Private Cloud Infrastructure Resiliency 2016 Benchmark Report

Published by

CONTINUITY SOFTWARE

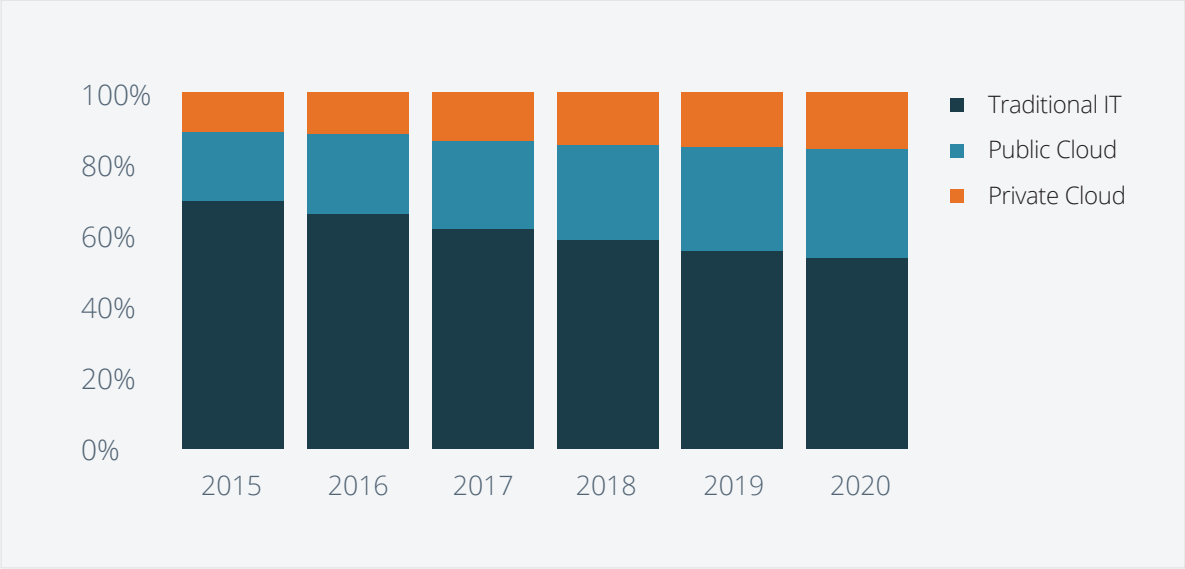
Executive Summary

The shift of IT infrastructure resources to the cloud environment is significant, and it is not showing signs of slowing down any time soon.

According to IDC, total investment in private cloud IT infrastructure will grow by 10.3% year-over-year to $13.8 billion, with more than 60% of this amount contributed by on-premises private cloud environments. Spending on public cloud IT infrastructure will increase by 18.8% in 2016 to $23.3 billion. IDC expects this rate of of year-over-year growth to stay constant through the year 2020, when spending on private cloud IT infrastructure will reach $21.1 billion, while spending on non-cloud IT infrastructure is expected to decline at 1.4% CAGR during the same period.

These forecast numbers are inline with the findings of Continuity Software's Infrastucture Resliency Survey, which shows that 64% of the organizations run a portion of their mission-critical applications in their private cloud and 42% run such applications in the public cloud.

However, the transition to the cloud is not without challenges. The survey shows that companies running mission-critical system in the cloud are less successful in meeting their service availability goals compared to organizions that don't store any of their mission-critical data in the cloud.



WW Cloud IT Infrastructure Investment Forecast - 2015-2020

Source: IDC

As many organizations have learned the hard way, even the failure of a single physical device or shared file system can bring down multiple virtual machines running several business applications, severely impacting business resiliency.

"Ensuring the availability of applications and data that run on the private cloud is a very difficult task."

Jean S. Bozman
Research Vice President, IDC

Configuration errors and deviations from vendor recommendations may linger in a virtualized environment without immediate impact, but may still pose a risk when circumstances change.

The data shows that frequent testing of cloud availability is essential. 73% of the organizations that test their cloud availability every 3 months or more often were successful in meeting their service availability goals, compared to just 50% of the organizations that conduct such testing less often.

"I urge all IT professional to team with the best technology, service providers and/or expert advisors to design and deploy their cloud, and then ensure its success with a solution such as AvailabiltyGuard/Cloud".

Deni Connor
Founding Analyst
Storage & Server Strategies NOW

However, almost half of the companies surveyed (47%) never test their private cloud availability, and only 18% test it on a quarterly basis or more often. Since the number of combinations and permutations in a virtualized infrastructure is almost endless, the reality is that manual failover testing in this environment is in most cases just too costly, time-consuming, and simply ineffective.

It is clear that ensuring resiliency in a mission-critical cloud environment requires a different playbook. It calls for a new set of capabilities that provide IT teams with an early-warning system to proactively identify and eliminate downtime and data loss risks before they impact the business.

Mission-Critical in the Cloud

64% of the organizations run some mission-critical applications in their private cloud and 42% run such applications in the public cloud.

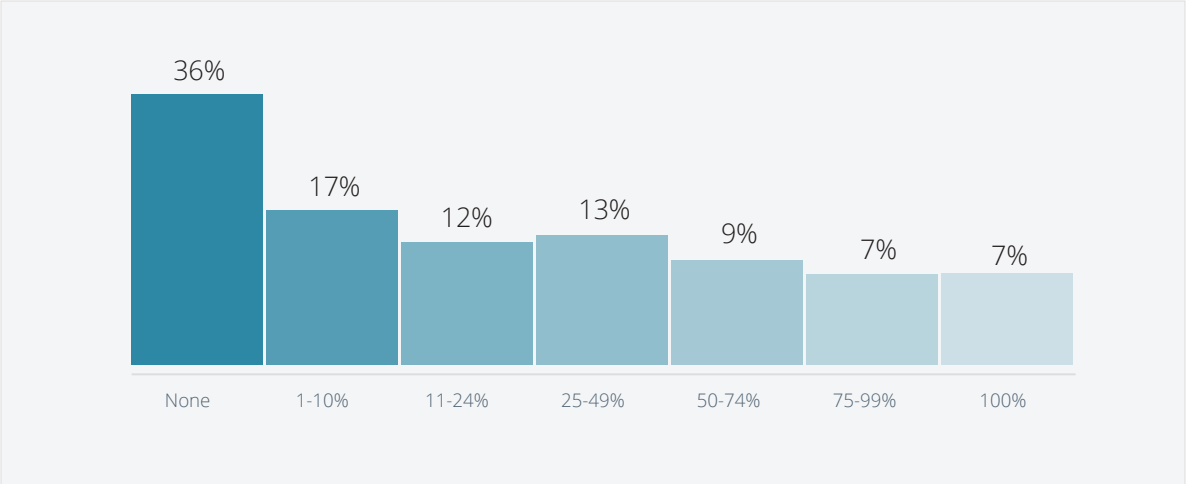


Figure 1: Mission-critical applications running in the private cloud

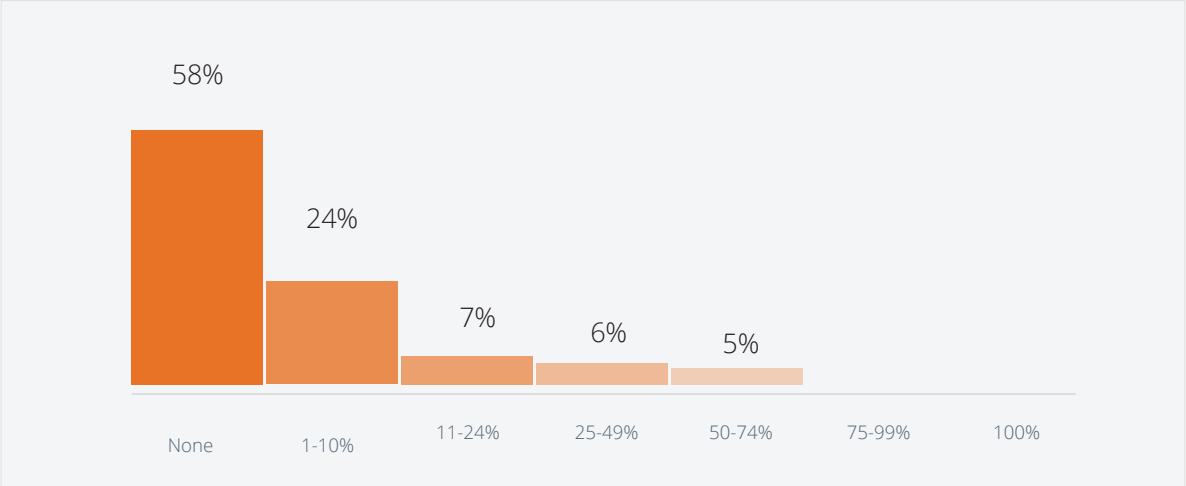


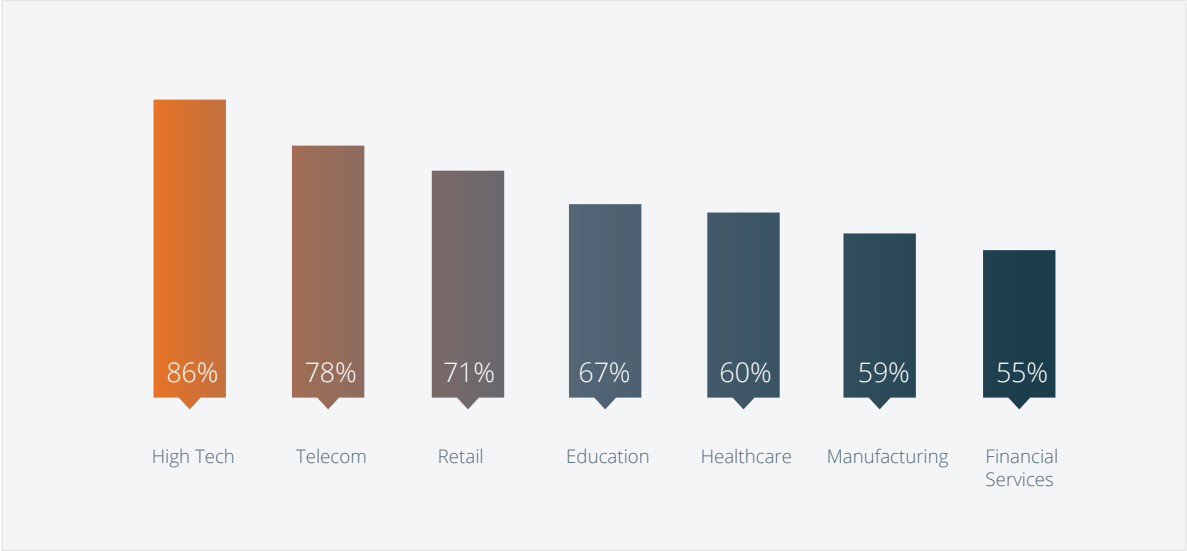
Figure 2: Mission-critical applications running in the public cloud

Large companies are leading the charge in the transition to the cloud. 69% of companies with over 10,000 employees run some of their mission-critical systems in the private cloud, compared to 58% of the companies with fewer than 10,000 employees.

Which Industries Lead the Way to the Cloud?

High-tech, telecommunication and retail are the industries that lead the way to cloud adoption. The education sector joins them in public cloud adoption.

PRIVATE CLOUD ADOPTION



PUBLIC CLOUD ADOPTION

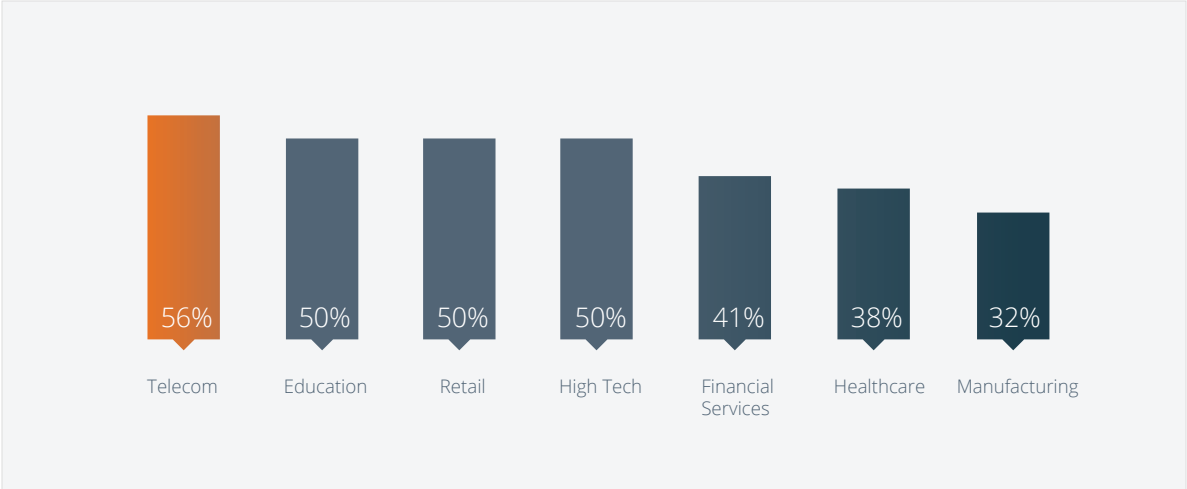


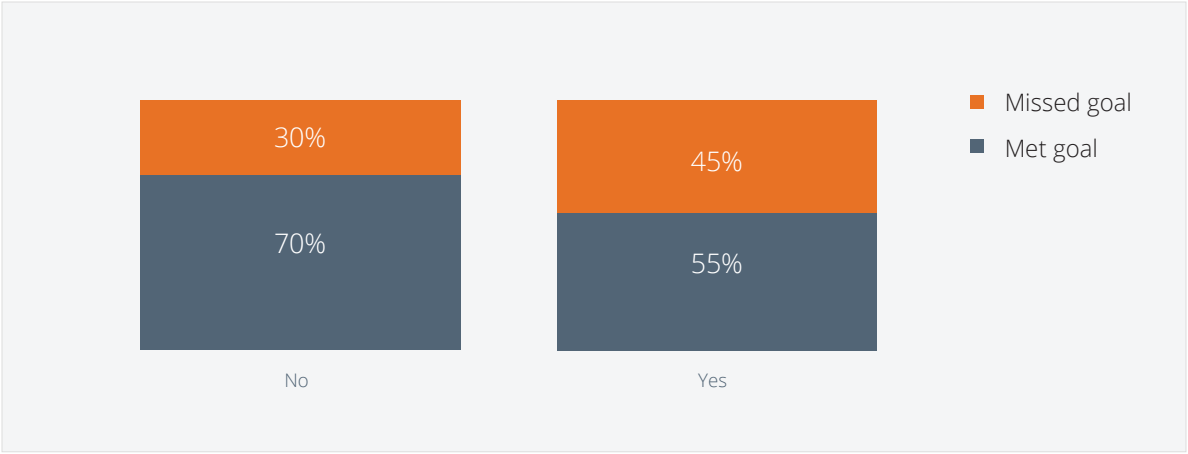
Figure 3: Which industries lead the way to the cloud?

Cloud Systems Are Less Resilient

Companies that have mission-critical system in the cloud were less successful in meeting their service availability goals compared to organizions that don't run any of their mission-critical systems in the cloud.

The figures are similar for private and public cloud. About half of the companies with cloud systems did not meet their goals, compared to about a third of the companies that don't have any cloud-based mission-critical systems.

MISSION-CRITICAL SYSTEMS IN THE PRIVATE CLOUD



MISSION-CRITICAL SYSTEMS IN THE PUBLIC CLOUD

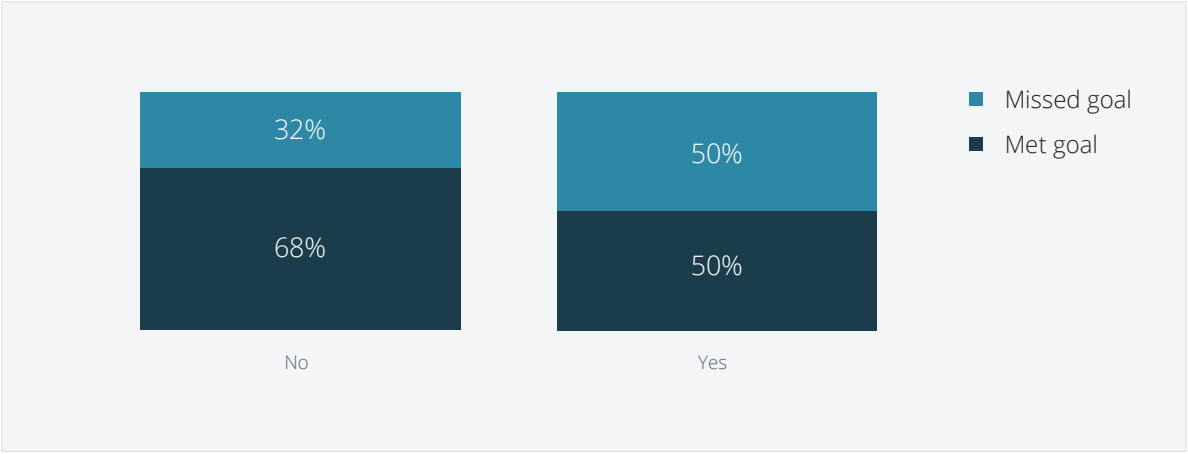


Figure 4: Mission-critical systems in the cloud vs. ability to meet availability goals

Industries with Higher Cloud Adoption Lag in Meeting Their Goals

Industries with higher levels of cloud adoption – high tech, telecommunication, and retail – generally have a harder time meeting service availability goals.

One of the exceptions is the education sector, which is one of the leaders in public cloud adoption yet has the best record for meeting service availability goals.

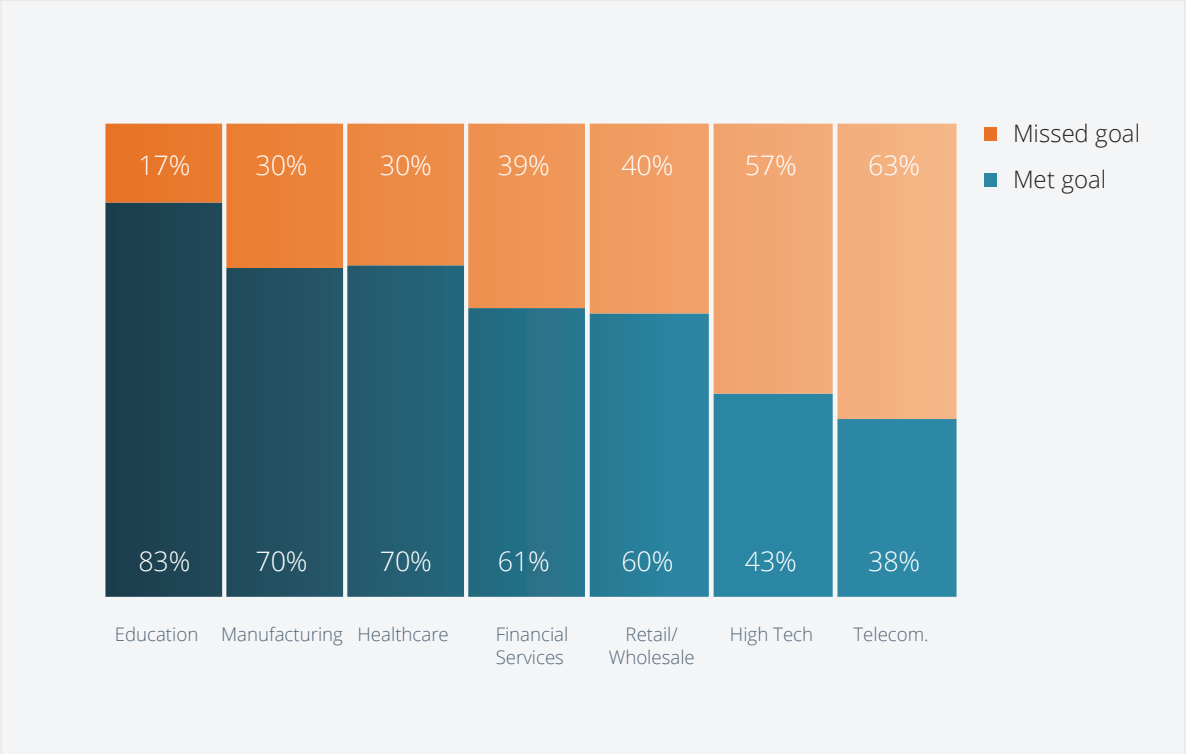


Figure 5: Meeting service availability goals by industry

Frequent Testing Leads to Better Resiliency

There is a positive correlation between the frequency of testing cloud availability and meeting service availability goals. 73% of the organizations that test their cloud availability every 3 months or more often were successful in meeting their service availability goals, compared to just 50% of the organizations that conduct such testing less often.

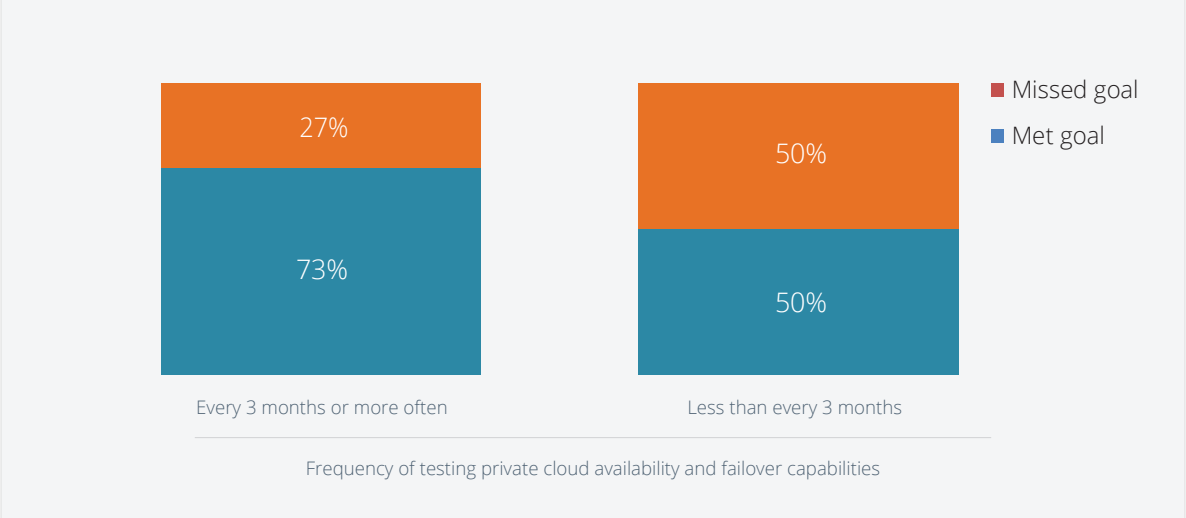


Figure 6: Frequency of testing vs. ability to meet availability goals

However, almost half of the respondents (47%) never test their private cloud availability. Only 18% test it on a quarterly basis or more often.

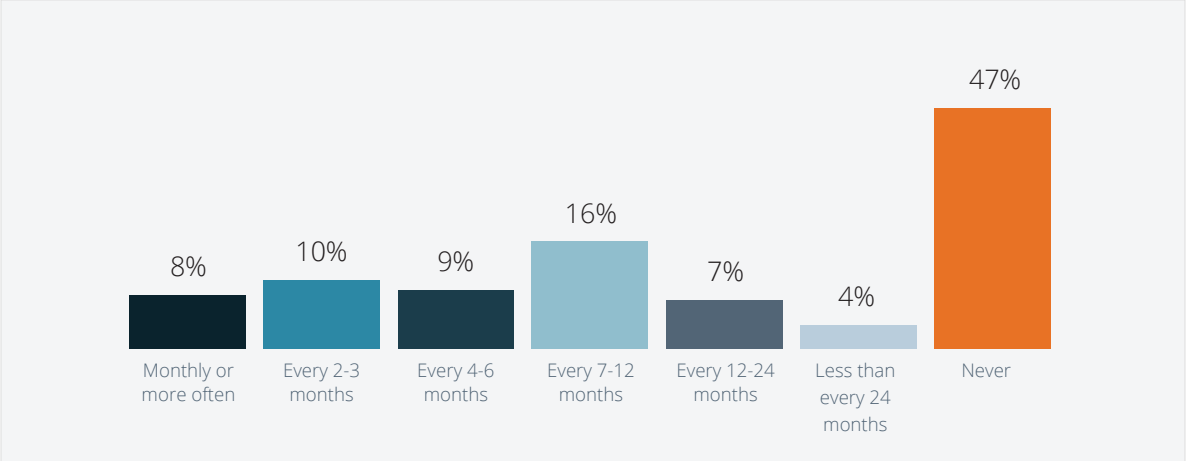


Figure 7: Frequency of testing private cloud availability

Respondent Demographics

Most survey respondents come from mid-size and large companies, with 40% of the survey respondents coming from organizations of over 10,000 employees.

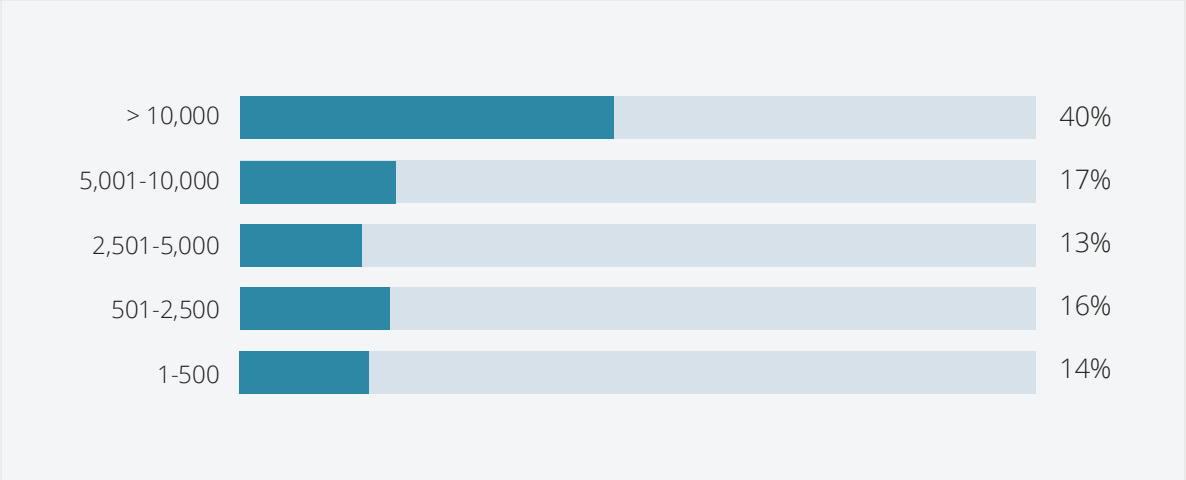


Figure 8: Number of employees

Over half of the respondents (54%) have more than 500 servers in their datacenter.

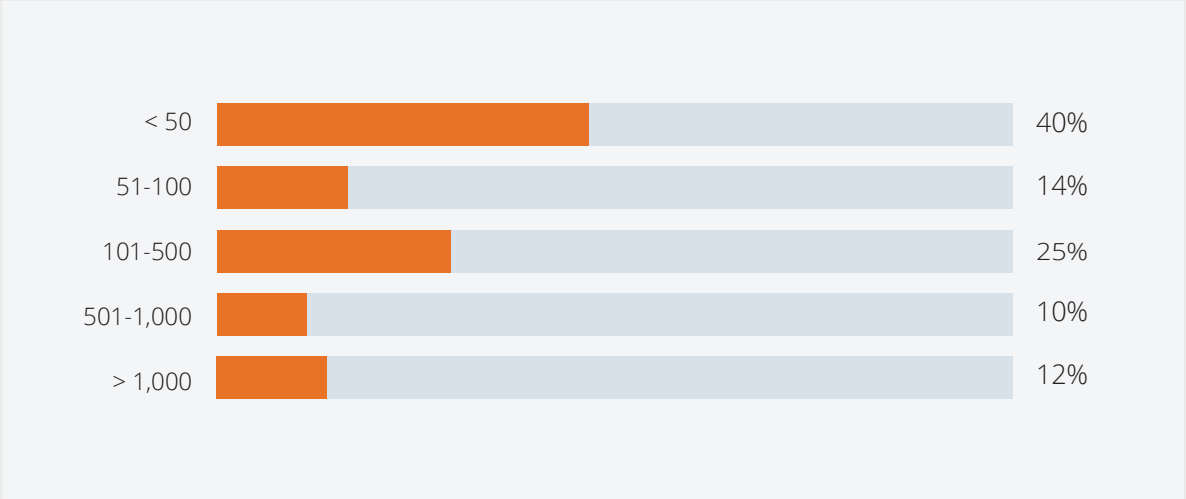


Figure 9: Number of servers

Additional Resources

Survey

IT Operations Analytics Report

e-Book

The Agile IT Operations