

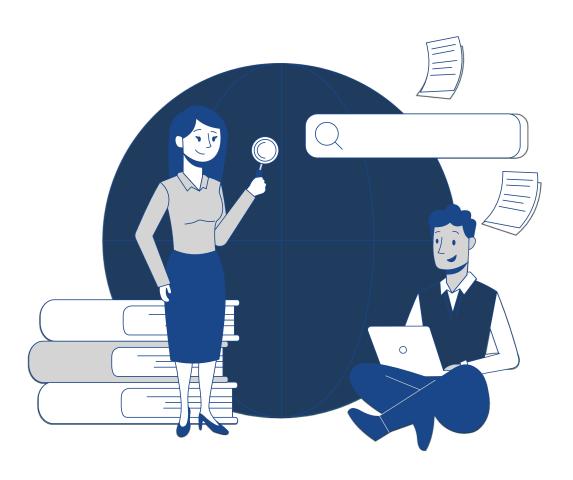
# DevOps Job Oriented Program

Become a Multi-Skilled DevOps Professional and Land High Paying Jobs at Top Companies



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# **About K21Academy**

K21 Academy Founded by Mr. Atul Kumar, an experienced Multi-Cloud & DevOps expert, and author, we have partnered with industry leaders like Oracle (Training Partner) and Microsoft (Silver Partner).

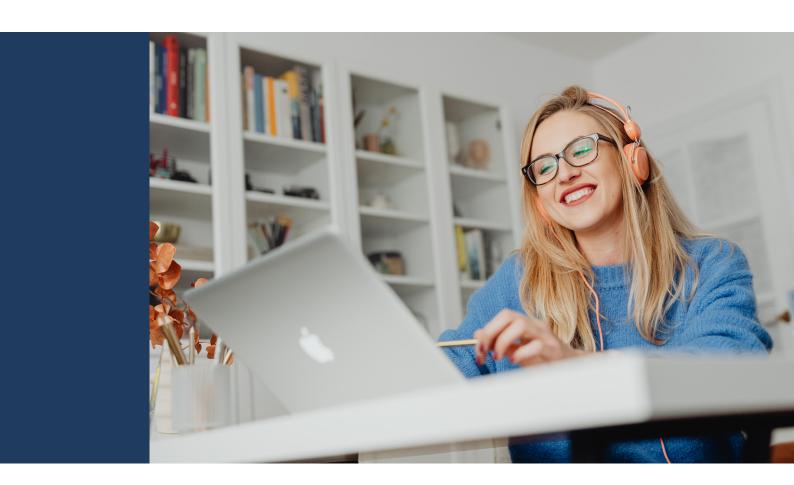
We offer online courses on AWS, Azure, Oracle, Google, DevOps, and Kubernetes with top-notch study material.

Our study materials are comprehensive and up-to-date, covering everything you need to know about Cloud and DevOps technologies.

With over 12,000 individuals already benefiting from our training and securing higherpaying jobs, our community of over 150,000 social media followers trusts us to guide them in their careers.

Our team consists of highly skilled Azure/AWS/Google/Oracle Cloud Engineers, DevOps & Kubernetes Experts, Python & Data on Cloud Architects, and Apps DBAs/DBAs Architects who possess extensive knowledge and expertise in Cloud & DevOps technologies.

Curious to know more about us? Visit our website today www.k21academy.com





### **Meet your Mentor**



You will be mentored by Atul Kumar, the founder of K21 Academy, and his team of MultiCloud experts. Atul has over 20 years of experience in the IT industry.

He began his IT career in 2000 as an Oracle DBA/Apps DBA. The first few years were tough for him, with very little growth. However, in 2005, he transitioned to Oracle Security & IAM, and his career took off. He had a great run for the next 5-6 years, with a lot of growth and opportunity.

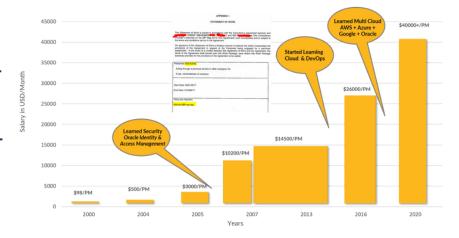
However, around 2012-13, he started to feel stuck. He wasn't learning anything new,

wasn't growing, and wasn't being challenged. At that time, the Cloud was gaining popularity, and Containers (Docker) were emerging, offering many higher-paying job opportunities in those fields.

So, he decided to make a change in his career path and transitioned from working on On-premises (Security, Infrastructure & Databases) to focusing on Cloud & DevOps. Over the next 2 years, he learned about important Cloud platforms like AWS, Azure & Oracle, as well as DevOps. He kept up with the new Cloud-based tools & technologies such as Google Cloud, Docker, Kubernetes, Terraform, Ansible, CI/CD, Jenkins, etc.

Learning Cloud & DevOps gave him the opportunity to work with some of the world's biggest and most prestigious clients such as Toyota, Royal Bank of Scotland, Worldpay, Scottish Government, NHS (United Kingdom), Saudi Railways, datAvail, Tuscan Electric (USA), Oracle, and more.

# Atul's Mid-Career Crisis







The DevOps Job Oriented Program is your gateway to a thriving career in the dynamic world of DevOps. Crafted to cater to the evolving industry demands, this comprehensive program is designed to equip you with the essential skills needed for a wide range of DevOps-related roles. Whether you aspire to be a DevOps Engineer, Site Reliability Engineer (SRE), or Continuous Integration/Continuous Deployment (CI/CD) Specialist, our program is your steppingstone to success.

Throughout this program, you'll be immersed in a hands-on learning experience, engaging with industry-standard tools and real-world projects. Our commitment is to empower you with the knowledge and expertise that employers seek in a competitive job market. We will guide you through high-impact industry projects and practical labs, allowing you to master the art of DevOps.

You'll have the opportunity to dive deep into a wide range of DevOps technologies, including but not limited to Git, CI/CD, Jenkins, Ansible, Terraform, Docker, Kubernetes and more. Working closely with seasoned DevOps professionals, you'll gain invaluable insights and mentorship as you tackle real-world challenges. Our program is designed to provide you with practical experience that aligns with industry needs.

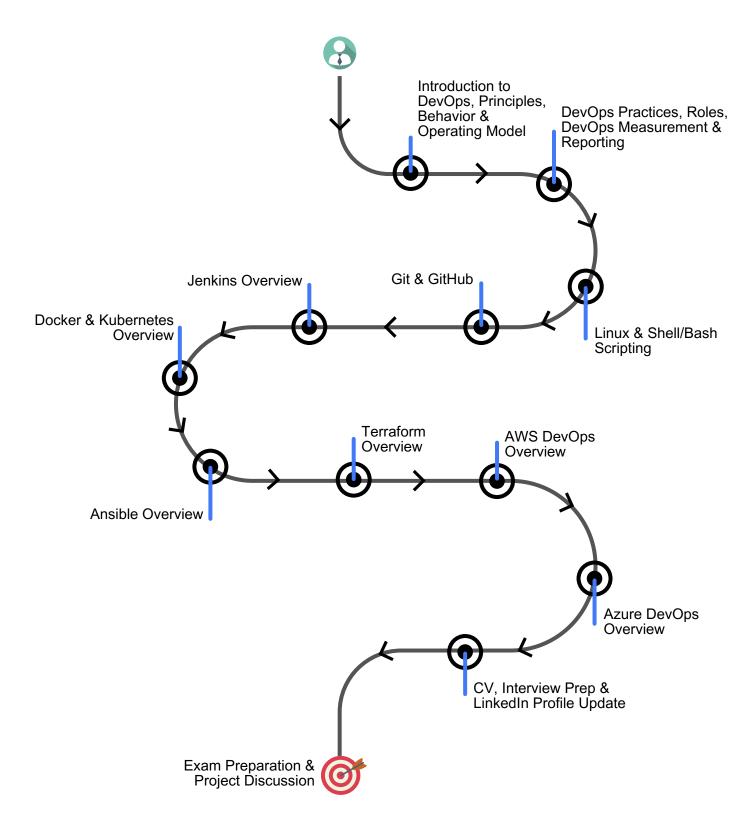
The DevOps Job Oriented Program primes you for a multitude of roles within the DevOps landscape. Whether you aim to become a DevOps Engineer, Automation Specialist, or Cloud DevOps Architect, our program equips you with the skills and certifications you need to excel in your chosen field. You can target certifications such as AWS Certified DevOps Engineer, Google Cloud Professional DevOps Engineer, and more.

We understand the importance of certifications in the DevOps world. That's why we offer the opportunity to select one certification from our catalog. We'll provide you with comprehensive study materials and exam preparation tools to ensure you are fully prepared to ace your certification exam. This strategic advantage will significantly boost your employability.





### **Course Curriculum**





# **DevOps Job Oriented Program Course Outline**

#### **MODULE**



#### **Introduction To DevOps, Principles, Practices**

- · What Is DevOps?
- · Why DevOps?
- · What DevOps Is Not?
- · Objectives Of DevOps
- · Business Value Of DevOps
- · Principles Of DevOps
- · CALMR Model In DevOps
- Top 10 DevOps Best Practices
- · RACI Model
- RCA Process

# 2

# DevOps Roles & Responsibilities, Culture, Behavior & Operating Model

- DevOps Roles
- DevOps Responsibilities In An Organization
- · DevOps Improvements
- · Dev + Ops Before Agile Culture
- Dev + Ops After Agile Culture
- · Wall Of Silos In Agile World
- Golden Circle Of DevOps
- · Shift Lift Strategies
- Rugged DevOps
- DevSecOps



# DevOps & Automation CI/CD, DevOps Measurement, Metrics & Reporting

- · Continuous Integration
- Continuous Testing
- · Continuous Delivery / Deployment



- Continuous Monitoring
- Continuous Feedback
- DevOps Adoption Challenges
- DevOps Risks
- · Key Metrics Of DevOps Such As MTTR, MTBF
- RRO And RTO In DevOps

#### **Linux & Shell/Bash Scripting**

- · Linux Distribution, Connectivity, MAN Page
- Common Linux Commands
- · Vi Editor, Permission, Copy File
- · Bash Shell & Bash Script

#### Hands-on-Lab

- · Create simple Bash Script
- · Define variables in Bash Script
- Arithmetic Operations & Conditional Statements
- · Comparison & Logical Operators
- Loops in Bash

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#### Git & GitHub, (CI/CD) With Jenkins

- · Git Introduction, Installation, And Setup
- Working With Git, Common Terminologies, And Commands
- Git Workflows
- An Overview Of Jenkins
- Getting Started With Jenkins & Installation Of Jenkins
- · Plugins And Its Uses
- · Setting Up Your Build Jobs
- Using Metrics To Improve Quality
- Nodes And Master-Slave Configuration
- Performing Automated Deployment And Continuous Delivery
- · Pipeline Execution Of CI-CD Jobs
- Jenkins Administration Activities

#### Hands-on-Lab

- Git, GitHub Installation & Setup
- Install & Configure Jenkins on Amazon Linux 2 AMI
- Installing and Configuring GIT & Maven Build Tools on Jenkins for Continuous Integration (CI)
- Install Tomcat on AWS Linux & Deploy Maven Project
- Install Jenkins on Windows



#### **Docker & Kubernetes Overview**

- Docker Introduction
- · Docker Architecture And Its Usages
- Docker Vs Other VM's Components Difference
- · Docker Vs Other VM's Cost And Time Factors
- Docker Vs Virtualization
- Docker Commands Introduction
- Docker Hub Introduction
- Docker Cloud Introduction And Integration With AWS, Azure
- · Creation Of Images
- Docker Volumes And Port Forwarding Introduction

#### Hands-on-Lab

- · Creating & Connect to Ubuntu EC2 Instance
- Create & Manage Docker on Ubuntu (Container, Image, Networking, Volume, Dockerfile, Compose)
- Create & Connect 3 Linux (Ubuntu) EC2 Instances on AWS Cloud To Set Up Kubeadm Cluster
- Create & Connect To Ubuntu Server On Azure Cloud Account

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#### **Ansible Overview**

- · Ansible Introduction
- · Ansible AdHoc Commands
- Basics Of Configuration Management ( Push Vs Pull Based)
- · Chef Vs Puppet Vs Ansible Vs Salt
- · Ansible Playbook Introduction
- Ansible Vault And Its Features
- · Ansible Galaxy Introduction

#### Hands-on-Lab

- Install & Configure Ansible Controller & Target Node
- · Ansible Ad Hoc Commands
- Ansible Playbook
- · Using Variables and Facts

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#### **Azure DevOps Overview**

- · Azure GIT Introduction
- · Azure CI/CD Pipeline Overview
- · Azure Dashboards
- Azure Test Plans
- Azure Artefacts



#### **Terraform Overview**

- Terraform Introduction
- · Terraform Modules
- Terraform Commands

#### Hands-on-Lab

- · Installing Terraform on Windows
- · Getting Started With Terraform in AWS
- · Creating An EC2 Instance
- Modifying and Deleting Resources
- · Creating VPC and Subnet

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#### **AWS DevOps Overview**

- · AWS Overview & Services
- · AWS CodeCommit, CodeDeploy, CodeBuild
- Monitoring & Logging in AWS
- · Infrastructure as Code (IaC) Cloud Formation

#### Hands-on-Lab

- · Working with AWS CodeCommit
- · Create a Simple Pipeline (CodePipeline)

11

#### CV, Interview Prep & LinkedIn Profile Update

- CV Preparation
- Interview Preparation
- · LinkedIn Profile Update
- · Expert tips & tricks

12

#### **Exam Preparation & Project Discussion**

- · What is DOFD Exam & what to expect
- · How to Register & Prepare for the Exam
- Sample Exam Qs
- · Real-Time Projects Discussion



# **Curated Projects (DevOps)**



Setting Up and Running SonarQube for Efficient Source Code Project Analysis

In this project, you will lead the implementation of SonarQube for efficient project analysis, enabling the development team to proactively identify and resolve code quality issues. Your responsibilities include configuring the SonarQube dashboard, integrating it seamlessly into the existing development workflow, and setting up customized quality gates tailored to the specific requirements of the projects.

Deploy Netflix Clone Application On Kubernetes Using CICD Jenkins integrating security with SonarQube & Trivy

This comprehensive project involves the adoption of Docker, Jenkins, SonarQube, Trivy, and Kubernetes to create an automated and streamlined deployment pipeline. The primary objective is to deploy a Netflix clone application on a Kubernetes cluster.



Deployment of Super Mario on Kubernetes using Terraform

This project involves deploying the Super Mario game onto a Kubernetes cluster using Terraform for infrastructure provisioning. Terraform is used to define and create the necessary infrastructure components such as Kubernetes clusters, networking resources, and storage. Once the infrastructure is set up, Kubernetes manages the deployment, scaling, and orchestration of the Super Mario game application within the cluster. This deployment approach ensures scalability, reliability, and efficient management of the game application infrastructure.

Azure DevOps Automate Infra Deployment on Azure Cloud with Terraform & Azure Pipeline (CI\_CD)

In this project, you will learn how to incorporate Terraform into Azure Pipelines (CI/CD) for implementing Infrastructure as Code (IaC) to create Azure WebApp and deployment of .Net Application (same logic can be used to deploy Java or Python or any other application) on Azure WebApp

Automating Azure Infrastructure(Virtual Network, Subnet, and Load Balancer) Setup with Terraform

In this project, we will be utilizing Terraform, an infrastructure-as-code tool, to create an Application Load Balancer (ALB) in Azure. The ALB plays a crucial role in distributing incoming network traffic across multiple backend resources to enhance the availability and scalability of applications.

6 Create a Containerized Application Using Azure Kubernetes Service (AKS)

This project involves the creation of an Azure Kubernetes Service (AKS) cluster and the deployment of a containerized application onto the AKS cluster using Docker images. Kubernetes is a powerful container orchestration platform that simplifies the management, scaling, and deployment of containerized applications in a cloud-native environment.

Deploy App on AKS Cluster using Jenkins (CI/CD)

In this project, we will leverage Jenkins as a CI/CD tool to automate the build and

deployment of applications on an AKS cluster. This approach enhances the efficiency and reliability of the software delivery lifecycle.



#### ArgoCD (GitOps CD) to Deploy App to K8s Cluster

In this project, we will employ ArgoCD, a GitOps continuous delivery tool, to automatically synchronize and deploy applications to Kubernetes clusters. This ensures consistency and traceability through version-controlled manifests.



### **Features and Perks**



#### **Live Interactive Sessions from DevOps Experts**

Learn from the best in the industry with live sessions from DevOps experts. They will share their expert tips and tricks, and answer all of your questions.



#### **Industry In-Demand Projects and Hands-on Labs**

Get hands-on experience with industry in-demand projects and hands-on labs. This will give you the skills you need to succeed in the job market.



#### 1 year unlimited retakes

You can rewatch the live sessions and retake the labs for up to 1 year after the program ends. This gives you plenty of time to learn and practice at your own pace.



#### 6 months on-job support

Get help on your job work for 6 months after completing the program.



#### WhatsApp support & ticketing system

Get help from our team of experts via WhatsApp or our ticketing system. We are always available to answer your questions.



#### **Mock Interviews**

We'll also do **mock interviews** so you can practice.







# Master Your Chosen Certification: Study Materials and Exam Prep for Success

You can choose <u>DevOps foundation</u> certification, and we'll provide you with the necessary study materials & exam preparation kit with multiple sample exam question sets (150+ questions with explanations to answers) focused on that certification so you can pass it.

#### What's Next:

After completing this program you can go for these certifications to grow your career in DevOps.

- · Certified Kubernetes Administrator (CKA)
- Certified AWS Certified DevOps Engineer Professional [DOP-C02]
- Certified [AZ-400] Microsoft Azure DevOps Engineer



#### 60-day Money-back Guarantee

If you don't get a job offer after completing all of the activity labs and projects, you can get a full refund. To qualify for a refund, you must provide proof that you have applied to at least 50 jobs (we will help you with the job search & application) and have not received an offer from any of them.



# Who is this Program for?



# The DevOps Job-Oriented Program is for anyone who wants to:

- · Get a higher-paying job in the Cloud area
- · Get industry-leading guidance from top experts
- Perform industry-demanded projects and add them to their CV
- · Gain hands-on experience in Cloud technologies

#### Specifically, the program is for:

- IT professionals working on data (SQL Expert, Data Engineer, Data Scientist, Data Analyst, storage, databases, support, operations, or technical managers)
- Those working on other Clouds like Azure, AWS, Google, Oracle, IBM, Alibaba, SAP, VMWare, OpenStack.
- Freshers or new to IT who want to build a career in high-paying IT Cloud jobs.
- Those who are feeling stuck in their IT career (not growing) or too busy (don't have
- enough time), or would like to stay on the latest in-demand technologies for higher paid jobs.
- Those who understand that it takes investment to get to the next level.



### **Success Stories**



Piyush Jain in

DevOps Engineer & Kubernetes Administrator

I was in final year of college, when I realized I have to learn Cloud & DevOps to get a good paying Job. Not only I learned Azure Cloud with the Guidance, after that I learned Kubernetes in depth and cleared Cloud certifications.

I got job offer as a DevOps & Kubernetes Security Specialist in Cognizant. I am glad I started learning these early.



Neha Mittal in

DevOps Engineer

I was already working on Oracle Cloud but wanted to learn multi-cloud to grow. I learned AWS and DevOps, able to clear the certifications and now working as DevOps & Multi-Cloud Engineer. Thanks Atul, K21 Academy always provides great and enhanced study material and quality support.



Meghana Batchu<sup>in</sup>

Specialist Design Engineer at BT

Took career break and confused about how can start my career again with the latest technology, I learned DevOps, Cloud that helped me to re-start my Career in IT after a Gap. I was able to learn all things step by step and as new things are coming, I am enjoying new learnings everyday.





Gargi Agrawal in

DevOps | SecOps | CKA

I had a strong reservation regarding the price but I took a leap of faith and found that the course was worth way more than being charged. Looking back, I wonder why I didn't take that decision earlier. I could have learned and earned much quicker. I passed exam on my first attempt which helped me to get higher paid job, and I am very thankful to the team. The service provided from registration to training is excellent.



Joby Sam in

DevOps Engineer

I moved to Australia, and i was looking for the secure job, I was looking for the training program which can help me for better opportunities, I joined K21Academy and after attending the session, I felt that i am at the right place. Atul helped me how to prepare for the interview. then I started getting for the interviews and finally i got the good job offer. Thanks, Atul for helping me.



Narinder Doal in

DevOps Engineer

I come from a project management background rather than a technically oriented one. after speaking with a few mentors and recruiters about the opportunity in Devops and Kubernetes, I decided to pursue my career in this. attended the live session, and the feedback was quite favorable, and the trainer was able to handle the whole class while also answering all of the questions correctly. I also appreciate K21's support system, which is both rapid and informative. I would suggest K21Academy to anyone who is just getting started on their Cloud adventure!



# **Our Happy Customers**



Witness the triumph of our esteemed customers as they embark on remarkable career journeys, securing coveted roles within renowned companies. Their success stories stand as a testament to the transformative power of our educational programs, providing the skills and knowledge needed to thrive in today's competitive job market. Join our community of achievers and unlock your path to professional excellence, paving the way for a future filled with boundless opportunities and personal growth.



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### #CREATEIMPACT

# THANK YOU

www.k21academy.com

## Need more insights?

Speak with our Career Counsellor for a detailed overview of Data on Cloud Job Oriented Program.

Schedule a Call (>)









