

CASE STUDY

SOFTSERVE LOWERS BIG DATA DEVELOPMENT COSTS BY 25 PERCENT WITH JASPERSOFT



Background

In its more than 22 years in business, SoftServe has delivered consulting and software development for over 2,500 projects for more than 200 global companies. Headquartered in Austin, TX, 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 include advanced reporting that was capable of handling the massive amount.

"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.

Customer

SoftServe

Industry Information

Technology

Technology

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

softserve

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.

Big Data Challenge

To develop a network security solution for a global IT company, SoftServe needed flexible, highperformance 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.

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 simplified integration and expedited development time.
- Linux compatibility - Jaspersoft provided the best fit on the Linux platform.
- Open source – Jaspersoft was the most mature open source solution, enabling for easier integration and fast performance.
- Flexible reporting – End users have direct, realtime 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.

Plus, with JasperReports Server as the reporting platform and application core, SoftServe has more complete out of the box capabilities, including 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.

“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.”

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, providing the team with 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, solution service product 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.

Results

- Lower development costs: SoftServe completed the project in just seven months with a team of 25 people, lowering development costs by 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.

Flexible, Dynamic Reporting

With JasperReports Server integrated with the network security solution, end users have a webbased, 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.

“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.

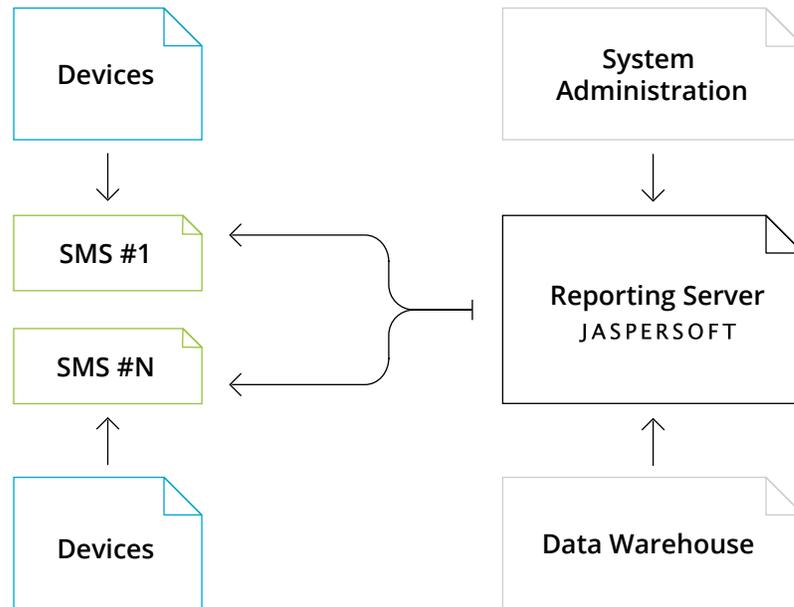
“Performance was critical for us,” Pavlyuk said. “We found that because the JasperReports Server performs the entire reporting cycle from parameters specification to result export in one single Java virtual machine (JVM), we get a significant performance improvement.”

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 people 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.



The experienced at SoftServe’s team 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 US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, media, financial services, software, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation—from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience are built on a foundation of empathetic, human-focused design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy—No matter where you are in your journey.

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