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Solution White Paper

Build the Right Cloud, Quickly

BMC Express Cloud

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THE PROMISE OF CLOUD COMPUTING

To improve agility, businesses of all kinds are pursuing cloud computing, which enables IT to be more flexible and deliver new services faster. This helps businesses respond quickly to fluctuations in customer demand and changes within the competitive environment. Cloud computing is attractive for many other reasons as well. By using Infrastructure as a Service (IaaS) within a cloud environment to pool and share IT resources and consume them on demand, IT can use assets more efficiently and reduce costs.

However, While cloud has proven itself in the IT industry, implementing it effectively can be difficult. There are many moving parts—from private to public to hybrid cloud and across the provisioning of infrastructure, platforms, and applications—and the challenges for enterprises are often exacerbated by the pressure to get cloud working quickly. How can enterprises get a successful cloud up and running fast—one that will stand the test of time and evolve with their needs?

GETTING STARTED

Public clouds provide an easy way for businesses to experience cloud computing or even initiate a journey toward in-depth cloud adoption. They combine massive scalability with elasticity, so organizations can start small and grow into their infrastructure without paying for extraneous resources. This helps organizations avoid the hefty capital expenditures (CAPEX) that often accompany first-time investments in physical infrastructure.

While public clouds provide numerous benefits, many businesses decide to go further by building clouds of their own. Organizations with on-premises private clouds often want direct control over infrastructure security and governance. Building a cloud onsite can also yield a lower total cost of ownership (TCO) compared to using public cloud infrastructure over long periods on-site.

Those building private clouds may also seek the benefits of a hybrid cloud—one formed by integrating two otherwise separate clouds, typically a private cloud and a public cloud. At the most basic level, hybrid clouds allow organizations to assign workloads to the infrastructure best suited to their needs. For example, a web application may benefit from the extreme scale and elasticity of a public cloud, while an application with specialized governance requirements may require a private cloud.

Hybrid clouds provide other benefits, too. They can help optimize spending, for example. Organizations can temporarily provision extra public cloud resources for short-term spikes in demand, while using the private cloud for ongoing activities that consume resources consistently. They can also help IT expand its geographic reach by connecting on-premises data centers with those of globally distributed cloud providers.

With the combined advantages of public and private clouds, along with its own unique benefits, the hybrid cloud model is widely viewed as the best long-term strategy for cloud computing. Unfortunately, many hybrid cloud projects—including their private cloud components—fall significantly short of expectations or fail altogether.

Cloud Project Failures

Both private and hybrid clouds hold plenty of promise. Yet, if you've hesitated to move forward with a cloud deployment of your own, your concerns are likely warranted. To succeed with your own cloud, it is important to first understand what can go wrong.

Organizational readiness is the first thing to consider when planning a cloud deployment of any kind. Businesses are often attracted to the agility and efficiency of the cloud but haven't properly evaluated whether their IT organization is prepared to actually deploy and manage these environments. Since cloud computing is so new, most organizations lack the background and direct experience needed to manage an automated infrastructure that blends computing, storage, and networking in a single, on-demand service.

It is also common for organizations to implement the wrong cloud strategy. For instance, an organization may think it needs a public cloud to achieve business agility only to find it really requires the security or control that comes with a private cloud. Alternatively, an organization may choose a rip-and-replace strategy for building a private cloud, driving huge capital expenditures rather than controlling costs by leveraging existing resources. Cloud strategies can also be shortsighted, solving short-term problems but not providing the right foundation for growth and expansion. Not including hybrid cloud in the strategy is a frequent mistake.

More problems arise when businesses overcommit to their initial cloud deployment. IT organizations sometimes feel a sense of urgency to move too many applications to the cloud, migrating applications that won't benefit from running in a cloud. Seeking the benefits of scale, these same organizations tend to build clouds with far more capacity than is initially needed. Issues also occur when organizations spend six months, a year, or more building a cloud only to find out their needs have changed.

Even with the right cloud strategy, businesses can still choose the wrong cloud solution. There is an entire spectrum of platforms, tools, and capabilities available to build and operate private and hybrid clouds. Yet too many solutions fall short, offering just automation without the capabilities needed to support scale and elasticity. The gaps may include lack of resource pooling, application programming interfaces (APIs), or self-service tools. Other solutions, rather than falling short, are over-architected. These solutions deliver far more than is needed, resulting in excessive complexity and, ultimately, project failures.

Cloud solutions can fail to meet expectations in other ways as well. For example, some cloud solutions are incomplete. On the surface, a cloud solution that addresses computing, storage, and networking may seem to meet all needs. However, without the ability to easily deploy and manage applications, the full benefits of cloud computing cannot be realized. Cloud solutions can also lack openness, effectively locking organizations into specific hardware, hypervisors, operating systems, and even public clouds.

SUCCEEDING WITH CLOUD COMPUTING

Understanding the common causes of cloud project failures is an important part of avoiding your own missteps. More importantly, learning how to avoid these failures will help you succeed with cloud computing.

Organizational readiness issues can be addressed in part through education and training. The more staff members who understand the new technologies, philosophies, and methodologies introduced by cloud computing, the better. Yet, there is no substitute for experience. Given the current shortage of cloud computing professionals with actual experience, the best method is to leverage a partner with proven cloud success.

Starting out with the right long-term cloud strategy is crucial for building the best foundation and for supporting future expansion and growth. Even if you are starting with a private-only cloud, you are likely to implement a hybrid cloud—integrating with multiple public clouds—in the future. Be sure to make decisions that keep your options open for developing a hybrid cloud at some point.

With any new development, it's important to maintain a proper scope and avoid over-commitment. Build a cost-effective starter cloud so that you can get a solid deployment up and running quickly. This will greatly improve your odds of success and help you avoid investing too many resources in your initial deployment. By ensuring your initial deployment is aligned with your long-term strategy, you can accelerate time to value (TtV) and extend your cloud further as your needs grow.

To do all of this, you must choose the right cloud solution from a proven vendor. Your cloud solution should go beyond automation and support resource pools, programmatic APIs, and self-service capabilities to ensure that you meet efficiency, elasticity, and scale requirements. The right cloud solution should be powerful, yet not overly complex. It must meet your needs in the future and not overwhelm you in the present.

In order to realize the full benefits and value of cloud computing, choose a solution with out-of-the-box support for application deployments. Instead of simply improving agility for infrastructure management, this will enable agility throughout the entire IT stack. To avoid lock-in, you should also choose an open solution that provides accessible, heterogeneous support for hardware, hypervisors, operating systems, and public clouds.

Choosing the Right Solution

Finding and choosing the right cloud solution may be the most important step in your journey to cloud success. After all, you don't just want a cloud soon; you need a solution that overcomes the challenges that so often lead to failure. You need a cloud that will stand the test of time, grow with your business, and support changing IT requirements. Until now, finding the right cloud solution has not been easy.

INTRODUCING BMC EXPRESS CLOUD

BMC Express Cloud is specifically designed to overcome cloud challenges and help you succeed with cloud computing. Express Cloud includes the software, services, and education you need to quickly and confidently plan, build, and run a hybrid cloud. In just days, you can have a working hybrid cloud that supports up to 250 cloud servers. You will also have the foundation for building the ultimate cloud for your business.

To help you get started quickly, Express Cloud supports VMware®, the most popular hypervisor. It also supports the Amazon Web Services™ (AWS) cloud, the most popular public cloud. When ready, you can add support for additional hypervisors and public clouds, as well as more cloud servers.

Express Cloud lets you start small, increasing success rates and avoiding multi-million dollar investments just to get started. For a set price of $199,000, you get a powerful and economical set of tools, including:

- BMC Cloud Solution Planning Workshop to plan your initial cloud and define your high-level strategy for cloud success
- BMC Cloud Lifecycle Management™ licenses to establish a hybrid cloud across VMware and AWS
- BMC Cloud Rapid Deployment Services to set up your hybrid cloud and offer services to support your initial users
- BMC Cloud Adoption Starter Kit to train your team to operate your new cloud with confidence

Let's take a closer look at some of the most valuable elements of the Express Cloud solution.

BMC Cloud Lifecycle Management

BMC Cloud Lifecycle Management (CLM) delivers the functionality needed to create and manage an effective hybrid cloud infrastructure. CLM lets you easily define and deliver fully configured services, including multi-tier applications—not just bits and pieces of infrastructure. Users get a self-service catalog that's designed for their needs and delivers consistent visibility and control over their cloud. Smart, policy-driven automation optimizes the infrastructure, so less time is spent manually provisioning resources and allocating workloads. CLM also provides access to free, downloadable content in the form of ZipKits, further speeding time to value.

ZipKits

The BMC ZipKit program provides a rich library of pre-built application components for BMC Cloud Lifecycle Management and BMC BladeLogic®. ZipKit service blueprints help you get started fast and produce real value with your new hybrid cloud. ZipKits let you integrate and manage a wide variety of middleware applications and application stacks with blueprints for popular operating systems like Microsoft® Windows and Linux®. These templates enable rapid delivery of new services through your cloud and also support provisioning and management of complex multi-tier applications with web, application, and database tiers.

Additional Express Cloud Benefits

Openess is a must-have feature for organizations looking to combine solutions from multiple vendors. Express Cloud is an open solution that includes BMC CLM and ZipKit components. It is hypervisor agnostic, with support for VMware, Xen, and Hyper-V. It is public cloud agnostic, with adaptors for AWS, Terremark®, Rackspace®, Savvis, OpenStack®, and more to come. Express Cloud also supports heterogeneous hardware, including x86 servers from any vendor, storage systems from EMC® and NetApp™, and network equipment from Cisco™ and Juniper®.

BMC CLM and ZipKits not only make it easy to set up infrastructure and provision applications and services, they also enable ongoing configuration management and compliance enforcement. The Express Cloud community develops and supports ZipKits, so users have an active say in what features and integration capabilities get added to each template. This approach helps ensure templates are engineered to meet the industry's most prevalent needs and revised with the most preferred improvements.

SUMMARY

The full benefits of cloud computing are not realized by simply standing up a private cloud in your data center. The best way to proceed is by starting small, with a solid foundation that is aligned with your long-term cloud strategy. This way you can be more successful at the onset and confidently extend your cloud from there.

BMC Express Cloud was designed to support this methodology, as well as overcome the fundamental challenges that too often derail private and hybrid cloud deployments. It helps you get started quickly with a cost-effective hybrid cloud that immediately produces value and can be extended as needed.

Express Cloud provides the features and support you need to thrive with a hybrid cloud, including resource pools, APIs, and self service to promote elasticity and scale—all from a proven vendor. It also promotes integration with specific hardware, hypervisors, operating systems, and public clouds so you will have a cloud that suits you well into the future. Finally, by managing middleware and applications through ZipKits, Express Cloud provides a far more complete solution than competing offerings.

BMC can help you develop the right cloud strategy, one that accommodates growth and changing needs, while leveraging your existing hardware. With included services, such as our Cloud Solution Planning Workshops, Rapid Deployment, and Cloud Adoption Starter Kit, our Express Cloud solution will help ensure that your organization is ready for the cloud.

Don't play expensive guessing games with cloud service providers. Get your cloud up and running faster with BMC Express Cloud, and start experiencing the benefits of cloud computing and data center automation.

For more information on BMC cloud solutions, visit www.bmc.com/cloud.

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