



Mark Schrutt, Director, Services and Enterprise Applications

The Transformation of IT and Infrastructure Based Cloud Services

Sponsored by Cogeco Data Services

November 2012

Cloud computing is one of the most anticipated and hyped technology in years. IDC expects 2013 to be the year when promise becomes reality and cloud delivery models such as infrastructure as a service (IaaS) begin playing a critical role in how Canadian enterprises manage IT. IDC analyst Mark Schrutt was asked about his thoughts on IaaS, how companies are using it, and best practices to maximize the value cloud offers.

Q. Where do Canadian companies stand with cloud and IaaS?

A. Cloud is the fastest-growing IT market in Canada. 60% of Canadian businesses believe cloud computing will be critical to their future success and according to the same IDC Cloud Survey, 50% see public IaaS cutting IT costs and making IT easier to manage. Simply put, cloud is software and IT infrastructure delivered as a service over the Internet or private connections (e.g., MPLS). There are three main categories of cloud:

- **Platform as a service (PaaS).** An application development and deployment platform that usually includes middleware and database and development tools.
- **Software as a service (SaaS).** Applications such as email and development tools available on-demand through a Web browser over the Internet.
- **Infrastructure as a service (IaaS).** IaaS provides clients with "as needed" or "elastic" access to third-party servers, security management, and storage resources. As with the overall cloud, IaaS has three basic models:
 - **Private.** Private IaaS is restricted (dedicated) to a single client. Private cloud environments can be hosted at either the vendor's or client's own datacentre.
 - **Public.** Shared, multitenant platform for a diverse set of clients. There are levels or degrees of what is shared and a range of self-serve features in public IaaS. This has given rise to "managed" public clouds with enhanced security and management.
 - **Hybrid.** Combines private IaaS with the ability to seamlessly "burst" to access public cloud as additional resources are need.

Cloud isn't anything really new or unproven. IaaS is built on technologies such as state-of-the-art datacentres, virtualization, load balancing, and advanced communication networks. These same technologies have helped usher in storage and server hosting services, which has created a strong and growing managed services market here in Canada. But cloud is unique. Until recently, these technologies and services would have been customized for the advantage of just that handful of companies that could afford it. IaaS not just lowers, but also eliminates, barriers to entry for enterprise-class IT services. The ability to rapidly and easily scale and pay for only what you use is a game changer in today's technology world and is already driving tremendous value for Canadian companies.

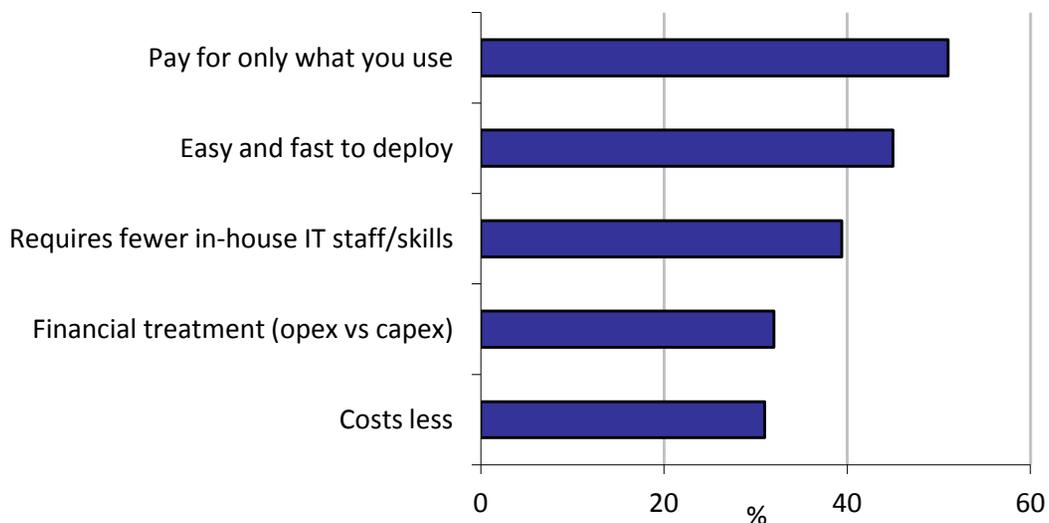
Q. What are the typical use cases for IaaS, benefits, and adoption challenges?

A. IaaS fits squarely into the managed infrastructure services spectrum. For many Canadian companies, IaaS will augment, and not supplant, traditional IT delivery and will complement and coexist with solutions such as colocation, dedicated hosting, and end-to-end outsourcing.

Already, IDC is seeing wholesalers and retailers benefiting from the flexibility of IaaS to add and remove capacity to meet seasonal demands. Some of Canada's largest banks, which spend a massive amount of dollars developing applications, are using IaaS as a cost-effective platform for development and test. Cloud has also revolutionized certain markets. One of these is backup and recovery. Public and private IaaS can be used to provide cost-effective backup and recovery and standby resources so that servers can be restarted immediately in the case of disasters or failures. The market for IaaS is expanding. As it becomes a mainstream component of companies' IT strategies, the value of IaaS is becoming evident. Based on recent IDC Canadian research, the key advantages of IaaS as seen by Canadian IT leaders are that cloud is on-demand, quick to deploy, and that they pay only for what they use.

FIGURE 1

Benefits of Infrastructure as a Service (IaaS)



Source: IDC Canada's Business and IT Advisory Panel, 2012

Risk management is an integral part of managing IT. Cloud computing reduces many of the operational risks of traditional IT, particularly the upfront technical project activities of designing, sizing, procuring, and deploying applications and infrastructure. While cloud computing reduces many of the traditional IT project risks, it accentuates others. It is not surprising that IT decision makers identify security and privacy as the top challenges. Telecom-based managed service providers integrate their cloud offerings with dedicated connections and data encryption protocols, which enable them to provide equal if not greater security measures than those that are in place in many Canadian organizations today. Privacy is also a key concern. Most public IaaS offerings today are delivered from the U.S., and are subject to the Patriot Act. 60% of Canadian decision makers see this as a major deterrent to public IaaS. In-Canada cloud offerings address this issue. Private IaaS or dedicated public IaaS will further lessen privacy concerns.

Q. Who can I get IaaS from?

- A. Today there are hundreds of vendors offering cloud services such as SaaS and PaaS in the Canadian market. The scope of vendors is far smaller in the infrastructure-based cloud market. Massive investments in technologies, facilities, and operational personnel are the table-stakes in the IaaS space. There are only a handful of vendors with the means to offer in-Canada IaaS services.

For many Canadian SMB and midmarket companies, telecom-based managed service providers are the best option. Telecoms offer the full scope of infrastructure services, from hosting to networking to managed application services. A key differentiator for telecom-based providers is their ability to offer network and Internet components embedded in their cloud services, which results in seamless, high-availability IaaS services. Telecoms also have the widest datacentre footprint, sales coverage, and marketing muscle to drive interest and adoption in cloud. IDC believes that in the long term, the telecom-based cloud providers will capture the majority of the IaaS spend in the SMB and midmarket segments, and carve out a significant niche within the enterprise market.

Outsourcers and specialty hosting firms will also be competing in the IaaS market. Outsourcing vendors offer a full range of cloud technologies with a particular focus on hybrid cloud environments. Outsourcing vendors' cloud services are geared for the midmarket and enterprise-sized organizations. Specialty hosting firms are another option. Hosting firms are mostly focused on infrastructure services and the target market for specialty hosters is SMBs to the midmarket.

Q. Where do I go from here?

- A. IT holds the promise of driving efficiencies, creating better goods and services, and enabling businesses to make better decisions. Historically, IT has had mixed results within Corporate Canada. On its own, cloud computing will not fix things. Cloud, though, gives organizations the tools to reach these goals. Cloud is already helping Canadian organizations mobilize ecommerce sites within hours, analyze market data overnight, and develop applications in weeks at a fraction of what traditional IT costs.

Cloud is also a great competitive equalizer. It enables SMB and midmarket firms access to high-performance technologies that historically have been out of reach except for just the largest of the FP500 companies. And while most Canadian companies have started using

cloud computing, there continues to be plenty of ground still to cover. To leverage the benefits and extract the potential value of cloud, CIOs need to plan, scale quickly, and manage cloud as a key component of their IT delivery.

- **Plan.** Planning starts with the needs of the business, how IT can support its goals, and what options are available to do it better and more cost effectively. Cloud changes how IT gets done, sometimes supplementing and in other situations replacing how services are delivered. Companies need to reassess their IT strategy and determine if and when traditional technologies and tasks such as test/dev and backup and recovery can be moved to the cloud. This new IT strategy cannot sit on the shelf. Planning needs to be a continuous process that realigns the business and IT and addresses the rebalancing between internally and externally provided service, hosting, public, private, and hybrid IaaS.
- **Scale quickly.** In today's uncertain economy, leading CIOs are driving towards a sustainable, low-cost framework that provides their companies with the ability to expand and shift strategies as their business dictates. Infrastructure-based cloud technologies are enabling top Canadian companies to take advantage of the current climate. There is too much at stake. Canadian companies need to move quickly to take cloud off the drawing board and into production.
- **Manage it.** IT needs to take a lead role not only in evaluating and selecting cloud providers but also ensuring the services are implemented seamlessly and managed properly. Cloud providers need to be integrated into the ongoing IT management and governance framework. The IT management framework needs to address measuring the quality and effectiveness of the services and how additional services are added, reduced, and removed. Furthermore, cloud needs to be managed as part of the full IT portfolio and continuously monitored and adjusted to ensure that it enables rather than inhibits a company's success.

ABOUT THIS ANALYST

Mark Schrutt manages the IT Services and Enterprise Applications team for IDC Canada. These programs include Canadian IT Competitive Dynamics, Application Services, Cloud and Enterprise Applications, and Strategic Sourcing. As the lead for Strategic Sourcing, he provides research insights and thought leadership on the key issues and trends affecting the outsourcing markets. Primary focus areas include outsourcing contract analysis, governance issues, vendor positioning and competitive stance, and industry-specific process issues in infrastructure outsourcing.

Schrutt authors IDC Canada's outsourcing research reports, participates in various industry conferences and events, and works with IDC's clients in the creation of business plans and market strategies. He also plays a management role in IDC's IT service benchmark practice and works with vendors and IT users to measure efficiencies and cost-effectiveness of service delivery. He has extensive experience in the outsourcing industry. Prior to joining IDC Canada, he held unit director positions at Bell Canada Enterprises, including managing the life insurance practice at CGI Group and strategic planning at BCE Emergis. He was also employed by EDS Canada, where as director of the Communications Industry Group he managed EDS' business development efforts in the telecommunications marketplace.

Schrutt holds a bachelor of science in management from the State University of New York at Buffalo and a masters in information studies from the University of Toronto. He is a member of the ACM, SLA, ARMA, and IAOP, and is a research board member of the Centre of Outsourcing Research and Education Research Committee.

A B O U T T H I S P U B L I C A T I O N

This publication was produced by IDC Go-to-Market Services. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis independently conducted and published by IDC, unless specific vendor sponsorship is noted. IDC Go-to-Market Services makes IDC content available in a wide range of formats for distribution by various companies. A license to distribute IDC content does not imply endorsement of or opinion about the licensee.

C O P Y R I G H T A N D R E S T R I C T I O N S

Any IDC information or reference to IDC that is to be used in advertising, press releases, or promotional materials requires prior written approval from IDC. For permission requests contact the GMS information line at 508-988-7610 or gms@idc.com. Translation and/or localization of this document requires an additional license from IDC. For more information on IDC visit www.idc.com. For more information on IDC GMS visit www.idc.com/gms.

Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 www.idc.com