

Automate your Data Warehouse & Big Data Testing

The data testing software of choice for Testers, Managers, Developers, Analysts, and Operations teams

Company Utilizes QuerySurge to Validate Data Interfaces and Provide 'Peace of Mind'

Validates Data Interfaces for Portfolio Project Management & Clinical Trial Management systems

A leading global contract research organization providing integrated drug development, laboratory and lifecycle management services was seeking an automated testing approach for data interface validation between numerous systems. They needed to validate much more data than they had been doing in a shorter time frame. These systems fed data into their project and portfolio management (PPM) and clinical trial management systems. The company selected QuerySurge's data testing solution to automate the testing of its data interfaces. QuerySurge helped them achieve significant ROI by validating the numerous internal and external data interface feeds.



Background:

An enterprise software solution was selected as the organization's internal resource system (Lawson/Infor), and interfaced with the Project and Portfolio Management (PPM) system (CA Technology) and Siebel Clinical Trial Management System (Oracle). The organization needed to test and validate the flow of data between the two systems. A testing effort was implemented and configured utilizing QuerySurge as the data test automation tool. The interface between the two systems was to be executed on a nightly basis and would update the PPM system with the human resource system data (Lawson). In the past, manual efforts by the internal testing team could only validate 5% of the data during the testing cycle within the time allotted. The organization needed a more efficient automated testing process.



Challenges:

- The organization needed to guarantee that the data that was transferred from the source HR system to the target PPM system met business requirements and mapping specifications.
- Incorrect data could cause downstream resourcing issues and could amount to millions of dollars in lost revenue. The organization required that 100% of the data be validated. (5% percent was being validated manually).
- Manual testing, using the Sampling Method (also known as 'stare-and-compare'), was taking too long and was susceptible to human error.

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The data feeds that needed to be tested included:

- Feeds from multiple external pharmaceutical organizations with their own proprietary systems
- An internal human resources system (Lawson)
- An internal management software (Synergy)
- An internal integrated voice response system

Solution:

Using *QuerySurge*, the premier automated testing solution for data interface testing and data validation, the organization was able to increase the amount of data tested by 1,900%, speed up the testing process dramatically and decrease the cost of testing resources. The testing also eased the minds of stakeholders regarding the risk of an internal or external audit - they now would have historical testing data and reports to quickly and easily verify that 100% of the data was tested and validated. *QuerySurge* was used to create automated tests (query pairs) over several weeks. A total of 26 query pairs were authored. These query pairs were logically grouped into test suites for scheduling test executions.

Execution time took 1 hour and validated 360,000 individual data cells. At the end of execution, an email notification from *QuerySurge* was automatically sent to the test team and management stakeholders, identifying the status (pass/fail) and completion time. Several test cycles were needed to clean the data, since defects (transformation & special character defects) were discovered. Additionally, the automated *QuerySurge* tests are used for future enhancement testing and regression test cycles.

This automation process resulted in verification of all of transformed and non-transformed data. The following project-level requirements were fulfilled:

- 100% of data was tested and validated
- Verified that the ETL code was developed correctly according to business requirements
- Verified that the ETL process did not improperly correct, reject or substitute data

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Testing Metrics:

Total QueryPairs	Average Data Validations per QueryPair	Total Data Validations per Test Cycle
26	14,211	369,486



Manual Execution & Analysis Time (minutes)	Automated Execution & Analysis Time (minutes)	Time Savings per Test Cycle (minutes)	Time Savings per Test Cycle (hours)
6,240.00	65.52	6,174.48	102.91

Benefits:

The 26 automated QuerySurge tests discovered numerous critical defects that would have cost the organization significant dollars. The defects discovered over the course of the testing cycles missing row defects. QuerySurge also provided metrics that were not previously available such as data reliability, using detailed reports generated by the tool.

“*QuerySurge saved us time and money while providing peace of mind against the risk of potential internal & external audits that occur in our organization.*”

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About RTTS

RTTS, the parent company of QuerySurge, is the premier pure-play QA & Testing organization that specializes in Test Automation. With headquarters in New York and additional regional US offices, RTTS has been servicing Fortune 500 and mid-sized companies throughout North America since 1996. RTTS offers the most comprehensive suite of automated QA & testing solutions and we've helped 600+ organizations drive positive results from their software development, integration and data quality projects. RTTS has cultivated partnerships with the world's leading software vendors, including IBM, Microsoft, HP, Oracle, Teradata, HortonWorks and Cloudera. We draw on our expertise utilizing our proven approach, our expert test engineers and the industry's best-of breed solutions to provide test automation that fits into your DevOps and DevTest strategy.

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About QuerySurge

QuerySurge is the software division of RTTS. RTTS' team of test experts developed QuerySurge™ to address the unique testing needs in the Big Data and Data Warehousing spaces. QuerySurge is the leading Data Testing solution built specifically to automate the testing of Data Warehouses & Big Data. QuerySurge makes it really easy for both novice and experienced team members to validate their organization's data quickly, analyzing and pinpointing up to 100% of all data differences while providing both real-time and historical views of your data's health.

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