Certified Cloud Native Platform Engineer (CNPE) Exam Curriculum

A Cloud Native Computing Foundation (CNCF) Publication

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This document provides the curriculum outline of the Knowledge, Skills and Abilities that a Certified Cloud Native Platform Engineer (CNPE) can be expected to demonstrate.

CNPE Curriculum

15% - Platform Architecture and Infrastructure

- Applying Platform Architecture Best Practices for Networking, Storage, and Compute
- Using Cost Management Solutions for Right-Sizing and Scaling
- Optimizing Multi-Tenancy Resource Usage

25% - GitOps and Continuous Delivery

- Implementing GitOps Workflows for Application and Infrastructure Deployment
- Building and Configuring CI/CD Pipelines Integrated with Kubernetes
- Deploying Applications Using Progressive Delivery Strategies (e.g., Blue/Green or Canary)

25% - Platform APIs and Self-Service Capabilities

- Designing and Creating Custom Resource Definitions (CRDs) for Platform Services
- Implementing Workflows for Self-Service Provisioning Using Platform APIs
- Using Kubernetes Operators for Platform Automation and Integration
- Using Automation Frameworks for Self-Service Provisioning

20% - Observability and Operations

- Implementing Monitoring, Alerting, Logging, and Tracing Solutions
- Measuring and Improving Platform Efficiency Using Deployment Metrics and Performance Indicators
- Diagnosing and Remediating Platform Issue and Incident Scenarios

15% - Security and Policy Enforcement

- Configuring Secure Service-to-Service Communication
- Applying RBAC and Security Controls Across Platform Resources
- Generating Audit Trails and Enforcing Policy Compliance (SBOM, Compliance Reports, etc.)
- Using Policy Engines and Admission Controllers for Governance
- Integrating Security Scanning and Compliance Checks into Deployment Pipelines

What tools should candidates expect to see on the CNPE exam?

A Certified Cloud Native Platform Engineer is expected to complete tasks using unfamiliar tools by relying on help and documentation available in the exam. Many Linux Foundation-hosted projects may appear in exam scenarios to test the skills listed in our exam blueprints (see Domains & Competencies). The tools listed below are examples of what may be included in the CNPE exam.

Note: you will NOT be tested on deep, tool-specific knowledge unless it is referenced in the domains and competencies.

- **Argo**
- **Crossplane**
- **Flagger**
- **Flux**
- **Gatekeeper**
- **Grafana**
- **Istio**
- **Jaeger**
- **Kyverno**
- **Linkerd**
- **OPA**
- **OpenCost**
- **OpenTelemetry**
- **Prometheus**
- **Tekton**

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Cloud native computing uses an open source software stack to deploy applications as microservices, packaging each part into its own container, and dynamically orchestrating those containers to optimize resource utilization. The Cloud Native Computing Foundation (CNCF) hosts critical components of those software stacks including Kubernetes, Fluentd, Linkerd, Prometheus, OpenTracing and gRPC; brings together the industry's top developers, end users, and vendors; and serves as a neutral home for collaboration. CNCF is part of The Linux Foundation, a nonprofit organization. For more information about CNCF, please visit: https://cncf.io/.