

Computing in the Clouds

A Primer for Homecare and Hospice Agency Executives



Introduction

Simple, secure and always available. These words describe cloud computing, a business model of delivering data and other information services – including software applications – using the Internet. Many global organizations use the cloud computing platform as a cost-effective, easy way to deliver services to their employees and customers. Examples of consumer-oriented cloud computing include online banking and airline reservation services.

The flexibility, economic practicality and accessibility of “The Cloud,” as well as its potential for collaboration among a diverse and fragmented healthcare system, makes it well-suited to the industry. In fact, several companies now offer healthcare IT software as a subscription-based service via cloud computing platforms. Homecare and hospice agencies can leverage the benefits of the cloud but they should be well-informed to all the considerations, including reliability and security.

What is “The Cloud?”

The phrase “cloud computing” originated from the cloud symbol typically used in flow charts and diagrams to symbolize the Internet. The principle behind the cloud is that any device connected to the Internet, such as a laptop computer, netbook or smart phone, is connected to a vast pool of computing power, applications and files — essentially supersized data centers containing tens of thousands of servers.

Cloud computing applications are delivered via the Internet to any standard web browser. The cloud contains a common application code and infrastructure, otherwise known as “tenants.” Applications are delivered to users by way of subscription or “pay for use,” based on the business service, hence the term software as a service (SaaS).

The cloud is a business model for delivering services, not a new technology. It brings together the existing and time-tested technologies of the Internet, co-tenancy and fee-based subscription services.

Cloud computing enables homecare agencies, hospice agencies and other organizations to bypass the expense and time of buying, installing, operating, maintaining and upgrading the networks and computers found in data centers. And, instead of licensing and installing software, users tap into these applications (housed on their vendor’s servers) when and where they’re needed.¹

¹ Six Questions Every Health Industry Executive Should Ask About Cloud Computing. White paper. http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_Cloud_Healthcare_PoV.pdf. Accessed online May 12, 2011.

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Some have compared cloud computing to a public utility. Just as standardized utilities free people from the burden of generating their own electricity or digging for water, cloud computing frees businesses and consumers from the burden of creating and maintaining their own on-site computing resources. Instead, the cloud enables users to access a vast network of resources, and sharing those resources reduces the cost to the individual users. Cloud computing enables healthcare IT vendors and other corporations to standardize, optimize and automate their offerings, thus providing economies of scale.

What kind of clouds are out there?

There are three types of clouds: Public, private and hybrid, which simply is a mix of the two. Public clouds make use of the Internet and shared computing resources to deliver services. An example is Amazon.com, which rents out application space to a wide array of retailers and other application vendors. Providing services in the public cloud carries with it a certain amount of security risk.

Private clouds are those created by a single organization, such as McKesson. They follow Internet protocol but the servers run behind the cloud provider's firewall and deliver encrypted data and applications to authorized users. The cloud provider has complete control to manage security, software updates, etc. The provider can even segment a portion of its server for customers that want their own instance or version of the software application they use. Therefore, a private cloud is a secure, protected environment appropriate for the needs of healthcare providers.

Who is using it?

If you access the Internet you likely use some form of cloud computing, although you may not realize it. Web-based email applications such as Gmail, Hotmail or Yahoo or even an email client program such as Microsoft® Office Outlook®, use cloud email servers. Online banking, shopping and travel planning are other examples of cloud-driven applications. In healthcare, online tools offered by CMS also make use of cloud computing to gather, store and publish de-identified patient outcome data for research purposes, for example, or to keep homecare and hospice agencies abreast of regulatory changes.

While the healthcare industry typically has been considered a "late adopter" of information technology, recent research suggests the industry actually is on the leading edge of cloud adoption. Current use is heavily related to web-based email applications and web portals for patients.

The survey indicates the appeal of cloud-based computing is strong among physician practices and other small providers that prefer subscription-based fees and the mobility offered by the Internet. According to the survey, one-third of health industry respondents polled were already using at least one cloud application, and 73% of these respondents intended to move more applications to the cloud in the future.²

As more participants in the health ecosystem move to cloud computing, those that hang back may find themselves at a competitive disadvantage in terms of cost and effectiveness, as well as being less able to collaborate seamlessly with other players in the industry.³ Cloud computing enables the homecare or hospice agency to support enhanced interaction among its field and office staff, and be better connected to the physicians and hospitals that it relies upon for referrals.

What does cloud computing mean for today's homecare or hospice agency? What questions should you ask?

Will my data be secure in the cloud? Security is one of the top concerns surrounding cloud computing, especially for homecare and hospice providers that must handle sensitive medical information and adhere to strict federal and state privacy regulations.

When considering using a cloud-based solution, homecare and hospice agencies must be satisfied that their IT vendor is reliable, knowledgeable about their specific industry security needs and experienced enough to hold the agency's data securely. You should consult a vendor that has experience running and maintaining data centers and that has an extensive background in security measures unique to healthcare.

McKesson is an example of a healthcare IT company that has heavily invested in the security of its private cloud environment, ensuring its reliability. And with a sole focus on healthcare, McKesson understands security and compliance issues such as upholding patient privacy privileges required by HIPAA.

There is no evidence that the cloud is less secure for sensitive information than an on-site infrastructure. Indeed, the opposite may be true. If you decide to manage and maintain your own data center and software applications, you alone are responsible for having the appropriate technical staff to secure and protect your networks, equipment and data. However, with the cloud computing model, you can leverage the security infrastructure, knowledge and experience of your healthcare IT vendor.

² Mimecast, Cloud Adoption Survey Results, February 4, 2010.

³ Six Questions Every Health Industry Executive Should Ask About Cloud Computing. White paper. http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_Cloud_Healthcare_PoV.pdf. Accessed online May 12, 2011.

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Can I access my data when I need it? Accessing your data via the cloud is reliable and secure. The data is available 24 hours a day, from anywhere. You should choose a vendor that understands the unique needs of the healthcare industry, and appreciates that information absolutely must be available all the time in order to provide patient care when and where it's needed. Your vendor should know the software and other data applications you're using completely so they can ensure proper performance standards. In fact, one of McKesson's data centers, which remains current with general business audit and security standards, is devoted exclusively to hosting our homecare and hospice applications.

Is it cost-effective to use software from the clouds? Software subscription fees or "pay for use" is based on the business service or applications a homecare or hospice agency needs to run its operations. Purchasing software as a subscription service enables you to avoid a large initial cash outlay for underlying infrastructure or software. Plus, you don't need to hire technical resources. Someone else takes care of IT infrastructure and maintenance, leaving agencies more time to focus on the business of caring for patients.

Cloud computing is really all about economies of scale, with advantages both for vendors that offer services via this model and their customers. By aggregating the demand for the service and delivery in a cost-efficient, less labor-intensive model, vendors can pass along the savings to smaller companies and agencies that now can use more highly functional and efficient applications that were once only available to larger companies or agencies.

How long will training and implementation of a cloud solution take? If you're familiar with using a web browser, then you're already familiar with using a cloud-based application. Implementation of a cloud-driven solution typically is quicker than a traditional customized implementation of licensed software because there is nothing to install at your site: no hardware to setup and test, no software to load onto servers.

Ideally, the vendor you chose should offer training and implementation for a cloud-driven solution in a just-in-time format, allowing you to enter real data to train your staff and build your system simultaneously. That way, users can "practice" learned skills immediately rather than trying to remember their training weeks after a customized implementation. Training and education sessions, which can be updated often, exist in the cloud as well and are easily accessed by any staff member with a web browser.

How does the cloud help me stay current? Cloud-based applications are simpler to manage and update once in a central environment. So it's easier for your IT provider to add functional capabilities in a more timely manner.

Likewise, the data for your own organization is kept-up-to-date by your users who are entering information in real time. For the homecare or hospice agency using a cloud-driven application, clinicians in the field as well as administrative staff in the office have access to the most up-to-date information, keeping everyone on the same page.

The cloud also makes it more economical for companies to offer applications capable of running on an ever-expanding wealth of mobile devices (e.g., smart phones and tablets). This portability makes cloud-based applications particularly appealing to the industry since homecare and hospice professionals spend most of their day in the field with patients. A cloud-based environment makes it easy for users to adapt to new devices, because they all use the standard web browsers and are compatible with the Internet.

Conclusion

Simple, secure and always available. Cloud computing enables the homecare or hospice agency to focus on the business of taking care of patients, rather than wrangling technology. Cloud computing is accessible, reliable, cost-effective, secure and relevant. It's not a new technology platform, but rather a new method of delivering services. The cloud is already being used in most people's daily lives. The healthcare industry is on the leading edge of cloud adoption as healthcare professionals realize the benefits of economies of scale, real-time, current information, and the ability to collaborate with each other anywhere, anytime — securely and confidentially.

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