

**Market Connections**  
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# New IP Survey Report

June 17, 2015

## About the Study

Technology is constantly evolving—big data, the cloud and mobility are fundamentally changing the industry. The New IP is the answer to managing these changes. It is a networking paradigm with the primary objective of creating networks that help organizations tap into the unlimited possibilities of cloud, mobile, social and Big Data. It is the industry's recognition that traditional networks inhibit organizations from achieving the unlimited possibilities of the cloud, mobility and social — known as the third platform.

The New IP represents a fundamental change in mindset about the role of networking and its ability to support the massive scale of today's powerful compute and storage models.

Government market research firm Market Connections, Inc. conducted this study to determine federal agencies' understanding, needs and propensity to adopt key components associated with the New IP.

## Key Research Findings

- **Barely more than one in ten respondents feel their agency's network infrastructure is fully able to support simple (12%), scalable (14%) and agile (12%) solutions to the movement and management of data.**
  - Budget constraints, and limited internal resources and expertise are top challenges for agencies looking to make improvements in these areas.
- **90% of respondents believe open standards are important, yet even though half (47%) are considering it, or are planning to adopt it in the next few years, only one in ten (11%) have actually done so.**
  - Flexibility, reduced costs and speed of innovation are the top reasons for adoption, while security concerns dominate reasons for not considering open standards.
- **84% of respondents have either implemented (18%), are planning (28%) or are considering (38%) integrating Ethernet fabric technologies into their data center.**
  - Ease of network management is a top reason, followed by scalability (grow with minimal touch provisioning).

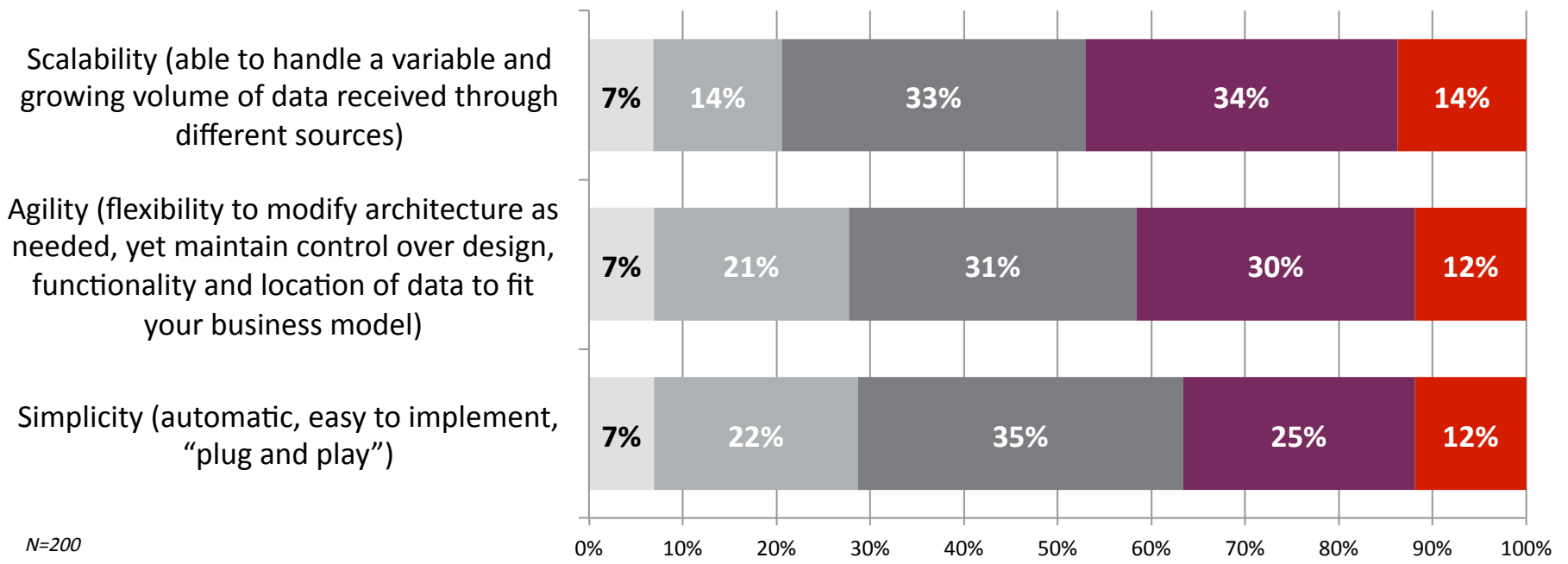
## Key Research Findings

- **Nearly 90% of respondents have deployed Network Function Virtualization (NFV) technologies: firewalls, load balancing, virtual routers, and other solutions.**
- **70% of respondents are currently considering/planning or have already moved to a software defined network (SDN).**
  - The most often mentioned advantages respondents feel SDN can deliver to a network are greater performance (53%) and ease of management (51%). Security (44%) and ease of deployment (41%) are other commonly perceived benefits.
- **52% of respondents are considering higher level orchestration tools.**
  - Among those considering or implementing, CloudStack, VCloud Director and OpenStack are the most popular tools.
  - Respondents making the final decision about network infrastructure solutions are nearly twice as likely to favor orchestration tools in general, specifically CloudStack and OpenStack.

# Ability to Support Data Solutions

- The majority of agencies do not have the infrastructure in place to support the New IP. Barely more than 10% rate their agency’s network infrastructure as scalable, agile or simple.

■ 1-Network infrastructure not at all able to support ■ 2 ■ 3 ■ 4 ■ 5-Network Infrastructure fully able to support



N=200



How would you describe your network infrastructure’s ability to support simple, scalable, and agile solutions to the management and movement of data?

# Challenges Improving Network Infrastructure

- Respondents face several challenges in improving their network infrastructure’s simplicity, agility and scalability with budget, resources, and expertise at the top of the list.

	Simplicity (n=128)	Agility (n=117)	Scalability (n=106)
Budget constraints (OPEX, CAPEX)	57%	52%	52%
Lack internal resources/personnel	41%	41%	35%
Lack expertise to implement new solutions	30%	35%	36%
Contractual restrictions	29%	28%	24%
Not an agency priority at this time	27%	25%	28%
Insufficient knowledge of the options/ technology	13%	21%	18%
Other	8%	6%	6%

Note: Multiple responses allowed

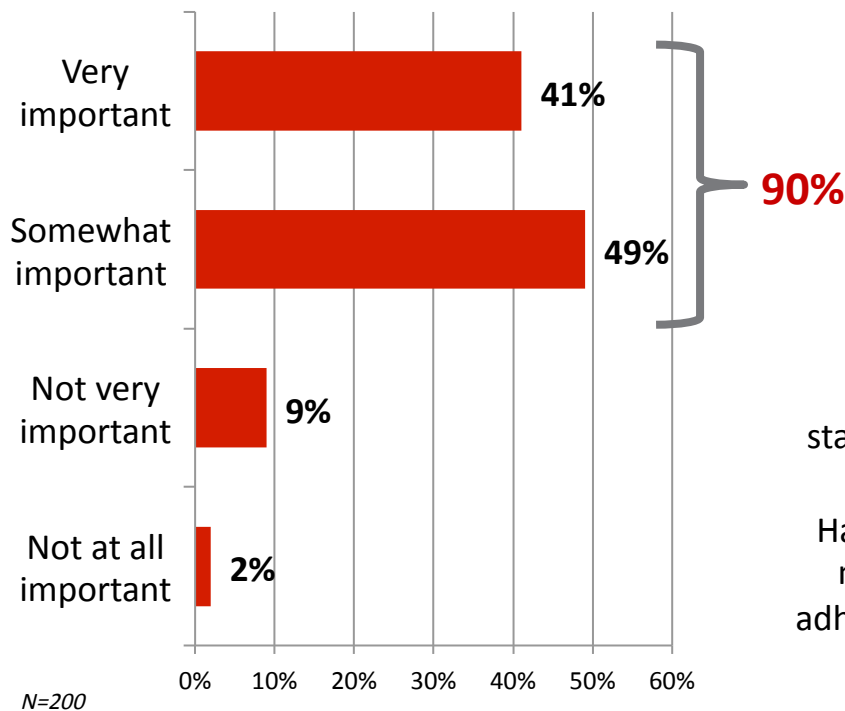


*What challenges do you face to improve your network infrastructure in terms of its [simplicity/scalability/agility]? (select all that apply)*

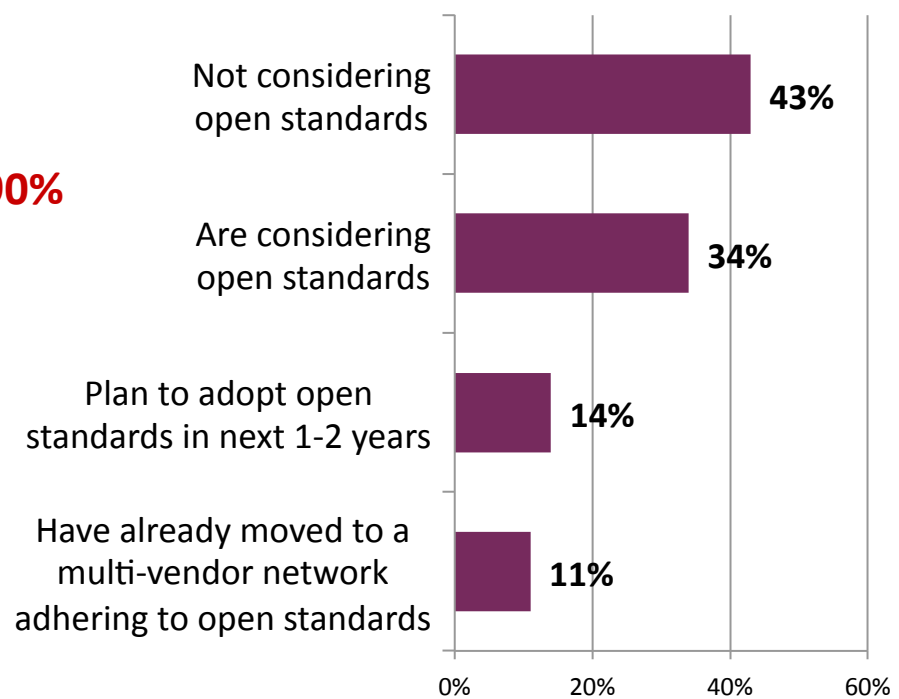
# Open Standards Importance and Consideration

- While almost all respondents (90%) believe open standards are, or would be, important to their network infrastructure, only 11% have adopted open standards.

**Importance of Open Standards in Network Infrastructure**



**Open Standards Consideration**



To what extent do you feel open standards are, or would be, important to your network infrastructure?  
 Have you moved, or are you currently considering moving, your network to a multi-vendor network that adheres to open standards?

# Reasons for Adopting Open Standards

- Greater flexibility and cost savings are the primary reasons for adopting open standards. Agencies also see faster innovation as a reason to adopt open standards.

	Are considering open standards (n=67)	Plan to adopt open standards in next 1-2 years (n=27)	Have already moved to a multi-vendor network adhering to open standards (n=21)
More flexibility	69%	63%	52%
Reduced costs	67%	56%	57%
Faster innovation	43%	41%	43%
Reduced vendor lock-in	34%	30%	38%
User-centric network (I am in charge as a user—the vendor is not in charge)	25%	19%	38%
Other	1%	4%	5%

Note: Multiple responses allowed

 = top reason

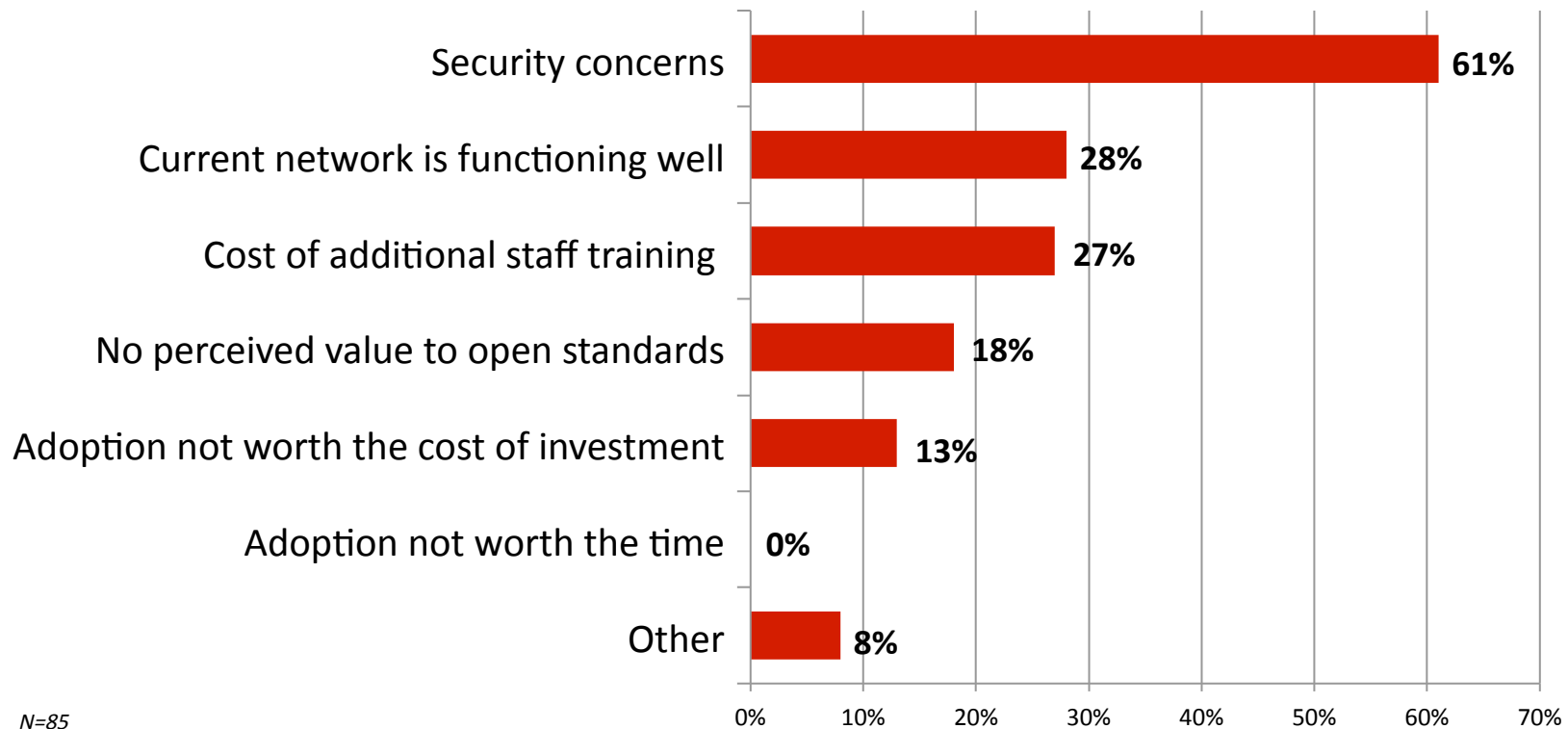


For what reason(s) [have you moved to open standards; are you planning to adopt open standards in the next 1-2 years; are considering open standards]? (select all that apply)



## Reasons for Not Considering Open Standards

- Among the 43% of respondents not considering open standards, security concerns are by far the most common reason.



N=85

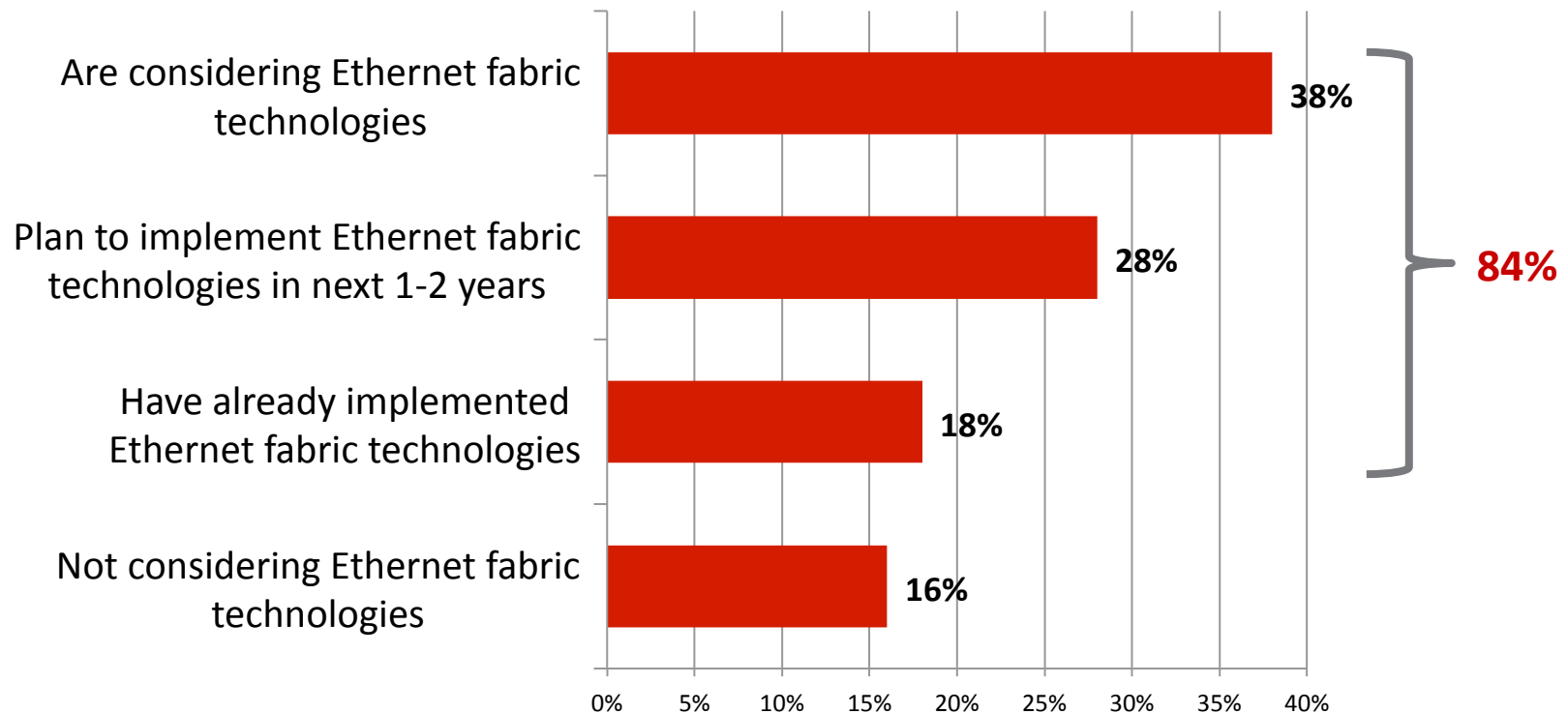
Note: Multiple responses allowed



For what reason(s) are you not considering open standards? (select all that apply)

# Ethernet Fabric Technologies Consideration

- More than four in five respondents have either implemented, are currently considering or planning (two-thirds) Ethernet fabric technologies for their data center.



N=97



Have you implemented, or are you currently considering, Ethernet fabric technologies in your data center?


# Reasons for Adopting Ethernet Fabric Technologies

- Ease of network management and the positive impact on scalability are the primary reasons for using Ethernet fabrics.

	Are considering Ethernet fabric technologies (n=37)	Plan to implement Ethernet fabric technologies in next 1-2 years (n=27)	Have already implemented Ethernet fabric technologies (n=17)*
Ease of network management	62%	37%	71%
Facilitates scalability (can grow with zero-touch provisioning)	51%	52%	29%
Want technology that will work with higher level orchestration tools	38%	41%	53%
Flattens our network	14%	22%	29%
Eliminates spanning tree	8%	30%	24%
Other	3%	0%	0%

Note: Multiple responses allowed

\* Caution: Small sample size

 = statistically significant difference

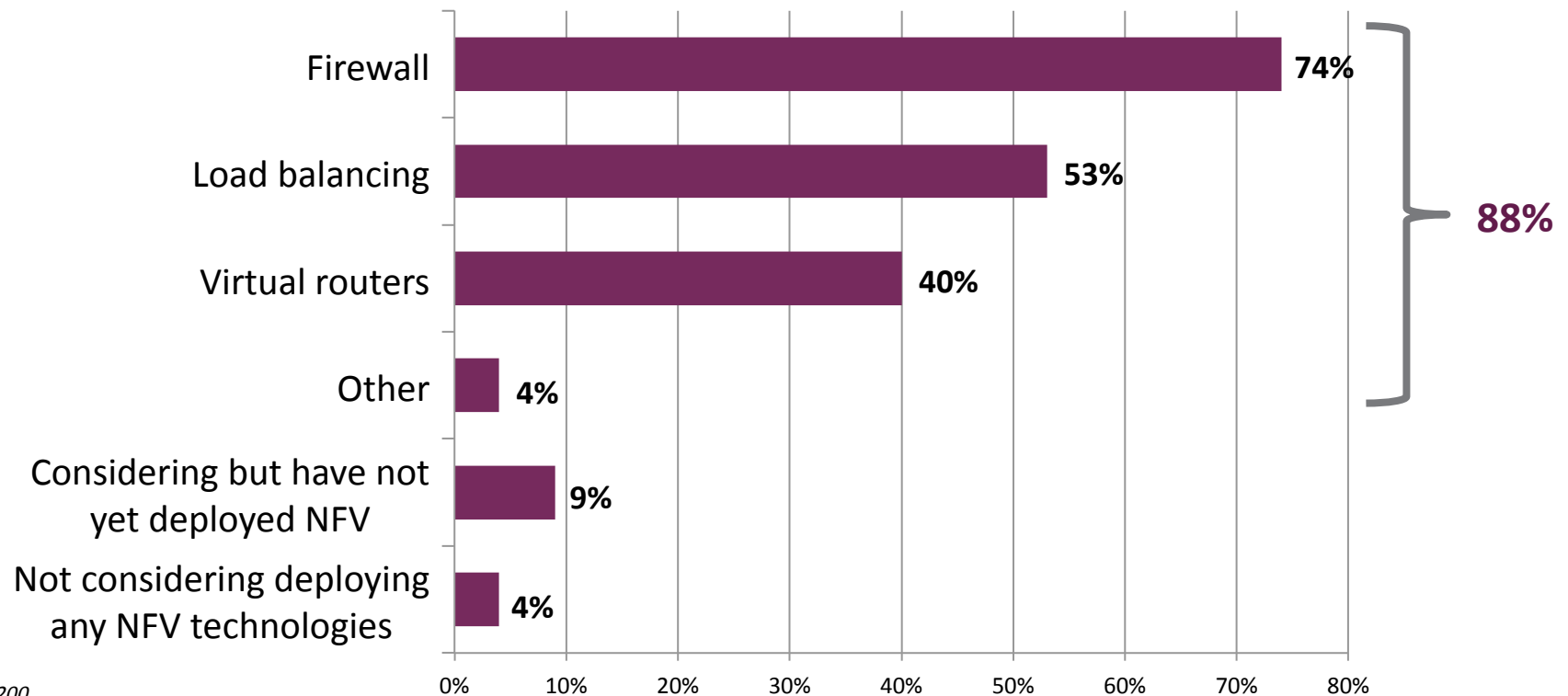
 = top reason



For what reason? (select all that apply)

# Network Function Virtualization (NFV) Deployment

- Nearly all respondents have deployed NFV technologies (virtualizing services on the network), and most of the remainder are considering NFV deployment.



N=200

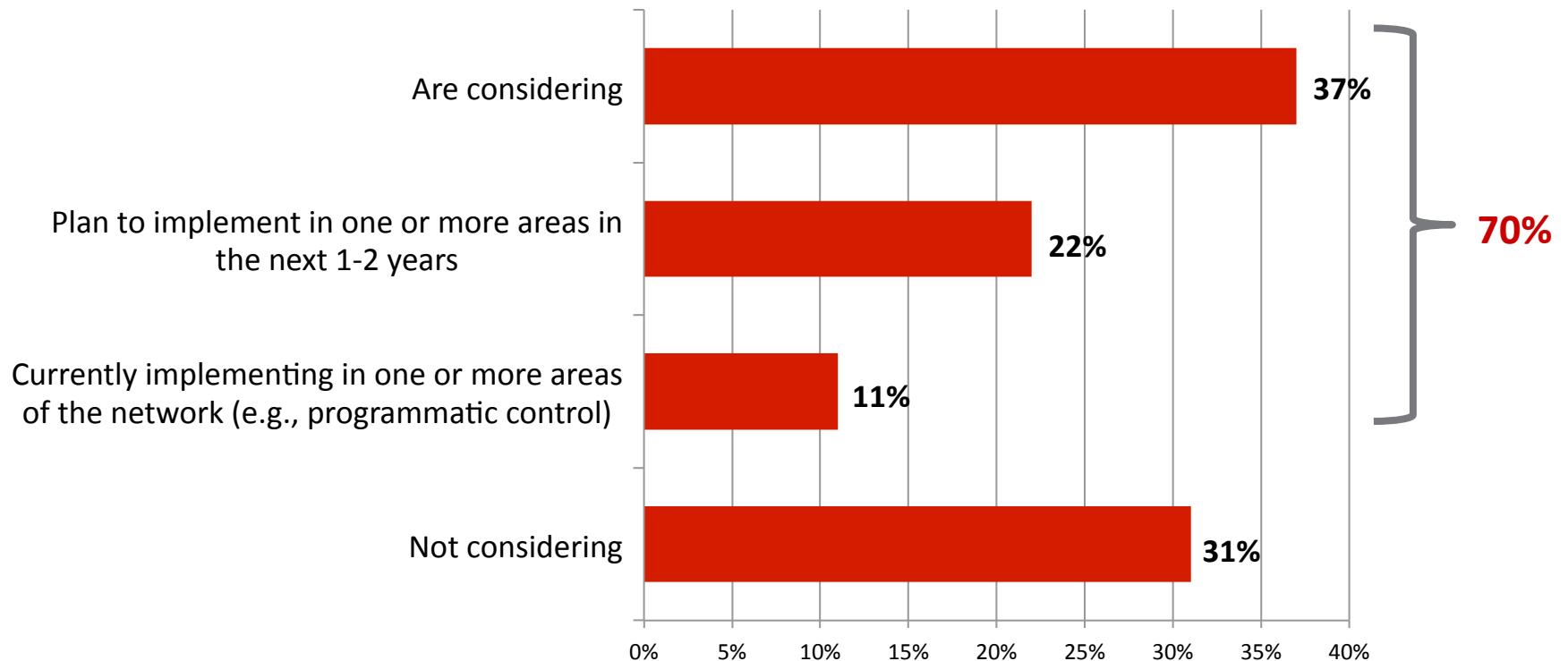
Note: Multiple responses allowed



Which Network Function Virtualization (NFV) technologies do you currently deploy in your data center? (select all that apply)

# Moving to a Software Defined Network (SDN)

- The majority of respondents (70%) are currently considering/planning or have already moved to a software defined network. Yet almost one-third (31%) are not considering it.



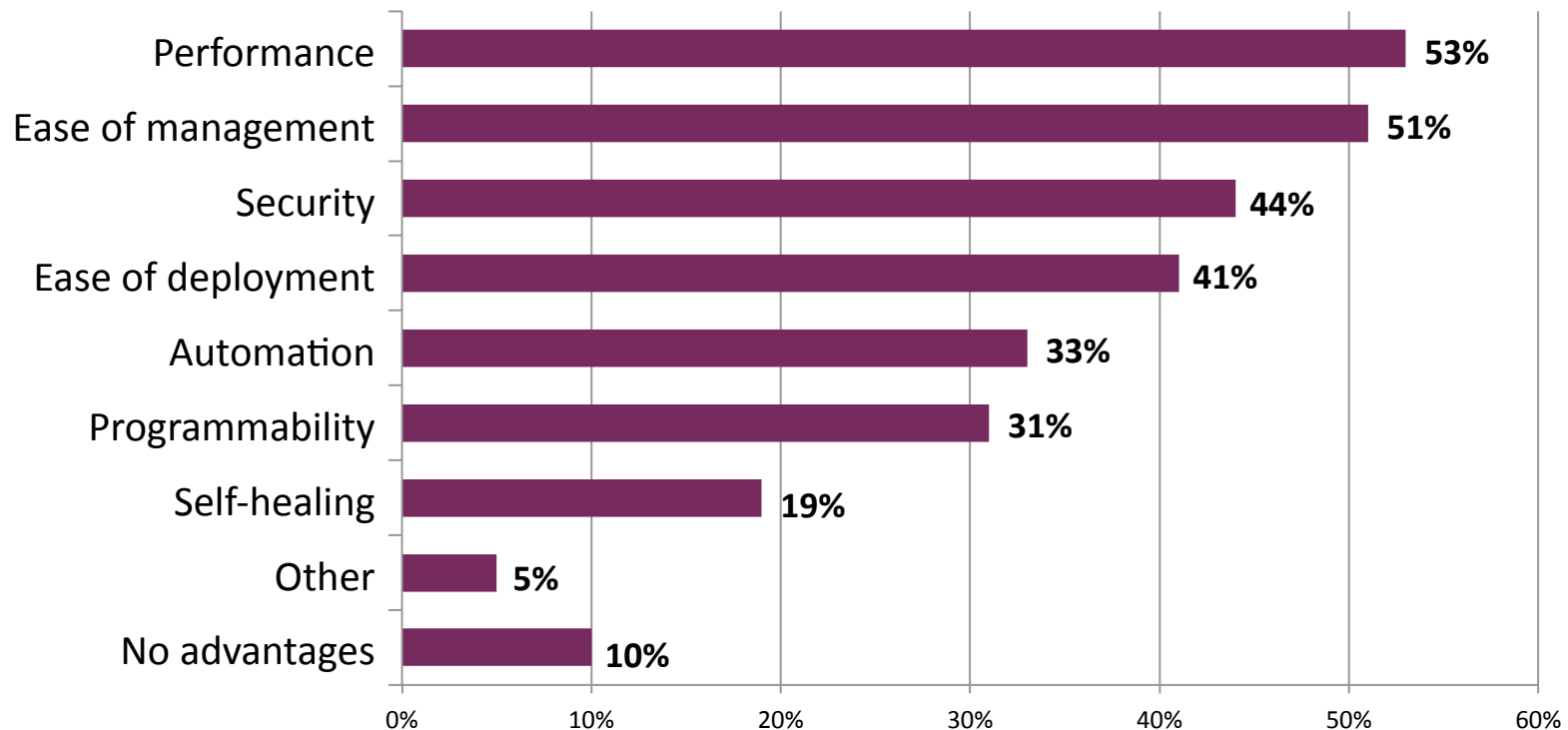
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Which of the following best describes any action you may be taking to move to a Software Defined Network?

# SDN Advantages

- Respondents feel SDN can deliver greater performance, ease of management, security and ease of deployment.



N=200

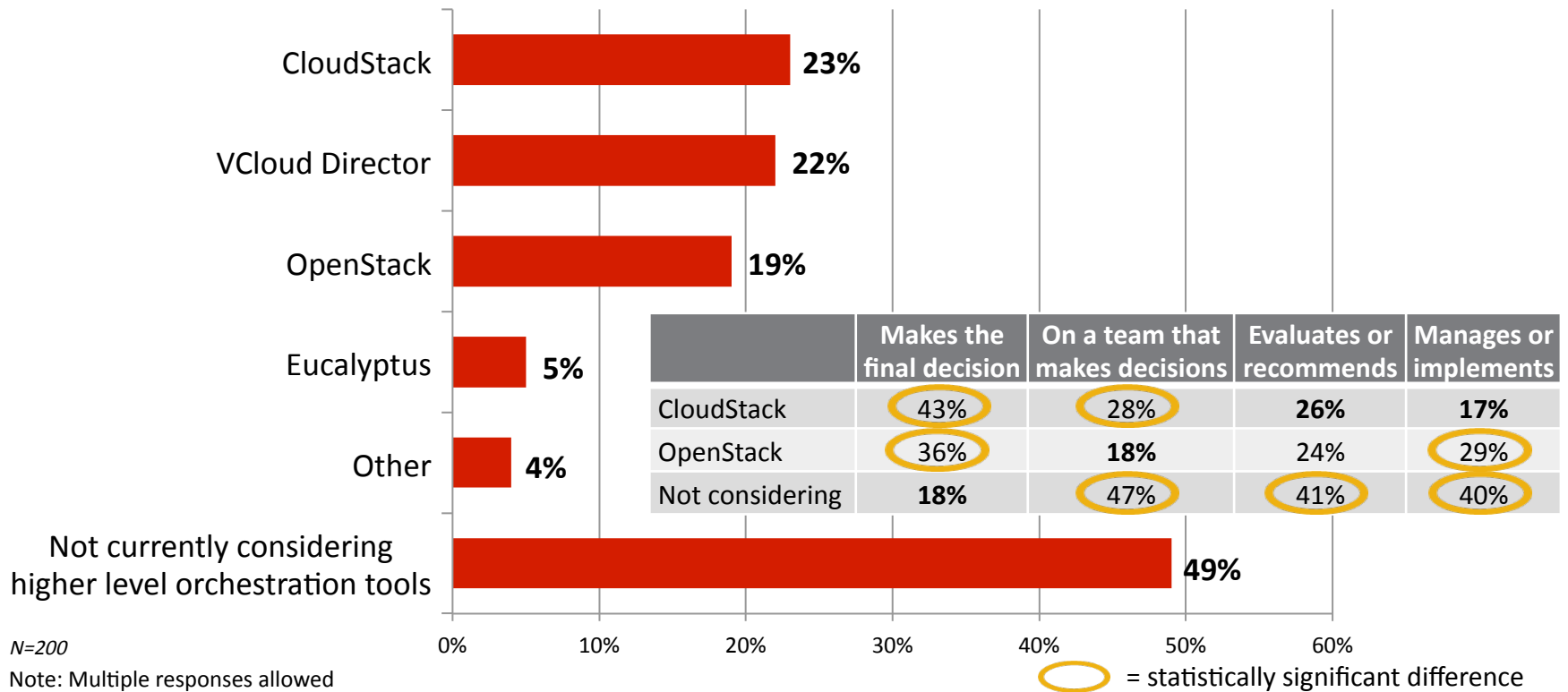
Note: Multiple responses allowed



What advantages, if any, do you believe Software Defined Networking can deliver to a network? (select all that apply)

# Higher Level Orchestration Tool Consideration

- While half of respondents (49%) are not considering higher level orchestration tools (that manage the entire data center, service storage, the network), those who make the final decision about network infrastructure solutions are nearly twice as likely to consider these tools.



N=200

Note: Multiple responses allowed



What, if any, higher level orchestration tools that allow managing, provisioning and automating your entire IT infrastructure are you considering or implementing? (select all that apply)

## Recommendations

The New IP is in its early stages, but agencies have already been adopting some of the enabling technologies that lay the foundation. However, the survey shows that, overall, agency infrastructures are not ready for the New IP.

The New IP is flexible, and agencies can transition incrementally as the needs arise. Adopting these components of the New IP will prepare your agency for the future:

Recommendation	Benefit
Move to open standards	Provide both vendor and technology flexibility while reducing cost and complexity—and accelerate the rate of innovation
Deploy Ethernet fabrics	Simplifies the network architecture; easy to implement and manage and scale
Initiate SDN and NFV	Provides the ability to programmatically control the way data flows through a network from a central feedback enabled decision point as well as providing faster resource deployment and scale
Implement higher level orchestration tools	Allows service provisioning of components within the entire data center from data storage to servers to the network



# About the Survey

**Market Connections designed and conducted a blind online survey among 200 federal government IT decision makers and influencers in April 2015.**

- 200 completed surveys yields a +/-6.9% margin of error.
- 64 different agencies participated.
- Six in ten agencies represented are federal civilian, with the remainder DoD or from the intelligence community.

**Throughout the report, notable significant differences are reported.**

Statistical analyses were conducted for agency type (federal civilian vs. defense).

**Due to rounding, graphs may not add up to 100%.**

N=200

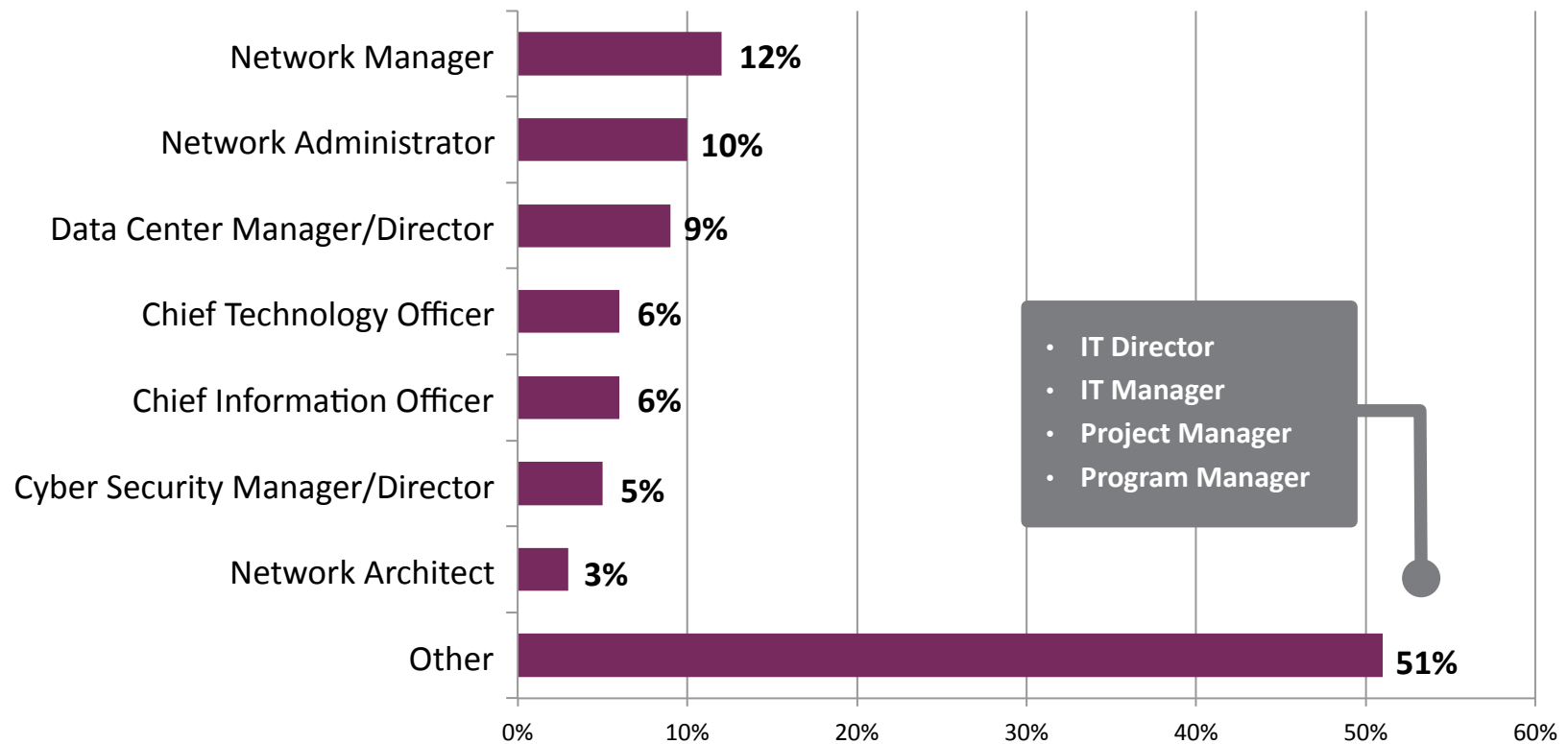


*What is your agency type?  
What federal agency do you work for?*

Sample Agencies Represented (In Alphabetical Order)	
Air Force	Department of Justice (DOJ)
Army	Department of the Interior (DOI)
Congress	Department of Transportation (DOT)
Department of Agriculture (USDA)	Department of Treasury (TREAS)
Department of Commerce (DOC)	Department of Veteran Affairs (VA)
Department of Defense (DOD)	Federal Aviation Administration (FAA)
Department of Energy (DOE)	Judicial/Courts
Department of Health and Human Services (HHS)	National Security Agency (NSA)
Department of Homeland Security (DHS)	Navy
Department of Housing and Urban Development (HUD)	US Postal Service (USPS)

# Job Role

- A wide variety of agency roles are represented, the most common of which are Network Manager, Network administrator, and Data Center Manager/Director.



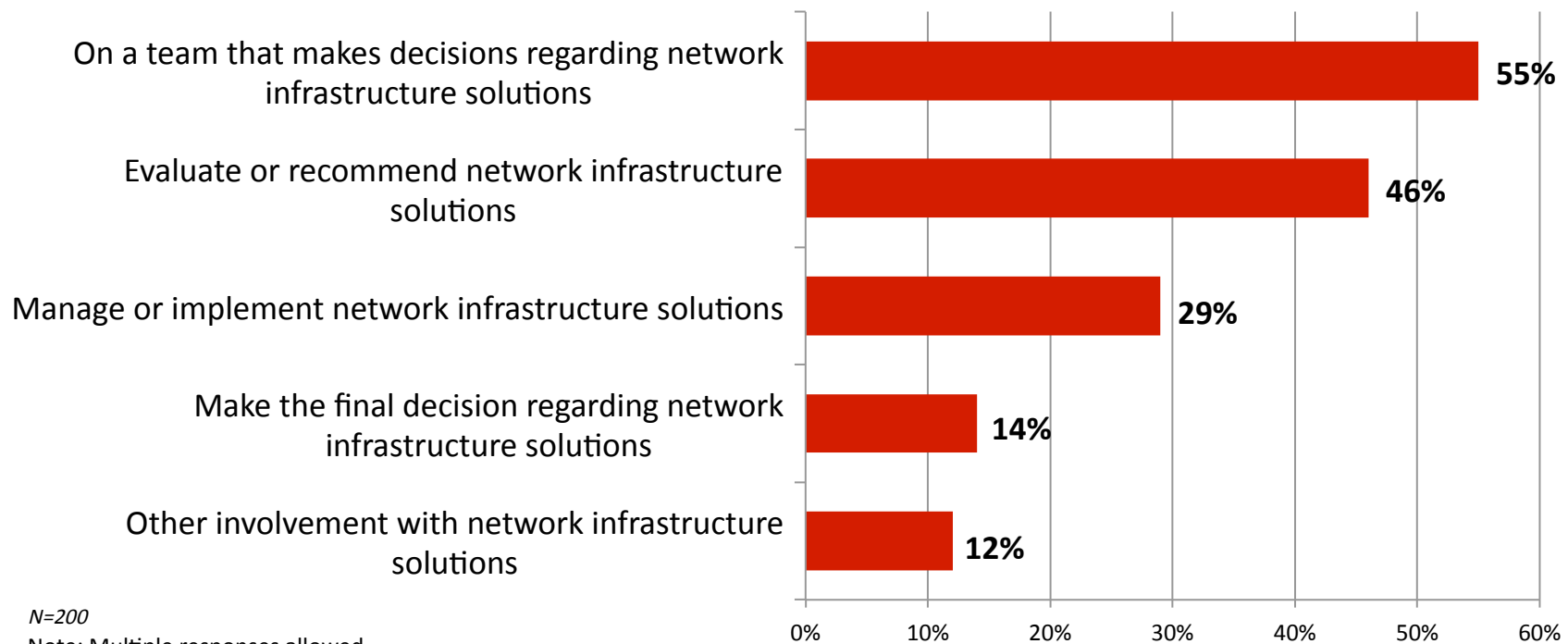
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What is your role at your agency?

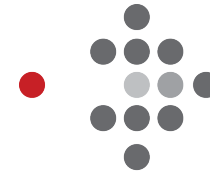
## Decision-Making Involvement

- More than half of respondents mention they are on a team that makes decisions regarding network infrastructure solutions; and nearly half evaluate or recommend network infrastructure solutions. Three in ten also describe their role as managing or implementing network infrastructure solutions, and one in seven make the final decision in this regard.



How are you involved in decisions or recommendations regarding your agency's network infrastructure? (select all that apply)

## Contact Information



**Market Connections**  
Research you can act on.

**BROCADE**

**Dave Glantz, Director of Research Services**

[DaveG@marketconnectionsinc.com](mailto:DaveG@marketconnectionsinc.com) | 703.378.2025, ext. 104

**Monica Mayk, Vice President of Client Services**

[MonicaM@marketconnectionsinc.com](mailto:MonicaM@marketconnectionsinc.com) | 703.378.2025, ext. 107

**Susan Rose, Thought Leadership Content Strategist**

[SusanR@marketconnectionsinc.com](mailto:SusanR@marketconnectionsinc.com) | 703-944-7685

*Brocade commissioned this research from Market Connections.  
For more information about Brocade's New IP solutions, contact:*

**Ginger Kessler, Federal Marketing, Brocade**

[gkessler@brocade.com](mailto:gkessler@brocade.com) | 301.512.6843