

CLOUD COMPUTING: HOW TO MAKE YOUR OWN SILVER LINING

Like many big ideas, cloud computing is often talked about in sweeping generalities: It's the next paradigm shift in the technology industry. Everything is going to be different somehow. The media loves this stuff. There are lots of opinions and very few facts.



Cloud Computing Solutions

A cost-effective way to manage IT.

Cloud computing takes its name from the cloud shapes that were used in schematic drawings to depict the early Internet. The concepts that make up cloud computing aren't new, reaching back to time-sharing in the 1960s and drawing on aspects of the application service provider and utility computing mega-trends in recent decades. Virtualization—the ability to create pools of computing resources separate from the underlying hardware—is the most recent phenomenon absorbed into the cloud nebula.

A silver lining exists in cloud computing, but it's not something you'll find adrift in the whirlwind of metaphors currently descending on IT. The silver lining in cloud computing is something you make the old-fashioned way.

"It starts with a detailed business-to-IT strategy assessment," says Logicalis Director of Cloud Computing Mike Martin. "You need to define the business challenges that you must meet—your business continuity requirements and growth plans, your technology assets, your financial goals and objectives—and, from these components, you develop feasible options and solutions for a more cost-effective way to manage your IT."

The attributes most associated with cloud computing—rapid self-provisioning, automation and capacity on-demand—offer something for both the business and IT sides of an organization. IT benefits from available, flexible and affordable computing resources. Business benefits from the ability to shift the balance from a capital expense model with a significant up-front commitment of funds to an operational expense model with a variable fixed cost aligned with business/IT needs.

The appeal of the operational expense model, in particular, has caused many CFOs during the recent economic upheaval to wander across the halls to their CIOs' offices and inquire about the feasibility of cloud computing. What do we need a data center for? Why not just rent space on Amazon's EC2?

TO THE FOREFRONT

That the push for cloud computing within an organization coming from the top down is another reason for apprehension in the IT department. Nothing unleashes more rampant expectations than a technology paradigm shift that C-level executives read about in the business press. But it's never quite that simple.

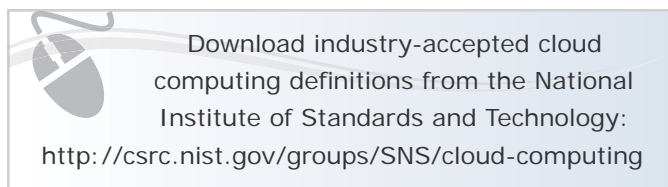


“Three things happened last year to push cloud computing to the forefront,” says Logicalis President and CEO Terry Flood. “First, people became comfortable with high-speed bandwidth connections. Second, virtualization technology made it possible for centralized providers to stack systems with a high enough utilization to offer computing capacity at a price that would be interesting. And, lastly, the economy tanked, which caused end users to say, ‘Hey! What about that cloud thing?’”

In fact, cloud computing is not one thing but many things available in many combinations. Fortunately, as the technology evolves it is becoming more defined.

There are three basic types of cloud service models. They are infrastructure-as-a-Service (IaaS) clouds, like Amazon’s EC2; Software-as-a-Service (SaaS) clouds, like Salesforce.com, which support a specific application; and Platform-as-a-Service (PaaS) clouds, which provide computing resources with full support through the operating system and platform software level.

These cloud service models are available in all of the cloud deployment models: private clouds that are operated for a single organization, public clouds that are available to the general public or an industry group, community clouds that are shared by a group of organizations and hybrid clouds that combine select features of the other cloud deployment models.



Despite the hype, there are no cloud offerings that take all the complexity out of IT.

“Make no mistake about it,” Martin says. “The complexity of applications and managing IT is not going away. Whether your computing systems are running in your own data center or somewhere

in the cloud, you still have to run them, patch them, upgrade them and manage them...or pay someone else to do it.”

CLOUD OPTIONS

Instead of looking for ways to fit your IT into a cloud, a more effective strategy is to start with your needs and see what cloud options could work for you.

The cloud solution Logicalis developed for API Healthcare is a case in point. API Healthcare is a leading provider of workforce management solutions to healthcare organizations of all sizes. Its solutions include everything from a touch screen badge reader for time & attendance and scheduling to business analytics that help healthcare providers achieve positive outcomes by managing labor costs while focusing on patient care. API Healthcare has been in business for 28 years and boasts more than 700 hospitals and health system organizations as clients.

API Healthcare recognized the value of virtualization technologies early on and had been optimizing their software solutions to take advantage of virtualization for many years. API Healthcare initially approached Logicalis because they wanted to leverage this expertise and knowledge by bundling their software in a virtualized environment on hardware provided by Logicalis. This would allow API Healthcare to provide healthcare organizations with a highly optimized, cost-effective turnkey solution.

API Healthcare also indicated that its clients had been asking about accessing its applications as a service instead of hosting them in their own data centers. The problem for API Healthcare was that providing its software in a hosted environment meant building and supporting its own data center, which is not a core competency.

It was at this point in the discussion that a new service for their clients began to take shape that drew on the core competencies of both API Healthcare and Logicalis. Logicalis would leverage its existing hosting infrastructure to build a

platform for API Healthcare's applications in its data center in Cincinnati and make it available as a service to API Healthcare, which could, in turn, use the cloud platform to offer its application as a hosted solution to its clients.

Drawing on their respective strengths, they developed a partnership allowing each organization to focus on their core strengths; Logicalis delivering technology infrastructure solutions and API Healthcare delivering healthcare workforce management solutions.

Because of its 10 years of experience as a provider of hosted solutions and managed services, Logicalis had the resources and experience to offer an enterprise-class, ITIL-based platform that included infrastructure, memory, storage, processing and network capacity, as well as maintenance, monitoring and management.

The ability to offer its software in a hosted environment at a fixed cost gives API Healthcare a competitive advantage without requiring the company to make the significant investments in a data center system that would otherwise be required to support it.

The reaction from API Healthcare's market has been very positive. Logicalis had barely finished explaining the solution to the API Healthcare sales force before clients began queuing up at API Healthcare to discuss the terms for accessing API Healthcare's software as a hosted service.

Clients liked the idea on several levels: Their Nursing and Human Resources departments liked API Healthcare solutions for making it possible to more effectively manage their workforce and provide better healthcare to their patients. Their CFOs liked the idea of being able to pay a fixed license fee for the service. And their IT departments liked the fact that they didn't have to support, monitor or manage the application in their already crowded data centers.

A MODEL CLOUD

The response from API Healthcare and its clients encouraged Logicalis to use the experience as a model for expanding into other PaaS cloud offerings. Recognizing that most of its clients have heterogeneous IT environments, Logicalis designed its cloud platform with support for multiple operating systems, including Windows, Linux, AIX, HP-UX and i5OS. The infrastructure underlying the platform incorporates best practices from ITIL V3; it is designed for complete redundancy, leverages Tier-1 disk capacity and has complete load balancing across the network to ensure availability.

To accommodate clients with different regulatory needs (i.e., HIPAA, PCI, SAS 70 II), the Logicalis cloud platform is designed to provide security cloud zones that are based on a specific customer's unique regulatory needs. Encryption policies, as well as auditing capabilities, are applied within zones for different data types to meet specific regulatory requirements.

All of the requirements and considerations involved in designing and implementing a data center for a client have gone into the platform that Logicalis now offers as a service for clients to offer basically any service they would otherwise need their own data center to provide.

In fact, several years ago—before anyone was talking about cloud computing—an international printing firm that needed help maintaining operations during a SAP implementation spanning two continents turned to Logicalis for help. The solution involved outfitting and providing



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managed services for a data center in the United States, where it could implement the ERP system and then deliver the services remotely to branches in Europe. Done today, this same solution would be called a “private cloud.”

Clients are working with Logicalis today to use its enterprise cloud platform for a wide variety of uses, including disaster recovery and high availability services, as well as virtual desktop services, including user interface, office productivity suites and email. A number of clients are working with Logicalis on Domino suites of applications, as well as SharePoint, WebSphere and other portal applications that would be hosted and managed in the cloud platform at a fixed cost.

FROM THE CLOUD

In parallel with access to an enterprise platform for their own purposes, Logicalis also offers a growing list of services so its clients don't have to provide them for themselves. These include:

- IT contract management: Puts IT asset information into a single, accessible repository and ensures assets are properly supported throughout their life cycle while significantly reducing IT costs.
- Hosted email: Reduces the complexity, cost and resources required to manage an Exchange environment.
- IT service management: Provides enhanced portal functionality for ticket handling, ticket timers and workflow, and ITSM can be extended to your environment for complete help desk functionality.
- Monitoring: Includes the software and personnel necessary to monitor systems and infrastructure 24/7 while building a historical baseline of system performance.

HEAVY LIFTING

As a systems integrator and value added reseller for IBM, HP, Cisco and other key vendors, it has occurred to Logicalis' senior management that cloud computing could appear to compete with its own established business model of helping clients design and implement their own data centers. A closer examination of all that is involved in developing and implementing an effective cloud strategy, however, suggests that cloud computing is just another option in an expanding portfolio of services that can be used to help clients get the most from their IT investments.

“Now the heavy lifting starts,” Logicalis' Flood says. Every company thinks it is the most complicated company in the world. It's almost a point of pride, and, in reality, it's actually true. We help clients implement an IT strategy that is tailored to their unique needs. That's what we've always done. Now we include cloud computing in that strategy.”

CLOUD FORECAST

Though it may seem like a tsunami that is going to overturn the established order in the computer industry, cloud computing is a long way from taking over. Most researchers forecast that as much as 7 to 10 percent of the money spent on IT will be spent on cloud computing by the year 2012. As Martin notes, “That seems like a lot, but that still leaves more than 90 percent of the money spent on IT going to traditional internal data center systems.”

In many ways, a truly virtualized internal data center environment is a cloud, says Logicalis Virtualization Practice Director Jeff Nessen. “A good way to know if you are running in a cloud is to ask yourself if you can point at a disk or device and say, ‘My application is running there.’ If you have to point at a rack and say, ‘My application is in there somewhere,’ then you are running in a cloud.”

Nessen says the next wave of cloud computing will be taking virtual machines running in private infrastructures and migrating them out to public

clouds to handle peak workloads. The key to migrating in and out of a cloud environment, he says, is all about planning and understanding what it is you are trying to accomplish. “You have to establish that all up front so you know what you are going to get when you do it.”

Logicalis plays on both sides of public and private clouds, Martin says. To help its clients manage their total IT environments, Logicalis’ managed services offers ServiceNow, which provides an ITSM dashboard that allows clients to monitor and manage internal data center systems, as well as external cloud capacity, on a single screen. The same service allows clients to change

their capacity and service levels on a self-service basis for on-demand computing resources.

RAW POTENTIAL

Just as the raw potential of the Internet nurtured far-reaching innovation, cloud computing will stimulate the creation of more and varied uses for private and public clouds that exploit the economies of scale inherent in cloud technology. Cloud computing has expanded the context for IT, but it has not changed the message written on the wall for IT professionals for some time. “If you are in IT, you want to align yourself with providing business value, not patching Windows servers,” Martin says.

“You need to be able to work with the business side of your organization to understand what technology can do to drive innovation. You need to see your job as taking market share away from your competitors and generally improving the profitability of your business. Cloud computing is just one more tool that IT can use to accomplish that job.”

- Mike Martin,
Director of Cloud Computing

ABOUT LOGICALIS

Logicalis is an international provider of integrated information and communications technology (ICT) solutions and services founded on a superior breadth of knowledge and expertise in communications and collaboration, data center optimization, application development and integration, and outsourcing and managed services.

With its international headquarters in the UK, Logicalis Group employs more than 1,900 people worldwide, including highly trained service specialists who design, specify, deploy, and manage complex ICT infrastructures to meet the needs of more than 6,500 corporate and public sector customers. To achieve this, Logicalis maintains strong partnerships with technology leaders such as Cisco, HP, IBM, and Microsoft.

The Logicalis Group has annualized revenues in excess of \$1 billion from operations in the UK, US, Germany, Latin America, and Asia Pacific, and is fast establishing itself as one of the leading IT and communications service providers, specializing in the areas of advanced technologies and services.

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