

# I D C   E X E C U T I V E   B R I E F

## **Cloud Computing in the Midmarket: Assessing the Options**

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### **Introduction**

Cloud computing has been gaining increasing attention from businesses of all sizes as a way to obtain secure access to advanced technology that is not necessarily owned or hosted by the user. Midsize companies, those with 100–999 employees, can benefit from cloud-based capabilities. The variety of applications and approaches to cloud solutions and the different resources companies can draw on will make a difference in how these companies implement cloud computing into their business. According to IDC research, public cloud approaches are beginning to gain traction among midsize firms, while private cloud solutions are far less prevalent. Roughly twice as many midsize firms plan to implement public cloud solutions compared with private cloud solutions in the next 12 months. However, IDC expects SMB spending on cloud solutions to grow by 20% annually over the next five years.

This IDC Executive Brief is designed to provide a basic understanding of cloud technology and help identify the strengths and weaknesses associated with different cloud computing models. This will be helpful to senior management and IT professionals in midmarket firms as they determine whether cloud computing solutions represent a good fit for their firms and what approach to adoption would be most effective.

### **Cloud Computing: The "Off-Premises" Approach**

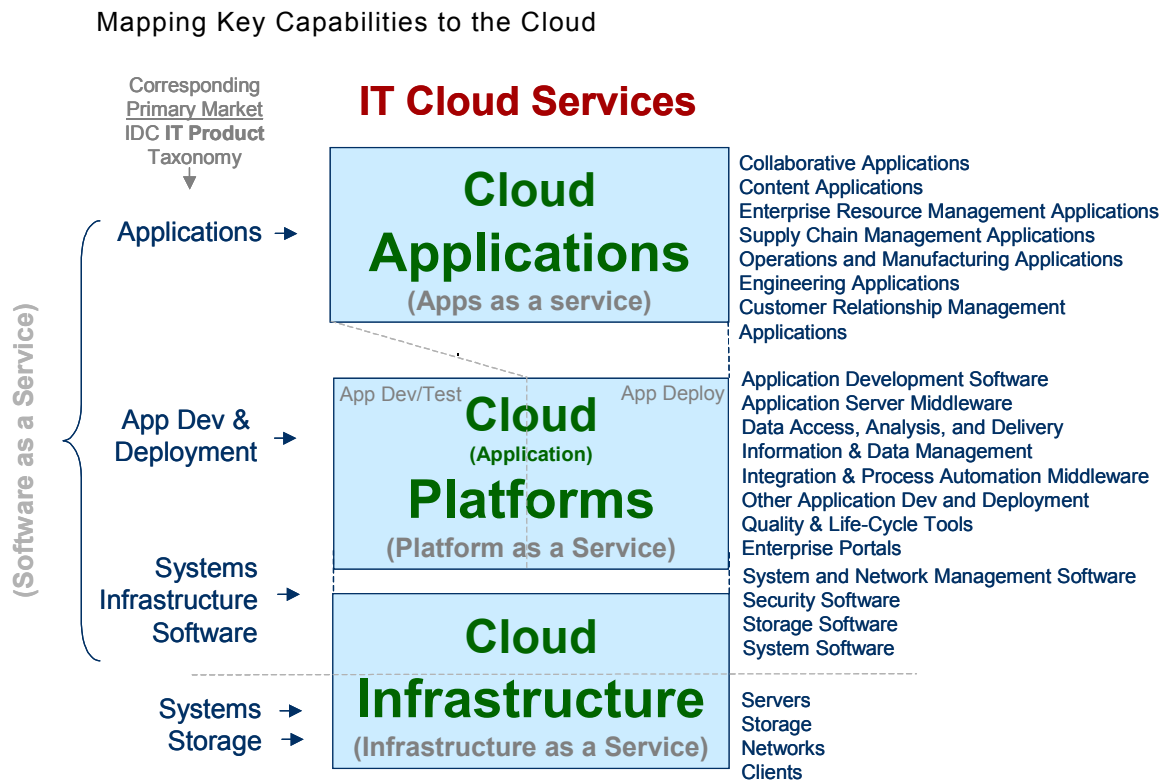
On the surface, cloud computing is really nothing new — a service provider delivers technology infrastructure or software resources that are hosted or located offsite with access made possible via a high-speed Internet connection. Web hosting and remotely hosted email are typical examples of cloud computing and, like remote storage, were being used by many midsize firms long before cloud computing became a popular term.

What's different now is that specific offerings are being presented in a very efficient, shared way that effectively pushes operational economies down to the user. Also different are three important elements that will encourage adoption: the quality of remotely hosted offerings, the ease with which they can be implemented, and the widespread availability of high-speed Internet connections that make effective implementation possible.

Over the past two years, IDC has seen overall interest and activity regarding cloud computing spread from larger firms to midsize firms and, to a lesser degree, smaller firms. And cloud engagements are becoming more central to core IT operations, at least in early adopter firms. For others, though, it's a more gradual, evolutionary process, with cloud resources being applied in very specific and limited areas.

"Cloud computing" includes three basic categories: cloud applications, cloud platforms, and cloud infrastructure (see Figure 1). The first two categories are included under the general heading of "software as a service" (SaaS) as is the system infrastructure software part of cloud infrastructure. At roughly 70%, the SaaS part of cloud computing accounts for the largest share of total cloud spending, with spending increasing by about 23% annually. Annual spending increases for cloud infrastructure will be even higher, at 37%, indicating that both SaaS and cloud infrastructure investments will continue to have strong appeal to potential users.

**FIGURE 1**



Source: IDC, 2010

IDC's definition of cloud computing is based on the following attributes:

- **Shared, standard service** — built for a market (public), not a single customer, using standard browsers and underlying technology
- **Solution packaged** — a "turnkey" offering, integrates required resources
- **Self-service** — administration, provisioning; may require some "onboarding" support
- **Use-based pricing** — supported by service metering
- **Accessible via the Internet/IP** — ubiquitous (authorized) network access

The most basic attribute is that cloud resources are designed to meet a general market need rather than a specific customer need. Private cloud solutions can be customized, but they still rely on basic solutions to begin with. The shared aspect of capabilities makes the use of standardized architecture and technologies understandable and also sets the stage for innovation by service providers. The number of innovative offerings will increase as interest in and use of the cloud increase.

### **Cloud Options: Public, Private, and Hybrid**

The public cloud will be of particular interest to midsize firms. This is where the greatest economies and the easiest-to-implement solutions will be found initially. For companies requiring more complete control of their data, a private cloud might be more appropriate. And, of course, some combination of public and private cloud solutions in a hybrid approach will be an option, with a firm's position on the public/private scale guided by needs, capabilities, and budgets.

#### ***The Public Cloud Model***

The central benefits of cloud computing for midsize firms are available through the public cloud. Resources are available to an unrestricted set of potential users who share the same capabilities delivered through the Internet. Upgrades are available automatically to the entire user population, and basic support is provided as part of a company's subscription. In theory, the arrangement and the acquisition of services could be handled online, but the reality is that most firms turn to value-added resellers (VARs) or other technology resellers to build and maintain their IT infrastructure. Because midsize firms average just 5–10 full-time IT staff in-house, they often rely on outside resources to help understand the best way to move forward with the deployment of cloud-based resources.

## ***The Private Cloud Model***

The coordination of the basic operational building blocks under the application layer is important to cloud computing efficiency. The private cloud approach is designed for a single enterprise, though it can be a large and extended one, with multiple sites and datacenters. The idea is that the cloud attributes that let firms like Google and Salesforce.com improve their delivery performance can be applied in a private setting to improve the coordination of corporate datacenters. Private clouds won't have the same reach and scale as public clouds, but they can serve as an efficient choice over traditional deployment approaches, essentially letting the corporate IT department serve as the provider of standardized services to company users.

From a practical point of view, a combination of public cloud and private cloud would be far more common than pure private cloud solutions. This would allow different levels of control over different company data. It would also be in keeping with phased deployment, starting with solutions that are the easiest to implement and most value packed. This approach to "dynamic IT," which large firms have been moving toward for a decade, is now more accessible to midsize firms than ever before, offering flexibility and customization while also featuring a level of standardization that can minimize costs and speed deployment time.

## **Integrating Cloud Capabilities into Existing IT Infrastructure: The Ideal Versus the Real**

The enthusiasm of many for cloud computing is increasingly tempered by an appreciation of the practical realities associated with moving organizations toward technology change. While early adopters often leaned toward the "hope" side of the "hope versus experience" scale, the midsize firms recently surveyed by IDC have been remarkably realistic in their expectations of how well, how quickly, and how extensively cloud-based capabilities and SaaS in particular will be integrated into their overall IT approach.

At present, two-thirds of midsize firms indicate that their cloud solutions are only minimally integrated into their IT environments and function independently of other IT operations. In the future, these users expect this situation to change; 31% expect full integration into their IT environments, and an additional 21% expect a major shift to cloud-based solutions (suggesting a higher level of integration) as the use of on-premises solutions declines. This is different from the pattern anticipated by those not yet embracing the cloud but planning to do so. Over half of these firms expect to implement a mix of integrated and standalone cloud capabilities. While the early adopters continue to pioneer new approaches, the next wave of early majority companies have a more pragmatic approach — almost 20% expect minimal integration of cloud resources from the start. These realistic expectations can help a firm avoid disappointment.

## ***The Incremental Versus Comprehensive Approach***

An appreciation that cloud resources need to be thoughtfully integrated into current IT environments is especially important for midsize firms. While cloud pioneers may have had ambitious plans to transform technology deployment by leveraging cloud capabilities, two basic factors, in addition to the need for compatibility with the current IT environment, have made evolution rather than revolution the typical deployment story:

- **Cost.** The available budgets for cloud implementations have forced highly targeted approaches initially.
- **Internal staff resources.** Independent of the expected cost and the potential leverage of existing technology, the staff question is important to consider in a decision to adopt cloud solutions. In addition to the current capabilities of an IT staff and its ability to facilitate a move to new cloud resources, the interest and support of users must be considered. Ideally the implementation of cloud solutions will not require much adjustment by most employees. The reality is that the implementation of any new solution that is designed to improve efficiency and effectiveness will be associated with new learning that can slow rather than advance productivity, at least initially. This short-term impact may be minimal and can be eased by encouraging knowledgeable peers, rather than IT staff, to help with the basic questions. But plan on an increase rather than a decrease in IT support needs when cloud solutions are first introduced.

The more practical and measured approach to cloud adoption makes sense from both technical and organizational perspectives. Leveraging existing IT resources, as well as implementing a strategy of incremental upgrades that will enhance applications in place, makes perfect sense. While early pioneers might have the greatest imagination and optimism about how new initiatives might develop, the next round of adopters appear to have a clearer understanding of what can be accomplished and what can't.

## **Defining Cloud Success: Which Measures Matter?**

The traditional consulting mantra, "If you can't measure it, you can't manage it," certainly applies to cloud investments. The key is to determine what to measure. The best metrics will reflect management's judgment of what is important. This is an essential first step that articulates the rationale for cloud initiatives.

- **The General Management Perspective: ROI Should Rule.** Classic return on investment, typically associated with cost savings or cost avoidance, is the traditional measure for any investment decision. If the payback offsets the cost of capital, then it's worth making the investment. The first step looks at the easy-to-measure potential savings of licensing costs and hardware upgrades that an on-premises option would involve. Ideally there are enough financial benefits to justify a cloud

solution; if not, then a look at less tangible investments might be in order. Shifting perspectives should help make clear whether a cloud investment is worthwhile. Once a commitment is made, results should be tracked over time to confirm that anticipated benefits are being realized.

- **The IT Perspective: Enhancing Organizational Agility and Flexibility Matters Most.** The financial aspects of cloud computing and SaaS are certainly compelling: paying just for what you need without having to own capabilities that may not be fully utilized. But cited almost as often by midsize firms are the cloud benefits associated with ease of management, consistent versions of software used throughout the organization, and the speed with which new users can be added and upgrades implemented. These benefits will appeal to IT managers, but they can also make a company much more agile, ensuring that everyone is relying on the same resources. On the surface, the cost savings of these benefits will be reflected in lower IT costs (like overtime), but improvements in efficiency can be difficult to quantify. Other measures like time to implement new procedures or the ability to coordinate different activities in more efficient ways can be useful to consider. The hard dollar estimates of such impact may be subjective, but that doesn't make the exercise any less valuable.

## Five Questions That Set the Stage for Cloud Deployment

Related to the measures used to examine the effectiveness of a cloud computing implementation are the critical questions associated with any IT initiative: What is the starting place that a company is building from? What is the destination that is being sought, and what are the most timely and affordable paths that will bring a company to that objective? Before examining the specific strengths and weaknesses of individual cloud offerings, midsize companies need to establish some basic guidelines that will facilitate the assessment process. Five basic questions can provide a framework to allow midsize companies to explore potential next steps in adding cloud computing capabilities to their IT environments.

1. **To What Extent Are IT Resources Used to Support Company Objectives?** This may seem like an easy question, but it requires careful consideration. At the heart of the issue is whether IT is an integral part of the strategic thinking of a company or whether it is viewed as a servant to help execute plans that were crafted independently. IDC has found that 40% of midsize firms agree strongly (6 or 7 on a 7-point agree/disagree scale) that advanced technology is an important competitive tool that is used as a strategic resource. For other firms, technology is certainly useful, but it is more often iced on after the fact rather than baked into planning from the start. Cloud computing can contribute to the role of technology as a competitive differentiator, with innovative technology available in a scalable way across an organization. Cloud solutions can also represent an attractive option for companies that view technology as a way to save money once

basic performance standards are met. Especially for firms that can benefit from off-the-shelf solutions implemented in a timely way, having additional resources available via the cloud can be a relatively easy way to enhance performance in a specific application area. The immediate benefit of cloud solutions will be of a tactical nature, providing cost and deployment economies. But in the longer term, the strategic implications of cloud capabilities will be even more valuable, setting the stage for innovative adoption of new technology that can enhance a company's competitive position.

- 2. How Physically Complicated Is the Company?** The number of company locations supported by your current IT infrastructure will be important to consider in any cloud computing implementation. Firms with a single site have a much easier time coordinating technology resources than those with multiple sites. On average, midsize firms have 10 locations, although IT staff is typically based at headquarters. This can complicate general maintenance and, more importantly, the installation of new software and upgrades, with the potential need to support multiple versions of the same key programs at any given moment. One important advantage of SaaS offerings is that all users run the latest version of hosted applications, simplifying the support of multiple locations. In essence, the more locations you have and the more diverse your IT environment, the more cloud solutions can do for you in coordinating and managing application deployment across the company.

The number of sites and their physical proximity can influence the decision to explore public cloud versus private cloud approaches. For larger firms with multiple sites, it can be appealing to use a private cloud for secure data transfer under the exclusive control of the company. A private cloud can also extend to partners or other third parties to provide potential competitive advantage, although public cloud alternatives may represent a lower-cost alternative.

- 3. What Is the Company's Pace of Organizational Evolution? How Much Change Is Under Way?** The natural pace of company growth is rarely uniform over time, especially when firms reach midsize. Major acquisitions, new product successes, and market transformations can accelerate the pace of organizational change significantly, resulting in new demands on IT infrastructure. The nature of merger and acquisition (M&A) activity can result in legacy technology and approaches that are still being used in some parts of the company but not others. Cloud solutions can provide access across the organization to a central set of rationalized offerings. While these are easier to manage than multiple legacy approaches, the real benefits will come from improvements in worker cooperation and collaboration. And don't overlook future M&A activities. Are there any acquisitions in the wind? The integration of IT resources is not among the top concerns in an acquisition until a deal is completed, when its impact can emerge in not very pleasant ways. For firms

undergoing major change, cloud engagements today can set the stage for improved organizational flexibility tomorrow.

4. **How Are Mobile Workers Supported, and Could They Benefit from Access to Cloud-Based Solutions?** Enhancing worker productivity is a key reason for expanding technology investment, and providing access to advanced networking capabilities via cloud-based solutions can help companies achieve the goal of anytime, anyplace resource access. From an ROI perspective, the mobile worker case for cloud computing can be intuitively compelling, if difficult to measure. To what extent would remote sales staff, or those actually visiting prospects, improve their closing rates if they had real-time access to inventory positions or competitive intelligence? Even a 5% improvement could translate into an effective financial argument for cloud computing investment depending on costs involved.
  
5. **What External Forces Are Encouraging/Discouraging Cloud Computing Adoption?** While the case for any technology investment should be based on internal needs and available resources, external considerations also need to be at least acknowledged and, in many cases, formally examined. The changing competitive environment as well as the regulatory environment can provide strong incentives or disincentives for the adoption of different cloud computing solutions. For some, the timely access to current information will override any other concerns. For others, though, the assurance of secure and tightly managed transactions will be paramount. Note that external forces will continue to be in a state of flux as cloud computing gains increasing traction. The kinds of concerns that once discouraged the use of credit cards for online purchases have all but disappeared. If external constituents are resisting cloud adoption, it will still be appropriate to revisit those attitudes regularly because the increasing visibility of cloud solutions has been influencing receptivity to new approaches, just as much as changing costs and application capabilities.

## Conclusions/Recommendations

Cloud computing can be a compelling and appealing way to acquire IT capabilities and reduce costs. Midsize businesses need to approach cloud deployments with their eyes open and be sensitive to a few key issues to ensure that the expected benefits are realized:

- **Integrating business priorities and IT priorities with cloud deployment strategy.** The company's or business unit's strategic goals and supporting IT strategies need to be clearly articulated and understood so that any cloud strategy can be built on a secure foundation. Cloud investments must be designed to support larger company objectives and advance long-term IT goals as well as deliver on near-term financial objectives.



- **Capitalizing on the flexibility and business agility associated with cloud computing for maximum impact.** The real benefit of cloud computing is its potentially transformative role in providing access to consistent resources across the organization. Sharpening decision making and streamlining processes are the hallmarks of an agile organization. The consistent deployment and regular updating associated with cloud-based resources will set the stage for continuing business success.
- **Leveraging existing IT investments and practices through cloud computing deployment.** Midsize firms typically have significant IT resources in place, and although cloud capabilities represent a new approach to technology provisioning, off-premises resources still rely on an existing technology infrastructure. The integration of cloud and noncloud resources as part of a long-term technology road map is a key goal of current cloud users, a view that potential users should keep in mind. Integration can take different forms, of course, and the most popular cloud applications tend to play supporting roles on the IT stage: sales force automation, remote storage, or hosted email. Over time, though, firms should anticipate and encourage the collaborative engagement of both remote and on-premises resources.

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