



CLOUD 401: NAVIGATING ADVANCED TOPICS IN CLOUD COMPUTING

Introduction

The cloud market has matured, and many IT professionals are exploring advanced topics in cloud architecture and deployment, covering details of migration, financial outcomes and barriers to further adoption.

Welcome to Cloud 401 – a research report addressing those advanced topics in cloud computing.

100% of respondents to the survey behind this report work at organizations that have implemented cloud computing services as part of their IT strategy

100% of respondents participate directly in the decision making on their organization's implementation of cloud computing services



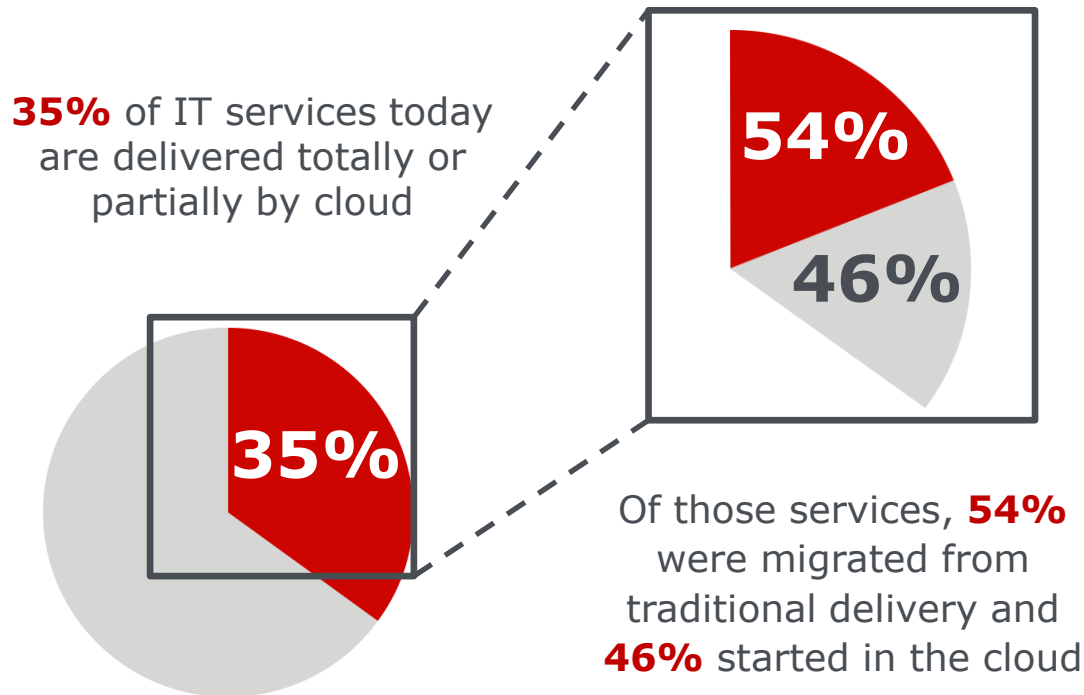
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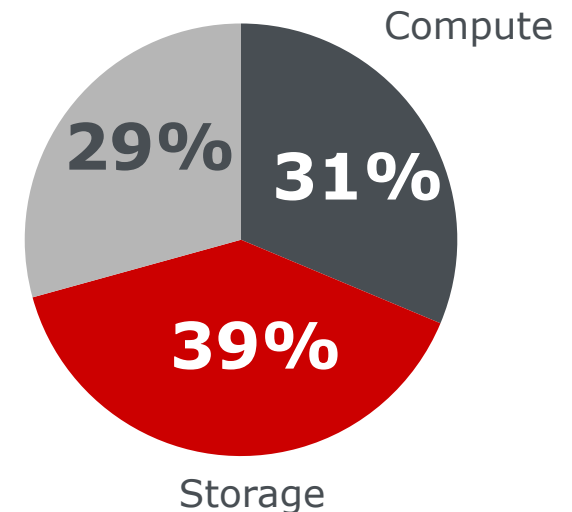
The State of the Cloud

- Organizations that have implemented cloud computing are no longer just testing the waters



What percentages have you reserved for computing, for storage and for applications?

Applications

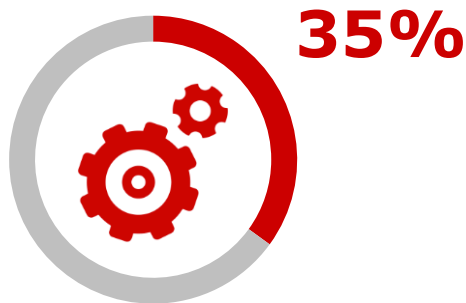


Research Topic: What percentage of **entirely new** IT services launched recently were launched via traditional delivery vs. in the cloud?

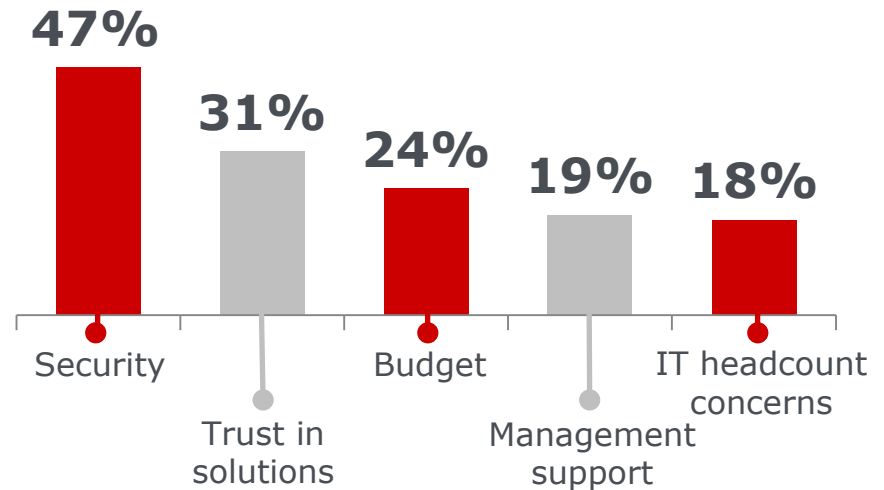
Prospects for Cloud Growth

- Looking ahead, organizations consider delivering **35%** of **entirely new** IT services via cloud

As your organization evaluates and plans entirely new IT services, approximately what percentage do you consider for either partial or total delivery via cloud?



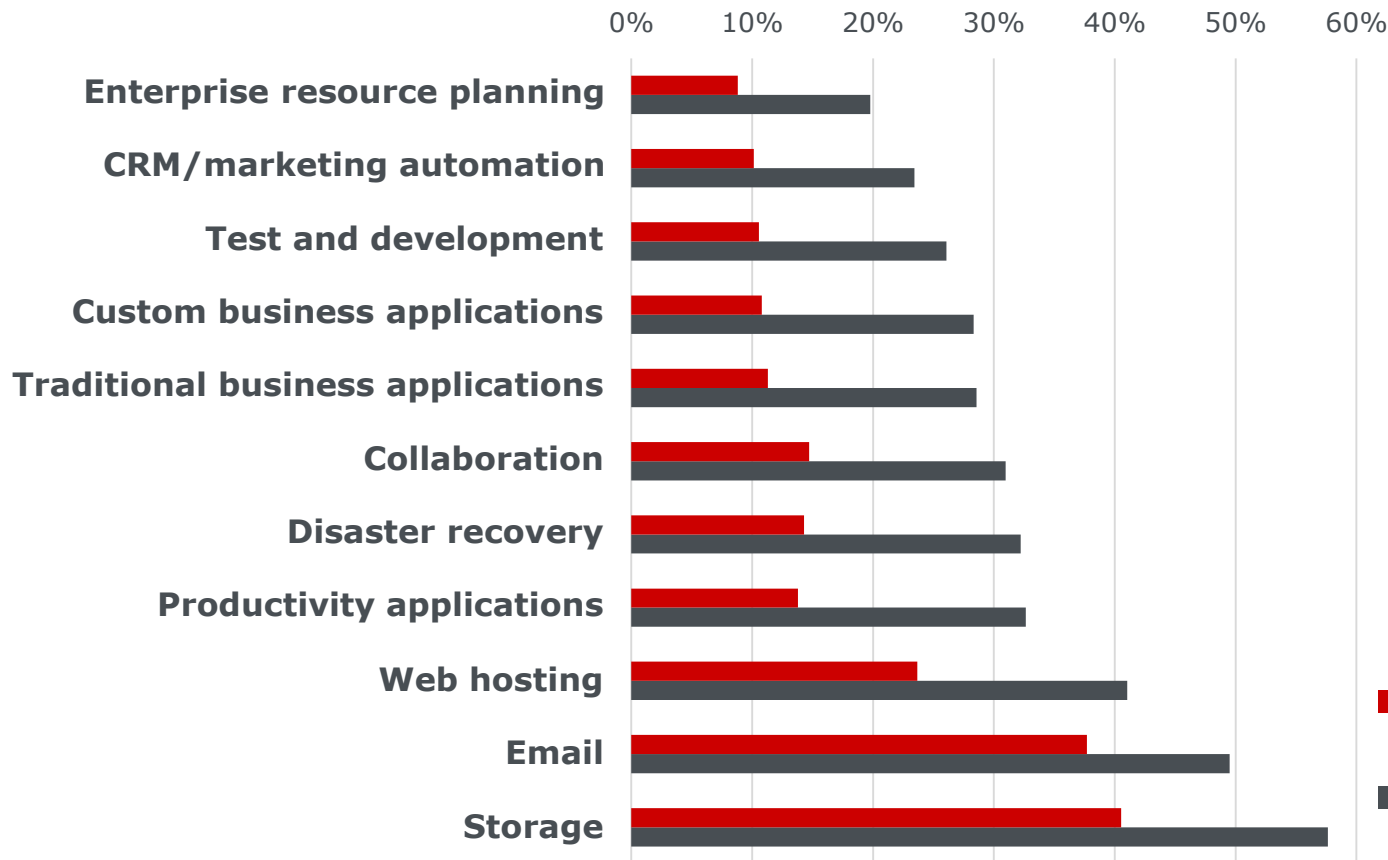
Looking ahead, what barriers do you see for moving more services to the cloud?



Research Topic: Given current options, what is the maximum technical and economic potential for IT services delivery via cloud?

Adoption Thus Far

- The most prevalent IT services in the cloud are also the easiest to transition – storage, email and Web hosting



Research Topic:
Customers are pursuing what they perceive as easy.
Are they doing so by accident or design?

- Easiest to transition to the cloud
- Percentage of organizations delivering via the cloud

The Cloud Experience: Mixed

- Organizations report mixed reactions regarding the hype vs. realities surrounding the cloud – and for some, the conversation is ongoing

What parts of the cloud hype were most true and most false?



Flexibility

True: **19%**
False: **7%**



Ease of Use

True: **16%**
False: **7%**



Ease of Administration

True: **12%**
False: **8%**



Security

True: **11%**
False: **21%**



Cost Savings

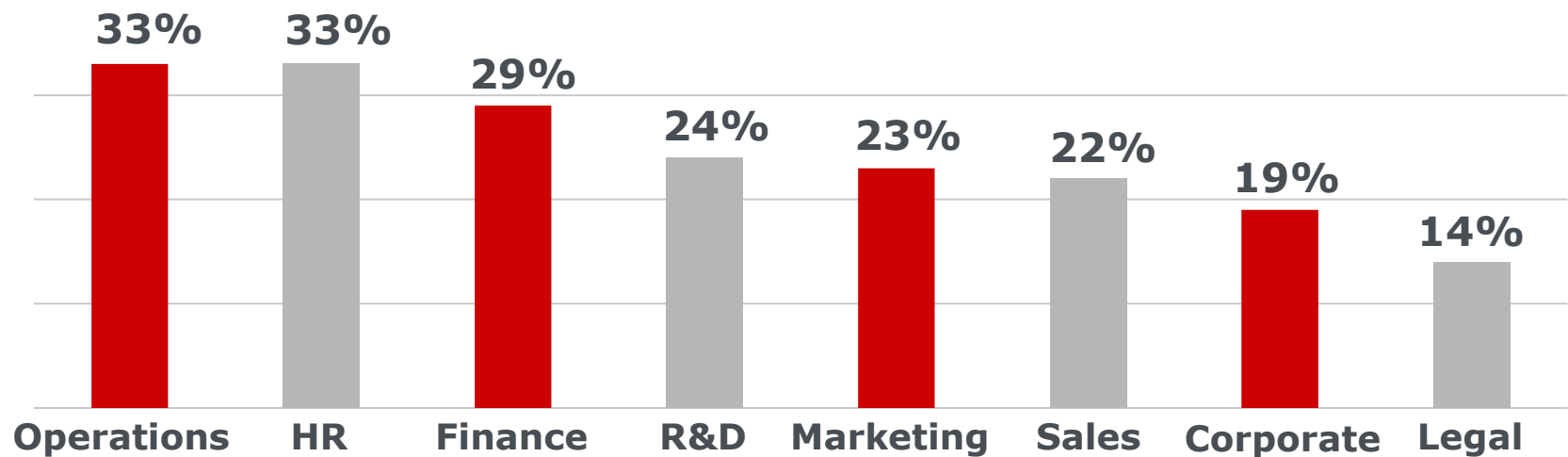
True: **17%**
False: **17%**

Research Topic: Why is the experience compared to many of cloud's hyped benefits so mixed?

The Essential Role of IT: Enabling and Integrating

- In the average cloud-subscribing organization, IT selects and manages only **73%** of cloud services, making its mission of enablement and integration more critical than ever

Besides IT, what parts of the organization are buying cloud services directly?



Research Topic: How can IT empower its internal customers while fulfilling its services mission effectively?

Same as Ever: IT Must Plan for Service Disruptions

- Reliability is key, but **76%** of organizations surveyed say at least one cloud vendor failed to meet their SLA

Cloud vendor attributes identified as most important to customers:



43%

Reliability



28%

Cost
stability



27%

Ability to
integrate with
existing
infrastructure



25%

IT support during
implementation



25%

Lowest
total cost

Research Topic: How can we architect business continuity, high availability and disaster recovery into our cloud solutions?

Security Risks Remain, But Are Addressable

- Only **28%** of respondents identified security as the largest source of problems for **current** cloud services; most users are more concerned with how to derive value from the cloud – securely

Cloud security **isn't a point solution** that you buy and implement. CDW recommends the following risk mitigation practices to help **actively address and manage** an organization's security concerns:

- ☁ Define security policies for various levels of organizational data
- ☁ Apply controls for tracking data
- ☁ Manage access and credentials
- ☁ Protect remote and mobile endpoints

Measures organizations also consider to secure their data in the cloud*:

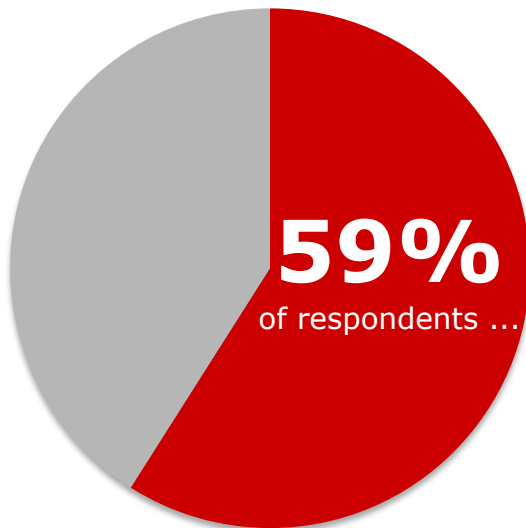
1. Encrypt transmitted and sensitive data
2. Manage access, authentication and identity for cloud applications
3. Change password every 90 days
4. Certify security measures taken by cloud vendor
5. Hold annual security training for all employees

*Source: CDW 2011 Cloud Computing Tracking Poll

Research Topic: Has cloud security been an actual problem for many organizations? What specific security issues have they had? And how are they addressing them?

Cloud or Traditional IT, Migration/Integration Is Key

- Beyond security and other concerns (see slide 5), complexity of migration and integration proves to be IT's top challenge – making IT's role of enablement even more critical



... would make more use of cloud, but the **complexity of migration and integration** is holding them back.

... believe cloud is inexpensive to buy, but expensive and/or **difficult to implement and integrate** with their other resources.

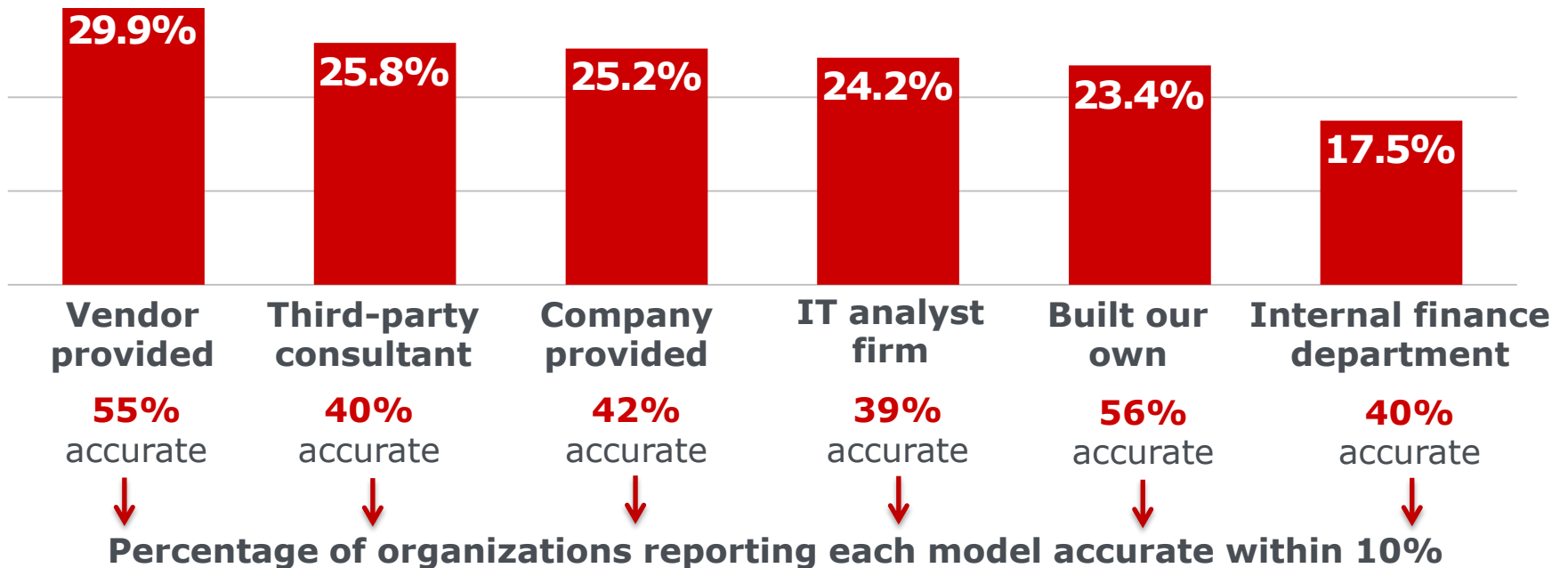
Cloud implementations have streamlined. On average, respondents reported that their first cloud implementation took **14 weeks**, from start to finish. Now, the typical cloud implementation takes only **10 weeks** on average, with more than half of organizations saying it takes **six weeks or less**.



The Benefits Are There, But the Math Is Complicated

- Organizations struggle to make accurate financial forecasts, as **53%** say their models are **off by** more than **10%**

How organizations sourced financial models for cloud adoption:



Research Topic: What is difficult about forecasting cloud's financial impact, and how can we improve? What are the best financial variables to consider?

All Industries Agree – Cloud Works

Organizations with successful cloud migrations offer the following inspiration:



“Although it may seem complex, cloud is by far the way to go as far as infrastructure and storage.” – **CTO, Healthcare Organization**



“It is not as difficult to implement and train staff to use cloud computing as was initially feared. Had we known how easy it was going to be, we would have done it much sooner.” – **IT Supervisor, Small Business**



“Cloud computing has enabled us to invest more money back in the business.” – **CIO, K-12 Public School**



“People are always going to buck change; don't get discouraged, just keep pressing forward” – **IT Supervisor, Large Business**



“Using cloud computing we can optimize the organization and minimize the workload efficiently.” – **CIO, Higher Education**



“It is an expensive investment in the short term, but provides significant long-term cost savings.” – **IT Director, State & Local Government**



“Be very optimistic and open-minded about how it can enhance the efficiency and reliability of an entity's operations.” – **CIO, Federal Government**

Recommendations

- Don't overlook the importance of planning and preparing for migration and integration
- Organizations need a platform with system diagnostics, along with properties and processes that are made to run seamlessly and without any concerns over privacy and speed of network transfers
- Managed services provide the full benefits of a cloud solution, without the complexity and concern of management:



Continuous 24x7
monitoring



Management reporting



Metered billing



Case-based ticketing
and escalation



Progressively tiered
services



Application support

Methodology and Demographics

CDW surveyed 1,204 IT professionals in June 2014. The total sample equates to a margin of error of $\pm 2.74\%$ at a 95% confidence level

100% of respondents' organizations have implemented cloud computing services as part of their IT strategy

100% of respondents participate directly in the decision making on their organization's implementation of cloud computing services

Respondent Position	
Chief or Deputy Chief Information Officer	19%
Chief or Deputy Chief Technology Officer	12%
IT Director or Manager	49%
IT Supervisor or Specialist	13%
IT Systems Engineer	7%

Industry	
Small business	12%
Medium business	13%
Large business	12%
Federal government	13%
State or local government	12%
K-12 public school	13%
Higher education	12%
Healthcare provider	13%

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