

Cloud Gazing

Shedding light on how businesses can leverage the cloud

By HEATHER LARSON

If your eyes glaze over when hearing technical jargon, you're not alone. But the information in this article will help make sense of cloud computing and its payoffs.


The term *cloud computing*, which has never been sharply defined in the first place, is all the more difficult to understand because it is intangible: unlike a physical on-site server, you can't see or touch 'the cloud.' But the cloud is where technology is taking us, and produce companies should be aware of its many advantages and a few limitations.

Although *Blueprints* has reported on cloud computing before, change seems to be constant in terms of service capabilities and availability. If you generate, evaluate, share, or store information, this content is relevant to your business.

So to help keep produce buyers and sellers on the cutting edge, we're talking to cloud solution providers and users to discuss what's happening in the world of offsite data storage.

A BIT OF BACKGROUND





The idea of cloud computing debuted in the 1950s when large-scale mainframe computers could be accessed from multiple terminals, called 'hosting' at the time.


 In the last decade, the cloud has thrived, developed, and proven valuable for both businesses and individuals in equal measure. Users seeking space, speed, and safety have increasingly turned to the cloud.

Service providers have also proliferated, available from coast to coast to meet the needs of personal and professional users. Some are now universally known, like Dropbox, to store files in the cloud and access them from computers, notebooks, or a myriad of electronic devices.

Key Elements

The pros and cons of moving to the cloud:

-  it's fast, secure, and there's ample space
-  it can provide a more stable power supply
-  legacy solutions might not be a fit
-  there are both short- and long-term costs and benefits.

To learn more about each key element, look for the  symbols throughout the article.

"Even though our costs haven't gone down, our benefits have gone up."

Of course, today's cloud—like the actual vaporous shapes in the sky—will continue to change and evolve in real time. In five years, what we consider the norm may be completely different.

BENEFITS & ADVANTAGES

There are many benefits to cloud services, but one of the better selling points for moving from an in-house server to the cloud is customization.

Flexibility & stability

“Cloud computing provides users with the ability to utilize computing resources that are flexible and easily configurable, without owning or managing the hardware platform directly,” explains Jeff Schaefer, general systems development manager for Produce Pro, Inc., located near Chicago, IL.

“Instead,” he continues, “a third party purchases and builds the computing resources the user subscribes to, and the user only uses the resources needed.”

In simple terms, Schaefer reiterates that cloud-based services allow companies to spend more time on their operations and less time managing computer hardware and accessories.

And for businesses in growth mode, the cloud gives management the ability to react more quickly to expansion needs for more services or storage capacity at a much faster rate.

☞ In addition, the cloud can provide a much more stable power supply, which means an internet connection with far fewer interruptions. This is always welcome news to users—especially those dealing in perishable goods—as cloud services are not hardwired into

buildings and subject to weather incidents, structural damage, or other issues related to building maintenance or unexpected events.

Simplicity

The prospect of securing these types of advantages and more convinced grower-shipper Interfresh, Inc., headquartered in Orange, CA, to make the transition to cloud computing ten years ago.

“We had PCs at everyone's desk that required constant updating, we had to make big capital outlays (for equipment) every three years, and we made tape backups and took them to the bank every day,” recalls Interfresh president, Chris Puentes.

By contrast, today's operations are no longer dominated by hardware or

Demystifying Technojargon: A Glossary of Terms

Bandwidth

A measure of the amount of data that can travel over a connection in a specified amount of time. If a cable-to-modem internet connection provides 25 megabits per second (Mbps) of (high) bandwidth, it can download much faster than with a low-bandwidth connection. For example, with 7.85 Mbps of bandwidth, it will take two hours to download a 7-gigabyte (GB) file.

Enterprise resource planning (ERP)

A method of integrating multiple business functions such as planning, purchasing, inventory, sales, marketing, human resources, accounting, and more into one platform. In technology, ERP usually refers to the specific software used for the above functions.

Hybrid cloud

A combination of onsite IT infrastructure and offsite cloud services designed to improve and extend existing resources; often an initial step toward complete cloud computing.

Megabits (Mbps)

A unit that measures the speed of data transfers on high bandwidth connections: up refers to the upload speed; down, the download speed.

Megabytes (MB)

A unit of measure like megabits, only greater: 1 megabyte is equal to 8 megabits. Megabytes are typically used for calculating storage and size, while megabits are more often associated with the speed of a connection.

Software as a Service (SaaS)

A model whereby software is in the cloud and the user pays a subscription fee to use it. The software is usually accessed through a web browser by typing in a user name and password.

Virtual Private Network (VPN)

Experts liken VPNs to tunnels running through the internet; a VPN uses encryption and other security methods to scramble data, thus shielding internet traffic from others and preventing cyberattacks.

For those still unsure about transitioning to the cloud, there's a way to test the waters before jumping in with both feet.

hard-copy backups. “Cloud computing gave us everything we had hoped for,” Puentes says.

Evolving

While ridding crowded offices of bulky equipment is a major draw, the flexibility offered by cloud computing is the more powerful incentive. Not only can companies easily increase or decrease services and capacity, but such changes require little or no downtime.

Irvine, CA-based Zumasy, Inc. offers business solutions, including cloud services, to more than 150 agriculture-related customers.

President Paul Giobbi confirms that relocating data and applications from hardware to the cloud is much easier than it used to be. “Creating or bridging a customer’s network using a virtual private network (VPN),” he explains, is not a difficult undertaking. “You can do it today with zero downtime.”

MOVING FORWARD AND UP

Although there may be legitimate reasons for keeping a local server on your premises, moving to the cloud is still a compelling option—and it doesn’t have to be an all or nothing scenario.

Assessing current needs

But first things first: it is necessary to assess your current technology. To successfully move to the cloud, a certain amount of bandwidth is required for optimal performance, cautions Giobbi.

“The bandwidth required is a function of the number of enterprise resource planning (ERP) users and the design of the ERP itself,” explains Tim Smith, president of Spokane Software Systems, Inc. in Spokane, WA.

“Even with a small organization, say three to five users, an internet connection with 25 megabits per second down and 3 megabits up would be the minimum we’d like to see,” Smith says. (For a glossary of

terms, including megabit loading speed, see the sidebar on the previous page).

Software requirements

Another important consideration is legacy software applications that may not be conducive for a cloud-based hosted environment.

These legacy applications often support special business functions like accounting or inventory management, but have not been upgraded in years. Various custom-built applications for unique business needs may not be optimized for cloud-based access either.

One step at a time

This is when having the right partner is crucial and requires due diligence to find a service provider that not only

understands your industry but the unique needs of your business.

Breaking the migration from onsite server to the cloud into well-planned steps or phases will help ensure the move is smooth and done properly. Each stage depends on the one before it, which is why it’s important to have a good implementation strategy.

Smith also suggests installing wireless service to the organization, a firewall to provide antivirus, and instituting content filtering (limiting access to management approved sites). Of course, part of the process is getting everyone up to speed on the new service and protocols. This includes reviewing and updating security procedures with all staff, from simple safety measures (like strong passwords) to scheduled backup or maintenance.



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A SMALLER LEAP

For those still unsure about transitioning to the cloud, there's a way to test the waters before jumping in with both feet. Using a 'hybrid cloud' might be a good way to ease into cloud technology. According to Zumasy's Giobbi, this is the fastest-growing area of cloud computing.

How does it work? You move some applications to the cloud and leave others tethered to the onsite server. This could mean moving all email to the cloud but leaving core applications, customized software, or legacy applications on the company server.

"Hybrid cloud architecture integrates on-premises resources with cloud resources," explains Smith. "For most organizations with on-premises technology investments, operating in a hybrid cloud architecture is a necessary part of cloud adoption."

Smith says you'll still need the same internet connection speed as you did for a full cloud migration, as well as the onsite server or processor, and a certain number of PCs, tablets, printers, etc. He also notes the cost of entry for a hybrid cloud

is higher than for a complete conversion to the cloud or Software as a Service (SaaS) solution.

FIGURING COSTS

The actual cost for transitioning to the cloud differs, depending on who you ask. Giobbi estimates the cost of using the cloud instead of onsite applications and a server at half—citing the approximate cost of upgrading a server every three years, training engineers, and physically backing up files—he believes this is double the cost of using the cloud for the same period of time.

"Eighty percent of spending on IT just keeps it running," contends Giobbi. "When you migrate to the cloud, your IT people can focus on other things."

According to Spokane Software's Smith, cloud-based software generally has a lower entry price, as there's no expensive server to purchase. Bringing a new client into the cloud requires less onsite time or possibly none at all, he says.

Not purchasing an expensive server lowers a company's capital expenses, and potential total cash outlay. However, cloud-based software and data storage is

typically accounted as an operating expense, so a shift from capital to operating expenses may need to be factored into the budgeting process.

Guesstimating expenses

To come up with an educated guess, list your direct costs such as fees related to physical servers, software licenses, maintenance contracts, warranties, necessary supplies, spare parts, etc. Then add up the cost of operations, including labor for maintaining servers, databases, and other technology, and even consider the physical space occupied by IT equipment—could this square footage be repurposed? And don't forget the cost of IT consultants if used on a regular or annual basis.

Puentes admits the cost for Interfresh to transition to the cloud was more than the company's traditional way of doing business with onsite equipment, but new services and capabilities have since been added. "We've been able to add on pieces that before were prohibitively expensive," he says. "Even though our costs haven't gone down, our benefits have gone up."

BOTTOM LINE

It's worth the time to explore the possibilities of the cloud. Compare costs, seek guidance, and find a service provider with solutions well suited to your business.

Or as Puentes urges, "Fit it into your budget and make the move." **BP**

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Heather Larson, a writer in Tacoma, WA, frequently delves into business issues affecting food-related companies.

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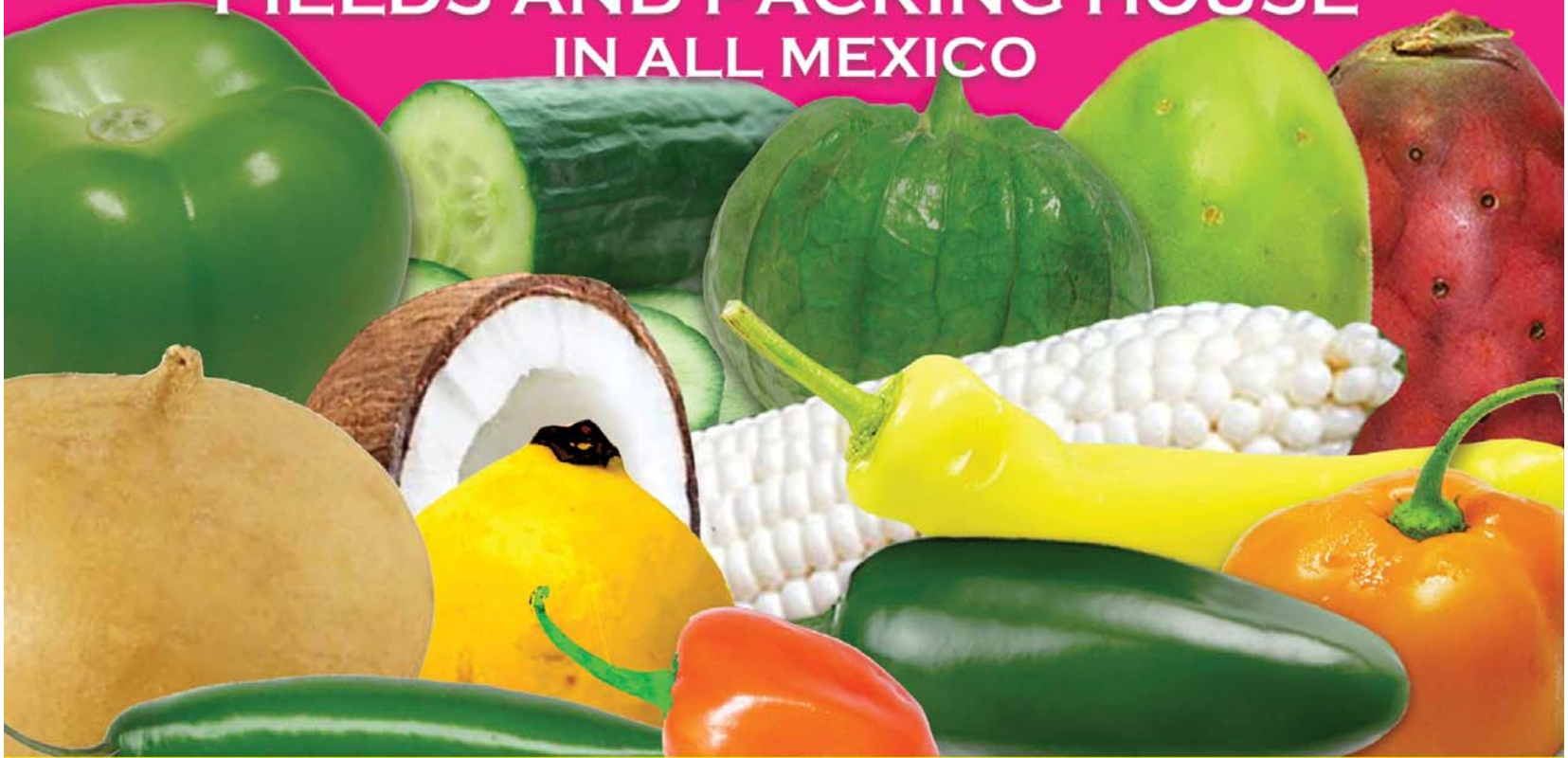
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