



Choosing the Right Cloud Management Platform

A Key to Cloud Success for Service Providers

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White Paper

Introduction

As more service providers enter the cloud computing market, particularly the infrastructure as a service (IaaS) segment, they need supporting tools and solutions to help them successfully build and deliver cloud services. As you will see in this report, one of the most important success factors for new service providers involves choosing the right cloud management platform. Service providers that choose poorly can spend excessive time and resources getting to market,

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and may face ongoing sales, delivery and support issues once they arrive. Those providers who choose wisely will have far greater odds of quickly and successfully building services that deliver real value to customers and drive greater return on investment.

Neovise has completed several research projects that provide insight into how different cloud management platforms relate to service provider success. We’ve evaluated an extensive cross section of dedicated hosting providers from all over the world, and developed an index of hundreds of service providers that have deployed cloud services. In addition, through vendor briefings, customer interviews and market research, we’ve identified several cloud management platforms that are commonly used by service providers to successfully deliver cloud services.

For this report, Neovise also interviewed several OnApp customers to understand their reasons for choosing OnApp versus any other cloud management platform. In our analysis, we examine their input, and evaluate cases where other platforms might provide a better alternative for some providers.

The Cloud Computing Opportunity

Cloud computing has made a lasting impact on the way IT infrastructure and services are purchased and delivered. Rather than make a large capital investment in data center infrastructure, businesses now have the opportunity to purchase IT resources and services on demand, and pay on a per-use basis. Cloud environments also enable massive scalability and flexibility in deploying and running workloads of all kinds.

These advantages are causing a momentous shift in the industry, beyond traditional hosting. Customers, typically businesses, prefer the speed, automation and agility they gain over fixed hosting environments and are using public clouds for test and development, analytics

applications, and new web-scale applications. Some are even hosting and delivering mission-critical, production workloads entirely from the cloud.

Established service providers are starting to offer cloud services in order to capture their share of the market. They are discovering new sources of revenue by delivering compute, network and storage services. They are also gaining new customers as more businesses transition from conventional IT services to using public cloud services. At the same time, the cloud service market is becoming more competitive and not all providers will be successful.

Becoming a Cloud Provider

There are several different approaches to becoming a cloud service provider. A few of the most dominant service providers have built clouds from scratch, including Amazon, Microsoft and Google. But don't be fooled – developing software to deliver infrastructure services, often called a cloud management platform, is a highly complex task. Most service providers won't be able to follow this approach because they simply don't have the time, resources or expertise.

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Some service providers have built clouds from open source cloud management platforms such as OpenStack or Apache CloudStack. Both HP and Rackspace have built cloud services using OpenStack, and have achieved some success in capturing market share. However, it takes deep expertise, time and resources to build cloud services using an open source platform. Once again, most providers won't be well suited to this approach. It takes a large capital investment, and still has not positioned these players to compete head-to-head with top tier service providers.

Other providers have successfully built clouds from commercial management platforms like OnApp and Citrix CloudPlatform. There are many commercial offerings to choose from, including commercial OpenStack platforms, but most only have a handful of service provider customers. These platforms generally demand less from providers in terms of expertise or product development capabilities, but choosing the right one is still critical.

If you are like most service providers, a commercial cloud management platform is the right approach.

Choosing the Right Cloud Platform

Finding and selecting the best cloud management platform for your specific needs involves many questions and considerations, more than will fit comfortably in this report.

Here we look briefly at some of the top considerations from three main categories:

1. Business Requirements:

- What customers do you plan to serve, and what are their requirements? How well will the cloud platform serve them?
- How much additional work is required for installation/configuration? Integration? Adding missing features?
- How quickly will the cloud platform let you get to market and start generating revenue?

2. Product Requirements:

- Does the platform enable the right compute, network and storage capabilities?
- Are there specific hardware requirements for the platform? Or can you choose hardware from any vendor? Can you leverage existing hardware investments?
- How extensible is the product? Does it support federation with other providers?
- Does the platform allow you to seamlessly integrate new cloud services with your existing hosting services?

3. Support Requirements:

- Will it require significant resources and expertise to deploy, customize and operate the platform?
- What do you do if you need help deploying or troubleshooting the platform? Is there customer support? Or just community support? Both?
- Does the platform receive ongoing enhancements? Are new versions difficult or disruptive to install?

With these questions in mind, you should understand that choice of platform depends on your specific capabilities, resources, timeline, and strategy. Using a detailed RFP, customized to align with your unique requirements, will further improve the selection process.

Mini Case Studies

Every individual business has different requirements and various goals they hope to accomplish. By interviewing leaders from several different service provider organizations we gained detailed insight into how different cloud management platforms were able meet these needs, where certain platforms fell short, and the success and challenges service providers have had with a commercial offering – in this case, OnApp.

Cartika – Build Versus Buy

After spending six months building a basic cloud management platform, Cartika faced a critical decision – whether to procure a third-party solution with a broader set of features, or keep spending time and resources developing the platform.

To get to market quickly, Cartika decided a third-party platform was the answer. But in vetting

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different open source solutions, Cartika found OpenStack and Apache CloudStack to be too complicated. With regard to the difficulty, Andrew Rouchotas, CEO, said, “Unless you’re NASA, I don’t see a reason to engineer your own OpenStack solution.”

Cartika then considered commercial offerings, but many didn’t offer the right storage capabilities or network flexibility. That’s when they discovered OnApp.

Once OnApp was installed, Cartika went live and started accepting new business in seven days. The company achieved a positive ROI in the first three days of production. OnApp provided all the features Cartika required, and helped it maintain a single pane of glass for customers to provision and manage services. Cartika continues to add new customers, and credits OnApp with enabling them to complete a legitimate self-service IaaS platform quickly and easily.

VooServers – Quick Time to Market

Matt Parkinson, Technical Director of VooServers, knew he had to act fast when a customer requested high availability and failover. At the time, the company specialized in dedicated server hosting and couldn’t provide these features without a cloud management platform. After examining the full set of OnApp features, VooServers had the platform up and running in two weeks time. The customer’s requirements were met and VooServers had a new source of revenue.

Support from OnApp was crucial to VooServers. OnApp deployed the platform for them, and continues to provide support by logging in to fix problems and check the system's health periodically. VooServers also utilizes OnApp staff for ongoing operations training.

The decision to use OnApp has ultimately proven successful. More dedicated server customers are migrating to cloud services based on OnApp, and the company is using OnApp bare metal and smart server capabilities for a number of these projects. According to VooServers, OnApp has been a primary reason for its substantial growth in the last year, and allowed it to double its data center capacity without physically expanding.

Xfernet – A Better Platform

When Xfernet started selling cloud services, it used a well-known cloud management platform from a popular software vendor. While the platform offered the right capabilities, it was a major struggle to reach production-level stability. Then the vendor suddenly announced it was rearchitecting the solution.

Due to these issues, the original platform was becoming nonviable, and Xfernet made the decision to move to OnApp. Xfernet took a hands-on approach with the platform and performed its own installation in about a week. With 15-minute response times from OnApp support, Aaron Faby, CTO, said, "Installing OnApp was orders of magnitude easier than our first cloud."

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Once it was production-ready, Xfernet was able to get its first OnApp cloud up and running in 24 hours. Cautious after struggling with its original platform, the company started with a small-scale deployment and only a few customers on the new platform.

The response was overwhelmingly positive and encouraged Xfernet to move forward with a full-scale deployment of OnApp services. Xfernet is now in the process of migrating all its cloud customers to OnApp.

UK2 Group – A Strategic Choice for a Major Provider

The UK2 Group encompasses 18 hosting provider brands, with 19 data centers in 12 countries, based almost entirely on the OnApp platform. According to UK2 CEO, Phil Male, "OnApp brings a hosting mindset to the table rather than an enterprise focus. The cloud platform should manage the cloud, not someone onsite with a screwdriver."

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The UK2 Group needed a single control panel that would integrate with their existing console. They also wanted to drill their flavor into the platform. According to Male, “We just couldn’t do this level of integration with other platforms.”

Speed was also key. Their original VMware-based cloud system took two days to provision new capabilities, while OnApp only takes three minutes, and customers can do it themselves. Male says, “From a feature standpoint, OnApp allowed us to take a step ahead of where the other big platforms were.”

Feature additions, such as recipes, have also been a major benefit, and UK2 is impressed with the level of storage and security integration they get with OnApp. They haven’t seen this kind of roadmap from other platforms, and OnApp continues to satisfy all their service requirements.

How Do Service Providers Choose?

All of the service providers in these mini case studies chose OnApp as their cloud management platform. But before identifying the common threads among these providers, it is helpful to discuss why some service providers choose alternatives to OnApp.

Choosing Alternatives

There is no shortage of cloud management platforms on the market today. And since each provider has different capabilities, resources, timelines and strategies, there is no single platform that is the best choice for all providers.

On-Premises Private Clouds. Some cloud management platforms are designed specifically for building service provider clouds, while others are designed to build on-premises private clouds. A few platforms try to meet the differing requirements for both use cases, but the OnApp platform is targeted very clearly at the hosting and service provider segment. Those seeking to build on-premises private clouds might consider other cloud management platforms.

Pure Custom Clouds. Some cloud providers want full control over every aspect of their cloud services. Of course, this takes in-depth expertise, plenty of engineering resources, and a significant amount of time. Those intent on developing a pure custom cloud – and have what it takes to do so – should strongly consider starting with open source code from OpenStack or Apache CloudStack. Building a cloud platform from scratch, without leveraging open source code, would be impractical for nearly all service providers.

Amazon Compatibility. In terms of revenue and customers, Amazon is the clear leader in IaaS. Rather than competing with differentiated services, some providers try to offer compatible services. Their hope is that that by offering API compatibility they will attract customers that want to move from Amazon – or customers that want the option of moving to Amazon later. Some also want to attract partners that have developed applications that run on Amazon. There are no cloud platforms with perfect Amazon compatibility, but there are some with greater compatibility than OnApp.

Bad Choices. Several of the service providers we interviewed felt strongly that certain aspects of a cloud management platform should not be viewed as optional. These include security, performance and reliability. We agree with this perspective, and strongly encourage providers to validate these attributes for any platform they consider. It is possible to choose a cloud platform that falls short on these dimensions.

Choosing OnApp

With over 900 service provider customers in 93 countries, OnApp is the most popular cloud management platform in the world. Let's take a look at some of the most prevalent reasons why service providers choose OnApp.

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The service providers we spoke with all mentioned time to market as a primary consideration. The platform is easy to install, and OnApp provides hands-on support and 15-minute response times after deployment. OnApp also met their requirements for extensibility and customization. The platform enables easy integration with new and existing systems, and provides a single, brandable interface for provisioning and managing services.

Each provider also noted the platform's integrated storage capabilities, which help lower costs and greatly increase reliability. OnApp uses the disks already attached to servers to create aggregated storage, so there is no need to purchase or maintain a separate SAN. Three of the providers also mentioned the OnApp CDN federation as a valuable feature, and look forward to compute federation in the future.

Scale and automation were two more important aspects; each provider required a highly scalable solution that could be automated for self-service and changing customer demand. Templates were also seen as a unique benefit, allowing service providers, and their customers, to deploy services quickly at any scale.

Interestingly, most providers did not suggest cost as an important consideration. However, when asked directly, it became clear that initial capital outlay, ability to use existing or commodity hardware, and ongoing operating costs were each important. One provider did not mention cost simply because, “the spending on OnApp was small compared to the hardware.”

Recommendations

While there are always exceptions, if you aren’t Amazon, Microsoft or Google, you probably shouldn’t put time, money and energy into developing a cloud management platform from scratch. If you are considering developing your own cloud based on OpenStack or similar raw open source offerings, you may need to think twice. Depending on your capabilities, resources and timeline, there is a good chance you’ll struggle with the initial stages of deployment, stabilizing the platform, and finally delivering production services.

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If you are like the majority of service providers seeking to build their own cloud, you are likely to have more success with a commercial cloud management platform. But remember, you still need to vet your options carefully and choose a platform that meets your unique requirements and supports your long-term goals. This will require a comprehensive understanding of your business requirements, the requirements the product must meet to support your initiatives, and the level of support you’ll need to manage and maintain your services.

There may be no single best cloud management platform for all service providers, but OnApp represents an outstanding choice in terms of its features, level of customer support, opportunities for generating revenue, and the value service providers can deliver to customers. Few platforms offer the same breadth of turnkey capabilities, including load balancing, CDN and DNS management, and service providers get a wide range of options in how they build, manage, and deliver cloud services.

OnApp has a hosting mindset and designed the platform from the ground up to meet the needs of hosting providers. The company understands the importance of supplying a turnkey solution, and strives for operational simplicity. There is no need for service providers to develop code, and the platform doesn’t require excessive maintenance. Service providers can get to market quickly with a complete catalog of best-in-class services that deliver the reliability, performance, and quality of experience today’s cloud customers demand.

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