# NoOps Foundation Certification

## About DevOpsSchool

DevOpsSchool is a unit of "Cotocus PVT ltd" and a leading platform which helps IT organizations and professionals to learn all the emerging technologies and trend which helps them to learn and embrace all the skills, intelligence, innovation and transformation which requires to achieve the end result, quickly and efficiently. We provide over 40 specialized programs on DevOps, Cloud, Containers, Security, AI, ML and on Big data that are focused on industry requirement and each curriculum is developed and delivered by leading experts in each domain and aligned with the industry standards.

## About Course

The NoOps Foundation Certification is an emerging credential designed to equip IT professionals with a thorough understanding of the NoOps methodology, a concept that aims to remove traditional operational barriers in software development and automate the operational tasks associated with running and managing applications. NoOps stands for No Operations, and its goal is to eliminate the need for manual intervention from operations teams during the software delivery lifecycle, primarily by automating the deployment, monitoring, scaling, and management of applications in cloud-based or hybrid environments.

The NoOps Foundation Certification offers professionals the knowledge and skills required to apply NoOps principles in modern IT infrastructures. NoOps is built upon the foundation of DevOps but takes automation and self-service to the next level. Instead of relying on dedicated operations teams to manage infrastructure, NoOps promotes the idea that software development and operations should be fully automated, with minimal human intervention. It leverages technologies such as Infrastructure as Code (IaC), continuous integration/continuous deployment (CI/CD) pipelines, containerization, and serverless architectures to streamline application management.

The certification provides foundational knowledge on automating infrastructure management, application deployment, and the lifecycle management of cloud applications. It's aimed at professionals who are looking to understand how to implement a fully automated operational environment with little to no reliance on traditional operational teams.

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|---|---|
| Duration | 5 days |
| Mode | Online (Instructor-led, live & Interactive) |
| Projects (Real time scenario based) | 1 |

| FEATURES | DEVOPSSCHOOL | OTHERS |
|---|---|---|
| Faculty Profile Check | ✔ | ✖ |
| Lifetime Technical Support | ✔ | ✖ |
| Lifetime LMS access | ✔ | ✖ |
| Top 25 Tools | ✔ | ✖ |
| Interviews Kit | ✔ | ✖ |
| Training Notes | ✔ | ✖ |
| Step by Step Web Based Tutorials | ✔ | ✖ |
| Training Slides | ✔ | ✖ |
| Training + Additional Videos | ✔ | ✖ |

## Training

DevOps As part of this course, you would be strong in DevOps technology. You would learn Linux, Python, DevOps, Docker, Jira, Git, SonarQube, Maven, Ansible, Jenkins, Kubernetes, Datadog, Splunk, NewRelic, Terraform and various other stacks related to this methodology.

## Projects

As part of this initiative, trainer would help you to execute one real time scenario based project, doing it end to end and step by step to visualize a real agile work environment in any organization.

## Interview

As part of this, you would give complete NoOps Foundation Certification interview preparations Kit.

This interview kit will help you organize your application and interview with eas

# AGENDA : NOOPS FOUNDATION CERTIFICATION

## Day 1 - Introduction to NoOps and the Evolution of IT Operations

### Understanding NoOps

- What is NoOps and why is it essential in the modern IT landscape?
- The evolution from traditional IT operations to DevOps and then to NoOps
- Key differences between NoOps, DevOps, and traditional IT operations
- The concept of automating infrastructure and operational tasks

### Benefits and Challenges of NoOps

- Benefits of adopting a NoOps model (e.g., automation, reduced manual intervention)
- Common challenges faced during the transition to NoOps
- The role of AI, ML, and automation in NoOps
- Case studies of successful NoOps adoption.

### NoOps vs. DevOps vs. Traditional Operations

- Comparing the operational models: NoOps, DevOps, and traditional IT management
- The cultural shift required for NoOps adoption
- Tools and frameworks for supporting NoOps practices.

### Hands-On Activity

- Explore a NoOps environment with tools like Kubernetes, serverless architectures, and AI-driven operations platforms.

# Day 2 - NoOps Architecture and Automation

## Building a NoOps Architecture

- Key components of a NoOps architecture: serverless computing, microservices, and cloud-native technologies
- The role of Infrastructure as Code (IaC) and CI/CD pipelines in NoOps
- How cloud platforms (AWS, Azure, Google Cloud) support NoOps architectures
- Choosing the right tools for automating infrastructure management.

## Automation in NoOps

- The role of automation in NoOps: Automating infrastructure provisioning, monitoring, and management
- Tools and technologies enabling automation in a NoOps environment (e.g., Terraform, Ansible, Puppet, Chef)
- Using serverless computing to eliminate operational overhead
- Scaling applications in a NoOps environment with minimal manual intervention.

## Self-Healing Systems in NoOps

- Implementing self-healing systems that automatically manage failure recovery
- Auto-scaling and auto-recovery principles in NoOps environments
- Monitoring and alerting mechanisms for self-healing systems.

## Hands-On Activity

- Implement a serverless application using AWS Lambda or Azure Functions with automated provisioning.

# Day- 3 Security and Compliance in NoOps

## NoOps Security Overview

- Understanding the unique security challenges in NoOps environments
- Automated security controls and the role of AI/ML in securing NoOps applications
- Securing serverless and microservices applications in a NoOps environment
- Tools for security monitoring and automated compliance (e.g., Cloud Security Posture Management tools).

## Compliance and Auditing in NoOps

- Ensuring compliance with industry standards in a NoOps model (e.g., GDPR, SOC2)
- Automating audits and compliance checks using IaC and CI/CD tools
- Privacy and data protection strategies in automated and serverless environments.

## Managing Identity and Access in NoOps

- Role-based access control (RBAC) and identity management in a NoOps context
- Automating access management using tools like AWS IAM, Google Cloud IAM, and Azure Active Directory
- Secure credential storage and management in NoOps systems.

## Hands-On Activity

- Configure automated security checks for a serverless application using AWS Inspector or Azure Security Center.

# Day - 4 NoOps Tools and Technologies

## Key NoOps Tools

- Overview of essential tools for implementing NoOps:
- Infrastructure as Code (e.g., Terraform, CloudFormation)
- CI/CD for automation (e.g., Jenkins, GitLab CI, CircleCI)
- Container orchestration (e.g., Kubernetes, Docker)
- Serverless computing platforms (e.g., AWS Lambda, Azure Functions)
- Monitoring and observability tools (e.g., Prometheus, Grafana, Datadog).

## Integrating NoOps Tools

- How to integrate NoOps tools for seamless operations
- Automating the deployment pipeline with CI/CD tools
- Using monitoring tools to gain visibility in NoOps environments
- The role of container orchestration tools in a NoOps environment.

## Continuous Improvement and Feedback Loops in NoOps

- The importance of continuous feedback and optimization in NoOps
- Automating performance tuning and resource scaling
- The impact of data-driven decision-making in NoOps operations
- Ensuring continuous delivery and improvement in NoOps models

## Hands-On Activity

- Build an automated CI/CD pipeline integrating tools like Jenkins and Terraform for a serverless application

# Days – 5 Culture, Best Practices, and Certification Exam Preparation

## Cultivating a NoOps Culture

- The cultural shift towards NoOps: Moving from reactive to proactive operations
- Building collaboration between development, security, and operations teams
- How to foster a "failure is an opportunity" mindset
- Organizational change management for adopting NoOps.

## NoOps Best Practices

- NoOps best practices for monitoring, scaling, and recovering from failures
- Standardizing processes for automated workflows
- Improving efficiency with serverless architectures and microservices
- Managing the lifecycle of applications with automated operations.

## Certification Exam Preparation

- Key topics and concepts for the NoOps Foundation Certification exam
- Study tips and recommended resources
- Sample practice questions and solutions
- Overview of exam format and structure.

## Final Hands-On Activity

- Complete a final project: Design and implement a NoOps pipeline for deploying and monitoring a microservice-based application.

# Thank you!

Connect with us for more info

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