



Enhancing member portal system performance for leading health plan

Success Story

A leading health insurer leveraged CitiusTech's Performance Engineering capabilities to reduce the number of failures related to application performance and availability

Business Impact

A leading health insurer leveraged CitiusTech's performance engineering capabilities to analyze and optimize the performance of their member portal site and applications, improve user experience and address future needs.

40%

Faster
Response Time

70%

Improved
Application Query
Execution

10%

Improved
CPU Utilization

50%

Reduction in
Network calls

Client Requirement

Client is a large health plan offering a variety of products, including managed care, and traditional indemnity insurance with one of the highest rated member portals in the country.

The client's member portal faced performance bottlenecks during peak times, which impacted customer experience. To address this, it required a comprehensive Performance, Capacity, Availability & Scalability (PCAS) assessment, focusing on:

- Identifying potential issues from performance and availability perspective
- Performing high level code analysis
- Strategies to remediate near-term issues and meet long-term business needs

The CitiusTech Advantage

The client partnered with CitiusTech to improve the performance and availability of the portal, especially for key workflows such as user access and claims management.

The CitiusTech team conducted a preliminary assessment to identify key areas of concern. The client leveraged CitiusTech's expertise with commercial and open source Application Performance Monitoring tools like Dynatrace and Lighthouse to identify performance bottlenecks from an application and infrastructure perspective.

The team focused on four key areas – performance benchmarking, performance testing, capacity sizing and performance engineering. This enabled the client to achieve a significant reduction in response time and increase overall load bearing capacity.

Technology Overview

CitiusTech's comprehensive approach to Performance Engineering helped the client address several key performance challenges.

Performance Benchmarking

- Identification of key performance targets, resource usage and application analysis reports
- Benchmarking using load, stress, endurance, volume, spike, failover and throttle bandwidth tests
- Defining performance SLA's and key measures for success
- Analysis of Dynatrace user action dashlet, PurePath and disk performance reports, along with Kibana logs, to measure data and impact of new releases, enabling large scale benchmarks and readiness for peak usages

Performance Testing

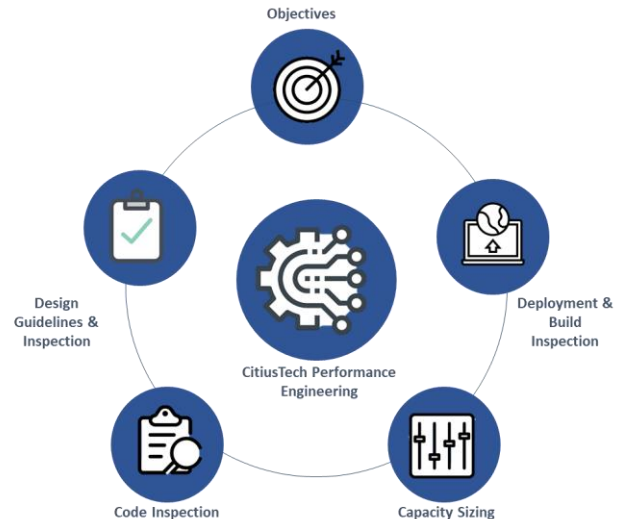
- Deep-dive into individual request flows and page performance analysis using Waterfall Analysis
- Performance testing with average user load, maximum user load and isolation tests

Capacity Sizing

- Right-sizing IT resources to meet requirements
- Critical infrastructure metrics tracking against average user load and peak usages
- Logs for exceptions and anomalies

Performance Engineering

- Reduction in response time with optimizations across page lifecycle stages; including DNS lookup, initial connection, queued & stalled requests, HTTP requests and content downloads
- Improvement in application query execution by optimizing index and migrating inline queries to stored procedures
- Identification of issues around caching which were causing high memory usage, through Heap Dump Analysis



CitiusTech Approach

About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to healthcare technology companies, providers, payers and life sciences organizations. With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence - across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), predictive analytics & data science and digital engagement (mobile, IoT). CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, platforms, proficiencies and accelerators. With cutting-edge technology, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

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