

# STATE OF CALIFORNIA

## NASCIO 2016 State IT Recognition Awards



### California Department of Technology

#### CalCloud

Category:

**State CIO Office Special Recognition**

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## **Executive Summary**

One of the goals in the California Department of Technology's (CDT) Strategic Plan is to leverage public-private partnerships to deliver innovative IT solutions that leverage performance-based and benefits-based procurement strategies, while deploying technologies to meet business program needs through an appropriate blend of internal and external cloud platforms.

In the last few years, California state departments are requiring faster and more effective IT solutions to meet the demands of the citizens of California. Cloud technologies are the next generation tools that offer access to IT services at a rapid pace, while minimizing the upfront capital investment and controlling financial risks. Transforming how the state delivers technology services proved to be not only more efficient and cost-effective, but it also spurred innovation with cloud capabilities that are open and secure.

The CDT's vision was to be the catalyst for new technology delivery methods by making efficient, flexible, and secure cloud services available to our state and local government customers. Our mission became focused on cost-effective cloud solutions to provide state and local government customers with convenient, on-demand access to a shared pool of configurable resources which greatly improves our customers' ability to streamline project timelines, while minimizing cost.

The strategy to execute CDT's vision was to establish a partnership with a cloud service provider and create a public-private cloud Infrastructure as a Service (IaaS) environment within the state owned Tier III data centers that could be shared with all California state and local government customers. In addition, cloud Software as a Service (SaaS) technologies, contracted through the CDT, would provide government agencies timely access to enterprise technologies, which also promoted an additional level of standardization and interoperability within California, while ensuring adherence to security standards.

In July 2014, CalCloud was launched with the CDT and IBM announcement of a collaboration to provide IaaS technologies. CalCloud IaaS is vendor provided and managed which requires no initial investment by the state. The vendor is paid based on a pay-as-you-go model with computing resources provisioned by the customers. This approach placed the risk on both the vendor and the state, thereby increasing the likelihood of success.

CalCloud is based on the IBM Open Cloud Platform and combines technologies from a variety of technology vendors. It is an open ecosystem that has provided the opportunity for innovation in cloud computing. Cloud services are now provisioned by customers as a turnkey service utilizing the State's LAN/WAN and network security. The self-service business model is accessed through the CalCloud web portal. This innovative business model, with an easy access portal, is expediting the on-boarding process with time savings of four (4) to six (6) weeks and has reduced the turnaround time of adding resources to servers from months or weeks to minutes. CalCloud also meets stringent security standards based on National Institute of Standards (NIST) for cloud based services and the Federal Risk and Management Program (FedRAMP).

Additionally, Vendor Hosted Subscription Services (VHSS) was added to the CalCloud portfolio in July of 2014 to provide customers access to cloud-based software solutions hosted by private service providers. The VHSS portfolio currently offers cloud services under five different lines of business - Project and Portfolio Management, IT Service Management (ITSM), Customer Relationship Management (CRM), Email, and Office Productivity. In partnership with customers, the VHSS portfolio is expanding to other lines of business such as offsite backups, disaster recovery, and digital/e-signatures.

As of March 2016, the CalCloud Portfolio has on-boarded 31 IaaS and 68 VHSS customers. CalCloud has created efficiencies by streamlining the procurement process, creating standardization, and enabling state entities to provide IT services to businesses with reduced timelines. Many customers transitioning applications and systems to CalCloud have seen savings of between 30 and 50 percent in infrastructure and support cost. In addition, with cyber threats at an all-time high, CalCloud offer customers security safeguards and controls that are difficult to achieve independently due to the cost and skilled resources that may be required.

### **Business Problem and Solution**

Redundant infrastructure hardware and the overhead to manage those resources are not cost efficient. It has become critical for public sector leaders to take a strategic approach to the state's technology infrastructure if government is to meet changing customer requirements and business needs efficiently and effectively. Cloud computing delivers scalable and flexible IT capabilities as a service, using a shared infrastructure, and provides the needed flexibility to add or remove capacity based on shifting demand in a cost effective manner. It provides the needed strategic platform for California's leaders to enable business agility and shorten IT project timelines.

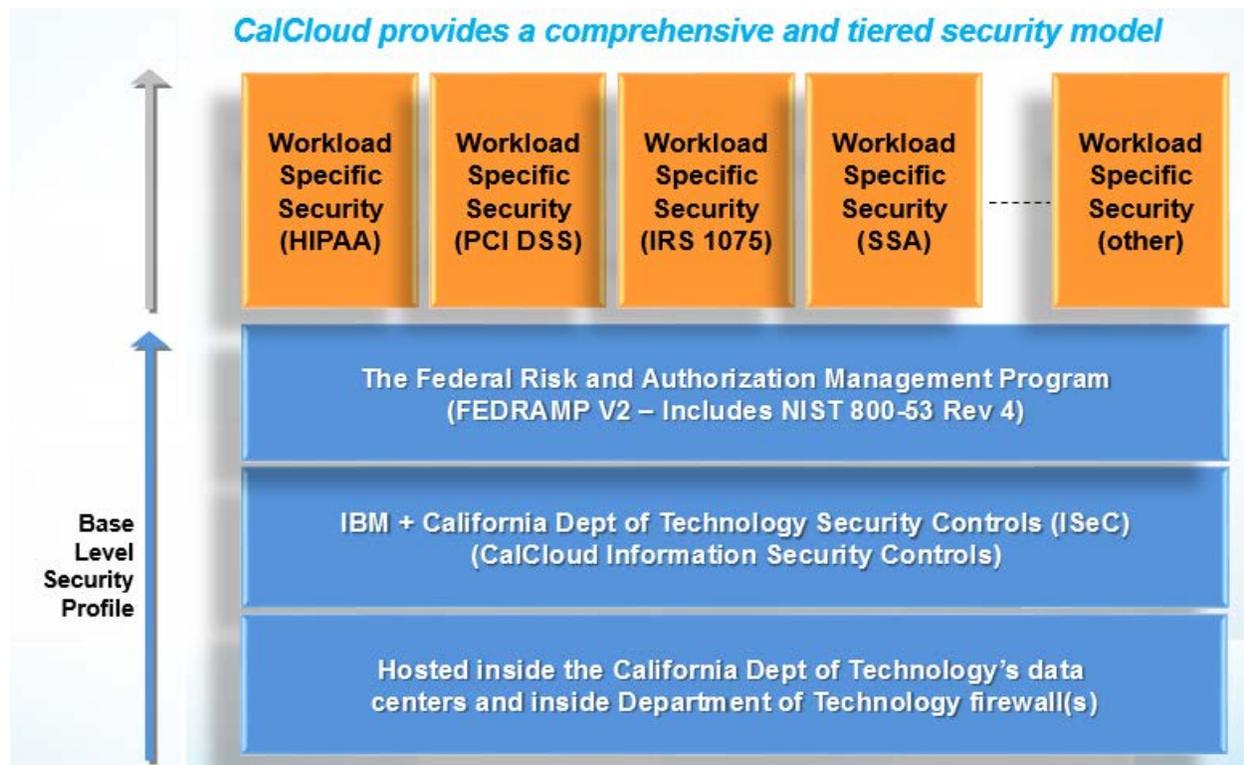
CalCloud's IaaS successful public-private partnerships have enabled CalCloud's IaaS, SaaS, and Platform as a Service (PaaS) pay-per-use model. The CalCloud platform offers an on-premises infrastructure without capital cost - the CDT's Office of Technology Services assesses charges based on a customer's monthly usage only. Users are able to choose what services they want to

use and stop usage of those services at any time. Departments experience faster implementation of any changes made to their cloud service plans.

CalCloud's IaaS was developed to allow users to select their preferred operating system for their workloads and applications. Windows, Linux and AIX are the current supported operating systems. Users can also select additional features like:

- Disaster Recovery
- Storage and Memory
- Backup / Recovery
- Encryption

To ensure the security of the state's sensitive data, all infrastructure is housed in the CDT's Tier III data centers, which allows for total control. Through an in-depth process, approximately 325 required controls, processes, and associated documentation have been implemented as proscribed by FedRAMP. A tiered security model has been implemented to meet stringent compliance and regulatory requirements such as HIPAA, PCI, IRS 1075 and more. CalCloud customers now have a foundation for their applications to achieve compliance with the NIST security publications, as generally required by many Federal programs.



Data sovereignty provides an additional benefit when it comes to migration costs. The state has made available their GS Smart financing program for clients to finance migration costs. The

project financing available through this program allows clients to match up their payment stream with the recognition of benefits from migration to CalCloud. This first of its kind program is only possible because the state retains physical control of the data.

CDT is periodically asked by our customers and vendor communities to broker vendor hosted subscription services. As a result, CDT has initiated and executed subscription service contracts with specified vendors based on lines of business requirements, thereby streamlining the procurement process. The CalCloud VHSS program has been able to streamline the procurement process, thereby enabling rapid acquisitions of products by leveraging pre-existing contracts and moving the responsibility of uptime, upgrades, and security to the vendors. In addition, to minimize the security risk to the state, CDT requires and ensures participating vendor solutions are NIST compliant. The currently offered VHSS lines of business covered are:

- Project and Portfolio Management
- IT Service Management
- Customer Relationship Management
- Email
- Office Productivity



The VHSS portfolio will be expanded based on customer demand and are prioritized by our Agency and Chief Information Officers. Customer subject matter experts participate in developing the requirements that would be used in the bidding process.

### **Significance**

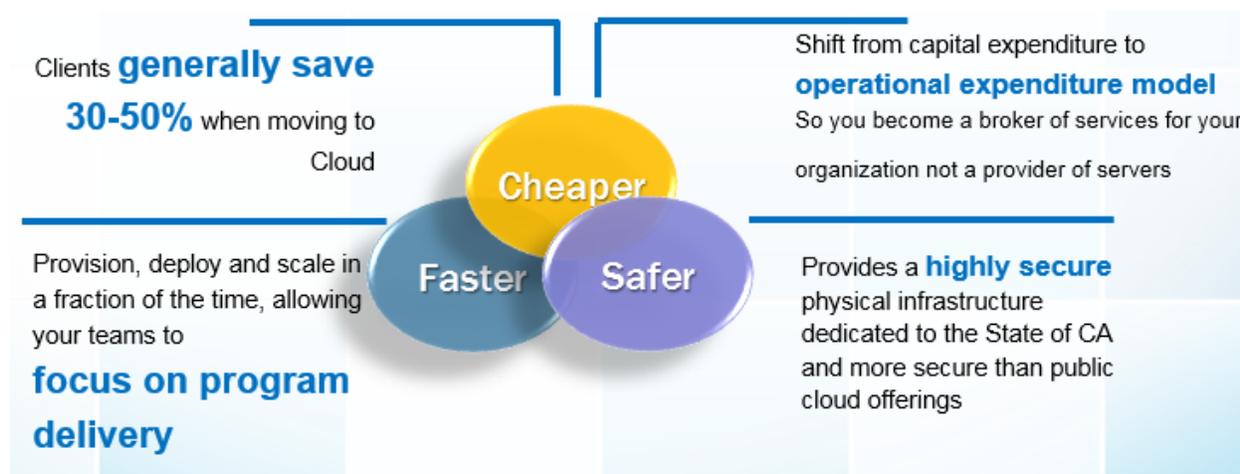
CalCloud provides a strategic platform that enables our customers to spend more time focusing on business needs, while lowering cost. Faster provisioning with deployments in a fraction of the time required in the past allows IT to focus more time on program delivery. In addition, the shift from a capital expenditure model to operational expenditure model, thereby allowing organizations to become a broker of services for their organizations (not just a provider of

servers) has generally saved our customers up to 30 and 50 percent. Business initiatives have become much easier to start by having readily available cloud services.

Furthermore, with data breaches on the rise and attacks occurring by the second, the security controls and monitoring that has been implemented within CalCloud provides a supportable foundation for systems with HIPAA, CJIS, PCI DSS, IRS-1075, Social Security Administration, or other regulatory or compliance mandates. The centralization of resources and strong adherence to NIST standards enables the State of California to have closer control over critical and sensitive data, while minimizing duplication of effort and ensuring standardized operations are consistently carried out.

### **Benefits of the Project**

CalCloud provides a strategic platform that enables our customers to spend more time focusing on business needs, while lowering cost. Some customers have seen their total cost of ownership (TCO) be reduced by as much as 50 percent. Faster provisioning with deployments in a fraction of the time required in the past allows IT to focus more time on program delivery. In addition, the shift from a capital expenditure model to operational expenditure model and allowing organizations to become a broker of services for their organizations (not just a provider of servers) has generally saved our customers up to 30 and 50 percent.



In the past, it could take months and complex budget proposals to request new IT services, and now we can respond in hours to shifts in demand. Having all the data in the cloud and easily accessible by all of our customers will make us more efficient and secure going forward.

The CalCloud VHSS program has been able to streamline the procurement process and increase the level of standardization of IT services throughout state government. The state has already

began the transition to the Office 365 Government Community Cloud (GCC) platform for email and other office productivity solutions. When the transition of approximately 100 State entities to Office 365 GCC is completed, the entire state will be utilizing a common set of up to date office productivity tools, allowing state IT staff to focus their attention on more critical business needs instead of maintaining and updating back office software products. This common toolset will also improve interdepartmental collaboration on cross organizational projects and initiatives.

CalCloud is benefiting the state by increasing operational continuity, operational agility, and interoperability, while lowering the level of risk for departments and enabling our customers to keep pace with the ever changing demands of doing business.