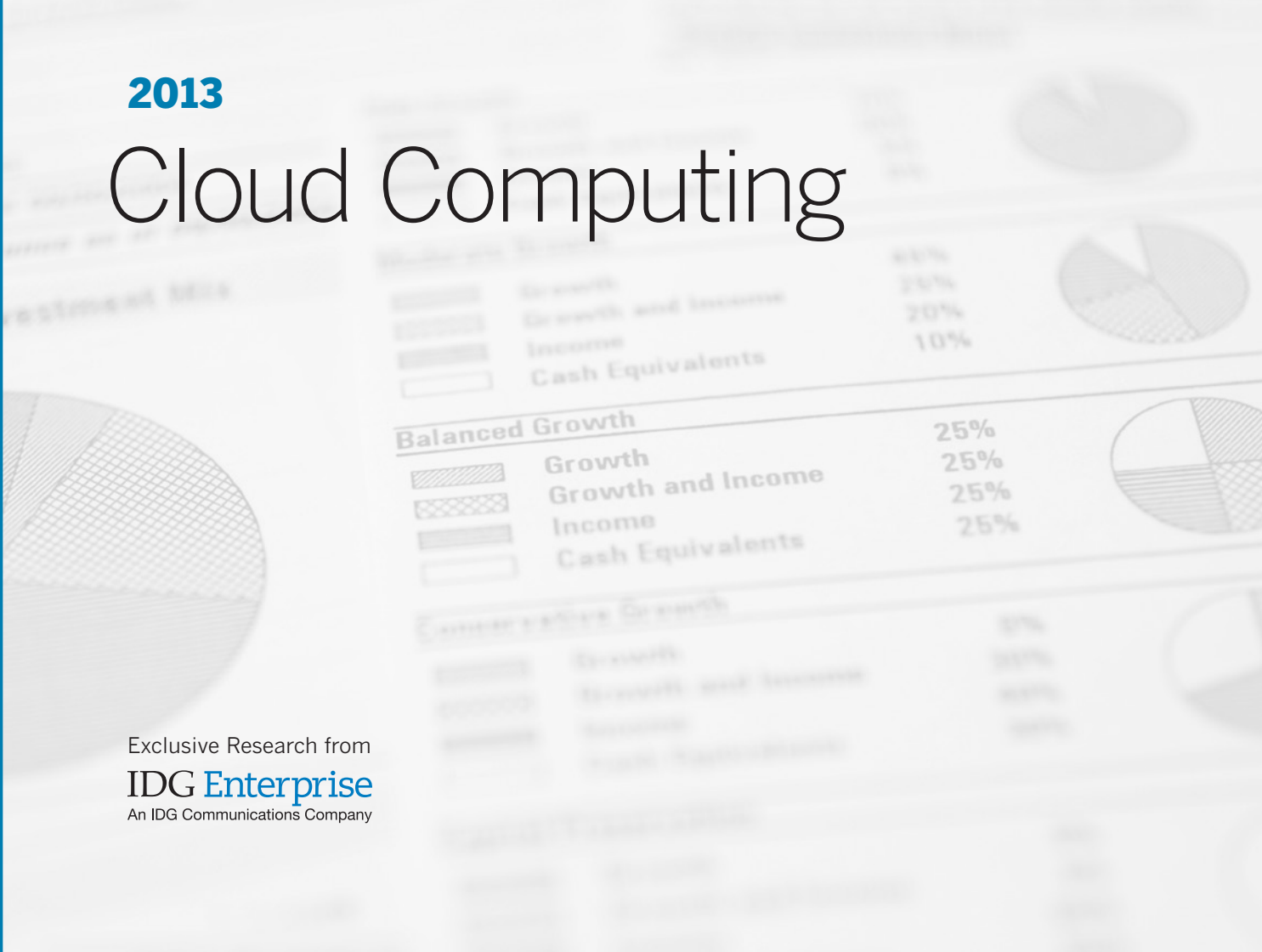




2013

Cloud Computing



Exclusive Research from
IDG Enterprise
 An IDG Communications Company

Committed to Cloud Computing

Cloud budgets are rising as IT confronts security, ROI challenges

The path to cloud adoption remains complex and varies according to company size, application, industry, as well the model for the cloud service, according to a recent survey of 1,358 CIO, Computerworld, CSO, InfoWorld, IT World and Network World customers. The results, which represent the practices and opinions of technology buyers whose organizations' have, or plan to have, at least one application or a portion of its infrastructure in the cloud, finds that security of corporate information in the cloud continues to be a top concern. Meanwhile, cloud proponents report that one key justification for cloud investments—that it lowers IT costs—remains difficult to demonstrate.

Survey results also suggest that most companies will continue to run mixed computing environments for the foreseeable future, although IT and security executives are significantly more likely than respondents in other technology roles to envision an extensive use of cloud. A slightly higher percentage of respondents overall now say they will move a majority of their IT operations to the cloud within the next five years: 29 compared to 27 percent in 2012.

Meanwhile, the percentage who say they will limit their cloud activity to private clouds (18 percent) or to using software as a service (7 percent) is declining. Large companies, with 1,000 or more employees, are somewhat more conservative about the public cloud than are small and mid-sized companies, with less than 1,000 employees.

Most companies (59 percent), however, regardless of company size, are still working to identify IT operations that are candidates for cloud hosting.

Warming Up—a Little—to Public Cloud

As previous surveys have found, companies favor private clouds: 69 percent of respondents report having data, applications or infrastructure deployed in a private cloud compared to 59 percent utilizing a public cloud. What's more, the average percentage of companies' IT environment in private clouds (28 percent) is double that in public clouds (14 percent). Only 28 percent use community clouds, most commonly in education and high-tech.

Adoption of all three cloud models is expected to rise during the next 18 months, and the gap between usage of private and public clouds, particularly, will likely narrow. Respondents anticipate that by mid-2014, private clouds will encompass slightly more than one-third (36 percent) of their IT environment, while about 20 percent of the IT environment will be deployed in a public cloud. Small and mid-sized organizations are likely to put more of their IT in the public cloud versus large organizations.

Which cloud model companies choose depends to some extent on the application. Respondents were asked which cloud models they would select when migrating various applications. More than half said they prefer a public or quasi-public (e.g. hybrid or community) model for collaboration/conferencing, CRM, email and call center applications. These were among the first public cloud offerings, so respondents preferences may reflect their comfort with established products or vendors.

Meanwhile, companies are more likely to prefer an exclusively private model for applications such as compliance, data storage/data management, and security that impact IT operations, critical business data or complex business processes.

Regardless of the application, most companies that are migrating to cloud are still in the planning stages. Collaboration/conferencing, email and HR technologies top the list of applications that companies are currently migrating. When choosing a SaaS application provider, customization opportunities, performance and security are the most important factors.

Companies are also proceeding with IaaS and PaaS investments. More than half of those with cloud plans (51 percent) say they are at least somewhat confident in shifting their production workloads to IaaS providers; half are developing, testing, or deploying workloads now or plan to in the next year.

They're embracing PaaS more slowly, however. Forty-four percent of respondents expressed confidence in shifting applications to PaaS, and less than one half (41 percent) are actively pursuing adoption. Among companies that are planning to adopt PaaS, IT executives report significantly higher levels of confidence in the technology than do IT staff. This may reflect concerns staff have about unfamiliar application platforms. Large companies are more likely to be engaged with either IaaS or PaaS deployment than small and mid-sized companies.

When choosing either an IaaS or PaaS provider, respondents say performance and availability, service level agreements and price are the most important considerations. Ability to accommodate existing development processes and environments is also a top factor when choosing a PaaS vendor.

Cloud Spending Rises, But CFOs Still Need Convincing

Companies expect to invest an average of \$1.5 million in cloud-based services during the next 12 months—a 10 percent increase over 2012. Not surprisingly, large companies will spend more than small and medium-sized companies: \$2.8 million versus \$486,000 on average. Financial services and high tech companies are likely to have the biggest cloud budgets.

Investment in every category of cloud services is likely to increase in the next year, accounting for median expenditures of about 15 percent of the IT budget. Software as a service again will continue to take largest share of cloud expenditures, on average, followed by infrastructure as a service, managed network services, managed security services, platform as a service, and management as a service. Large companies will likely spend slightly more than small and medium companies on cloud-based infrastructure and management services.

However, although half of IT decision makers report that business leaders consider cloud to be a critical game changer for their companies, there's no single, overwhelming argument for cloud investments.

Respondents deem some justifications more effective than others, however, considering a few most persuasive. For example, the opportunity to lower TCO is among the top three selling points for both public and private cloud investments. Faster deployment and saving on capital expenses are also important when choosing public cloud offerings, while enabling business continuity and replacing on-premise legacy technology are high on the list of reasons to choose private cloud.

Nevertheless, IT departments may find it difficult to demonstrate the financial benefits. Asked to rank the concerns of non-IT business leaders, 38 percent of respondents cite difficulty measuring ROI and determining the economic value of cloud investments--their second biggest worry (security is first). And they indicate that among C-level executives and board members, the CFO is hardest to convince of cloud's value. Consistent with this challenge, respondents say vendors could best help them to make the business case for cloud with evidence for lower TCO.

Although IT may need to find better ways to pinpoint cloud's financial benefits, the answers may not make much difference when choosing between a public or a private cloud implementation. Most respondents (59 percent) say they're at least somewhat confident that they'll achieve the same or better cost savings and flexibility with their private cloud initiatives as they would in a public cloud environment.

IT Influences, But May Not Control, Many Purchase Decisions

Spending by non-IT business units is expected to rise from an average of 20 percent today to 24 percent within three years. However, IT is involved more often than non-IT decision makers when determining what to buy. The results suggest that vendors should build relationships broadly within IT and end user organizations.

CIOs weigh in on what to buy more often than individuals in other IT or business roles, but not always; only 47 percent of respondents said the top IT executive is at the table, followed by the CEO (39 percent) and senior IT managers (35 percent).

There are some differences in how decisions are made depending on company size. At small and mid-sized companies, CEOs are more likely than even the CIO to be signing off on vendor choices. But in large companies, non-IT business executives are not usually involved: the decisions are made primarily by IT executives, including IT VPs, CTOs and architects, as well as IT steering groups (which generally include leaders from both IT and end user organizations).

Nevertheless, business units frequently have IT-sanctioned freedom to make their own purchases, at least when buying public cloud services. Although public cloud purchases are typically made by one central group, business departments are allowed to make choices on case by case basis at 30 percent of companies. The data suggest that at large companies, it's more common for business units to drive public cloud buying decisions, with or without IT's blessing, than at small or mid-sized companies.

Even when IT blesses business unit purchases, technologists have a strong stake in them. Forty-six percent of IT executives say that cloud projects originating outside of IT eventually return to IT ownership. Most often, this is due to security concerns (cited by 65 percent of all respondents) or problems with technical oversight (noted by 64 percent).

Vendors Must Step Up for Security

In fact, security concerns remain the top challenge to deploying cloud, especially public cloud services. Two-thirds (67 percent) of respondents chose security among their top three concerns, with integration (46 percent) a distant second. Security is somewhat more of an issue for large companies than for small and mid-sized companies.

And it's a challenge many respondents are setting out for vendors. Fifty-six percent say they can't embrace cloud fully until they ensure the security of cloud service providers can meet corporate compliance requirements.

More than half (52 percent) of security decision makers surveyed consider security to be a responsibility shared between their companies and their vendors. Nearly three-fourths (73 percent) of them are at least somewhat confident in the security of information they have in the cloud. However, their trust in cloud security has declined slightly in the past year. Their uncertainty about their ability to enforce security at provider sites is still a barrier to using public cloud services, rising as a worry even as other specific concerns are diminishing.

Security-focused respondents are clear about what they want from vendors: greater insight into vendors' security practices. Sixty-eight percent want regular security updates. Nearly 60 percent also want to see vendors implement a variety of measures, including being allowed to conduct onsite security audits, having vendors adopt industry standard frameworks, maintaining interoperability with the company's information security architecture and, more generally, meeting the organization's security standards.

In addition, more than half want vendors to incorporate security into the their system development life cycle, implement monitoring and access control policies and procedures and conduct background checks on relevant vendor employees.

IT Shops Still Have Work to Do

Technology organizations are continuing to adapt to the changes cloud is bringing to IT operations. About half of respondents say cloud is increasing the demand for new applications (50 percent), IT complexity (49 percent) and the need for specialized skills (49 percent). Though 48 percent see no impact on headcount, in the 39 percent of companies where staffing levels are changing, headcount is more likely to be decreasing.

Respondents are more likely to note positive effects. Fifty-six percent point to increasing IT innovation and greater access to critical business data. And 54 percent say employee collaboration and IT agility has improved.

Information governance in the cloud remains an area for IT to address, especially at small and mid-sized companies. Many organizations don't yet have policies for governance of information generated or stored in the cloud. At large companies, where 59 percent have cloud governance policies (up from 52 percent in 2012) they're most often an extension of existing information governance policies. Among small and medium companies, 63 percent don't yet have data governance policies, though of this group, 70 percent are planning to create them.

Given that data governance is an ongoing challenge for many companies, and that some business leaders are unconvinced about the value of cloud, it isn't surprising that respondents want vendors to focus most on data integrity/quality assurance and better pricing models. Respondents at large companies, perhaps because most have data governance in place, put contract flexibility and controls to help with compliance among their top needs.

Respondents say they often turn to their peers for information about cloud vendors, support issues, and emerging technologies. Their top interests now, consistent with their concerns about cloud technology and management, include learning how vendors are addressing security concerns (73 percent), storage (72 percent) migrating data to the cloud (70 percent) and deciding which applications are a good fit for cloud computing models (70 percent).

Given that IT decision makers consider information from many sources, vendors have opportunities to raise their profile among customers, possibly by coming up with creative ways to address the gaps in their management capabilities as well as their financial challenges. Respondents most often cite the same established vendors as cloud computing thought leaders that they did last year--Amazon, Microsoft and Google-- no vendor was mentioned by more than 32 percent of respondents, and most were cited by 18 percent or less.

Methodology & Respondent Profile

IDG Enterprise's 2013 Cloud Computing Survey was conducted online among the audiences of six IDG Enterprise brands – CIO, Computerworld, Network World, CSO, InfoWorld and ITworld – via pop-up and email invitations, between December 14, 2012, and January 17, 2013 with the objective of understanding organizational adoption, use-cases, and solution needs with respect to cloud computing. This was a targeted research effort, to be considered qualified respondents must have reported cloud utilization was planned or currently leveraged at their organization. Furthermore, respondents must have reported personal involvement in the purchase process for cloud solutions at their organization.

Respondents were offered a chance to win \$250 cash as an incentive for completing the survey. Results are based on 1,358 qualified responses. The margin of error on a sample size of 1,358 is +/- 2.7 percentage points. For the purposes of this report, large companies refer to those respondents at companies with 1,000 or more employees. Small and mid-sized companies refer to those respondents at organizations with less than 1,000 employees. Percentages on single-select questions may not sum to 100 percent due to rounding.

A broad range of industries are represented including high-tech (18 percent), financial services (10 percent), public sector (10 percent), manufacturing (10 percent), education (9 percent) and business services (9 percent). Fifty-five percent of respondents are employed by organizations with fewer than 1,000 employees while 43 percent are employed in 1,000+ employees (2 percent did not provide an answer).