MICROSERVICES ARCHITECTURE DESIGN DOCUMENT

Summit Digital Solutions, Inc.

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1. DOCUMENT CONTROL

1 This Microservices Architecture Design Document ("Architecture Document") is a confidential and proprietary document of Summit Digital Solutions, Inc., a Delaware corporation ("Company").

2 This Architecture Document is protected under applicable intellectual property laws and the terms of any applicable non-disclosure agreements.

2. PURPOSE AND SCOPE

1 This Architecture Document defines the authorized microservices architecture design specifications for the Company's Peak Performance Platform(TM) and related technology infrastructure.

2 The specifications contained herein represent the Company's official technical architecture requirements for all microservices development, deployment, and maintenance activities.

3. DEFINITIONS

1 "Microservice" means an independently deployable service that implements a specific business capability within the Platform architecture.

2 "Platform" means the Company's proprietary Peak Performance Platform(TM) and all associated components.

3 "Service Mesh" means the dedicated infrastructure layer for facilitating service-to-service communications between microservices.

4. ARCHITECTURE SPECIFICATIONS

1 **Core Architecture Principles**

- Domain-driven design with bounded contexts
- Event-driven architecture patterns

- Containerized deployment model
- API-first design approach
- Infrastructure as code implementation

2 **Service Requirements**

Each microservice shall:

(a) Maintain its own dedicated data store

(b) Implement circuit breaker patterns

(c) Support independent deployment

(d) Include health check endpoints

(e) Implement standardized logging

3 **Communication Protocols**

(a) REST APIs for synchronous communication

(b) Apache Kafka for asynchronous messaging

(c) gRPC for high-performance internal services

(d) GraphQL for aggregation layer

5. SECURITY REQUIREMENTS

1 **Authentication & Authorization**

- OAuth 2.0 implementation required
- JWT token-based authentication
- Role-based access control (RBAC)
- Service-to-service authentication

2 **Data Protection**

- Encryption at rest using AES-256
- TLS 1.3 for data in transit
- Regular security scanning
- Secrets management via vault

6. OPERATIONAL REQUIREMENTS

1 **Monitoring**

- Distributed tracing implementation
- Metrics collection and aggregation
- Centralized logging
- Performance monitoring
- Error tracking and alerting

2 **Deployment**

- Kubernetes orchestration
- Automated CI/CD pipelines
- Blue-green deployment strategy
- Automated rollback capabilities

7. COMPLIANCE AND GOVERNANCE

1 All microservices must comply with:

(a) Company's Information Security Policy

(b) Applicable regulatory requirements

(c) Data privacy standards

(d) Industry best practices

2 Regular architecture reviews required quarterly

8. CHANGE MANAGEMENT

1 Modifications to this Architecture Document require:

(a) Technical review by Architecture Review Board

(b) Security assessment

(c) CTO approval

(d) Documentation update

(e) Communication to affected teams

9. INTELLECTUAL PROPERTY

1 All architecture designs, patterns, and implementations described herein are the exclusive property

of the Company.

2 No rights or licenses are granted except as expressly set forth in separate written agreements.

10. DISCLAIMER

1 This Architecture Document is provided "as is" without warranty of any kind, either express or implied.

2 The Company reserves the right to modify these specifications at any time.

11. APPROVAL AND EXECUTION

IN WITNESS WHEREOF, this Architecture Document has been approved and executed by the authorized representatives of the Company as of the Effective Date.

SUMMIT DIGITAL SOLUTIONS, INC.

By:

Name: Michael Chang

Title: Chief Technology Officer

By:

Name: James Henderson

Title: Chief Digital Officer

Date: January 9, 2024