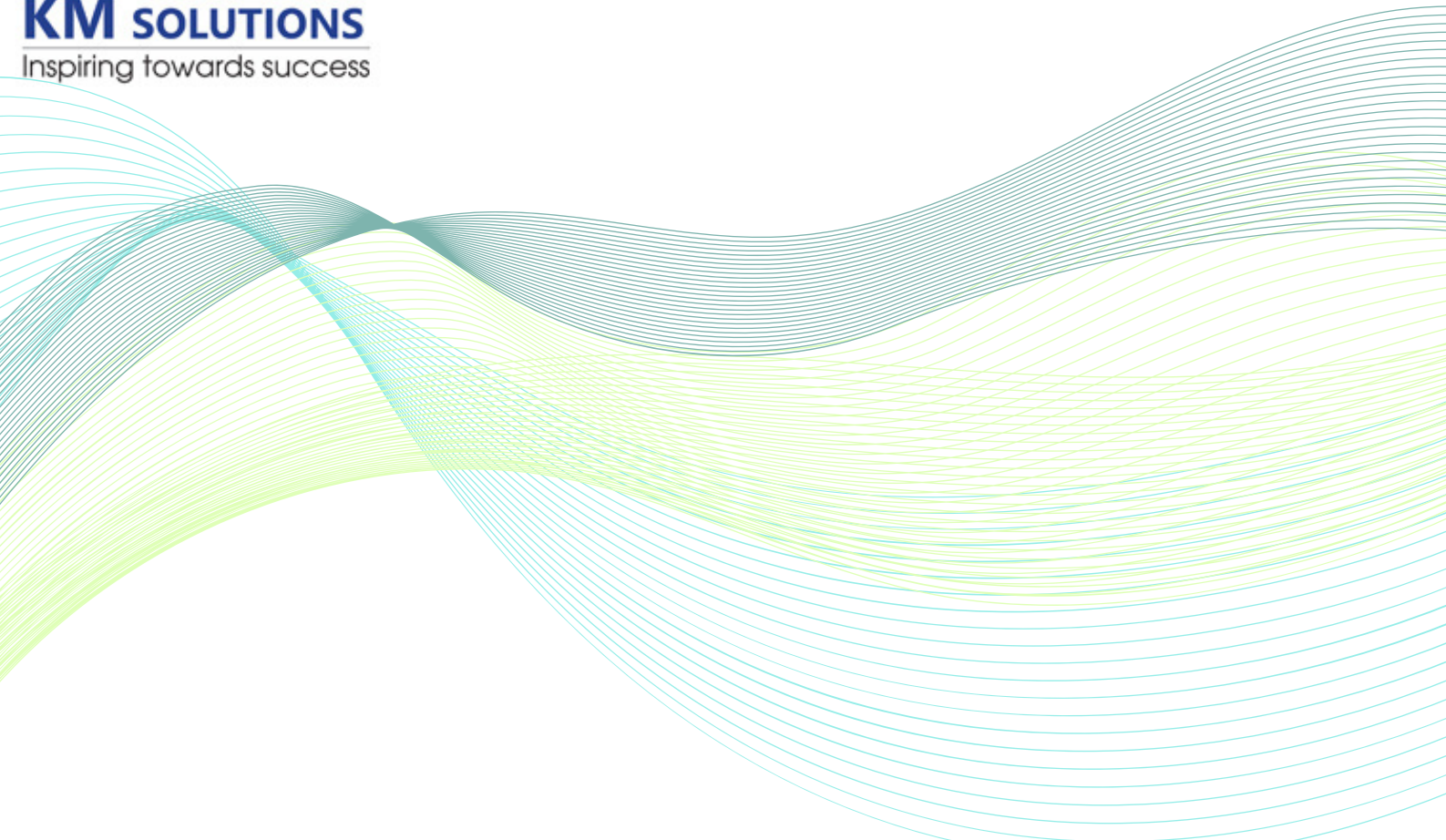KM SOLUTIONS CONCLUDED ON 20TH JUNE 2023

DATE

Mr. GANESH BHOSALE

OWNER

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