

General Information

February 26, 2010 • Vol.32 Issue 5

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Cloud's Key Considerations

Plans For Moving To The Cloud Are Not Complete Without Thorough Assessment & Examination



Cloud computing has gradually transformed from a niche option into a full-bore opportunity for organizations to offload nearly every element of their data center infrastructures. But jumping into the cloud without a solid perspective on the key issues around the concept can be a perilous experience, particularly if you choose to rely on the cloud for business-critical applications.

“While cloud computing poses new challenges to IT managers and data center providers, it also throws up interesting opportunities,” says Sanjay Vyas, vice president and general manager of managed services for Arcot Systems (www.arcot.com). “By carefully framing requirements, designing the system, choosing vendors, and deploying, you can leverage the cloud to achieve lower costs for you with better availability than usually possible with internal IT deployments.”

Although you might have a firm grasp on your organization's needs, it remains critical to pair that understanding with solid knowledge of the cloud's primary problems. Doing so can help you avoid becoming overwhelmed or confused by the glut of information currently swirling about the cloud realm.

■ Be Inquisitive

For organizations looking to move their products or services to a cloud format, plenty of

Key Points

- Although cloud computing serves a huge number of enterprise needs, managers must still determine whether cloud services will in fact meet their particular requirements.
- Without availability, any cloud foundation can crumble, so look closely at a potential provider's physical infrastructure to ensure it can deliver on its promises.
- Cloud considerations should include examination of support and extensibility options offered by cloud providers, similar to considerations involved with evaluations for internal IT deployments.

questions must be answered before making such a move. Lee Goldstein, IT manager for IPRO Tech (www.iprotech.com), says that organizations must first determine whether their products or services provided to customers would even work in a cloud environment.

For example, he says, can an environment be provided that enhances the line of business? What resources will need to be purchased to achieve the overall goal while maintaining security and availability? Does the current facility provide the resources (redundant power, Internet, cooling/heating, etc.) required to handle the increased hardware resources? Is the current IT staff able to create the proposed cloud environment, or

are additional resources and/or specialties required? What is the anticipated growth, and how should the new environment be configured to accommodate that projection?

The move to cloud-based services can seem inevitable for parts of many data centers, but Vyas recommends taking a careful approach that involves thoroughly analyzing your needs from the cloud, including the kind of service your application provides, the sensitivity of the data, throughput, and availability.

“This step will help you frame your requirements for the remaining issues,” he says. “If the application is an internal application, it is also important to evaluate the application itself. So if a sensitive application with high availability needs to be implemented in a cloud environment, the security, controls, and infrastructure are very important considerations.”

■ Assess Availability

Organizations considering cloud computing should examine availability issues with any potential cloud provider. For example, if the provider’s physical infrastructure does not support redundancy through the use of multiple network providers, onsite UPSes, and fuel storage, it’s tough to expect high availability. Availability can be a tricky component to assess, so Vyas stresses the need to understand how it is measured and reported.

“If the provider’s definition of availability is different than yours, there will be problems later. It is important to ensure that the provider measures availability in a fashion similar to your users accessing the cloud application,” Vyas says. “For instance, if your users are in Europe, North America, and APAC, the provider should measure the application availability from all these locations. Reports on application availability should be available readily.”

Vyas adds that once an application is available in the cloud, end users and business owners will measure it only by their experiences. As such, if the application is slow to respond or isn’t available at all, the business can be affected. By its nature, cloud computing can keep costs relatively low by using a shared infrastructure, but that same infrastructure can impact throughput and availability during peak loads.

In terms of security, Vyas says more questions are required to help make a final determination on a cloud provider—if a move to the cloud is the right move at all. Is the provider’s facility marked or unmarked? What is the thickness of its walls? Does it have barriers outside the building to stop a truck? Does it have bulletproof glass, sophisticated security cameras, and/or motion sensors? The answers to these questions can help managers decide whether their data will be safe in a cloud environment.

■ Familiar Evaluation

Other issues to consider, Vyas says, are support—How will end-user support be addressed? What are the SLAs on the underlying data center infrastructure? What are the support agreements for remaining pieces, such as databases and system hardware?—and extensibility—How easily can you add more to your cloud environment? Can you ramp up quickly if you experience rapid growth? Although these and other concerns can seem like plenty to handle, Vyas recommends treating the evaluation process like the process used for internal IT deployments.

“Focus on your requirements first,” he says. “Once you have determined your users’ needs, you can start the evaluation process. You will need to evaluate your cloud environment keeping in mind [all of these] issues. When using external vendors, it is important to ask questions and seek more information—data center site visits, customer references, past availability reports, etc.” ■

by Christian Perry

Cost Consideration

A leading driver for cloud computing is cost, particularly among small and midsized enterprises that are looking for ways to save on infrastructure and support expenses. For example, SMEs can benefit from renting applications in the cloud and paying a monthly rental fee rather than purchasing 20 copies of similar software and paying for maintenance on top of it, says Lee Goldstein, IT manager for IPRO Tech (www.iprotech.com).

However, there is more behind the cost equation than just savings. “Price plays an important role in the equation for data centers because the cloud environment is usually priced similar to a utility model—i.e., the costs are a recurring expense,” says Sanjay Vyas, vice president and general

manager of managed services for Arcot Systems (www.arcot.com). “This is all the more important if you need a private cloud. Once set up in private clouds, it is very difficult to simply move your business to another provider. Therefore, it is important to evaluate all costs up front, accounting for growth in future needs.”

According to Vyas, high-bucket costs include electricity and space (most data centers charge by wattage per square foot, but in essence, all are charging for power), bandwidth (also account for cost of replication across multiple data centers if high availability is required), database and storage (relational database management system costs and backups can build up over time), and monitoring (these costs increase as you increase the monitoring frequency and geographical locations for measurements).