



Firewalls and the Cloud

A Survey of IT Security Professionals Responsible for Cloud Environments

March 2018

Introduction

Next Generation Firewalls (NGF) are a mainstay of IT security organizations, maintaining a perimeter to protect vital systems and data. But as cloud deployments have completely changed network and system topologies, the perimeter is an increasingly complicated concept. It's no longer easy to define, let alone defend. So what is the role of the firewall in a cloud and hybrid world? Do existing NGF approaches continue to deliver needed protection or are new capabilities needed?

This research investigates the hands-on reality of security in cloud environments, with a specific focus on the role of firewalls. It considers general attitudes towards cloud security, then takes a deep dive into experiences with existing NGFs in cloud environments and the demand for additional cloud-specific firewall capabilities. It also explores potential security challenges associated with the adoption of modern development and deployment methodologies.

This report is based on an online survey of 608 IT decision makers from around the globe. All participants had responsibility for security in an environment with significant cloud investments.

Key Findings

The cloud is redefining the role of the firewall

- More than half (56%) report that their on-premises security is superior to cloud
- At large companies, almost two-thirds (62%) say their on-premises security is better than cloud
- 76% expect cloud security to be a shared responsibility

Value found in cloud-specific security capabilities


- 83% have concerns about NGFs in the cloud
- Top concerns include pricing and licensing, lack of integration, and increased overhead due to a lack of centralized management
- 99% would see value in cloud-specific firewall capabilities including:
 - 74% want integration with cloud-native capabilities
 - 59% value ease of deployment and configuration by cloud developers
 - 56% would benefit from regulating traffic flows between on-premises and cloud
 - 53% see a benefit in distributed policy enforcement

DevOps teams benefit from security automation

- 93% of those who have adopted DevOps, DevSecOps, or CI/CD report that they have faced challenges when integrating security needs into their processes
- Top challenge reported was “limitations with existing security solutions”

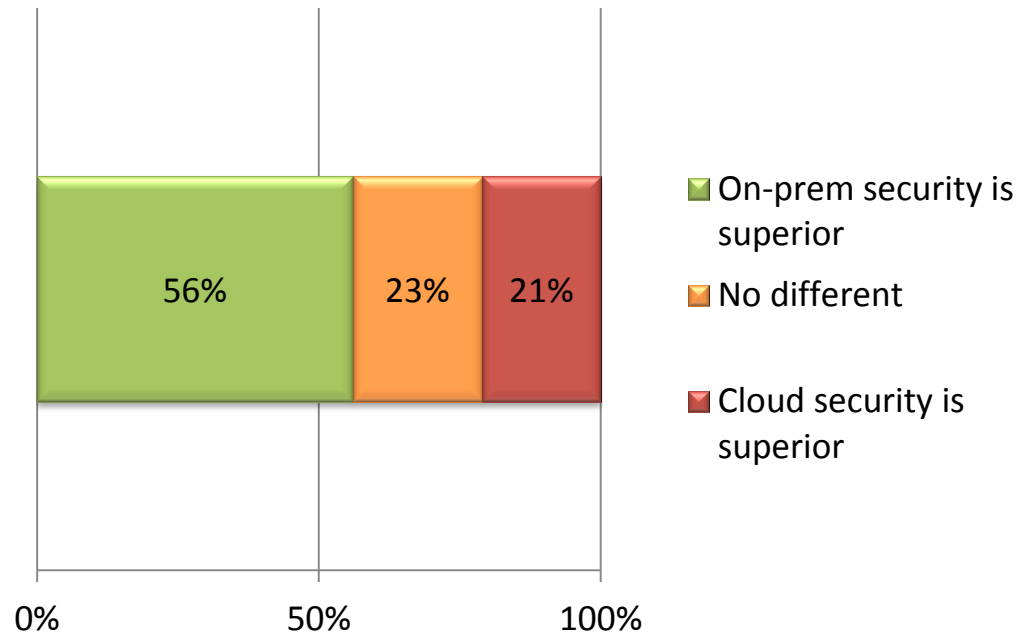
The cloud is redefining the role of the firewall

In this first group of questions, respondents were asked to provide their thoughts about the effectiveness of traditional on-premises security tools compared to the effectiveness of security tools available for public cloud environments. The data collected provides insight about current security preferences and feelings about who owns the responsibility — here's what was discovered:

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More than half believe their on-premises security is superior to their cloud security

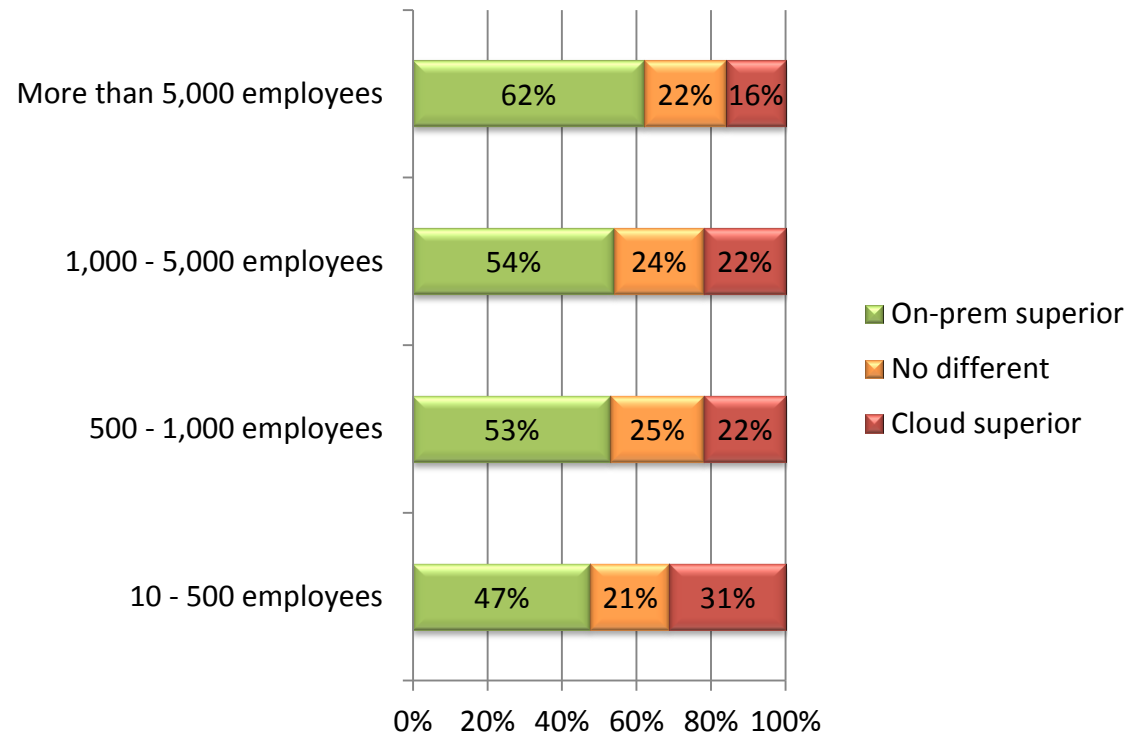
In your opinion, how does the overall security posture for your company's cloud services compare to your on-premises security?



Larger companies most likely to say on-premises security exceeds cloud security

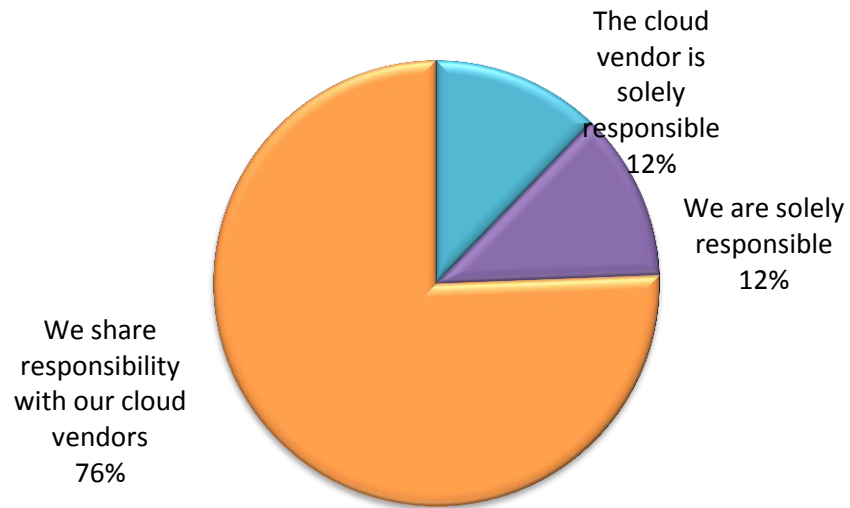
In your opinion, how does the overall security posture for your company's cloud services compare to your on-premises security?

(By company size)



Cloud security is typically expected to be a shared responsibility

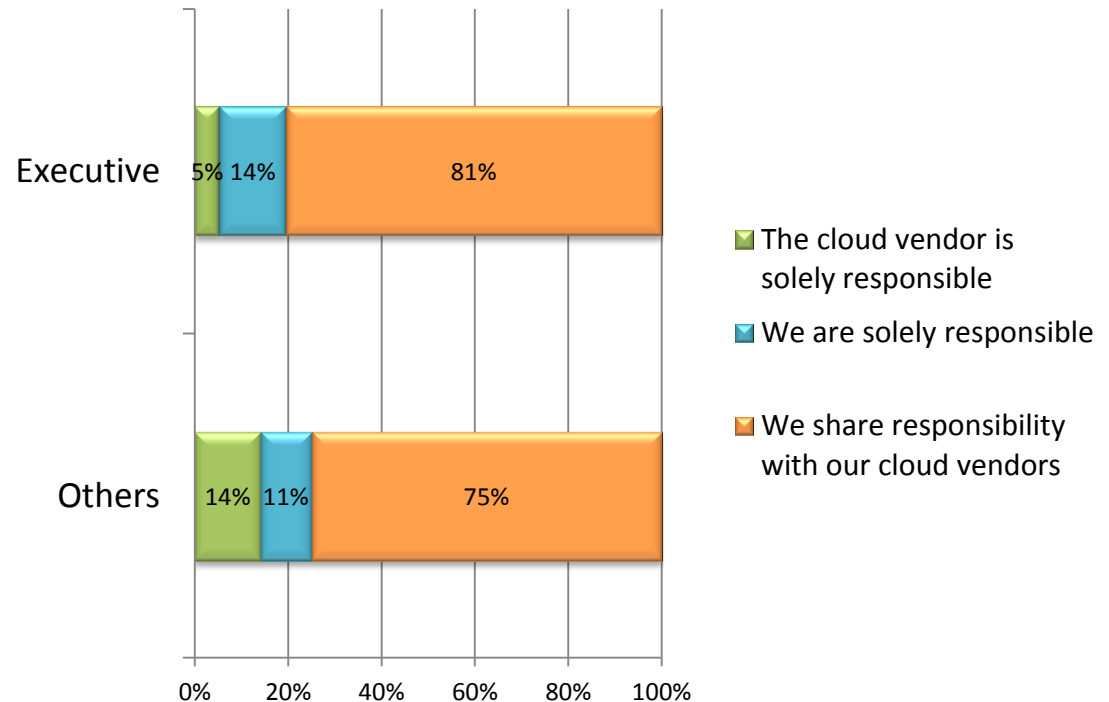
In your opinion, who is responsible for the security of cloud environments?



Executives least likely to put ownership for security on their cloud vendors

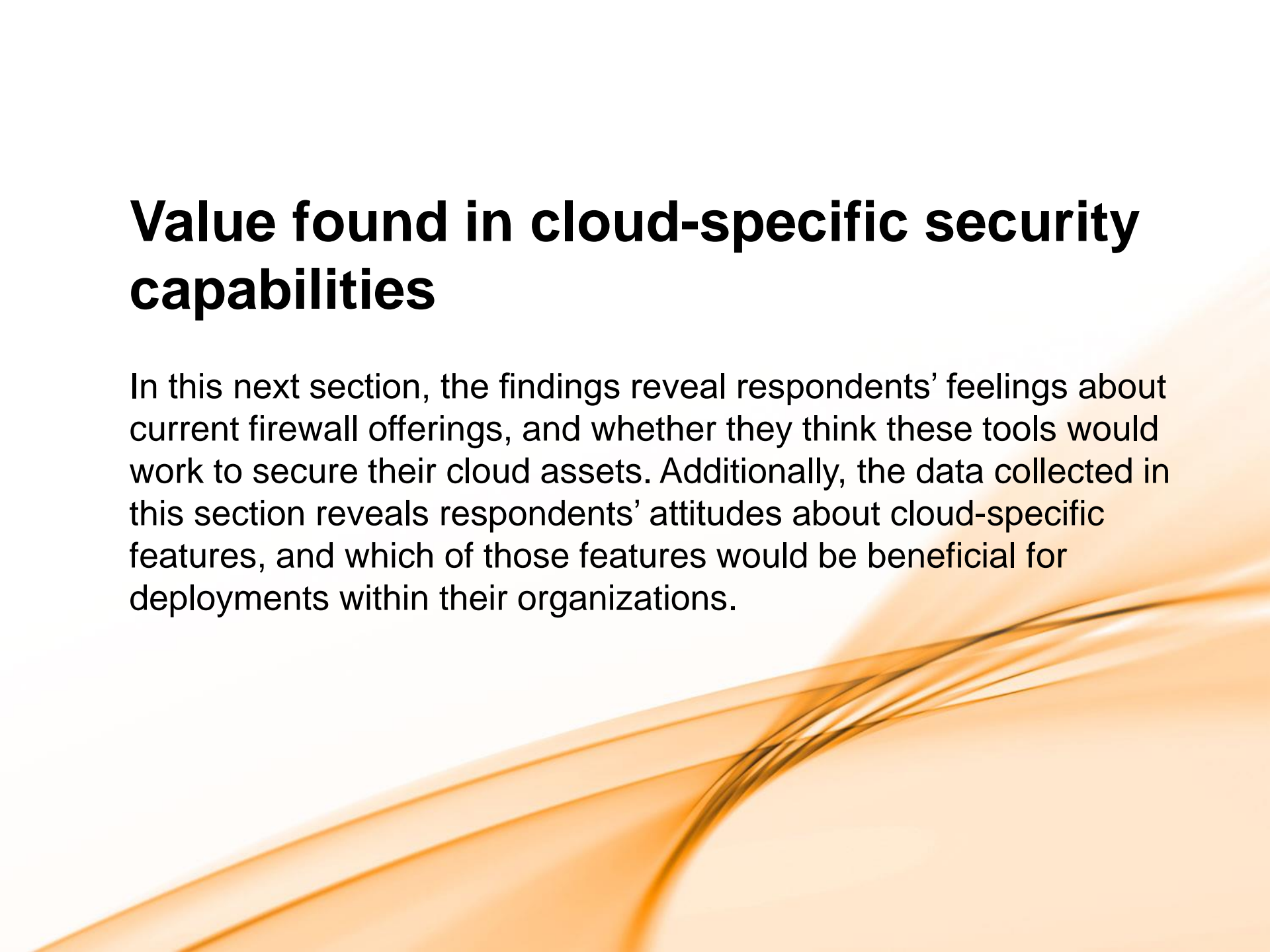
In your opinion, who is responsible for the security of cloud environments?

(By job level)



Value found in cloud-specific security capabilities

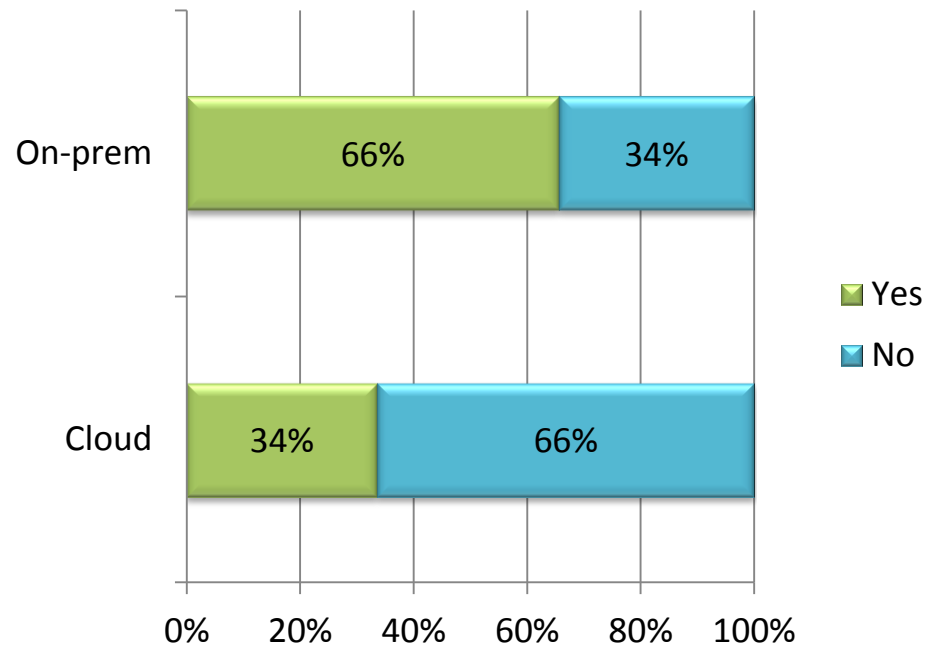
In this next section, the findings reveal respondents' feelings about current firewall offerings, and whether they think these tools would work to secure their cloud assets. Additionally, the data collected in this section reveals respondents' attitudes about cloud-specific features, and which of those features would be beneficial for deployments within their organizations.

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Security teams are twice as likely to install an NGF on-premises vs. in the cloud

Have you currently deployed NGF (Next Generation Firewall) solutions in your **on-premises** environment?

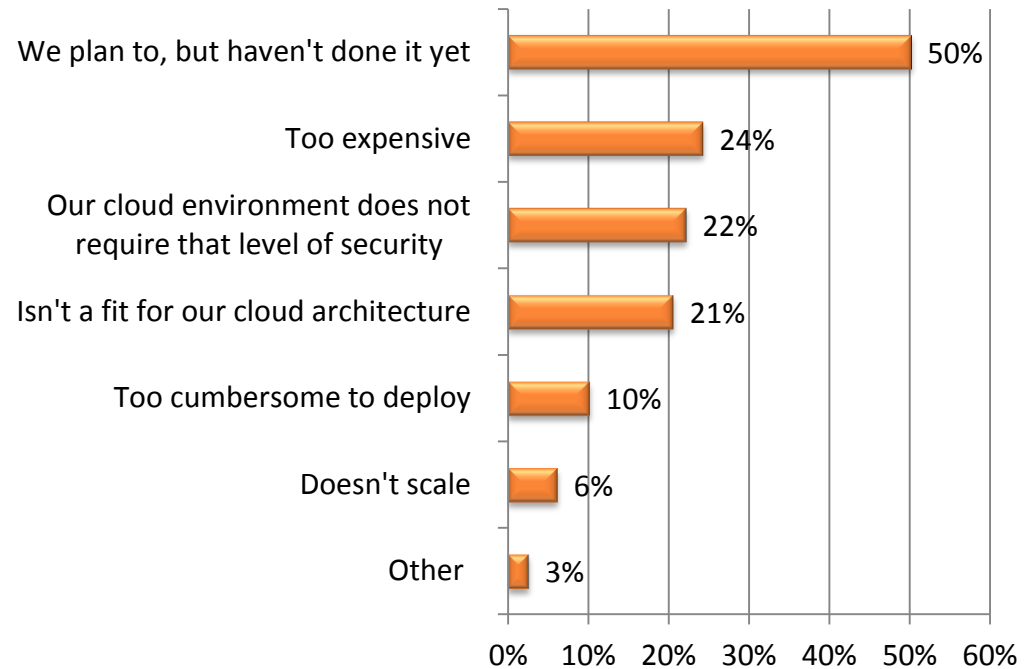
Have you deployed NGF (Next General Firewall) solutions in your **cloud** environment?



Half of those who haven't deployed NGF for cloud usage, plan to do so in the future

n = Have not deployed NGF for cloud

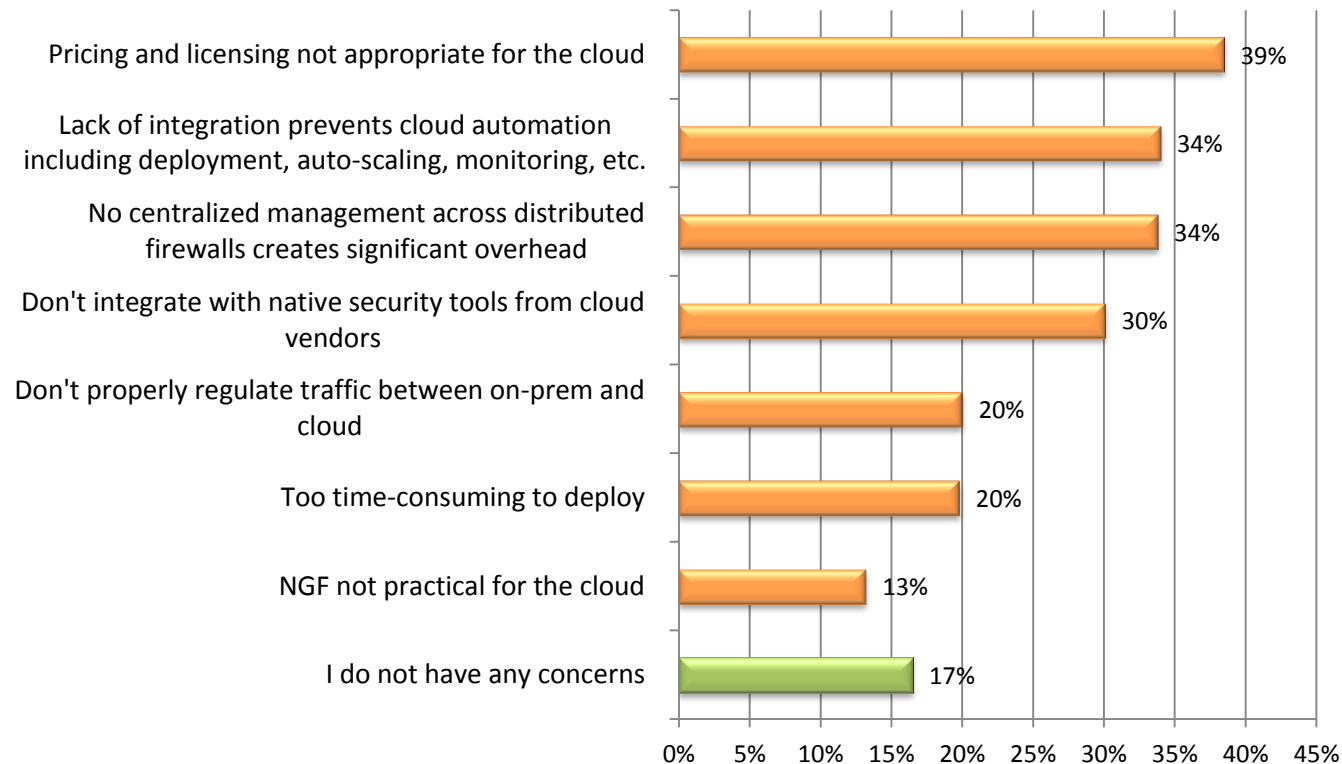
Why haven't you deployed NGF in your cloud environment?



Most frequent "Other." Expect their cloud vendors to do this for them

83% have concerns about NGFs in the cloud

What concerns do you have about deploying a NGFs (Next Generation Firewall) in a cloud environment?



99% say cloud-specific firewall capabilities would be beneficial

Below is a list of possible new capabilities of a firewall built specifically for the needs of cloud and hybrid environments.

Which of these would your organization find beneficial?

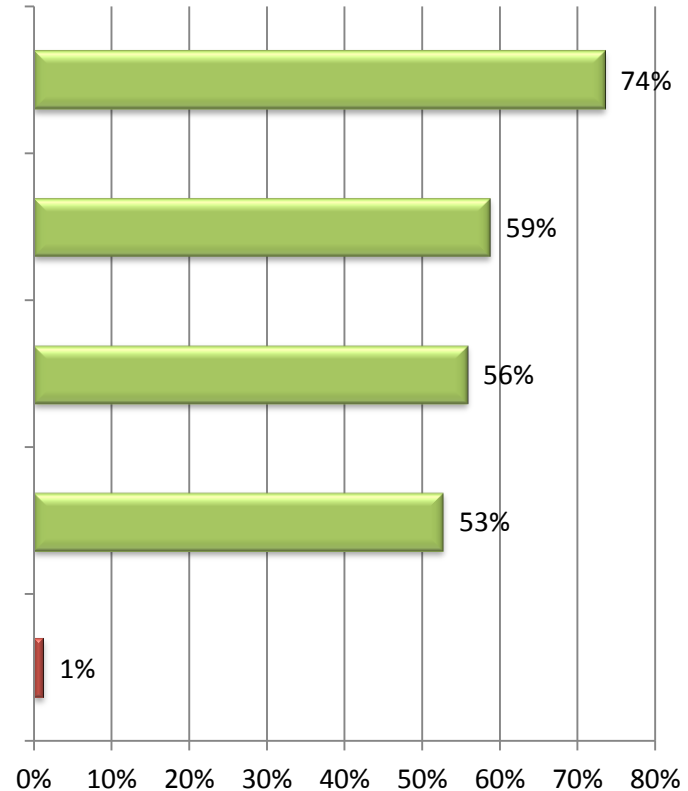
Integration with cloud management, monitoring, and automation capabilities (i.e. AWS Cloudwatch, Azure Security Center, Azure OMS, etc.)

Easy to deploy and configure by cloud developers so application security can be integrated during development as opposed to waiting to be deployed in production

Regulate traffic flows between on-prem and cloud data centers

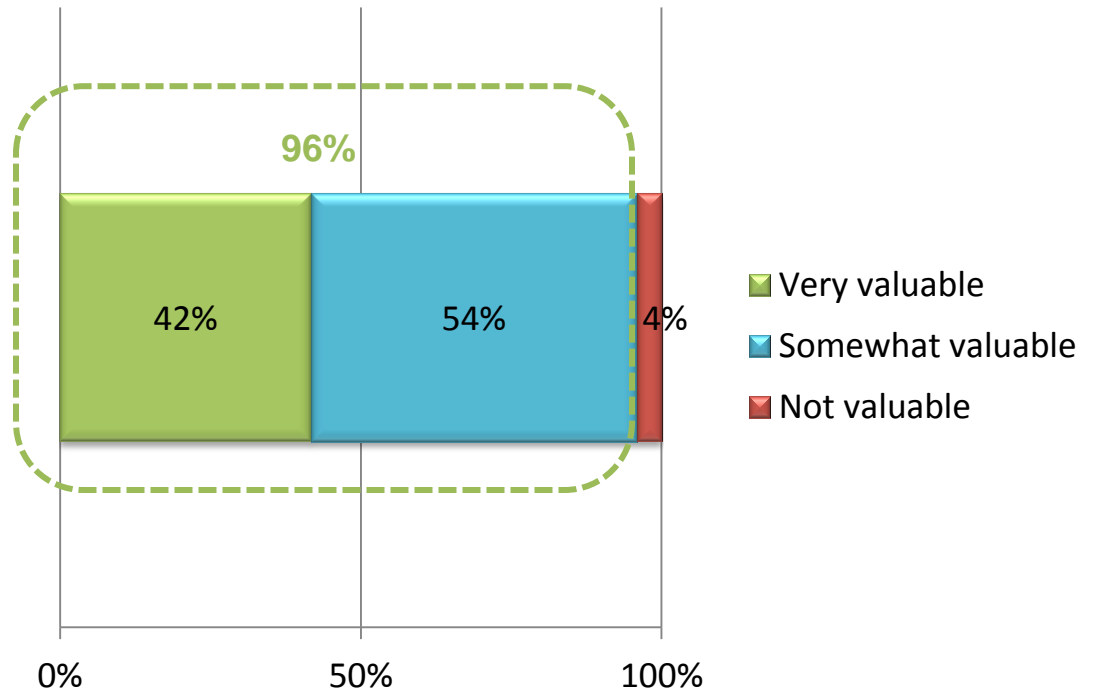
Distributed policy enforcement that adapts to individual workloads rather than securing multiple services behind a single hardware solution

None of these would be beneficial



96% would find a cloud-specific firewall valuable

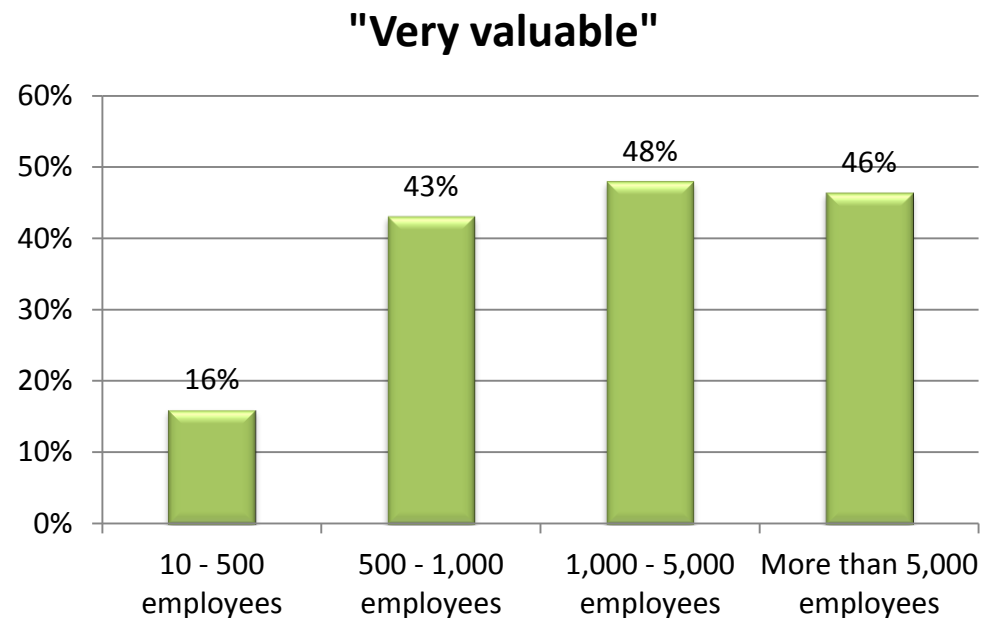
How valuable would a firewall built specifically for the needs of cloud and hybrid environments be for your organization?



Large companies see the most value in a cloud-specific firewall

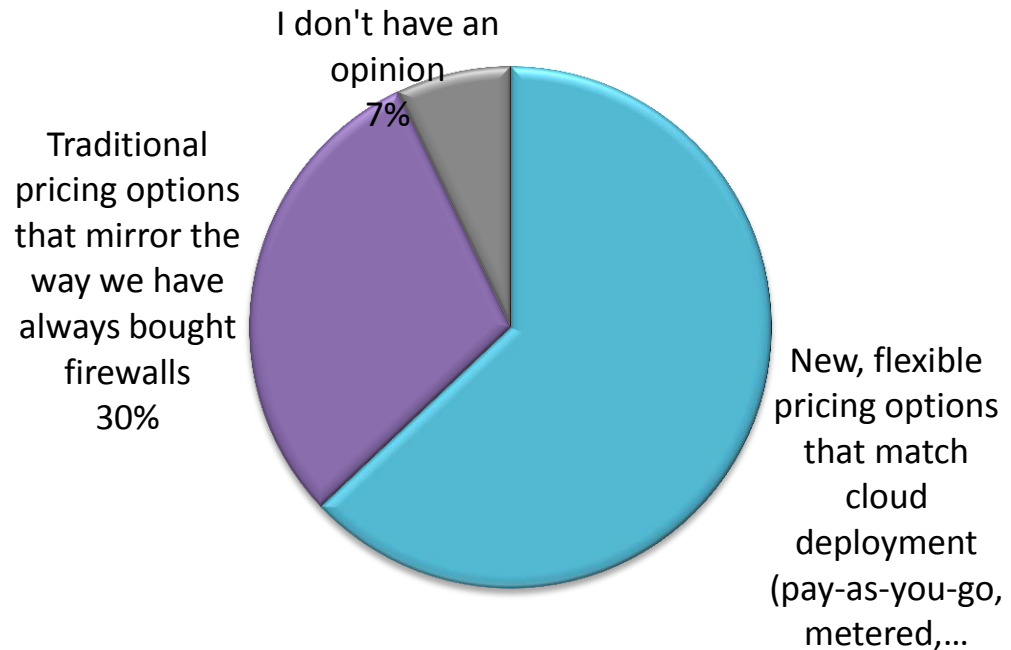
How valuable would a firewall built specifically for the needs of cloud and hybrid environments be for your organization?

(By company size)




Strong preference for usage-based cloud pricing for cloud-specific firewalls

What type of pricing model would you prefer for a firewall solution built specifically for the needs of cloud environments?



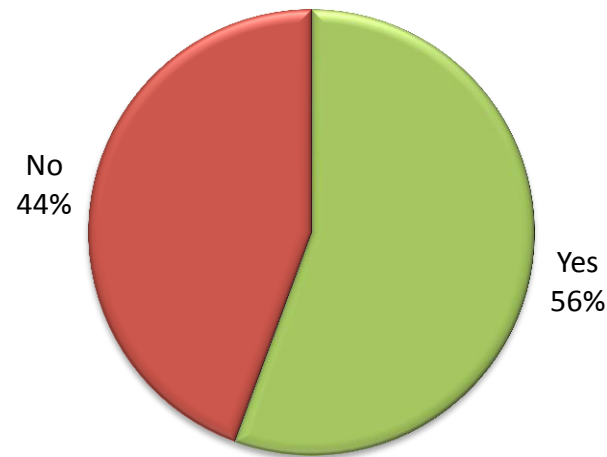
DevOps teams benefit from security automation

In this last set of questions, respondents offer a bit of insight into their experiences with some of the common security challenges faced by DevOps, DevSecOps, and CI/CD (continuous integration and continuous deployment) teams.

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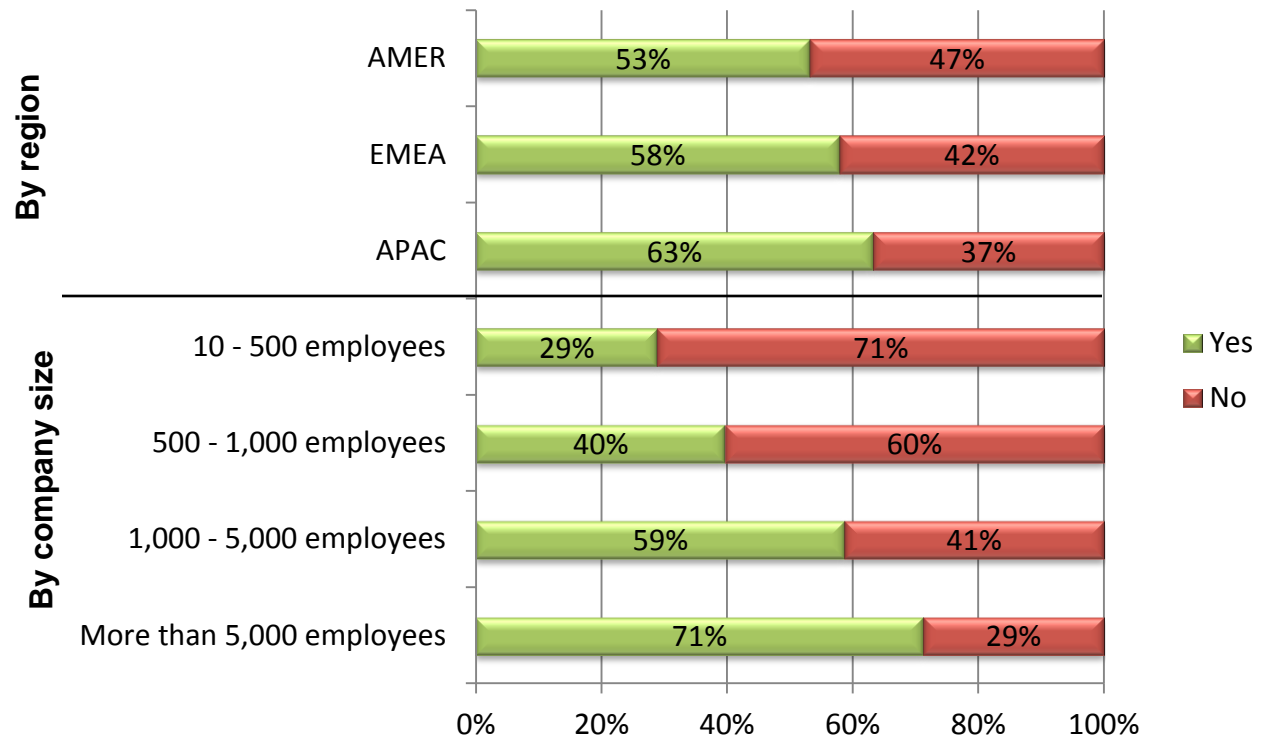
Just over half have adopted DevOps, DevSecOps, or CI/CD

Has your company adopted DevOps, DevSecOps, or CI/CD development methodologies?



Large companies and companies in APAC are more likely to adopt

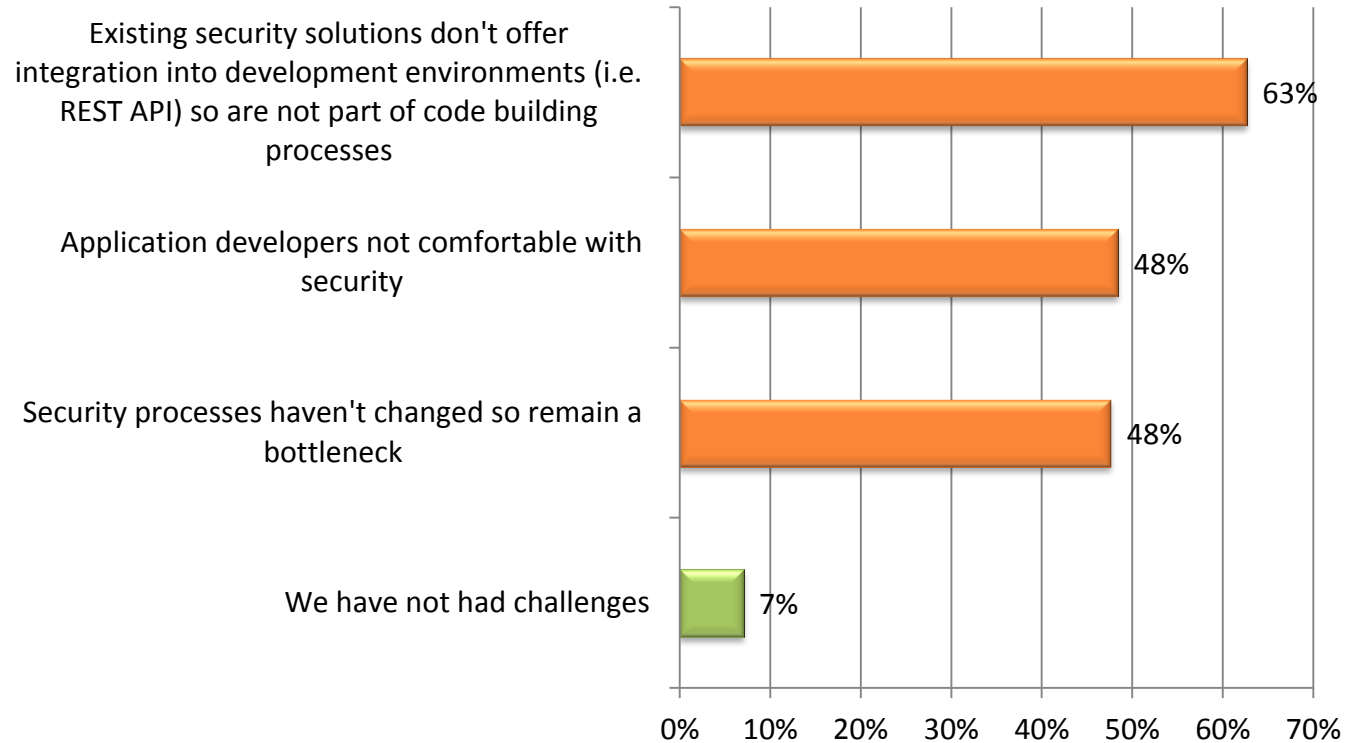
Has your company adopted DevOps, DevSecOps, or CI/CD development methodologies?



93% have faced challenges integrating security into DevOps, DevSecOps, or CI/CD

n = Have adopted CI/CD, DevOps, DevSecOps

What challenges have you faced integrating security into DevOps, DevSecOps, or CI/CD adoption?



Methodology and Participant Profile

The background of the slide features abstract, flowing lines in shades of orange and yellow, creating a sense of movement and depth. The lines are smooth and curved, starting from the bottom left and moving towards the top right, with some lines overlapping and creating a layered effect. The overall aesthetic is clean and modern.

Goals and Methodology

Research Goal

The primary research goal was to capture hard data about security experiences and attitudes in cloud environments, particularly about Next Generation Firewalls (NGF).

Methodology

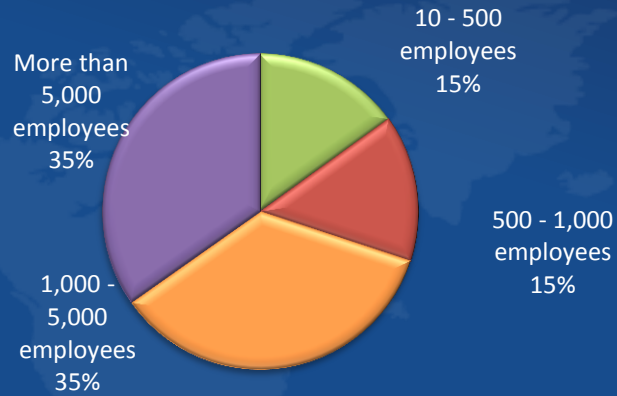
An online survey was sent to independent sources of IT security stakeholders. A wide range of questions were asked on the current state of security in the cloud, use of NGF, and needs for cloud-specific capabilities.

Participants

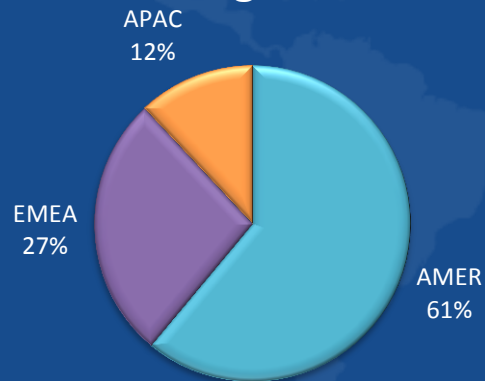
A total of **608 participants from around the globe** completed the survey. All had responsibility for security in an environment that included a significant cloud investment.

Demographics

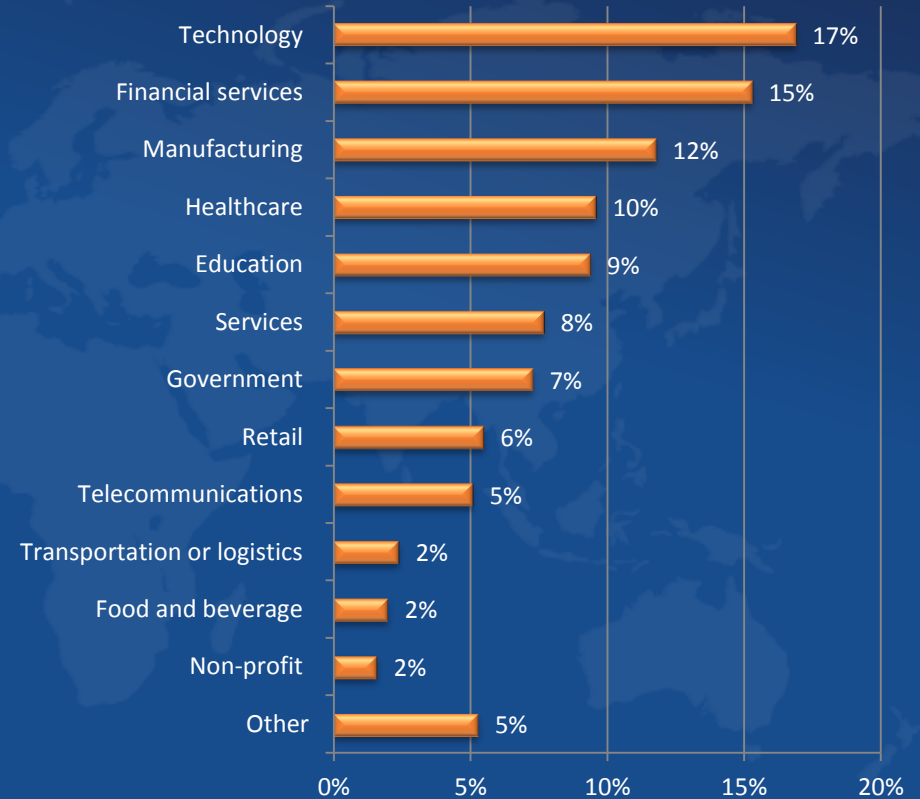
Company Size



Region

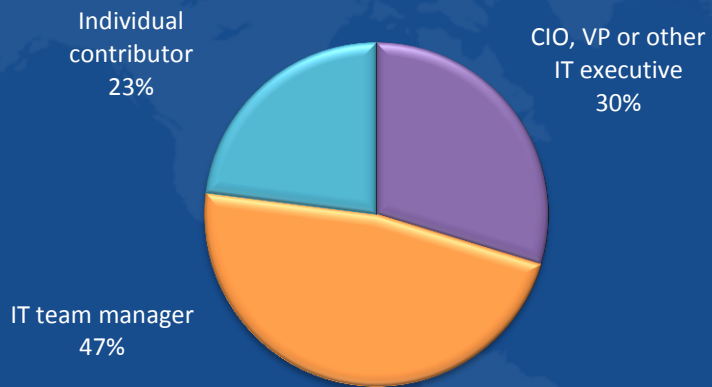


Industry

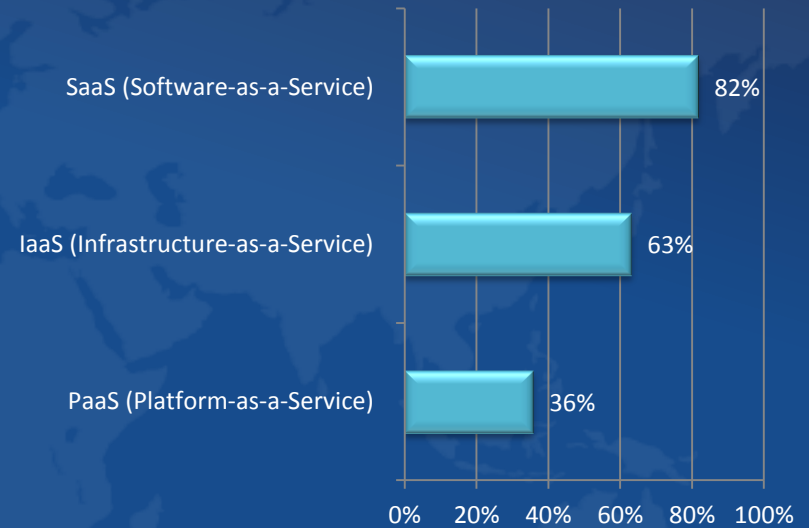


Demographics (continued)

Job Level



Significant Cloud Investments



For more information...

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