

WHITE PAPER

# How to choose and implement your cloud strategy



## Introduction

Cloud computing has the potential to tip strategic advantage away from large established enterprises toward SMBs or startup companies. How? Small talented teams can address a market need without pools of cash for IT infrastructure, dramatically reducing barriers to entry for most markets or market segments. Therefore the question for your business is not so much *do* you move to the cloud – but *when* and *how*.

This white paper offers guidance on how to choose and implement a cloud strategy that makes sense for your business.

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## The first big question: Public or private cloud?

It's clear that more companies than ever before are turning their attention and adjusting their budgets to accommodate cloud computing. A TechTarget survey of more than 500 North American companies of all sizes across a variety of industries found that 70% have budgeted for cloud computing initiatives this year, compared with fewer than 10% of companies in 2010.<sup>1</sup>

Along the same lines, in a poll conducted in January 2011 by Unisys, 44% of participants said that cloud computing is the top priority for IT investment.<sup>2</sup> Meanwhile an April 2011 SpiceWorks' survey reports that 42% of SMBs use or plan to use cloud services by mid-2011. And Gartner forecasts that SMB cloud market revenue will exceed \$30 billion by 2014, with the greatest demand coming from SMBs in North America.<sup>3</sup>

Mid-sized businesses are looking at cloud technologies to further optimize their IT budgets and overall cost structure, while smaller businesses are taking advantage of SaaS and IaaS capabilities that previously would have required significant upfront investments. Bottom line – with cloud computing SMBs can have enterprise-class technology for a fraction of the cost of on-premise solutions, making them more nimble and competitive.

SMBs most frequently use cloud technology for storage and website hosting, followed by business continuity and CRM applications. However once a business has successfully deploys its first cloud-based solution, it is likely to explore broader uses of cloud infrastructure and cloud-based applications. So the race to the cloud is surely on – and the ensuing discussions include references to different types of public and private cloud solutions. Here's a primer:

With a **public cloud computing solution**, you connect via the Internet to an offsite third-party hosted computing environment and pay on a monthly basis, usually per GB based on bandwidth usage. Scaling is easy since the hardware and infrastructure are managed by the provider. Your data resides in a computing infrastructure shared between multiple companies, and you have no control over where the computing infrastructure is hosted.

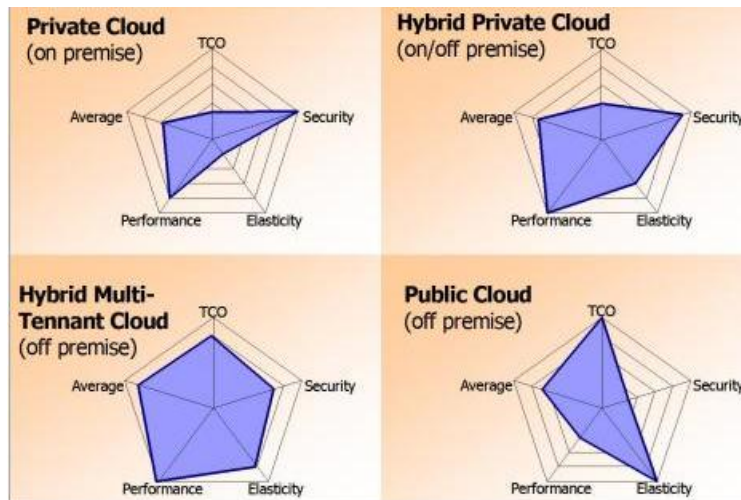
When building a **private cloud computing solution**, you supply and own all of the infrastructure and architecture. Unlike a public cloud, your data sits protected behind a firewall, so you are in control of data exposure. Scale your cloud by adding another server and expanding the architecture with additional capacity. Private clouds come in two flavors – on-

premise, meaning the cloud infrastructure resides in your onsite data center, or externally hosted. Externally hosted private clouds are exclusive to one company but hosted by a third party that specializes in cloud infrastructure.

And there is a third choice – the “best of both” if you will:

**Hybrid cloud computing** – As its name implies, hybrid cloud is a combination of public and private cloud computing environments, where some data resides in the private cloud environment and some – perhaps less sensitive data – resides in the public cloud. Hybrid clouds enable an organization to use its own computing infrastructure for normal usage, and then access the cloud for planned or unplanned higher load requirements. While this ensures each aspect of your business runs in the most efficient environment possible, you have to keep track of multiple security platforms and ensure that all pieces of your business are communicating with each other.

### A Method for Evaluating Which Cloud Computing Style to Adopt



Source: ITCandor, November 2010

## Developing your cloud strategy

As you consider these cloud options, examine your core business activities and pinpoint any process issues that may impact employee productivity or your business. Then move on to developing your cloud

strategy. Be aggressive when it comes to asking the tough questions regarding what you need from the cloud and what you expect from your cloud service provider.

## **Question to Ask Within Your Company**

### **Applications:**

- What level of availability does the application require?
- What degree of control do you require?
- Do the cloud applications integrate readily with your existing infrastructure?

### **Architecture:**

- What are your bandwidth needs?
- What are your incremental capacity requirements to meet peak loads?

### **Compliance and Security:**

- What are your compliance and regulatory considerations?
- What are your security requirements?

### **Infrastructure:**

- How frequently does new infrastructure need to be deployed or taken down?
- What hardware – including servers, storage, firewalls and networks – needs to be supported?
- How much visibility into your infrastructure usage is required?

### **Management:**

- Will you have complete, real-time view of business performance when you need it?
- Will the cloud solution work with what you have in place today?
- Can you run a next-generation cloud data center efficiently and effectively on your own?
- Who will manage your move to the cloud – internal resources or an external technology integrator?

### **User community:**

- How many groups, organizations or business units will the cloud support? What are the features and size of IT requirements within these groups?
- What are some of the different use cases that need to be supported?
- Will users have to rely solely on cloud-based tools with your chosen solution?

### **Cost:**

- What is your budget for migration and implementation?
- What is your budget for monthly usage fees?

## Questions to Ask Prospective Cloud Providers

### Architecture:

- Is their architecture modular enough to allow service to move to and from the cloud as you need?
- Is the interface easy-to-use?

### Application support:

- How well do they understand your application?
- What skills do they apply to ensure the application is monitored, tuned and updated appropriately?

### Availability and disaster recovery:

- How will your data be backed up? How long will it be stored?
- What level of availability do they provide? Three nines? Four nines? What happens if they don't meet the service level?
- Can you see their downtime records and their performance indicator records?
- What are their disaster recovery and business continuity plans? Can you see a copy of those plans? How do they communicate outages and fixes to their customers?
- Who is responsible for recovery, you or the cloud service provider?
- What happens if they lose your data or if the data become corrupt?
- Multi-tenancy: how many other businesses do they support in their cloud? What layer of the cloud is shared – the virtual layer, the application layer or the database layer?

### SLAs:

- How do they handle service level agreements (SLA)?
- Is there room for negotiation based on your company's request?
- What is the remediation process and what are the penalties for not delivering to the promised SLA?
- Does the penalty provide only free replacement service or does it cover your lost revenue?

### Security:

- How will your data be secured? Who will have access to your data and/or the server on which it will be running?
- Do they provide 24X7 monitoring, management and response?
- What are their encryption policies?
- What are their privacy policies?
- What types of logs will they provide? Can you see a sample log file?
- What happens when you delete a file? Is it really deleted or is there a backup somewhere? What is their data retention policy?
- If you move to another cloud service provider, how do they prove that all of your data has been removed from their systems?
- How do they prevent the proliferation of infections or malware from another of their customers?

**Compliance and industry standards:**

- Do their data centers meet regulatory requirements and standards, including ISO 27002, Safe Harbor, ITIL, COBIT?
- Are they SAS 70 compliant? If so, which procedures are certified?
- If you processes credit card information, is the cloud service provider PCI compliant?
- Are their security standards and compliance audits transparent?

**Scalability and flexibility:**

- How will they accommodate your growth or expansion plans? Can they scale when you need them to?
- How easy is it to migrate to another cloud service provider? Do they have the tools and technologies to port your data to another cloud service provider?

**Technology:**

- On what technology is their cloud built? Is it "best of breed"?
- Is their offering based on industry standards or are you required to re-architect your infrastructure to meet their requirements?

**Management:**

- Do they manage the solution, or will you be doing that yourself?

**Implementation:**

- What is the implementation timeline?
- Do they provide technical expertise during the implementation?

**Geography:**

- Where will your data be stored? Can you inspect the physical location where your data will be stored?
- What type of redundancy do they have in place?

**Costs:**

- What does the cloud fee include? For instance are there additional fees for storage? Backup services? Enhanced security? 24X7 support?
- Is there a minimum contract period?
- What, if any, are the exit fees or penalties if you switch to another cloud service provider?

**Experience:**

- Is the cloud provider financially stable? How are they financed?
- Is the cloud provider trusted? Who are their references?

## Key steps on the road to cloud implementation

Moving applications and infrastructure to the cloud can bring your business reduced costs, increased flexibility and accessibility, and improve how your IT works. However to reap these benefits, you need to think carefully when defining your cloud strategy.

**Define your project** – The truth is, some applications or infrastructures should never be put on a cloud. So define your project, run a check to make sure it is suitable for the cloud, and then start asking questions to guide your next steps.

**Select the platform** – Choose a platform that is fast, easy and safe to deploy. You also want a flexible platform that scales horizontally so you can take advantage of one of the key features of the cloud: the ability to support evolving business models and future growth.

**Understand the security policies of computing service providers** – A majority of cloud providers do not believe data security is their responsibility – it is yours. A 2011 Ponemon Institute study of 127 cloud service providers across the U.S. and Europe reveals that 69% of survey participants believe end users take final responsibility for cloud security.<sup>4</sup> Meanwhile only 35% of end users believe they are the most responsible for ensuring the security of resources provided by a cloud provider. Don't be part of this statistic.

**Select your cloud computing service provider** – Partner with a service provider that has proven success with businesses similar in size and scope to yours and knows your technology. Be thorough and vigilant in your selection. A 2010 Ponemon Institute study shows that organizations are lagging when it comes to assessing cloud providers. Only 36% of U.S. respondents to the study said their organization is vigilant in conducting audits or assessments of cloud providers before deployment

**Determine service level agreements** – Be very clear with your service provider when it comes to SLAs and exactly what it covers (and doesn't cover). For example, according to industry analysts, today's SLAs for cloud storage capacity typically provide guarantees in terms of uptime but specify little in terms of data availability or data protection.<sup>5</sup>

**Understand who owns recovery** – Outages will happen. Be sure you know in advance who is responsible for recovery. For instance, if your cloud service provider is Amazon's EC2, then you are responsible. If it's SunGard, it's a shared responsibility with technical support people available to help you recover.

**Migrate in phases** – Consider rolling out a phased migration that allows you to gradually increase the load, giving you time to fine-tune and minimize risks while maintaining business continuity.

**Think ahead and avoid cloud lock-in** – What you have on the cloud today you may not want there tomorrow. What's departmental and on-premise today may need to be global tomorrow. What's currently published on the cloud may become regulated and required to move on-premise the day after. So choose

a cloud solution that allows you to move between on-premise and cloud as needed, and allows you to move to a different cloud service provider if necessary.

**Don't go it alone** – Moving an application from your on-premise environment into the cloud is not a trivial task. Contract with an experienced technology integrator who will migrate the application and your data into the cloud. Partner with an experienced service provider who can help ensure that application performance and uptime is maintained through the transition while helping you seamlessly integrate cloud-based applications with your in-house applications.

## Summary

Setting and implementing your cloud strategy requires thorough knowledge and expertise in policy, strategy, business and IT. Don't jump on the cloud bandwagon because of its media hype. Remember "the cloud" is still a maturing market. Make sure you have solid, justifiable reasons for moving to cloud computing. Think it through. Lock down your objectives and your criteria for success. Know what you want to achieve in terms of total cost of ownership and return on investment. Set realistic objectives.

As you begin to plan your implementation strategy, take the time to ask explicit questions within your own company and of prospective cloud providers. The answers will set you on the right path and help lay a solid foundation for building a sound cloud implementation strategy, fine-tuned to the unique requirements of your business.

## About the author

OSF Global Services ([www.osf-global.com](http://www.osf-global.com)) has been delivering SLA-grade professional services since 2003, having established itself as a trusted advisor and technology integrator to clients in 17 countries. The company's forte is application development and technology integration across key markets, including Cloud, Ecommerce and CRM. Headquartered in Quebec, Canada, OSF has offices in the U.S., Romania and Ukraine. This mix of onshore and offshore expertise offers comprehensive, follow-the-sun support for clients. OSF Global Services is ISO 9001:2008 certified, Microsoft Certified, a Salesforce.com Consulting Partner, a NetSuite Solutions Partner and a Rackspace Hosting Member Partner.

For information on how OSF Global Services can help with your cloud requirements, please contact us at [info@osf-global.com](mailto:info@osf-global.com) or (888) 548-4344.

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<sup>1</sup> [Cloud computing added to many 2011 IT budgets](#), April 20, 2011

<sup>2</sup> Unisys.com, <http://unisys.com/unisys/news/detail.jsp?id=1120000970009610085>

<sup>3</sup> SMB Cloud Services Require Comprehensive CSP Channel Strategies, Gartner Dataquest Market Insight: Dec. 6, 2010

<sup>4</sup> Security of Cloud Computing Providers Study, Ponemon Institute, April 2011

<sup>5</sup> [Cloud storage service-level agreements \(SLAs\) specify uptime guarantees but not data availability](#), Feb 2010