

POWERED BY 3RI TECHNOLOGIES



STEP: Software Training Employability Programme

STEP IN

DEVOPS ENGINEERING

JOB-ORIENTED COURSE

Instructor-Led Online Training



About Us

COMPANY HIGHLIGHTS



3RI is an Advanced Technology Education Platform providing advanced and professional training in Data Analytics that helps freshers and professionals rise to the advanced skills requirements of the current industry.

Powered by 3RI Technologies, these classroom training sessions are industry-oriented courses on Data Science, Machine Learning, and Python by top-class faculty who have more than 7+ years of experience in the same domain.

The curriculum is designed by industry experts, who have real-time scenario-based exercises and case studies and projects using databases from companies like Walmart, Amazon, Google, etc. This training is supported with teaching assistance which allows individuals to develop hands-on skills by applying the concepts and becoming technically proficient.

www.3ritechnologies.com

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WHAT IS WHERE?

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Faculty

THE TECHNOLOGY EXPERTS



CERTIFIED TRAINERS

3RI has a team of Cloud Computing, AWS & DevOps Working Professionals with 8+ Years of Relevant experience.



TRAINING METHODOLOGY

3RI follows the unique methodology which is followed by every trainer to align with today's IT Industry standard. It's a complete Corporate method of hands-on knowledge-based training.

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Subjects & Tracks



WHAT MAKES 3RI DIFFERENT?

BASIC FOUNDATION

N/W, OS, DBMS, etc.

AWS ASSOCIATE LEVEL

It is a basic level of AWS Training for every individual who would like to initiate their career in cloud computing.

SOFT SKILLS / APTITUDE

Logical Reasoning & Communication Skills
Training

UNIX / LINUX

File Handling, vi Editor, other useful commands, etc.

DEVOPS ENGINEERING

Intro, Source Code, Version Control, CI/CD, Monitoring, Ansible, Docker, Terraform, Kubernetes.

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BASIC FOUNDATION



1. Programming Basics

- Fundamentals of Computer
- Understanding Applications Using
- Windows Explorer & File Structure
- Number Systems
- Application Software.

2. Operating System & Networking

- Need for the operating system
- Functions of Operating System
- Process Management
- Memory Management
- File Management
- Device Management
- Types of operating system
- TCP/IP fundamentals

BASIC FOUNDATION



3. Introduction to Database Mgt Systems

- Introduction to Database
- DBMS, RDBMS, ORDBMS
- DDL, DML, DCL, TCL
- Data types
- SELECT Statement
- Restricting and Sorting Data
- Aggregating Data Using Group Functions
- Manipulating Data
- Subqueries
- Important Functions
- Joins and different types



AWS: ASSOCIATE LEVEL



1. Introduction to Cloud & AWS

- Define cloud computing.
- Cloud computing Infrastructure.
- Cloud service and deployment models.
- Common misconceptions about cloud computing.
- Common cloud Implementations.
- Architecture discussion
- Lab preparation
- AWS account creation
- Overview of major AWS services
- Benefits of studying AWS

2. Identity And Access Management Techniques (IAM)

- Understand Users, Groups, and Roles
- Policies and Policy documents
- Lab creating roles, user,s and groups
- Access control
- Policy management
- Lab policy creation
- Restricting different services for users.

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AWS: ASSOCIATE LEVEL



3. Amazon Elastic Compute Cloud (EC2)

- Defining EC2 Instances
 - Different types of Images (AMI)
 - Lab creation Linux/Windows EC2 instances
 - Lab connecting to EC2 instances
 - Lab AMI creation
 - Volumes (EBS)
 - Lab volume creation
 - Lab setting up a volume once attached to Ec2
 - Lab snapshot creation
 - Lab security Groups
- Key Pairs
 - Lab Autoscaling
 - Lab creation of billing alerts
 - Lab Cloud Watch



AWS: ASSOCIATE LEVEL



4.S3

- S3 buckets and its usage
- Lab creating an S3 Bucket
- Lab uploads and retrieve data from the S3 bucket.
- Lab giving privileges on to S3 bucket.
- Lab on S3 policies and ACLs
- Lab Life Cycle Management
- Lab object expiration in S3
- Lab S3 Versioning
- S3-RRS, S3-IA, and Glacier
- CORS, Lab S3 Policy
- Lab hosting a website on S3

5.Networking: Setting up VPC and NAT

- Lab creation of custom VPC
- Default VPC concepts
- Lab CIDR notation
- Subnets and routing concepts
- Different methods to connect to custom VPC
- Lab to create Subnets
- Lab ACLs, Lab Routing rules.
- Lab to create security groups at an instance.
- Lab setting up public and private subnets. www.3ritechnologies.com

AWS: ASSOCIATE LEVEL



- Lab setting up Internet/Nat gateway
- Lab Securing your network.
- Lab Network ACLs
- Lab configuring Multi-AZ failover
- Lab accessing a database hosted on RDS

6.AWS Databases RDS & Dynamodb

- AWS Database services overview
 - RDS, DynamoDB, Elasticache, Redshift
- Lab creating RDS instances
- Read Replicas
- RDS scaling concepts, postgres sql server
- RDS Oracle Server
- Database migration Service
- DynamoDb Core knowledge
- Scaling with Dynamodb
- DynamoDb write and read unit calculation, Elasticache concepts
- API Gateway
- Kinesis

AWS: ASSOCIATE LEVEL



7.SNS, SWF and SQS

- Working with the simple notification system.
- Understanding queuing service.
- SNS and SQS real-time use case
- Introduction to SWF and use case
- Lab on SNS

8.Application Services

- R53 and DNS
- Domain registration
- R53 routing policies

- Lab on routing policy setup
- Routing policies in detail
- AWS CloudFront
- AWS Cloud Formation
- Deployment Using Cloud Formation
- Direct Connect



AWS: ASSOCIATE LEVEL



9. HA Architecture

- Elastic Load Balancing
- Advanced Load Balancer
- Lab Elastic load balancing
- Launch configuration
- Auto-scaling concepts
- Lab Autoscaling
- Backup and Disaster Recovery
- Deployment on AWS
- Cost Optimization in AWS
- KMS



10. Serverless

- Lambda Basics
- Lab on Serverless Webpage



UNIX/ LINUX



1. Introduction to UNIX and its flavours
2. UNIX architecture
3. File System
4. User and Group Policies
5. Unix general commands
6. Concept of Files and Directories in Unix
7. File Permission and related commands
8. Filter Commands and their options
9. Vi Editor



Project Work and Case Studies



- Deploy a Python/Java application
- To access/create/upload files on S3 through EC2/Lambda
- To create tables, insert values in Dynamo-Db through EC2/Lambda
- Lab on Kinesis, through cloud formation
- Designing Fault-tolerant and Highly Available architecture (ELB)
- Host Static Website on S3
- Build a Serverless Web Application
- Build an Alexa Skill

Preparation for Certification

AWS - Solution Architect Associate



- 500+ Practice Questions, in-line with certification.
- Doubts Clarification Session.
- Resume Preparation Guidance by Expert.
- Interview Preparation by Certified AWS Trainer.

DEVOPS ENGINEERING



1.DevOps Introduction

- What is DevOps
- Need of DevOps
- DevOps Transition
- Technical challenges
- DevOps Market trends
- DevOps Tools in Market
- CI-CD overview

2.Basic Linux and Networking Concepts

- Architecture and Filesystem of Linux
- Linux Bash Commands
- Managing Services on Linux
- User and Group management
- Filesystem usage.
- IP assignment and Service Ports
- Installing and Configuring Apache

DEVOPS ENGINEERING



3. Cloud Computing with AWS

- Fundamentals of Cloud Computing
- Hypervisors, Bare Metals, KVM/XEN
- AWS introduction
- IAAS, SAAS, PAAS
- EC2, AMI, Securitygroups, Keypair, S3, Public, Elastic IP
- IAM, Roles, Cloudwatch
- VPC : Segreatting public, private infrastructure
- Introduction to ASG, ELB



4. Source Code Management & Version Control

- Source Code Management using GitHub UI
- History & Need of Version Control
- Centralized VS Distributed version control system
- Github CommandLine
- Cloning, Commit, Forking, Merge, ReBase, PullRequest, GitDiff, Logs
- Exposure to CherryPick

DEVOPS ENGINEERING



5. Continuous Integration with Jenkins

- Jenkins - Installation
- Jenkins - Configuration
- Jenkins - Management
- Jenkins - Setup Build Jobs
- Integration of JENKINS with GIT
- Integration of Maven with Jenkins
- Jenkins Dashboard
- Remote Builds and user management in Jenkins.

- Exposure to backup & Jenkins Security

- Build Tools - Maven & exposure to Gradle

- Pipelines

6. Monitoring

- Virtualized infrastructure monitoring using Nagios

- Installation & maintenance

- Exposure to Prometheus & Grafana

DEVOPS ENGINEERING



7. Ansible

- Understanding Configuration Management
- Understanding Configuration Automation
- Understanding Desired State Configuration Management
- Understanding Continuous Configuration Automation
- Understanding Server Client based Configuration Automation.

- Understanding Remote Configuration Automation.
- Introduction to Ansible tools
- Ad Hoc commands and Modules
- Yaml templates
- Playbooks



DEVOPS ENGINEERING

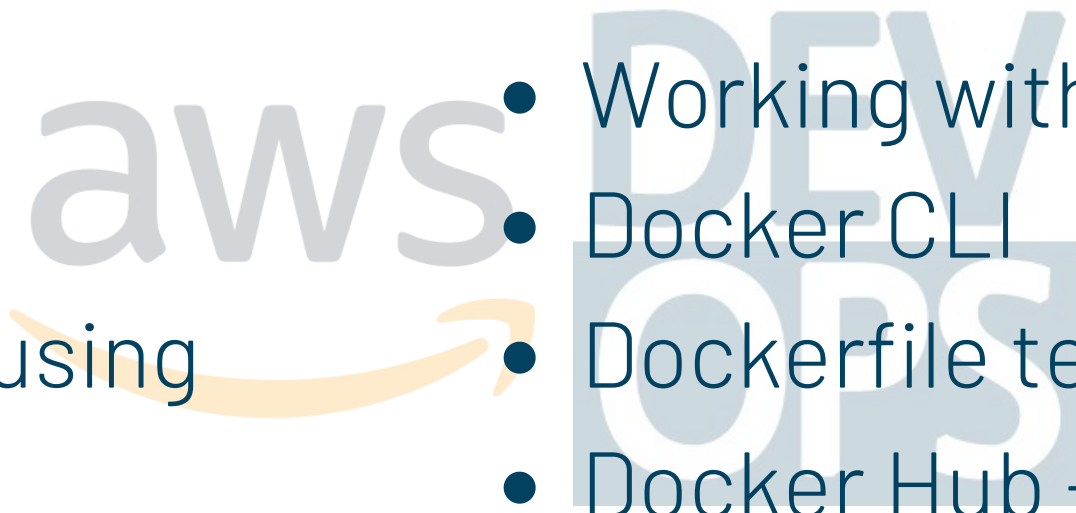


8. Terraform

- Understanding Infrastructure As A Code
- What is Terraform
- JSON templates
- Managing infrastructure using Terraform
- Multiple modules
- Integrating Terraform with AWS
- Update existing templates

9. Docker Containers

- Understanding MicroServices
- Introduction to Docker & Containers
- Working with containers
- Docker CLI
- Dockerfile templates
- Docker Hub - Repo, Push, Pull



DEVOPS ENGINEERING



10. Kubernetes

- What is Kubernetes and Need
- Technical overview of Control Plane & Data Plane
- Kubernetes cluster provisioning using Kubeadm
- POD, Deployment, ReplicaSet, Nodes, DaemonSets, InitContainers
- Command & Args
- Multi Master architecture and exposure
- ScaleIn/ScaleOut Ad Hoc on Demand of Microservices
- Services, Secret, ConfigMap, Volumes, PVC, PV, StorageClass



Project Work and Case Studies



- WebBased application using Tomcat, Apache, EC2, Maven, Jenkins, Git for CI-CD flow.
- CI-CD flow using EC2 with Git, Jenkins, Ansible.
- CI-CD flow using EC2 with Git, Jenkins, Docker/Containers and Ansible.

SOFT SKILLS



1. Self Analysis

- Know yourself
- Personality types
- Areas of interest

2. Self Discovery

- SWOT Analysis – strength, weakness, opportunities, threats

3. Goal Setting

- Short-term plan
- Long-term plan
- Effective Time-management

4. Effective Self Presentation

- Personal grooming, Dressing, Hygiene

5. Effective Communication

- Verbal – Language
- Voice modulation – Tone, Pitch
- Clarity of Speech
- Listening skills – Active Listening, Selective Listening
- Written communication – general business correspondence

6. Email Etiquette

SOFT SKILLS

7. Body Language

- Understanding non-verbal communication
- Postures, Gestures, Eye contact

8. Tips to prepare an impressive Resume

9. Tips for Group Discussion

10. Handling Telephonic interview

11. Mock – Technical interview

12. Mock – Personal Interview (PI)

13. Office Etiquettes and Mannerisms



APTITUDE



1. Quantitative Aptitude

- Number Systems
- LCM and HCF
- Percentages
- Profit, Loss, and Discount
- Interest (Simple and Compound)
- Speed, Time, and Distance
- Ratio and Proportion
- Probability
- Permutation & Combination
- Time and Work
- Heights and Distances

2. Logical Reasoning

- Number and Letter Series
- Calendars
- Clocks
- Logical Sequence
- Blood Relations

3. Algebra

- Linear Equations
- Quadratic Equations
- Higher Degree Equations

Placement Support

DON'T FORGET



Placement at Our Client's Location



Resume Workshop by Experts



Real World Application Integration in Resume



Exclusive Sessions from Experts

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Meet The Team

THE PRESENTERS



**ASWATHI
MA'AM**
Python Expert
Trainer



**RISHIRAJ
SIR**
AWS Solution
Architect



**SUBHASHISH
SIR**
DevOps
Engineer

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FAQ's



- **Do I need to purchase any Software ?**

No, we provide necessary installation guides of the software required.

- **What are the specific System Requirements ?**

8 GB RAM, 500GB Hard disk (i3 Processor).

- **What are Projects ?**

Projects are real world datasets from companies like Gmail, Facebook, flipkart, Amazon, etc. that are provided to our students.

Contact Us



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