



MICROSOFT TRAINING

Advanced Devops Tools Git Ansible Kubernetes On Baremetal And Azure Ci Cd With Jenkins Quiz Questions Answers

Master advanced DevOps tools like Git, Ansible, Kubernetes, and Jenkins. Build robust CI/CD pipelines on baremetal and Azure for efficient software delivery.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level course, "Advanced DevOps Tools Git Ansible Kubernetes On Baremetal And Azure Ci Cd With Jenkins," is meticulously designed to elevate your understanding and practical application of critical DevOps methodologies and tools. You will dive deep into mastering advanced Git workflows, enabling seamless collaboration and robust version control. The curriculum then progresses to comprehensive infrastructure automation using Ansible, empowering you to manage configurations and deploy applications efficiently across both traditional bare-metal servers and modern cloud environments.

The core of this course focuses on container orchestration with Kubernetes, covering deployments and management on bare-metal clusters and integrating with Azure Kubernetes Service (AKS). A significant portion is dedicated to building and optimizing end-to-end Continuous Integration/Continuous Delivery (CI/CD) pipelines using Jenkins, ensuring rapid, reliable, and automated software releases. By combining these powerful tools and practices, you will learn to construct resilient, scalable, and automated deployment strategies that span hybrid cloud infrastructures.

Upon completion, you will possess the advanced skills necessary to design, implement, and maintain sophisticated CI/CD pipelines, automate complex infrastructure tasks, and manage containerized applications effectively across diverse platforms. This course not only deepens your technical expertise but also equips you with the confidence to tackle real-world DevOps challenges, streamlining development cycles and enhancing operational efficiency within any organization.

Duration	2 hours
Level	Intermediate
Vendor	Microsoft

COURSE CURRICULUM

01 Module 1: Advanced Git for Collaborative DevOps

- Revisiting Git Fundamentals and Best Practices
- Advanced Branching Strategies (Gitflow, GitHub Flow)
- Complex Merge Conflict Resolution Techniques
- Git Hooks and Customizing Workflows
- Managing Large Repositories and Monorepos

02 Module 2: Infrastructure as Code with Ansible

- Ansible Architecture and Inventory Management
- Developing Idempotent Playbooks and Roles
- Ansible Vault for Sensitive Data Management
- Automating Bare-Metal Provisioning and Configuration
- Integrating Ansible with Cloud Providers (Azure)

03 Module 3: Kubernetes Deployment and Management (Baremetal & Azure)

- Kubernetes Core Concepts and Object Management
- Setting Up a Kubernetes Cluster on Baremetal
- Deploying Applications to Baremetal Kubernetes
- Introduction to Azure Kubernetes Service (AKS)
- Managing Deployments and Services in AKS

04 Module 4: Continuous Integration/Delivery with Jenkins

- Jenkins Setup and Administration
- Creating Declarative and Scripted Jenkins Pipelines
- Integrating Git for Source Code Management
- Automating Builds, Tests, and Code Quality Checks
- Artifact Management and Versioning

05 Module 5: Hybrid CI/CD Pipelines and Advanced Deployments

- Designing CI/CD for Hybrid Cloud Environments
- Deploying Applications from Jenkins to Baremetal Kubernetes
- Deploying Applications from Jenkins to Azure Kubernetes Service (AKS)
- Implementing Advanced Deployment Strategies (Canary, Blue/Green)
- Monitoring, Logging, and Troubleshooting CI/CD Pipelines

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Senior DevOps Engineer specializing in Hybrid Cloud Infrastructure**
- > **Cloud Infrastructure Automation Lead (Azure & On-Premise)**
- > **Site Reliability Engineer (SRE) with Container Orchestration Expertise**

FREQUENTLY ASKED QUESTIONS

Q: What foundational knowledge or prerequisites are essential to succeed in this 'Advanced DevOps Tools' course?

This course is designed for an intermediate audience. It is highly recommended that participants have a solid understanding of fundamental Linux command-line operations, basic networking concepts, and familiarity with at least one scripting language (e.g., Bash, Python). Prior exposure to basic version control (like Git) and an introductory understanding of CI/CD principles will be beneficial, as the course dives directly into advanced applications of these tools.

Q: How will this course specifically equip me to manage CI/CD deployments across both bare-metal Kubernetes clusters and Azure Kubernetes Service (AKS)?

The curriculum is meticulously structured to provide hands-on experience with both environments. You will learn to use Ansible for robust bare-metal server provisioning and configuration, preparing them for Kubernetes deployments. Concurrently, you will cover AKS specifics for cloud-native orchestration. The Jenkins CI/CD pipeline module then integrates these learnings, enabling you to build pipelines that can target and deploy applications seamlessly to both on-premises bare-metal Kubernetes clusters and managed AKS instances in Azure, highlighting the unique considerations and best practices for each.

Q: What kind of complex real-world automation and deployment challenges will I be able to solve upon completing this certification?

Upon completion, you will be proficient in solving a range of advanced challenges, such as: automating the entire lifecycle of multi-service applications from Git commit to deployment on hybrid infrastructure; establishing infrastructure-as-code for complex environments using Ansible; designing and implementing robust CI/CD pipelines for microservices deployed on

both bare-metal and Azure Kubernetes; orchestrating zero-downtime deployments; and significantly improving the speed, reliability, and auditability of software releases within an enterprise setting.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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