

GET CLOUD EMPOWERED. SEE HOW THE CLOUD CAN TRANSFORM YOUR BUSINESS.

Cloud computing is as much a paradigm shift in data center and IT management as it is a culmination of IT's capacity to drive business ahead. It can be narrowly defined as "just-in-time provisioning and scaling of services on shared hardware." But really, it's an opportunity to completely transform how your business and its people work.

The cloud makes it possible for you to:

- Scale rapidly—up and down.
- Deploy services only when and where they're needed.
- Deliver rich experiences across the PC, phone, and browser.
- Generate efficiencies and cost savings by paying as you go for only the services used.

In moving to the cloud, you can choose to implement any combination of several cloud models. The "public" cloud typically describes complete services offered by third-party providers. A "private" cloud involves organizations enabling their own cloud-computing capabilities on-premises or via dedicated hardware from a third-party host.

There are three basic models in mind:

- A *private cloud* is a set of computing resources that is dedicated to an organization, usually on-premises.
- A *hosted private cloud* has a dedicated infrastructure that's hosted by a third-party but is inaccessible to other customers.
- A *public cloud* involves computing resources hosted externally but shared with other organizations and dynamically provisioned and billed on a utility basis – pay for what you use as you use it.

None of these models are all-encompassing. Part of the cloud's unique power is its flexibility. Cloud models are designed to work together, so you can use the right models for your organization as well as for individual workloads.

IMPROVE AGILITY AND RELIABILITY WITH THE CLOUD

For growing businesses that need agility and reliability to compete, the cloud represents both a unique opportunity and a paradigm shift in the value of IT as a competitive differentiator. Savvy CIOs are finding that a *standardized, global* infrastructure has deep bottom-line potential. Because the cloud encompasses these characteristics, businesses can use it to:

- Save costs directly.
- React more quickly and efficiently to new business requirements.

- Increase reliability in several important ways.
- Potentially add revenue by making themselves more competitive.

Being able to directly align IT resources with new business requirements has been hugely difficult in the past, largely due to long and expensive purchasing and deployment cycles. The cloud represents a paradigm shift in IT computing because it can dramatically decrease deployment cycles and make purchasing considerations – at least in terms of planning and reaction – almost a non-consideration.

With an agile cloud infrastructure, you can:

Exploit global business opportunities more quickly. Bringing a new electronic product to market in a foreign country, for example, used to mean at best a new outsourcing contract to a data center in that country, requiring separate contract negotiations, IT process alignment, hardware and software deployment and testing, and possibly even new staff hires. By contrast a public cloud will:

- Already have a global presence that allows you to simply request servers deployed in a specific geographic locale.
- Negate the need for hardware purchasing and deployment because resources are virtualized.
- Significantly decrease software deployment and testing since the new servers can be based off images of your current – already functioning – production servers.
- Integrate with your existing on-premises technology, making maintenance simpler.
- Protect your existing software investment by providing full compatibility between on- and off-premises resources.

Cut deployment time by huge percentages. This agility was realized by Acumatica, which cut its time for deploying a new software-plus-service solution from two months to two hours.¹ If your company has extended its private cloud into the geographic region in question, private clouds can offer the same benefits. If not, it's a perfect example of when to consider combining private and public models.

Enable business opportunity while decreasing IT investment. Another example of the cloud's ability to increase business agility is RiskMetrics. With 1,100 employees in 13 countries, RiskMetrics models over 4 million global securities daily. The company was being challenged by its customers asking for complex, on-demand financial simulation models, often generating bursts of demand on its computing resources that were 10x above normal usage. By moving these operations to the cloud using a pay-as-you-go model, RiskMetrics was able to meet these demands while decreasing its new data center costs because it only needs to pay for those resources as they are used.²

Help improve IT reliability. This involves many of the same processes that bolster IT agility:

- **Virtualization.** Virtualized servers are based off the same or similar images (copies of themselves). Virtualization not only decreases testing time, but it also increases reliability because IT staff in different locations aren't configuring servers in different ways causing more points of possible failure.
- **Reduced server sprawl.** Whether in a public or private cloud model, virtual machines run in a higher density on fewer hardware servers. That means a lower chance of hardware failure and an easier time building reliable hardware fail-over protection.
- **Simplified disaster recovery and business continuity.** If all or even most of your IT infrastructure is virtualized, spinning up a mirror of your entire infrastructure becomes easy. And connecting users to it becomes equally easy as long as they have an Internet connection and you're employing an identity management system that spans various computing scenarios.
- **Easier archiving and backup.** The cloud essentially allows you to outsource these functions while still maintaining direct management control. Any concerns about regulation compliance can be addressed by having cloud providers ensure that appropriate audit trails and log files exist with which to stay in compliance.

Increasing your IT department's responsiveness to changing business demands can effectively contribute to the bottom line, and turn IT from a loss leader to a competitive advantage in the bargain. The cloud will also simultaneously allow IT to significantly decrease capital and operational expenditures.

By moving to a private cloud infrastructure, IT managers can decrease sprawling server and network purchasing by large margins. This has decreased the forecasted IT spend of some early Microsoft cloud customers by a factor of 10.³ Work with your cloud provider to find the right ratio and migration plan for your organization going forward.

Getting started. *Start identifying the ways in which improved IT agility can help your enterprise: Exploiting new business opportunities? Easing the burden of M&A integration? Speeding procurement or order fulfillment? Build a wish list of capabilities from that discussion and use it as a map when planning the capabilities of your cloud infrastructure with your cloud provider.*

INCREASE YOUR COMPETITIVE ADVANTAGE WITH LINE OF BUSINESS APPS IN THE CLOUD

If you're considering moving your LOB applications to the cloud, congratulations! You've grasped the power of the cloud as a path to achieving a greater competitive edge for your IT department and your business.

LOB applications and the way in which they're deployed, managed, and used represent the core of your IT competitive advantage. Cloud-savvy CIOs realize that the new paradigm of cloud computing represents a golden opportunity for your IT department and your business to advance and maintain a competitive edge. No matter what form your LOB applications take, the cloud can help:

- **Increase your ability to react quickly to new business needs while decreasing costs.** The virtualized nature of the cloud means your LOB portfolio can quickly adjust performance up or down based on immediate workload requirements – lowering your TCO. Your workloads can immediately react to sudden “bursts” of demand, and you'll only pay for the resources those bursts require as you need them. And the cloud's global nature means easier and more reliable access to your LOB assets for mobile, remote, and even temporary workers. This gives your front-line managers much-needed flexibility in meeting new business needs and exploiting new opportunities.
- **Ease your management burden.** If a new market opportunity became available in another country, for example, opening a presence there with a standard IT architecture would require purchasing a data center or at least rack space in a data center located in that country. That capital expenditure would immediately be followed by operational expenditures when your LOB portfolio has to be manually migrated there and maintained by your IT staff – a significant management task, often representing weeks or even months of man-hours. But if your enterprise exploits a public or hosted private cloud architecture in addition to your on-premises private cloud, you can simply spin up virtual servers in the new location, complete with your LOB portfolio already configured to communicate with your servers back home. This is not only cheaper and faster than traditional deployment, but also much simpler for your IT staff to plan and execute.
- **Speed and standardize custom application development.** And if your LOB portfolio is partially or even wholly based on custom applications created in-house, the cloud represents a great opportunity to standardize your applications on a powerful cloud-enabled app stack. Building applications on a standardized framework is part of the cloud's definition, and moving your applications onto such a framework is beneficial for all cloud infrastructure models. Once your

custom apps have become cloud-enabled, they'll be able to take advantage of the cloud's inherent deployment and TCO advantages while also giving your application developers a clear road for future development and customization.

Moving your LOB portfolio into a cloud architecture is certainly forward thinking, but don't forget about the rest of your application and data management requirements. The cloud enables a fundamental shift in the way data centers and IT infrastructure is managed. Forward-thinking CIOs are using the cloud to run physical infrastructure (*Infrastructure as a Service*), server platforms and management (*Platform as a Service*), and entire software workloads (*Software as a Service*). Collectively, these models can be viewed as IT as a Service (ITaaS). With ITaaS, your organization can see huge decreases in data center TCO while simultaneously empowering your end users and IT staff with new capabilities through more reliable and responsive services. Adding team collaboration and messaging applications to the cloud means taking advantage of a global cloud infrastructure for employee productivity and lowering TCO at the same time. A careful application audit and some in-depth planning sessions between your IT staff and your cloud provider can build the right cloud migration mix for your organization.

Getting started. *Planning an LOB cloud migration requires diligence. You'll need to meet not only with your IT staff and your cloud provider, but also with your front-line business managers and your workers. Planning involves communicating the framework of the migration, understanding the processes that exist around these applications, and then mapping the future directions these applications need to take.*

YOU CAN TAKE GREATER CONTROL WITH THE CLOUD

Loss of IT operational control is possibly the most common misconception about cloud computing. Yes, unless you stick entirely to a private cloud model, the cloud does require a certain amount of IT and infrastructure outsourcing. But what makes the cloud such a paradigm shift is that you're not locked into an all-or-nothing approach. Work carefully with your cloud provider and make sure it can offer you all the control your IT operation needs.

Any form of outsourcing requires the loss of some direct control, but compared to traditional outsourcing, the cloud offers far more options for maintaining a controlled and entirely customized cloud computing experience. To gain the most from these options, you can:

- **Leverage all the right cloud models for your enterprise.** You're not locked into a single cloud model. Make sure that your on-premises and off-premises cloud models are designed to work together with a common management model, a common identity model, and a common application development model. By utilizing cloud models on a workload basis, you can maintain physical control over assets or work streams that simply can't be outsourced, and you can still take advantage of public cloud benefits for the rest of your portfolio. Work with your cloud provider to build an SLA that protects your company's processes, and investigate updates to your current IT management software tools to make sure that your IT staff has visibility and control over all assets whether on-premises or off.
- **Protect your critical data.** Fear of losing control over critical company data is often another stumbling block in cloud adoption. The truth, however, is that cloud computing can give you as much or even more control over your data, not less. For example, data that can't be moved can stay on-premises and cloud providers offer a plethora of options for protecting the data entrusted to them – sometimes more than your in-house IT staff and budget could make available. In all situations, however, data sovereignty should belong to you. Stay away from cloud providers

that cannot guarantee that your data won't be mined or used for another organization's commercial purposes. Work up a detailed list of requirements that will both satisfy your need to control your IT infrastructure and leverage the benefits of cloud computing.

- **Detail requirements with your SLA.** If you're worried about runaway costs, just remember your SLA. Plan your migration carefully and involve your cloud provider as much as possible. Choose a cloud provider that can meet up-front costs easily. Choosing one that already supports an application stack compatible with the apps you're running in-house will help lessen migration and integration costs and protect the financial investment you've already made in your current software portfolio. Ask about compatible management tools; making sure the cloud provider supports tools that your IT staff is familiar with or already using will help you save money on both new tool purchases and staff training.

Make sure these and any other requirements necessary for your business are detailed in your SLA. Definitely cover the basics – 99.9% up-time and 24/7 customer support are good places to start – but take the time to go as deep as your organization needs. Your cloud provider must recognize that not all software is ready to run in the cloud today – and not just for technical reasons. The beauty of the cloud is that you're not locked into a single model. Outsource what makes sense, and keep the rest on-premises. If your prospective cloud provider can't support that to your satisfaction, keep looking.

The other most common misconception about cloud computing is security. Moving critical data to the cloud is a difficult proposition for many CIOs worried about data security. Fortunately, if you look closely, you'll find that competitive cloud providers, with highly trained on-premises staff and enterprise-class datacenter facilities, can offer as much or more security for your data than what most companies are using now. Start the conversation with your cloud provider today, and ask the tough questions. Use the cloud's unprecedented flexibility to build a cloud computing solution that both enhances your IT capabilities and helps protect your critical data.

Getting started. *Not losing control starts with knowing what needs to be controlled. An accurate list of requirements is paramount here, and that's a discussion for your IT department. Matching that list to your cloud provider's capabilities comes next followed by customization to get that final level of control while decreasing costs.*

MICROSOFT: IT'S ALL ABOUT CLOUD POWER

At this point, just about everyone's talking about the cloud. But it's not just another buzz word – and it's not new. Microsoft has been leading the evolution for 15 years, building and hosting some of the world's largest cloud services. We're the only vendor currently capable of bringing you the full power of cloud computing with a complete offering of Infrastructure as a Service, Platform as a Service, and Software as a Service. We're enabling customers and hosted partners to build their own cloud computing environments as well as implement provided cloud services.

With Microsoft, you can build, extend, or migrate to the cloud on your terms. ISVs and in-house developers will be able to easily adapt existing applications to your cloud environment because we provide a set of common management, identity, and developer tools that work across traditional server and cloud environments.

We've infused our cloud solutions with the power of experience. Having run some of the world's largest cloud services for over 15 years, we understand the requirements of mission-critical services. Our cloud services run in a global network of enterprise-class data centers that offer 99.9% up-time and full 24/7 customer support, as well as mission-critical physical and data center security accredited to ISO 27001:2005 with SAS 70 I and II attestations. Your IT staff and end users can easily move to and from

the cloud using their existing investments and the skill sets they already have. We ensure a familiar and consistent experience by designing our cloud-based products with equivalent functionality and similar look and feel to that of our traditional, on-premises products.

There is a cloud on your company's horizon regardless of size, focus, or vertical. Cloud computing offers a paradigm shift in cost savings, agility, scalability, and global reach that is simply too powerful for any enterprise to ignore. Whether you're looking to move to the cloud today or you simply need to investigate this new model for the future, you should start that conversation with a cloud leader fully committed to existing cloud services and to future cloud innovation. By bringing the full power of the cloud to bear and providing you with the flexibility and control to harness that power, Microsoft will enable you to transform your business with cloud computing on your terms.

Now that you have begun exploring the possibilities of Cloud Power, contact your local Microsoft partner to learn more and to start transforming your business.

Footnotes

1. Microsoft Case Study, *Software Company Efficiently and Cost-Effectively Delivers Software-plus-Services*, http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?CaseStudyID=4000005777 (November 17, 2009)
2. Microsoft Case Study, *Financial Risk-Analysis Firm Enhances Capabilities with Dynamic Computing*, http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?CaseStudyID=4000005921 (November 17, 2009)
3. Microsoft Case Study, *Siemens Expands Software Delivery Service, Significantly Reduces TCO*, http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?CaseStudyID=4000005945 (November 17, 2009)