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Is the Public Cloud Secure?

The Truth from Public Cloud Customers

Introduction

As the excitement around cloud technology increased, one of the top cloud concerns raised was security. Security fears, fueled by the unknown, tainted all cloud solutions options: Public, private, and hybrid. While there is still plenty of cloud hype, many companies have progressed beyond sandbox projects and are now leveraging a cloud operating model for mission critical applications that directly affect their operations and profits. Cloud adoption is at a point where companies are utilizing public cloud services for their tier 1 applications and critical customer data.

As enterprise-class cloud services hit the market, they provided improved security solutions. Previously one of the most important reasons for not taking advantage of cloud economics, security, has now become one of the top reasons for some companies to select a public cloud. Earlier cloud case studies reveal that companies sought cloud solutions to lower capital investments, lower operating costs, and increase flexibility so that they can focus more on their core business. But in the continuing era of high security concerns and demanding regulations and compliance, companies who need state-of-the-art security infrastructure, software and personnel, may find that an enterprise-class public cloud solution is the best model for their computing needs. And for those industries burdened with immense security requirements, like health care and financial services, the following case studies demonstrate how access to top rated security experts and ensured compliance is more valuable than actual cost savings.

This paper shares the experiences of two companies whose move to the cloud has been motivated at least in part by the desire to receive better security than they could provide themselves. Each testimony reveals the companies' business drivers, security requirements and the benefits realized from a public cloud deployment.

Project Methodology

VMware® commissioned Dimensional Research to interview customers who have deployed enterprise-class public cloud solutions and obtain in-depth feedback on security effectiveness and actual realized value from moving to the cloud. The companies in this report are customers of Tier 3. This report summarizes the interviews, although some quotes may have been edited for grammar and readability. VMware did not participate in the interviews nor did they give guidance on how to structure the information gathered.

Participants were not compensated for participating in this research project, although as a token of appreciation for their time, a donation was made to the charity of each participant's choice. Due to the challenges in obtaining corporate approvals to discuss sensitive development processes publicly, participants were ensured their feedback would be presented as part of a summarized report with no attribution unless they requested otherwise.

Participant Profile

All participants were directly involved with their company's decision to move to a public cloud. The participants helped compile the requirements for their cloud solution and were intimately involved with the process to deploy and migrate their applications to the cloud. Furthermore, they focused on measuring the actual benefits gained by the move to the cloud from both an operational and business perspective.

vCloud® Powered / vCloud Datacenter

The cloud service providers who participated in this research paper offer public cloud services which are founded on VMware vCloud solutions. These short descriptions explain what technology is leveraged and what business benefits they deliver.

vCloud Powered Services

vmware® vCLOUD® POWERED

Customers can choose and use with confidence, and bypass the risks and uncertainties of commodity public clouds with robust and secure infrastructure services. Delivered by VMware service provider partners, vCloud Powered Services are built on the same proven VMware cloud technology that more than 250,000 enterprises depend on in their datacenters. This makes vCloud Powered Services inherently and fully compatible with an enterprise's internal environment so customers can deploy and scale new and legacy applications without recoding.

vCloud Datacenter Services

vmware® vCLOUD® DATACENTER

More than 250,000 customers worldwide trust VMware's proven, production-ready technology in their datacenters. Now customers rely on VMware to deliver globally consistent enterprise-class cloud computing infrastructure services. Offered by VMware-certified service providers and built on proven VMware vCloud infrastructure technology, including vSphere, vCloud Director, and vShield, vCloud Datacenter Services allow users to extend their datacenter to the cloud with confidence.

Case studies highlighting key business drivers and realized benefits can be found in the VMware "Public Cloud Diaries."

Tier 3

Tier 3 takes a "defense in-depth" approach to securing its Enterprise Cloud Platform for customers' business-critical systems. Tier 3's secure multi-tenant architecture is accessible via secure private connections, and security processes and operational controls enable customers to attain PCI, HIPAA or other third-party audits and compliance standards. The company has extensive experience providing secure cloud services to the financial and legal industries.

To meet customers' individual requirements, Tier 3 provides the following compelling security offerings:

- SSAE 16 audited; ISO 27001 compliant in 2012
- 99.999% SLA across server, network and storage
- Encryption for data at rest, in flight and to the spindle
- Strict, thorough and automated patch management program

Tier 3 maintains strict separation of development, test and production environments, and maintains full network separation between clients with dedicated firewalls. In addition, Tier 3 performs full security scans on storage and applications and provides expert advice on how to remove vulnerabilities. Customer access to the cloud is offered via VPN, IPsec, and dedicated connections to ensure secure control. Tier 3's infrastructure is located in state-of-the-art datacenters with the following physical security:

- All access and operations are logged, audited and reported
- Biometric scans
- Separate cage enclosure
- 24/7 security with closed-circuit television (CCTV) surveillance
- Restricted access only permitted with an approved escort

These advanced security measures provide Tier 3 customers the peace of mind to run their business-critical, production applications and services on the Enterprise Cloud Platform.

Visit tier3 to learn more

TIER 3

Financial Transaction Company Utilizes Tier 3 for Secure Stock Trades and Capital Exchanges

This emerging company provides secure IT architecture and software for stock trades and capital exchanges for some of the largest financial institutions and investments banks located across the Eastern United States.

The company's CTO explained that they used to operate three datacenters on their own, but several disasters within a few months caused service interruptions for the company and some of their clients. He also shared that the rising security requirements from both hacker activity and regulations continued to increase the resources and dollars spent on their IT operations. These realities prompted them to look at a secure public cloud solution.

"We had a slew of disasters within a few months that all caused service interruptions: Hurricanes, a tornado, and a thermal overload. It was time to really look at a cloud solution."

"When we were running our own datacenters, it was a full time job just to evaluate and install all the required security patches. We just didn't have the ability to get to them all. That was creating risk."

He went on to share that his own IT team with their current skills could not meet the current requirements. The CTO shared the following requirements when considering a public / private cloud provider:

- SAS 70 certification with annual retesting
- Redundant infrastructure including a separated dedicated carrier backbone with full security system
- Stated patch and update process for security with access to online reports and status
- ISO 27000 certification with compliance reporting
- Data security and management policy including encryption and threat response
- Virtual technology to roll back or redirect instantly if a security vulnerability was discovered

"We would have had to hire ten times the people we have now to meet the security regulations and expectations of our Fortune 100 clients."

"Our cloud solution at Tier 3 is more secure than we could afford if we built it on our own premises."

The CTO shared that at the beginning they were very excited and committed to operating their own IT infrastructure but the costs, commitment, and security vigilance was a distraction to their core business. Now the company is delivering higher security and availability at a reduced cost with a public cloud solution at Tier 3. That service is being accomplished through a SaaS offering that previously was not possible.

"Already this year we have had a blizzard, hurricane, and some nasty tropical storms that took out power. But with our cloud deployment, we had zero interruptions."

"If you are thinking that you are small company and hackers won't come looking for you, you are dead wrong."

"The cost to continue running our own datacenters with required security compliance and reporting would have been seven times the cost spanning a three year timeframe over what our Tier 3 cloud solution is costing."

Legal Discovery Company Delivers Secure Services and Development Platform on Tier 3 Infrastructure

This new company produces software to support law firms and legal departments inside of large enterprises. The company vision was to modernize the legal documentation storage and retrieval, and electronic discovery process.

The senior operations analyst stated that they operate in a very competitive climate and in order to succeed, they need to offer superior solutions over their competitors. The company focused on delivering superior products with faster time to market and outstanding customer service. In order to achieve this they created a follow-the-sun development, bug reproduction and resolution process, and testing process, facilitated by their cloud-based infrastructure. This increased the speed of development, testing and resolving of customer issues. Additionally, the cloud enables them to create an evaluation environment for new clients that can be spun up or down almost instantly.

"We have the ability spin up customer environments in a virtualized image in minutes and that means we can replicate a bug, fix it and test it in a customer environment. We commonly fix a bug in 24 hours but occasionally it takes 48 hours. This is key differentiator over our competition."

Another advantage they have with a public cloud offering is the ability to offer their solution in a SaaS model. He shared that customers are deciding whether to choose on-premise deployment, cloud deployment or SaaS solutions based on their internal IT security prowess, experience and bandwidth to manage it.

The senior operations analyst further shared that when they were looking for a cloud provider they weren't just looking for a bare metal vendor. They needed their partner to provide an extension to their IT team and were looking to them to deliver services and commit to those services with SLAs. It was critical that they deliver leading security solutions and reporting and be SAS 70 / SSAE 16 certified. They selected Tier 3 and have been thoroughly impressed with them from a technology, service and operation perspective.

"I am not looking to outsource personnel or boxes. I wanted an extension of my team, and guaranteed service delivery to my team, and ultimately to my customer. Tier 3 does a fantastic job and is unmatched in the market today."

The senior operations analyst explained that the company often gets RFP's that cover a number of security requirements and that it's easier to meet those requirements with a public cloud solution than via a traditional in-house datacenter. The following subject areas are part of almost every RFP they receive:

- Data access procedures
- Account setup and decommission
- Data retention / separation / isolation
- Active Directory creation and mapping
- Secure back up (on site / collocation / third-party)

"We educate our customers on how a number of issues and processes that were needed with outsourcing to bare metal and traditional datacenters aren't even a factor with an enterprise-class cloud environment."

When asked about the value of a cloud solution to their company, the senior operations analyst used bug fixes as an example. At minimum, the company could pay $300/month for a bare metal box and then would have to configure it, set it up and maintain it which consumes a lot personnel time. With Tier 3's VMware-based cloud service, it is only $25 a month for it to be ready and approximately $75 a month to use a specific customer environment to fix a bug.

"Using Tier 3 provides a huge ROI in so many ways. We have numbers to prove it is three to four times less expensive than building and securing it yourself."

Back to our initial question: Is the Public Cloud Secure?

Just a couple of years ago companies ran from the cloud and the hype based on security fears. Now companies of all sizes and industries, including some of the most regulated, are considering the cloud. They're finding that some cloud services, those that are "enterprise-class" with industry-leading security capabilities, offer security that is superior to what they can provide in-house.

Customers have shifted their mindsets from believing that applications and data are safe because they're in their basement datacenter to now openly admitting that security is based entirely on the technology, strategy, implementation, processes, personnel and constant vigilance. In testimonials, they admit that day-to-day IT issues distract their teams from necessary security tasks. Others state that the sheer cost of acquiring not only the technology but the expertise and personnel are beyond their reach. Still others share that IT and security are rapidly becoming too complex and that they are better served focusing on their core business and leaving IT to expert service providers.

It is clear that cloud providers must be evaluated on strengths, capabilities and experience. Diligence must be invested to evaluate their software, hardware, operational practices, and their security measures. Those considering a service provider should ask about the experience and resources dedicated to security and should request a list of current and future credentials as well as a plan and commitment for keeping them current. According to those interviewed, choosing the right service provider will deliver savings, top flight security and more time to focus on the core business.

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About Dimensional Research

Dimensional Research® provides practical marketing research to help technology companies make their customers more successful. Our researchers are experts in the people, processes, and technology of corporate IT and understand how corporate IT organizations operate. We partner with our clients to deliver actionable information that reduces risks, increases customer satisfaction, and grows the business. For more information visit www.dimensionalresearch.com.

About VMware

VMware (NYSE:VMW), the global leader in virtualization and cloud infrastructure, delivers customer-proven solutions that accelerate IT by reducing complexity and enabling more flexible, agile service delivery. VMware enables enterprises to adopt a cloud model that addresses their unique business challenges. VMware's approach accelerates the transition to cloud computing while preserving existing investments and improving security and control. With more than 300,000 customers and 25,000 partners, VMware solutions help organizations of all sizes lower costs, increase business agility and ensure freedom of choice.