

# The State of Public Cloud Monitoring

A SURVEY OF IT PROFESSIONALS

March 2019



# Executive Summary

This research finds that utilizing the public cloud for business applications continues to surge, with more than 8 out of 10 companies increasing cloud-based workloads in 2018. The top priority to support these cloud-based applications is to gain visibility in application and data traffic. Woefully, less than 20% of participants indicated their company can properly monitor public cloud environments. Nearly half indicate that the lack of monitoring led to application performance issues. And with approximately 90% of IT professionals pointing out that packet level visibility is required for both application performance and security, an overwhelming majority of participants are concerned that low application and network visibility is masking security threats.

Nearly 7 out of 10 participants stated that public cloud monitoring is more difficult than monitoring their own data center and private cloud, as half indicated that the tools provided by public cloud vendors were inadequate to provide the necessary management and monitoring of infrastructure, applications and security. There is little doubt this is why nearly every participant cited numerous business benefits to a solution that could provide comprehensive cloud visibility.

# Key Findings

## Public Cloud Usage Continues to Grow

- 84% of companies grew their public cloud workloads in 2018

## Operational Concerns

- Visibility is the top concern for applications deployed in the public cloud
- Less than 20% of companies can monitor public environments properly
- 87% fear lack of public cloud visibility hides security threats
- 86% reveal packet level monitoring is key for application performance

## Justifying Investments in Cloud Monitoring

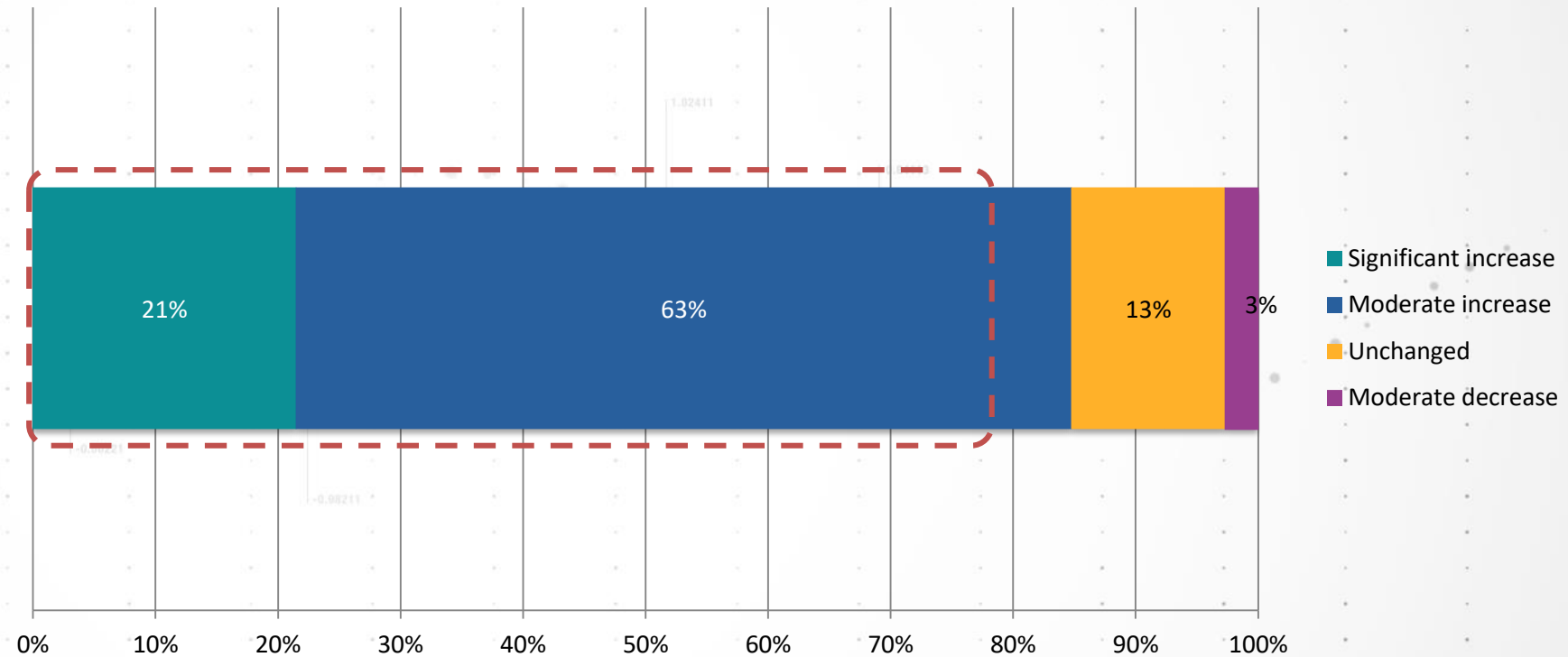
- 99% of companies indicate direct business value from comprehensive cloud visibility



## Detailed Findings

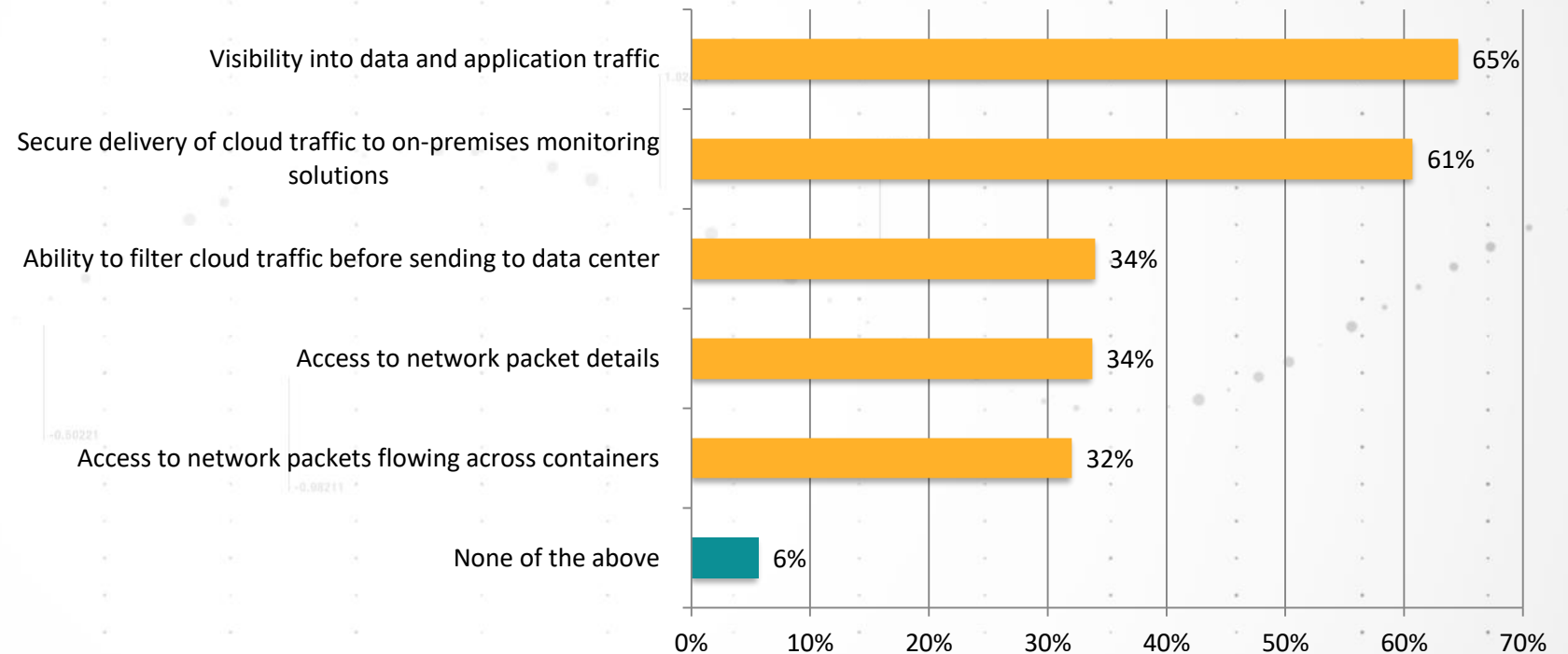
# 84% of Companies Grew their Public Cloud Workloads in 2018

How has your company's use of public cloud for production workloads changed over the past 12 months?



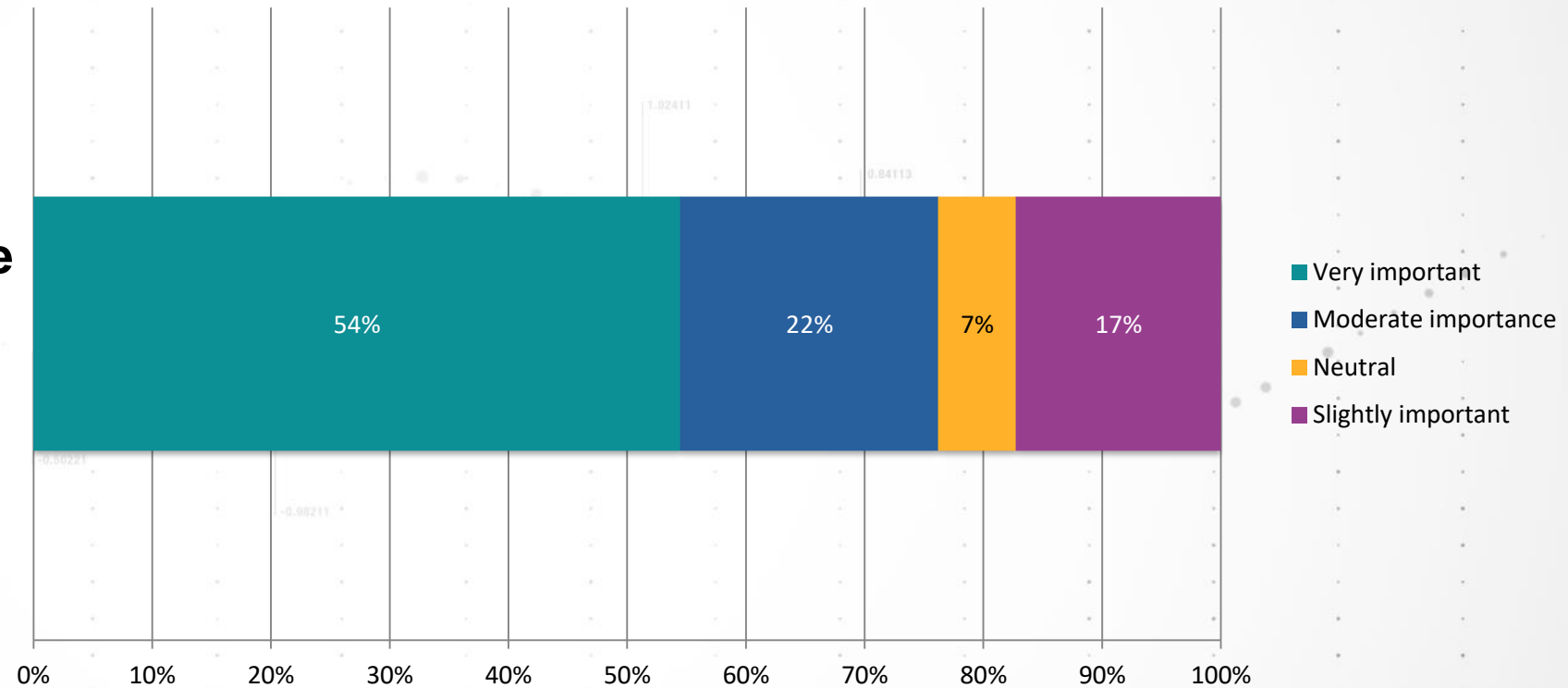
# Visibility is the Top Concern for Applications Deployed in the Public Cloud

**Which of following concerns do you have for applications deployed in the public cloud?**



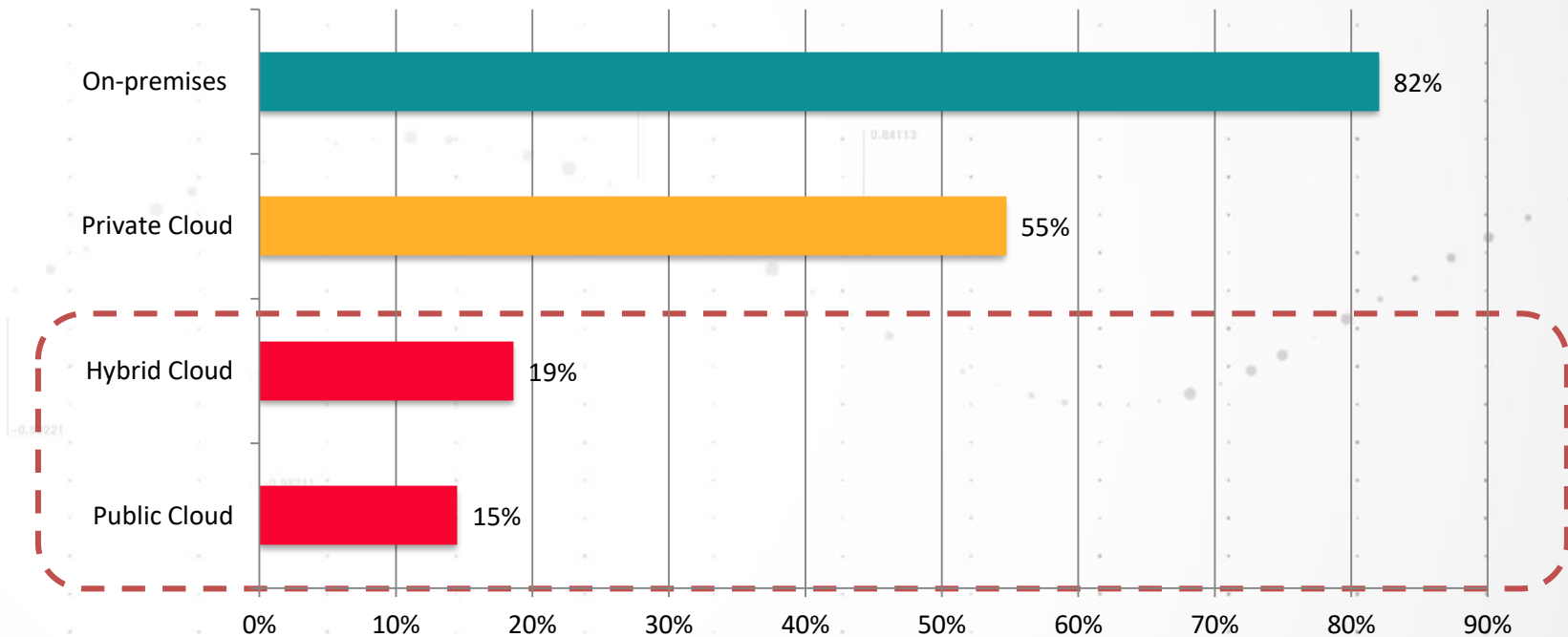
# 76% Say Monitoring Public Cloud Is Important

How important is monitoring the performance of your public cloud infrastructure?



# Less than 20% of Companies Can Monitor Public Environments Properly

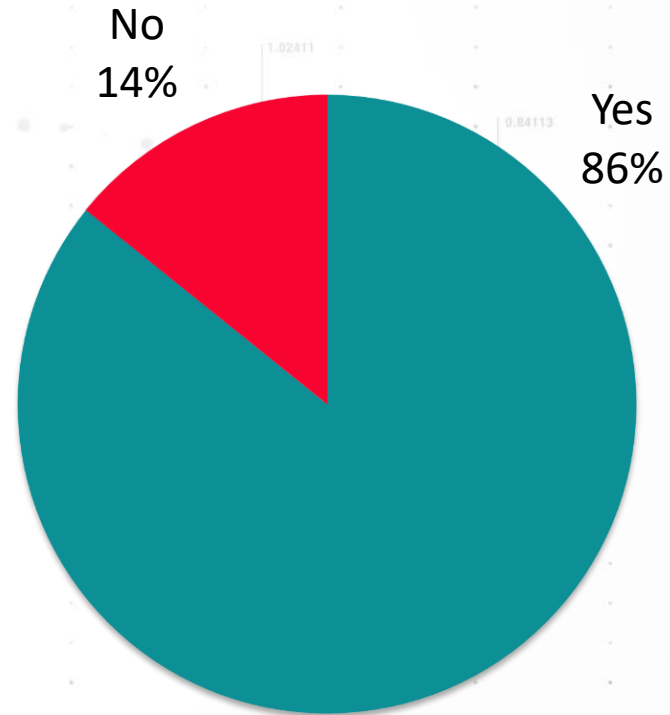
**In which environments do you have complete and timely access to network packets?**





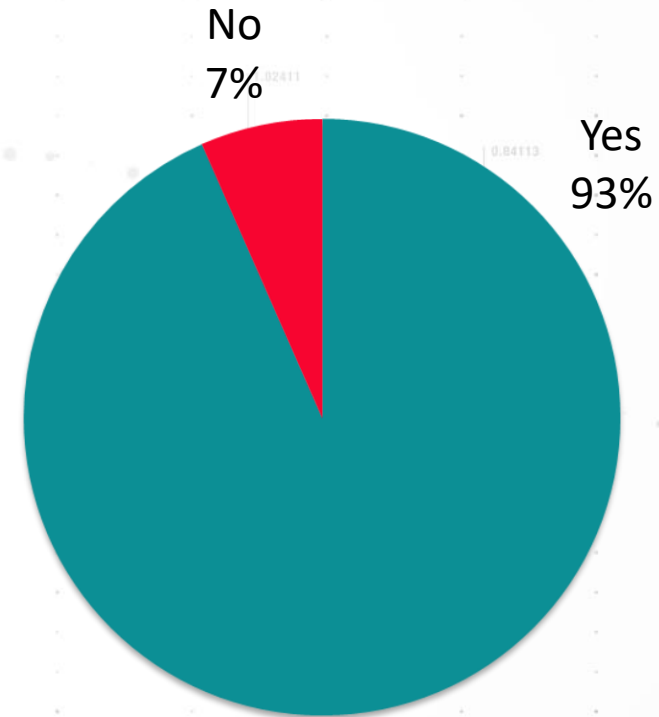
# 86% State Packet Level Monitoring is Key for Application Performance

Are network packets important for monitoring network and application performance?



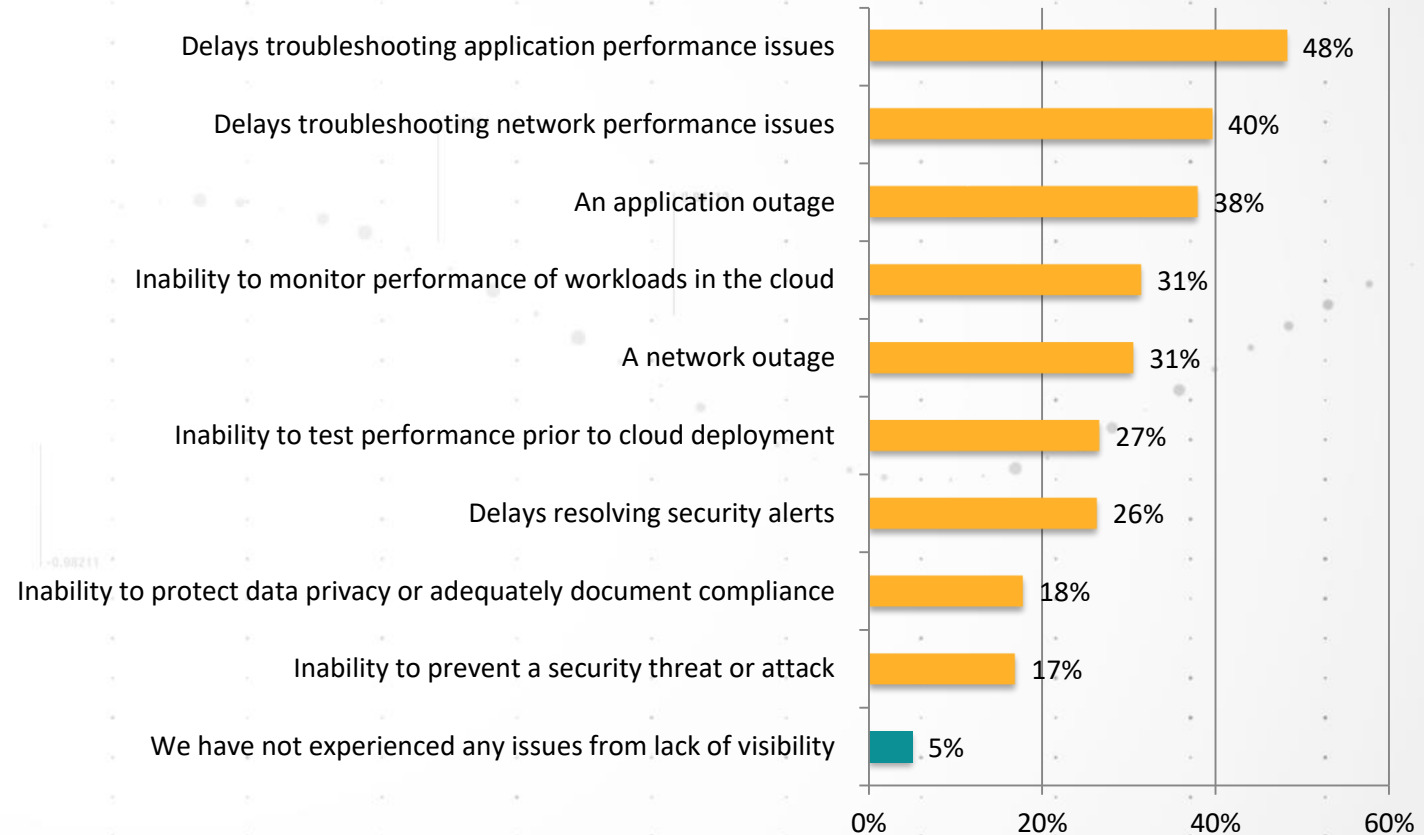
# 93% State Packet Level Visibility is Required for Security Monitoring

Are network packets valuable for security monitoring?



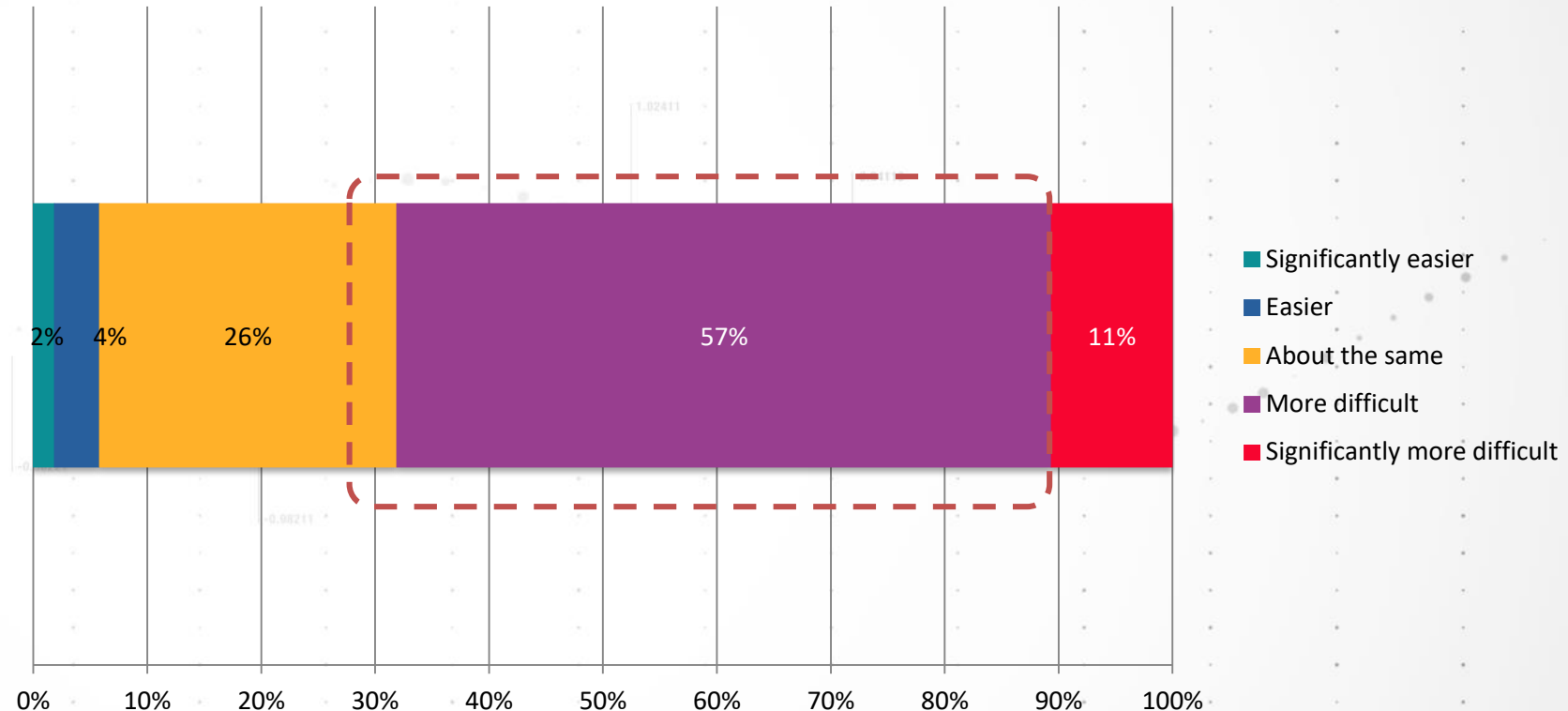
# Nearly Half of Companies Experience Issues From a Lack of Cloud Visibility

**In the last 12 months, which, if any, of the following issues has your company experienced from lack of visibility into PUBLIC or PRIVATE clouds?**



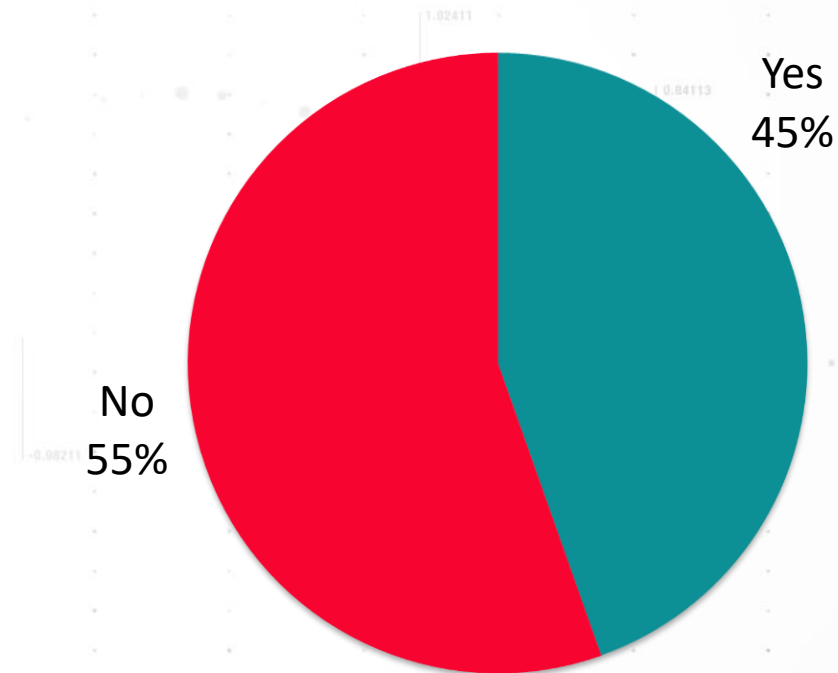
# 68% Indicate Visibility into Public Cloud Environments is Difficult

How does obtaining visibility into network traffic within public cloud environments compare with traffic visibility within your physical data center?



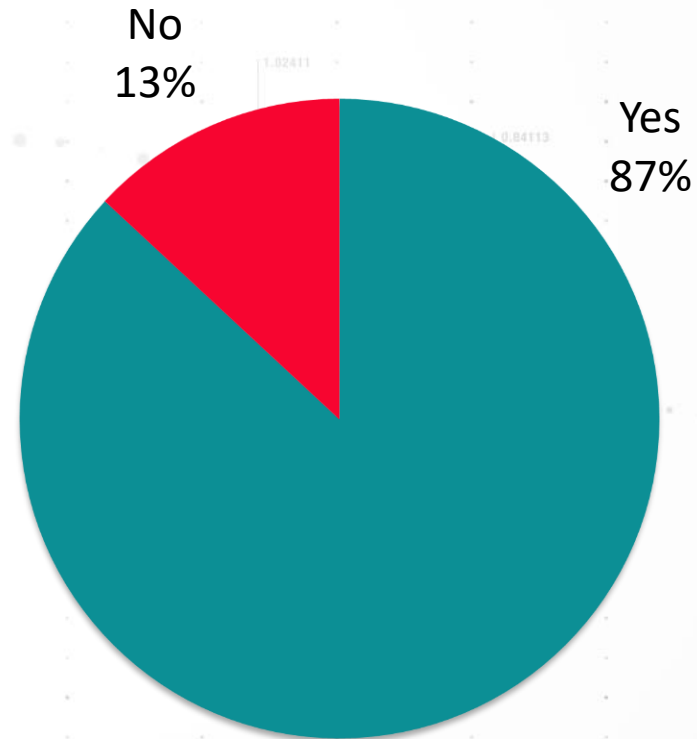
# Only 45% Believe Their Public Cloud Vendor Provides Sufficient Monitoring

**In your opinion, is the data supplied by your company's public cloud provider sufficient for monitoring what happens in your public clouds?**



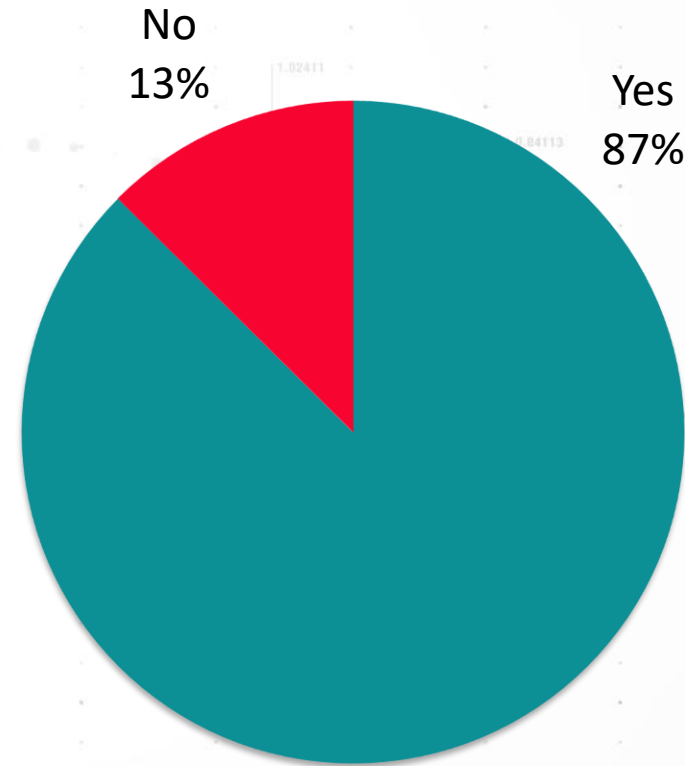
# 87% Fear Lack of Public Cloud Visibility Hides Security Threats

**Are you concerned that lack of visibility inside public clouds will prevent you from identifying potential security threats?**



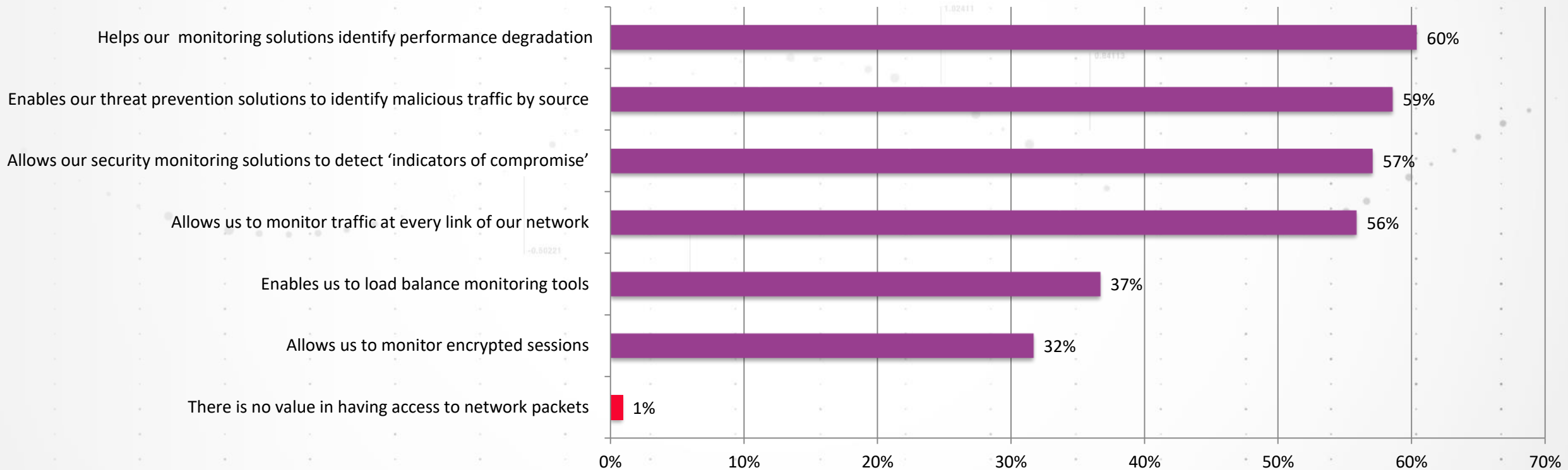
# 87% Find it Difficult to Predict Application Performance Prior to Deployment

**For public cloud-based applications, is it challenging to predict application performance prior to deployment?**



# 99% of Companies Indicate Direct Business Value from Comprehensive Cloud Visibility

In your opinion, what is the value of having a comprehensive cloud visibility solution?







# Methodology and Participants

# Goals and Methodology

## Research Goal

The primary research goal was to understand the challenges of managing, monitoring, and securing workloads running on public cloud infrastructure. Additionally, the research sought to understand the capability of current cloud monitoring tools.

## Methodology

IT professionals that were responsible for public cloud -based applications and/or infrastructure were invited to participate in a survey on their company's use of public cloud infrastructure.

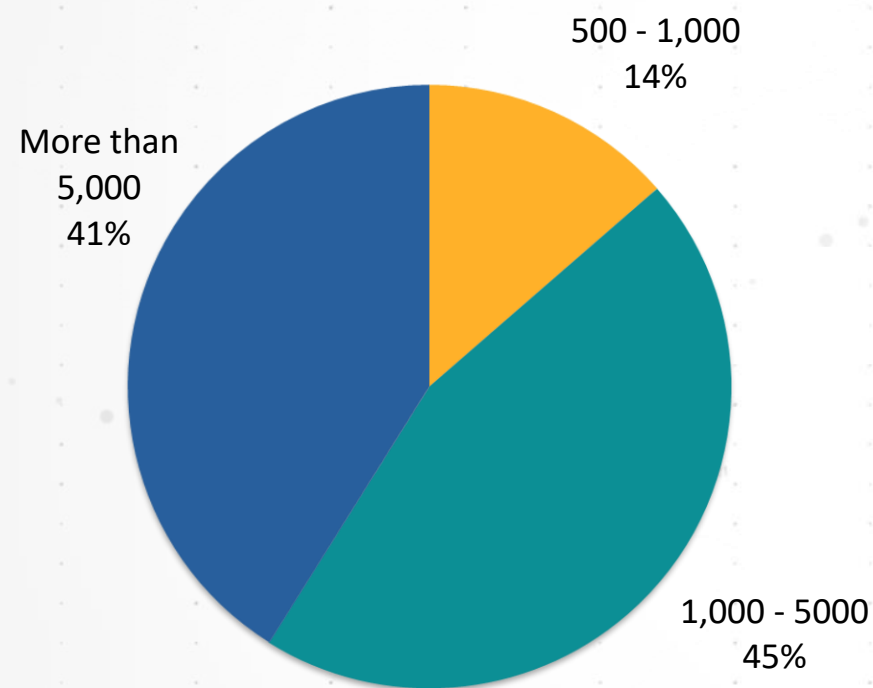
The English-language survey was administered electronically, and participants were offered a token compensation for their participation.

## Participants

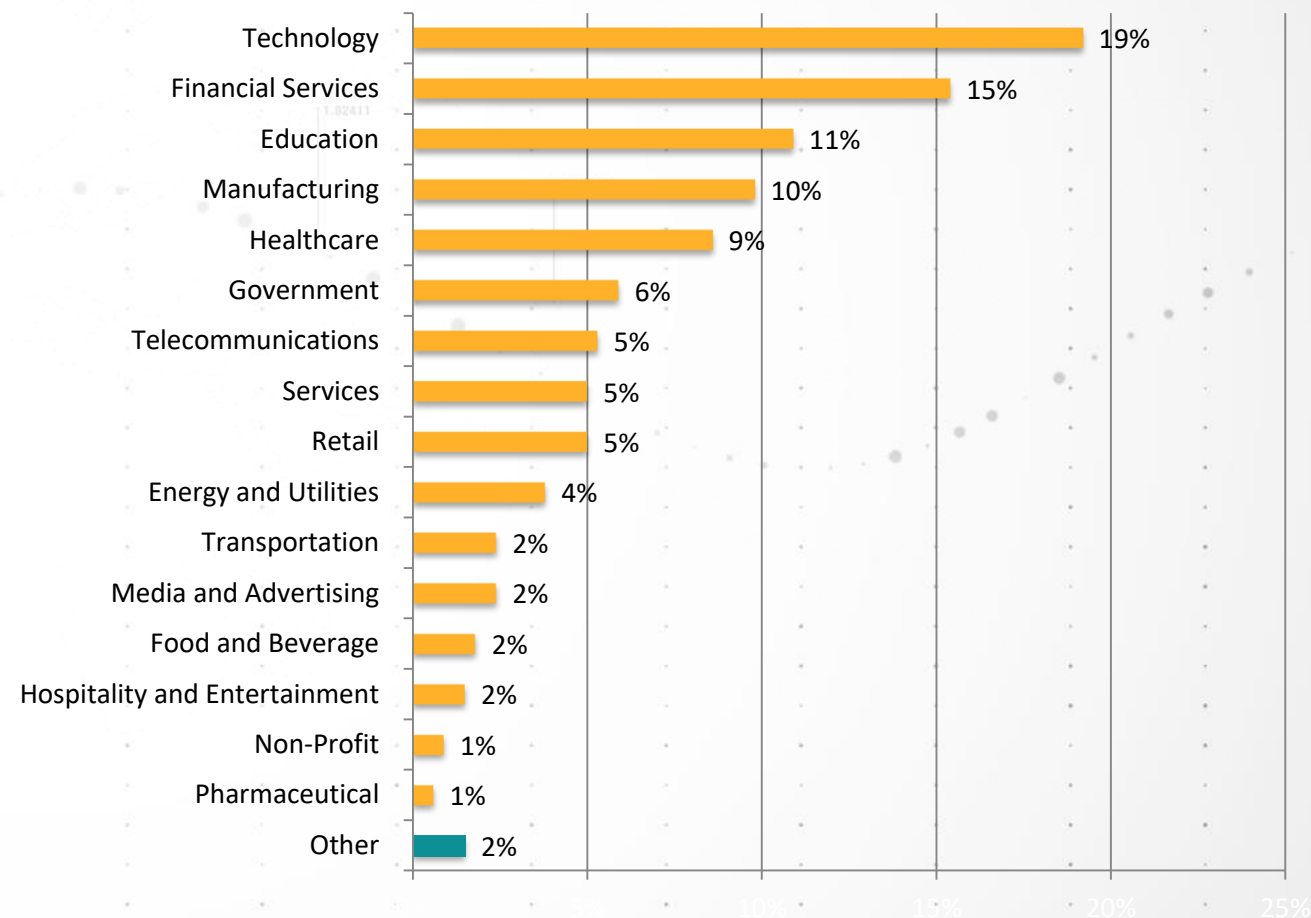
A total of 338 participants that develop, deploy, or manage public cloud applications or infrastructure completed the survey. Participants were from all 5 continents.

# Companies Represented

Size

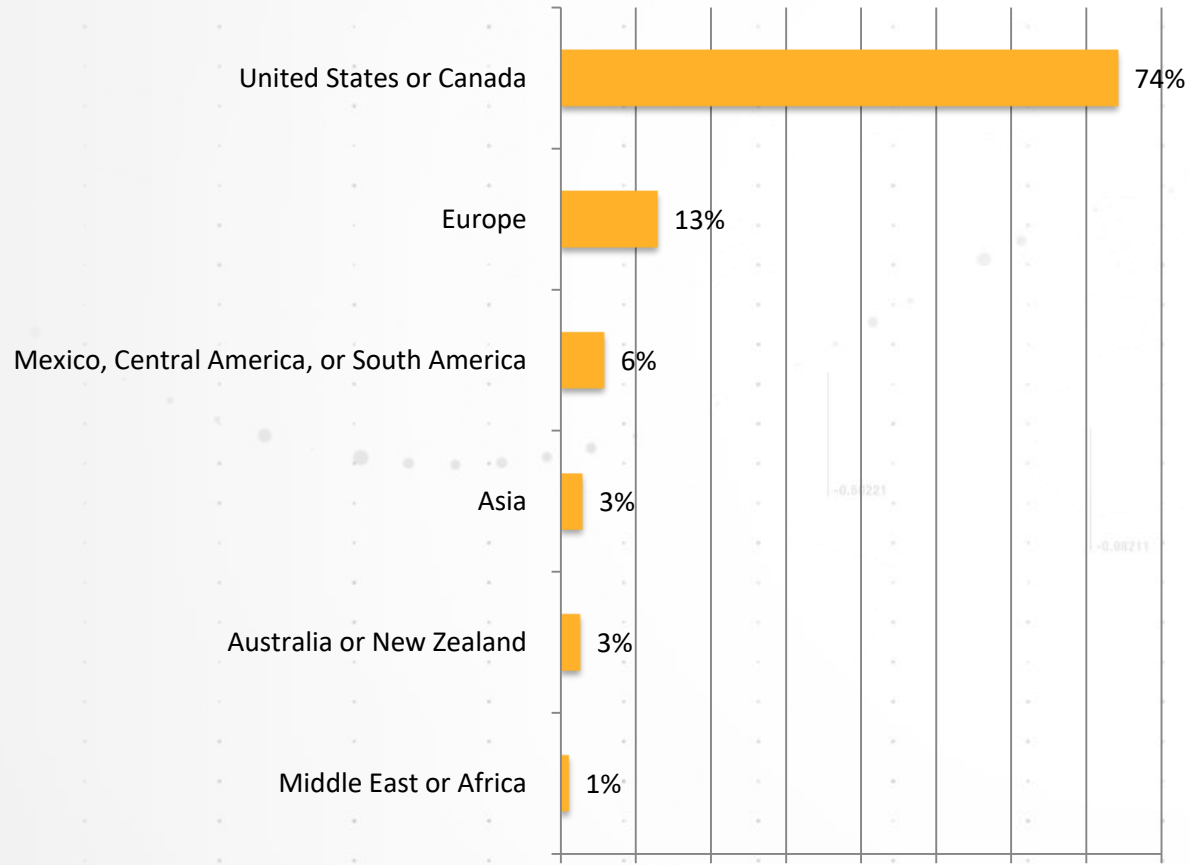


Industry

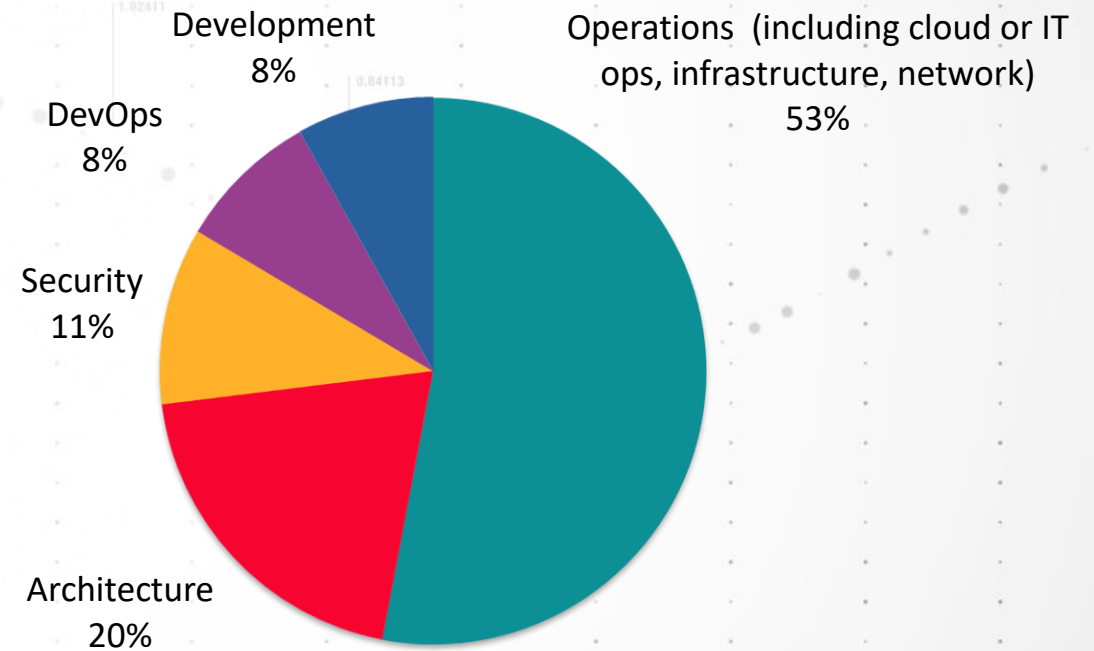


# Individuals Represented

## Location

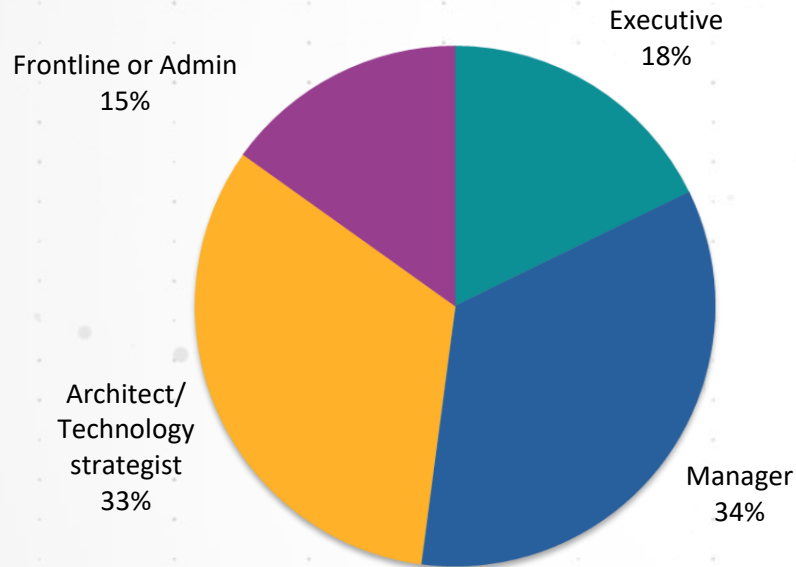


## Role

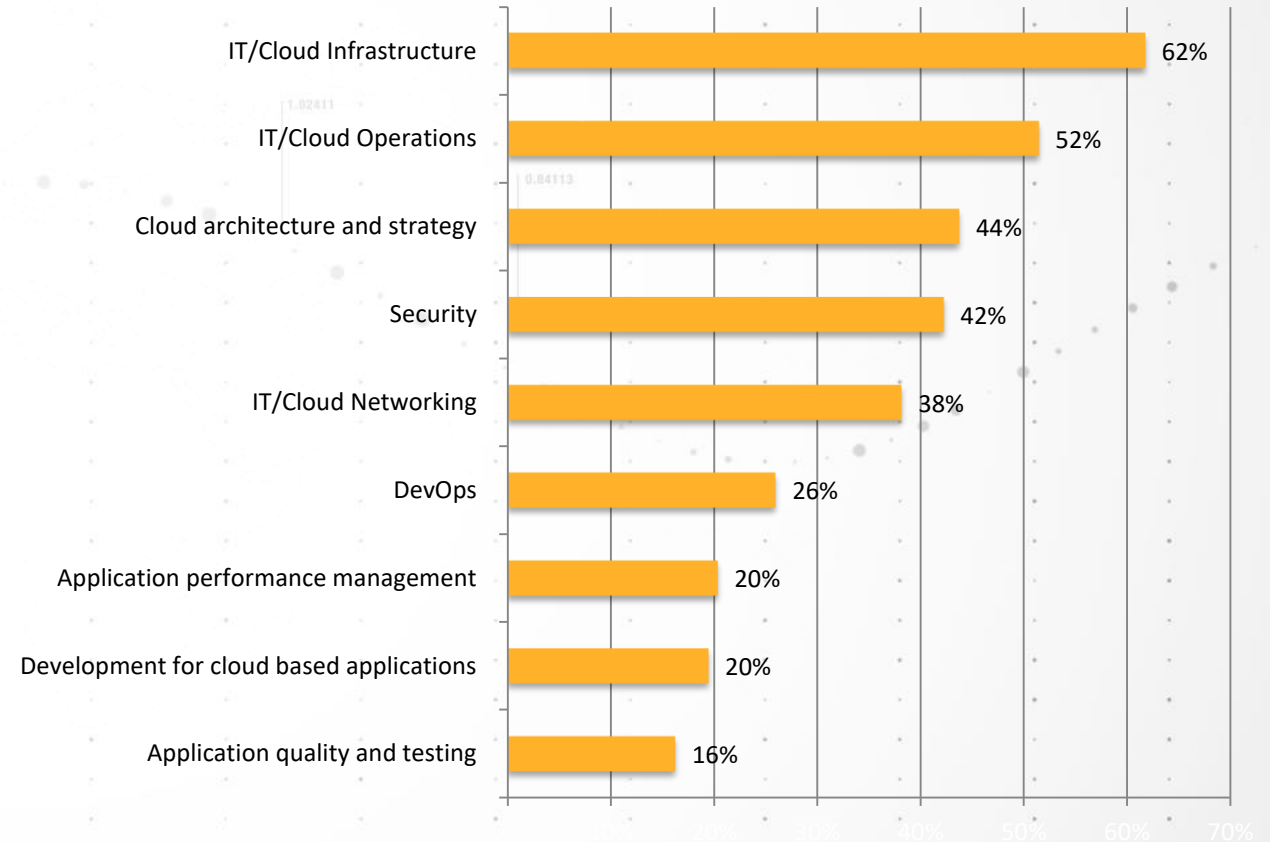


# Individuals Represented

## Organization Role



## IT Responsibilities



# For More Information...

## About Dimensional Research

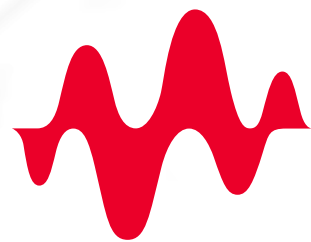
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## About Keysight Technologies Inc

Keysight Technologies, Inc. (NYSE: KEYS) is a leading technology company that helps enterprises, service providers, and governments accelerate innovation to connect and secure the world. Keysight's solutions optimize networks and bring electronic products to market faster and at a lower cost with offerings from design simulation, to prototype validation, to manufacturing test, to optimization in networks and cloud environments. Customers span the worldwide communications ecosystem, aerospace and defense, automotive, energy, semiconductor and general electronics end markets. Keysight generated revenues of \$3.2B in fiscal year 2017. In April 2017, Keysight acquired Ixia, a leader in network test, visibility, and security.

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