The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
Gravitant

Organization URL:
www.Gravitant.com

Project Name:
Improving public sector agency responsiveness to unexpected demand

Please select the category in which you are submitting your entry
Emerging Technology

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Information Technology enables public sector agencies to deliver services, but agencies are often faced with uncertain demand (e.g. demand for information during election season or change in demand due to a government policy change like Healthcare or responsiveness to a disaster). It is impractical (both from a cost and forecasting perspective) for agencies to buy IT capacity to meet peak demand. Cloud computing has often been suggested as a way to meet spikes in demand. However, many agencies have found that accessing, utilizing and optimizing cloud computing resources is extremely complicated. For example: Which apps for which cloud? How do I even source cloud computing? Current procurement processes don't work. How do I optimize my choice of cloud providers but not get locked in? How do I do application solution design across private and public cloud IT resources? How do I deal with "phone book" size API cloud guides? How do I ensure tight governance over this evolving way of doing IT across multiple vendors without slowing everything down? In short, cloud computing is more complicated than it looks and so agencies don't utilize its potential for agility.

Gravitant proposed a novel cloud brokerage and management platform to several agencies in the State of Texas. The platform handled the end-to-end cycle of using cloud computing from assessment to design to procurement to provisioning to real-time governance of solutions across hybrid cloud environments. This platform was developed after five years of work with technology components based on Java/JEE stack with open standards. By applying Operations Research techniques to develop advanced simulation and optimization mathematical models, Gravitant was able to provide optimization methodology for IT Planning, Sourcing & Governance.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

The platform was implemented in production in September 2011 at four state agencies in Texas as part of the Texas Cloud Self-service Portal (TCSP) pilot program.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

Yes.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

For example, the Secretary of State's office was able to stand up www.votetexas.org, a mobile-enabled, interactive information website built to assist Texans with the complexities of redistricting and voter participation, within two weeks of beginning the sourcing and procurement effort. This was a mission-critical, highly visible, and advertised website that was urgently needed to support the 2012 Texas primary elections. It included a solution design, pricing, approval workflow, provisioning, and system monitoring of the site, all governed from a single web portal. The agency's office for this second most populous U.S. state knew that demand for IT resources would go up significantly on election day. But they didn't know exactly how much, and they didn't want to buy extra infrastructure for a temporary surge in demand. Given the time it normally took to deploy and provision new servers, the Secretary of State's office knew they couldn't use traditional means to procure compute and storage capacity to meet this demand. As it turned out, demand went up over 1,000% to over five million hits on the state voting web site by noon on election day. The state had deployed a cloud brokerage and management platform powered by Gravitant to seamlessly provision IT resources in real time from multiple public cloud sources to meet the variability in demand. As a result, this demand was fully met without needing to do complicated planning or buy unneeded infrastructure.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

This project is both an innovation and a best practice for optimally consuming and managing the multitude of available cloud resources. This kind of brokerage can be used by government agencies to pragmatically enable them to implement the Federal "Cloud first" mandate. It is provided as a SaaS offering so it is very easy to deploy.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

This cloud brokerage and management platform makes cloud computing practical. Here is a link to a lessons learned case study from the Texas Department of Information Resources: http://www.dir.texas.gov/SiteCollectionDocuments/Texas.gov/ptco.pdf.