

Realizing the Full Potential of Hybrid Cloud Computing

In a world increasingly enchanted with cloud computing, the hybrid cloud is emerging as the solution that addresses the broadest customer challenges. Although implementations—and even definitions—vary, hybrid cloud solutions broadly aim to blend the best aspects of public clouds with those of on-premises private cloud environments. Public clouds bring reduced costs, elasticity, quick provisioning and other benefits to the party. For their part, private clouds enable companies to meet their business requirements by maintaining data sovereignty and defining their own service-level agreements with data protection and continuous availability.

The combined benefits of agility, elasticity, availability and simplicity—together with choice—have made hybrid cloud deployments a top agenda item for many companies. In a recent survey of 111 IT and business executives, IDG Research Services found that 72 percent have either deployed hybrid cloud solutions already (44 percent) or plan to do so in the coming 12 months (28 percent).

Hybrid Cloud Priorities, Benefits and Challenges

When asked about their hybrid cloud objectives and uses in the coming months, the IDG survey respondents identified a wide variety of goals.

The top five objectives, identified by at least 40 percent of the respondents, included:

- High availability/disaster recovery (49 percent)
- Increasing flexibility for responding to spikes in demand (48 percent)
- Development and testing (48 percent)
- Managing IT operations (41 percent)
- Data protection, backup and availability (41 percent)

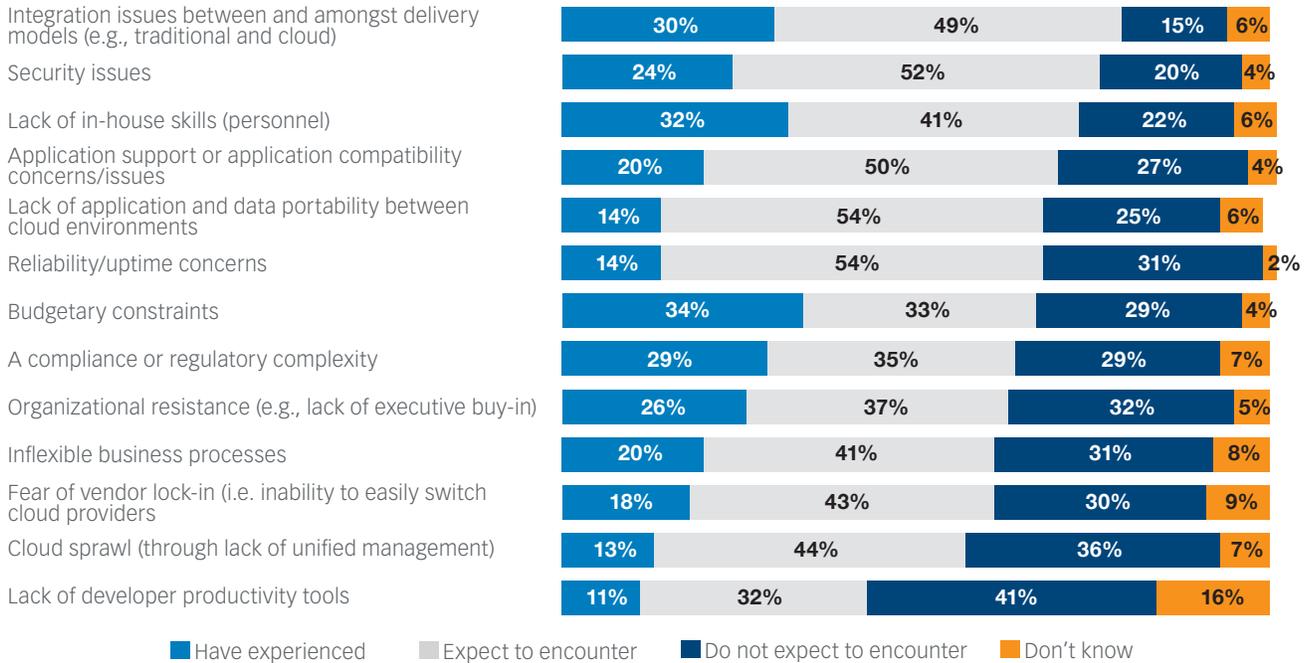
Among the key benefits companies have already experienced from their hybrid cloud deployments are better resource efficiency (41 percent), better application availability (39 percent) and a reduction in capital expenditures (39 percent). Other common benefits range from better performance and improved backup and recovery to meeting required service-level agreements.

Users who effectively manage their journey to the cloud “can add 20 to 80 percent more capacity without incremental cost,” says Rand Morimoto, president of the consulting, technical services and IT staffing firm Convergent Computing.

Actually achieving such a return can require overcoming a host of challenges. As illustrated in Figure 1, the top challenge survey respondents have experienced or anticipate involves integrating different environments. Security issues and lack of in-house skills also rank as top concerns.



Major Challenges Experienced with Hybrid Cloud Deployment



SOURCE: IDG Research Services, June 2015

Predictably, this long list of challenges has many companies searching for solutions and services that will help them optimize their hybrid cloud deployments. In fact, the IDG survey revealed that many are doing so with Microsoft platforms—nearly two-thirds (65 percent) of the survey respondents said their solutions use, or will use, either Windows Server, Systems Center, Windows Azure Pack, Azure or some combination of these Microsoft platforms.

Longtime Microsoft partner EMC is right there with solutions that address many of their top needs.

EMC Solutions Provide Data Backup and Recovery Across Hybrid Clouds

Already an established industry leader in data solutions, EMC has also made a name for itself in hybrid cloud solutions, services and support. “EMC always has had management tools for data

and storage, and it is extending the best practices it has had for years—and then some—to the cloud,” says Convergent’s Morimoto. “Customers trust EMC, and with its help, hopefully they will trust the hybrid cloud as well.”

Many of EMC’s solutions help customers tackle critical hybrid cloud challenges, including data backup, recovery and accessibility. Among the EMC offerings in this area are:

- **EMC Data Domain deduplication storage systems** — protection storage that delivers high-speed, variable length deduplication for backup, archiving and disaster recovery. The Data Domain Operating System also features secure multi-tenancy which enables data protection as a service for Microsoft hybrid cloud environments.

- **EMC Data Protection Advisor** — data protection management software with which users can unify and automate monitoring, analysis and reporting across all the environments that make up

the data backup and recovery infrastructure. Multi-tenancy capabilities and support for Microsoft Exchange and SQL provide enterprise-level scalability and tenant isolation to ensure quality of service for Microsoft hybrid cloud environments.

■ **EMC Avamar** — a complete software and purpose-built appliance solution that can reduce the bandwidth required for data backup by up to 99 percent and reduce the disk storage required by up to 95 percent. The EMC Avamar Virtual Edition consists of EMC Avamar software and a virtual storage appliance that can be deployed on Microsoft Hyper-V and integrate with Microsoft Azure, thereby serving as a bridge between legacy backup functionality and cloud-based backup and disaster recovery solutions.

“As stable as Microsoft Azure has proven to be, any cloud environment is potentially subject to unavailability, and the need to protect still exists,” says John Brier, chief technology officer at advanced IT infrastructure solutions provider, AdvizeX Technologies. Although many companies already use EMC Avamar technology to meet various data backup and recovery demands, “It probably becomes more important in a hybrid cloud environment to have that normal state of protection, and Avamar is one of the best solutions for doing that,” Brier says.

Avamar’s native integration with Microsoft Exchange, SharePoint, SQL Server and Hyper-V makes it particularly well suited to many hybrid cloud deployments, according to David Mazursky, practice manager at AdvizeX. With Avamar, companies can instantly recover application data that spans cloud as well as in-house environments, he says.

Delivering Data Management and Trust

Beyond data backup and recovery that spans hybrid cloud environments, companies require

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higher-level data management functionality. For example, nearly half (48 percent) of the survey respondents said data sovereignty and control were a critical driver behind their hybrid cloud deployments. The EMC/Microsoft Azure ExpressRoute solution addresses this need by giving companies the ability to keep critical data in EMC storage systems on-premises or in Equinix company-located data centers. At the same time, companies can also use a private connection to access applications running in the Microsoft Azure cloud.

“The idea of a seamless extension to existing data center resources resonates pretty well with IT people who don’t want to have a general network connection to Azure,” says Mazursky. “They want something more reliable and secure,” he continues, noting that ExpressRoute gives IT the ability to holistically manage and provide a secure and high-availability hybrid cloud environment.

For more information about EMC’s hybrid cloud solutions, see :
www.emc.com/cloud