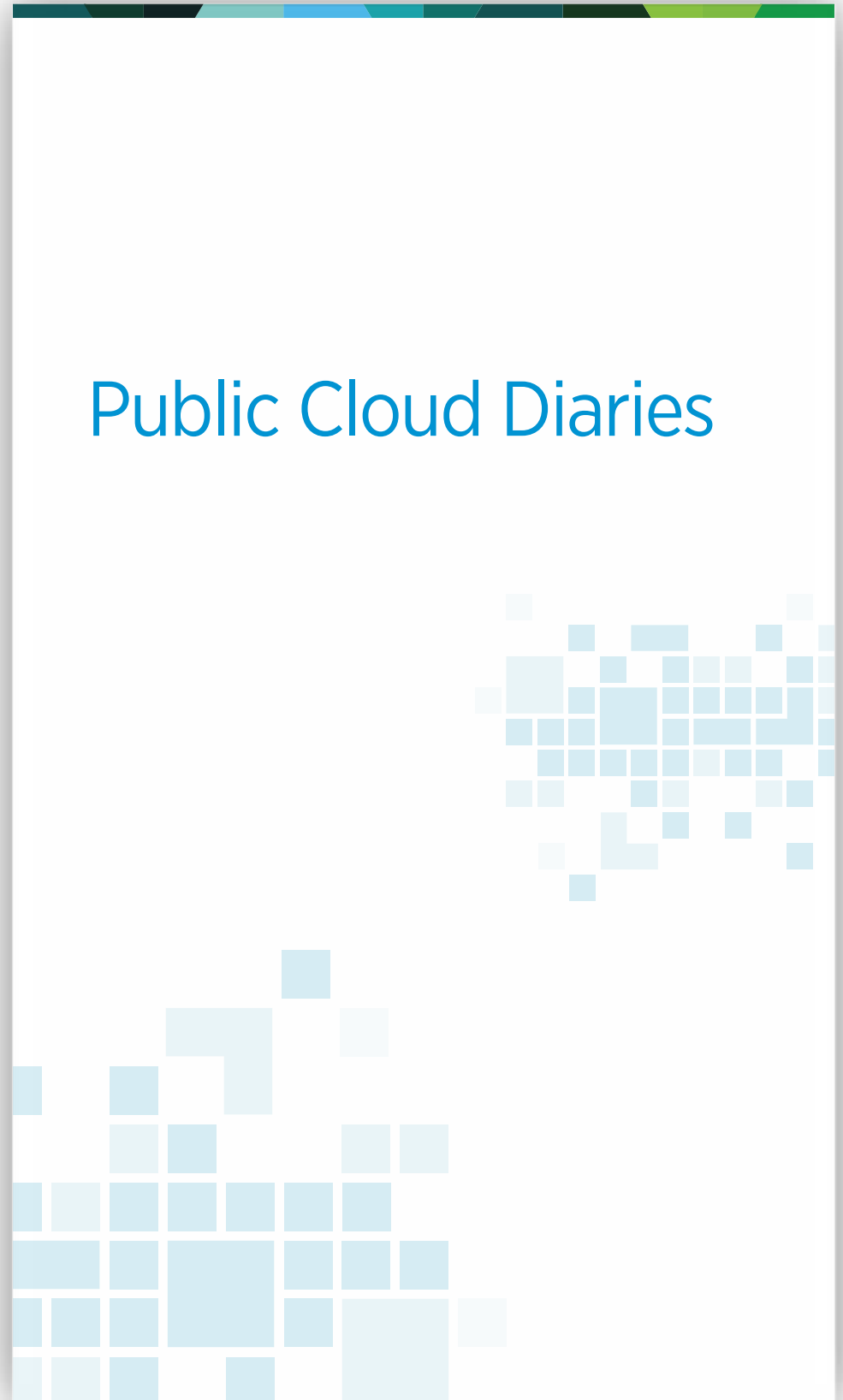


# Public Cloud Diaries



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## Real Companies Solve Real Problems by Moving to a Public Cloud

## Introduction



Welcome to the Public Cloud Diaries. The diaries share business situations and challenges that charted the course of many companies as they moved to the public cloud. The entries capture key requirements for selecting a cloud vendor and business benefits received with a public cloud solution.

To keep the information fact based, Dimensional Research was hired to find and interview companies and assemble a corporate biography of each personal conversation. The company and the respective spokespeople were promised anonymity in order to capture candid and accurate information that can be publicized.

This is an ongoing project and we encourage you to visit [vmware.com/go/PublicHybridCloud](https://vmware.com/go/PublicHybridCloud) to keep learning how real companies are solving real problems with enterprise public clouds. You will continue to discover insights and ideas on how to measure return on investment leveraging the cloud. We hope you will find an entry that articulates business challenges and offers solutions that identify best with you.

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*“When the company started, everyone was excited about building everything ourselves. Now, we look at getting the best IT infrastructure with the lowest cost.”*

## Business Service: Diary Entry 01



I interviewed the VP of IT at a company that provides charitable fundraising systems designed for special fundraising events. As the application and infrastructure grew, the company was looking for improved IT system management and operations without driving up headcount or equipment costs.

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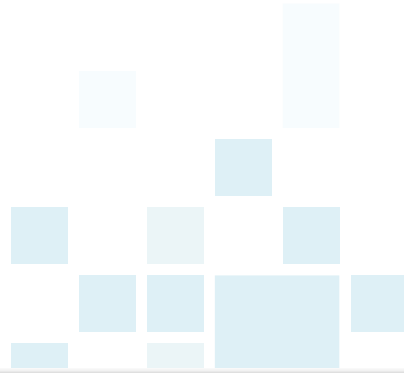
### Move to the Cloud

The company needed improved operational excellence but could not afford the 24x7 personnel for each event. They knew for a small company to get world class IT infrastructure, the best way would be to move to a managed cloud solution, with full 24x7 support. Although they started with just their customer-facing application, they expect to migrate all of their applications to the cloud.

The executive team was on board but a lot of the IT staff was concerned about the change in operation and the impact to their jobs. By moving to the cloud, no one has lost a job. The team now spends time ensuring the technology that supports fundraising events effectively supports their clients rather than focusing on operational tasks.

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*“When I got here, it was like many other companies; the servers were not taken care of, not patched regularly, back ups were sporadic and undisciplined, and there was poor monitoring. And we were not able to adapt to changing business conditions that required quick changes and increases in process and storage.”*



### Cloud Requirements

The company has 99.99% uptime requirements that extend to their clients. Storage was not a major consideration given their model is completely event based and data is not retained. In addition, they needed monitoring and diagnostic tools to observe and manage system and application performance.

*"It is key that we can see how the system and our application is performing and use that information for diagnostics or improvements should the need arise. (The vCloud Provider's) offering has some excellent tools."*

Most importantly, they needed accessibility to more computing power on short notice to capitalize on business opportunities.

*"An event can grow or swell just a day or two before and we need to know we can get the processing and storage to meet the needs."*

### Solution

The company has just completed their move to the vCloud Service Provider which offers more dynamic response to computing and storage needs. The number of virtual servers scales to the demand.

*"We have never had a performance problem."*

In addition, they run VMware technology on their own servers and are looking forward to using vCloud Director so they can migrate the rest of their applications to the vCloud Provider's Virtual Datacenter (VDC).

### ROI

By their calculations, they have saved 37% of their operational costs when compared to running the application internally. The company went on to share several other key benefits:

- Higher service levels and uptime
- Tracking and reporting for all compliance and customer requirement issues
- Superior monitoring and management system
- Scalability to grow capacity within a few hours

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*"I know (the vCloud Provider) takes care of their infrastructure really well. I don't even worry about it. They provide helpdesk, root cause analysis and monitoring. All of this is better than we did for ourselves without increasing costs or resources."*

*"I think their communication is outstanding."*

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*"I had used (the vCloud Provider) at my previous company. They are solid, reliable and affordably priced."*

*“We always need to be concerned with “Safe Harbor” and may need to move our infrastructure to ensure we are providing our customers with the security and privacy they need.”*

## Business Service: Diary Entry 02



I talked to a company that offers home security solutions including both hardware and software. The security company is continuing to expand their offerings into home automation which requires integration with home appliances as well as the heating and air conditioning systems. The company needed to offer their services to the end customer, and as a development platform for partner integration. At the same time, security of customer data such as video feeds from surveillance cameras was paramount. A buggy software rollout and unreliable operations caused serious customer complaints, leading the company to reevaluate its ability to run and operate its own world class datacenter and focus on the development and delivery to its customers and partners.

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### Move to the Cloud

The company's business plan requires a low per customer infrastructure cost to make their \$8 a month service profitable. Slow economic conditions, a reliance on partner integration and new product development

costs created concern about the hardware and operational costs of a datacenter. Flexibility and short term commitments were valuable attributes to the team, but hard to accomplish in a dedicated datacenter model.

### Cloud Requirements

Their decision between a traditional datacenter and cloud offering had several requirements: extremely tight security requirements, meeting ITIL and ISO standards, as well as co-location for back up and service reliability.

*“Security has to be top notch. We may have live feeds that cannot ever be hacked.”*

The company wanted to build their deployment to be self-contained, such that the security, load balancers, servers, database and file system could be moved as one if required. This meant multi-tenancy was never an option.

### Solution

The company had done some testing on Amazon EC2 but realized they needed a very specific solution for security and quality. They sent an RFP to all the top vendors in Gartner’s magic quadrant and the bids were very competitive. Some of the large vendors had problems offering and supporting a flexible and self-contained “virtual private cloud” hosted in a public cloud environment. The business went to a vCloud Service Provider based on a strong technical platform, but what weighed even more was their responsiveness and willingness to meet their exact needs.

*“With (the vCloud Provider) we are getting exactly what we want: F5 and Checkpoint technology up front, SQL server on backend and all self-contained and very portable. This is a top notch offering by some really solid guys.”*

### ROI

The company is on target with their IT costs at 20-25%, hitting the bottom line profit objectives. In addition to the peace of mind and the ability to focus on their core business, they cited several other key attributes of the hosted cloud solution at a trustworthy vendor:

- Cost scales with the business
- Ability to match billing to subscribers to track profit and loss efficiently
- Rapid scalability
- The company can focus on the business and partnerships, not hardware operation

*“The real ROI is that we can sleep at night. We have infrastructure and operations that are top notch, supported and maintained 24 x 7.”*

### Next Steps

The next step will be looking at a possible hybrid cloud in the future.

*“We may want to store some of the data, or offer a specific service out of our datacenter or our partners.”*

*“Honestly, given the business, it could take a couple years to achieve the subscriber base we anticipate. We wanted to be able to scale with business and that just spells out cloud.”*

*“We work with many virtualization technologies and companies, but we prefer the combination of VMware’s vCloud and (the vCloud Provider).”*

## Business Service: Diary Entry 03



I interviewed the CEO at this value added reseller of services and infrastructure to deploy, integrate, customize and operate e-commerce, CRM, ERP and help desk applications. Client requests for cloud based deployments continue to increase, and the organization is looking to manage its balance sheet carefully and reduce IT costs.

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### Move to the Cloud

For most of the company’s clients, economics is the deciding factor for the deployments on the cloud. Moving to the cloud is in line with a client’s decision to outsource IT tasks and keep internal headcount low. The CEO went on to say that the continued influx of new mobile devices now makes the use of cloud computing more obvious to their clients. Many conversations with customers start with disaster recovery, which now costs 10% of what it did a few years ago.

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*“80% of our clients’ software applications now operate in the cloud. About 20% stay on the premises primarily for file sharing and printing needs.”*

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### Cloud Requirements

Even though this company is a value added reseller and provides a range of services themselves, they spoke of the importance of having the cloud provider offer managed services too. Most cloud vendors only offer raw virtual machines as commodities, and so instead they sought out cloud providers who offered managed services in addition to virtual machines. The company wanted VMware technology to enable the cloud infrastructure because of its reliability, business continuity and replication, something their clients need and at which VMware technology excels.

### Solution

When cloud deployment is the right choice for a new customer, the company initially recommends a vCloud Service Provider powered with VMware's vCloud technology. Most of their customers utilize 2-4 physical servers and up to 12 VMs run on them. The solution allows the company to operate and control cloud infrastructure whether it is an application, back up, or recovery, all from a centralized operations control panel.

### ROI

The CEO explained several other advantages his clients receive by moving to a cloud solution:

- Replacing a 3 or 4 year capital expense with an operating expense
- Reduced IT costs
- Focusing on their business, not on managing IT infrastructure
- 2-4 hour recovery time objective with minimal business impact

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*"For our clients, top ROI is risk management with disaster recovery. But shifting costs from CapEx to OpEx has proven to be of tremendous strategic value."*

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*"Even though we have the skills and knowledge to do it all, sometimes it just makes sense to have the cloud provider provide an additional service. We want that option. VMware's vCloud is an example of technology that gives me a lot of options."*

*“We know that reality is starting to fulfill the cloud hype and with the outage we had, the time was right for real investigation.”*

## Business Service: Diary Entry 04



I interviewed the Director of IT at this technical research company, which commissions semiconductor research projects with universities. It processes, compiles and packages the information for its subscribers and offers direct research data access. The IT system facilitates the interaction with the universities, internal analysts and experts, and clients. Availability and data protection is critical. Some staff are remote and the requirement to access and analyze large datasets is problematic.

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### Move to the Cloud

One senior executive had been reading about the cloud and the virtues it can provide. The research company currently has its database and web servers in-house. The Director of IT knew they were exposed to data loss

and downtime. Recently, a local power outage created a significant hardship and loss. Strong encouragement from the executive and a compelling event prompted them to look for a cloud solution.

### Cloud Requirements

The Director of IT shared several key cloud requirements that drove their decision. The first was VMware, which they had used in-house for several years and was key to a long-term hybrid cloud strategy. They also wanted to use just a few cloud-based services initially, such as load balancing and back up, and then grow over time. Costs were a big factor, and they were starting small and they wanted a matching price tag. Some vendors bid too much in their smallest package. Lastly was their desire to extend their network domain to the cloud. The cloud provider had to be able to secure both the public cloud services and make servers and applications available to remote employees – with better performance than they had on-premises.

### Solution

Initially the research company did a trial deployment with one of the big commodity cloud providers but they just didn't have the right technology, service options or customer service. Their public cloud selection criteria required a vCloud Service Provider powered with VMware's vCloud technology. The company recently deployed phase one and are running a single virtual machine on a single box with load balancing and back up services. They expect that will change rapidly and they will build in more redundancy as they build out their web server and databases in their hybrid cloud strategy.

*"We attended a VMware vCloud webinar and knew that was the right technology. At the end of the presentation they showed a list of certified cloud providers using that technology and that is where we started."*

### ROI

As the company is still deploying, most of their ROI is anticipated. Here are areas in which they are expecting to receive benefits:

- Reduction in hardware purchases and maintenance costs
- Improved throughput for remote users and employees
- Redundancy for emergencies both for data and uptime

### Next Steps

Their next project will be to install a Microsoft Exchange server in the cloud for better remote performance as well as the redundancy benefits.

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*"Availability and reliability is why we are doing this, and I see no reason why this won't pay off well for us."*

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*"While we are just starting small we needed to know the cloud provider could grow with us toward a hybrid cloud in the future, and that was a combination of services and VMware technology."*

*“Security and operational issues have very little to do with where your hardware is. It has everything to do with the security strategy, technology, implementation and constant vigilance.”*

## Communications: Diary Entry 01



This company does media and communications for many pharmaceutical companies, providing information about their drugs, benefits and clinical trial results for physicians and healthcare organizations. The company must satisfy HIPAA regulations for some of the information it provides, such as some clinical results. The latest communication project is to provide an interactive multimedia application for doctors.

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### Move to the Cloud

The company had experience with server co-location for client websites and information portals. However, they were not entirely happy with their current cloud vendor, and could only get a

commodity offering. The executive staff decided to seek out cloud providers, specifically ones that offer some value-added services and managed services expertise.

### Cloud Requirements

The move to the cloud meant HIPAA and SAS 70 security requirements for the public cloud service provider, and an ability to remain current with applicable certifications. The service must achieve five nines (99.999%) reliability and offer scalability.

*“We don’t have the technical know-how or the resources to meet the SAS 70 requirements. That was the high bar for entry to the bid process.”*

### Solution

Although the company looked at several cloud and datacenter companies, they ultimately chose a vCloud Service Provider.

### ROI

The customer said that value to their company is noticed in numerous areas but these rose to the top of their list:

- Avoid hiring more IT staff while not distracting current staff
- Did not have to find a SAS 70 consultant to help implement the solution

Another important benefit was local service from the vCloud Provider.

### Next Steps

Communication contracts on drugs typically last around 2 years. They believe the cloud provides an optimum solution given the short-term nature of the business and the highly variable infrastructure requirements.

*“We could not be profitable on this project if we had to provide the infrastructure, maintain it, and keep current with SAS 70 security requirements. I think that is pretty clear ROI.”*

*“(The vCloud Provider) has several other healthcare companies, a good reputation, and excellent services. While not the cheapest choice, it was clearly the best value.”*

*“The (vCloud Provider) solution is excellent both for their technology offerings and their customer service. Their own redundancy between their centers with dedicated tunneling was a perfect solution.”*

## Communications: Diary Entry 02



I spoke to the Senior VP of IT at a telecommunications company requiring secure back up services. Using their own facilities did not provide the required diversity for effective data protection and disaster recovery. Furthermore, even though they offer Internet services and some cloud services, they did not have modern back up technology and still relied on tape back up.

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### Move to the Cloud

The Senior VP of IT led the move to consider an external cloud provider. He knew cloud technology had come of age and could be the right choice for their needs. His decision met with internal resistance at

the operational level as the administrators wanted to maintain control and feared job loss. Some basic education and the assignment of new tasks and responsibilities helped remedy the situation.

### Cloud Requirements

The selection of a cloud provider for data back up had several key requirements such as location, technology used, managed services and expertise. They also operate in a hybrid cloud with their own internal private cloud and a public cloud. It was vital that the technology selected would work seamlessly across the two clouds. The company also uses VMware vCloud technology in their own cloud offerings. Staying with technology they knew worked, which also provided an optimal back up scenario was important.

### Solution

The company shopped around and considered popular cloud vendors but found that not all vendors were equal in both the technology and services. They selected a vCloud Service Provider and use multiple virtual servers at two physical locations. Should a disaster occur, this configuration would allow them to restore rapidly.

The solution today offers superior functionality that allows the company to quickly find and pull a single file for restoration or reporting. Hours used to be spent searching across tapes and then restoring numerous files instead of searching for just what was needed and restoring that.

### ROI

As a telecommunications company they have vast experience with technology and operational processes. Here are additional benefits they are receiving:

- Reliability of the solution
- Efficiency and proficiency of the IT team
- Ability to restore a single file via a GUI in minutes
- Control of the process remotely
- Removal of hardware responsibility

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*“The ROI is pretty obvious. It takes a lot less time to back up now, on better technology that frees up my team to work on more important projects.”*

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*“Our requirements covered strategic locations for disaster recovery, excellent tools, great customer service and VMware technology.”*

*“(The vCloud Provider) was fantastic, they are a partner and their expertise and efficiency has truly benefited our company. They were absolutely the right choice.”*

## Healthcare: Diary Entry 01



This software company provides services and a scrub engine for claims processing in the healthcare industry. To ensure faster service and greater profitability, the company’s original business plan included building out an IT team, purchasing boxes, installing hardware, running the datacenter and doing maintenance and upgrades. However, the CEO and COO found that demand for services comes in peaks and valleys, making buying and maintaining hardware a significant and unprofitable investment. Was a virtual private cloud solution better than a traditional data center?

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### Move to the Cloud

This company was introduced to a VMware vCloud service provider during their funding and start up phases. Early meetings convinced them that the vCloud Provider could also be a trusted partner, and not just a vendor of virtual machines. The vCloud provider helped them with analysis and design to demonstrate that a cloud solution could be operational and cost effective. They looked at other cloud providers but none had the people-oriented approach and experience of the vCloud Provider team.

After a few meetings and whiteboard discussions, the company had a plan to implement a virtual private cloud for their application. From there they could scale and spin up as the demand required.

### Cloud Requirements

One key technical requirement was security as this company is required to be SAS 70 Type 2 certified to meet the HIPAA certification requirements. The vCloud Provider and their VMware technology cloud environment already held that certification. The commitment from the vCloud Provider to maintain this status relieved one of their largest concerns. Early demonstrations proved that this software company need not be concerned about performance, reliability or back up. The company has an SLA for 99.9% uptime and no outages to report.

### Solution

Implementation of the cloud infrastructure took only a couple of months. It also helped the company design their software to take advantage of the vCloud environment. Since implementation, the vCloud Provider's cloud solution has provided error-free operation and allowed them time to optimize their application and service for cloud deployment. When a new customer showed up with 4x the number of records previously processed, the company was confident it could get all the compute capacity it needed with a quick call. As a result, the company could focus on closing business, not managing technology.

### ROI

The business has compared their initial business plan IT costs and resources to real dollars paid for the hosted cloud solution. It showed a bottom line advantage in choosing a virtual private cloud vendor.

In addition to cost avoidance, they stated several key benefits of outsourcing to a cloud service provider:

- Immediate IT expertise
- Avoiding costs and processes of machine upgrades and maintenance
- Ability to focus on the core business

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*"We are healthcare experts and our technology is the leader in the space and that is what we are good at. Managing IT infrastructure is not our focus and the move to VMware-powered cloud with (the vCloud Provider) has allowed us to focus, drive, and grow our core business. Is there better ROI than that?"*

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*"We now know the cloud solution was the right choice. We are able to scale as needed without wondering if we have to buy and provision hardware or if we have enough technical resources. The (virtual) private cloud was the perfect choice to meet our varying business demands."*

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*“I know exactly where the data is at (the vCloud Provider), and I can get direct access to all the firewall and security logs and reports. I always know what is going on and can report on that to be in compliance.”*

## Healthcare: Diary Entry 02



This company is a healthcare start-up with software in beta with hospitals. Their system helps doctors access, document, and evaluate risk with skin conditions and wounds. The application and database are accessed on hospital computers via the public Internet, and relies on a database that is constantly growing and frequently updated. Providing a traditional on-premises solution would require each hospital to deploy or assign hardware plus constant updates to the database and application. This type of up-front commitment by a hospital was a non-starter and thus, this company's product has been designed to run in the cloud.

### Move to the Cloud

Analysis of this healthcare start-up showed that a cloud solution was the most economical solution versus building a datacenter. The company initially deployed on the Amazon Web Services cloud but found that while the headline price was cheap, Amazon offered no support besides a forum or a for-fee support service. The for-fee support service often stated that “the problems are with customer's software” but offered no real guidance on how to find or resolve issues. In addition, the company could not get any information on how the Amazon cloud was secured, where their data was

stored, what controls were in place, and had no access to firewall or other logs critical for audits. The company reviewed several vendors and found a VMware vCloud service provider offered a more secure cloud with expert support, expertise and guidance. This allowed them to focus on their application and not question the cloud infrastructure. Today, the company's customer-facing application is on the vCloud and they expect that most of their on-premises applications will move to the cloud as they grow and expand.

### Cloud Requirements

Providing a solution to the healthcare industry required comprehensive security, strict records and data controls. They needed to know exactly what was happening to the infrastructure and where the data was at all times.

*“With Amazon, their system could be under a DOS attack and you would never know or be told. When I asked where records were stored, they said on the east coast. That is not good enough.”*

The vCloud Provider offered security knowledge and existing credentials for the healthcare industry.

The IT Director stated that they use VMware technology in their office and that having VMware used by their cloud provider was a tremendous benefit.

*“Amazon uses Xen and we really wanted VMware so we weren’t ever locked in. (The vCloud Provider) gives us access to our virtual machine images so if we decided to host our own cloud someday, we would already have those assets.”*

### Solution

Today the solution is in beta and running on the vCloud Provider’s product with no problems to report.

*“Today it is small but we go live in a couple months and we will need load balancing and redundant back up. We are absolutely confident scaling this system with (the vCloud Provider) will be easy.”*

### ROI

The company is enjoying hard ROI out of the gate, having saved a tremendous amount on upfront costs as well as having the expertise of the vCloud Provider.

The company further describes the benefits as:

- Savings by avoiding increased headcount
- Removed effort and ongoing expense to find experienced cloud operators
- Avoided the need to hire a compliance consultant
- Access to dynamic and instant scalability

### Next Steps

When their software is finally released, the company expects they will re-organize the application architecture to scale up and add more front-end web servers and a load balancer.

*“We could not afford the type of equipment, nor meet the requirement to be this protected and this secure. We have a large datacenter feel without large datacenter costs. It would have been \$500,000 to build the initial datacenter.”*

*“Going with the cloud and with (the vCloud Provider) has removed a lot of risk for us. We just focus on our application and growing the business.”*

*“We only have a few IT people, yet we compete with the big guys in the industry. We are insurance experts, not IT experts, and the (vCloud Provider) cloud solution lets it remain that way.”*

## Insurance: Diary Entry 01



This insurance industry company provides business process outsourcing between primary insurers and reinsurance companies. The company was founded in 2004 and started providing services via a private cloud in 2008.

I talked to the COO and co-founder of the company. Business demand has significant fluctuations each month driven by the timing of policy and record transfers, as well as monthly profit and loss statements and reporting requirements for each client. Security and assurance of client data protection was also paramount. The acquisition of new clients or new business with existing clients can represent significant new demands for IT infrastructure.

### Move to the Cloud

An IT consultant first suggested that they should seriously consider moving to a cloud-based deployment. A 15-year IT veteran of the insurance industry, he cited the difficulty in managing a traditional data center to meet scalability demands and constantly changing security requirements.

No one else in their industry had moved to a cloud solution, so the company became an early pioneer. Key leaders in the company who owned the business commitments were uncomfortable with cutting edge concepts like cloud. However, the vCloud Service Provider provided detailed cloud education and technical assurance that encouraged them to move ahead with the project.

### Cloud Requirements

Security topped the list for technical requirements, followed by utilizing VMware technology and scalability requirements. The infrastructure needed to scale up and down to maximize performance and minimize costs. Latency needed to be minimized as excessive responses time can give false indications of processing errors.

*“We didn’t need to pile risk on risk, so we required VMware, the proven industry leader.”*

### Solution

The solution is comprised of multiple virtual servers that scale dynamically based on transaction processing demands. Three applications are hosted in the cloud: the primary processing engine, a secure FTP site and a financial ledger. A secure server with access keys ensures no one has unauthorized access and includes additional passwords for each tier of security. They utilize a SQL database with flat files for storage so enterprise class SAN was unnecessary.

*“(The vCloud Provider) offers the best value, the ability to respond quickly to our requirements and a business ethic like our own.”*

### ROI

At the one-year anniversary of the cloud deployment, a thorough analysis of the operational costs was performed. The company compared their costs to what it would have been if they had chosen a traditional datacenter. That analysis revealed they would have purchased too much hardware, creating unnecessary expenditures, under-utilizing infrastructure and creating tough decisions about upgrades and software costs for ‘extra’ capacity equipment.

Several additional areas were mentioned as generating strong measurable ROI:

- Reduced startup investment costs
- Improved ability to bill clients based on real IT utilization and costs
- Ability to instantly book new business and know they have the infrastructure to deliver it
- Focus on the business, not IT

### Next Steps

The company is looking forward to the move to the next vCloud Provider cloud offering 2.0, which will allow even better dynamic provisioning and response to demand.

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*“As our business grows it is easy to look back at the decision to choose a hosted cloud approach and realize that was one of the best decisions we made. The size and costs match our business needs.”*

*“We really felt the move to a cloud provider gave us increased security options, redundancy, uptime and the ability to grow without hiring our own IT team.”*

## Non-Profit: Diary Entry 01



This nonprofit company offers information, services and social media to the art community. The website supplies information and logistics about art shows, artists, collections and other art related activities. The site is well trafficked and the organization was already outsourcing development, system administration and operation of their web site.

### Move to the Cloud

While the site has been hosted for years at a small hosting provider, the company's president had seen a number of performance and availability issues that caused their site to be unusable. Security was not adequate as the site was hacked and infused with a Trojan spam generator and numerous illicit redirects. They decided it was time to seek a solution that provided more security, better uptime and improved customer service.

*“Our hosting provider turned out to be a nightmare; we experienced multiple site crashes, being hacked, and poor customer service.”*

### Cloud Requirements

The hacking was so invasive that the entire site had to be rebuilt and the new website developer wanted to run the new site on a Debian Linux OS. The company wanted the ability to grow over time, handling increasing traffic as well as adding new services. After the company's previous issues, they wanted to select a vendor who would provide remote management capabilities and have a local data center so that support and dialog could be done live if required.

### Solution

The company has migrated and rebuilt the website at the vCloud Service Provider. With VMware vCloud Director they are able to create and upload server images whenever they need to. This allows them more flexibility to react to new art information and make both structure and content changes to the website.

### ROI

The biggest benefits are peace of mind and access to top technology without major expense. They also enjoy the following advantages from moving their website to a cloud based solution:

- High level of security
- Painless growth options
- Increased flexibility to update or change the web site

### Next Steps

The next project is dynamic load balancing and an email service for members.

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*"The biggest benefit to us was the ability to focus on our service and what we love: Art. That is a big change from a state of constant worry when our site crashed and was hacked, and we couldn't get a live person on the phone."*

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*"Even though we are a small shop, we get big shop service and are running on the same technology as the largest enterprise without the expense."*

*“After the last outage a few items made it to the top of the requirements lists: geographic redundancy, scalability, and that VMware is at the heart of the technology.”*

## Retailer: Diary Entry 01



This company is a growing national retailer that relies on a franchise business model. The combination of national diversity and franchisees adds tremendous complexity to their IT systems, which must serve each store, each of which may carry any combination of over 475,000 items (SKUs) at different price points. Since the IT system must support every physical store, uptime and availability is critical. The company was hosted at a local mom-and-pop facility, which went down for an entire weekend while the provider was unaware of the outage. It was time to find a new solution.

### Move to the Cloud

The company had been doing research for some time and looking for a comprehensive software package to manage their ecommerce, marketing,

CRM and store by store tracking. They found one that met all their needs, and the software vendor encouraged them to look to cloud computing for their infrastructure.

### Cloud Requirements

The company sees an incredible increase in volume over the Christmas period. The day after Christmas is their top business day of the year when gift certificates are redeemed. Finding a solution that allows them to scale and process transactions that are several times normal capacity for a few weeks was a key requirement. The company also wanted geographic redundancy to prevent an outage from a cloud provider site failure. Finally, they wanted easy scalability, redundancy and recovery, as well as ease of building and managing technology in a development and production environment.

### Solution

Although a few other cloud providers were considered, the customer picked a vCloud Service Provider based on references, personal experience and their partnership with VMware. Their software is very complicated, with display, indexing and authoring servers. It would have been difficult to implement on a stripped down commodity provider such as Amazon, and expensive to purchase each component needed on Amazon's a la cart menu of services. The company's ecommerce system is deployed on customer facing VMs that are load balanced and secured with a backend server running a dedicated SQL database. They are also connected with the ecommerce software providers on the backend to form a hybrid public/private cloud.

### ROI

As the deployment is recent, they are still measuring the benefit, but the company now has:

- Geographical redundancy
- Scalability for seasonal business
- SAS 70 and SSAE 16 security certification
- Ability to run their business better from a combination of new software and cloud flexibility

*"Our deployment is new and hard ROIs are still being measured. But how about peace of mind, scalability, better business efficiency, and top notch security?"*

### Next Steps

The company is still enjoying their new cloud solution but expect to be looking to the cloud for some new storage requirements in the near future.

*"We have nothing but good things to say about VMware technology and (the vCloud Provider) team. It just runs without issue."*

*“The speed and willingness to work with us really set the (vCloud Provider) team apart. They are ready to work with you and provide a solution that fits both technically and financially. We consider them extensions of our team.”*

## Software: Diary Entry 01



This company supplies IT management software for small to medium companies, offering everything from patch and configuration management to antivirus and power management. Their solution also provides reporting for compliance and regulatory needs. The VP of Technology stated that historically all their customers purchased their software for on-premises deployments; however, the market is rapidly evolving. The arrival of reliable cloud and SaaS offerings has their customers, especially small banks and insurance companies, questioning if they should be running datacenters at all.

### Move to the Cloud

In order to capture the movement in the market place, the company needed to create a SaaS version of their on-premises software. Internal discussions centered on whether they would build a cloud infrastructure or utilize a third party cloud provider. Two large factors drove the decision-making process: initial costs and executive

team concerns around skill set, reliability and failure mitigation. After much debate, the decision to outsource to the cloud was the decision of the CEO.

*“Once the CEO knew what he wanted, I was brought in to enable the vision of a cloud-based SaaS offering.”*

### Cloud Requirements

The initial cloud infrastructure requirements were sophisticated load balancing and scalability. The company is familiar with VMware vCloud Director and wanted to leverage the virtual datacenters for dynamic resource provisioning. The company stressed it was key to have access control as they were updating their SaaS offering each month. They are pursuing ITIL compliance and were pleased to find that the vCloud Provider can support those objectives with specific processes and reporting.

*“Our ongoing cloud strategy involves utilizing VMware technology so that was an absolute requirement.”*

### Solution

The company decided to look at all of the options available: large and small hosting companies as well as cloud providers. They determined that large vendors did not see their business as significant and thus meeting their specific requirements required expensive customization. The smaller companies offered more of a solution-type approach that was more flexible.

*“The large companies like Amazon and Rackspace were like a Chinese menu and we had to select load balancing, security, SAN, multiple images, and the end price was just too high for a very small footprint.”*

The company's cloud infrastructure at a vCloud Service Provider has a load balancing schema, dedicated VLANs, and redundant SQL database for resiliency. The solution was exactly what the IT team wanted without having to buy or provision each device or piece of software.

### ROI

The solution realized a strong ROI, especially during the startup phase. The costs to procure high availability servers, security hardware and software, SAN and load balancers would have been tremendous when there was no initial revenue. For a smaller company with a new offering, the ability to invest in the software and service, and not IT, really helped them focus and minimize cash outlay.

*“Overall by selecting the hosted cloud solution with (the vCloud Provider) we saved 42% of what we would have had to initially invest. We have calculated that 25% of that savings was an effect of virtualization.”*

The VP of technology commented that resiliency and proper IT operational maintenance are a key benefit. The fact that all of their servers are now identical - easily provisioned and imaged - reduces time pinpointing bugs between software and hardware.

*“I have peace of mind that we are very fault tolerant. If we ran this application on our datacenter and one server were to fail, it would be a disaster. But at (the vCloud Provider) that situation just doesn't happen and we don't have to invest the resources to maintain the servers, or replace memory or hard drives. It comes with the package.”*

*“Our users drive large swings in usage each day, as they use our service at the beginning and end of each day. This requires a lot of infrastructure for a short period of time so scalability is critical.”*

*“What I love is if a project gets stalled, I am not paying for all that idle hardware, software and personnel. It scales with the business.”*

## Software: Diary Entry 02



A large corporation spun-off a new company to provide Software as a Service (SaaS) for the construction industry. Although the parent corporation possessed assets and resources that the subsidiary could utilize, the CIO made it clear that the new company was a separate business and its profits and losses would be scrutinized. Thus resources and assets from the corporation came with charge back costs.

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### Move to the Cloud

The company's SaaS strategy presented them with a decision to either build an internal cloud or select a cloud vendor. One aspect of the construction industry that the company had to consider is the multitude of project stop-starts. Stop-starts are driven by permits

and approvals, economic changes, various construction phases and contractors' schedules. This stop-start operation drives peak and valley usage and leads to high bandwidth requirements and substantial hardware allocation for short periods of time.

### Cloud Requirements

Requirements focused on cost and value with high reliability, translating into application uptime and a solid disaster recovery solution. The company wanted unmetered bandwidth to keep prices down since the application, at periods of time, could be bandwidth intensive. The company used these requirements to compare an in-house deployment with that of a cloud provider to see which would best fulfill their needs. The company exhaustively evaluated more than 15 cloud vendors. The evaluation process led to reading vendor collateral, witnessing demonstrations and having many technical discussions with the vendors. The company's IT leadership had extensive experience in VMware technology and preferred it to other virtualization technology. Furthermore, deploying on a Linux or UNIX based virtualization technology would have had significant impact on their software, leaving their developers to retool their application.

### Solution

The company selected a vCloud Service Provider who provided their unmetered bandwidth option of up to 10MB. The company has deployed their technology in several locations. This provides disaster recovery and minimal service interruption should one site have a problem.

*"Our solution is technically what we wanted, including VMware. Frankly, the way it is run and operated is almost exactly how we would have done it. It feels like an extension of our team."*

*"The cloud requirements must be well defined. Even though we evaluated over 15 cloud providers, almost all of them were unique in the software they used, the services they offered, the hardware they used and their operational philosophy. Those differences have serious ramifications on how solutions are developed, deployed and operated."*

### ROI

The company's CIO broke down the costs into these categories, had they built their own cloud solution:

\$200k	Equipment
\$6k/Month	Bandwidth
\$60k/Year	SAS 70 Compliance (covering resource expertise and reporting impact to the team)
\$20k/Year	Collocation
\$20k - \$60k/Year	24 x 7 Support
\$15k - \$25k/Year	Software and Maintenance

The company received tremendous cost benefits by selecting a hosted cloud solution and believes they are getting a better value than if they'd selected an in-house solution. Furthermore, costs are directly related to customer usage and project demands.

### Next Steps

In the future, they will begin migrating some of their office applications, such as email, to the cloud.

*"If we had built our own cloud solution, the hardware and operational costs would have been greater than \$300,000 in the first year. Our hosted solution is just about \$40,000 a year. Is there a better ROI?"*

*“Fear of the unknown has given way to the pure economics of a cloud solution. The cloud removes operational responsibilities, saves money, provides superior application performance to remote users around the world, and disaster recovery is seamless. Many of our clients are now pursuing a cloud solution approach.”*

## Software: Diary Entry 03



This company develops and deploys enterprise custom software. Their offerings include not only hardware selection and deployment but also application integration. Clients are multinational companies with operations in the Americas, Europe and Asia. Like most customers, their clients are focused on the lowest operating cost solution that minimizes their hardware investments, software costs, and personnel. The solution must also achieve high availability, disaster recovery and back up options.

### Move to the Cloud

The company's founder had recommended a cloud solution to 80% of their clients due to a combination of geographically dispersed users and their clients' desire for low costs. However, two forces have held adoption of the cloud at bay until recently. The first was the cost of bandwidth, which for a long time would counter any savings achieved by moving operations to the cloud. The

company's founder stated that has changed significantly in the last 18 months. The second force was that in areas outside of the North America, clients remained tied to the belief that servers in their own buildings were more secure. Today the economic advantages, strong security measures and disaster recovery options are too compelling to be overlooked.

### Cloud Requirements

This company has Service Level Agreements (SLAs) for uptime and availability as well as for managing the software. Selecting a cloud solution provider was critical for the company's success, reputation and profitability. The company needed the cloud provider to manage day to day operations but required access to the system for software and configuration updates. Their search for a cloud provider included the following key attributes:

- Use of VMware technology for easy deployment of new software and updates
- More than one geographic location for performance, reliability, and disaster recovery
- Excellent reputation of uptime and availability
- Remote access to the cloud infrastructure and applications
- Strong security implementation and certification

### Solution

After looking at several cloud vendors, the company selected a vCloud Service Provider based on their experience, reputation, multi-location operation and strong VMware technology utilization. With the vCloud Service provider, the company has the option of deploying clients' software on a dedicated infrastructure as well as in a multi-tenant scenario. The company was able to allay their clients' fears about their software and data, while still managing costs.

*"We have every option we want at [vCloud Service Provider]. We can manage the hardware, software and every nuance, so we can deliver a customized solution to each of our clients."*

### ROI

The company's founder explained that their clients are primarily looking at operational savings. The cost to develop and integrate software is essentially the same if it is done for on-premises or cloud deployment. However, his company is able to deploy and manage software in the cloud at a substantial cost reduction. Deploying to the cloud also removes the responsibility for hardware acquisition and maintenance, which their customers now recognize as a strong benefit.

*"A lot of our international clients are still warming up to the cloud, but a 50% cost reduction in running and deploying in the cloud versus doing the same project on site is too shocking to ignore anymore."*

### Next Steps

The founder stated that some of their clients are just finishing their initial cloud deployments. In the next twelve months, he expects many clients will ask if other applications can be moved to the cloud to generate greater savings and more redundancy.

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*"Our services to our customers sit on top of the cloud provider's infrastructure. The cloud provider must have impressive infrastructure, technology and an outstanding operational track record."*

*“While the previous cloud vendor’s infrastructure costs were half what they are today with our new vendor, the previous vendor required us to commit all the resources, software, and tools and provide services just to make it work. Our new vendor’s value, with infrastructure and services, is a better ROI both for the dollars and the resources.”*

## Software: Diary Entry 04



In this diary entry we spoke with a Product Manager at a well-known consumer and enterprise software company. The company recognized that their customers often prefer to have both the applications and tools hosted for them, rather than spend time and resources managing them on-premises. This saves hardware and maintenance costs and simplifies the experience while improving the ROI for their customers. They deployed on a commodity cloud, but soon realized that they were shouldering the entire burden for all cloud operations, which was expensive as well as diverting their focus away from delivering the best product for their customers. The result? Not only do they spend 50% less thanks to lower operational costs, they also regained their focus on customer experience.

### Move to the Cloud

Part of this company’s corporate strategy is dependent on the cloud offering of their software. Their customers could utilize technologies, tools and applications from the SaaS offering and then use a PaaS approach to integrate and deploy their own applications. This innovative offering is taking cloud based SaaS to the next level but also pushes the demand and expectations of the cloud infrastructure up several notches.

Initially they had deployed their solution on Amazon Web Services. However after two years, they realized that they still needed to provide everything for the  
*(continue next page)*

*“Our customers can utilize the product and services directly, or they can build their own applications on the platform and make web service calls to the SaaS.”*

### Move to the Cloud (cont.)

management and operation of that cloud. They had to buy, customize, and manage tools as well as hire full operational teams in a network operations center (NOC) to maintain high quality cloud operations. Through their ongoing commitment to their customers, they recognized that significant operational resources were being consumed for a cloud solution. The company wanted to focus on the software development and features, not running someone else's cloud infrastructure.

*"We realized that operating the cloud was just too costly from a resource standpoint. It was a strategic decision to look for a cloud provider that could offer more services and own the operation of the cloud infrastructure so we could focus on our software."*

### Cloud Requirements

The Product Manager bid out their requirements to several cloud providers. They looked for services to complete an end-to-end operation of the cloud, not only for their software to run on but to offer their clients a PaaS. These requirements formed the bid package:

1. VMware vCloud technology
2. Flexibility of server configuration such as CPU and Memory specifications
3. Easily manage and scale to 1,000s of virtual machines with Terabytes of storage
4. Upload the company's own virtual machine (VM) templates
5. Virtualized Load Balancer that the company can configure
6. Multi-tier cluster with the ability to mix and manage hybrid public/private clouds in a single cluster
7. Back up and restore services and technology
8. Security including intrusion detection, denial of service, encrypted back up, firewalls, and a secure tunnel for their access and control
9. Monitoring for both the SaaS and the PaaS
10. Compliance with ISO 2701, SAS 70 type 2
11. Multiple locations in the US and the ability to have a federated solution for Europe and Asia
12. Disaster recovery with a direct back up repository
13. 99.99% uptime SLA
14. A combination of reserved and pay-as-you-go price structure
15. Secure and stable APIs
16. Single tenant/multi-tenant choices for SaaS, PaaS and back up

### Solution

The company chose a vCloud service provider using VMware's vCloud technology through a rigorous selection process, and was impressed with their service, customer service and technical ability. The company has the capacity to run thousands of VMs in various configurations of public or private clouds as well as single and multi-tenancy. They also have full control of their public cloud from their facility. Their utilization of VMware allows them to create templates and then deploy them quickly and consistently worldwide.

*"We found a vendor, (a vCloud Provider), that is a cut above them all. They provide all the requirements we need and are working on a few more we want. They continue to impress us on all levels."*

### ROI

The bottom-line costs are impressive and they noted several other areas that were strategic as well as delivering valuable ROI:

- Faster time to market
- Ability to deploy in a new location in hours not months
- Business options in the future because of the portability of the VMs

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*"Our costs today are 50% of what they were with our previous cloud commodity vendor."*

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*"We can be up and running in a few hours on a new cloud in a different country with VMware's virtualization technology. That used to take six months."*

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*"We had operated a cloud for years and knew what we wanted. We needed a reliable and secure infrastructure based on vCloud and services to fill in the operational gaps. We are focused on our software and even more so on our clients who choose the PaaS in addition to the SaaS."*

*“Cost reduction is a key benefit of our operation in the cloud. We are at ½ to ⅓ of what our costs would be like if we had a more traditional deployment.”*

## Software: Diary Entry 05



We interviewed the CIO of a young gaming company that provides social and gambling games. They needed scalable infrastructure that can cope with large changes in demand, driven by a substantial increase in users over the weekends. Additionally, related news events and tournaments can dynamically raise the demand for short periods of time for particular games. The CIO went on to say that gambling regulations also require a prescriptive approach for activity tracking and security controls.

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### Move to the Cloud

Given the dynamic nature of the company's operation, the cloud provides a natural choice. With a cloud solution they can instantly bring up new virtual machine instances to handle increased load. From the beginning, the CIO has driven the company to a 100% cloud approach, such that they

don't have a single server or development box in their building. In order to meet gaming regulations requirements, they currently use two cloud providers. One is for the games and the second is for the rest of their IT system.

### Cloud Requirements

The need for security dominated their cloud requirements. The gambling regulations board is fairly stringent and compliance mandated a number of technical requirements, and also impacted where the servers were physically located. The company sought VMware vCloud technology stating it was the most secure of all the virtualization software. In addition, the company had a need for control that allowed them to change software and algorithms for initiating new capacity.

*“One aspect of the VMware vCloud technology I really liked is the ability to control my exposure, and how much it operates like a public cloud and how I can protect the rest as a private cloud behind it.”*

### Solution

They are currently deployed at a vCloud Service Provider powered with VMware’s vCloud technology. Their cloud solution can instantly scale up for surges in gaming. They are running a SQL server in the back end, and a combination of virtual and physical security devices and software to protect the system.

*“The (vCloud Provider) solution works so well, I don’t know how many physical boxes we are using and I really don’t care. If I had to know that information, there would be a problem with the whole cloud approach.”*

### ROI

The CIO often cited costs as the chief benefit of the cloud choice. That was quickly followed by the following benefits:

- High level security controls to meet requirements
- Freedom from hardware purchases, updates, replacements and provisioning
- Reliability and availability of the gaming platforms
- Control of the infrastructure and operation

### Next Steps

The company is working on a fully dynamic provisioning strategy so that even unexpected peaks will have to invoke machines beyond their reserved amount. This would also add a pay-as-you go model to their operations.

*“(The vCloud Provider) has been a great and good partner, and provides a seamless operation.”*

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*“It is our strategy to have a 100% cloud operation. It saves our company from having all the hardware headaches.”*

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