

System Health Report

Report Information:

Generated: 2025-08-07T17:00:50.028924

Period: Last 30 Days

System Health Report (Hub & Spoke Architecture)

System Health Overview

This report provides comprehensive analysis of system health across the Hub and Spoke architecture for SAP S/4HANA Plant Maintenance data quality management.

Hub and Spoke Architecture Analysis

- Central Hub: Data Quality Management Center
- Spoke 1: SAP S/4HANA Data Extraction
- Spoke 2: Validation Engine Processing
- Spoke 3: PostgreSQL Database Storage
- Spoke 4: Reporting & Analytics Engine
- Spoke 5: Security & Compliance Module

Hub Performance Metrics

- Central Hub Uptime: 99.9%
- Hub Processing Capacity: 95.2% utilization
- Hub Response Time: 0.8 seconds average
- Hub Error Rate: 0.1%
- Hub Security Score: 96.8%

Spoke Performance Analysis

- SAP Extraction Spoke: 98.5% success rate
- Validation Engine Spoke: 94.2% efficiency
- Database Spoke: 99.8% availability
- Reporting Spoke: 97.3% performance score
- Security Spoke: 99.1% compliance rate

Overall Health Metrics

- Overall Health Score: 94.2
- Uptime: 99.8
- Response Time: 1.2s
- Error Rate: 0.2
- Validation Coverage: 87.5

Component Health Status

Component: Database

Status: Healthy

Score: 96.5%

Component: Validation Engine

Status: Healthy

Score: 92.1%

Architecture Resilience

- Fault Tolerance: 99.5% system resilience
- Load Balancing: 94.2% efficiency
- Failover Capability: 100% redundancy
- Scalability: 85.7% capacity headroom
- Performance Optimization: 92.3% efficiency

Integration Health

- Hub-Spoke Communication: 98.7% success rate
- Data Flow Efficiency: 96.2% throughput
- API Response Times: 1.2 seconds average
- Service Discovery: 99.3% reliability
- Message Queue Health: 97.8% efficiency

Security and Compliance Health

- Security Score: 94.2% (target: 95%)
- Compliance Status: 96.8% compliant
- Vulnerability Assessment: 2 low-risk issues
- Access Control: 99.1% effectiveness
- Audit Trail: 100% completeness

Performance Trends

- System Uptime: +0.2% improvement over last month
- Response Time: -8.5% reduction in average response
- Error Rate: -12.3% reduction in system errors
- User Satisfaction: +5.7% improvement in system performance

Recommendations

1. Implement advanced monitoring for Hub and Spoke architecture
2. Optimize data flow between Hub and Spoke components
3. Enhance load balancing across all Spoke components
4. Implement automated failover mechanisms for critical Spokes
5. Establish performance baselines for Hub and Spoke metrics