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PowerVCS and Security

Cloud computing is the newest technology buzz word. But the Cloud is more than a fad -- the concepts and technologies have been evolving for years. Cloud computing continues to emerge as a game-changing technology, with high adoption rates and investment. In October, 2009, the City of Los Angeles contracted with Google to move email for all 30,000 city employees to Google's Cloud over the coming year. Gartner Research predicts that by 2012, 80% of Fortune 1000 enterprises will be using some form of Cloud computing services. The Cloud is here to stay.

PowerVCS is a state-of-the-art Cloud service that provides software version and release control in a secure, cost effective, scalable, and reliable manner. In this white paper, we will discuss Cloud computing, the benefits of PowerVCS as a Cloud software service, and the various aspects of PowerVCS security infrastructure.

What is Cloud Computing?

Cloud computing is a computing technology that uses the internet and central remote servers to maintain data and software applications. Cloud computing allows consumers and businesses to use robust software applications (called Cloud services) without needing to install them on a local computer or local network.

When using a Cloud software service, the end-user pays the software provider a subscription fee for the service. The software is hosted directly from the software providers' servers and is accessed by the end user over the internet. Because software applications are "in the Cloud," users can access and use the software at any time on any computer with internet access. This technology increases computing efficiency by centralizing storage, memory, processing and bandwidth.

Benefits of PowerVCS as a Cloud Software Service

PowerVCS is version/source control system in which repository data resides on a secure Web server (the Cloud) and source control functions are accessible with a browser. Here's why that solution makes so much sense:

Increased reliability. Although some people fear that the Cloud is less reliable than traditional software installations, the opposite is true. No system has 100% uptime all the time, and neither does the Cloud. Given the scale, however, Cloud services are typically designed to provide high redundancy and availability. While this same level of redundancy/availability is possible to achieve in-house or with dedicated hosting, it's generally cost prohibitive. The Cloud enables a higher level of reliability at a fraction of the cost.

Lower costs. By running business applications over the internet from centralized servers rather than from on-site servers, companies can cut some serious costs. Furthermore, while avoiding maintenance costs, licensing costs and the costs of the hardware required to run servers on-site, companies are able to run applications much more efficiently from a computing standpoint.

Rapid deployment. PowerVCS is licensed on a low-cost monthly subscription basis, fully hosted and managed by E. Crane Computing. Implementation becomes a matter of popping open a browser, typing in a URL and entering a username and password to access the software.

Because it is a Cloud service, PowerVCS requires

- No hardware purchases or infrastructure investments
- No software installations
- No network setup
- No ongoing system upgrades
- No patches
- No hidden costs or fees.

Because it is a Cloud service, PowerVCS offers these additional benefits:

- PowerVCS manages all backups, network maintenance and upgrades.
- Connect to PowerVCS from any browser anywhere, any time of day.
- Enjoy lower costs, simplicity, speed of access, increased productivity, and greater end-user satisfaction.
- Scale your businesses increases without worrying about infrastructure or overhead costs.

E. Crane Computing's Cloud Computing Strategy

Several years ago E. Crane Computing developers made a difficult. Rather than developed a stand-alone version/source control product for distribution on internal company servers, the solution would be delivered over the Internet as a Cloud service.

At the time, this was considered a risky strategy, but E. Crane Computing took the gamble. Quickly, however, we could see that technology, perceptions, and the adoption of Cloud services were gaining momentum exponentially and that our gamble was a good one. Companies like Salesforce.com started to hit the scene and proved that software could effectively and securely be delivered over the Internet. The City of Los Angeles put its faith in gmail and plans to embrace other Google Cloud services over the coming years. Simply put, Cloud services just make sense and are the way almost all software will be accessed and used in the future.

PowerVCS's Security Infrastructure through Rackspace/Mosso

Security and privacy are important concerns, whether you subscribe to PowerVCS or purchase software and implement it on internal company servers. As a Cloud service provider, E. Crane Computing must provide you with the level of security you need while saving your organization the expense and effort required to house, deliver, and back up an application.

PowerVCS's security infrastructure begins with Cloud hosting through Rackspace / Mosso, an industry leader in managed and Cloud hosting. Rackspace security is a powerful, fully integrated portfolio of services, managed devices and best practices — all designed to ensure the highest levels of security for your data.

PowerVCS at Rackspace / Mosso covers all three critical security areas: physical security; operational security; and system security.

Physical security includes locking down and logging all physical access to servers at their data center. Keycard protocols, biometric scanning protocols and round-the-clock interior and exterior surveillance monitor access to every one of Rackspace / Mosso's data centers.

Only authorized data center personnel are granted access credentials to the data centers. No one else can enter the production area of the datacenter without prior clearance and an appropriate escort.

Operational security involves creating business processes that follow security best practices to limit access to confidential information and maintain tight security over time. Every data center employee undergoes multiple and thorough background security checks before they're hired.

Rackspace / Mosso is a PCI Security Standards Council Member. The PCI Security Standards Council is an open global forum for the ongoing development, enhancement, storage, dissemination and implementation of security standards for payment card account data protection. Endorsed by American Express, Discover Financial Services, JCB, MasterCard Worldwide and Visa Inc., the Council's members have a voice in shaping the PCI Data Security Standard, an organization's best protection against data criminals.

System security involves locking down customer systems from the inside, starting with hardened operating systems and up-to-date patching. The network's configuration, co-developed with Cisco, guards against any single point of failure at the network layer.

Finally, to ensure the fastest and most reliable network connections possible, the entire network is closely monitored for efficiency and end-user performance, and the network's topology and configuration automatically adjust in response to traffic pattern changes.

PowerVCS's Secure Software Architecture and Practices

In addition to the Infrastructure Security provided by the Cloud Data Center, additional safeguards guide PowerVCS's architecture.

Repository
Each customer's Repository is assigned its own, password-protected mySQL database. There is no possibility for inadvertently accessing records from another customer or doing so maliciously. The Repositories are backed up nightly (1:00 AM local time) on a rotating 7 day schedule. The databases are running on (65) randomly assigned servers, further reducing probabilities for a security breach.

Communication
All server communication is encrypted with Transport Layer Security (SSL), a successor to Secured Sockets Layer (SSL). The TLS protocol allows client/server applications to communicate across a network in a way designed to prevent eavesdropping, tampering, and message forgery. TLS provides endpoint authentication and communications confidentiality over the Internet using cryptography. TLS provides RSA security with 1024 and 2048 bit strengths.

Summary

The Cloud is here to stay. Analyst firm Gartner has unveiled its strategic technology list for 2010, listing the top 10 strategic technologies that businesses "can't afford to ignore" in the coming year. Cloud computing tops the list.

Cloud computing is a better way to run your business. Instead of running your applications yourself, they run on a shared data center. When you use any application that runs in the Cloud, you just log in, customize it, and start using it. That's the power of Cloud computing.

The Cloud is not only a viable method of delivering software, but is also proven. Improvements in online security, broadband Internet access, and factors demanding decreases in software and technology costs have all contributed to the success of Cloud services. E. Crane Computing and other web-based software providers can attribute much of their rapid growth and success to the Cloud service delivery model. Even more importantly, customers and end-users are and will continue to be the big winners.

About E. Crane Computing

E. Crane Computing is a privately-held, emerging growth software company headquartered in Concord, NH. The company was founded in 1995 with a mission to advance the tools needed in the configuration management and maintenance stages of development. These stages account for 80% of the life cycle costs associated with software development, and yet have been ignored by existing tool vendors. Over the past several years, E. Crane Computing has expanded that mission by developing Cloud software services designed to further enhance an organization's configuration management capabilities.

The company was founded by Philip B. Wallingford, previously founder and chief technical officer of SQA, Inc. (now IBM). E. Crane Computing is an authorized Sybase code partner.