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# Executive Perspectives on Virtualization and Cloud Initiatives at Midsize and Enterprise Organizations

Research conducted by:

**InfoWorld**

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# Executive Perspectives on Virtualization and Cloud Initiatives at Midsize and Enterprise Organizations

## Overview

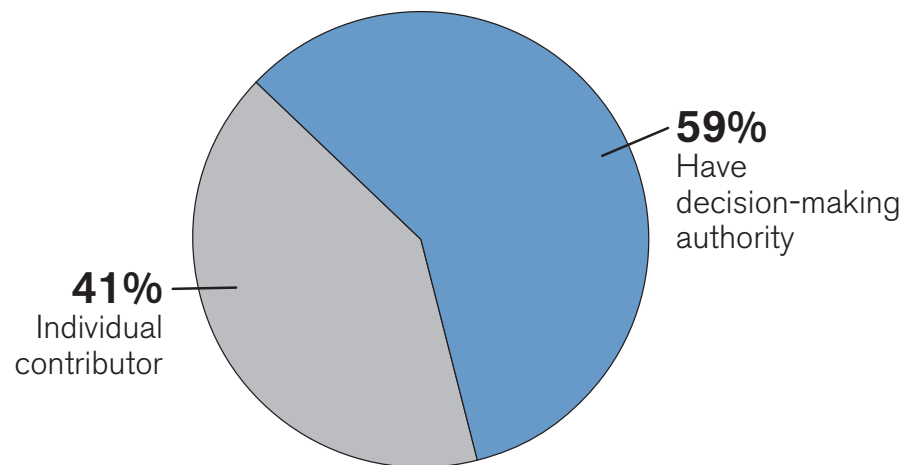
In April 2009, *InfoWorld* invited IT leaders to participate in a survey on virtualization and cloud computing. The survey was fielded via targeted broadcasts to *InfoWorld* customers, as well as through an invitation on InfoWorld.com. The goal of the survey was to gain insight into objectives driving virtualization initiatives at their organizations, as well as to measure current and planned cloud initiatives and understanding of the value of cloud computing. The survey was commissioned by VMware, but the data was gathered and tabulated independently by InfoWorld Research. The following report represents top-line results of that survey.

## Profile of Respondents

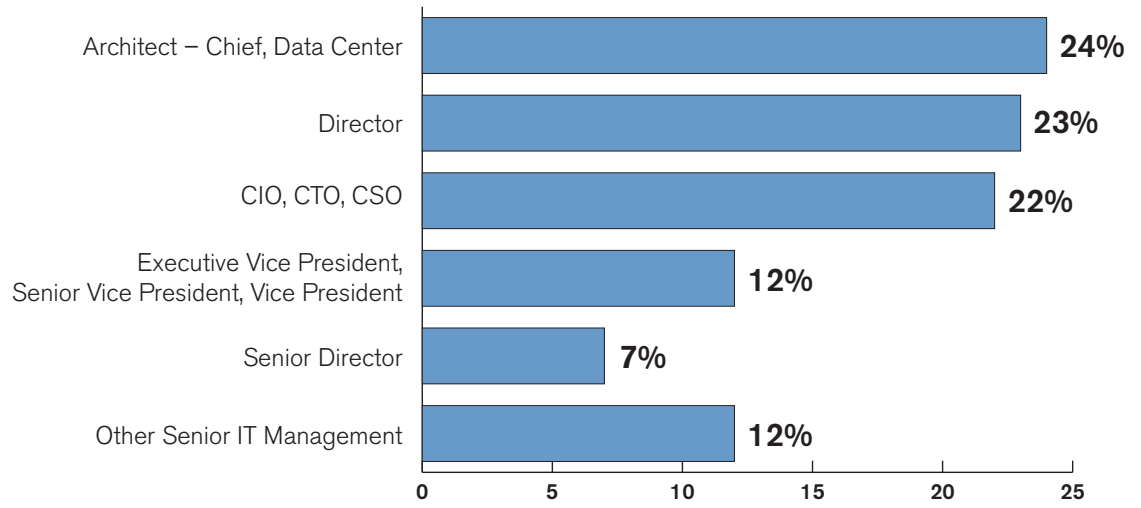
Total respondents: 135

All respondents were qualified through a series of screening questions for director level and above IT management roles at organizations with 500 or more employees. The chart below provides a breakdown of the percentage of respondents based on involvement. This chart is followed by breakdowns of respondents based on IT job function, company size, industry and location.

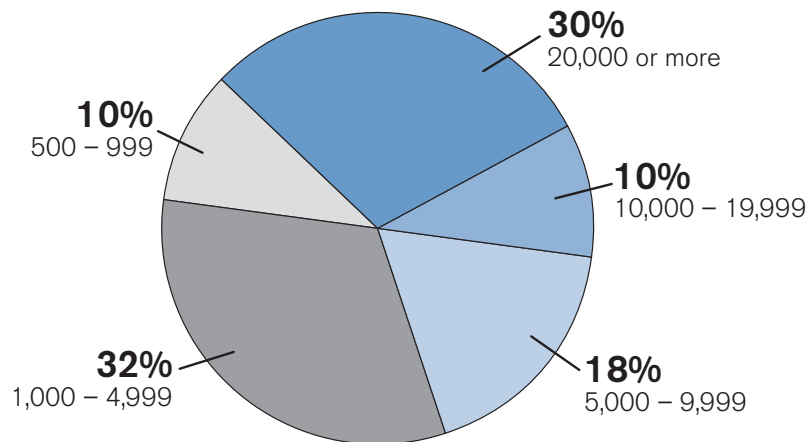
**Would you describe yourself as having decision-making authority or are you an individual contributor?**



Which one of the following best describes your primary IT job function at your organization?

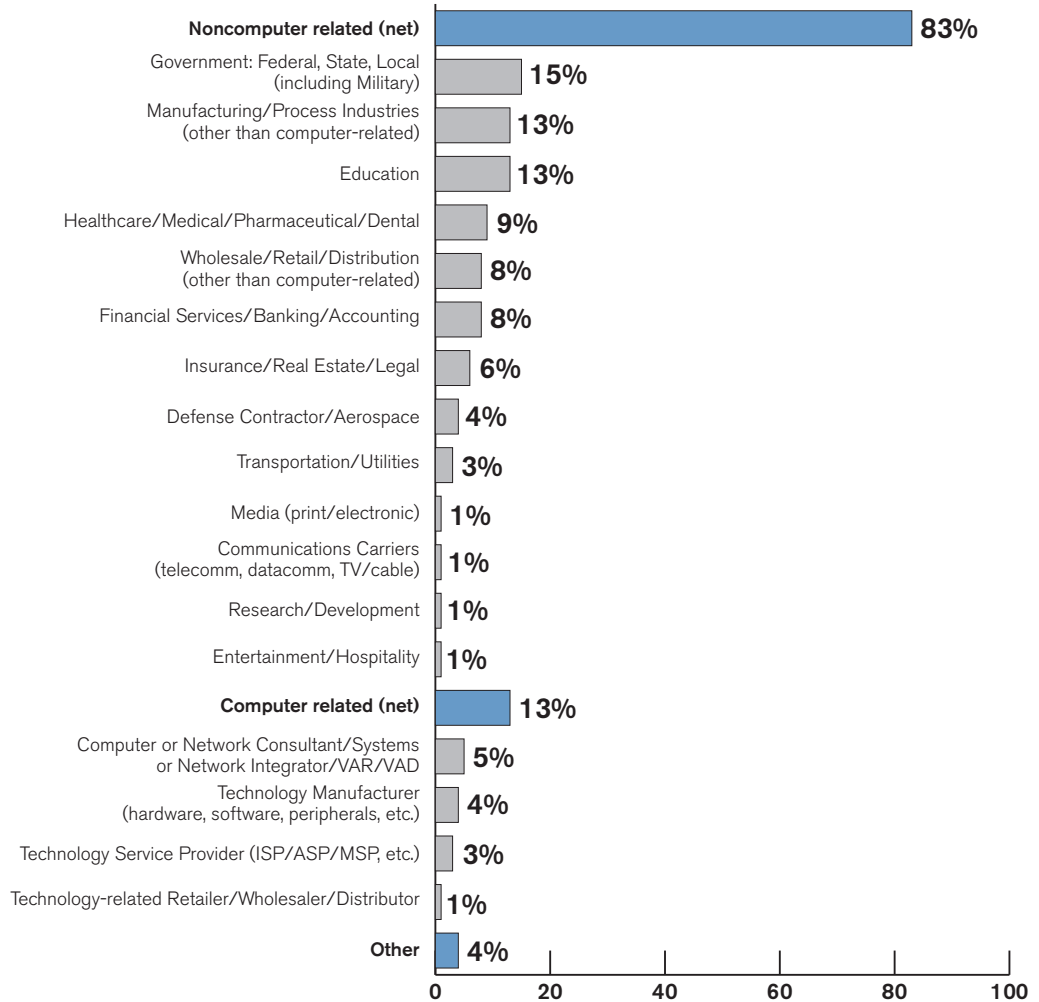


How many people are employed in your entire organization, including all branches, divisions and subsidiaries?

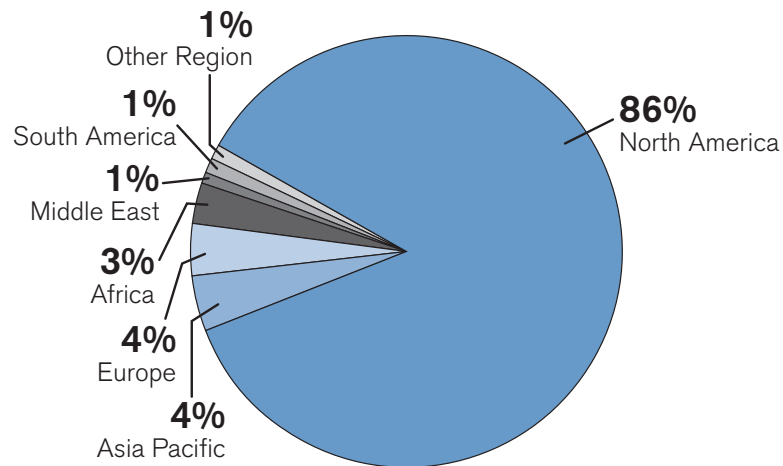


Average company size = 9,848

Which of the following best describes your organization's primary business or industry?



In what region are you located?



## Executive Summary

With the continued climate of IT budget constraints and more stringent regulatory requirements, the benefits of virtualization, including the reduction of IT costs while increasing efficiency, utilization and flexibility, are resulting in continued investment in virtualization. Respondents virtualizing production applications are realizing ROI of less than 1 year, and virtualization projects are surviving in the face of reduced IT budgets and closer examination of IT projects.

Respondents to this research plan to increase investments in all areas of virtualization from 2009 through 2011. Server virtualization, desktop virtualization, storage virtualization, application virtualization and enterprise/data center virtualization are noted as the top areas of investment. Overall, more than nine out of 10 respondent organizations indicate continued investments in virtualization.

Improving the efficient use of server and storage resources (64%) via server and storage consolidation (62%) continue to be important drivers for virtualization. However, respondents also recognize that overall data center efficiency can be improved from easier server provisioning, storage provisioning and software deployment (58%); reduced management costs/administrative overhead (54%); improved disaster recovery or reduced disaster recovery costs (53%); and improved systems reliability/availability (50%).

Six out of 10 respondents indicate they have realized ROI and cost savings from virtualization and 70% of those have realized these savings by virtualizing production applications. Seventy-nine percent (79%) of respondents who realized cost savings did so within 1 year and 30% realized those savings within 6 months. More than half of respondents have used ROI/TCO modeling to estimate savings.

With the need to improve the efficiency of IT, it is not surprising that seven out of 10 respondents report that server virtualization is surviving cost cuts at their organization along with plans addressing security and compliance (50%). Even in the current economic climate, only 34% of respondents indicate they are required to show additional justification for virtualization.

While virtualization itself dramatically improves the efficiency and availability of resources and applications, cloud computing is changing the way IT resources are utilized. It is clear that cloud initiatives at respondent organizations are on the rise, with two out of 10 indicating they currently have a cloud initiative under way, and an additional 31% planning to over the next 12 months.

Internal clouds enable the next generation of flexible, reliable IT services with uncompromising control over service levels. While 11% of respondent organizations report that they have their own internal cloud, 13% are planning to establish one over the next 12 months, and 25% are planning to establish their own internal cloud over the next 3 years.

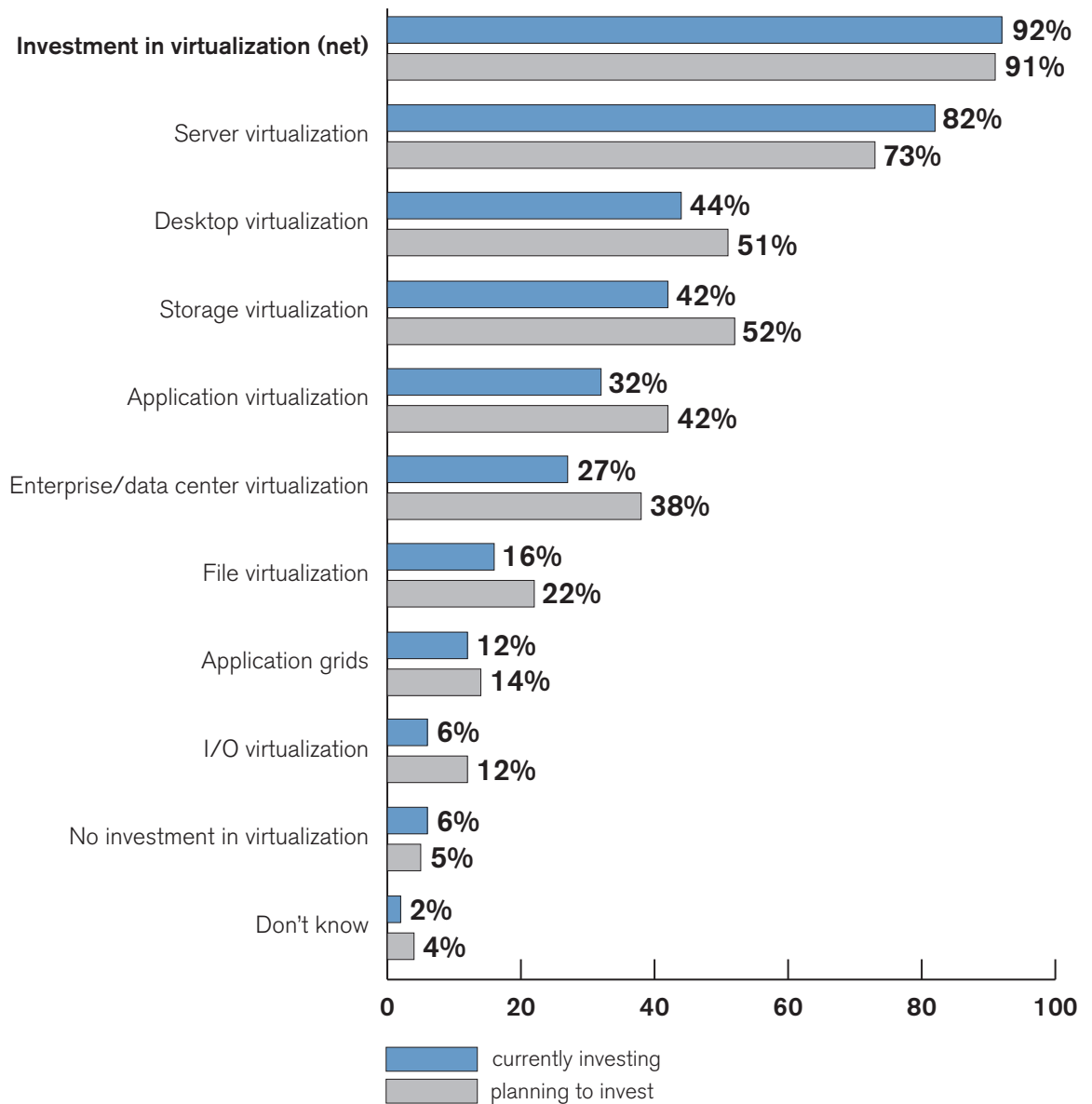
However, even with the expected growth in cloud computing, just under half of respondents (49%) state that they are unclear as to the value of cloud computing. Once provided a definition of cloud as "IT resources you can consume on and off premise," the percentage of respondents unclear as to the value decreased to 38%. Additionally, the percentage of respondents reporting that they definitely understand the value of cloud computing increased from 42% to 52%.

When asked which attributes they would assign to cloud computing, 56% of respondents indicate that clouds make IT respond faster or anticipate capacity, a top goal of organizations that would leverage virtualization for different initiatives if they received the required technical support and education. Other attributes assigned to cloud computing include "clouds remove the need to manage IT plumbing and make them more efficient" (47%), "clouds allow me to choose service providers easily based on best-of-breed capabilities" (39%), or "clouds reduce depreciation expenses" (32%). Leveraging the power of virtualization to transform IT infrastructures into internal or private clouds can enable these benefits of increased control, reduction of capital and operating costs, and the ability to maximize IT efficiency.

## Investment in various areas of virtualization

Current and planned investments in virtualization is high at respondent organizations, with more than nine out of 10 indicating current or planned investments in virtualization. Virtually all areas of virtualization measured will see an uptick in planned investments in 2009 through 2011, with the exception of server virtualization, which has the highest percentage of those currently investing at 82%. Topping the list for both current and planned investments are server virtualization, desktop virtualization, storage virtualization, application virtualization and enterprise/data center virtualization.

**In which areas of virtualization is your organization currently investing?  
In which areas of virtualization is your organization planning to invest in 2009 through 2011?**

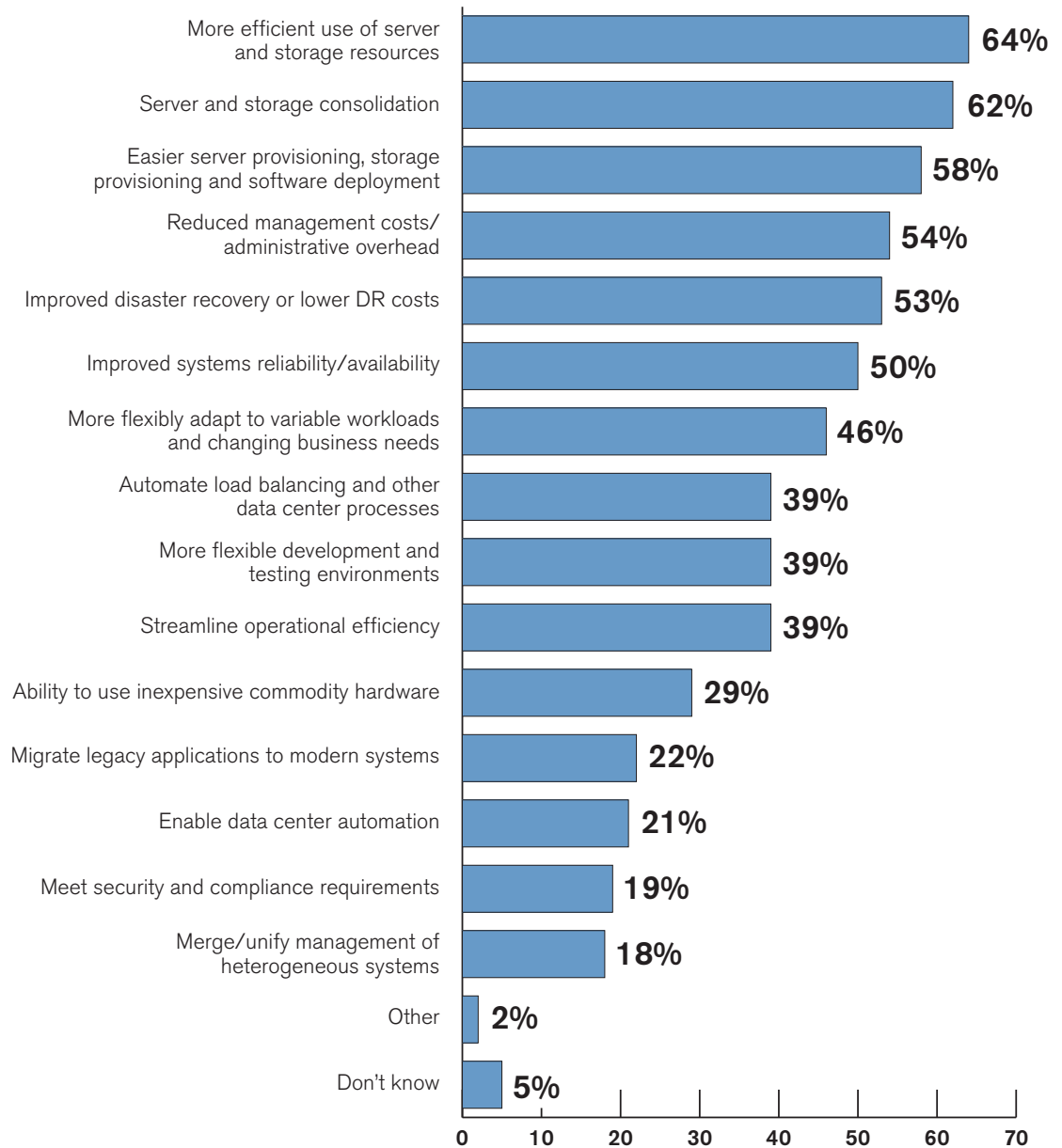


Multiple responses accepted

## Objectives driving virtualization initiatives

Improving the efficient use of server and storage resources (64%) via server and storage consolidation (62%) are the top two objectives driving virtualization initiatives at respondent organizations. Other top objectives relate to the improvement of overall data center efficiency, including easier server provisioning, storage provisioning and software deployment (58%); reduced management costs/administrative overhead (54%); improved disaster recovery or reduced disaster recovery costs (53%); and improved systems reliability/availability (50%).

### What objectives are driving your organization's virtualization initiatives?

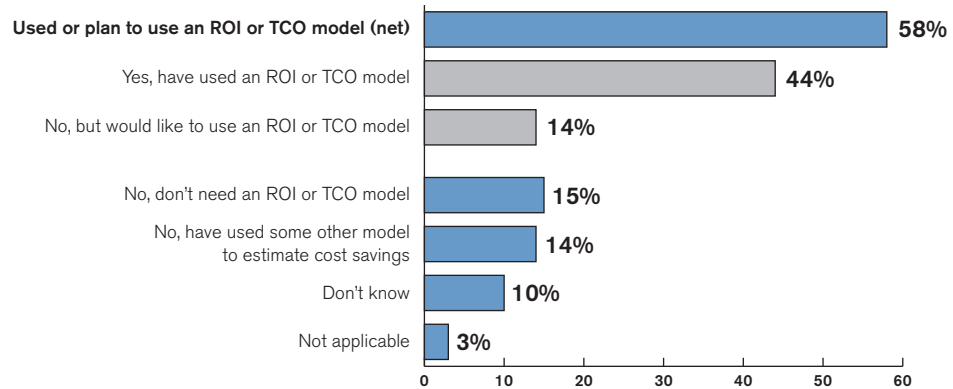


Multiple responses accepted

## Usage of ROI or TCO models to estimate cost savings from server virtualization

While roughly four out of 10 respondent organizations (44%) have used an ROI or TCO model to estimate cost savings from server virtualization, an additional 14% would like to use one of these models and 14% have used some other model to estimate cost savings. Fifteen percent (15%) of respondents feel they don't need an ROI or TCO model to estimate cost savings.

### Has your organization used an ROI or TCO model to estimate cost savings from server virtualization?

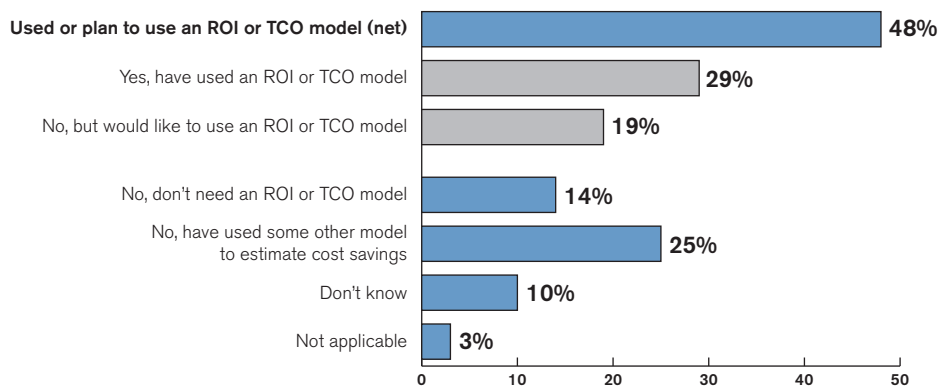


Base: 111 respondents whose organizations currently invest in server virtualization

## Usage of ROI or TCO models to estimate cost savings from desktop virtualization

While nearly three out of 10 respondent organizations (29%) have used an ROI or TCO model to estimate cost savings from desktop virtualization, an additional 19% would like to use one of these models and 25% have used some other model to estimate cost savings. Fourteen percent (14%) of respondents feel they don't need an ROI or TCO model to estimate cost savings.

### Has your organization used an ROI or TCO model to estimate cost savings from desktop virtualization?

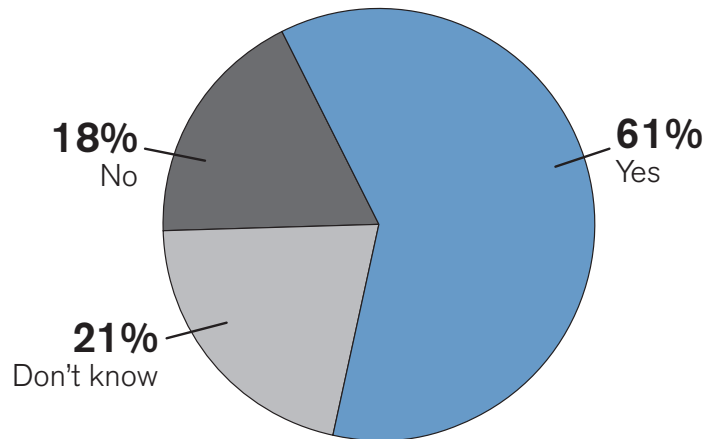


Base: 59 respondents whose organizations currently invest in desktop virtualization

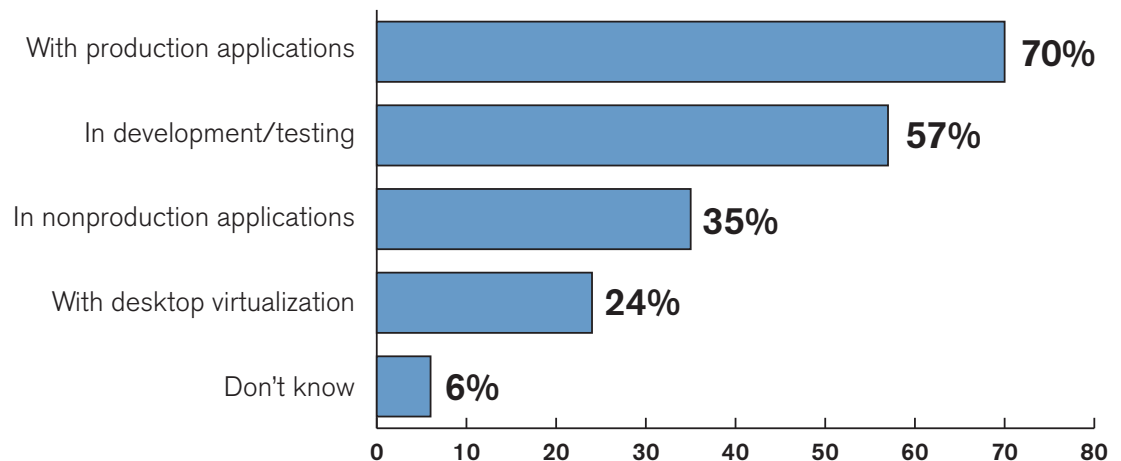
## Realization of ROI and cost savings from virtualization

More than six out of 10 respondents (61%) report that their organization has realized ROI and cost savings from virtualization. Among these respondents, seven out of 10 have realized ROI or cost savings with production applications. Nearly one-third of respondent organizations (30%) report that the first level of ROI or savings was realized within just 6 months, and 79% realized cost savings within 1 year.

### Has your organization realized ROI and cost savings from virtualization?



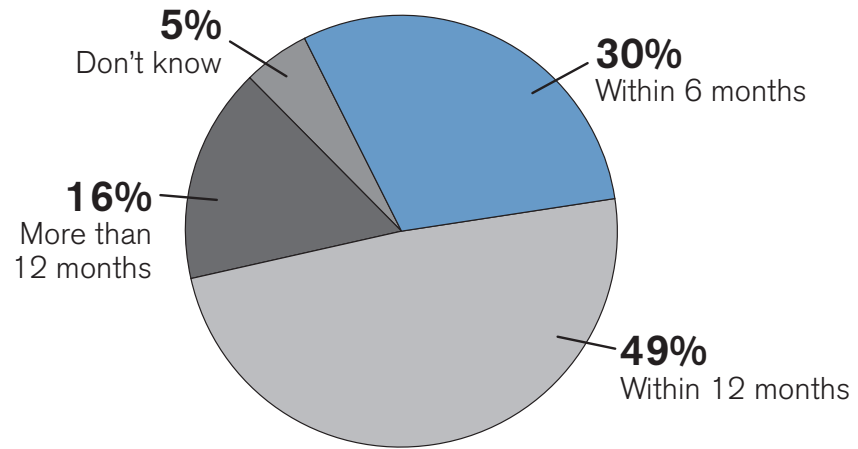
### To what degree was your organization's ROI or cost savings realized?



Base: 82 respondents whose organizations have realized ROI and costs savings from virtualization

Multiple responses accepted

**In what time frame was the first level of ROI or savings realized?**

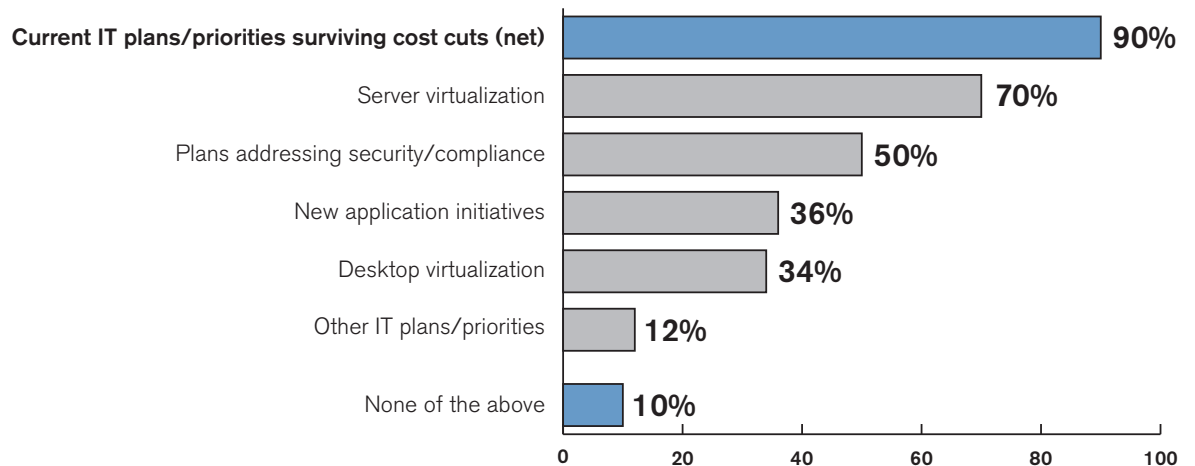


Base: 82 respondents whose organizations have realized ROI and costs savings from virtualization

## Current IT plans/priorities surviving cost cuts

Based on the top objectives driving virtualization initiatives at respondent organizations, it is not surprising that seven out of 10 respondents report that server virtualization is surviving cost cuts at their organization. Plans addressing security and compliance (50%) are also currently surviving cost cuts at respondent organizations.

**What current IT plans/priorities are surviving cost cuts at your organization?**

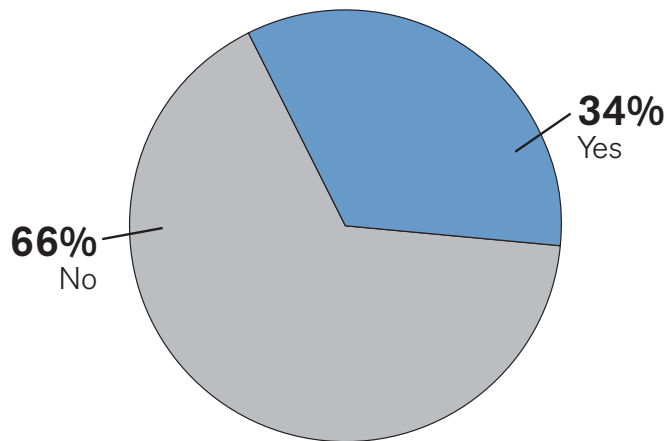


Multiple responses accepted

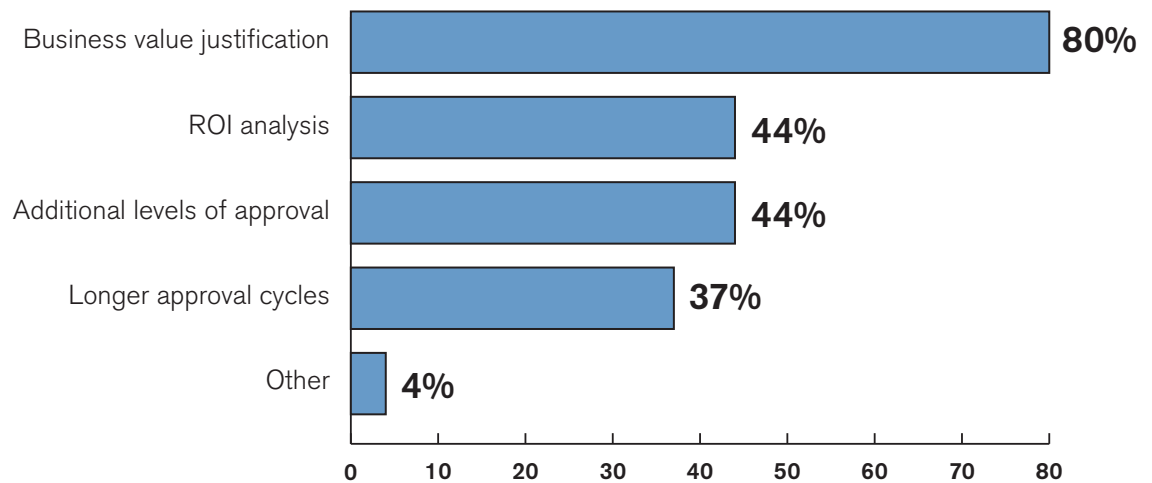
## Additional details required to justify virtualization projects

Even in the current economic climate, only 34% of respondents state that additional details are required now that were not required before to justify virtualization projects. Among these respondents, the most common form that these additional details must take is business value justification (80%). More than four out of 10 respondents (44%) also report that they are required to provide ROI analysis or that additional levels of approval are needed.

**Are additional details required now that were not required before to justify virtualization projects amid the current economic climate and your organization's business priorities?**



**If additional details are required, what form must they take?**



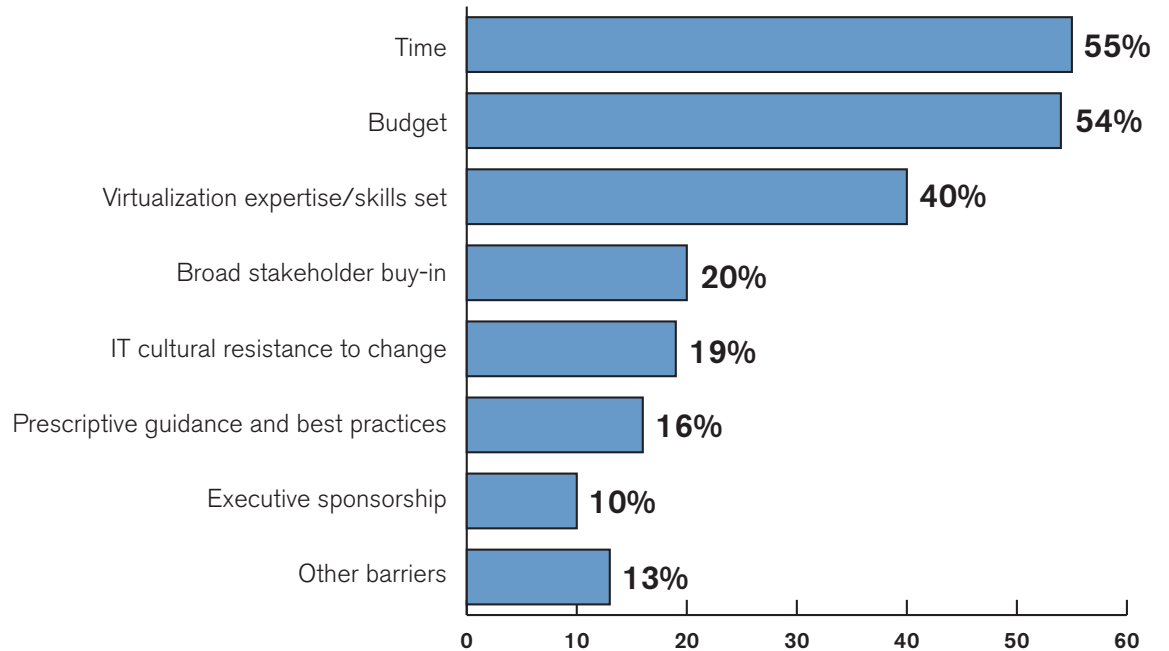
Base: 46 respondents whose organizations require additional details now that were not required before to justify virtualization projects

Multiple responses accepted

## Top barriers to deploying virtualization faster

Time (55%) and budget (54%) are the top two barriers to deploying virtualization faster at respondent organizations. Four out of 10 respondents (40%) also report virtualization expertise/skills set as a top barrier to deploying virtualization faster.

### What are the top barriers to deploying virtualization faster at your organization?



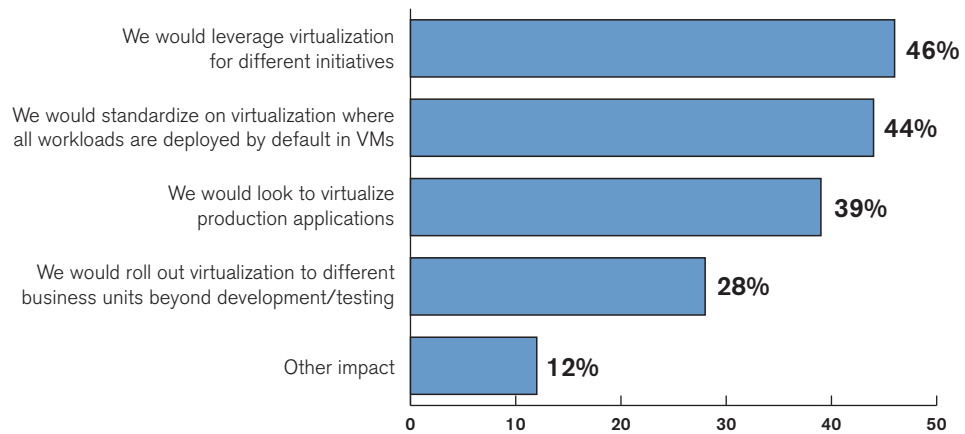
Multiple responses accepted

## Impact of virtualization with required technical support and education

If respondent organizations received the required technical support and education needed to support virtualization, it is expected that roughly four out of 10 organizations would leverage virtualization for different initiatives, standardize on virtualization where all workloads are deployed by default in VMs, or look to virtualize production applications.

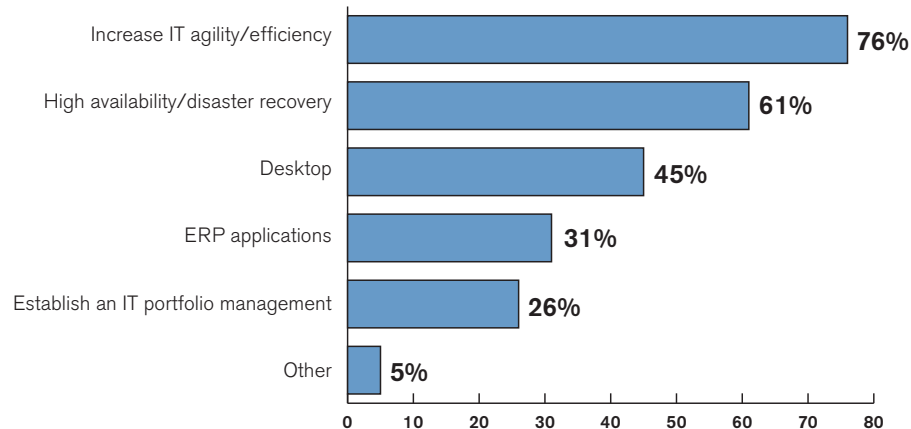
Among those respondents whose organizations would leverage virtualization for different initiatives, more than three-quarters (76%) would look to increase IT agility/efficiency, followed by high availability/disaster recovery (61%).

### If you received the required technical support and education, what would be the impact of virtualization within your organization?



Multiple responses accepted

### If your organization would leverage virtualization for different initiatives, what would they be?



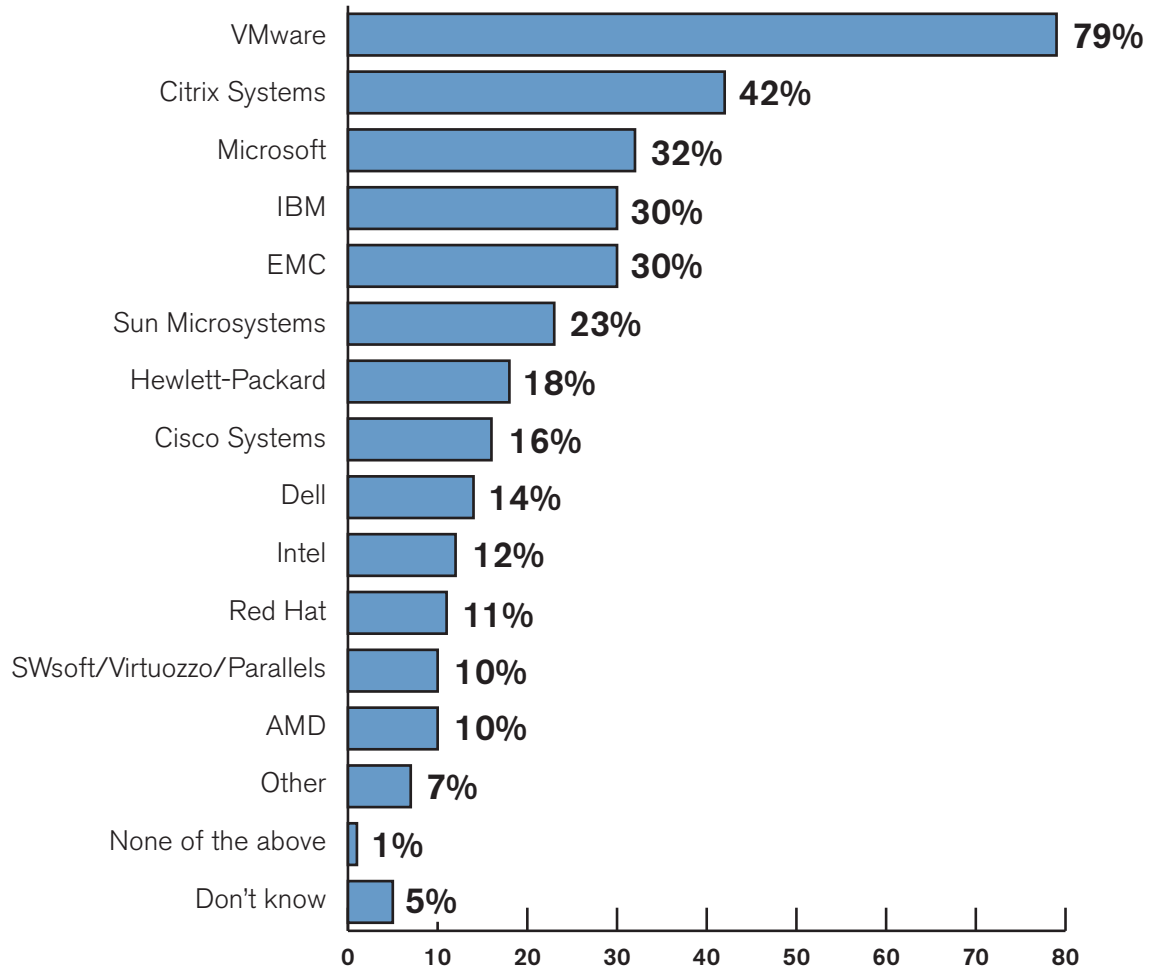
Base: 62 respondents whose organizations would leverage virtualization for different initiatives

Multiple responses accepted

## Virtualization thought leaders

VMware is by far considered the thought leader in the area of virtualization by nearly eight out of 10 respondents (79%). Rounding out the top five thought leaders are Citrix Systems (42%), Microsoft (32%), IBM (30%) and EMC (30%).

Which, if any, of the following companies are thought leaders in the area of virtualization?

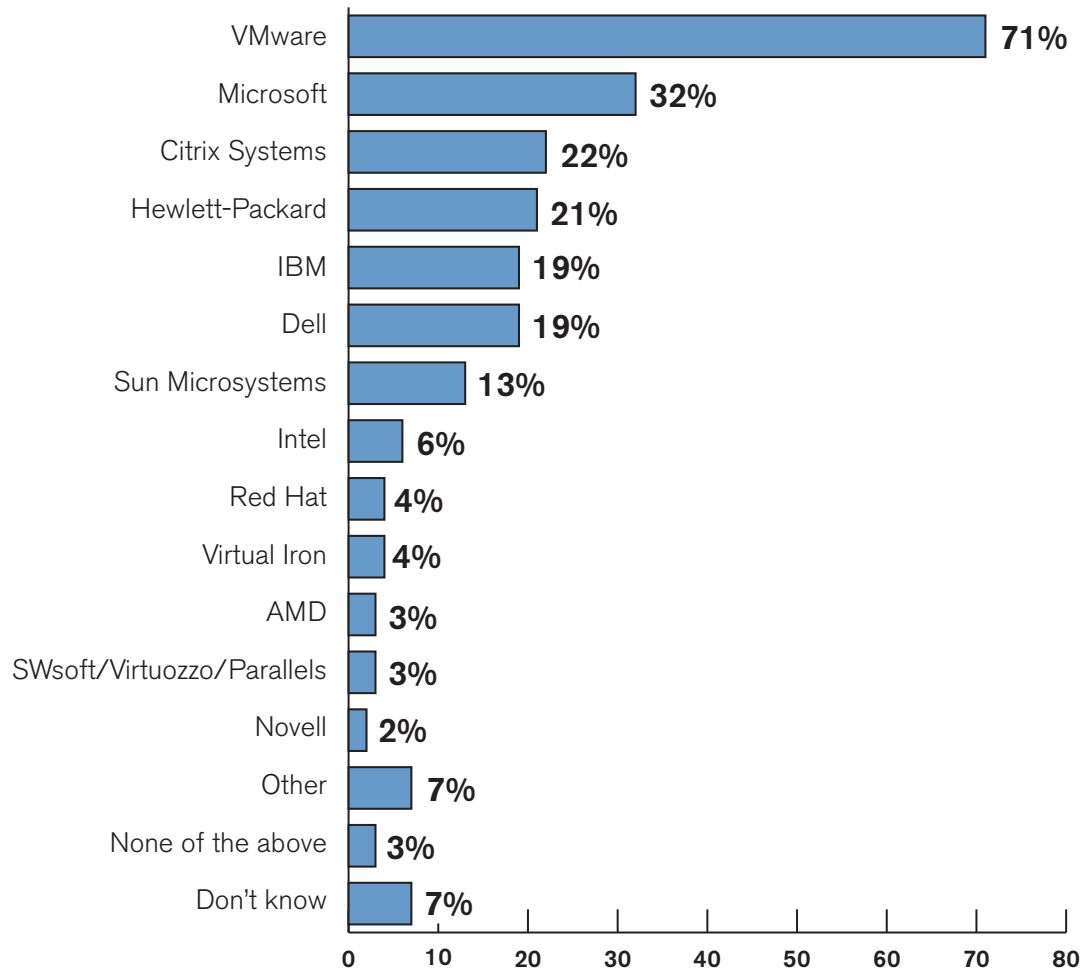


Multiple responses accepted

## Vendors likely to turn to for expertise and solutions necessary for server virtualization

During the next 12 months, organizations are most likely to turn to VMware for the expertise and solutions necessary for server virtualization at 71%. Other top vendors include Microsoft (32%), Citrix Systems (22%), Hewlett-Packard (21%), IBM (19%) and Dell (19%).

**During the next 12 months, which of the following companies is your organization likely to turn to for the expertise and solutions necessary for server virtualization?**

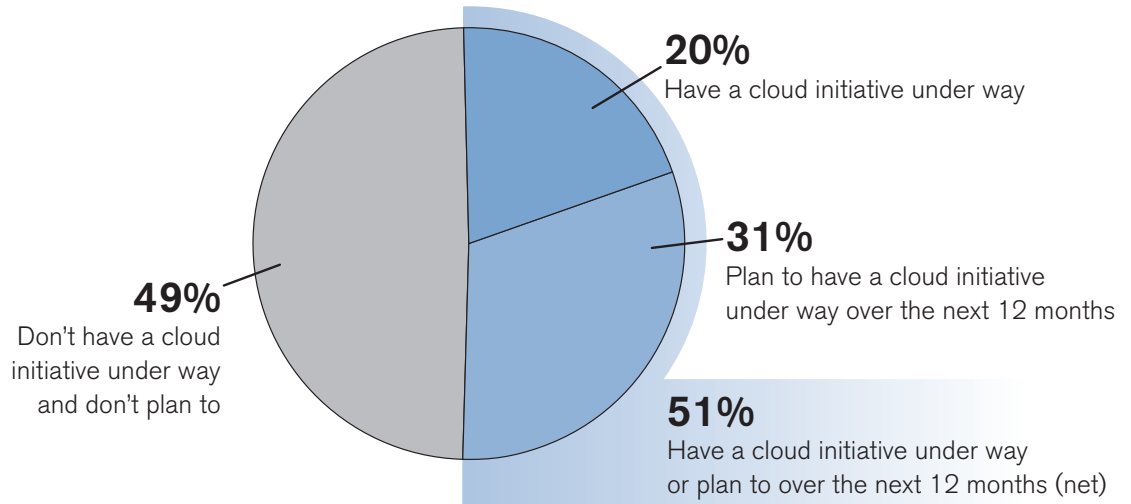


Multiple responses accepted

## Status of cloud initiatives

While two out of 10 respondent organizations currently have a cloud initiative under way, an additional 31% plan to over the next 12 months.

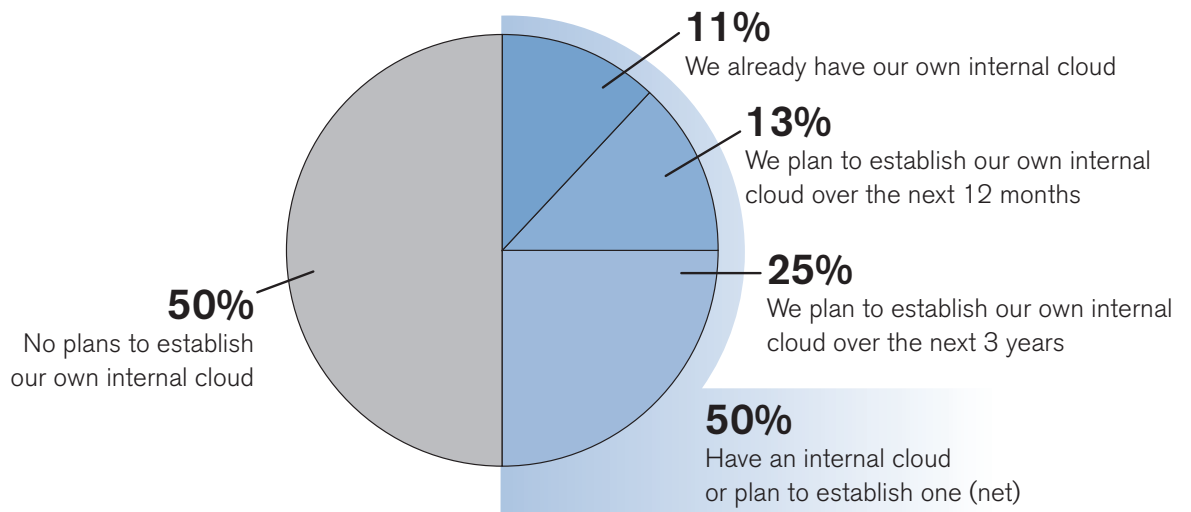
### Do you currently have a cloud initiative under way at your organization?



## Plans to establish an internal cloud

Half of respondent organizations have their own internal cloud or plan to establish one, with 11% indicating they already have one, 13% planning to establish one over the next 12 months, and 25% planning to establish their own internal cloud over the next 3 years.

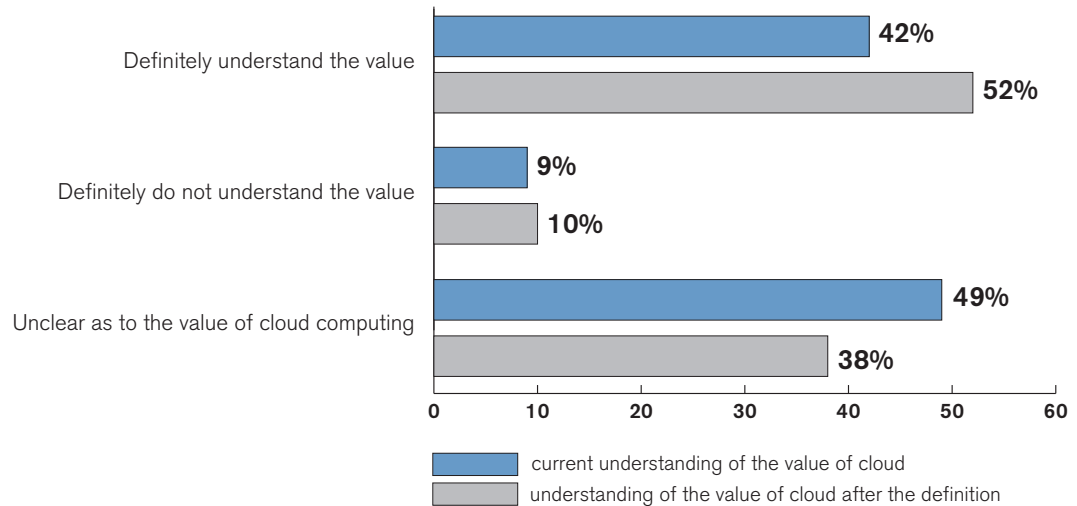
### What are your organization's plans to establish your own internal cloud?



## Understanding of the value of cloud computing

It is apparent that respondent organizations need to learn more about cloud computing as just under half (49%) state that they are unclear as to its value. While 42% of respondents understand the value, this percentage did increase to 52% once a definition of cloud computing was provided. After the definition was provided, the percentage of respondents unclear as to the value of cloud computing declined to 38%.

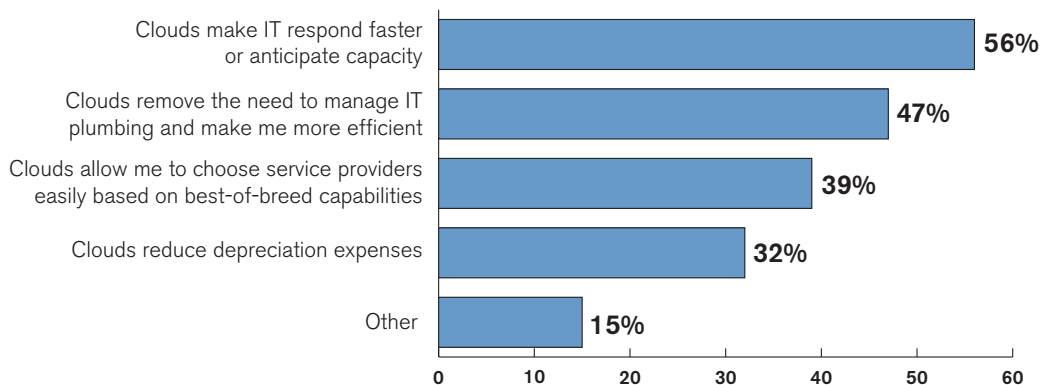
**Which one of the following best describes how well you understand the value of cloud computing?  
What if we defined cloud computing as “IT resources you can consume on and off premise”?  
Which one of the following best describes how well you understand the value of cloud computing now?**



## Attributes of cloud computing

When asked which attributes they would assign to cloud computing, more than half of respondents (56%) state that clouds make IT respond faster or anticipate capacity. Forty-seven percent (47%) of respondents also report that clouds remove the need to manage IT plumbing and make them more efficient. More than three out of 10 respondents also feel that clouds allow them to choose service providers easily based on best-of-breed capabilities (39%) or that clouds reduce depreciation expenses (32%).

**If you could assign your own attributes to cloud computing, what would they be?**



Multiple responses accepted

## Conclusion

Server and storage efficiency continue to be important drivers of virtualization, but overall data center efficiency is also becoming a key driver of current and future virtualization plans. Reducing IT management costs, improving system reliability and availability, and improving IT agility are cited by IT executives as reasons for continued investment in virtualization as they work toward transforming IT infrastructures into internal or private clouds in order to create an automated, controlled and resilient IT environment that can respond rapidly to changing business requirements.

While over half of respondent organizations have a cloud initiative under way or plan to over the next 12 months, more education is needed around cloud computing, with just under half of respondents reporting that they are unclear as to its value. Organizations facing the issue of reducing IT costs, while increasing efficiency, utilization and flexibility, should turn to a vendor offering a trusted and reliable platform for building internal cloud infrastructures, allowing their organization to focus on delivering business value.