Case Study

“Before, if we needed ad hoc enterprise configuration information, it would take more than a day to get reliable information. Now, that same type of query takes minutes.”

This ServiceNow case study is based on an interview with Brian Arlington, group leader for service management and Tim Guilliams, lead ServiceNow administrator at Oak Ridge National Labs.

New Discoveries in the Science of Service Management

As a major scientific and technology research lab, Oak Ridge National Laboratory is home to an extraordinarily complex and wide-ranging technology infrastructure—so complex, in fact, that it can overwhelm even the very knowledgeable and technologically proficient IT staff. It’s not surprising, considering the infrastructure includes 27,000 systems and devices running hundreds of complex applications along with associated massive repositories of data.

Just keeping track of the data sources and configuration items—much less maintaining an accurate map—was more than a full-time job. It was so complex that the IT team actually concluded that with human tracking alone it was not possible to create a comprehensive configuration map.

While grappling with rampant infrastructure growth, and in response to a security issue that brought these challenges to light, the IT team set out to improve overall response time and data access capabilities. The established goal was to better enable the business to respond more quickly to any future threats. The team led an initiative to automate the discovery of all devices connected to the network and create a comprehensive, real-time configuration database for faster, easier access and more accurate information.

“We had 23 systems that each played a role in holding configuration data, and over time, things got even more fragmented. We were data rich and information poor,” said Brian Arlington, group leader for service management in Oak Ridge’s IT organization. “We needed a consolidation strategy based on a single, authoritative source to manage and efficiently report on this critical data.”

Two steps to Discovery and Configuration

With the decision made to make discovery and configuration management the epicenter of the project, the next choice was the platform. After evaluating several, the team chose a two-pronged approach—starting with Microsoft System Center Service Manager to create a baseline map of configuration items, and then re-evaluating options to choose a tool to take the project through to completion.

“We knew that the Microsoft tool could get us about 75 percent of the way there,” Arlington said. “And would allow us to get our feet wet. We considered it a learning experience for what would come next.”

While using the Microsoft tool helped the team find more than 11,000 configuration items on the first go-round, it also sealed the decision that Microsoft just wasn’t ready for prime time when it came to Linux and Mac OS. The platform that would take the process the rest of the way would have to have excellent discovery and configuration management modules, and would have to be agentless so it could communicate with a variety of platforms.
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ServiceNow fit the bill—not only as a platform to finish the massive discovery and configuration management phase, but as a foundation for everything else Arlington’s staff wanted to do, from replacing aging incident, problem and change processes to automating and transforming other business services throughout the organization.

Conquering complexity
Starting with a fairly well-developed configuration item map, the IT group engaged the ServiceNow Professional Services team to define requirements, and then began working together to build out the discovery schedules.

“The level of engagement from the ServiceNow Professional Services team is probably the best I’ve ever worked with,” said Tim Guilliams, lead ServiceNow administrator at Oak Ridge National Labs. “We have an extremely complex environment, and they picked it up extremely fast. They were also able to provide some insights on best practices that proved very valuable and led to a faster time to market. And most importantly, they were as excited by what we were doing as we were.”

It was a complicated endeavor with more than 700 discovery schedules across five networks, and more than 900 vLANs. Together, the two teams finished the entire Configuration Management database (CMDB) phase in less than three months.

“When we laid out these plans, we didn’t think we could deliver a CMDB in a three month window,” Arlington said. “We exceeded our own expectations.”

Once complete, the configuration database quickly became indispensable.

“Before, if we asked a simple question like ‘Which machines have access to the Internet and are running versions 8, 9 or 10 of Cold Fusion’, it would take more than a day to get reliable information—so long that the information couldn’t be used to make timely decisions,” Arlington explained. “Now that same type of query takes less than an hour.”

“Other groups have been asking for access to the CMDB data and realize the powerful insight it can provide into each device,” Guilliams says. “Even something as simple as not having to go down to the data center to find a barcode on the back of a machine to get a serial number is a big efficiency benefit.”

Extending Innovation Across and Outside of IT
With the foundation set, the next phase consisted of replacing legacy systems for incident, problem and change management with ServiceNow applications. This has allowed the IT staff to better track progress based on true Service Level Agreements (SLA) set with their customers and to better analyze where improvements need to be made.

“It was critical to have the base at the CMDB level first, because it makes the incident, problem and change processes rich enough that people will want to use it, instead of having to use it,” Guilliams said. “And that’s what has happened; people can see how making a change to one thing will impact other activities.”

With basic ITSM functions running smoothly and the CMDB database proving its worth every day, Arlington’s team has moved to the next phase—improving Oak Ridge’s help desk, which it calls Solution Center.

“We were data rich and information poor when it comes to enterprise configuration information. Clearly, we needed a single authoritative source of timely and detailed configuration data, and a simple way to mine it for various purposes.”

Products
ServiceNow® Configuration Management (CMDB)
ServiceNow® Discovery
ServiceNow® Incident Management
ServiceNow® Change Management
ServiceNow® Problem Management
“We wanted to be able to give people one number to call to get information on anything,” Arlington explained. “If they are a researcher, they might ask where to get instrumentation, and if they are a visitor, they might want to know how to get through a guard gate. These are the opportunities with the ServiceNow platform that are really exciting as we can deliver a portfolio of automated services that will increase efficiencies across our facility and touch every employee.”

Also on the docket is being able to support other organizations within Oak Ridge, such as human resources, training or finance. Ultimately, Arlington plans to replace those siloed request systems with applications from ServiceNow.

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