.[REGEX]*
Software Services- Learn To Create

AWS Cloud With DevOps Specialization Program

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About The Program:

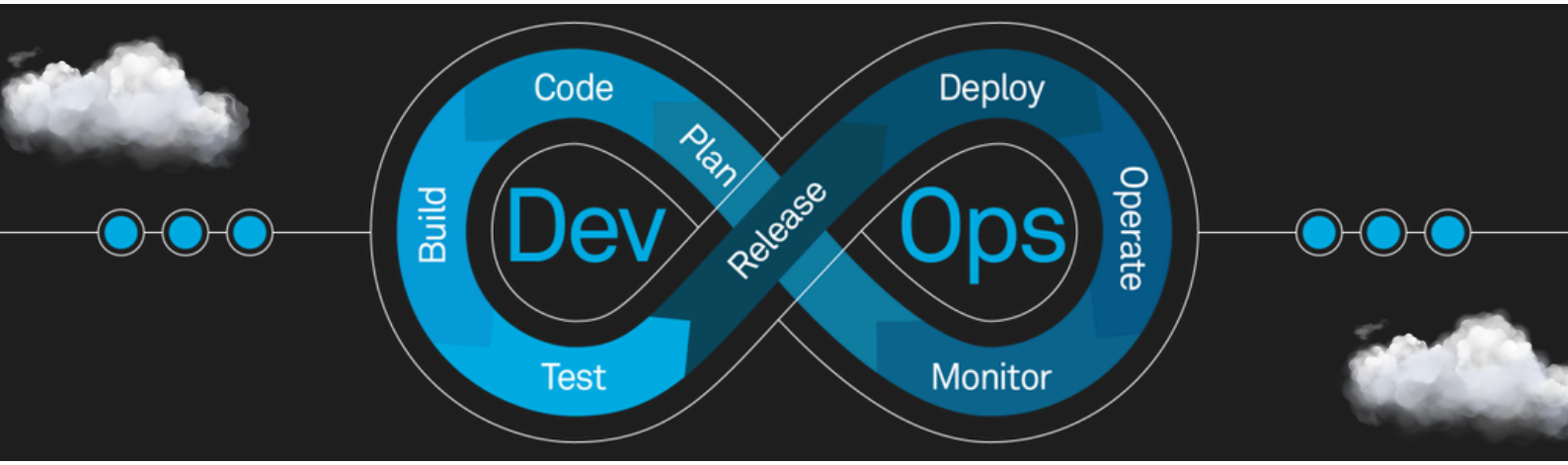
Whether you're an IT professional looking to upskill or a fresh graduate seeking a future-ready career, our DevOps and Cloud computing training in Jaipur is designed to meet your goals. You'll learn how to deploy secure and scalable applications in the cloud, manage infrastructure as code, and automate the software delivery process efficiently.

The program also includes mock interviews, resume building, real-world projects, and career mentoring, helping you become job-ready from day one. With a focus on cloud transformation and DevOps culture, Regex Software's AWS Cloud Specialization is your gateway to joining the next generation of cloud experts.

Mode:	**Duration:**	**Participants:**
Physical (Jaipur) or Online (Google Meet)	10 Months + 6 Months Additional Support	18 – 20 per Batch

What you will Learn ?

- AWS
- Linux
- Python
- GitHub
- Docker
- Kubernetes
- Grafana
- Jenkins
- Terraform
- Ansible
- Chef



Study Material-

- E-Notes.
- Poll Test & Assignments .
- Over 450 hours of Live Video Lectures available on demand.
- Accessing lecture videos and notes.
- 24*7 Mentorship Support
- Engaging in real-time project assignments

Course Outcome-

- Solve cloud & DevOps challenges with creative, practical approaches
- Deliver multiple industry-aligned projects and secure internship opportunities
- Be fully prepared for the AWS Certified Solutions Architect – Associate exam
- Demonstrate hands-on proficiency in Docker, Kubernetes, Ansible, Terraform & Jenkins
- Launch your career as a devops enginner or Cloud Associate with average packages from ₹5 to ₹8 LPA

Package Offered So Far

IT Candidates	Non-IT Candidates
Minimum Package: 4 LPA	Minimum Package: 3 LPA
Average Package: 4 – 6 LPA	Average Package: 3.5 – 5 LPA
Overall Highest Package: 39 LPA	Overall Highest Package: 14.5 LPA

PLACEMENT PROCESS:

At **REGex Software**, we are committed to providing a structured and results-driven training approach to ensure your career success.

- 🔹 **Training & Performance Analysis:**
  - Your training will begin from day 1 of your joining, focusing on hands-on learning and practical implementation.
  - Our team will analyze your performance based on assignments, projects and weekly assessments from the **second week onwards** and we will provide **weekly feedback** to help you improve.
- 🔹 **Mandatory Criteria for Placement Opportunities:**

To be eligible for placement opportunities, you must meet the following criteria:

- ✅ **80% attendance** in live training sessions.
- ✅ **80% completion and timely submission** of assignments & projects.
- ✅ **80% attendance** in assessments, including **tests, mock interviews, HR interviews and group discussions**.

- 🔹 **Resume Preparation & Placement Process:**
  - Between **5.5 to 6 months**, our team will provide guidance on **resume building** and evaluate your resumes accordingly.
  - After completing **75-80% of the program**, you will receive details about the placement opportunities based on your **performance and company requirements**.
  - Placement opportunities will be provided **continuously** via **email, calls and WhatsApp groups**, depending on your performance.

- 🔹 **Placement Assurance & Refund Policy (Applicable only for Indian Students Only):**
  - This is a **Placement Assured Program**, with an additional **6-month post-program assistance**.
  - IT Graduates who passed out in 2025 or later (Regular B.tech, BCA, M.tech, MCA programs) are assured a minimum salary package of 4LPA upon placement. However, for IT Graduates who passed out in 2024 or earlier, having gaps in their academics, as well as for Non-IT Graduates (graduates other than regular B.tech, BCA, M.tech, MCA programs), the minimum guaranteed package will be 3LPA.
  - In the event that you have attended & completed at least 80% of the program, submitted and finished at least 80% of the assignments, Tests, Mock Interviews & HR Interview and still do not secure a placement then REGEX will refund your fees with a 9% Annual interest rate. Furthermore, Refunds are applicable only within the first 3 days of the demo period and solely in cases where a specific concern is raised regarding the quality of the learning experience provided. You will receive an official notification email from our team on the third day at 7:30 PM, confirming the completion of your demo period. Requests for a refund of the registration amount must be submitted prior to the issuance of this email. No refund requests will be entertained after this time and Even if you discontinue the program prematurely, you are still obligated to pay the full fee to REGex.
- 🔹 **Our Commitment to Your Success:**

At **REGex Software**, **Placement Assurance = Skills + Opportunities**

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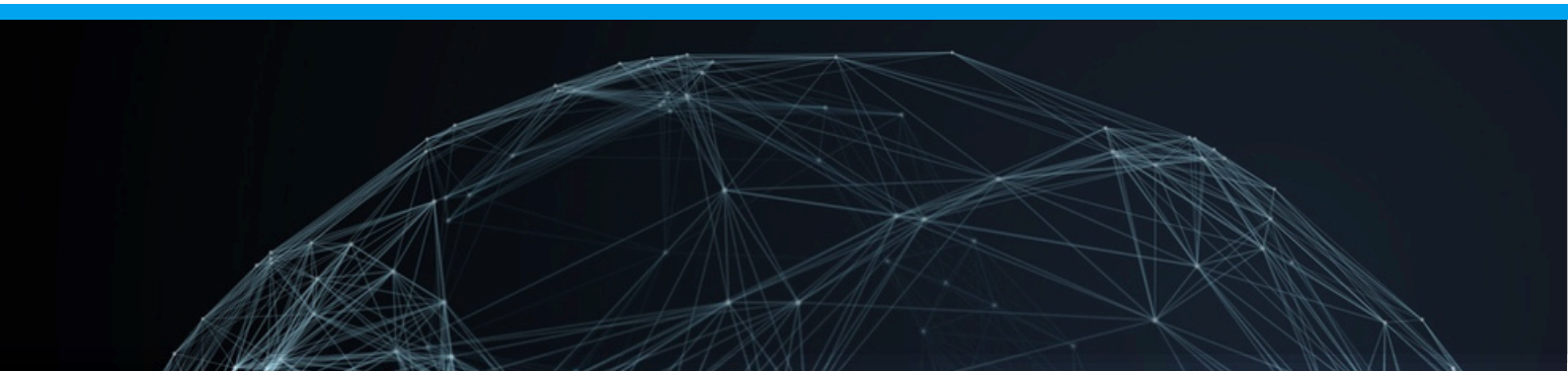
We equip you with **industry-relevant skills** and provide continuous **job opportunities** based on your performance. However, it is the **student's responsibility to crack interviews** and enhance their skills based on feedback.

For additional support, we offer the flexibility to **rejoin previous batches** to reinforce concepts and improve understanding.

We are dedicated to your career success! 🚀



COURSE CONTENT:

Week 1 - 4

C Logical Programming

- Data Types
- Variables
- Variable Scope – Local, Global
- Constants
- Operators
- Decision Making Statements
  - if Statement
  - if...else
  - switch
- Loops
  - while Loop
  - do...while Loop
  - for Loop
- Basic I/O Functions
  - scanf() and printf() usage

Week 5

Linux

- Introduction to Linux
- Basic Linux Commands
- Using the Vi Editor
- Tar Archives (Compression & Extraction)
- User Management and Permissions

GitHub

- Difference Between Git and GitHub
- Common Git Commands
- Git Branches
- Branching and Merging
- Git Push vs Pull

Week 6

Python

- Introduction to Python
- Data types
- Immutable vs Mutuable data types
- String formatting & slicing
- Conditional Statements

Week 7

Python

- Introduction to looping statement
- for loop vs While loop
- String Data type
- String manipulation
- Sequential Data type
- List Vs Tuple
- Dictionary & Sets
- In-built functions related to the sequential datatypes
- List comprehension , set and dictionary comprehension

Week 8

Python

- Introduction to functions
- Inbuilt vs user-defined functions
- Type of parameter passing in functions
- Functions vs Lambda functions
- Exception Handling
- File Handling
- Generators & Iterators

OPS concepts

- Introduction to oops concepts
- Creating your first class & objects
- Inheritence, polymorphism, abstraction, encapsulation
- Advanced topics of Python

Week 9

AWS Security – Part 1

Domain 1: Design Secure Architectures
Task 1.1: Design Secure Access to AWS Resources
Knowledge Areas:

- **Access Control Across Multiple Accounts**
- **AWS Federated Access & Identity Services (IAM, IAM Identity Center/SSO)**
- **AWS Global Infrastructure (Availability Zones, Regions)**
- **AWS Security Best Practices (Principle of Least Privilege)**
- **AWS Shared Responsibility Model**

Skills Development:

- **Apply Best Practices to IAM Users & Root Users (MFA)**
- **Design Authorization Model: IAM Users, Groups, Roles, Policies**
- **Role-Based Access Control Strategy (STS, Role Switching, Cross-Account Access)**
- **Strategy for Multiple AWS Accounts (Control Tower, SCPs)**
- **Appropriate Use of AWS Resource Policies**
- **Directory Federation with IAM Roles**

Week 10

AWS Security – Part 2

(Continuation of Week 7 topics with deeper hands-on practice and real-world examples.)
Hands-On Focus:

- **Create and Manage IAM Policies**
- **Setup Multi-Account Access using IAM Roles**
- **Use AWS STS for Temporary Credentials**
- **Implement MFA and Identity Federation**
- **Use AWS Control Tower for Managing Org-wide Policies**
- **Enforce Least Privilege with Fine-Grained Permissions**

Week 11

AWS – Data Security Controls

Task Statement 1.3: Determine Appropriate Data Security Controls
Knowledge Areas:

- **Data Access & Governance**
- **Data Recovery Strategies**
- **Data Retention & Classification**
- **Encryption & Key Management**

Skills Development:

- **Mapping AWS Tech to Compliance Needs**
- **Encrypting Data at Rest (AWS KMS)**
- **Encrypting Data in Transit (TLS via ACM)**
- **Implementing Encryption Key Access Policies**
- **Data Backups & Replication**
- **Defining Data Lifecycle & Protection Policies**
- **Key Rotation & Certificate Renewal**

Week 12

AWS – Scalable & Loosely Coupled Architectures

Task 2.1: Design Scalable & Loosely Coupled Architectures || Domain 2: Resilient Architecture Design

Topics Covered:

- API Management: API Gateway, REST APIs
- Managed Services: SQS, Secrets Manager, Transfer Family
- Caching Strategies
- Microservices: Stateless vs Stateful
- Event-Driven Design
- Scaling Techniques: Horizontal vs Vertical
- Edge Optimization: CDN, Edge Accelerators
- Container Migration
- Load Balancing: ALB

Week 13

AWS – Multi-Tier, Serverless & Containerized Architectures

Knowledge Areas:

- Multi-Tier Architectures
- Queuing & Messaging (Pub/Sub)
- Serverless Technologies (Lambda, Fargate)
- Storage Types (Object, File, Block)
- Container Orchestration (ECS, EKS)
- Use of Read Replicas
- Workflow Orchestration (AWS Step Functions)

Skills Development:

- Designing Microservice/Event-Driven/Multi-Tier Systems
- Scaling Strategies per Component
- Choosing AWS Services for Loose Coupling
- Decision-making: Containers vs Serverless
- Choosing Right Compute/Storage/DB/Networking Solutions

Week 14

AWS – High Availability & Fault Tolerance

Task 2.2: Design Highly Available / Fault-Tolerant Architectures

Topics Covered:

- Global Infrastructure: Regions, AZs, Route 53
- Managed Services: Comprehend, Polly
- Networking Basics: Route Tables
- Disaster Recovery:
  - Strategies: Backup & Restore, Pilot Light, Warm Standby, Active-Active
  - Concepts: RPO, RTO
- Design Patterns: Distributed Systems, Immutable Infra
- Load Balancing & Proxies: RDS Proxy
- Limits: Quotas, Throttling
- Storage: Durability & Replication
- Monitoring: AWS X-Ray

Hands-on Skills:

- Infra Automation for HA
- Multi-AZ / Multi-Region Setup
- HA Metrics Analysis
- Remove Single Points of Failure
- Data Durability Planning
- Choose Right DR Strategy
- Support Legacy Apps with AWS

Week 15

High-Performance & Scalable Storage Solutions

Knowledge of:

- **Hybrid storage solutions**
- **Amazon S3, EFS, EBS**
- **Storage types: object, file, block**

Skills in:

- **Choosing storage based on performance and scalability**
- **Configuring storage to meet future growth needs**

Week 16

High-Performance & Elastic Compute Solutions

Knowledge of:

- **AWS compute services: AWS Batch, EMR, Fargate**
- **Distributed computing and messaging**
- **Auto Scaling, Lambda, ECS, EKS**

Skills in:

- **Decoupling workloads for independent scaling**
- **Selecting compute options and instance types**
- **Setting scaling conditions**

Week 17

High-Performance Database Solutions

Knowledge of:

- **Availability Zones, caching (ElastiCache)**
- **Data access patterns, capacity planning**
- **Database types, engines, replication**

Skills in:

- **Designing database architectures**
- **Using read replicas and caching**
- **Selecting appropriate engine and type (Aurora, DynamoDB)**

Week 18

Scalable Network Architectures

Knowledge of:

- **Edge services: CloudFront, Global Accelerator**
- **Network architecture: subnets, routing, IPs**
- **Load balancing and connectivity options**

Skills in:

- **Designing scalable network topologies**
- **Choosing load balancing strategies**
- **Optimizing resource placement**

Week 19

Data Ingestion & Transformation

Knowledge of:

- **Data tools: Athena, QuickSight, AWS Glue, Kinesis**
- **Ingestion & transfer services: DataSync, Storage Gateway**
- **Secure access, transformation formats, data lake design**

Skills in:

- **Building secure data lakes**
- **Designing streaming and transfer solutions**
- **Implementing visualization strategies**
- **Choosing compute options (e.g., EMR)**

Week 20

Cost-Optimized Storage Solutions (Part 1)

Knowledge of:

- **S3 Requester Pays, FSx, EFS, EBS**
- **Cost tools: Cost Explorer, Budgets, Usage Report**
- **Multi-account billing, cost allocation tags**

Week 21

Cost-Optimized Storage Solutions (Part 2)

Knowledge of:

- **Backup strategies, HDD vs SSD options**
- **Data lifecycle, hybrid storage options**
- **Storage access patterns, tiering (e.g., cold storage)**
- **Storage types: object, file, block**

Week 22

Cost-Optimized Compute Solutions

Knowledge of:

- **Spot, Reserved, and Savings Plans**
- **Instance types: memory, compute optimized**
- **Compute optimization: containers, serverless, microservices**
- **Hybrid compute (Outposts, Snowball Edge)**
- **Scaling strategies, cost tools**

Week 23

Cost-Optimized Database Solutions

Knowledge of:

- **Cost tools: Cost Explorer, Budgets, Usage Report**
- **Caching strategies, data retention policies**
- **Capacity planning, proxies, database connections**
- **Database engines: Aurora, DynamoDB, migrations**
- **Replication: read replicas**
- **Relational vs non-relational databases**

Week 24

Cost-Optimized Network Architectures

Knowledge of:

- **Load balancing: ALB**
- **NAT instances vs gateways**
- **VPNs, private/dedicated lines**
- **Routing, topology, Transit Gateway, VPC peering**
- **DNS and network services**
- **AWS cost tools and features**

Week 25

DevOps (Part 1)

- **What is DevOps?**
- **Principles: CALMS (Culture, Automation, Lean, Measurement, Sharing)**
- **Benefits: Faster cycles, reduced failure, faster recovery**
- **Lifecycle:**
  - **Plan (Jira)**
  - **Develop (Code + Tests)**
  - **Build (Maven, Gradle)**
  - **Test (JUnit, Selenium)**

Week 26

DevOps (Part 2)

- **Release: Version control, sign-offs**
- **Deploy: CI/CD (Docker, Kubernetes)**
- **Operate: Monitoring and incidents**
- **Monitor: Prometheus, Grafana**
- **DevOps Tools:**
  - **Categories: CI/CD, monitoring, IaC**
  - **Tools: Jenkins, Docker, Kubernetes, Terraform**
  - **Integration: Jenkins + Ansible pipelines**

Week 27

Git Basics & Advanced Features

- Repo creation, cloning, committing, tagging
- Branching strategies: Feature, Release
- Stashing changes
- Rebasing vs merging
- Merge conflict resolution

Week 28

Git Workflow Models

- Centralized workflow
- Git Flow: Feature and release branches
- Trunk-based development
- Use case: Multi-team global project with GitFlow
- Case study: Open-source collaboration

Week 29

Git, Jenkins & Maven

- CI/CD overview with Jenkins
- Jenkins installation and setup
- Maven integration: Java builds, dependencies, packaging

Week 30

Jenkins Pipelines & Advanced Features

- Declarative vs scripted pipelines
- Jenkinsfile scripting
- Parallel builds, agents, Blue Ocean UI
- Use case: Banking CI setup with Jenkins + Maven
- Case study: Agile build automation

Week 31

CI with Jenkins

- Designing modular CI pipelines
- Git webhook integration
- Automated testing: Unit (JUnit), UI (Selenium)
- Test reports: JaCoCo, SonarQube
- Monitoring CI metrics: Success rate, MTTR
- Alerts: Slack, Email
- Use case: Early bug detection with CI

Week 32

Configuration Management with Ansible

- Ansible setup and inventory
- Playbooks with roles, variables, handlers
- Best practices for reusable playbooks
- Ansible Vault for secrets
- Dynamic inventories
- Ad-hoc commands for real-time management

Week 33

Docker Containerization

- Containers vs VMs
- Docker architecture: Daemon, CLI, Registry
- Networking: Bridge, host, overlay
- Dockerfiles with multi-stage builds
- BuildKit and image optimization
- Security: Minimal base images, DCT

Week 34

Kubernetes Orchestration

- Kubernetes components: API server, etcd, scheduler
- Pod lifecycle and states
- Workloads: Deployments, StatefulSets, DaemonSets
- Autoscaling, Liveness & Readiness probes
- Networking: DNS discovery
- Persistent storage: PVs and PVCs

Week 35

Monitoring

- Prometheus: Metrics collection, querying, alert rules
- Grafana: Custom dashboards, threshold-based alerts
- CloudWatch: AWS service monitoring, alarms, insights

Week 36

Terraform Provisioning

- IaC benefits and reusable modules
- Remote state management and locking
- Cloud providers: AWS, Azure, GCP

Week 37

IaC with CI/CD

- GitOps for infrastructure changes
- Automating deployment with Jenkins, Ansible, Kubernetes

Week 38

Final Project & Evaluation

- End-to-end implementation and assessment of learned concepts

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