Uniserve delivers cloud computing services throughout Canada with Dell Data Center Solutions

- **Cloud computing**
- **Green efficiency**

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>
> *Mike Schmidt, President and CEO, Uniserve*

Customer profile

Company:	Uniserve®
Industry:	Communications Service Provider
Country:	Canada
Employees:	50+
Website:	www.uniservecloud.com

Business need

Uniserve needed a fully supported, proven, scalable cloud solution for its customers that could be deployed quickly and managed easily.

Solution

The company selected a Dell™/Joyent® cloud solution for its public cloud service offering. The Dell Cloud Solution for Web Applications combines Joyent Cloud Control software with Dell PowerEdge™ C servers, and Dell services and support.

Benefits

- **Bring a cloud services offering to market quickly**
- **Offer a proven, reliable cloud with community-supported applications and developer tools**
- **Offer true cloud scalability to accommodate on-demand customer needs, and future growth**
- **Ability to offer new products to current customers, while making inroads into new markets and vertical business segments**

As one of Canada's first Internet service providers, Uniserve is used to driving technology forward. The company, founded in 1988 as a computer retail store and dialup bulletin board system, has grown into an industry leader in the integration and delivery of voice and data services over multiple IP networks, including cable, ADSL, BPL and wireless broadband.

Using its proprietary software, Uniserve delivers digital voice and data services directly, or through wholesale partnerships, to 50,000 residential subscribers and more than 3,000 commercial customers throughout Canada.

Today, Uniserve continues to deliver new technology forward as it ramps up to deliver cloud computing services. The company now offers its business customers secure cloud computing hosting based on the Dell Cloud Solution for Web Applications. The Uniserve Cloud offering is a true on-demand Internet infrastructure that is hosted within the Canadian boarders—an important point for companies concerned about compliance with Canada's data privacy laws."

The Path to the Cloud

Uniserve's path to the cloud was a natural part of the company's ongoing evolution from Internet service provider (ISP) to application service provider (ASP). In addition to seeking Internet services, the company's commercial customers were increasingly looking to Uniserve to host business applications, such as Microsoft SharePoint, Microsoft Exchange, and BlackBerry.

In response to this growing demand, Uniserve began looking for additional data center space. That proved to be hard to come by due to power constraints. Many existing data centers had available space but could not accommodate Uniserve's power requirements. This

reality contributed to the company's decision to build a data center to accommodate the growing demand for hosted services.

In the same cycle, Uniserve began investigating cloud computing solutions, a process that continued for the better part of a year. The company has a lot of in-house expertise, including seasoned Linux® and UNIX® professionals, so it could have built its own cloud environment, notes Mike Schmidt, Uniserve's president and CEO. Instead, the company decided to look for a proven cloud solution that would give customers confidence and allow Uniserve staff to worry less about technology and spend more time building customer relationships.

"We were looking for a solution that would enable the cloud quickly, reliably and with some credibility,"

Technology at work

Services
Dell ProConsult
Dell ProSupport for IT

Hardware
Dell™ PowerEdge™ C1100 server
Dell PowerEdge C2100 server
Dell PowerConnect™ 6200 series switches

Software
Joyent Smart Technology software

Schmidt says. "A lot of companies are developing cloud strategies right now. But my sense is they're holding back because they are worried about things like scalability, security, and reliability. We wanted to make sure that when we put a solution forward, it would cover all those things, so people would have confidence in it."

With these goals in mind, Uniserve began talking to public cloud service provider Joyent about a cloud computing solution.

The Dell Cloud Solution for Web Applications

Joyent, a Dell business partner, provides cloud services to some of the fastest growing businesses on the Web, including those in the social gaming, digital agency, publishing, eCommerce, and iOS (Apple's mobile operating system) industries. Joyent runs a major public cloud, builds technologies that power that infrastructure, and uses those technologies to enable multiple third-party public, private, and hybrid clouds.

Joyent's field-proven software is used in the Dell Cloud Solution for Web Applications. This turnkey solution, based on Dell PowerEdge C servers, brings together pre-tested, pre-assembled, and fully supported hardware, software, and services. This turnkey approach allows organizations to easily and quickly deploy and manage elastic, on-demand cloud infrastructures.

The Dell Cloud Solution for Web Applications is well suited for

Telcos, IT service providers, and IT hosters who want to deploy public clouds to deliver Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS), and compute as a service. It's also a good solution for organizations that want to deploy private clouds to support Web 2.0 offerings. It is designed to address key issues around Web application development and deployment, including unpredictable traffic, the fear of under-provisioning, and migration from development to production.

For Uniserve, the Dell Cloud Solution for Web Applications had all the right components. It was a turnkey offering that could allow the company to bring cloud services to market quickly. It was a modular, scalable solution that could grow with customer demand. And it included built-in reliability and security features proven in real-world deployments.

"This cloud solution gives us credibility," Schmidt says. "It's established, it's proven, it's reliable, it's scalable. It has everything our customers need to deliver Web applications. So we can confidently go to a customer and say, 'This is the best solution. This will handle all your needs."

Security From the Kernel Out

For organizations moving applications to cloud environments, security is a top-level concern. It's also a top-level concern for Joyent, which has provided cloud-style infrastructure as a service

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since 2004. The company builds wide-ranging security features into its branded Smart Technologies, including its SmartMachine technology stack for cloud computing. In addition, Joyent Smart Technologies are built from the ground up to provide application and company-level isolation.

"We've been operating cloud for the last six years," says Jason Hoffman, Ph.d., Joyent founder and chief scientist. "We provide VLANs, which segment different customers from each other. We provide a level of load balancing, which segments the traffic, so it's better managed."

Joyent's cloud software also carefully protects the cloud operating system, Hoffman notes. End-user customers get full access to their virtual servers, but they don't get access beyond that into the kernel of the operating system. That prevents one user from creating problems for other systems, or other users within the cloud.

"The kernel level within our SmartMachine OS is protected," Hoffman says. "It's run by the operator—Uniserve, with support as needed from Dell and Joyent. It's completely isolated from any end-users. So through standard-space VLANing and security practices, and security at the kernel level of software, we set up essentially isolated instances for customers to operate in."

A Route to New Markets

As Uniserve looks ahead to the rollout of new cloud offerings, Uniserve sees a wide range of market opportunities—from online gaming services, mobile applications and e-commerce sites to application builders and content providers looking for a distribution strategy.

The Uniserve Cloud, powered by the Dell Cloud Solution for Web Applications, includes a rich set of online gaming, social media, and Web tools for businesses that offer online services. It gives companies on-demand access to a high performance Internet application and consumer delivery platform.

"Web startups are looking for development space," Schmidt says. "We're hearing from many iPhone and Blackberry app builders in our market. We have e-commerce storefronts. We work with a couple of SaaS billing companies who want to host their Infrastructure in our data center.

We have customers moving from small startup to commercial deployments. They need this infrastructure as they scale because they can't do it in their back rooms. Traditionally, we would just be racking their servers within our co-location space, but now they can also gain access to high performance servers, storage and network services."

In addition to new market opportunities, Uniserve now has a whole new set of infrastructure services that it can offer to its existing customer base, including the ability to deliver Internet-based TV content via the Uniserve Cloud and access to the company's national Gigabit Ethernet network.

Working with Joyent and Dell

Both Dell and Joyent were easy to work with, according to Schmidt. The two companies give service providers a lot of flexibility in configuring and financing cloud solutions, he says. And they understand the cloud business.

"When we went to Joyent, they said, 'Yes, we can help with that. And, yes, we agree—we think there is demand there. Let us help you become the public cloud.'"

Dell, in turn, is a leader in its industry and a well recognized name, Schmidt notes. Those characteristics are important to Uniserve's cloud customers, who want the assurance of a proven cloud solution from trusted providers. And Dell offered flexible financing services—which is always important to service providers.

But most importantly, the two companies weren't offering just hardware and software, Schmidt says. Instead, they offered a turnkey cloud solution with essential security and scalability features.

"They're providing an elegant solution. It just works. We're not cobbling together a solution. That's the advantage of working with these partners."

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