QUALITEST™

Rigorous Performance Testing Facilitates Successful Implementation of SAP S/4 HANA and BW/4 HANA for Global IT Services Provider

Challenges

Evaluate global requirements and ensure high performance SAP S/4 & BW/4 HANA integration.

Accurately simulate real-life business scenarios and validate the E2E data processes at the client-side and the server side simultaneously.

Solutions

Qualitest designed and implemented a phased strategic approach.

Technical solution comprised NFR consulting, LR tool installation, architecture analysis, NFR elicitation, engineering analysis and profiling.

Results

Our strong underlying test strategy assured SAP S/4 & BW/4 HANA top performance and implementation.

Project achieved major cost savings and over-delivered a targeted 60 users concurrently working across BW/BPC reports to 110 user concurrency.

Client overview

As one of the world's leading IT product and services providers, the Client is a household name. It employs 130,000 staff in 180 countries using 40 languages throughout its network of global delivery centres. The Client had become concerned about their time to market and quality of their existing BPC 11 Planning reports which were taking too much time to process and load.

When the Client engaged Qualitest, as part of their transformation program, they had initiated their own green-field implementation of the SAP S/4 and BW/4 HANA enterprise resource planning platform but quickly ran into complexities for which they could not readily deduce a solution.

> 66 **Qualitest was engaged to define, scope, and execute SAP S/4 HANA Cloud performance testing.** 99

Green-field implementation of SAP HANA Cloud

To assist the client's green-field implementation of SAP S/4 & BW/4 HANA, Qualitest was engaged to define, scope, and execute performance testing. This critical phase in the project was entrusted to Qualitest to evaluate and ensure optimum performance of the new SAP private cloud-based platform, as well as its integration with the Client's legacy systems.

To achieve this, we faced technical uncertainties and challenges that needed innovative solutions to overcome, including:

- The simulation of numerous real-life business scenarios and validation of these E2E data processes on the client-side as well as the server-side.

- Incumbent performance testing tools didn't have the capability to script and execute BW/4HANA with BPC 11 planning reports.

- No performance testing infrastructure was available to do load test for S/4 HANA systems.

- No definitive non-functional testing, approach, or plan in place.

- Monitoring tools were not available to monitor and provide recommendations.

A performance testing program for a modern global enterprise

To overcome these technical challenges, Qualitest scoped, defined and executed a program of performance testing that was underpinned by a clearly defined strategy. This phased strategy comprised NFR consulting, LR tool installation, architecture analysis, NFR elicitation, engineering analysis and profiling, as well as:

- **Workbook design and query volume scoping** – Based on a deep-dive analysis at the component level, this identified that rendering activities were consuming high response time and recommended splitting into multiple workbooks if there were no interdependencies. Additionally, it provided the list of reports to be actioned.

- **Multiple workshops** – Held to focus the business objectives and articulate a multi-layer approach (Component level, E2E level, Infra level).

- **Communication about data** – Educating the Client on the importance of useable and representative data for test.

- **Orchestrated LRE 2021** – Tooling infrastructure set up from scratch by performing different POCs.

- **Automated report monitoring** – Macro and deep-dive analysis to nail down exact root cause of issues.

- **Infra-related testing** – To capture issues relating to areas such as network latency, database, memory, CPU degradation etc.

Key benefits

Due to its complexities, this engagement was not one that other vendors had wanted to take on, but we came forward and helped the Client to build its ideal new tool infrastructure.

- **Saved major costs for the Client** by accomplishing the LRE 2021 infrastructure build in two months against the four months' effort suggested by the Client.

- **Exceeded Client expectations** of achieving 60-users concurrency as a standard peak volume across the BW/BPC reports, and increased it to 110 concurrent users.

- **Identified and fixed the most time-consuming queries in two days** (Component vs E2E) where Client had targeted two weeks.

- **Enabled a cultural shift within Client's IT staff** with understanding the importance of using representative data for testing.

- **Enhanced business intelligence** with 30 mins reduced to five mins report turnarounds and KPIs that included report opening processing, and saving.

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