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SUCCESS STORY

The State of North Dakota Powers Decisions with Zenoss

Client:
State of North Dakota

Location:
Bismarck, ND

Industry:
Government

"Implementing this publishing system was very high pro ile for the legislative branch. Zenoss made sure that the system was performing nicely and provided us with key statistics and alerting to make sure it didn't fail while we were in session."

Dan Wanek
Systems Architect
State of North Dakota

The Challenge

Information technology operations for the State of North Dakota are consolidated for nearly all of the state's government entities with the Information Technology Department (ITD). Although most services and systems run in the state capital of Bismarck, ITD also provides network access via a statewide network to K-12, Higher-Ed and various regional facilities. There are more than 300 geographically dispersed school districts that depend on ITD for hosting a common student information system platform. The IT Operations team is also tasked with monitoring presidential and state election services.

"Our department and agency customers get monthly bills for our services," explains Dan Wanek, Systems Architect. "For them, we're a service provider and they rely on us to support their mission. We track performance and availability of systems and applications, identify and solve problems, and support detailed agency access to new and critical applications like the legislative branch bill drafting and publishing system."

The operations department was facing major obstacles in making intelligent decisions about their IT environment. The tools the team had in place were inconsistent among the various platforms and much of the infrastructure had no performance monitoring at all. If a problem arose they did ad-hoc monitoring with system tools but had no real visibility into the past. Understanding why an issue might have occurred on their network or within their data center was always a reactive effort, never predictive. This made it very difficult to diagnose and apply corrections to application performance problems. They needed a monitoring system in place that would not only track the entire performance of their system over a long period of time, but would also be able to correlate the impact of different services and devices in their infrastructure.

The Solution

The State of North Dakota decided to replace existing limited monitoring solutions from Compuware and HP with a new system that would provide end-to-end visibility. Four companies made the short list – Zenoss, Nagios, Compuware, and HP. Team members had prior experience with Zenoss and Nagios, they had a foundation of Compuware in place, and HP provides the majority of the server hardware for the state. After careful review and some internal proof-of-concept deploys, the State of North Dakota decided to go with Zenoss due to the simplicity of the product, agentless monitoring capabilities and the overall data visibility Zenoss provided. The simplicity of the product lent itself to a quick educational curve so several administrators were able to use it compared to the specific training requirements other products required.

With hundreds of Windows servers, VMware, Oracle Real Application Clusters, AIX, Linux, and a mainframe, being able to combine data across servers, virtualization farms, storage servers, networking, and applications for easy analysis was a key goal for the new system.

Once Zenoss began monitoring the state's operations, the team immediately benefited from the simpler data collection process. "With our old monitoring solution we had limited statistics on our systems that didn't correlate to other systems very well," said Wanek. "With Zenoss, we have a year of statistics. We use this information to improve decisions, eliminating a lot of the finger pointing that happens within an IT department. For example, one agency needed better performance from their image processing application. With Zenoss, we were able to graphically show the customer that slow disk drives (IO waits) in the storage system was the issue, instead of reflexively purchasing faster server CPUs."

With this new understanding in place, the team was able to reach their goal of making more intelligent decisions when it came to solving issues and began to extend basic monitoring with custom application monitoring, using web transactions to measure application performance, tracking authentication requests to the LDAP server, and identifying overall mail throughput.

"Our biggest lesson learned was to take a good look at what comes out of the box and use it," offered Wanek. "What Zenoss provides is great. After we understood it, we were able to start using it creatively."

The Results

The vast majority of the systems that ITD monitors are virtualized and applications are hosted in and outside the state's data center. Zenoss is able to address the diverse needs of all these sub-ecosystems and help maintain performance on each of these networks with detailed data of each device running on the system.

"An agency might say that they are slow," said Wanek. "Now we can easily see how a two-week old change affected performance. As we go further along the virtualization track, Zenoss helps us address more tricky stuff like resources, high IO, and multi-tenancy."

After using Zenoss within the executive branch to monitor applications, the team was approached by the legislative branch to help monitor a new bill drafting system that was being developed. The system went live for the 2011 legislative assembly and Zenoss was in place to help troubleshoot and pinpoint parts of the application that needed to be tuned.

"Bill drafting is really a complex publishing ecosystem with many parts that rely on Zenoss for monitoring and performance," said Wanek. "Implementing this publishing system was very high profile for the legislative branch. Zenoss made sure that the system was performing nicely and provided us with key statistics and alerting to make sure it didn't fail while we were in session."

The simplicity that Zenoss provides as well as the statistical reports allows for many government agencies within North Dakota to easily understand what is happening with their system.

"Zenoss helped us reach our major goal, which was to have better statistical data on our environment to make more intelligent decisions," said Wanek. "We use these statistics to make better decisions for future implementation, solve current problems and ensure that our systems are performing optimally."

About Zenoss

Zenoss is a leading provider of management software for physical, virtual, and cloud-based infrastructures. Zenoss provides a single, unified product that was purpose-built for the management of large-scale Cloud environments. Over 25,000 organizations worldwide have deployed Zenoss to manage their networks, servers, virtual devices, storage, and Cloud infrastructure, gaining complete visibility and predictability into their IT operations. Customers include Rackspace, VMware, Hosting.com, LinkedIn, Carlson, Motorola and Deutsche Bank. Zenoss was recognized as a "Visionary" in Gartner's 2010 Magic Quadrant for IT Event Correlation and Analysis.

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