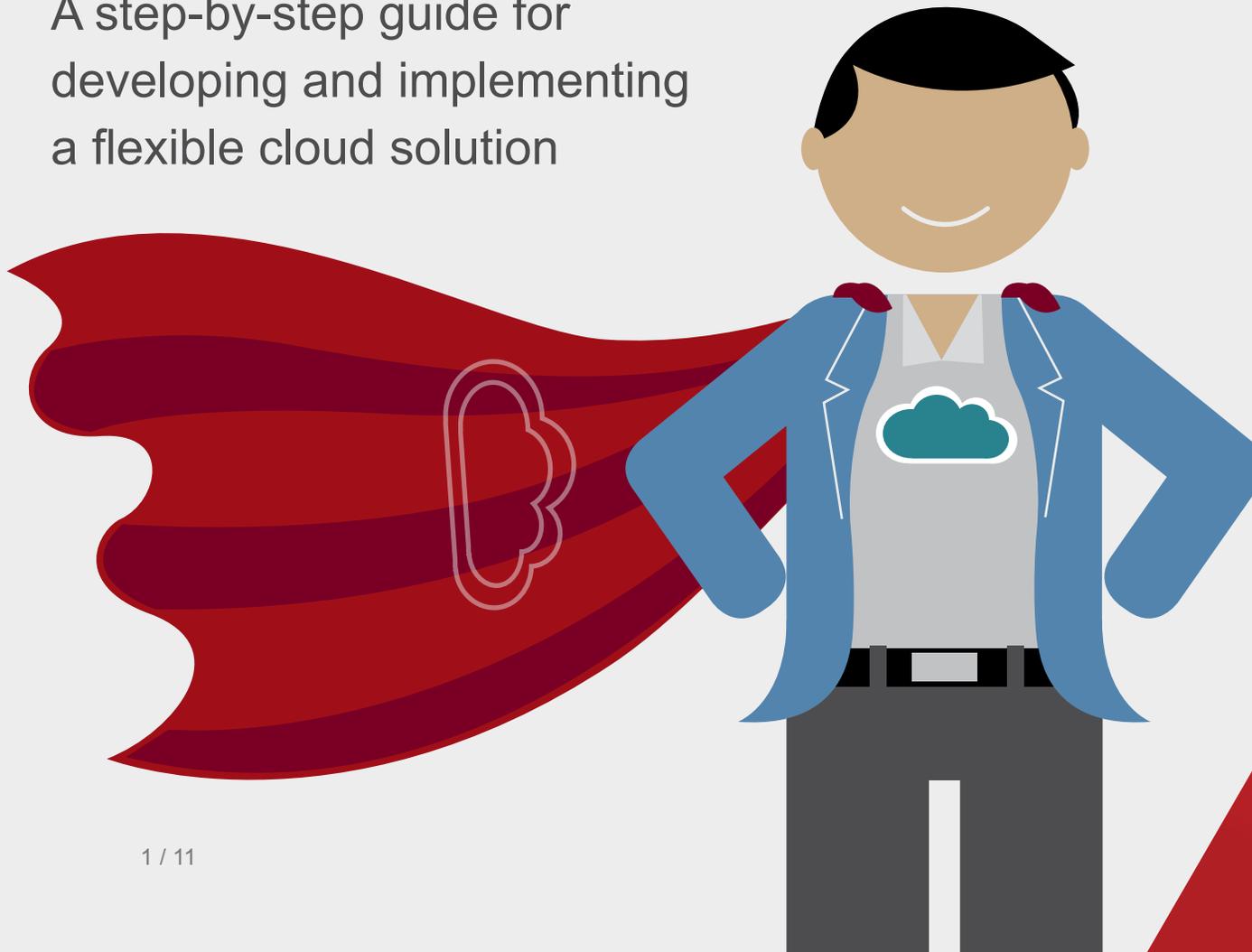


How a Hybrid Cloud Strategy Can Empower Your IT Department

A step-by-step guide for developing and implementing a flexible cloud solution



IT service delivery, particularly in the cloud, has evolved radically over the last decade. As cloud technologies mature and more vendors enter the market, the barriers to migrating applications and virtualized workloads into the cloud are diminishing. With a plethora of different service delivery and deployment models, businesses must recognize that there are a variety of ways to implement a cloud strategy. Companies are embracing a variety of cloud solutions to meet their business challenges and free up their IT departments. However, when cloud computing is introduced, companies tend to struggle with maintaining governance and control across the business.

How can IT decision makers ensure a cohesive cloud strategy that addresses business needs while maintaining control? Many are turning to a hybrid cloud strategy, which allows businesses to leverage more than one model of cloud computing for various aspects of the business. The result is an IT department that can scale resources nimbly, optimize costs, ensure high availability of applications, maintain security and compliance standards, and provide services to business users promptly.

This E-book will review emerging trends in cloud computing and examine the benefits of adopting a hybrid approach to cloud-based solutions.



Trends in Cloud Computing

Greater agility is the primary driver behind cloud services as IT departments try to keep pace with the needs of external customers and internal business units. The ability to deploy and scale virtualized workloads rapidly, with or without the approval of the IT department, has led to varying degrees of cloud implementation challenges throughout different organizations.

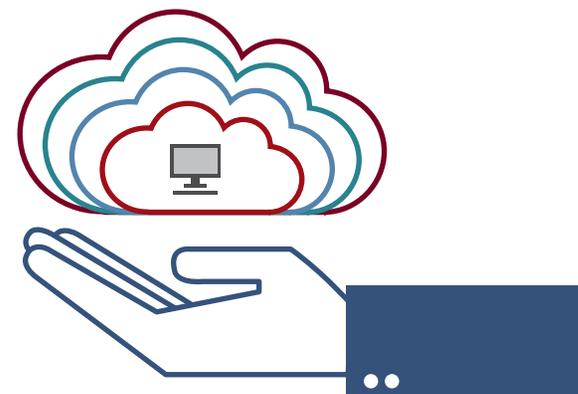
As the choices in cloud services, from public to private, continue to climb, IT departments must rethink their existing approach to governing the adoption of cloud services.

This challenge is only compounded by the fact that business units' budgets are increasingly dedicated to digital initiatives. Gartner estimates that by 2019, more than 75% of all new IT projects will be funded by individual business units directly responsible for generating growth.¹

Companies are experiencing a variety of benefits from cloud services, which includes the shift from capital to operational expense models, and faster resource provisioning

with minimal additional staffing requirements, among others. "IT spending on public cloud services is growing more than five times faster than growth in IT spending across all categories. North America and Western Europe are the largest markets for cloud services. Emerging regions and countries, while smaller markets, show the highest growth rates."² Additional research reports found that nearly half of large enterprises polled have deployed a private cloud service through 2014.

At the same time, companies are also seeing a need to integrate a variety of cloud computing approaches. Often, the IT department will choose a private cloud for mission-critical applications and data that may need to be kept isolated for regulatory requirements, but choose public cloud solutions for development or collaboration with business partners. There simply is not one cloud service that is appropriate for each business use case. As such, the proliferation of the cloud services requires a solid strategy to ensure proper governance and control.



As the choices in cloud services, from public to private, continue to climb, IT departments must rethink their existing approach to governing the adoption of cloud services.

Meanwhile, the IT department constantly needs agility and scalability. As organizations rely more on technology to get things done and request more from IT departments, IT managers find that the cloud allows them to provision resources responsively and as needed for the business users.

¹ Gartner, "CEOs Are Signaling the First Significant Change to IT's Mission in More Than 20 Years," April 10, 2014

² Gartner, "Forecast: Public Cloud Services, Worldwide, 2012-2018, 3Q14 Update," September 29, 2014

Growing Pains from Cloud Computing

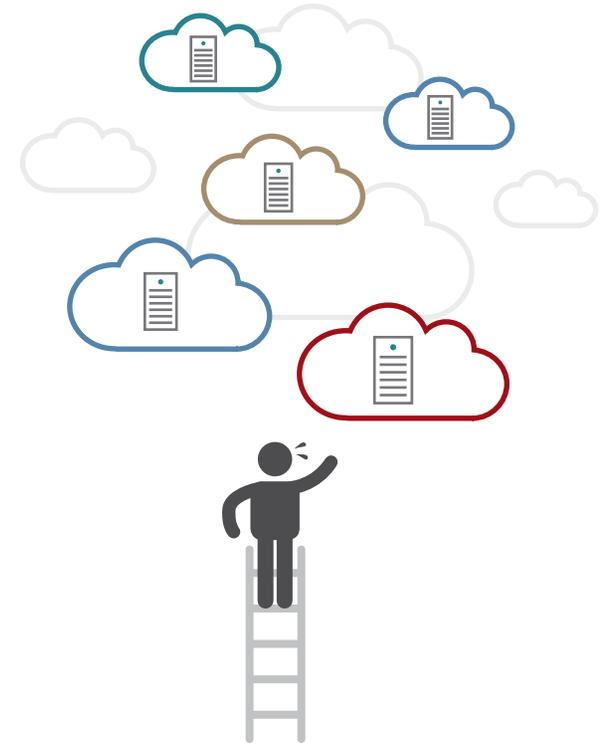
IT departments and enterprises face a variety of challenges when implementing cloud-based solutions. These challenges often include maintaining control and governance; integration with other systems and strategy; internal cultural resistance; ensuring security and compliance; staffing; and facilitating high availability for applications and resources.

Organizations often struggle to integrate cloud solutions with their various legacy systems, existing deployments, and overall strategy. Every organization has its own challenges, and there is no single model that will fit all the needs of every business unit. This means that disparate applications need integration to allow the business to operate efficiently.

But integrating those applications isn't as easy as it sounds, particularly with the current shortage of qualified IT personnel.

New technologies are emerging so quickly that existing staff isn't prepared to support them, or enterprises don't have enough staff to deploy a comprehensive cloud strategy. However, it takes money and personnel — of which many organizations do not have enough — to provide adequate support.

Meanwhile, internal users, convinced that the IT department can't respond fast enough, are spinning up their own cloud solutions without consulting the IT department. This can range from applications like CRM and collaboration to storage used by the development team when creating new applications, created by adopting a public cloud provider with little thought to security, compliance, or overall strategy. These "shadow IT" deployments make it impossible for the IT department to manage and secure the various virtualized workloads and may lead to security and compliance issues.



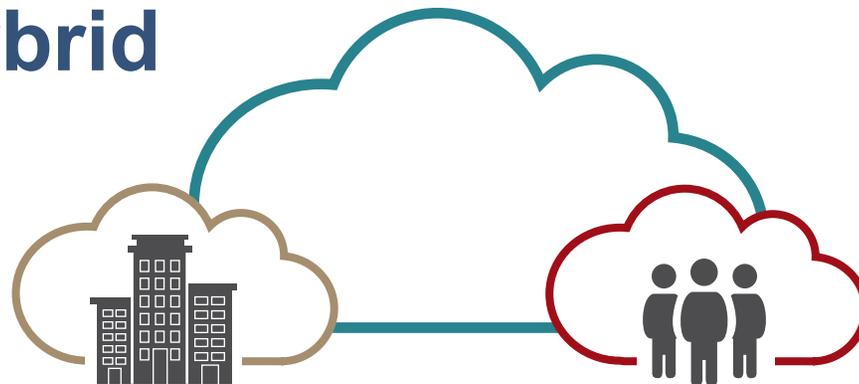
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Enterprises need a solution that will integrate disparate systems, utilize existing staff, and allow the IT department to respond to user needs promptly to discourage shadow deployments.

The Solution: A Hybrid Cloud Strategy

To overcome the various governance, integration, security, staffing, and cultural challenges, businesses are turning to a hybrid cloud strategy that enables them to select from a variety of delivery methods to meet business needs.

According to Gartner, the hybrid cloud is focused on the different cloud delivery methods used by businesses. Hybrid Cloud Computing refers to policy-based and coordinated service provisioning, use and management across a mixture of internal and external cloud services.³ “While actual hybrid cloud computing deployments are rare, nearly three-fourths of large enterprises expect to have hybrid deployments by 2015.”⁴ Just like with cloud solutions in general, the hybrid cloud can be delivered with a variety of methods. Internal IT staff can create their own solutions or work with a vendor to provide specific



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applications. The IT staff can also assume a “cloud broker” role to review services and providers, and help select the best solution for the business.

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department’s value to the business. A well-defined hybrid cloud strategy combined with a shift in corporate culture to view the IT department as the organization’s trusted advisor, brings the IT department out of the shadows and server rooms, and into a more strategic business role.

³ Gartner Glossary, Hybrid Cloud Computing, <http://www.gartner.com/it-glossary/hybrid-cloud-computing>

⁴ Gartner, “Private Cloud Matures, Hybrid Cloud Is Next,” September 6, 2013

Benefits of a Hybrid Cloud Strategy

Enterprises gain significant advantages from using hybrid cloud deployments. Benefits to this approach include:



Extending existing cloud patterns:

Hybrid cloud serves as an extension of existing cloud adoption patterns, complementing them by addressing that there is no single cloud service that will address all the needs of the business.



Transforming the IT department into a strategic partner:

When the IT department shifts its focus to brokering cloud resources, it becomes a trusted advisor to the business. The department is also better able to provide greater insight and governance of the company's cloud deployments, integrating them into a cohesive business and IT strategy.



Enhancing cost efficiencies:

Depending on the configuration, cloud deployments can heavily reduce capital expenditures by shifting to an operational expense model. This allows the business to access the latest hardware to support their applications without investing capital to build the environment on their own. The appropriate cloud model can also be matched to the application availability, performance, and security requirements, ensuring that service level agreements and costs match the use case.



Maintaining control and governance over mission-critical applications:

The underlying application process complexity and sensitivity should be considered when identifying which applications are mission-critical and which are not. Highly complex and customized applications continue to require strict governance and control, while others may only need general oversight. Hybrid cloud strategies emphasize the need to cordon off these mission-critical applications from shadow initiatives.



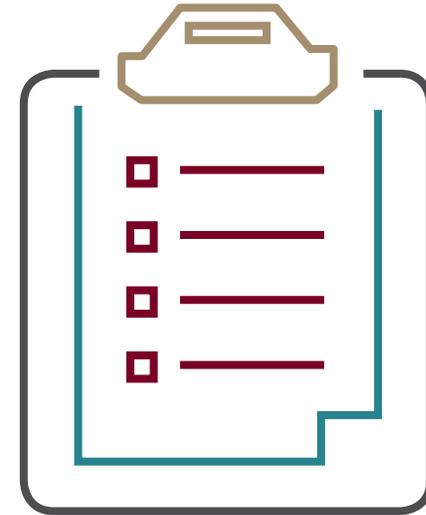
Supporting the entire application lifecycle:

Different stages of the application lifecycle may be better suited for different cloud deployment models. Test and development work may be performed in a multi-tenant environment, while live production for the application may require full isolation in a private cloud. Hybrid cloud strategies recognize these different requirements and encourage integration between the two to ensure smooth migration from the various stages of the application lifecycle.

Preparing Your Hybrid Cloud Strategy

With the advantages of a hybrid cloud laid out clearly, companies that want to start reaping benefits should approach it with these goals in mind. Here are some things to consider before evaluating providers:

- Perform a readiness and requirements assessment for each mission-critical business application. This may necessitate bringing in a consultant to assist with the assessment and ensure all key considerations are addressed.
- Identify requirements for different stages of the application lifecycle and integration so that work in each stage (e.g., test and development, user acceptance testing, staging, and production) can be easily migrated.
- Outline the capacity requirements for each application. For example, is the application predictable and steady or volatile? The latter may require a cloud bursting model that leverages both private and public cloud services to handle activity spikes.
- Review the SLA (service level agreement) landscape for different service providers. Critical applications need a comprehensive SLA with guaranteed uptime to ensure optimal availability.
- Understand the requirements of different business units to better assist with application selection, integration, security, and data governance, as well as ensuring that the appropriate backup and recovery practices are provided by the vendor chosen.
- Evaluate capital expenditure and operating expenditure requirements against existing budgets.
- Decide how much to leverage existing IT staff and whether to hire a consultant. That means evaluating the skillset and knowledge of staff to determine whether they can manage migration to a cloud environment that can support mission-critical business applications. Do just a few team members possess the



necessary level of cloud competency, or is the knowledge spread across the team?

- View the hybrid cloud as a journey, not a destination. It requires revisiting and reviewing the strategy periodically to maintain agility in the execution model chosen and adapting to new requirements with a variety of cloud deployments.

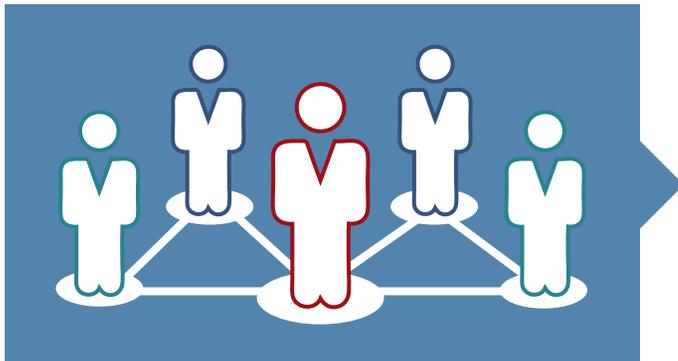
What to Look for in a Cloud Services Provider

Whether choosing a provider to host a dedicated private cloud at the provider's data center, or host applications, data, and infrastructure in a multi-tenant cloud solution, the following requirements need to be kept at the forefront of discussions:



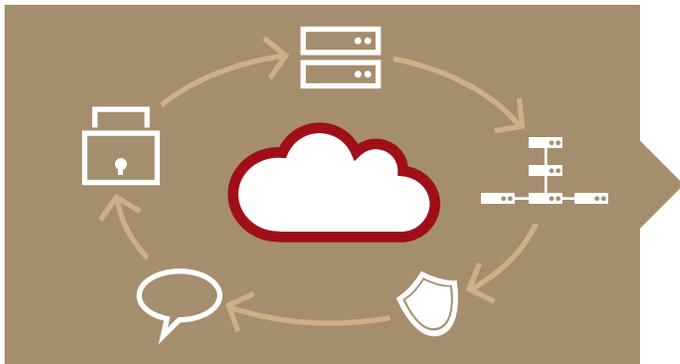
A variety of cloud deployment models:

Seek out a cloud solution provider that offers a variety of options to meet the business needs. This includes both public and private cloud solutions that can be deployed and maintained by the service provider if necessary.



Proven experience with complex hybrid strategies:

The right provider has worked with a diverse customer base, including small- and medium-sized businesses, as well as Fortune 100 enterprises that span a variety of industries, from healthcare to financial services, retail to manufacturing, telecommunications to transportation, and even government and utilities.



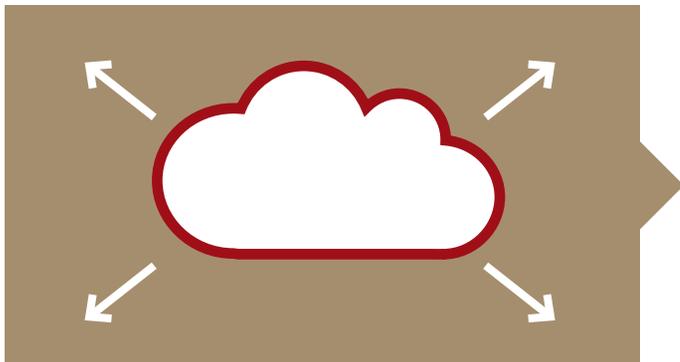
A complementary suite of additional managed services:

Compiling the right suite of complementary managed services and bringing in outside expertise can be a necessary service to help organizations surmount barriers that prevent them from realizing the full value of cloud computing. Seek out a cloud service provider that offers a variety of additional managed services to compliment your existing staff and internal expertise. Additional services may include: managed storage, security services, cloud migration consulting, managed network, cloud-based disaster recovery, managed applications, and industry-specific compliance preparation services (HIPAA, PCI DSS, SOX, FISMA, etc.)



Experience with backup and recovery of highly complex cloud environments:

Seek out a provider that has the experience necessary for backup and recovery of a highly complex cloud environment. Look for providers with broad customer bases, industry experience, qualified professionals, and secure, redundant facilities that can handle extensive disaster recovery.



Ability to expand beyond hybrid cloud and into hybrid IT:

Because the cloud doesn't make sense for all business applications, look for a provider that can assist with managed services that are suited for the entire IT landscape. The provider should have a full suite of consulting services and solution engineers that can transform the IT environment as needed.

Conclusion

The demand for flexible cloud deployments to meet business needs is clear. Organizations are finding that a hybrid cloud approach provides them the responsiveness, cost effectiveness, and the appropriate level of support required for mission-critical applications.

Additionally, hybrid cloud allows the IT department to become a strategic partner for the organization as it navigates the options available. This type of hybrid strategy is vital for maintaining control and governance across an organization as the proliferation of cloud services continues.



Hybrid cloud allows the IT department to become a strategic partner for the organization.



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