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FOCUS ON: TECHNOLOGY

Local companies wade into cloud computing

Washington Business Journal - by [Darlene Darcy](#) Staff Reporter

Last fall, the state of Oregon realized it needed to quickly develop a system to help deliver H1N1 vaccinations to residents.

Herndon-based  **Lore Systems Inc.** received the call.

The state tasked Lore with developing a Web site where residents could find information, a help desk call center and back-end systems to run those operations.

Thanks to cloud computing, Lore had the entire project running within its data center in 24 hours. The state was not equipped to procure additional physical servers and other infrastructure needed to handle the tens of thousands of residents seeking vaccine information, according to Mike Velotta, Lore's founder and chief technology officer.

The whole system is now managed by two of Lore's engineers.

Cloud computing is among the hottest emerging technology trends, and as businesses, consumers and the government begin to adopt cloud technology, several local tech companies are betting "the cloud" will be their next rainmaker.

"It's a really big deal," said Mel Landin, CEO of Reston-based  **Logicstudio Corp.** "Everybody's trying to get in on this business."

Cloud computing refers to the delivery or use of software, application platforms and hardware via the Internet. The technology behind the cloud — virtualization — is what really gives cloud computing its wow factor.

Virtualization software has been around for quite some time. However, advances in computing power, improvements to network capacity and software have made cloud computing more attractive.

When there were just a bunch of servers with individual operating systems sitting in a room, that was called a data center, but because of the ability to create virtual servers, some data centers are called clouds, Landin said.

Cloud computing advocates say the technology can save businesses money because it requires less hardware and infrastructure and uses less energy and fewer employees in information technology management.

“From a tech perspective what excites people about the cloud environment is to be able to scale computing power on demand,” said Velotta.

Lore, which specializes in networking, security and managed hosting services, operates its own data center facilities in Ashburn, San Jose, Calif., and Belgium to serve more than 300 federal, state and commercial customers.

“You have a lot of flexibility in this equation,” Landin said. “You are actually able to tailor [computing power], memory and storage” in the cloud.

Pay as you go

Before cloud computing, businesses had to invest in enough computer infrastructure to support every employee sitting at a computer regardless of the amount of computing power the person used. With cloud computing, businesses don't have to pay for as much expensive hardware and other infrastructure. They only pay for what they use, when they use it. That's because computing power, data storage and memory from hardware and software applications are hosted in the cloud, managed by a third party and accessed via the Internet.

The cloud also provides cost-saving benefits when it comes to backup and disaster recovery because the virtualization technology used to create clouds can duplicate data on existing physical servers. That allows businesses to continue accessing data on virtual servers even when a physical server is offline. Cloud computing is also considered environmentally friendly because it requires less infrastructure, which means less energy is used to operate and cool data centers.

While the cloud has lots of upside, the technology isn't without challenges. Many companies are concerned about security; whether they should operate their own private cloud or have their data aggregated on servers provided by other companies. They also have questions about the cloud's level of performance and availability and whether it could lead to laying off any IT staff.

Security is currently one of the biggest obstacles to rapid, widespread adoption of cloud computing, especially among government customers, said John George, senior vice president and chief information officer of Arlington-based IT management contractor **Vangent Inc.** He said Vangent runs about 60 percent of its data on a combination of cloud infrastructure and traditional hardware in its data centers, saving the company about 40 percent of what one unit of computing power typically costs.

IT service providers and tech industry organizations have begun to address security issues in two ways: creating standards for cloud computing environments for government and commercial users and building higher levels of security into clouds.

While tech companies might not have all the answers, many local businesses are becoming early adopters, thanks to the growing buzz around cloud and heightened awareness of Web tools offered by tech giants such as **Google Inc.** with its apps