

Private Cloud Benefits: Different Strokes for Different Folks

Recent industry study reveals that private cloud benefits vary by industry, as do challenges.

Based on almost all measures – and there have been plenty of measures in recent years – private cloud computing has become a mainstream enterprise IT practice. But while many surveys have set out to gauge private cloud adoption rates, or to assess the challenges and benefits associated with this service-oriented form of computing, few have considered the specific needs and experiences of organizations working within different industry sectors.

A recent IDG Research Services survey set out to do just that. Overall, the survey reinforces the conventional wisdom that private clouds are quickly multiplying across the enterprise IT landscape. But the survey also reveals some interesting distinctions as to how organizations in different sectors approach private clouds, and what they hope to gain from them.

Conducted in late 2012 and early 2013, the IDG Research Services study polled respondents in five industry sectors: banking/financial services, health care, telecommunications, high tech and public sector – all organizations with 500 or more employees that, at a minimum, have evaluated private cloud implementations.

This paper first explores some of the key aggregate data collected by the survey, then takes a deeper dive into each of the five industry sectors to depict their respective use cases and drivers for considering private clouds, their main concerns, and the business and operational benefits some are already realizing from adopting private clouds within their organizations.

Aggregate results: Sunny days for private clouds

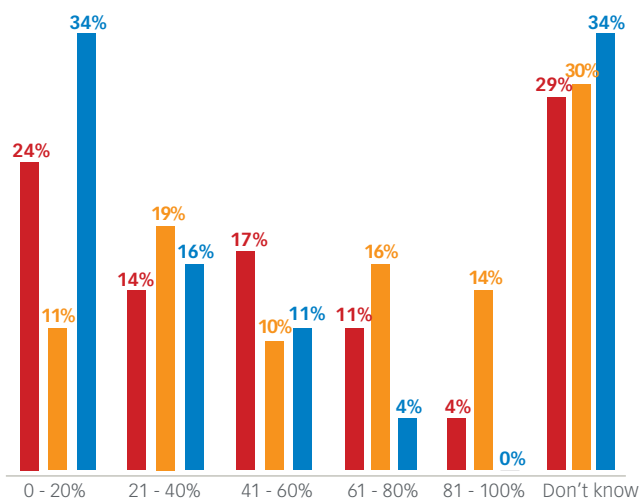
The IDG Research Services survey confirms that private cloud adoption is well under way across all five of the targeted sectors. Only a small percentage of would-be respondents (9 percent) failed to qualify to take the survey because their organizations aren't currently deploying or evaluating cloud solutions.

Of the 165 people who did qualify to take the survey, 42 percent work at establishments that are already utilizing private clouds either organization-wide or within specific



Computing Resources Delivered by Private Cloud

- Current utilizers; current proportion of computing resources; Mean: 40%
- Current utilizers; expected proportion of computing resources 12 months out; Mean: 53%
- Not current utilizers; Expected proportion of computing resources 12 months out; Mean: 27%



SOURCE: IDG RESEARCH SERVICES, MARCH 2013

departments or business units. All of the remaining respondents are evaluating, planning or piloting private cloud deployments. Private clouds already deliver a significant proportion of computing resources (an average of 40 percent of all resources at enterprises are already using the technology). Even those who have yet to deploy private clouds expect that 27 percent of their resources will be delivered via this type of infrastructure within 12 months.

Meanwhile, private cloud budgets are either stable or increasing for most of the surveyed organizations. These budgets held stable from 2012 to 2013 at 38 percent of the firms, increased at 27 percent and decreased at just 1 percent.

Survey respondents identify a range of benefits derived from private clouds, with more than half of the respondents reporting improvements in scalability, speed/agility and resource utilization. On the other hand, more than 40 percent cite two barriers to realizing cost benefits from their private clouds: spending more than anticipated on support (due to lack of in-house resources) and the lack of a unified strategy for cloud deployment. Vendor solutions to automate the deployment and management of private clouds would help companies clear these barriers, as well as increase the agility and reduce total cost of ownership (TCO) for benefits associated with private clouds.

Delving beneath these aggregate survey results reveals numerous private cloud distinctions among the five vertical sectors surveyed.

Banks and financial services cash in on private clouds

Banks and financial services firms have always been among the leading adopters of new computing technologies and methods, and they continue to play that role with private clouds. More respondents in this sector – 39 percent – report an increase in private cloud budgets from 2012 to 2013 than in any of the other four sectors surveyed.

The growing level of private cloud investments at banks and financial institutions translates into relatively high deployment levels across different use cases. The survey asked about five specific use cases: test/development, production use, deploying new apps, non-mission-critical apps and mission-critical apps. For each of these uses, it also asked respondents to characterize the private cloud status, from initial evaluation at the low end to enterprise-wide utilization at the high end.

This sector leads, or is tied for the lead, in three of the five use cases when it comes to utilization of private clouds enterprise-wide. Reflecting both the innovation and intense competition characteristic of this industry, banks and financial services firms are especially strong in their use of private clouds for deploying new applications. Thirty-nine percent of these companies report utilizing private clouds for new application deployments either within departments or across the entire enterprise, far more than any other industry sector.

When it comes to ranking the key vertical-specific drivers

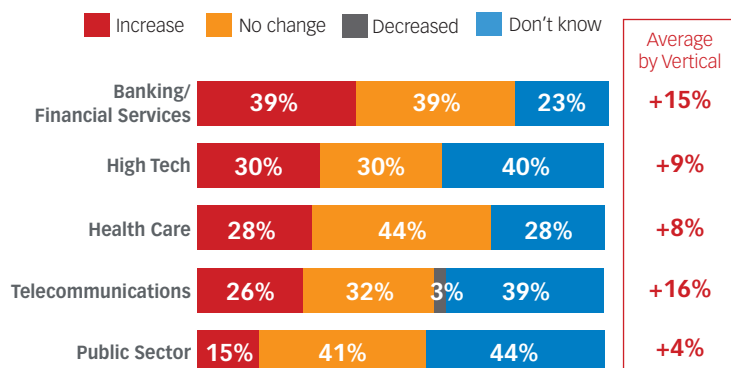
pushing banks and financial firms to adopt private clouds, one driver easily outpaces all the others: improving the timeliness, accuracy and transparency of financial information. More than half of the respondents in this sector also cite two industry-neutral drivers – scalability/flexibility and speed/agility – as important motivations in their adoption of private clouds.

IT executives and managers at banks and other financial services companies note some private cloud security concerns. “Security and compliance, as well as risk reduction and cost efficiency, are the biggest concerns,” says one banking respondent. “We need to go to market quickly and efficiently, but with minimum disruption.”

Still, 91 percent of this sector’s respondents –



Comparison of FY2013 Budget for Private Cloud to FY2012 by Vertical



SOURCE: IDG RESEARCH SERVICES, NOVEMBER 2012

more than any other sector – report that they are either very or somewhat confident in the security of private clouds. Perhaps this high level of confidence reflects the fact that banks and financial services firms recruit top-tier IT professionals, and that these professionals have done a good job implementing strong security technologies and policies for their cloud infrastructures.

This sector's embrace of private clouds has generated a range of business and operational benefits. When asked about 12 specific benefits, anywhere from 45 to 58 percent of banking and financial services respondents indicate they have already realized 8 of the 12. Topping the list is speed/agility (accelerating service delivery), a benefit cited by 58 percent. Only telecom sector respondents report a higher level of across-the-board benefits from private clouds.

Health care uses private clouds to treat a range of IT needs

The health care sector encompasses many types of institutions, functions and workers, but from an IT perspective, one mandate tends to eclipse all others: the need to secure and protect sensitive health information. Participants in this sector view almost all IT major decisions, including the use of private cloud infrastructure, through a security and privacy filter.

Of course, many of the IT operations in this sector are designed to support medical professionals in their diagnosis and care of patients, which puts additional pressure on IT to ensure the accuracy and availability of health care data. For hospitals and other medical institutions, "mission-critical" applications can directly affect people's health and even their lives. That may explain why only 19 percent of health care respondents – fewer than any other sector – say their organizations currently utilize private clouds for mission-critical applications at a departmental or enterprise-wide level.

Although mission-critical applications may be a tough sell here, the health care sector is adopting private clouds for other uses. This industry leads all others in the use of private clouds for non-mission-critical applications, with 37 percent doing so either by department or enterprise-wide. Thirty-four percent already utilize private clouds for test and development operations – again, more than any other sector. Private clouds in health care organizations can often

be found running back-office financial and HR applications.

Unlike the banking and financial services sector, in which one industry-specific driver far outpaces all others, 44 percent or more of the health care survey respondents identify four private cloud drivers. Topping the list, with 56 percent, is the need to securely exchange information about patient care and claims. Also important are providing new products and services to technology-savvy consumers; improving the ability to report on and mine clinical data to improve patient outcomes; and storing and managing a high volume of data and images, such as X-rays.

Not surprisingly, organizations in the health care sector are more concerned than those in any other sector about cloud security. These organizations operate under strict regulatory requirements for maintaining patient confidentiality, and 66 percent of the survey respondents say a primary concern is the risk of unauthorized access, data integrity and protection. Nearly as many (63 percent) cite concerns about maintaining security and policy compliance in the cloud. Despite these worries, 91 percent of the respondents in this sector report being either very or somewhat confident in the security of the data placed in their private clouds, with only telecom respondents reporting a higher level of confidence.

Health care respondents cite a variety of benefits already realized from their private cloud deployments, led by scalability/flexibility. This sector leads all others in two other reported benefits: standardization/better operational efficiency and risk reduction. Given the particular requirements and pressures health care organizations face, it makes sense that they are pursuing these specific benefits with their private cloud deployments.

Telecommunications firms broadcast their private cloud leadership

Telecommunications firms prove to be the star performers in many of the private cloud categories measured by the IDG Research Services survey. This is an industry characterized by consolidation and intense competition. It is also populated by companies that have had to build extremely complex IT infrastructures to deliver highly reliable services, and to accommodate constantly evolving communications technologies and operational models. As a result, telecom firms have been forced to spend a huge percentage of



Impact of Private Cloud Deployments by Vertical

	Banking/ Financial Services	Telecom	Health Care	Public Sector	High Tech
Speed/agility	58%	74%	44%	44%	50%
Scalability/flexibility	55%	74%	56%	54%	50%
Improved resource utilization	52%	58%	50%	56%	53%
Standardization/better operational efficiency	52%	52%	53%	46%	33%
Cost savings/lowering TCO	48%	48%	44%	34%	50%
Improved user experience	55%	45%	38%	39%	33%
Improved productivity levels	45%	48%	31%	37%	37%
Improved disaster recovery/business continuity	52%	55%	44%	34%	30%
Meeting environmental standards/ becoming 'eco-friendly'	32%	29%	31%	32%	30%
Risk reduction	29%	45%	38%	27%	27%
Meeting industry or government compliance requirements	29%	39%	38%	29%	30%
Generation of new revenue streams	32%	35%	19%	12%	27%

SOURCE: IDG RESEARCH SERVICES, NOVEMBER 2012

their operational budgets, not on innovation, but “keeping the lights on.” Based on the survey results, telecom firms are finding that private clouds can address many of their specific needs, and may help them to shift more of their budgets to the innovation side of the ledger.

Respondents working at telecoms lead all others in departmental or enterprise-wide deployments of private clouds in production use (42 percent) and deployment of mission-critical applications (29 percent). They tie with banking and financial services firms (at 29 percent) in the deployment of new applications in private clouds. These leadership positions suggest that telecoms were among the first companies to adopt private clouds, possibly lured by their promise of reduced operating costs over time. Many of these firms saw steep revenue declines as highly profitable voice services gave way to low-profit (but high-bandwidth-demand) data service. As a result, reducing costs has become a top priority in this sector.

Indeed, the top “generic” drivers motivating telecoms to adopt private clouds are cost savings and lower TCO, cited by just under half of the respondents in this sector.

The main industry-specific drivers reflect both the need for more efficient operations, as well as telecom’s requirement to accommodate fluctuating workloads. Fifty-five percent list improved hardware utilization and the ability to scale up or down based on traffic levels as their main catalyst for adopting private clouds. In second place (45 percent) is the need to improve service for end customers.

As with other sectors’ respondents, IT managers in the telecom industry list various security issues as private cloud concerns, led by the risk of unauthorized access, data integrity and protection (cited by 55 percent). Also relatively high on their concerns list – mentioned by 42 percent – is the need to integrate private clouds with existing applications and IT infrastructure.

Telecom firms have significant investments in legacy IT systems and custom applications, and it has become increasingly difficult to leverage these investments in a cost-effective and efficient fashion. However, moving legacy operations to private clouds, while beneficial over time, can be an expensive, time-consuming and resource-intensive undertaking, so the concern about the integration issue is

understandable.

These concerns notwithstanding, higher percentages of telecom firms report private cloud benefits than respondents in any other industry surveyed. Nearly three-quarters say private clouds have helped them increase both the speed and agility of their operations as well as their scalability and flexibility. No other industry comes close to these levels of reported benefits. Telecom firms also are at or near the lead in reporting a range of additional private cloud benefits.

High-tech firms aren't so high when it comes to private cloud adoption

High-tech companies rank at or near the bottom in terms of deploying private clouds within departments or enterprise-wide in all of the five use cases surveyed. Production use of private clouds is the top use case cited, at 33 percent. This puts high tech ahead of health care and banking/financial services in this use-case category, but behind telecoms and public sector organizations. Meanwhile, high tech is dead last in three of the remaining use-case scenarios: test/development, non-mission-critical applications and mission-critical applications.

Companies working in the competitive and fast-paced high-tech sector must be careful that new IT programs don't disrupt their existing operations. "[We need] timely implementation of new cloud computing platforms without affecting production continuity," says one survey respondent.

In a sign that high tech's relatively low deployment rankings may improve, 30 percent of the respondents in this industry say their firms have increased their private cloud budgets from 2012 to 2013. That percentage is second only to the banking and financial services sector. The two main industry-neutral drivers for these growing investments – both cited by 57 percent of the high-tech respondents – are scalability/flexibility and cost savings/lowering TCO.

As it turns out, the scalability/flexibility and low TCO characteristics of private clouds are natural allies when it comes to providing outward-facing public cloud services to customers and partners. Software vendors and other high-tech industry players that deliver their products as digital, public cloud services typically have private cloud infrastructures supporting those operations, and the use of such

back-end private clouds is likely to grow in the high-tech sector along with the rise in digital commerce.

The leading industry-specific driver for private cloud deployments within high-tech firms is supporting end-to-end processes in order to improve customer service, a need identified by half of the respondents. Nearly as many (47 percent) say private clouds would help them to cost-effectively link CRM systems with other applications.

Although high-tech respondents report relatively slow deployments of private clouds, they also express fewer worries about these deployments than other industry respondents. No area of concern is mentioned by even 50 percent of those surveyed in this sector, although nearly half (47 percent) join their peers in citing worries about the risks of unauthorized access, data integrity and protection.

When it comes to describing the benefits they've already realized from private cloud deployments, just over half of the high-tech respondents say this type of infrastructure has helped them achieve improved resource allocation. Exactly half identify three other benefits: speed/agility, scalability/flexibility and cost savings/lower TCO. The latter two, of course, also are the two top drivers for high-tech companies to adopt private clouds in the first place.

On the flip side, only 33 percent of high-tech sector respondents say they have realized standardization and better operational efficiency from their private cloud deployments. That is far lower than any other industry in this measure. High-tech companies are also at the bottom of the heap in reporting improved user experience due to their private clouds, with just 33 percent citing this benefit.

Public sector organizations go private when it comes to clouds

If any sector can make cash-strapped telecom firms feel rich by comparison, it is the public sector. Whether federal, state or local, public sector organizations have been under intense budget pressures given the recent, and deep, recession, and the consequent slashes to government budgets across the board.

Although the economic scene has brightened of late, public sector organizations generally experience a longer lag time than private companies when it comes to having their budgets and resources increased. Only 15 percent of the organizations in this sector report increases in their

private cloud budgets from 2012 to 2013, far lower than any other industry.

Despite the tight times, public sector survey respondents indicate that their organizations are healthy adopters of private clouds across most of the five use cases measured. They are last in only one category – deploying new applications – which only 22 percent of the public sector respondents say their organizations have done on their private clouds. That low number makes sense given that, in addition to being cost strapped, these organizations tend to be risk averse. They likely want to first achieve success in running existing applications in private clouds before venturing into new application areas.

Public sector respondents identify one overwhelming driver behind their private cloud adoption: simplifying and modernizing application management via standardization. Seventy-one percent of the respondents cite this driver, with 59 percent mentioning increasing collaboration between departments and agencies, and 49 percent citing the expansion of services for the public and other stakeholders as additional drivers.

Working against these drivers is a long list of private cloud concerns, with public sector respondents generally more worried about a range of issues than their counterparts in other industry sectors. For organizations entrusted with serving the public – and with managing and protecting information ranging from social security numbers to court records – security concerns naturally rank high on the list of concerns.

Still, two other concerns – organizational transformation (culture) and the risk of vendor lock-in – rank as more pressing issues than one of the three security issues measured (maintaining security and compliance policy in the cloud). Not just vendor lock-in, but also vendor support concerns one of the public sector respondents. “[We need an] implementation strategy for a global organization that exists in multiple countries in regard to availability of vendor support in all areas where we’re located,” the respondent explains.

Public sector survey respondents report mixed results when it comes to the benefits they’ve realized to date from their private cloud deployments. Leading the benefits for this group is improved resource utilization, which was cited by 56 percent in this sector, the second highest of any

group in this benefit category.

Conversely, public sector organizations are often behind organizations in other sectors in attaining many other private cloud benefits. Predictably, few public sector respondents (12 percent) say private clouds are helping them to generate new revenue streams – not typically an objective in this sector.

More troubling is the fact that just 34 percent say private clouds have generated cost savings or lower TCO; that’s 10 percentage points behind the second lowest sector (health care) in this benefit category. The relatively low financial payback achieved by public sector organizations may reflect their need to move somewhat cautiously and incrementally when introducing private clouds, while navigating through a maze of entrenched operational processes and ingrained workplace cultures.

Conclusion: Private clouds are popular, but one size doesn’t fit all

On one level, the IDG Research Services survey strongly reinforces the general consensus that private clouds are on a roll. At the same time, the survey results make clear that participants in different industry sectors are following their own agendas, and navigating distinct challenges, when it comes to how quickly they’re adopting private clouds and what types of workloads they’re placing in them.

These sector differences call for tailored private cloud solutions. For their part, IT managers and their organizations shouldn’t assume one size fits all when it comes to private clouds. Each organization must keep their – and their industries’ – particular requirements and objectives at the forefront of their decision making. They can’t afford to be blinded by the glare of widespread enthusiasm now shining on private clouds.

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