

# CLOUD COMPUTING IN CLOSE-UP

The ability to move IT infrastructure, applications and storage onto the Internet has sparked curiosity, enthusiasm, scepticism and sometimes panic from Canadian chief information officers. We walk through the adoption process from beginning to end, looking at the skills and strategies you need to be successful. A special report

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# Create a cloud-ready team

New computing models will have a huge impact on operations, but also on the labour market. The outlook from ICTC

BY SHELDON POLOWIN

■ Cloud computing is likely to have a significant impact on the ICT labour force. It will create new human resource requirements and compel many workers to acquire new skills.

Cloud computing requires an understanding of traditional core technologies as well as comprehensive knowledge spanning different technology platforms. As a result, many IT workers will likely have to broaden their knowledge across multiple domains.

“The industry is changing quickly,” says Paul Swinwood, president of the Information and Communications Technology Council (ICTC). “Tomorrow’s IT worker will fully straddle conventional IT silos such as storage, networking, virtualization and security.”

As with outsourcing and automation, widespread adoption of cloud computing is expected to shift some IT workers from the technical to the business side of operations. Demand will increase in areas such as vendor contract management, cloud integration, analytics, Internet workforce and mobile applications—with the strongest

growth likely occurring in storage functions such as archiving and data backup. New jobs in web-scale development and virtualization will very likely emerge.

Although some IT workers will be displaced by cloud computing, those who broaden their skills in business and new cloud technologies will continue to be in demand. What is also clear is that the transition to cloud computing will affect enterprise IT staff and service provider organizations differently.

## Impact on Service Providers

While the unique attributes and requirements of cloud computing will transform the occupational structure of the IT workforce, many current high-value skills will be transferable to the cloud.

IT data centre managers, for example, may evolve into “cloud solution advisors.” Professionals currently focused on assembling and managing application services may become “cloud application managers.” And some practitioners may become “cloud deployment professionals”—designing, deploying and maintaining the technology and software needed to administer the cloud. Testing and software development will occur increasingly within the cloud.

Traditional data centre workers will have to learn to design and populate service catalogues

and templates and create business and technical workflows to automate processes. This automation could lead to net job losses in areas such as installation, configuration, administration and maintenance. It will also, however, create demand for professionals trained in automation and standardized processes.

## Impact on Enterprise IT Staff

Companies that migrate services and data to the cloud will typically require fewer in-house IT workers to install technology and applications or link hardware and software. There will also likely be fewer jobs for server and database administrators, as well as network experts.

That said, the need for technical skills will remain. As valuable data and applications are stored and run from the cloud, remote monitoring skillsets will be highly prized. And with the growing importance of “software as a service” integration, in-house software developers will have the opportunity to evolve their skills.

“For many enterprises, moving applications and data offsite won’t eliminate the need for skilled IT workers,” says ICTC vice-president Norm McDevitt. “Some companies are training their IT professionals on cloud-based applications—such as Microsoft’s Windows Azure platform—to ensure ongoing competitiveness in the new market.”

## Revolution or Opportunity?

Large companies need to assess the benefits and costs of cloud computing relative to the investments they have already made in IT infrastructure. For the small- to mid-sized businesses that account for 99.8 percent of businesses in Canada and 60 percent of employment, it’s the way of the future. IDC Canada expects that domestic cloud computing expenditures will jump from one percent of IT spending today to 33 percent by 2014, with sales quadrupling to US\$758 million.

As the cloud becomes adopted by more and more organizations, roles will shift and skills requirements will evolve. “Cloud computing represents a real revolution,” says Paul Swinwood. “But with the right preparation

and training, IT workers can take advantage of it and make themselves indispensable to the ICT industry of the future.”

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