WHITE PAPER

Now that you have a Microsoft private cloud, what the heck are you going to do with it?

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rackspace®
the #1 managed cloud company

Abstract

Choosing and building a Microsoft Private Cloud is just the first step. Once you have the Microsoft® Cloud Platform infrastructure up and running, then you have to figure out what you're going to do with it and how you're going to monitor and manage all of the resources. This white paper examines how businesses can leverage the benefits of a Microsoft Private Cloud by using Rackspace to host and manage their Microsoft® Cloud Platform environment.

Choosing Microsoft® Cloud Platform as your cloud computing platform is the first step to creating a scalable self-service portal for managing your cloud IT infrastructure. Now that you have a Microsoft Private Cloud, though, you have a number of other questions to address: What do I do with this? Is configuring self-service a chore? Can I monitor the cost of the cloud services? In a nutshell – what are you going to do with this Microsoft Private Cloud?

To make effective use of your Microsoft Cloud Platform, you need a self-service portal which allows application owners to provision and deploy the necessary cloud infrastructure.

Let's take a closer look at some of the primary tasks and functions you'll need to consider for your Microsoft Private Cloud.

Enable self-service

To make effective use of your Microsoft Cloud Platform, you need a self-service portal which allows application owners to provision and deploy the necessary cloud infrastructure. The technical steps to set-up the self-service portal can be found in Microsoft's Cloud Platform documentation, but it's not something you have to worry about when you leverage the expertise of a managed cloud provider like Rackspace – they configure Windows Azure Pack for its customers, so the self-service portal is available by default. At a high level, though, the more practical aspects that every business should consider are:

- Define what the standardized service offerings will be
- Agree on the needed information to fulfill a request
- Determine who sends the information and who approves the requests

Federating Your Microsoft® Cloud Platform

Businesses need to be able to collaborate effectively–both within geographically dispersed elements of the company and with external vendors and partners. Efficient collaboration requires federating Microsoft Cloud Platform resources with other private and public cloud infrastructures.

Microsoft Cloud Platform has tools available to simplify and streamline the process of federation.

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- **Federation with external private cloud**
  Federation between a data center and a Microsoft Cloud Platform is facilitated through network gateways that enable the two to connect. The interconnection of the two environments forms a hybrid cloud environment that can be used by services and applications and accessed by users.

- **Federation with external Microsoft Azure cloud**
  Microsoft Private Cloud also allows the cloud infrastructure to be federated with an external Microsoft Azure cloud environment. The result is a shared hybrid cloud environment that provides access to services and applications from the public Internet.

The concept of cloud federation raises the question of the differences between private and public cloud infrastructures. There are both advantages and limitations to both private and public clouds, but a private cloud provides a couple distinct benefits that most businesses appreciate.

Hosted private cloud vs. Public cloud

- Private clouds provide better security and privacy. The physical infrastructure and cloud resources, including network assets and data storage are dedicated exclusively to your company. Public cloud platforms pool resources and share the cloud infrastructure between customers. A public cloud platform may violate security and data protection compliance requirements, and exposes applications and data to more risk of compromise or exposure.

- Because the private cloud resources belong exclusively to your organization you can set the subscription allocations and costs. Public cloud platforms offer generic services and applications that can be utilized on a pay-per-use basis, but a private cloud offers much greater customization and flexibility to select the best resources to meet the business need.

Take Advantage of Software-Defined Networking

Software-defined networking (SDN) frees your servers and applications from the limits of physical networking. Routers, switches, servers, applications, and every other element of your cloud environment are abstracted from the physical network, which provides much greater flexibility and agility.

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SDN lets you maximize operational efficiency by automating network configuration and management based on the needs of the individual applications and the workload at any given time. SDN can dynamically scale, load balance, or reroute applications to ensure optimal performance.

Messaging Services

The Service Bus feature of Windows Azure Pack enables reliable messaging between distributed applications. You can connect other apps running on Azure, or apps running in an on-premise data center, or both. Service Bus also allows you to connect your cloud apps and services with household appliances, sensors, and mobile devices.

Service Bus is built on cloud resources so it is reliable and scalable. It can scale quickly to cope with spikes in demand, and is capable of communicating with millions of devices simultaneously. Service Bus is a powerful tool that offers limitless possibilities for what you can do with your Microsoft Private Cloud.

Database as a Service (DBaaS) and its advantages

Database as a Service is a means of giving end users – applications owners, developers, etc- the ability to request and provision database engine components in a self-service manner. The Microsoft Cloud Platform stack offers DBaaS services capable of hosting both

Microsoft SQL and MySQL databases. It is also worth noting that some private cloud services do not provide this option.

Taking Advantages of DBaaS

Many applications and services rely on a backend database of some sort. Database-as-a-Service (DBaaS) separates responsibility for traditional database administrative functions and removes the need to employ a dedicated database administrator (DBA). DBaaS enables application developers to simply call a database service when needed without having to consider the database itself.

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The database is maintained, upgraded, backed up and managed by the DBaaS provider. From the Microsoft Cloud Platform or application developer perspective, the DBaaS database is just there, and it will seamlessly scale to meet the demands of the application. There are a number of benefits to using a DBaaS, including:

- A DBaaS eliminates the need to understand programming or write backend code when developing Web applications thereby speeding up the entire process

- Application developers can focus on developing apps and other solutions using the set templates provided by DBaaS.

Not all private clouds offer a Database-as-a-Service (DBaaS) capability, but you can leverage DBaaS with a Microsoft Private Cloud hosted and managed by Rackspace.

Website as a Service and taking advantage of it

Website-as-a-Service (WaaS) is another tool available to help customers streamline business and stay focused on what they do best. WaaS enables customers and application developers to utilize a Website as a resource or publishing platform without having to invest in the website backend or understand how to develop a website. Windows Azure Pack provides businesses with simple templates to build and deploy websites built on WordPress, Drupal, and other popular Web platforms at the push of a button.

WaaS allows you to set up a website at the push of a button, and leave the maintenance and upkeep to somebody else. The WaaS administrators are responsible for making sure the website is maintained and up to date. Using a WaaS gives businesses access to more advanced website features and capabilities without having to learn Web development or hire a professional Web developer. It also offers powerful tools to monitor website activity and measure valuable metrics that can be used to refine the website over time.

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Automation and speed to market

Microsoft Cloud Platform is an ideal platform for optimizing the processes involved delivering goods and services to your customers. The various applications that make up Microsoft System Center include a variety of tools and services you can use to automate routine or repetitive tasks.

Leveraging Microsoft Private Cloud to automate the routine tasks and functions that can be automated frees up valuable resources to be allocated to more important tasks that can't be replicated with cloud tools. Automation also helps to streamline workflow so business is conducted more efficiently – resulting in products or goods being developed and delivered to customers faster.

Rackspace Private Cloud powered by Microsoft®

Let Rackspace do the heavy lifting for you. Every Rackspace data center in the United States supports the Microsoft Cloud Platform – including Microsoft Hyper-V, System Center, Windows Server, and Windows Azure Pack with its web-based interface, enabling user self-service. Rackspace can deploy and manage your entire Microsoft Private Cloud environment so you can focus on your business.

Rackspace is a Microsoft Cloud OS Network Gold Certified Partner, and a four-time Microsoft Hosting Partner of the Year. With hundreds of Microsoft Certified Professionals and cloud specialists that have extensive expertise in Microsoft applications - it runs the largest Microsoft Exchange and SharePoint environments outside of Microsoft itself.

Unlike some cloud providers, Rackspace specializes in managed cloud.

A Rackspace Managed Private Cloud provides customers with a complete package. Rackspace has teams of cloud experts who do nothing but live and breathe cloud infrastructure. They have in-depth knowledge and experience with Microsoft servers and applications, and they understand what it takes to build, deploy, monitor, manage, and maintain a Microsoft Private Cloud.

A Rackspace Microsoft Private Cloud gives you the enhanced security of a single-tenant environment with physically isolated network, compute, and storage layers, and the cloud experts to proactively monitor and maintain the health of your private cloud 24x7x365. You get flexible guest OS management, which means you can enable or disable guest OS support on your virtual machines based on your needs, and monitoring, backup, troubleshooting, and antivirus. You also get the scalability and availability of the Microsoft Cloud Platform and can scale to thousands of nodes with the Windows Azure Portal, with built-in features such as live migration and failover clustering for up to 64 nodes.

Unlike some cloud providers, Rackspace specializes in managed cloud. Beyond the data center infrastructure, Rackspace also provides optimized platforms and a team of experts to run it all. Let Rackspace help you architect, build, and operate your Microsoft Private Cloud environment. Your company deserves a Microsoft Private Cloud supported by Rackers who are there to make it work for you, and backed by Fanatical Support. ■

Tony Bradley is a respected authority on technology. He is Editor-in-Chief of TechSpective.net. He has authored or co-authored a number of books, including Unified Communications for Dummies, Essential Computer Security, and PCI Compliance. He has been a CISSP (Certified Information Systems Security Professional) for over 12 years, and he has been recognized by Microsoft as an MVP (Most Valuable Professional) in Windows and Windows security for 9 consecutive years. – See more at: http://bradleystrategygroup.com/about/who-we-are/#sthash.wkosI3sg.dpuf

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