

Cloud & DevOps for System Administrators

With Real Industry Projects

In collaboration with



Microsoft

150+ hrs Live Classes





From System Administrator To Cloud & Devops Professionals

Built for **System Admin Professionals**, this program empowers you to lead **Cloud and DevOps** initiatives in today's cloud-first enterprises..



Real Projects for System Admin

Work on Capstone Projects from system admin domain in cloud.



Certification from Microsoft

Receive a prestigious completion certificate from Microsoft



Cloud & Infrastructure Automation

Understand how cloud infrastructure powers modern systems — from provisioning to production operations.



Global Cloud Ecosystem Exposure

Learn AWS, GCP, and Azure with end-to-end real projects from System admin domain.

Program Summary



Program Eligibility

Professionals having min 1 years of exp.



Training Mode

100% Instructor led Live Online sessions



Program Faculty

Seasoned Industry Experts & Mentors



Program Duration

5 Months Program
Weekday and
Weekend Batch



Payment Options

No cost EMI,
Interest free loan



Certification

Earn a Microsoft-verified Certification in Cloud and Devops.

Exclusive

Master Production-
Ready Cloud & DevOps Skills

Real Domain Projects

Work on real cloud projects designed for cloud engineers.

Practical Skills
Gain hands-on experience in cloud and devops

Understand where Cloud & DevOps workflows operates

Dedicated Mentors
Dedicated projects mentors from industry

Important Note: Gain real project experience in Cloud and DevOps under the guidance of industry mentors. Work with a team to implement real-world production projects.



Who is this program for?

A unique program For
System Administrators

 www.learnbay.co

 77956 87988

Entry to Mid Level Professionals with 1+ Years of Experience

Designed for system administrators, upgrading to cloud and DevOps roles



Designed For System Administrator

Important Note: This program is not for freshers, fresh grads, students.

Program Outcome: What's in it for you?



Full stack Cloud Mastery for Professionals

Learn AWS, GCP, and Azure with end-to-end real projects. Mastering these skills helps you to manage, deploy, and scale cloud-based app.



Master Production-Ready Cloud & DevOps Skills

By integrating industry-relevant cloud and DevOps practices into our programs, we ensure learners are prepared to lead and innovate in their roles.



Role Based Specialised Track With Projects

Domain Electives For System Administrator

Why choose Learnbay?

Cloud and DevOps Certification for System Admin

Industry-Backed Certification

Stand out with a prestigious certification from **Microsoft**



Get Certified
from



Real-World System Admin & Cloud Projects

Gain hands-on experience through domain-focused infrastructure projects and receive certifications validating your practical skills.



Learn from Industry Mentors

Gain insights from top industry experts in Cloud & Devops. Our mentors bring **real-world experience** to help you master advanced skills.



Personalized Support

Get tailored guidance with **1:1 doubt-clearing sessions** for a deeper understanding.

ob Referral & Career Assistance

No cold applications. Your profiles goes straight to **recruiters** for relevant jobs.



We refer you **directly** to hiring companies

WHAT THIS MEANS FOR YOU



Skip the ATS Black hole

Your resume reaches Humans not Algorithms



Access Exclusive Opening

Roles not posted to job boards



Matched to your skills

Job which is aligned to your profile and domain

Prepare to ace the interview

Get interview ready with expert guidance



Mock Interviews

5 Session with Industry Expert



Multiple Technical and HR Round with detailed feedback



AI-Optimized Resume

ATS-friendly and Job ready



Optimized to highlight your technical skills and domain expertise

Complete Support until Placed

We're with you in every step

Get certified

and accelerate your career growth

Azure Certifications



ELEVON AI PVT. LTD.

Globally recognised certifications aligned with
real-world cloud & DevOps roles.

Designed to validate skills, not just theory.

Program Fees

Live online classes

- ✓ Live online interactive sessions
- ✓ 1:1 online Doubt Session with experts
- ✓ Virtual Mock interviews
- ✓ Online Capstone projects

Program Fee

₹ 1,20,000/-

+18% GST

Payment Plan:

**No Cost EMI Available
For 6, 9 and 12 Months**

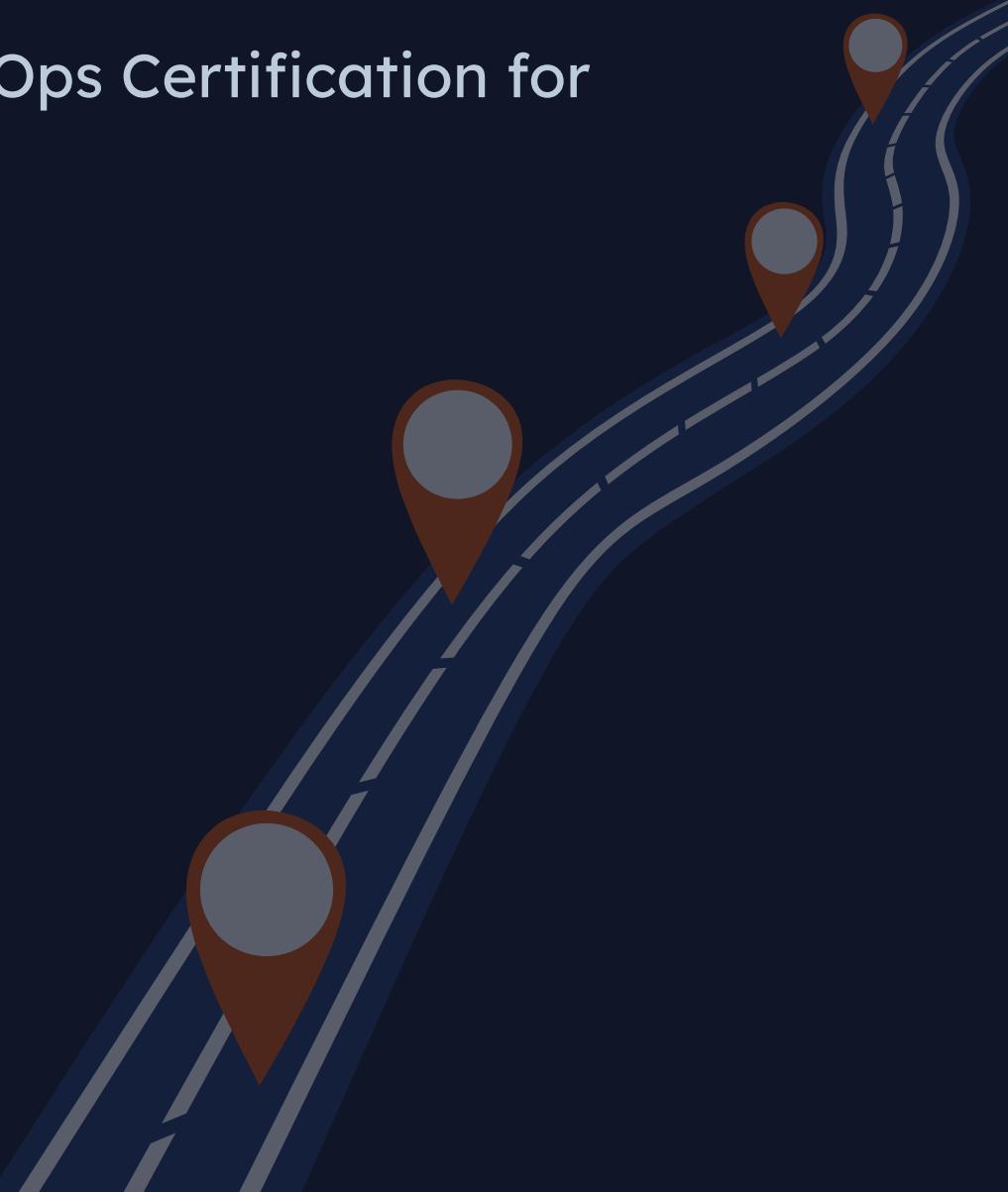
Tools and Topics



5 Months Program

Program Roadmap

Cloud and DevOps Certification for
System Admin



Program Curriculum Roadmap

1

MODULE 1

Duration: 20 Hours

Cloud Basics and Linux Fundamentals

Linux Fundamentals, Commands, SSH and utilities

2

MODULE 2

Duration: 25 Hours

Python Programming Essentials

Python for devops, pip, virtual environments

3

MODULE 3

Duration: 20-25 Hours

AWS Cloud Practitioner

Essential AWS skills to build, secure and manage cloud workloads

4

MODULE 4

Duration: 30 Hours

AWS Professional Solutions Architect

Learn Advanced AWS skills plan, run and protect large cloud setups

5

MODULE 5

Duration: 60 Hours

DevOps Mastery - Infrastructure & automation

Git, GitHub/GitLab, CI/CD pipelines, Jenkins

6

MODULE 6

Duration: 40 Hours

Microsoft Azure Proficiency (Optional)

Virtual Networks, Blob Storage, Azure SQL

7

MODULE 7

Duration: 20 Hours

MLOps Engineering Specialisation

MLOps fundamentals, MLmanagement, CI/CD

8

MODULE 8

Duration: 20 Hours

SPECIALISATION - For System Administrators

Cloud & DevOps Engineering Track



Program Curriculum

A unique program For
System admin Professionals

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Cloud Basics and Linux Fundamentals

Module - 01

outcome

This term builds **foundational Linux** and system administration skills, including user management, file permissions, and **system monitoring**. You'll also gain introductory cloud computing knowledge and learn basic shell scripting for **automation**.

Topic Duration: 20 Hours

Topic 1: Linux Basics and System Administration

- **Overview of Linux:** History, architecture, and OS comparisons.
- Linux Kernel and Shell: Types of shells and kernel responsibilities.
- Basic Command Usage: **Key commands like ls, cd**
- File Permissions: Manage access with chmod, chown

Topic 2: Practical Exercises and Assignments

- **User Management:** Add, modify, or delete users with useradd.
- Create and manage groups with groupadd.
- Sudo Configuration: Edit /etc/sudoers to assign privileges.
- **System Monitoring: Use tools like top, df**

Topic 3: Introduction to Cloud Computing (AWS, Azure, GCP)

- **Network Configuration:** Set up static IPs and configure interfaces.
- Generate and manage SSH keys with ssh-keygen.
- Shell Scripting Basics: Scripts for automation and tasks.
- Loop Statements: Automate with while and for loops.



This term covers Python basics, data structures, advanced concepts, and **cloud automation**, equipping you with the skills to **automate tasks** and manage cloud infrastructure effectively.

Topic Duration: 25 Hours

Topic 1: Python Basics & Fundamentals

- Variables and Data Types: **Int, float, str, bool**
- Operators: Arithmetic, logical, and comparison operations.
- Development Environment: Setting up IDEs like PyCharm and Jupyter.

Topic 2: Python Programming Foundations

- If-Else Statements: Nested if, ternary operators.
- Loops: For, while, break, continue, and else in loops.
- **Defining functions** with def and using return.
- Arguments: Default values, *args, **kwargs for flexibility.

Topic 3: Data Handling and Structures

- **Lists:** Indexing, slicing, and methods like append(), pop().
- Nested dictionaries, keys(), values(), and get() methods.
- **File Operations:** Reading, writing, and safety using the *with* statement.

Topic 4: Advanced Python Concepts

- List, dictionary, and set comprehensions.
- Lambda Expressions: Inline functions for map(), filter(), and reduce().
- **Exception Handling: Debugging with try-except blocks.**

Topic 5: Python for Cloud and DevOps

- Scripting for cloud automation
- Python libraries for cloud management
- Automating cloud infrastructure deployment with Python

This term provides foundational AWS cloud knowledge, covering core services, **cloud concepts**, security, and basic **hands-on practices**, enabling learners to understand and operate within AWS cloud.

Topic Duration: 20–25 Hours

Topic 1: Cloud Computing and AWS Fundamentals

- **Introduction to Cloud Computing:** Cloud concepts, service models (IaaS, PaaS, SaaS), deployment models.
- **AWS Overview:** Introduction to AWS platform and global cloud adoption.
- **AWS Global Infrastructure:** Regions, availability zones, edge locations, and global services.
- **Shared Responsibility Model:** Understanding AWS vs customer responsibilities.

Topic 2: AWS Core Services Overview

- **Compute Services:** Overview of EC2 and basic instance concepts.
- **Storage Services:** Overview of S3, objects, buckets, and storage classes.
- **Database Services:** Introduction to RDS and managed databases.
- **Serverless Basics:** Overview of AWS Lambda and event-driven computing.

Topic 3: AWS Security, Identity, and Access Management

- **AWS Account Setup:** Root account security and **MFA** configuration.
- **IAM Fundamentals:** Users, groups, roles, and policies.
- **Security Basics:** Security groups, basic access control, and best practices.
- **Compliance Overview:** Basic AWS compliance and shared security concepts.

Topic 4: Monitoring, Pricing, and Basic Operations

- Monitoring Services: Introduction to CloudWatch metrics and logs.
- Billing and Pricing Models: Pay-as-you-go, cost estimation, and billing alerts.
- Cost Management: Basic cost optimization and usage monitoring.
- Hands-on Labs: Launch EC2 instance, create S3 bucket, IAM configuration.

Project 1 Static Website Hosting with CDN

Deploy a static website to S3, configure CloudFront CDN, set caching rules, enable access logs, and secure the website using IAM and bucket policies.

S3

CloudFront

IAM

Project 2 EC2 Deployment and Monitoring Pipeline

Launch an EC2 instance, install a sample application, configure CloudWatch metrics & alarms, set CPU-threshold alerts, and visualize monitoring dashboards.

EC2

CloudWatch

CloudWatch Alarms



AWS Associate & Solutions Architect

Module - 04

outcome

This term focuses on solution architecting and advanced **AWS services**, covering scalable design, high availability, **security**, migration strategies, and hands-on architecture scenarios aligned with **AWS Associate-level** certifications.

Topic Duration: 30 Hours

Number of Projects with dedicated mentor

4 Guided projects | 2 Adv AWS projects on real data

Topic 1: AWS Compute and Networking Architecture

- **EC2 Deep Dive:** Instance types, AMIs, key pairs, security groups.
- **Scaling Concepts:** Auto Scaling basics and load balancing overview.
- **Networking Fundamentals:** VPC design, subnets, route tables, gateways.
- **Network Security:** Security groups vs network ACLs.

Topic 2: Storage and Database Architecture

- **Elastic Block Storage (EBS):** Volumes, snapshots, and backup strategies.
- **Amazon S3 Advanced Features:** Lifecycle policies, versioning, encryption.
- **Database Services:** RDS backups, Multi-AZ deployments.
- **NoSQL Overview:** DynamoDB tables, keys, and use cases.

Topic 3: Serverless and Advanced AWS Services

- **AWS Lambda:** Function creation, triggers, and execution model.
- **API Gateway:** Building APIs for serverless applications.
- **Advanced Data Services:** Amazon Redshift overview and data ingestion.
- **Event-Driven Architecture:** Designing serverless workflows.

Topic 4: High Availability, DR, and Migration

- **High Availability Design:** Fault-tolerant and scalable architectures.
- **Disaster Recovery:** Multi-AZ vs multi-region strategies, RPO and RTO.
- **Backup and Recovery:** Data protection and resilience strategies.
- **Migration Approaches:** Lift-and-shift, re-platforming, re-architecting.

Topic 5: Architecture Case Studies and Certification Preparation

- **Architecture Design Scenarios:** Real-world AWS architecture use cases.
- **Security Best Practices:** IAM policies, encryption, access control.
- **Cost Optimization:** Designing cost-efficient architectures.
- **Certification Preparation:** Hands-on labs and practice scenarios aligned to AWS Solutions Architect (Associate).

Project 1 Scalable Multi-Tier Application Architecture

Build a production-ready architecture using EC2 autoscaling, load balancers, multi-AZ RDS, S3 storage, and implement a fully scalable backend system.

ALB

ASG

RDS

Project 2 Serverless Order Processing System

Develop an event-driven order pipeline where API Gateway receives orders, Lambda processes them, and DynamoDB stores order data with automated notifications.

Lambda

API Gateway

DynamoDB



DevOps Mastery - Infrastructure & Automation

Module - 05

outcome

This term covers core DevOps practices: version control, automation, configuration management, monitoring, and infrastructure as code. Students will use tools like Git, Jenkins, Ansible, Terraform, Prometheus, and Grafana. By course's end, they'll streamline development for faster delivery and resilient software systems.

Topic Duration: 60 Hours

Topic 1: Introduction to DevOps

- **DevOps Overview:** What is DevOps, Benefits of DevOps, DevOps lifecycle, Key principles
- **DevOps Culture and Collaboration:** Differences between DevOps and traditional models, DevOps culture and mindset, Team roles

Topic 2: Server and Application Virtualization

- **Virtualization Overview:** What is virtualization, benefits, and evolution from physical servers to virtualized environments
- **Virtualization Types:** Full virtualization vs para-virtualization, use cases and trade-offs
- **Hypervisors:** Type 1 vs Type 2 hypervisors, overview of VMware, KVM, Hyper-V
- **Virtual Machines:** VM concepts, resource abstraction (CPU, memory, storage, networking)
- **Application Virtualization:** Application isolation concepts, overview of ThinApp and XenApp
- **Virtualization in Cloud:** How cloud platforms abstract virtualization for DevOps environments

Topic 3: **Version Control**

- **Introduction to Version Control:** Importance of version control, Version control systems (VCS)
- **Git Basics:** Git setup, Git workflow, Branching and Merging, Tagging, Git commands
- **GitHub/GitLab:** Repository management, Collaboration, Pull Requests, Webhooks

Topic 4: **Continuous Integration (CI)**

- CI Concepts: Definition, benefits, and tools overview
- Jenkins: Strategies, versioning, and Git practices
- GitLab CI: Configuration, YAML syntax, runners, and CI/CD pipeline

Topic 5: **Containerization and Modern Virtualization**

- Containers Overview: What are containers, benefits over traditional virtual machines
- VMs vs Containers: Architecture differences, efficiency, security, and real-world scenarios
- Docker Fundamentals: Docker architecture, images, containers, registries
- Container Lifecycle: Build, ship, run concepts
- Container Use Cases: Microservices, portability, scalability
- Introduction to Orchestration: Why orchestration is required for containerized applications

Topic 6: **Build and Release Management**

- Build Automation: Introduction, tools like Maven and Gradle, CI automation.
- Package Management: Repositories (Nexus, JFrog Artifactory), dependency management.

Topic 7: Data Migration in DevOps and Multi-Cloud Environments

- Data Migration Basics: Types of data migration, benefits, and common challenges
- Migration Strategies: Lift-and-shift, re-platforming, re-architecting approaches
- Migration Planning: Pre-migration assessment, dependency analysis, rollback planning
- Data Integrity and Security: Ensuring consistency, security, and compliance during migration
- DevOps-Driven Migration: Using automation and CI/CD pipelines for migration workflows
- Multi-Cloud Migration: Migration considerations across hybrid and multi-cloud environments

Topic 8: Continuous Delivery (CD) & Deployment Automation

- **CD Overview and Tools:** Continuous delivery principles, Differences between CI and CD
- **Deployment Automation:** Infrastructure as Code (IaC), Benefits of automation, Tool overview (Ansible, Terraform)
- **Ansible Basics:** Ansible playbooks, Inventory management, Topics, Roles
- **Terraform:** Terraform basics, Writing configuration files, State management

Topic : 9 Container Orchestration Basics

- **Introduction to Containers:** What are containers, Benefits of containerization, Introduction to container orchestration
- **Kubernetes:** Kubernetes architecture, Pods, Services, Deployments, Namespaces, ConfigMaps, Secrets
- **Helm:** Helm basics, Charts, Repositories, Managing Helm releases

Topic 10: Continuous Monitoring

- **Monitoring and Logging Concepts:** Importance of monitoring, Metrics, Logging basics
- **Prometheus and Grafana:** Prometheus installation, Metrics collection, Grafana dashboards.
- **ELK Stack (Elasticsearch, Logstash, Kibana):** Setting up ELK, Log collection and processing, Visualizing logs in Kibana

Topic 11: Resilience, High Availability, and Disaster Recovery in DevOps

- **Resilience & HA Basics:** Fault tolerance, redundancy, failover
- **High Availability Setup:** Load balancing, auto-scaling, health checks
- **Disaster Recovery:** RTO/RPO, backups, replication, recovery models

Project 1 Git-Centric CI Pipeline Implementation

Create a CI pipeline that executes linting, testing, packaging, and artifact storage. Include branching strategy, PR validations, and automated notifications for pipeline outcomes.

Jenkins

GitHub Actions

DynamoDB

Project 2 Dockerized Microservice Deployment

Containerize a simple application, create Dockerfiles, optimize layers, push images to a registry, and deploy onto a VM or container runtime with proper networking.

Docker

Docker Hub

DynamoDB



Microsoft Azure Proficiency (Optional)

Module - 06

outcome

This term covers Azure administration, solution architecting, DevOps, and certification preparation, equipping you with the skills to design, deploy, and manage cloud solutions on Azure.

Topic Duration: 40 Hours

Topic 1: Azure Administration & Identity Management

- **Introduction to Azure:** Navigating the portal and basic CLI commands.
- Account Setup: Subscription types, resource groups, and billing alerts.
- Azure Identity: Role-based access control and Active Directory.

Topic 2: Architecting Solutions on Azure

- Advanced Networking: Load balancing, VPN, and ExpressRoute setups.
- Data Solutions: Azure SQL, Cosmos DB, and Synapse Analytics.
- **Developing for Cloud: Microservices, containers, and serverless.**

Topic 3: Advanced Azure Specializations

- **Azure DevOps:** CI/CD pipelines for streamlined deployment.
- Application Modernization: Optimize apps with Azure services.
- Governance and budget controls for efficiency.
- Azure Storage: **Blob tiers and Data Lake integration**

Topic 4: Certification Preparation for Azure

- Certification Prep: Solutions Architect Expert exam readiness.
- Case Studies: **Real-world cloud scenarios and best practices.**
- Core Domains: Review concepts & study resources



Outcome of this term: This specialisation addresses why AI models fail in production by training Cloud and DevOps professionals to deploy, monitor, and operate ML systems reliably in real-world environments — focusing on engineering AI systems, not building algorithms.

Topic Duration: 4 Weeks

Topic 1: Foundations of MLOps & Production ML Systems

- MLOps fundamentals, ML lifecycle overview, role of DevOps in ML systems, model packaging concepts, inference services, containerising ML models.

Topic 2: Cloud & Kubernetes-Based ML Deployment and Scaling

- Deploying ML inference services on cloud, Kubernetes-based model deployment, scaling AI workloads, CPU vs GPU deployment concepts.

Topic 3: Monitoring, Observability & Reliability for ML Systems

- Monitoring ML systems, latency & error tracking, data drift & model drift concepts, logging and observability for AI services

Topic 4: Model Governance, CI/CD & Production MLOps

- Model versioning & governance, CI/CD for ML models, rollback strategies, securing AI APIs, production MLOps best practices



Cloud & Devops Specialization For

For System Admin Professionals

With Real Industry
Projects



Cloud & DevOps for **System Administrators**

Why Learn This?

Duration: 6 Weeks

System administrators must manage cloud infrastructure at scale and automate operations. This specialisation upgrades traditional admin skills into cloud-first infrastructure engineering.

Week 1:

- Cloud-based system administration, OS hardening practices, user & access control, VM lifecycle management.
- Secure image baselining, IAM roles vs instance profiles, SSH keyless authentication, monitoring agents, and best practices for cloud resource governance.

Week 2:

- Infrastructure automation concepts, configuration management, environment consistency, repeatable provisioning.
- Terraform fundamentals for system administrators, desired state configuration, immutable infrastructure patterns, automated patching pipelines, and configuration drift detection.

Week 3:

- Backup strategies, disaster recovery planning, high availability models, incident handling basics.
- Snapshot automation, cross-region DR replication, failover orchestration, runbook creation, chaos engineering basics, and SRE-style incident response workflows.

● **Week 4:**

- Containerised system administration, Docker fundamentals for sysadmins, container security, image lifecycle, and resource isolation.
- Container logging and monitoring, scanning for vulnerabilities, and orchestrator-aware OS management.

● **Week 5:**

- Cloud monitoring and observability foundations, log aggregation, alerting pipelines, metric collection standards, and automated remediation workflows.
- CloudWatch/Prometheus fundamentals, structured log design, performance troubleshooting, and event-driven remediation using Lambda.

● **Week 6:**

- DevOps operations for sysadmins: CI/CD pipeline basics, release automation, environment hygiene, and operational governance.
- Git-based workflows for system changes, automated environment rollbacks, policy-as-code, and compliance automation essentials.

Capstone Projects



Capstone Projects 1

Project 1: Cloud Server Hardening & Automation **Tools:** Linux, AWS EC2, Ansible

Automate server hardening, patching, and access management for cloud servers.

Capstone Projects 2

Project 1: Enterprise Infrastructure Migration to Cloud **Tools:** AWS EC2, IAM,

Migrate legacy infrastructure to the cloud with secure access and recovery planning.

Capstone Projects 3

Project 1: Infrastructure Provisioning with Terraform **Tools:** Linux, AWS EC2, IAM Roles for SysAdmins

Build reusable Terraform modules to provision servers, manage IAM roles, enforce consistent configurations, and automate environment creation.

Capstone Projects 4

Project 1: Monitoring, Alerts & Automated Remediation **Tools:** CloudWatch, Lambda, SNS,

Set up system metrics, logs, alert rules, and auto-remediation workflows that detect failures, trigger healing actions, and maintain uptime across cloud servers.



Thank you!

A premium learning experience for professionals committed to growth, excellence, and impact.

For more queries and information please reach out to us at:

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