

# 2016 Cloud Migration Survey

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## Executive Summary

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This benchmark survey presents challenges and best practices of companies that have already migrated or are looking to migrate their servers to the cloud. The results presented here are based on responses from 258 IT professionals from around the world, collected through an online survey during January-March 2016. Some of the key findings of the survey include:

- When looking at migration plans of all organizations surveyed, the public clouds and private clouds are expected to grow 22% and 15%, respectively, year-over-year for the next 2 years, while virtual machines and physical machines are expected to shrink by 25% and 31%, respectively.
- In companies with more than 1,000 employees, public clouds and private clouds are expected to grow 52% and 31%, respectively, year-over-year for the next 2 years, while virtual machines and physical machines are expected to shrink by 29% and 30%, respectively.
- The top 3 drivers for migration are: high availability, reliability and cost saving.
- When asked what is the targeted downtime window to finish migrations to minimize downtime, almost half (44%) of respondents said they cannot afford any downtime or, at most, just for under an hour.
- 55% estimate the cost to migrate a server is \$100-\$500, and 17% estimate it costs more than \$500.
- When looking at migration projects by phases, the execution phase lasted, on average, 6 months (27 “man-weeks”) and close to half (45%) of a total project’s time, with planning taking 13 weeks (23%).

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# Current Computing Environment

## Computing Resources by Location/Type

Looking at the current computing resource split by location/type, 43% of computing resources are hosted in the public cloud, 31% use VMs, 20% physical machines and 7% private clouds.

Note: Each physical or virtual machine counts as one resource.

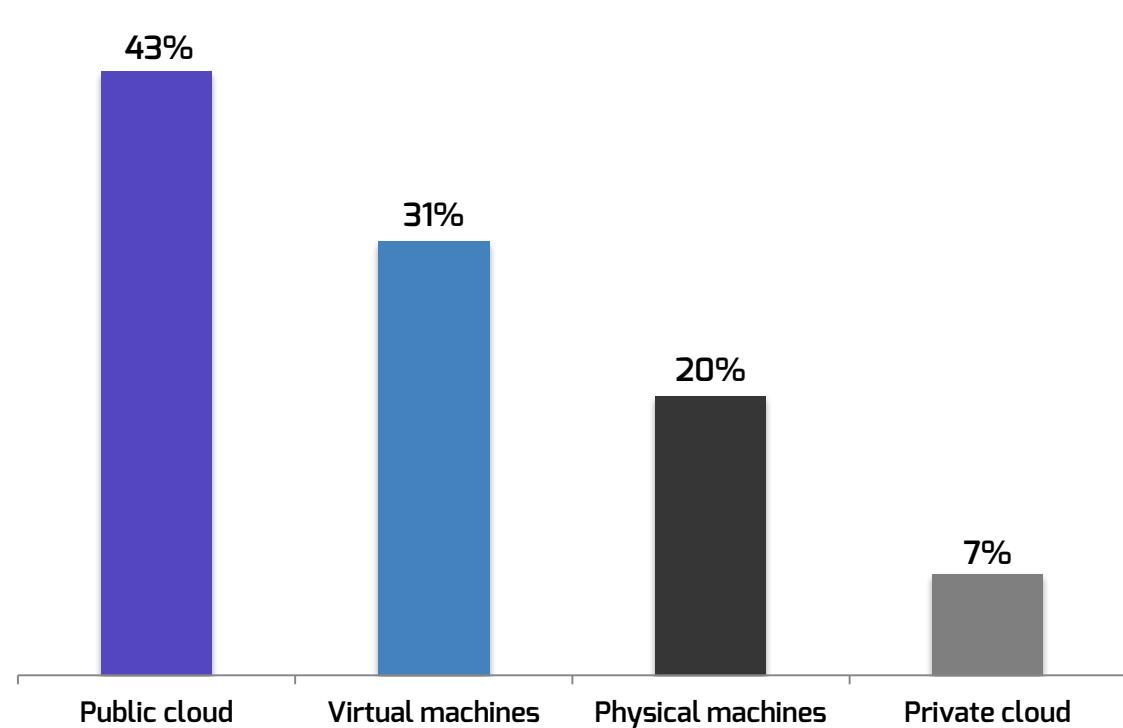


Figure 1: Current computing resources split by location/type

## Platforms Used for Production Workloads

Looking at the current production workloads by platform, Amazon Web Services (AWS) and VMware are the two leading platforms representing 42% and 29%, respectively. All other platforms account for less than a third (29%) of which physical machines account for just 7%.

Note: Each physical or virtual machine counts as one resource. If there was more than one, the most critical one was selected.

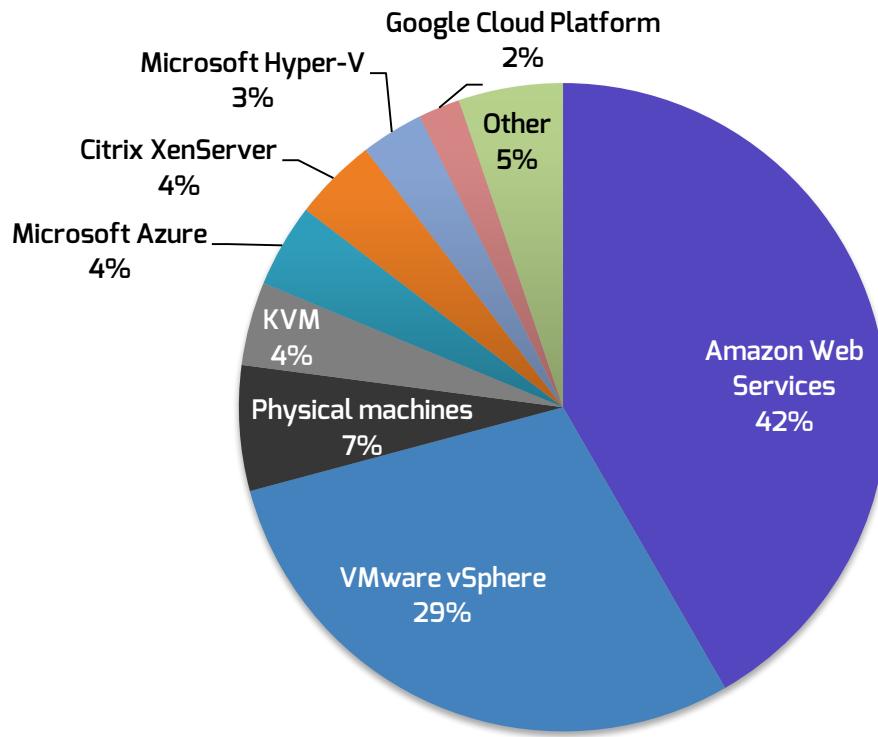
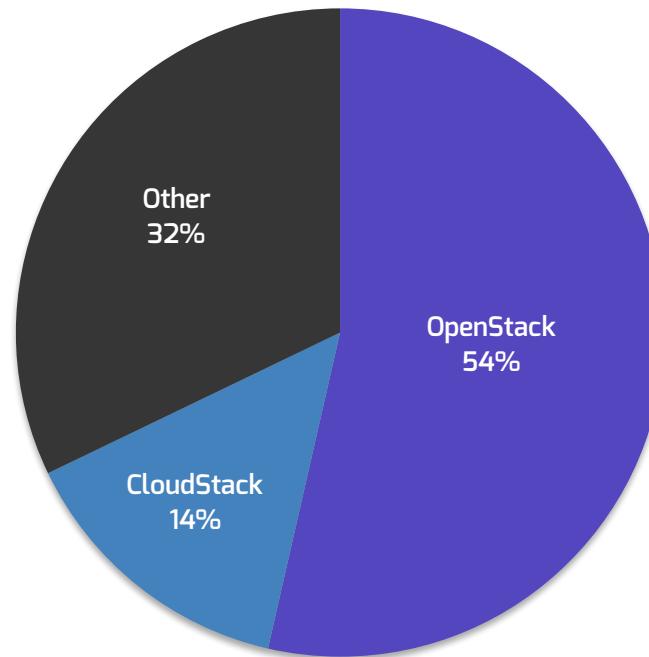


Figure 2: Platforms used for production workloads

## Private Clouds Platforms Used for Production Workloads

Private clouds are clearly dominated by OpenStack (54%), with CloudStack lagging behind (14%).



*Figure 3: Private cloud platforms used for production workloads*

## Production Computing Resources Footprint

38% of survey respondents have 1-50 computing resources, 32% have 51-500, and 30% have more than 500 computing resources used for production.

Note: Each physical or virtual machine counts as one resource.

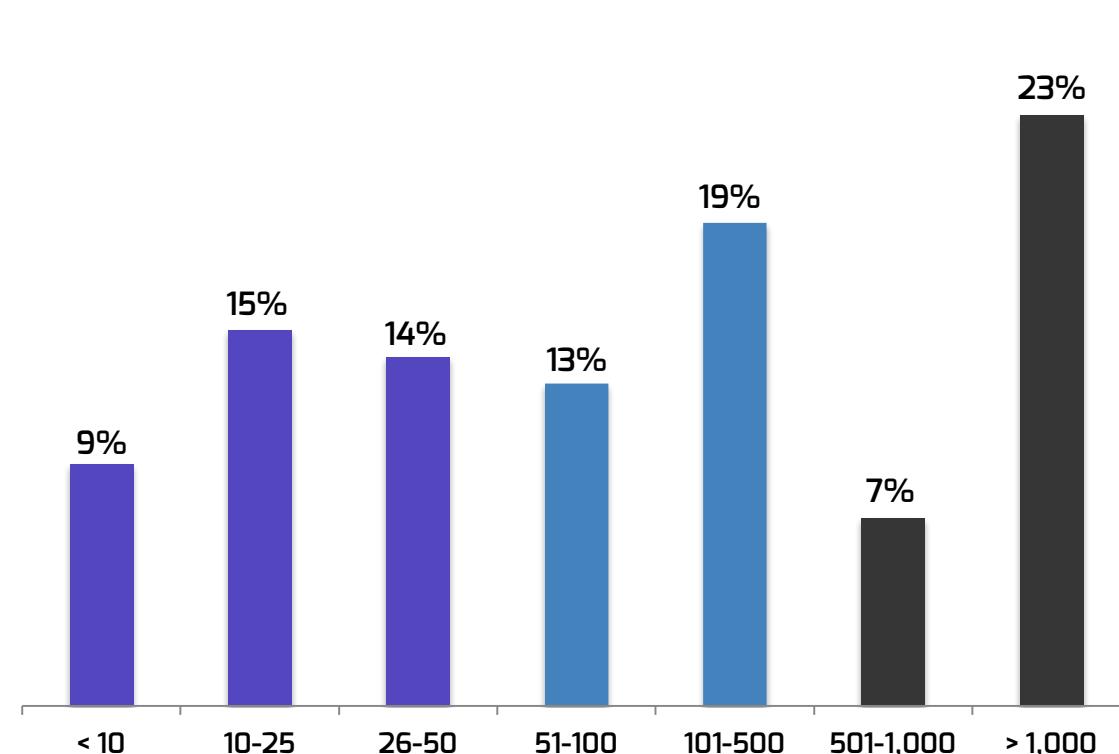


Figure 4: Production computing resources footprint across all locations

# Migration Plans

## Migration Plans 2016-2018, All Companies

When looking at migration plans across all organizations surveyed, public cloud is expected to grow by 22% year-over-year and private cloud by 15%.

Conversely, virtual machines are expected to decline by 25% year-over-year and physical machines by 31%.

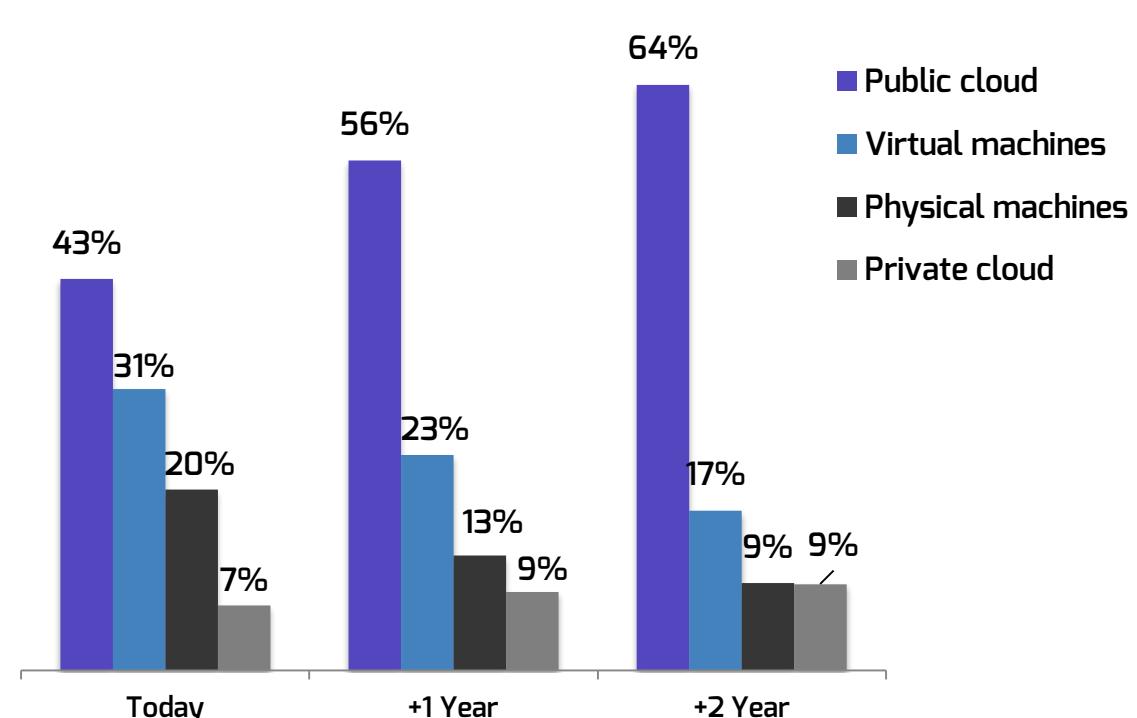


Figure 5: Computing resources split by platform 2016-2018

## Migration Plans 2016-2018, Enterprise Companies

When looking at organizations with 1,000 or more employees (36% of companies surveyed) we see different migration plans and year-over-year growth expectations. Public cloud is expected to grow by 52% year-over-year and private cloud by 31%.

On the flip side, virtual machines are expected to decrease in use by 29% year-over-year and physical machines by 30%.

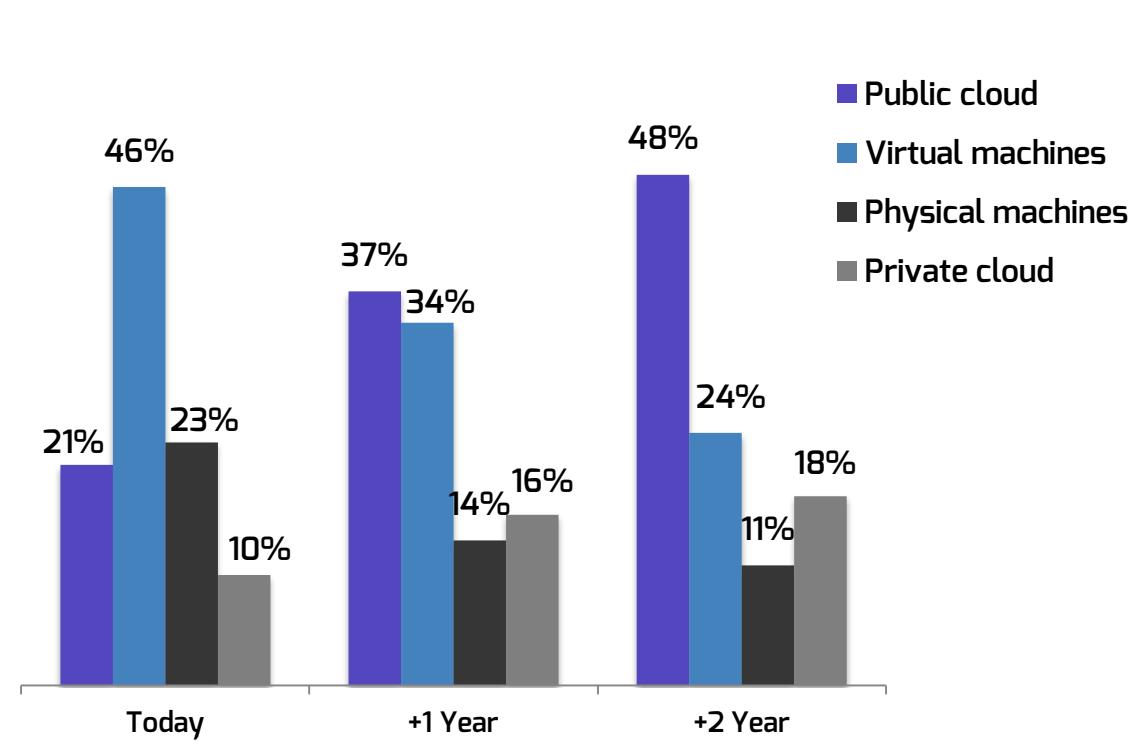


Figure 6: Computing resources split by platform 2016-2018, organizations with more than 1,000 employees

## Primary Drivers for Migration

The top three drivers for migration are:

1. High availability
2. Reliability
3. Cost saving

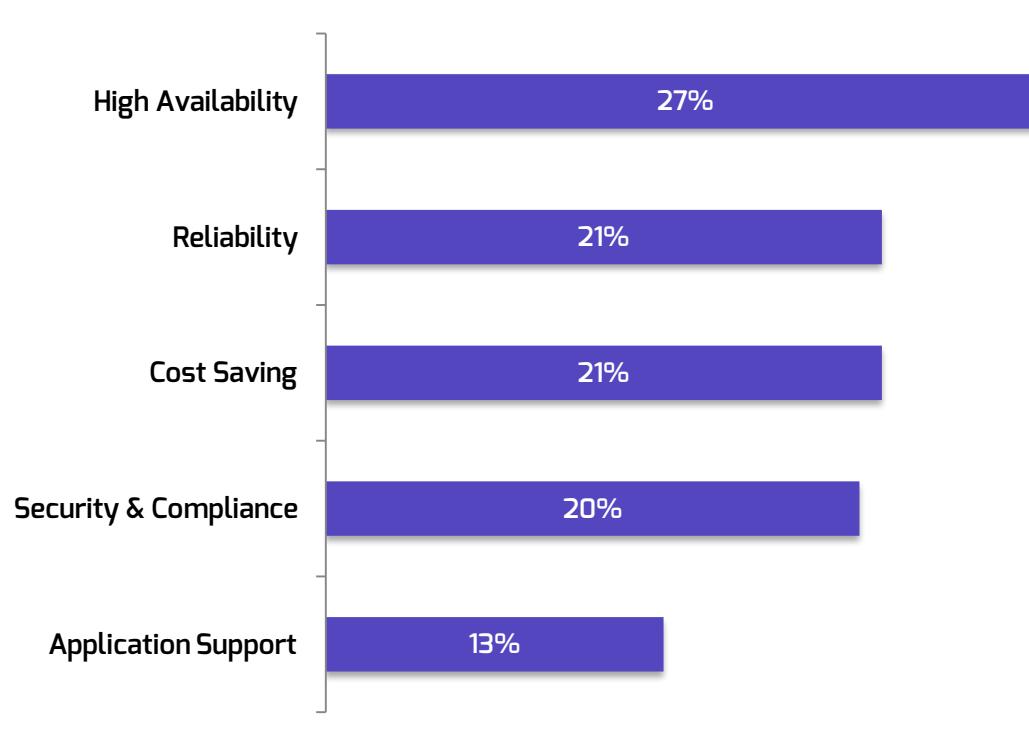


Figure 7: Top drivers for migration

## Top Workloads for Migration by Type

There is a clear breakdown of migration workloads into three distinctive groups. At the top of the list, workload types are focused on testing/development, Web applications, websites and databases.

At the bottom of the list, unsurprisingly, we see the “heavy-weight” enterprise applications such as CRM and ERP.

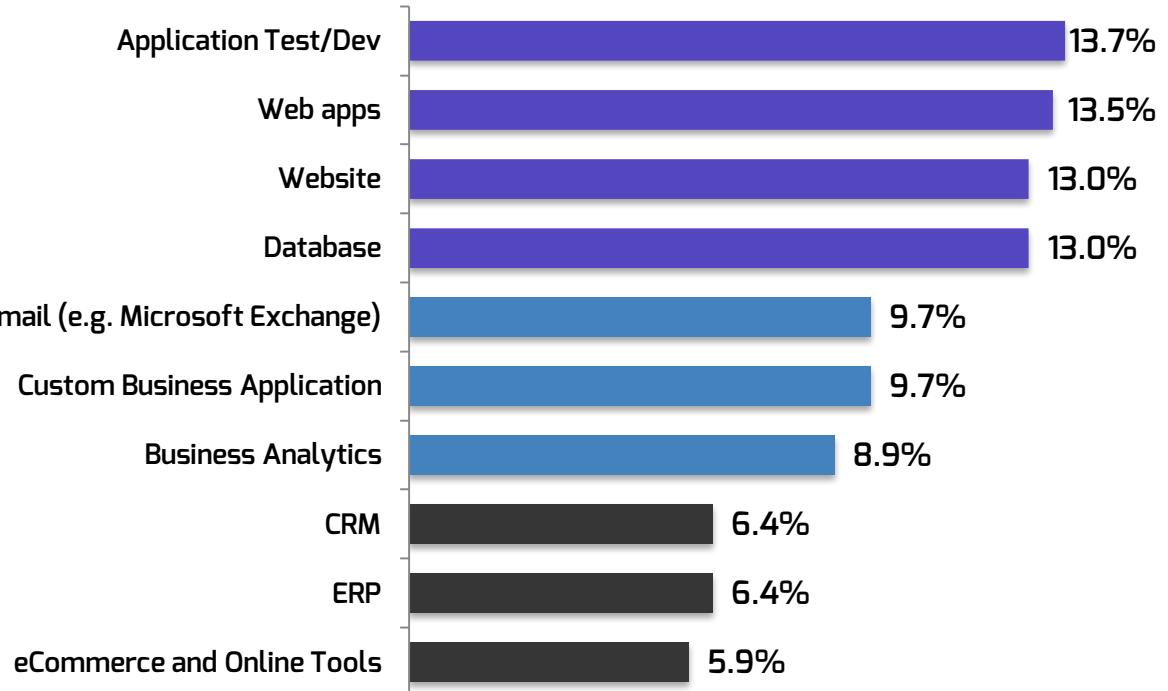


Figure 8: Top workloads for migration by type

## “Downtime Window” Goal for Completing the Migration Cutover

When asked what window of downtime companies can afford to withstand during migration cutover, almost half (44%) of respondents said they cannot afford *any* downtime, but if there has to be downtime, it can last no more than just under an hour.

49% have a downtime window of 1 hour to a day, and only 7.3% can afford more than a day of downtime.

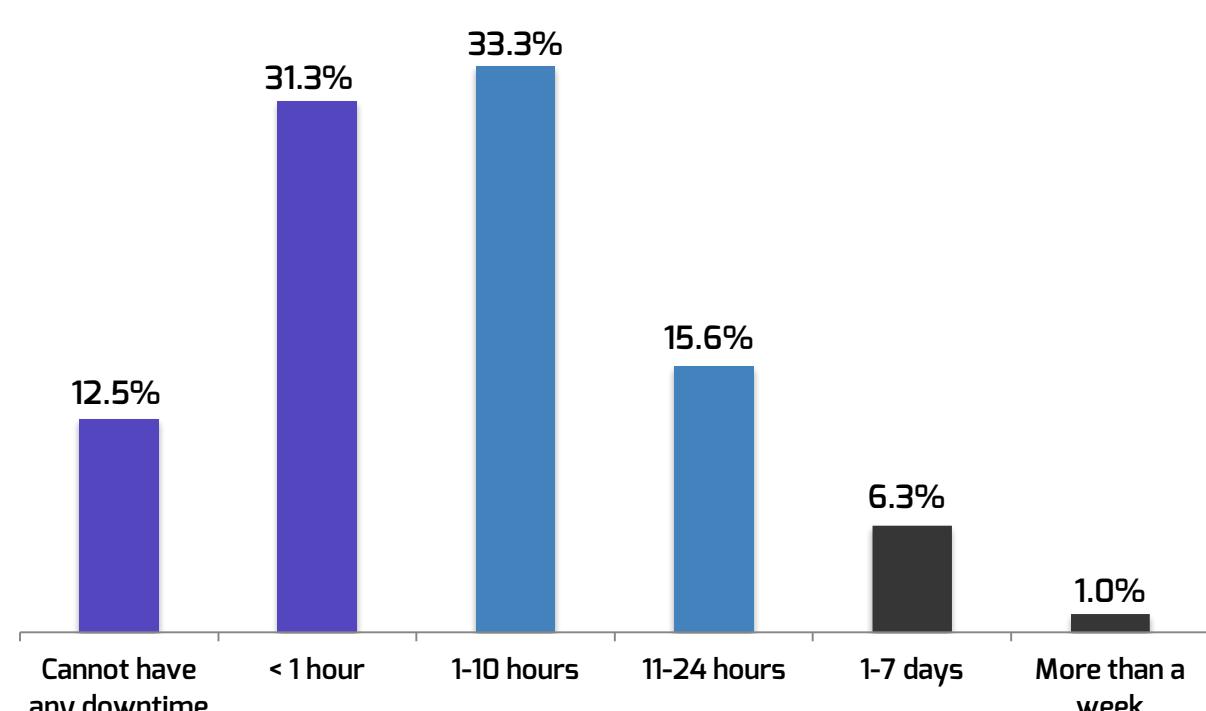
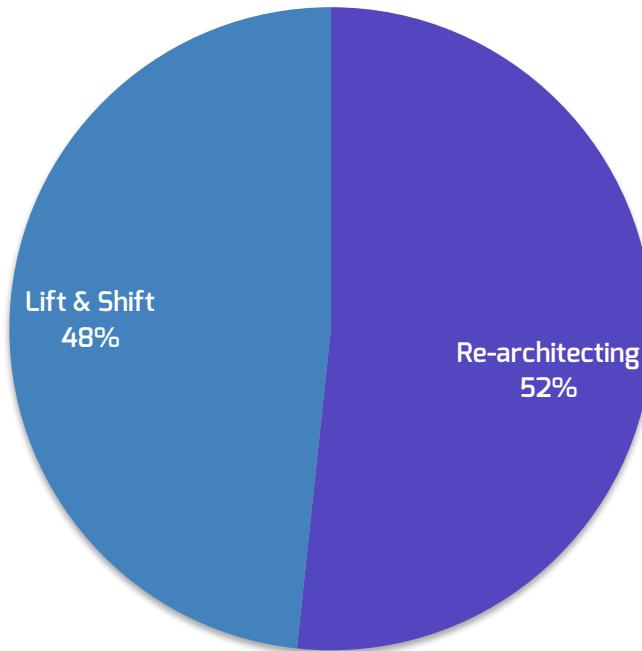


Figure 9: “Downtime Window” goals for completing the migration cutover

## Migration Strategy

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The two major migration strategies are split almost evenly between re-architecting (52%) and lift & shift (48%).



*Figure 10: Migration strategy*

## Migration Phases in Weeks

We asked respondents how many weeks they are spending on the four major migration phases, from planning to post-migration optimization.

Weeks were counted by number of people involved in the project multiplied by the number of weeks spent on each phase (e.g. 3 people working on the plan for 4 weeks should be considered as 12 weeks).

The migration execution phase lasted on average 6 months (27 man-weeks) and close to half (45%) of a total project's time, with planning taking just under 3 months, or 13 weeks (23%).

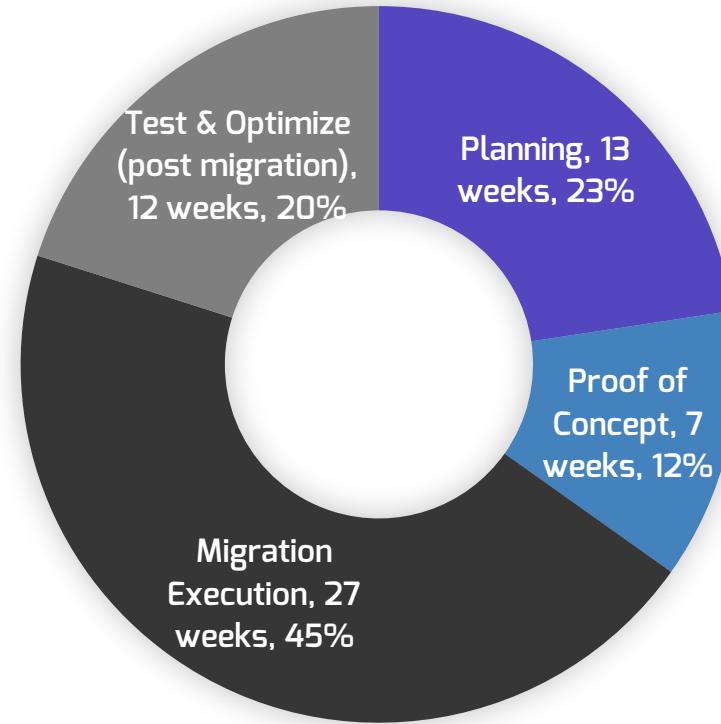


Figure 11: Migration phases in weeks and percentages

## Top Considerations for Choosing the Target Cloud Platform

The top three considerations for choosing a target cloud platform are:

1. Reliability
2. High availability
3. Security & compliance

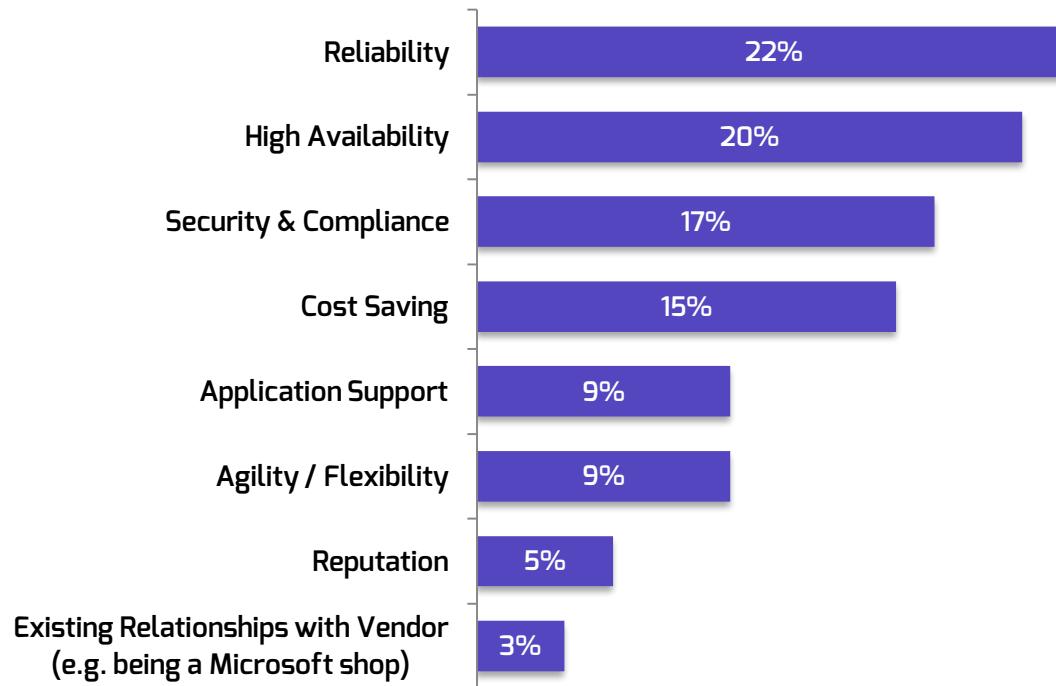


Figure 12: Top considerations for choosing the migration target cloud platform

## Top Migration Challenges

The top three migration challenges are:

1. Minimizing downtime
2. Performance impact on production
3. Technical challenge/Feasibility

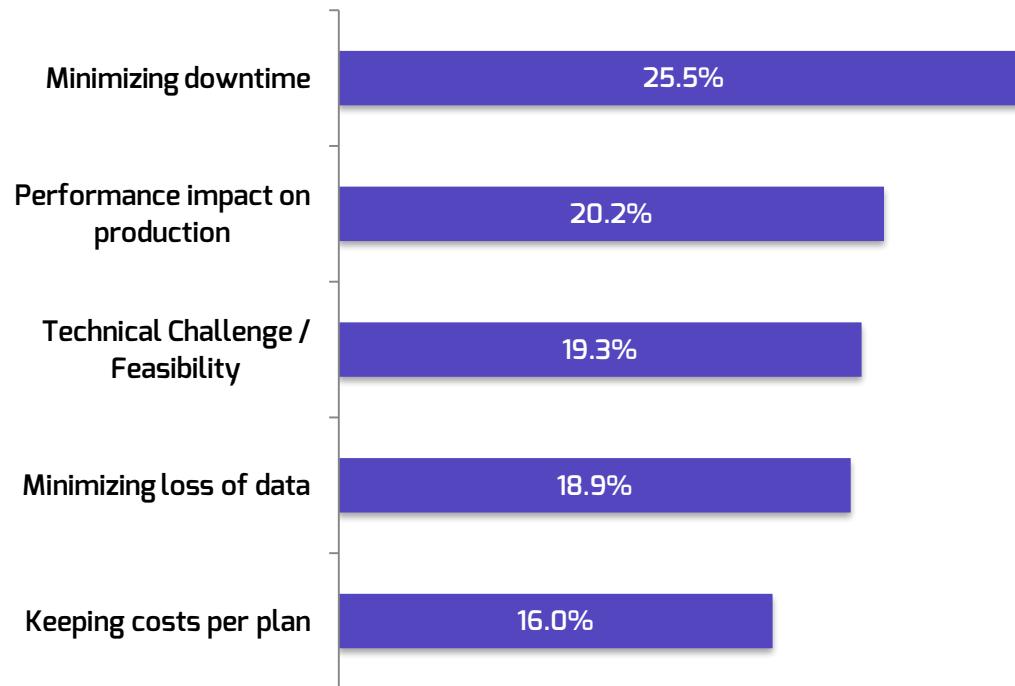


Figure 13: Top migration challenges

## Migration Planning: Cost Estimates per Server

When asked to estimate the migration cost per server, we asked respondents to divide the total cost of the project by number of servers migrated (e.g. a cost of \$100,000 to migrate 1,000 servers would translate to \$100 per server).

While 13% estimate the cost to be \$501-\$1,000 per server and 4% estimate the cost at higher than \$1,000, more than half (55%) of respondents estimated the cost to be \$101-\$500 per server.

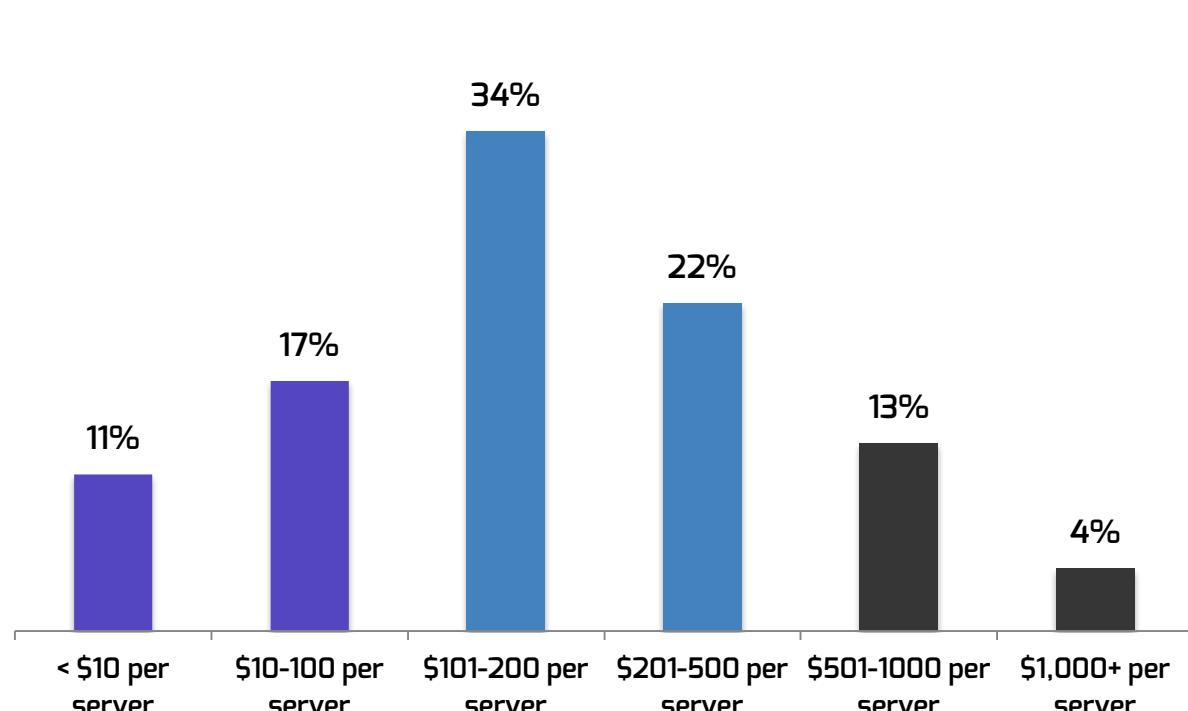


Figure 14: Estimated cost to migrate per server

# Respondent Demographics

## Respondent Demographics

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The majority of survey respondents serve more than one type of customer.

63% of respondents serve enterprises, and 40% serve small businesses, while 35% serve consumers.

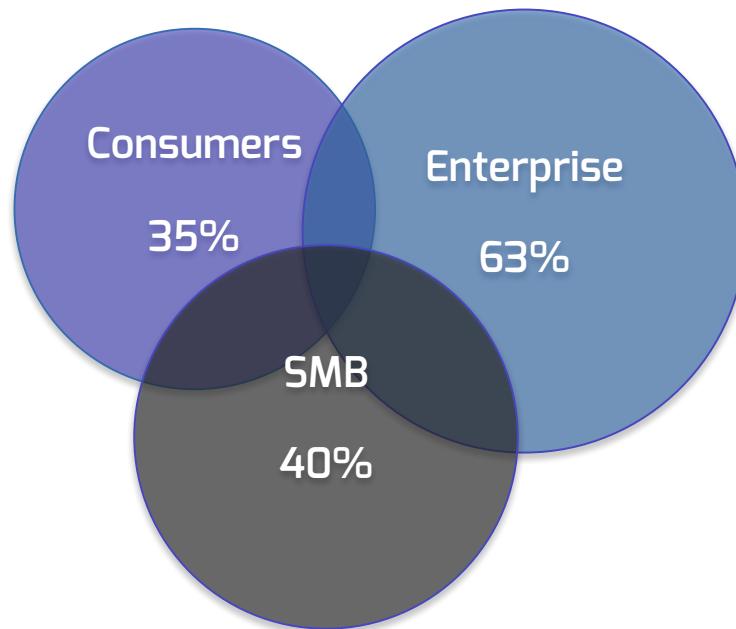


Figure 15: Type of customers served

## Respondent Demographics

39% of survey respondents come from organizations with up to 100 employees, 22% have 101-1,000 employees and 39% more than 1,000.

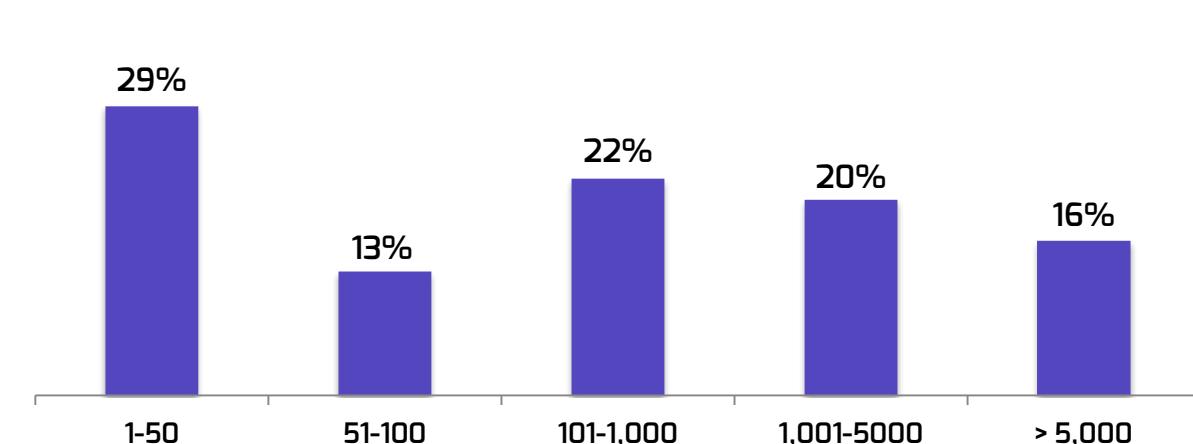


Figure 16: Number of employees

36% of respondents are with companies that have less than \$10 million in revenue, 33% work for companies with \$10-100M in revenue and 40% are with companies with more than \$100M.

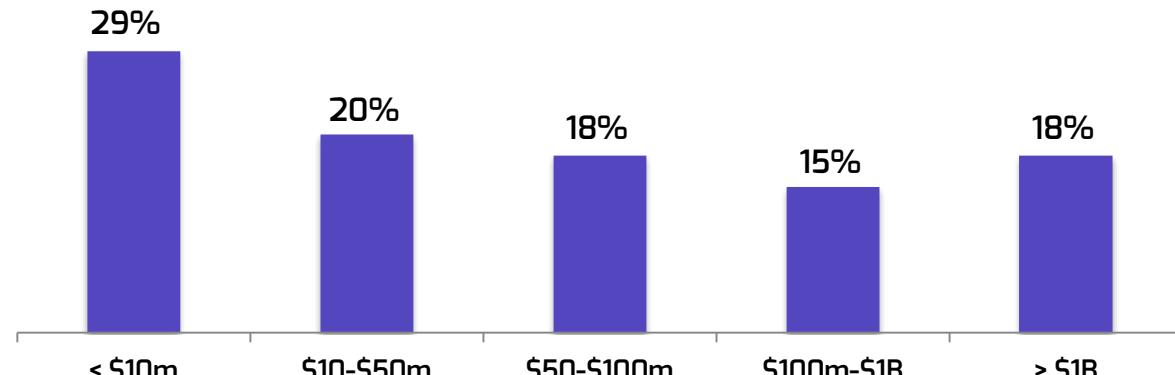


Figure 17: Annual revenues

## Respondent Demographics

29% of survey respondents are responsible for the cloud and another 29% for IT operations.

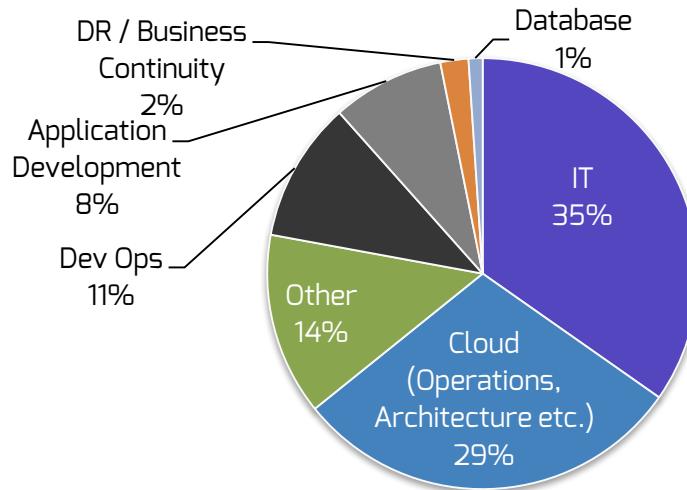


Figure 18: Job responsibility

52% of respondents are in director or manager positions, and 25% are VPs or C-level.

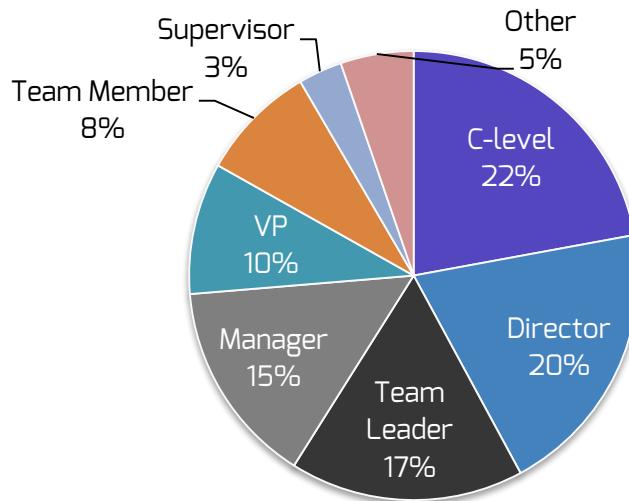


Figure 19: Position in the organization

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