Container Orchestration Reference Guide

Summit Digital Solutions, Inc.

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Last Updated: January 9, 2024

Classification: Confidential - Internal Use Only

1. Purpose and Scope

1. This Container Orchestration Reference Guide ("Guide") establishes the authoritative framework for container orchestration practices within Summit Digital Solutions, Inc. ("Company") and its Peak Performance Platform(TM).

2. This Guide governs all containerized applications, microservices, and associated infrastructure deployed across the Company's technology stack and client implementations.

2. Definitions

1. "Container Orchestration" refers to the automated configuration, coordination, and management of containerized applications and services.

2. "Production Environment" means any environment hosting live client workloads or business-critical applications.

3. "Platform Services" refers to core services provided by the Peak Performance Platform(TM).

3. Authorized Container Orchestration Technologies

1. Primary Platform
-       Kubernetes (K8s) version 1.26 or higher
-       Summit Container Management Suite(TM) version 4.2
-       Certified Summit Digital Solutions container images

2. Supplementary Tools
-       Helm (version 3.x) for package management
-       Istio 1.18+ for service mesh implementation
-       Prometheus/Grafana for monitoring

-       Summit Proprietary Orchestration Extensions

4. Security Requirements

1. Authentication and Authorization

-       Mandatory use of Role-Based Access Control (RBAC)

-       Integration with Company SSO infrastructure

-       Pod Security Policies enforcement

-       Network Policy implementation

2. Container Security

-       Mandatory image scanning

-       No privileged containers in production

-       Enforced resource quotas and limits

-       Regular security audits

5. Deployment Standards

1. Configuration Management

-       GitOps-based deployment workflow

-       Version-controlled manifests

-       Environment-specific configurations

-       Secrets management via Summit Vault(TM)

2. High Availability Requirements

-       Minimum 3 control plane nodes

-       Geographic distribution across availability zones

-       Automated failover configuration

-       99.99% uptime SLA compliance

6. Monitoring and Observability

1. Required Metrics

-       Container resource utilization

-       Application performance metrics

-       Network throughput and latency

-       Custom Summit Digital Solutions KPIs

2. Logging Standards

-       Centralized log aggregation

-       Structured logging format

-       Retention policies per compliance requirements

-       Integration with Summit Analytics Platform(TM)

7. Disaster Recovery and Business Continuity

1. Backup Requirements

-       Daily automated backups

-       Cross-region replication

-       30-day retention minimum

-       Regular recovery testing

2. Incident Response

-       Automated failover procedures

-       Documented escalation paths

-       Client notification protocols

-       Post-incident analysis requirements

8. Compliance and Governance

1. Regulatory Requirements

-       SOC 2 Type II compliance

-       GDPR data handling standards

-       Industry-specific regulations

-       Client-specific compliance requirements

2. Audit Requirements

-       Quarterly security audits

-       Annual compliance review

- Third-party penetration testing
- Configuration drift monitoring

9. Proprietary Rights and Confidentiality

1. All container orchestration configurations, custom tools, and associated intellectual property developed by Summit Digital Solutions remain the exclusive property of the Company.

2. This Guide contains confidential and proprietary information and may not be disclosed to third parties without written authorization.

10. Amendments and Updates

1. This Guide shall be reviewed and updated quarterly by the Technology Governance Committee.

2. All amendments must be approved by the Chief Technology Officer and Chief Information Security Officer.

11. Execution and Approval

IN WITNESS WHEREOF, this Container Orchestration Reference Guide has been executed by the duly authorized representatives of Summit Digital Solutions, Inc.

APPROVED BY:

Michael Chang

Chief Technology Officer

Date: January 9, 2024

Dr. Robert Martinez

Chief Innovation Officer

Date: January 9, 2024

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