



SoftServe Lowers Big Data Development Costs by 25 Percent with Jaspersoft

Jaspersoft Delivers 30-35% Higher Big Data Performance on Average

Background

In its more than 19 years in business, SoftServe Inc. has delivered consulting and software development for over 2,500 projects for more than 150 global companies. Headquartered in Fort Myers, FL, with an award-winning software development group in the Ukraine, the company is repeatedly recognized as a leader in the industry.

For each project, SoftServe assembles the optimal combination of technologies, platforms and approaches to achieve clients' goals. When a well-known, global IT company turned to SoftServe to develop a network security solution, the requirements included advanced reporting that was capable of handling the massive amount of data the solution would collect.

"The log files from multiple intrusion prevention system (IPS) devices can produce huge throughput," said Roman Kolodchak, manager of professional services at SoftServe. "Each device could generate 4,000 records per second, and potentially up to seven billion records per day." With multiple devices to manage, data volume and velocity can become very large.

Additionally, the chosen reporting engine had to run on Linux and provide flexibility for end users to drill down to the information they need in any frequency or format they require.

Jaspersoft: Uniquely Qualified for the Project's Strict Big Data Performance Requirements

SoftServe collaborated closely with its client to select a business intelligence (BI) solution for the security product. Jaspersoft rose to the top for its ability to meet the client's very specific requirements for integration and performance:

- Performance – Critically, Jaspersoft could process the results of queries on billions of records at a higher speed than other solutions.
- Ease of integration – Broad use of web services simplifies integration and expedites development time.
- Linux compatibility Jaspersoft provided the best fit on the Linux platform.

FAST FACTS

CUSTOMER

SoftServe Inc.

INDUSTRY

Information Technology

TECHNOLOGY SNAPSHOT

- Jaspersoft OLAP for Data Analysis
- MySQL
- Dell hardware
- HP servers
- Linux operating system
- Infobright database
- JBoss Application Server

BIG DATA CHALLENGE

To develop a network security solution for a global IT company, SoftServe needed flexible, high-performance reporting to handle massive data volumes.

BIG DATA SOLUTION

Jaspersoft uniquely met the project's strict requirements for performance, flexible reporting, and ease of integration and use.

RESULTS

- **Lower development costs:**
SoftServe completed the project in just seven months with a team of 25 – lowering development costs by an estimated 25 percent.
- **Faster project ramp-up:**
SoftServe built the core resource model rapidly in just three weeks instead of an estimated seven weeks.
- **Higher performance:**
SoftServe found that Jaspersoft delivered 30-35 percent faster processing on average, and 100 percent higher performance in some cases.

CASE STUDY

- Open source – Jaspersoft was the most mature open source solution, allowing for easier integration and fast performance.
- OLAP analysis – The Jaspersoft OLAP engine provides an interactive environment to analyze large data sets or perform complex analytic queries quickly.
- Flexible reporting – End users have direct, real-time access to their data and multiple reporting options, including dashboards, and interactive, web-based and scheduled reports, as well as a variety of export formats.

“Our client had a very clear vision of the reporting requirements for the security solution,” said Andriy Zabavskyy, business intelligence lead. “No other BI solution was able to satisfy those performance requirements.”

Plus, with JasperReports Server as the reporting platform and application core, SoftServe has more complete capabilities out of the box, including a report object repository, report development and customization environment, management of generated reports (PDF, XLS, etc...), export/import of report results and templates, and user management.

Jaspersoft APIs: Quick, Easy Integration

For integration with the security solution, the development team relied on Jaspersoft application programming interfaces (APIs). Jaspersoft APIs are designed for easy access, implementation and customization, giving the team significant flexibility as it integrated JasperReports Server with the SoftServe environment, including the user interface, the administration application, security platform, external single sign-on services and system health monitoring.

“Development of our product totally depends on the Jaspersoft APIs, which are awesome,” said Roman Pavlyuk, system analyst and project manager. “We quickly and easily integrated with other services running on the box.”

The client had requirements for a special input control to filter the data. Adding this custom control and integrating with standard controls was surprisingly easy; the end result was a seamless integration of both.

For data integration, the team relied on Jaspersoft ETL. Powered by Talend, Jaspersoft ETL scales to the highest levels of data volumes and process complexity. It allows developers to graphically design, schedule and execute data movements and transformations with an intuitive user interface and short learning curve.

Flexible, Dynamic Reporting

With JasperReports Server integrated with the network security solution, end users have a web-based, self-service BI tool that’s simple to use. They have both real-time and big-picture historical reporting to support rapid troubleshooting on infected computers or take proactive steps to prevent attacks in the future. They also easily pull the reporting they need to show internal and external auditors how the network is protected from the latest threats.

The Jaspersoft BI backend allows end users to choose from 35 pre-built reports to view in the dashboard or schedule to be emailed in the format they choose. Or, they can customize their reports based on existing templates. In turn, they can evaluate network attacks in any way they choose, such as by IPs, devices, geography and more.

CASE STUDY

“The reports are super flexible. End users can dynamically generate canned, ad hoc and scheduled reports with many inputs to choose from and ways to look at the data,” Zabavskyy said. “They can report on data from 20 different security devices in one place, on the fly.”

SoftServe also finds that Jaspersoft’s ease of use shortens the learning curve for end users. With the easy-to-use tools in JasperReports Server and Jaspersoft iReport Designer, users can easily follow Jaspersoft documentation to develop their own reports.

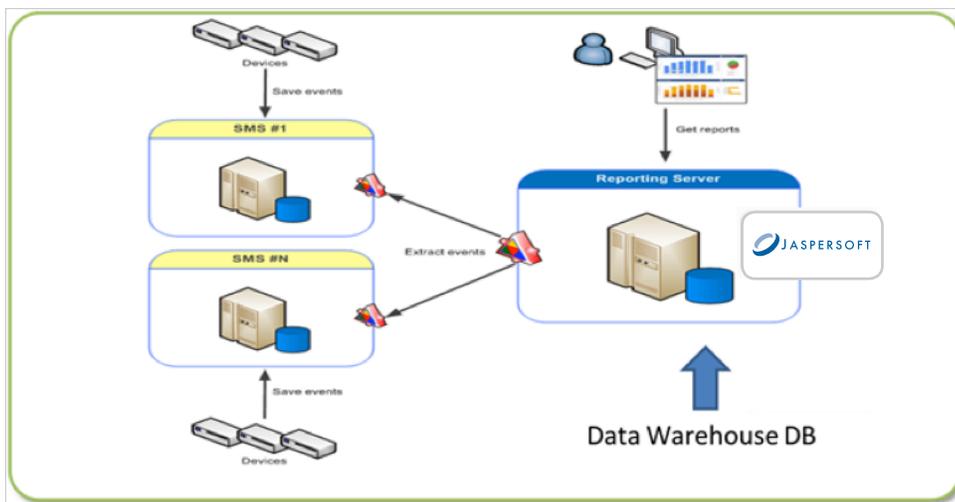
Higher Big Data Performance with Lower Development Costs

The choice of Jaspersoft allowed SoftServe to deliver the performance its client demanded in less time and for lower cost. With a convenient integrated development environment (IDE) for reports, SoftServe built the core resource model for the project ramp-up in just three weeks, instead of the expected seven weeks.

Comprehensive out-of-the-box functionality in Jaspersoft contributed to the project’s completion in just seven months with a team of 25 – lowering development costs by an estimated 25 percent.

When compared to solutions the firm has used on custom-built reporting engines, SoftServe found that Jaspersoft delivered 30-35 percent faster processing on average, and 100 percent faster for some reports.

“Performance was very critical for us,” Pavlyuk said. “We found that because the JasperReports Server performs the entire reporting cycle from parameters specification to result export in one single Java virtual machine (JVM), we get a significant performance improvement.”



Solution Architecture

The experienced team at SoftServe also values Jaspersoft's upgrade stability, which translates to fast, low-cost migrations. "The API is strictly maintained from version to version by Jaspersoft, so migration had almost no impact on development," Pavlyuk said. "It took just two to three days for two engineers to rebuild the packages."

Report performance on terabytes of data is excellent, and development/maintenance efforts were low. "With Jaspersoft, we were able to satisfy our client's strict performance requirements. Our experience has been very good and we look forward to continuing to work with Jaspersoft on future projects," Kolodchak said.

About Jaspersoft Corporation

Jaspersoft provides the most flexible, cost effective and widely deployed Business Intelligence suite in the world, enabling better decision making through highly interactive, web-based reports, dashboards and analysis. Leveraging a commercial open source business model, Jaspersoft provides end-to-end BI capabilities at a fraction of the cost of other vendors. The BI suite includes pixel-perfect enterprise reporting, ad hoc query, dashboards, OLAP and in-memory analysis, and data integration. Jaspersoft is the only BI vendor that enables companies to adapt to the new, virtualized world by providing a complete spectrum of on-premise, multi-tenant SaaS and cloud-based deployment options for both embedded and standalone business intelligence. Unlike traditional BI vendors, Jaspersoft is built on a modern, lightweight, standards-based architecture and offers greater vendor independence thanks to its open source codebase. Unlike niche BI vendors, Jaspersoft represents a safe choice with tens of thousands of production deployments across a wide range of industries.

Jaspersoft's open source business intelligence software has more than 16 million product downloads worldwide, 175,000 production deployments and over 15,000 commercial customers in 100 countries. Its BI suite is advanced regularly by a development community of more than 275,000 registered members. For more information visit: <http://www.jaspersoft.com> and <http://www.jasperforge.org>.

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