SAIC POWERS SMART GRID AS A SERVICE WITH VBLOCK™ INFRASTRUCTURE PLATFORMS

Agility of Private Cloud Enables Cost-Effective, Rapid Scaling to Support One Million Meters

Executive Summary

Challenge

- Huge market anticipated for Smart Grid as a Service (SGS)
- Growth rate of adoption by utilities difficult to forecast

Solution

- Vblock™ Infrastructure Platforms
  - Cisco Unified Computing System (UCS) blade servers
  - Cisco Nexus switches
  - EMC CLARiiON storage
  - VMware vSphere virtualization solution
  - VMware vCloud director
  - EMC Unified Infrastructure Manager (UIM)
- Professional services

Results

- Pre-integration, single support reduce risk
- Agility and cost-effective scalability to support unpredictable rate of adoption
- Granular analysis of impact of growth on infrastructure
- Shared, private cloud infrastructure creates economies of scale for utilities

Challenge

Science Applications International Corporation (SAIC) is a Fortune 500 scientific, engineering, and technology applications company providing utilities a comprehensive, hosted, smart grid infrastructure for public power communities that offer integrated, affordable-solutions.

Erik Naugle, vice president at SAIC, says, “The smaller utilities and co-ops do not have the public funding and resources to invest in their own smart-grid infrastructure. So, we are providing them with a much more economical option as “smart grid as a service” on a per-meter, per-month basis. The market for shared smart grid offerings is expected to be huge. Our challenge is to provide a shared, highly reliable infrastructure with tremendous scalability and agility because we really don’t know our requirements up front.”

Solution

To support projects of this type SAIC provides a scalable and secure shared infrastructure that will be easy to deploy and manage. We are partnering with Vblock™ Infrastructure Platforms from VCE, and others, to develop the right solutions.

"We considered aggregating solutions from various vendors into a single infrastructure," notes Naugle. "When we compared this option with the Vblock solution, we concluded that it made more sense for the VCE partners to be responsible for the integration and ongoing support."

VCE already had experience with delivering SGS to leading prime contractors, a fact which SAIC viewed as critical. SAIC purchased two Vblock platforms to serve as the foundation for its Tier 3 SAS 70 Type II service. The Vblock platform is to run Elster's EnergyAxis smart grid solution, which can enable integrated advanced metering infrastructure (AMI) and distribution automation (DA). Working with VCE Professional Services, SAIC is prepared to roll out the solutions to utilities today.

Results

Ease of Doing Business

VCE was committed to working with SAIC to deliver a solution that would accelerate and strengthen SAIC's go-to-market strategy. VCE engaged in a comprehensive and successful test of the Elster solution in the virtualized environment.

"Working with VCE has been a very positive experience at all stages of the process from researching the Vblock platform to the solution sizing to the ultimate procurement," reflects Naugle. "In addition, the implementation services have been excellent."

First-Mover Advantage

SAIC demonstrated SGS at the ElectricCities Annual Meeting in North Carolina late August. More than 90 utilities witnessed the scalability and flexibility offered by this solution.

Explains Naugle, "At this stage, we do not know how many utilities are going to sign up, what size their implementation will be, and which services they will select. With our Vblock platforms, we will be able to scale up very quickly and cost-effectively to support an infrastructure that is likely to reach at least a million meters."

VCE developed a smart grid technical framework that enables SAIC to analyze how costs, capacity, and other technical aspects would be affected as the Vblock infrastructure scaled to support additional customers. VCE compartmentalized the Vblock infrastructure into a logical unit, which VCE called a Smart Grid Compute Unit (SGCU), to make it granular enough to support analysis on a per-meter basis.

"The Vblock platform gives us the ability to scale and adapt on the fly to what the market throws at us," says Naugle. "That business agility is a great first-mover advantage in a market with so much growth potential."

He adds, "Another advantage of the Vblock solution was cost. While some of the other solutions were slightly cheaper up front, we estimated that they would have cost 20 to 30 percent more as the infrastructure scaled."

Cloud Infrastructure Makes Smart Grid Economically Viable

SAIC's delivery of a cloud-based model built on the Vblock platform enables remote utility customers to self-provision virtual machines. In addition, the Vblock platform satisfies SAIC's rigorous requirements for security in a shared, multi-tenant infrastructure.

"Our private cloud is virtually private, but shared among multiple utilities," Naugle says. "With the Vblock solution, we offer smaller utilities a quality and scope of infrastructure that today is only feasible for the big, investor-owned utilities. We will give them access to sophisticated applications that previously had been out of reach, such as automated billing, GIS asset management, and load-control management."

"With the Vblock solution, we are offering a private cloud with true data segmentation, rich applications, and all the security of a private environment, but at a significantly lower cost via a shared infrastructure."

For More Information

For more information about the VCE solution and professional services, please go to www.vce.com.
For more information about SAIC and its energy, environment, and infrastructure solutions, please go to www.saic.com/EEandI.

About SAIC

SAIC is a Fortune 500 scientific, engineering, and technology applications company focused on solving national and global issues in national security, energy and the environment, critical infrastructure, and health. The company's approximately 41,000 employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Department of Homeland Security, other U.S. government civilian agencies, state and local governments, and selected commercial markets. With headquarters in McLean, Va., SAIC had annual revenues of $11.1 billion for its fiscal year that ended Jan. 31, 2011.

ABOUT VCE

VCE, the Virtual Computing Environment Company formed by Cisco and EMC with investments from VMware and Intel, accelerates the adoption of converged infrastructure and cloud-based computing models that dramatically reduce the cost of IT while improving time to market for our customers. VCE, through the Vblock platform, delivers the industry's first completely integrated IT offering with end-to-end vendor accountability. VCE's prepackaged solutions are available through an extensive partner network, and cover horizontal applications, vertical industry offerings, and application development environments, allowing customers to focus on business innovation instead of integrating, validating and managing IT infrastructure.

For more information, go to www.vce.com.