Expert answers on public and private cloud

The industry is cluttered with buzz around the cloud that has reached a pitch that makes hard for many IT leaders to keep up. Is private cloud the solution, and for which applications? What is best put on the public cloud? What about hybrid?

It's critical, though, for IT organizations to have a strategic plan and understanding of cloud's impact on their operations before moving ahead with their cloud efforts, says Rami Wehbe, principal consultant and solution architect specialized in cloud at Microsoft Gold and Cloud Accelerate partner, Itergy.

"I think strategy is one of the key factors for success," he says. "You need to have a strategy. You need to build a roadmap to determine if it's appropriate to have a complete private cloud architecture, complete public, or hybrid. I find most organizations are going hybrid."

Itergy provides cloud-readiness assessments for its clients, during which Wehbe says he sees some businesses hastening to cloud models with the best of intentions, but not always the best infrastructure or operations model to support it.

When deciding between putting IT resources on a public, private or hybrid cloud architectures, there are a few important considerations.

Despite perceptions, public cloud architecture is not always the most cost-effective of solutions, but it does provide increased availability to IT resources for organizations without the necessary internal infrastructure, Wehbe points out. In addition, it can eliminate the cost of updating and maintaining those resources. "The public cloud can provide you with highly-available services, kept competitively up to date.

"You have a lot of organizations that are challenged to keep up with upgrades; however, if they're on the public cloud, they can do it faster."

Still, public cloud services don't automatically meet the stringent expectations for compliance and security, or the technical requirements of every application. From a business perspective, when a public cloud provider can't prove it meets an organization's compliance and governance needs, or the applications are deeply tied to back-end systems, private cloud may be the way to go.

Integration with an organizations back-end will add complexity and cost to a public cloud deployment, Wehbe says. He points to examples where an enterprise using Active Directory services has moved to the public cloud only to be surprised it then needed to manage and federate multiple directory services across different architectures.

Publishing part of an organizations directory to the public cloud can also pose a security risk. "Microsoft's cloud services are very reliable and compliant," he says. "But for smaller public clouds, I have concerns."

For many, of course, the answer is a hybrid infrastructure incorporating both public and private clouds, and bringing the best of both worlds: combining the dynamism and availability of public cloud services with the security, compliance and integration of on-premise private cloud. But hybrid architecture from operations perspective is typically the most expensive approach, according to Wehbe.

Some businesses are also particularly well suited to a hybrid cloud. Wehbe points to the example of a school board that moved students' IT services to the public cloud, while keeping administration on-premise to maintain privacy and security compliance.

Still, for all the advantages of a hybrid model, Wehbe points out organizations really need to plan ahead and create a clear roadmap based on business and operations needs: they must build a scalable integrated architecture that doesn't need to be constantly reengineered with every change in the cloud technology.

He notes that selection of cloud providers is another success factor; certain providers have complete enterprise private and public cloud solutions that leverage the existing infrastructure. In addition, one should consider there may be need to efficiently architect their cloud if need to use cloud architecture from different vendors, simple and scalable cloud architecture will help IT to cut the cost of operations.

Perhaps the biggest surprise to IT leaders trying to better understand cloud is that, despite the hype, it's not always about cost-savings, but about the benefits of dynamic resource allocation, availability and greater business agility.

"It's not always cost-effective to move to cloud," Wehbe says. "If you go to cloud without a complete operations model that supports it, you need to consider that there are then risks associated around cost.

"In the short-term when you don't consider all requirements, it will generate risk and technical constraints down on the road when you try to leverage the existing infrastructure. In the long-term when you make sure everything is ready for cloud, that's a mature model," he stresses. "Decision makers need to be aware there can be hidden costs."

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> Principal Consultant and Solution Architect, Itergy

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