Zukun

AWS DEVOPS

Empower Your DevOps Journey

Master AWS DevOps

www.zukun.in

Zukun

OUR PROMISES

1. 15 to 20 Guaranteed Interviews

2. Optimization Job Portals

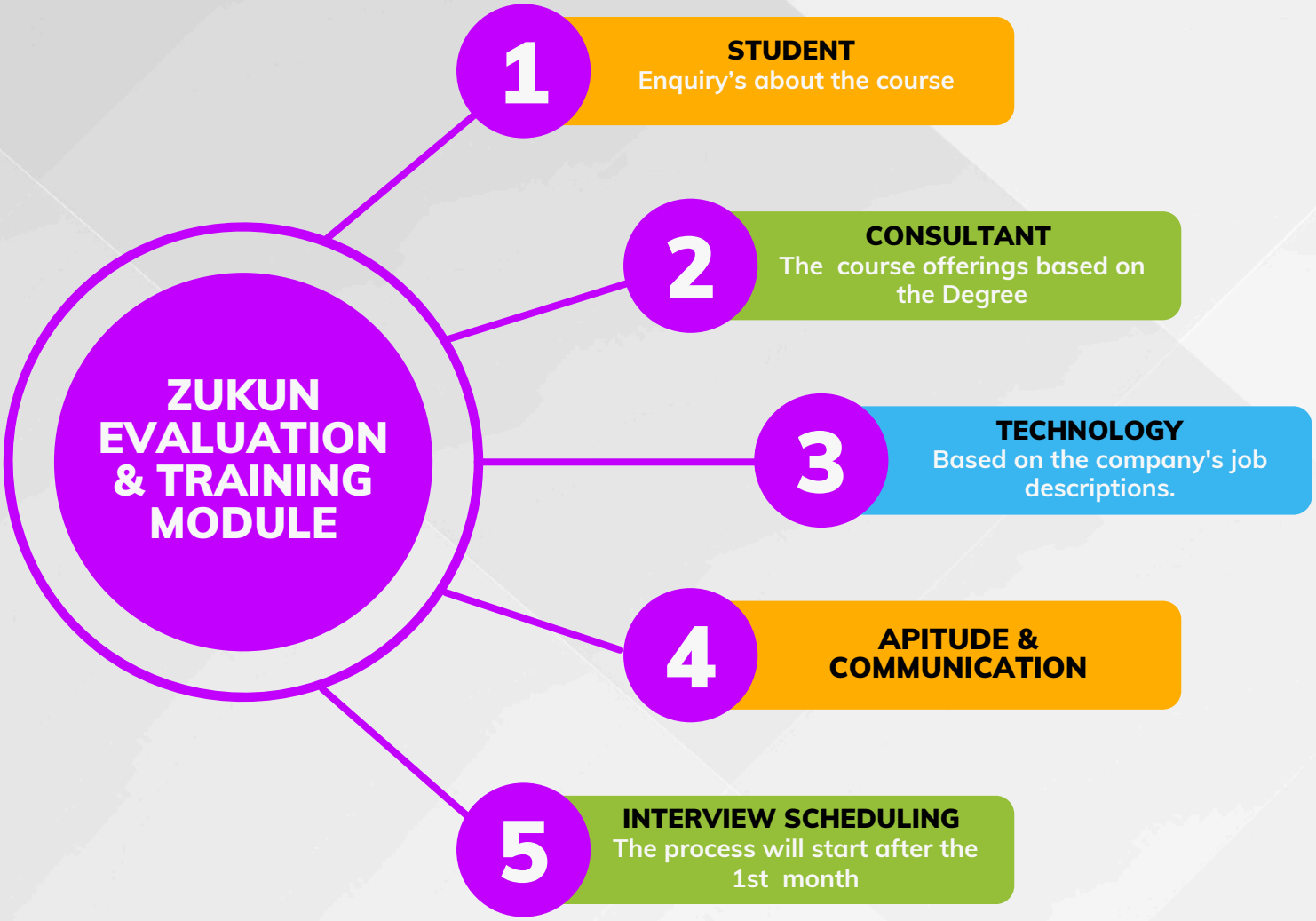
3. Free Communication

4. Weekly Test

5. Interviews scheduled after 1st month

6. LinkedIn optimization

TRAINING MODULE



PLACEMENT MODULE

1. RESUME BULIDING
2. JOB PORTALS OPTIMIZATION
3. TECHNICAL, APTITUDE, AND COMMUNICATION ASSESSMENT.
4. INTERVIEW SCHEDULING
5. GET PLACED

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Module-01

Introduction to Cloud Computing & AWS

- What is Cloud Computing?
- How AWS is the leader in the cloud domain?
- Various cloud computing products offered by AWS
- Introduction to AWS S3, EC2, VPC, EBS, ELB, AMI
- Getting a detailed understanding of the AWS architecture and the AWS Management Console
- Introduction to AWS EC2
- Comparing Public IP and Elastic IP
- Demonstrating how to launch an AWS EC2 instance
- What is auto scaling?
- AWS EC2 best practices and cost involved
- Understanding various concepts of backup services in AWS

Module-02

Database services

- Elastic Block Storage (EBS) for block level persistent storage volumes with S3 buckets
- Understanding Amazon RDS and Amazon Aurora which are relational databases
- Amazon DynamoDB which is a NoSQL database

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- Understanding Amazon Redshift which is a data warehousing product
- Amazon ElasticCache which is an in-memory data store
- Deploying AWS database migration service

Module-03

Object Storage

- Introduction to AWS storage
- AWS S3 (Simple Storage Service)
- Creating an AWS S3 bucket
- AWS Storage Gateway
- Understanding the Command Line Interface (CLI)
- Hosting a static website using Amazon S3
- Amazon Glacier storage for long-term data backup and archiving
- Amazon Snowball for data import/export

Module-04

Autoscaling and load balancing

- Understanding Fault Tolerance in AWS
- In-depth study of Elastic Load Balancing

- The types of Load Balancers viz. Classic and Application
- AWS Auto Scaling mechanism
- Understanding AWS Management Console
- How to access the Elastic Load Balancing
- Studying AWS SDK, AWS CLI and Https Query API

Module-05

Virtual Private Cloud

- What is Amazon VPC
- VPC as a networking layer for EC2
- Getting started with VPC
- Examples
- VPC and Subnets
- Default and non-default VPCs
- Components of VPC networking
- IP addressing
- Security
- VPN connections
- Accessing the internet
- Using AWS PrivateLink to access the services
- VPC supported platforms

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Module-06

Application services, AWS Lambda and CLI

- Introduction to various AWS application services
- Elastic Beanstalk
- Simple Email Services (SES)
- Simple Notification Service (SNS)
- AWS Lambda
- Elastic OpsWorks and CLI

Module-07

IAM and monitoring

- Authentication (who can use) and Authorization (level of access)
- IAM Policies – JSON structure, users, groups and their Roles
- IAM HTTPS API
- Logging IAM events with AWS CloudTrail
- Monitoring and managing AWS resources using CloudWatch
- Deploying configuration alerts and notifications with CloudWatch
- Billing for CloudWatch

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Module-08

Configuration management and automation

- Configuration management and automation of server configuration using OpsWorks
- Determining how servers are configured, managed and deployed across EC2 instances
- Creating a virtual machine using Amazon Machine Image (AMI)
- Introduction to the Domain Name Registration service AWS Route 53
- How to route internet traffic to resources
- Checking health of resources automatically
- Provisioning of infrastructure resources using AWS CloudFormation

Module-09

Architecting AWS – whitepaper

- Important guidelines for creating a well architected AWS framework that is resilient and performant

- Designing of fault-tolerant and high-availability architecture, resilient storage, decoupling mechanism, multi-tier architecture solution, disaster recovery solution, scalable and elastic solutions

Module-10

AWS Architect Questions

- Guidance for clearing the exam
- Most probable interview questions and other helpful tips for clearing the exam and interview

Module-11

AWS Migration

- Migrating to the AWS cloud
- Business drivers for migration
- Various stages of cloud adoption
- The actual migration process
- Migration tools and services in AWS

- Migrating customers to AWS cloud
- Track the progress of application migration
- Types of migration including data migration, application migra and databases migration

Module-12

AWS Security

- AWS cloud security essentials
- Penetration testing
- Security compliance
- Infrastructure security
- Mitigating DDOS
- Identity and Access Control (IAM)
- Logging and monitoring
- Automatic audits and compliance
- Limitations and challenges of native AWS security

Module-13

Infrastructure Setup

- Installation of Devops Tools on AWS
- Git
- Docker

- Selenium
- Maven
- Jenkins
- Puppet
- Ansible
- Kubernetes
- Nagios

Module-14

Introduction to DevOps

- What is Software Development
- Software Development Life Cycle
- Traditional Models for SDLC
- Why Devops?
- What is Devops?
- Devops Lifecycle
- Devops Tools

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Module-15

Software Version Control

- What is Version Control
- Types of Version Control System
- Introduction to SVN
- Introduction to Git
- Git Lifecycle
- Common Git Commands
- Working with Branches in Git
- Merging Branches
- Resolving Merge Conflicts
- Git Workflow

Module-16

Containerization using Docker - Part I

- Introduction to Docker
- Understanding Docker Lifecycle
- Components of Docker Ecosystem
- Common Docker Operations

- Creating a DockerHub Account
- Committing changes in a Container
- Pushing a Container Image to DockerHub
- Creating Custom Docker Images using Dockerfile

Module-17

Configuration Management using Puppet

- Need of Configuration Management
- Configuration Management Tools
- What is Puppet
- Puppet Architecture
- Setting up Master Slave using Puppet
- Puppet Manifests
- Puppet Modules
- Applying configuration using Puppet
- Puppet File Server

Module-18

Configuration Management using Ansible

- What is Ansible?
- Ansible vs Puppet

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- Ansible Architecture
- Setting up Master Slave using Ansible
- Ansible Playbook
- Ansible Roles
- Applying configuration using Ansible

Module-19

Continuous Testing

- What is Continuous Testing?
- What is Maven?
- Running Test Cases on Chromium Web Driver
- What is Headless Mode?

Module-20

Continuous Integration using Jenkins

- Introduction to Continuous Integration
- Jenkins Master Slave Architecture
- Understanding CI/CD Pipelines
- Creating an end to end automated CI/CD Pipeline

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Module-21

Continuous Orchestration using Kubernetes

- Introduction to Kubernetes
- Docker Swarm vs Kubernetes
- Kubernetes Architecture
- Deploying Kubernetes using Kubeadms
- Alternate ways of deploying Kubernetes
- YAML Files
- Creating a Deployment in Kubernetes using YAML
- Services in Kubernetes
- Ingress in Kubernete

Module-22

DevOps on AWS

- How to deploy DevOps principles and methodology on the AWS platform
- DevOps lifecycle and the important stages in the DevOps methodology
- What is AWS CodeBuild
- AWS CodeCommit
- AWS CodePipeline
- AWS CodeDeploy

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Module-23

Deploying Infrastructure with Terraform

- Installing Terraform – Windows Users
- Installing Terraform – Linux Users
- Choosing Right IDE for Terraform IAC development
- Creating first EC2 instance with Terraform
- Terraform Code – First EC2 Instance
- Understanding Resources & Providers
- Destroying Infrastructure with Terraform
- Destroying Specific Resource
- Understanding Terraform State files
- Understanding Desired & Current States
- Challenges with the current state on computed values
- Terraform Commands – State Files
- Terraform Provider Versioning
- Types of Terraform Providers
- Understanding Attributes and Output Values in Terraform
- Attribute Resource (Document)
- Referencing Cross-Account Resource Attributes
- Terraform Variables
- Data Types for Variables

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- Fetching Data from Maps and List in Variable
- Terraform Format
- Validating Terraform Configuration Files

Module-24

Continuous Monitoring using Nagios

- What is Continuous Monitoring
- Introduction to Nagios
- Nagios Architecture
- Monitoring Services in Nagios
- What are NRPE Plugins
- Monitoring System Info using NRPE plugins

Module-25

Terraform Modules & Workspaces

- What is Infrastructure as a code
- Iac vs Configuration Management
- Introduction to Terraform
- Installing Terraform on AWS

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- Basic Operations in terraform
- init
- plan
- apply
- destroy
- Terraform Code Basics
- Deploying and end-to-end architecture on AWS using Terraform

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