Istio Certified Associate (ICA) Exam Curriculum

Istio

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This document provides the curriculum outline of the Knowledge, Skills and Abilities that a Istio Certified Associate (ICA) can be expected to demonstrate.

ICA Curriculum

20% - Installation, Upgrades, and Configuration

- Installing Istio with istioctl or Helm
- Installing Istio in Sidecar or Ambient Mode
- Customizing your Istio Installation
- Upgrading Istio (Canary, In-Place)

35% - Traffic Management

- Configuring Ingress and Egress Traffic
- Configuring Routing within a Service Mesh
- Defining Traffic Policies with Destination Rules
- Configuring Traffic Shifting
- Connecting In-Mesh Workloads to External Workloads and Services
- Using Resilience Features (circuit breaking, failover, outlier detection, timeouts, retries)
- Using Fault Injection

25% - Securing Workloads

- Configuring Authorization
- Configuring Authentication (mTLS, JWT)
- Securing Edge Traffic with TLS

20% - Troubleshooting

- Troubleshooting Configuration
- Troubleshooting the Mesh Control Plane
- Troubleshooting the Mesh Data Plane

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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/.