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Shaping Healthcare Possibilities

Success Story

Performance Testing of HL7, CCDA Messages

The Challenge

System under test (SUT) is used for revolutionizing the coordination of care between providers, health plans and patients. SUT comprises of various components which process different CCDA and HL7 messages and generate relevant notifications for them. Client requirement was to identify overall message processing time and to know the component level processing time for processing each of those messages.

Performance Testing

- HL7, CCDA Data Creation
- Web Services Testing
- Component Level Checkpoint
- Volume Testing with
- Bulk File Upload

Performance Monitoring

- Batch Processing
- Batch Processing
- Batch Processing

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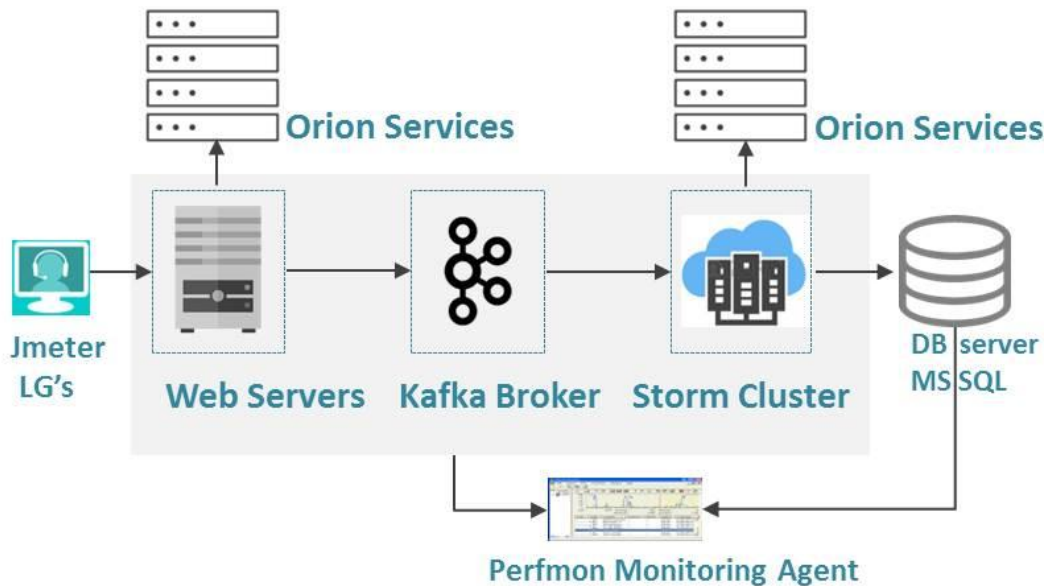**CitiusTech**

Tools Used

Apache **JMeter**™

Perf Mon

- CitiusTech's Performance Testing services helped to perform volume and stress testing
- With bulk upload of HL7 and CCDA messages and thereby monitor the end-to-end processing time

The Solution

- Different types of testing conducted viz Load, Stress and Volume using JMeter
- PerfMon was used to monitor resource utilization of Application, Database, KAFKA, STORM Servers
- Captured end-to-end and component level processing time (KAFKA, Persistence) by JMeter using JDBC request
- Analyzed SQL log to capture end-to-end and component level processing time

Solution(s) & Value Delivered

The Outcome

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Test Harness	• Different types of test conducted with HL7 and CCDA messages of different sizes
Performance Tuning	• Increased the Kafka thread to improve the queue processing time • Analyzed the optimum batch size to improve batch processing performance • Analysis of the SQL logs to monitor end-to-end processing time
Component Monitoring	• Component level monitoring using JDBC configuration parameter
Performance Metrics	• Key Metrics - CPU Utilization , memory utilization , transaction response time were captured to understand application health
Comprehensive Reporting	• Customized and detailed load and stress test reports.

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Thank You

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