University of Illinois College of Medicine

BI for the Enterprise
Sun and SAS Have the Solution

Customer Success Story

Industry
Education

Customer Spotlight
University of Illinois College of Medicine (UIC-COM)

Industry Challenges
- Speed to market
- Ability to scale Business Intelligence (BI) across the enterprise
- Recognizing the full value of BI deployments

Business Challenges
- Increase the level of analytics sophistication
- Decrease the cost-of-entry barriers
- Scalability without increasing server footprint
- Leverage 20-years of active SAS code

SAS Solution
- SAS Enterprise Business Intelligence Server
- Legacy SAS code

Sun Solution
- Solaris™ 10 Operating System (OS)
- Solaris Containers
- Java™ Software
- Sun Fire™ V240 Server
- Sun Fire V100 Server

Solution Results
- Affordable scalable, BI enterprise solution
- Increased sophistication of analytics
- Quick-start implementation path
- Leveraged legacy investments with fully integratable solution
- Increased IT staff's performance capabilities
- Provided secure, virtualized environments
- Easily replicated applications using SAS' embedded business logic capabilities

"We needed a Business Intelligence (BI) solution that scaled for the enterprise, with a 'just-add-water' simplicity. Sun and SAS offered that and so much more."

Donald Atkinson

Assistant Dean – Informational Resources

University of Illinois College of Medicine at Chicago

Small shop, big ideas

In 2006, the IT staff at the University of Illinois College of Medicine (UIC-COM) began evaluating SAS BI for their organization's needs. "We had been using SAS for 20 years to generate various reports, as well as for transmitting this information into the Oracle database," said Mr. Atkinson. "The prospect of moving SAS paper reports to a quicker, dynamically generated Web-based distribution was very appealing."

The small IT department was short on time, cash, and full experience of a BI deployment. "We wanted the full experience of a SAS BI deployment with the ability to first test the capability of the SAS Enterprise Business Intelligence software and then scale it-out across the enterprise as our needs grew. We also needed a development path that supported quick and easy, low-cost scalability."

Shrinking budgets and limited staffing compounded the implementation process. "We had existing SAS and Java software programming skills as well as access to a Sun server, but it was the capabilities of Solaris 10 that clinched the deal for Sun. At the time, nothing within our budget compared to the capabilities of Solaris 10 for virtualization and SAS BI. We found the Solaris Container environment more manageable and economical than comparable virtualization solutions."

Additionally, Sun's commitment to open source environments made them the ideal candidate for handling heterogeneous data types.

Small steps, big results

Solaris Containers, a software feature of the free Solaris 10 OS, have the ability to simulate multi-machine BI and reporting deployments from a single server. This functionality allowed the staff's theoretical discussions to become more pragmatic. "We began to realize how Sun's technology could be used to translate our modest capabilities into big ideas for SAS BI and analytics."

UIC-COM began the BI deployment process with a proof-of-concept running on the Sun Fire V240 server and Solaris 10 OS. By starting small and pacing its SAS BI deployments, UIC-COM transitioned from a prototype to an enterprise production environment, at a pace that let them correctly gauge the inclination and abilities of their user-base while getting the architectural aspects of the deployment done correctly – goals that were equally important to their overall success.

"By taking a phased approach, we were able to realize a return of knowledge at each juncture, allowing us to alter our BI plans to meet conditions in our environment, without sacrificing the experience gained. As a result, we avoided, the all-or-nothing trap."

Scalability, reliability, and security

Sun's platform continues to provide the necessary throughput performance to meet UIC-COM's growing needs. "The OE distribution was more in tune with our needs than comparable releases of Red Hat Linux. By teaming with Sun, we deployed a large scale, multi-server SAS BI environment on a single, inexpensive box, and we haven't tapped-out its capabilities yet."

Additionally, Java and Solaris technologies give UIC-COM the ability to easily interface with existing applications and quickly develop and deploy SAS Stored Services. Java software allows the staff to harness the power of SAS procedures and language capabilities in a Web-centric environment and move Solaris Containers on an as-needed basis.

The Java platform is also used to address UIC-COM's security concerns. For example, in the SAS Management Console Group Level permissions are used to define access to the underlying SAS Stored Services. Individual User Authentications and Authorizations are maintained at the Java application level. Depending on the application, any additional parameters required by the SAS Stored Services are gathered at the Java application level. This two-tiered approach to SAS Stored Process access allows for simplified account maintenance at the SAS level, as well as seamless integration of disparate authentication/authorization mechanisms that exist at the enterprise level.

In addition to the logical separation of authentication from application authorization with the Java application front-end, the Java application acts as a proxy to the SAS Stored Services Server. Only the Java Application Server is given firewall access to the SAS solution, thus acting as a separate, preferably physically separate, gatekeeper. The IT staff can also front the Java Application Server with an http reverse proxy server to regulate communications with the end user. By convention, in a reverse proxy scenario, the end users are on the "outside" of the reverse proxy and the application server is on the "inside". The http reverse proxy examines URLs in HTML documents passing through it and rewrites the http response headers to point to the reverse proxy for outbound packets bound for end user consumption. The http request headers are rewritten to point to the application server for inbound packets.

Ultimately, three physical tiers exist between the end user and the invoked SAS Stored Services. With SAS accessing the Enterprise Database, UIC-COM's data stores are separated by yet another application layer.

Today the UIC-COM IT staff is using the Sun and SAS BI environment to address pressing needs that up until six months ago had no obvious solution. "I'm not sure we could have taken this on if we hadn't started with Sun and Solaris 10. We might have given up. Solaris 10 environments help keep hardware support and costs down. Within the next two months we should triple our user-base."

Learn More

To learn more about Sun Microsystems and SAS Institute, please visit www.sun.com/sas and www.sas.com.

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