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The Cloud Evolution in Healthcare

HIMSS Analytics Survey
sheds light on where
we've been, where we
stand – and where
we're headed



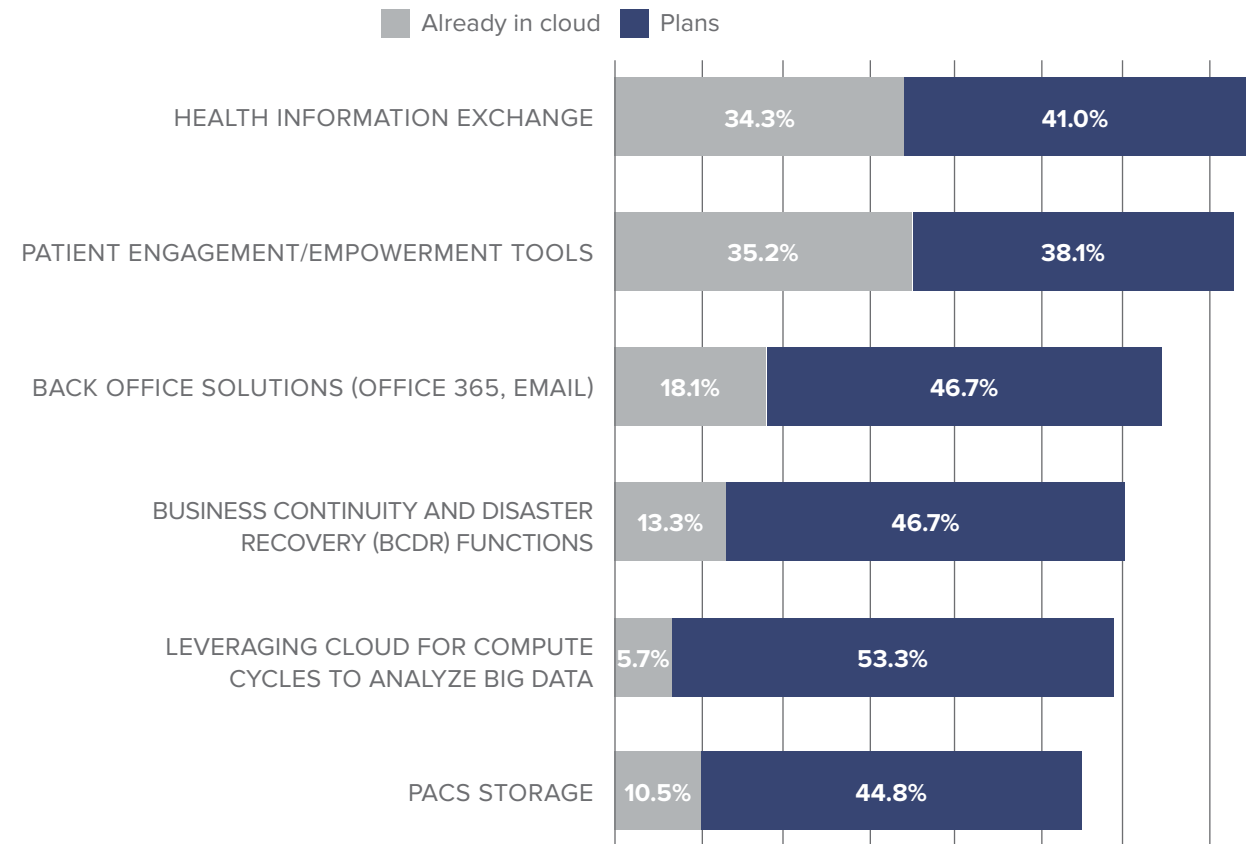
Healthcare embraces the cloud

Healthcare organizations are ready to embrace the cloud as strategic benefits trump previous reservations.

According to the *HIMSS Analytics 2016 Cloud Survey*, many healthcare providers already are using or planning to use the cloud. (see chart)

Organizations are increasingly willing to trust the cloud with protected health information (PHI). Healthcare providers are testing cloud platforms with back office applications first, with plans to leverage cloud solutions to manage analytics, PACS storage and rolling out patient facing applications. As a result, this nimble computing platform is emerging as a mission-critical tool that can help healthcare organizations distill intelligence, scale to the end patient and foster innovation.

What's moving to the cloud in 2016



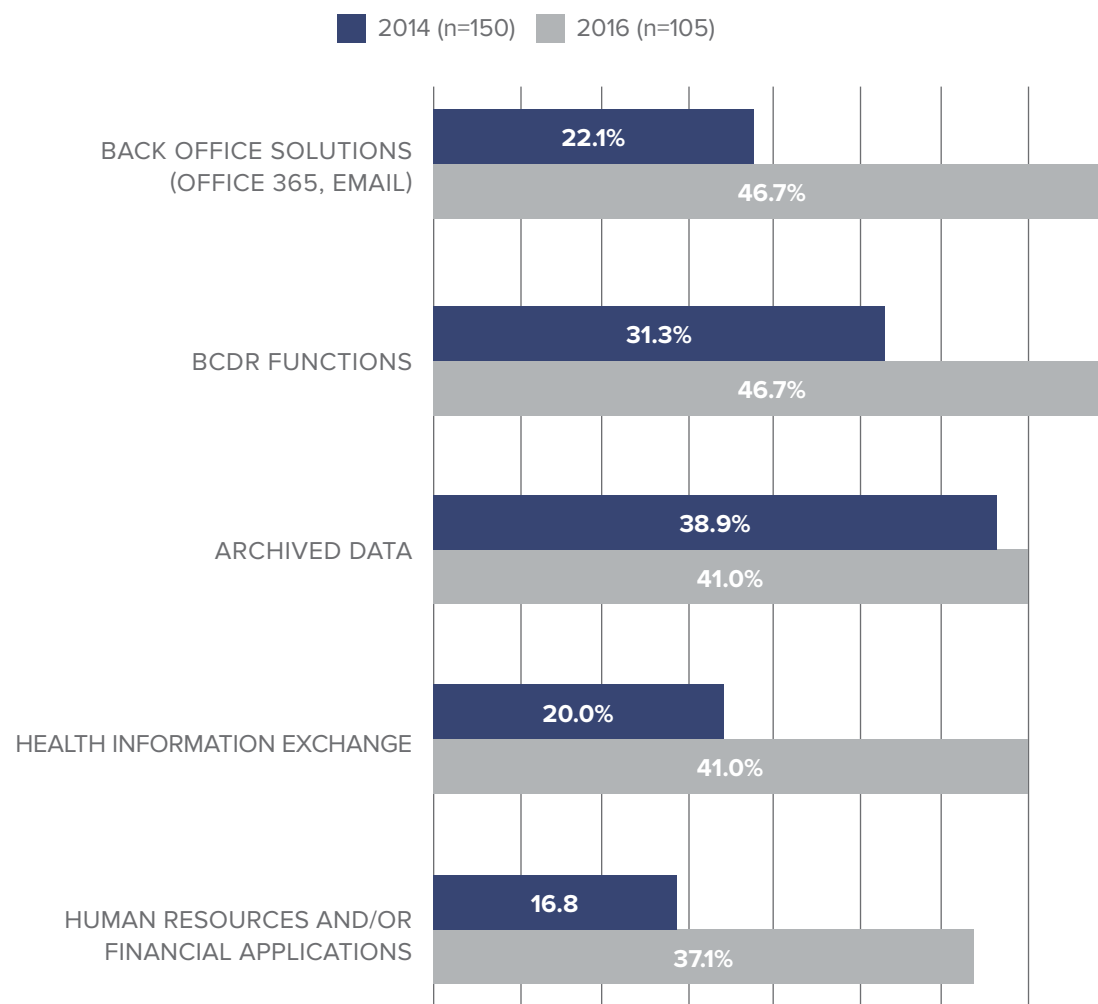
HIMSS Analytics 2016 Cloud Survey results are based on responses from 105 healthcare provider organization information technology and leadership professionals. The survey was distributed via email to these respondents between January 26, 2016, and February 12, 2016. About two-thirds of the respondents work at integrated delivery systems, and the others at stand-alone hospitals. 2014 survey results are based on responses from 150 respondents.

The Cloud: past, present and future

Just 22.1 percent of survey respondents were planning to use the cloud for back office functions in 2014, compared to 46.7 percent in 2016; 31.1 percent were planning to use the cloud for business continuity and disaster recovery (BCDR) functions in 2014, compared to 46.7 percent in 2016; and 20 percent for HIE in 2014, compared to 41 percent in 2016.

The fact that healthcare organizations are [tripling the use of cloud services](#) is only part of the story. In 2014, the cloud was primarily seen as a model that could support HIE and data storage, whereas in 2016, it is being leveraged for a full range of functions including patient empowerment. And, there's more to come, as the cloud is poised to play a prominent role when healthcare organizations deploy telemedicine, mobile health applications and remote monitoring tools – trends that are inevitable as organizations implement value-based care programs in alliance with the Affordable Care Act.

Changing plans, comparing 2014 to 2016



A cloudy future made bright

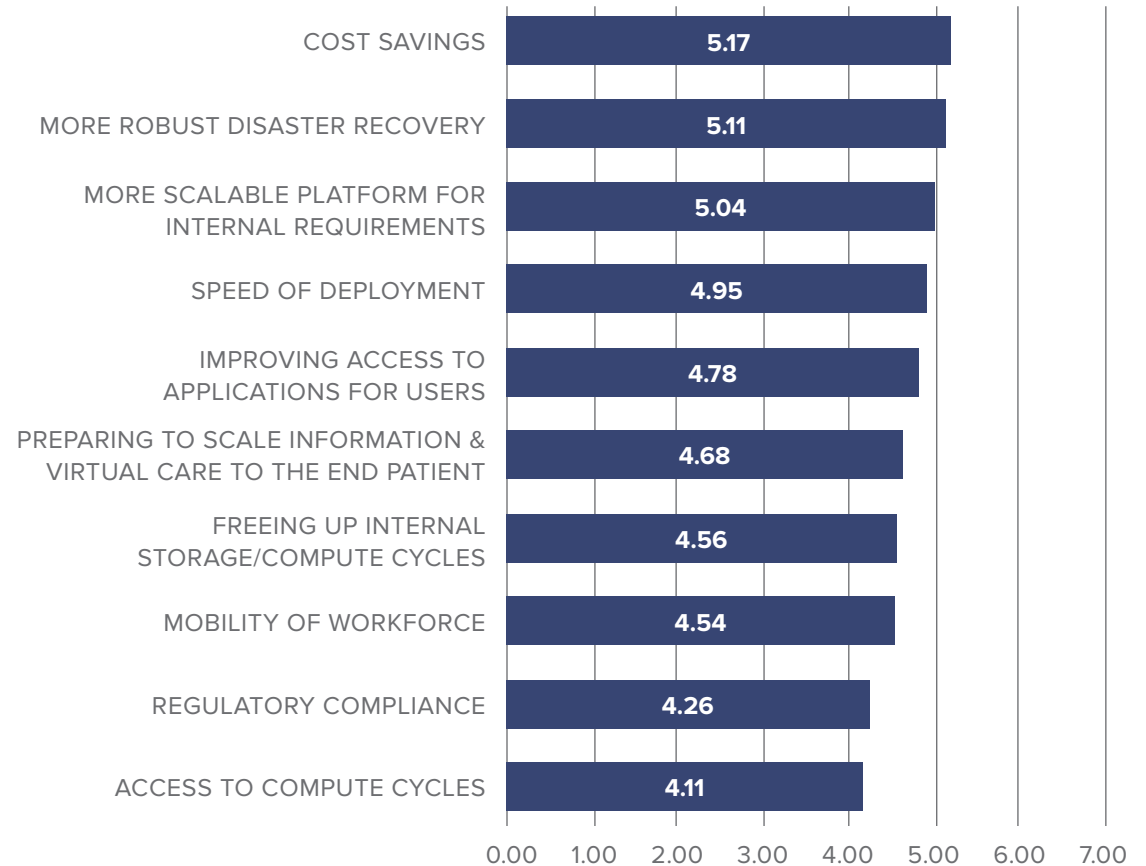
The cloud is well on its way toward becoming the preferred computing platform of choice for back-office solutions, BCDR, revenue cycle management and patient engagement/empowerment. Healthcare IT leaders who participated in the 2016 HIMSS Analytics Cloud Survey cited a variety of advantages. (see chart)

To realize these advantages, healthcare leaders need to ensure that their cloud service providers and their network connectivity operators are working in concert.

Cloud service providers need to ensure uptime and performance, deliver on compliance and service level agreements and offer reliable technical support.

Cloud solutions are an extension of a healthcare organization's communications infrastructure and connecting to the cloud is as mission critical as the platform itself. Connectivity should easily "scale up," as more applications are moved to the cloud or more compute cycles are accessed for [analytics](#).

What's behind the move to the cloud?



Rating scale - "1" being a non-motivating factor and "7" being a very motivating factor.

Concentrating on core competencies

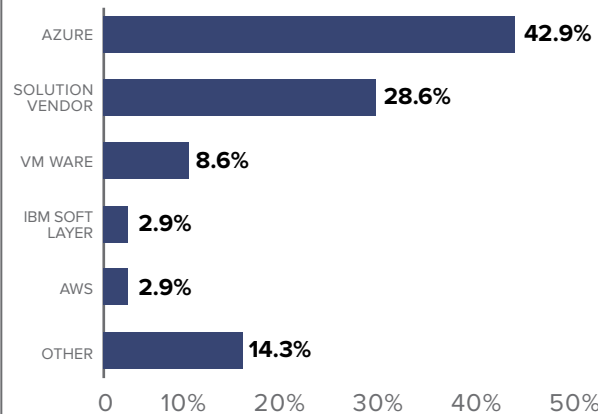
In an era where outcomes reign supreme, healthcare organizations need to invest in their core competencies – and work closely with best of breed cloud, security and network connectivity partners.

One of the benefits of cloud-computing is to scale up and down partners as needed. However, to take advantage of this capability, organizations must work with a network provider that can connect to a full array of cloud solutions and SaaS providers.

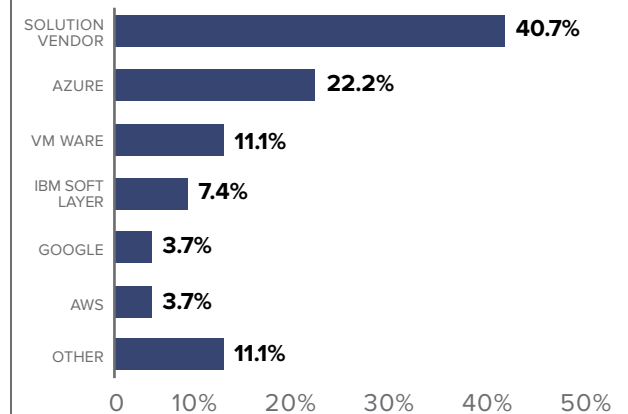
According to *HIMSS Analytics 2016 Cloud Survey* respondents, [Level 3 connects to a variety of cloud partners](#) that bring what's required to the table. For example, Google, Azure and AWS received the highest average rating overall. Respondents considered Azure most frequently as the choice to provide back office solutions and Google as the most cost-effective, easiest to implement, most user friendly and most scalable solution.

Cloud vendors under consideration

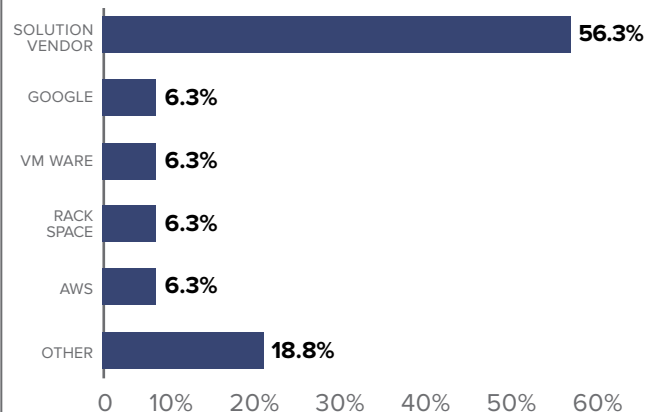
Back Office Solutions (Office 365, email)



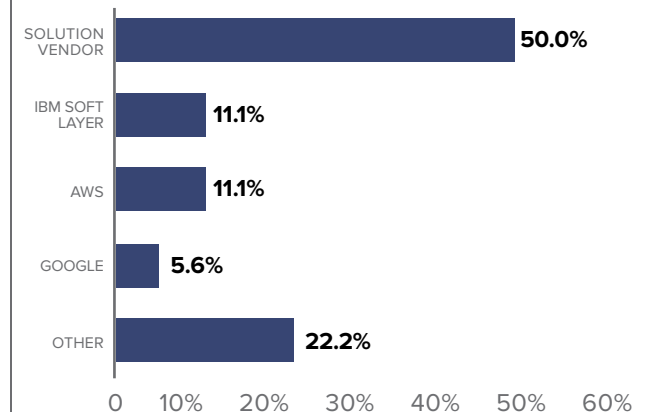
Business Continuity and Disaster Recovery



Revenue Cycle Management Tools



Patient Engagement/Empowerment Tools



Building a network infrastructure to support cloud computing

When moving to cloud computing, the importance of [working with the right network provider is unmistakable](#). Fortunately, healthcare leaders seem to be aware, as **54.3 percent of respondents engage with their network providers throughout the entire cloud deployment process and 22.9 percent involve a network provider once they have selected a cloud partner.**

Before leveraging the cloud for its numerous strategic advantages, healthcare organizations need to ensure that their network infrastructure can handle the demands of cloud computing – today and tomorrow. The network should provide an infrastructure that gives organizations the confidence that it will consistently perform; offers a secure connection into their cloud service provider (CSP) or SaaS provider;



“Healthcare organizations need to have confidence that the network is going to perform before they start moving applications to the cloud.”

Brian Hoekelman

Vice President, Business & Cloud Ecosystem Development

and then enables organizations to transparently view and control traffic. More specifically, leaders need to understand exactly how their organizations will connect to the cloud; the ability of the network to provide diverse connection paths; and how to move traffic to a different cloud zone in instances when there is a failure.

“Healthcare organizations need to have confidence that the network is going to perform before they start

moving applications to the cloud,” said [Brian Hoekelman](#), vice president of business and cloud ecosystem development at Level 3. “Leaders are now acknowledging this and **it’s becoming a best practice to concentrate on setting up a network infrastructure that offers a high level of performance before you actually start using the cloud.** The infrastructure has really become a pre-requisite to using the cloud.”

All the right connections

With the unrelenting call to improve outcomes, enhance care experiences and reduce costs, healthcare organizations require fast, secure and dependable access to information and applications anytime, anywhere. Thus, the hybrid cloud model is emerging as a preferred computing platform. Such a model offers the ability to tap into rich capabilities that enhance organizational agility and empower better decision-making, as well as the private connections to help keep data secure.

To successfully leverage such a model, organizations need to choose a [highly reputable](#) and connected network solutions provider – [one that can provide secure, dedicated connectivity to ensure optimum performance and availability](#). Network providers should be transparent about route design and commit to latency SLAs to ensure user satisfaction, increasingly critical as more applications scale to the end patient.



Moving forward with a strategic cloud plan

In healthcare, the cloud is no longer just a computing platform worthy of consideration for a few one-off applications. Instead, according to respondents of the *2016 HIMSS Analytics Cloud Survey*, the cloud is quickly morphing into a strategic tool that organizations can leverage to access the applications and data that will empower them to experience the improved care and reduced costs so critical to success in today's healthcare environment.

The challenge for healthcare providers, however, lies in not just moving to the cloud but in building the network infrastructure that will enable them to fully utilize the cloud to reach their strategic goals today – and, perhaps more importantly, tomorrow.



Level 3 Communications operates and maintains a global communications network to deliver managed solutions for enterprises, carriers and governments.

Provider organizations need reliable, dynamic and secure communications infrastructure to enable them to execute on their core mission; to provide world class care. Level 3 is trusted by over 2,500 healthcare organizations, including 8 of the nation's 10 largest hospital systems. As the healthcare industry continues to evolve, providers need technology partners that actively invest in their network, proactively address security threats and work hand in hand with them to design comprehensive and enabling communications infrastructure solutions.