

Market Connections
Research you can act on.

Brocade Federal IP Storage Survey Report

March 2016

About the Study

Data is essential to effective decision-making; so how organizations transport, store, manage and protect their data is critical. With global IP data center traffic growing 23% annually, there is increased pressure on the network to deliver the data reliably and efficiently.

Historically, organizations have used SAN storage for mission-critical data and IP storage for noncritical workloads. And because IP storage solutions are perceived as less expensive and easy to implement/manage, many commercial companies are now using IP storage for all types of data.

Brocade commissioned government market research firm Market Connections, Inc. to learn whether this trend is occurring in the federal market — and if so, what concerns and pain points those managing storage and storage networks are experiencing.

Key Research Findings

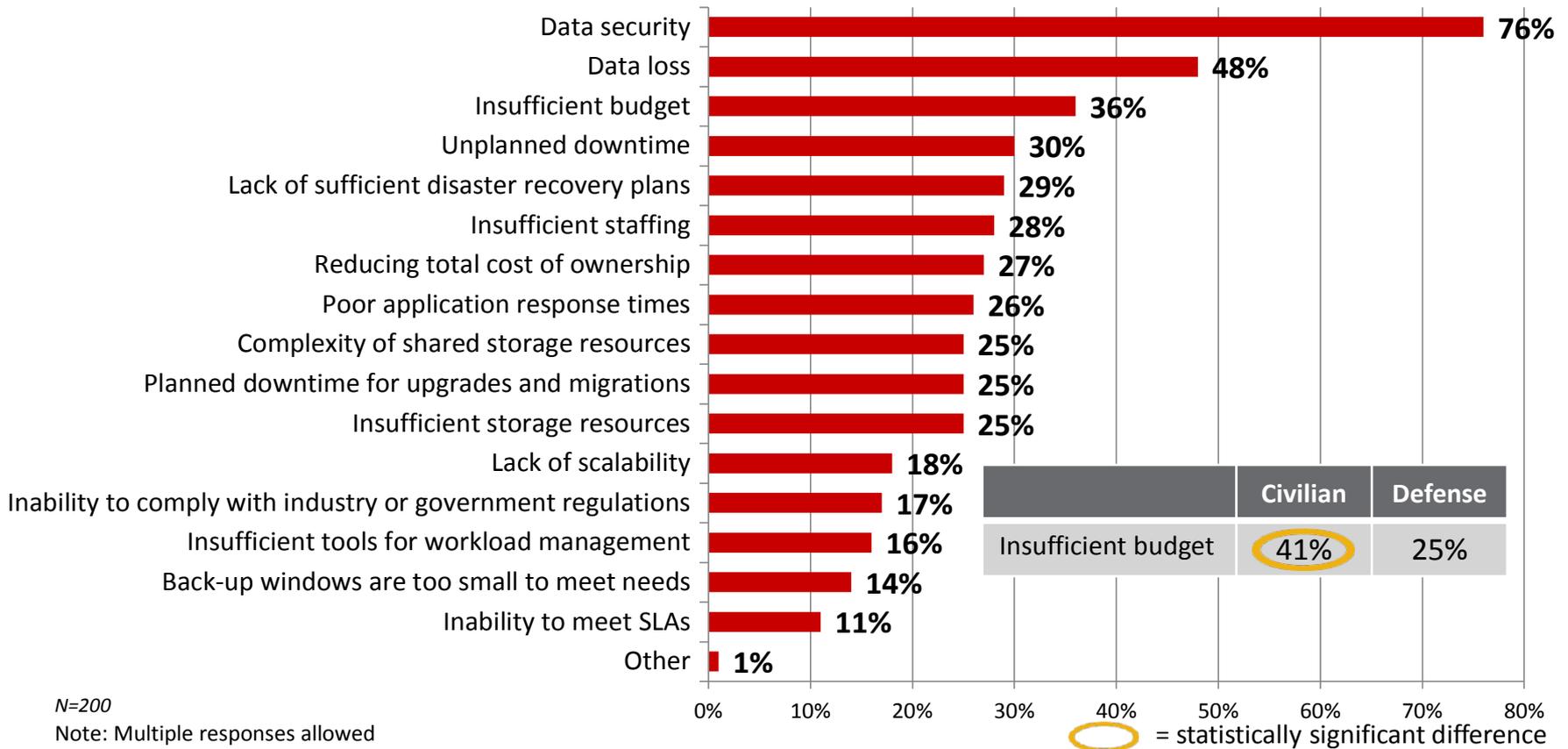
- Agencies' three most widely mentioned concerns regarding data storage and workload management are data security, data loss, and insufficient budget.
- On average, 45% of agencies' total storage capacity is IP-storage based; three quarters (78%) expect this capacity will grow by at least ten percent (10%) in the next year.
- The primary driver of agencies' IP storage growth is the growth in server virtualization (29%), followed by growth in unstructured data (19%) and an increase in converged systems deployment (18%). Sixteen percent also point to lower costs.
- Nearly nine in ten (88%) mention that in a mission critical (Tier 1) and/or business critical (Tier 2) capacity, their agency has deployed workloads/applications on IP storage.
- Network teams strongly outpace data center and storage teams as the managers of IP-networking infrastructure used for IT storage, and are also most commonly responsible for capacity planning related to an agency's IP-storage network.

Key Research Findings (cont'd)

- Close to half (44%) of mission critical workloads are using a shared network and more than one third (37%) of business critical workloads are using a shared network instead of a dedicated network.
- The top three pain points associated with a shared network for data access traffic (north south) are difficulties maintaining a secure environment, data loss, and poor application response times
- The main reason for an agency not having deployed a dedicated IP storage network for its mission- or business-critical workloads boils down to a lack of funds, especially among civilian agencies.
- The top-three benefits of a dedicated IP-storage network versus a shared IP-storage network are increased security, better application performance and reduced costs.

Data Storage Top Concerns

Data security is agencies' most widely mentioned concern when it comes to data storage and workload management, well ahead of a second tier of concerns that include data loss, insufficient budget (of significantly greater concern among civilian agencies), and unplanned downtime.



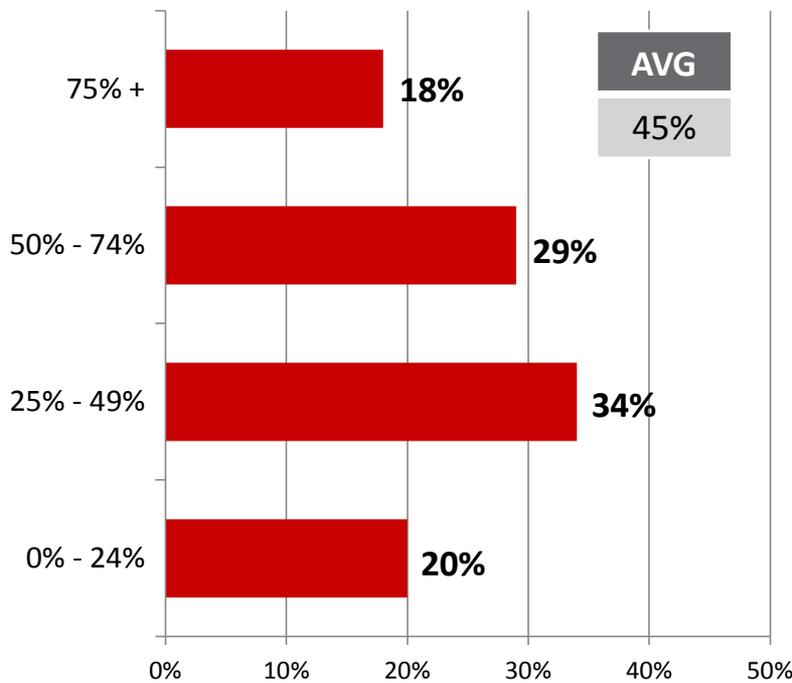
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 Note: Multiple responses allowed

Q In general, what are your top concerns when it comes to data storage and workload management in your agency? (select all that apply)

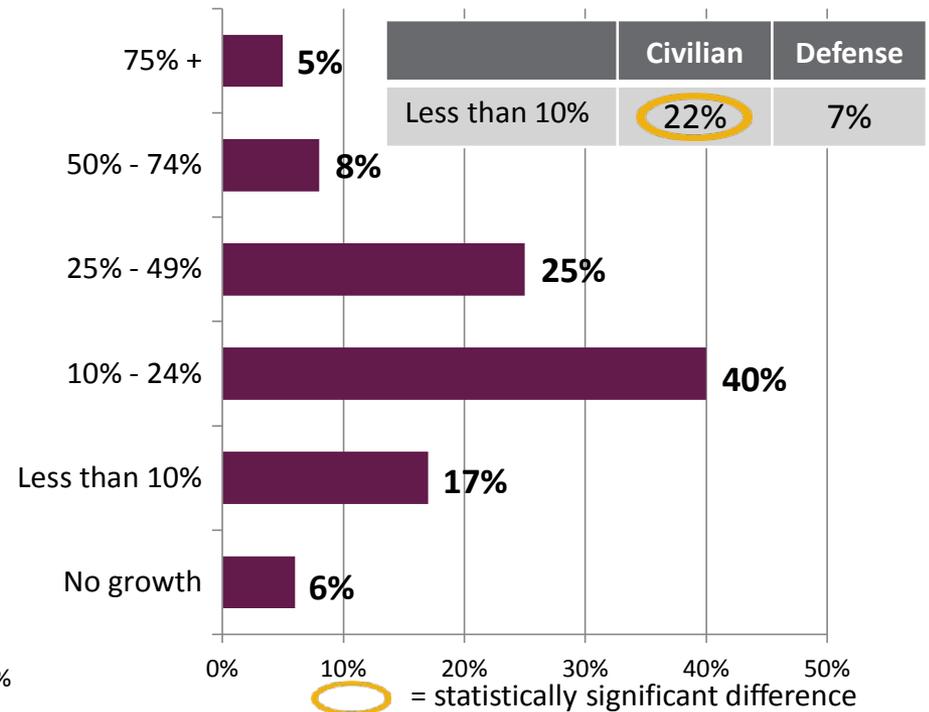
IP Storage Deployment and Growth

Although proportions can vary widely by agency, on average 45% of an agency's total storage capacity is IP-storage based. More than three-quarters (78%) expect their IP storage capacity will grow by at least ten percent in the next year. However, civilian agencies are significantly more likely to estimate growth below ten percent.

Deployed IP Storage



Expected IP Storage Growth



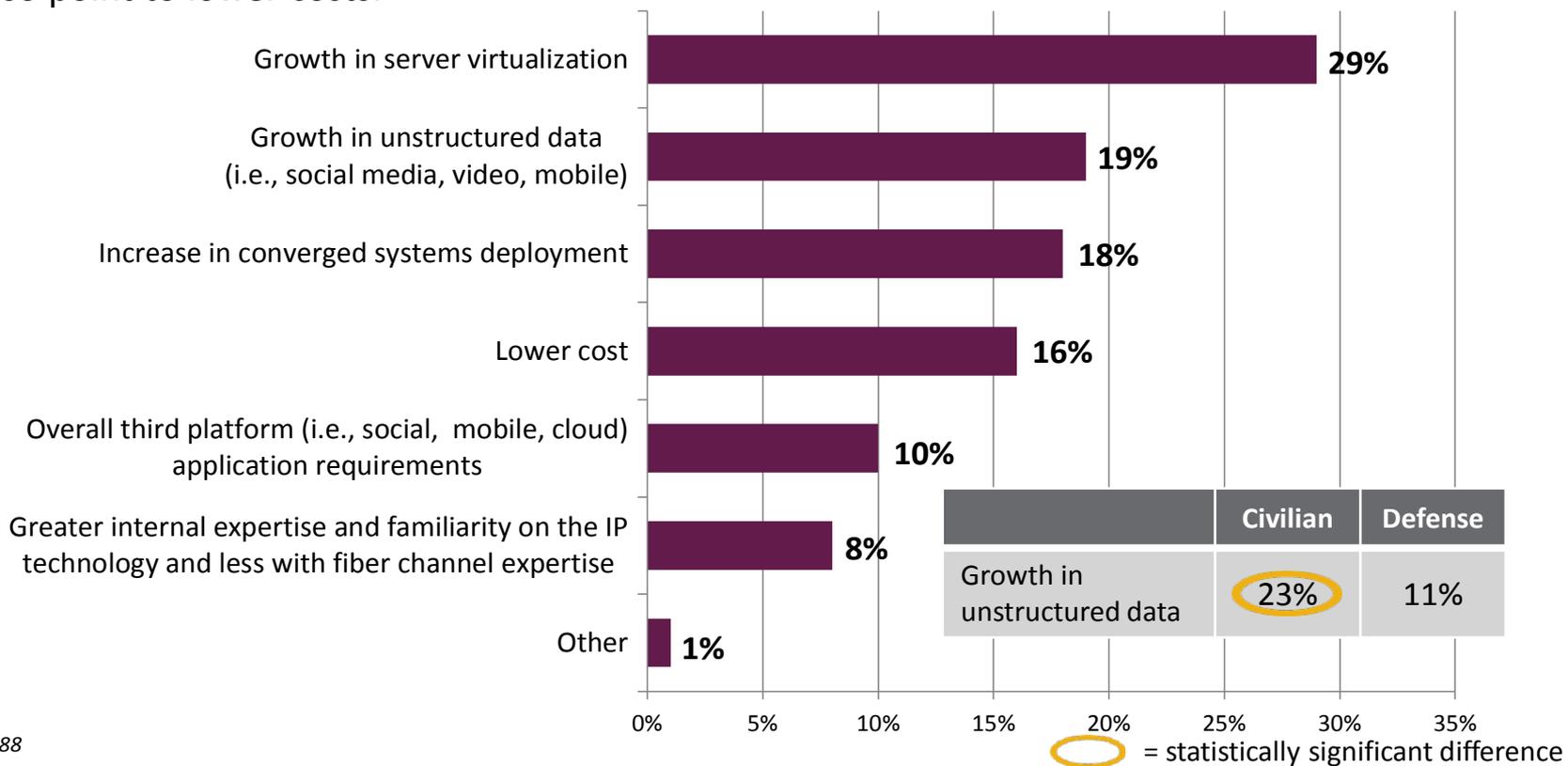
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Approximately, what percentage of your organization's total storage capacity deployed is IP-storage-based? (open end)
When thinking about your IP storage capacity, how much do you expect it to grow over the next year?

Drivers of IP Storage Growth

The most commonly cited primary driver of agencies' IP storage growth is due to the growth in server virtualization (29%), followed by growth in unstructured data (19% - rising significantly to 23% among civilian agencies) and an increase in converged systems deployment (18%). Sixteen percent also point to lower costs.



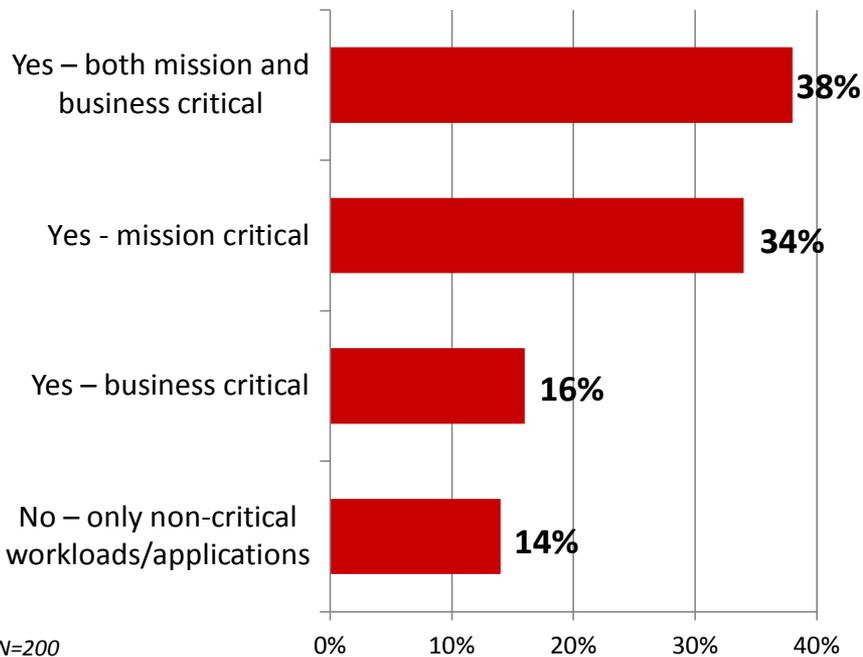
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Q What is the primary driver of your IP storage growth?

Workload Deployment on IP Storage

Nearly nine in ten (88%) mention that in a mission critical (Tier 1) and/or business critical (Tier 2) capacity, their agency has deployed workloads/applications on IP storage. Civilian agencies are significantly more likely to have done so purely for business-critical reasons.

Deployed Mission Critical or Business Critical Workloads on IP Storage



Respondents were provided with the following definitions:

Mission critical - Essential to the survival of an agency. Failure would result in the end of an agency's ability to complete its mission.

Business critical - Inability to operate would result in the failure of an agency's ability to perform a specific function that is important to its business operations.

	Civilian	Defense
Yes - business critical	20%	7%

= statistically significant difference

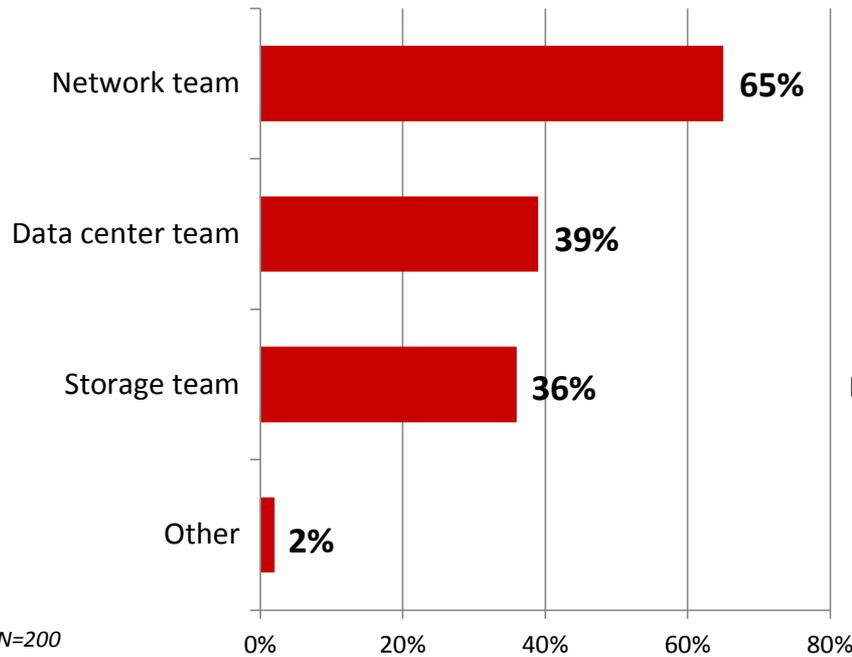


Has your agency deployed mission critical (Tier 1) or business critical (Tier 2) workloads/applications on IP storage?

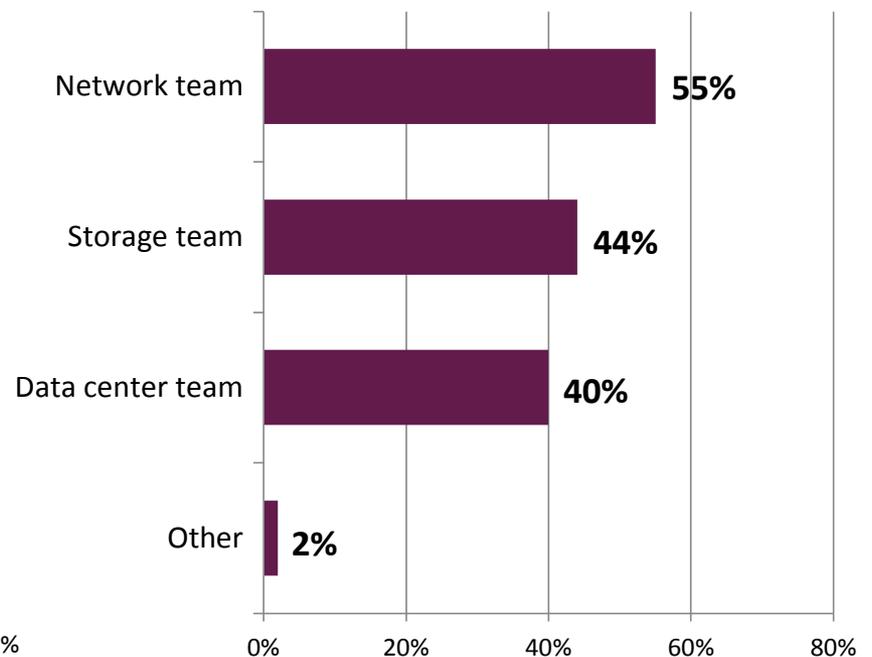
IP Storage Network Responsibility

Network teams strongly outpace data center and storage teams as the managers of IP-networking infrastructure used for IT storage. Likewise, network teams are most commonly responsible for capacity planning related to an agency’s IP-storage network.

Manages the IP-Networking Infrastructure



Responsible for Capacity Planning



N=200
Note: Multiple responses allowed



Who in your organization manages the IP-networking infrastructure used for IT storage? (select all that apply)
Who in your organization is responsible for capacity planning related to your IP-storage network? (select all that apply)

Networking Approach for Storage Workloads

Nearly half (44%) of mission critical workloads (essential to the survival of the agency) and 37% of business critical work loads (inability to operate would result in the failure of an agency’s ability to perform a specific function that is important to its business operations) are being put on a shared network.

	Mission Critical	Business Critical	Non-Critical
Dedicated IP Network	57%	35%	8%
Shared IP Network	44%	37%	19%
Dedicated – Mixed SAN/IP Network	36%	39%	25%
Fibre Channel SAN	36%	35%	30%

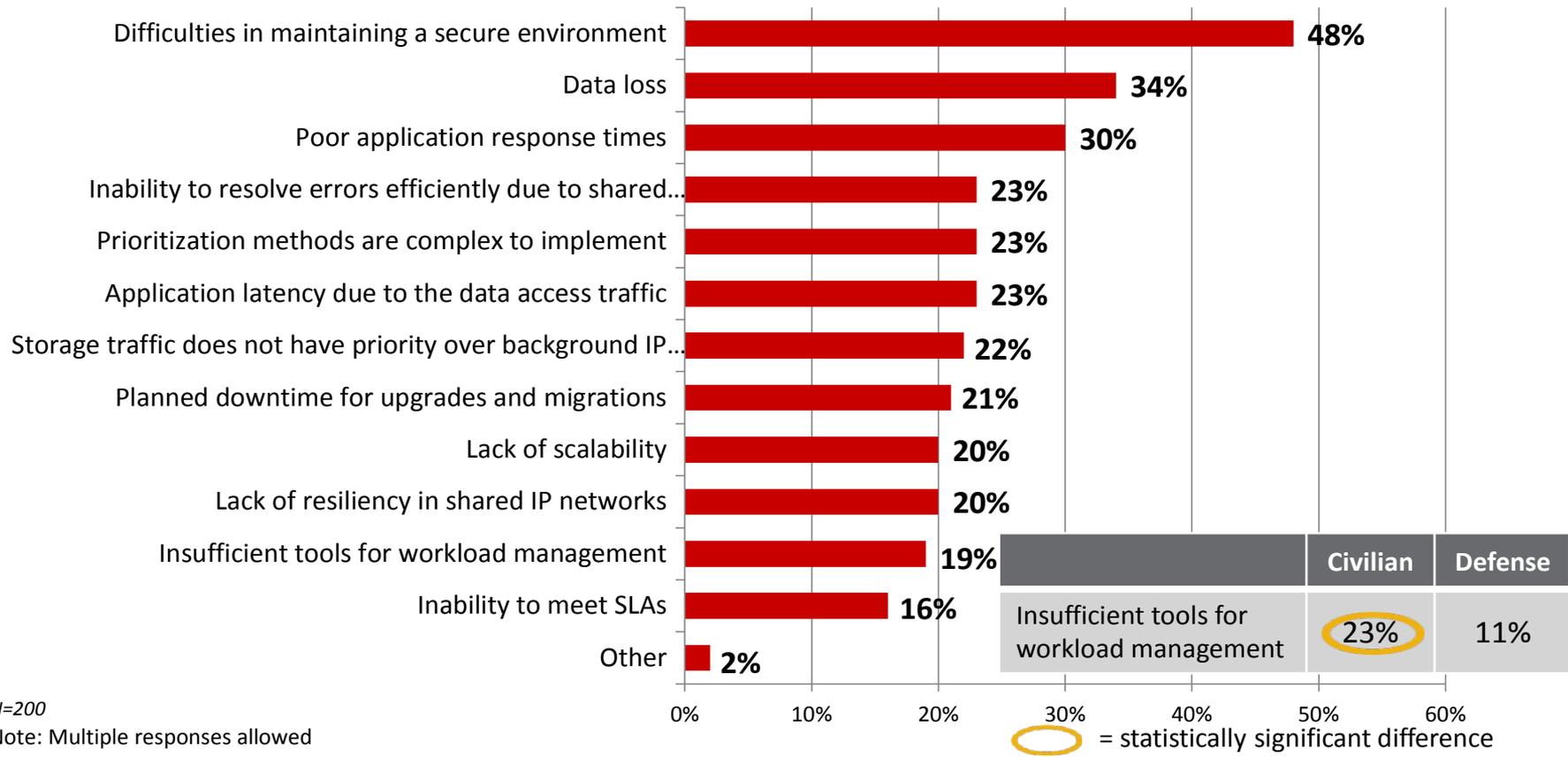
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Which of the following is your agency’s primary networking approach for each type of storage workload:

Pain Points Associated with a Shared Network

Pain points associated with a shared network for data access traffic (north south) are led by difficulties maintaining a secure environment, as well as data loss, poor application response times, and a host of other issues.

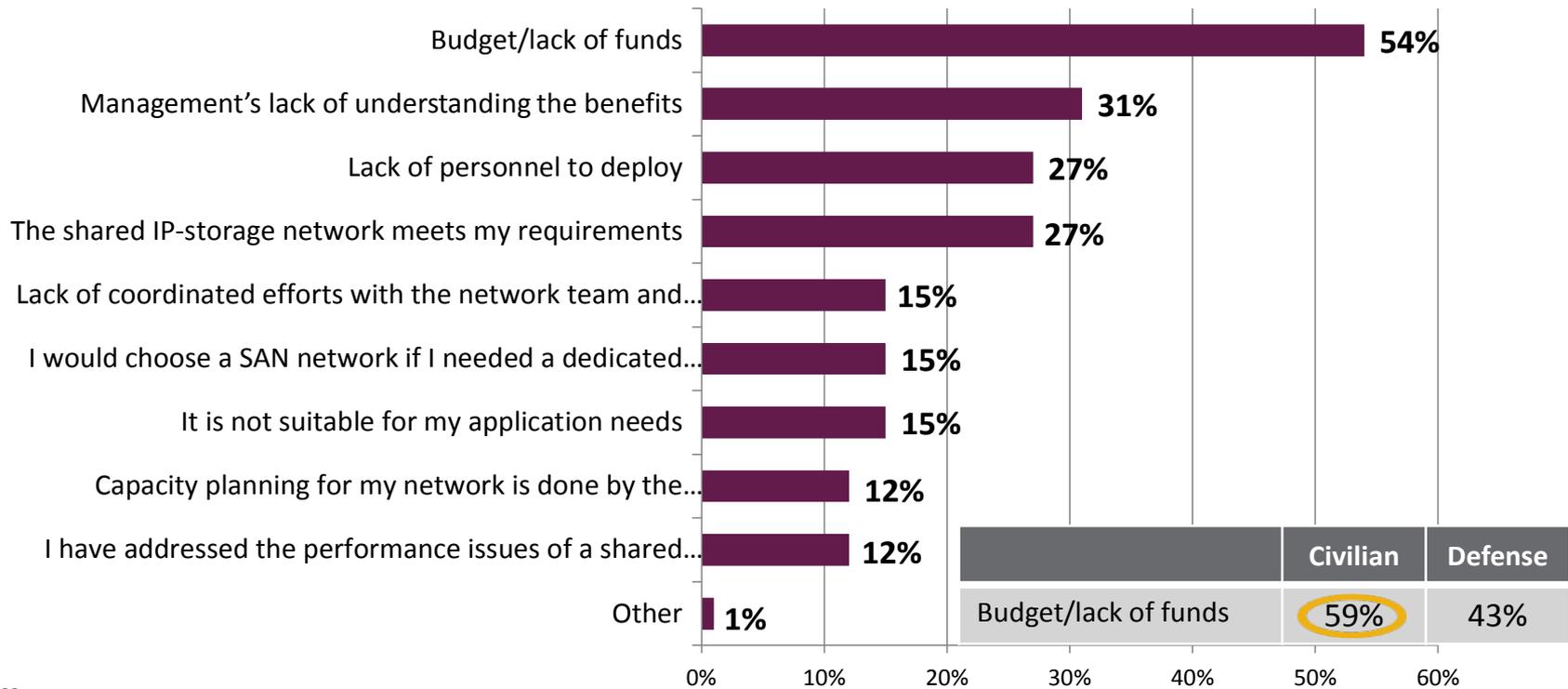


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 Note: Multiple responses allowed

Q What pain points are associated with a shared network for data access traffic (north south)? (select all that apply)

Reasons for Not Deploying A Dedicated Network for IP Storage

The main reason for an agency not having deployed a dedicated IP storage network for its mission- or business-critical workloads boils down to a lack of funds, especially on the civilian side.



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 Note: Multiple responses allowed

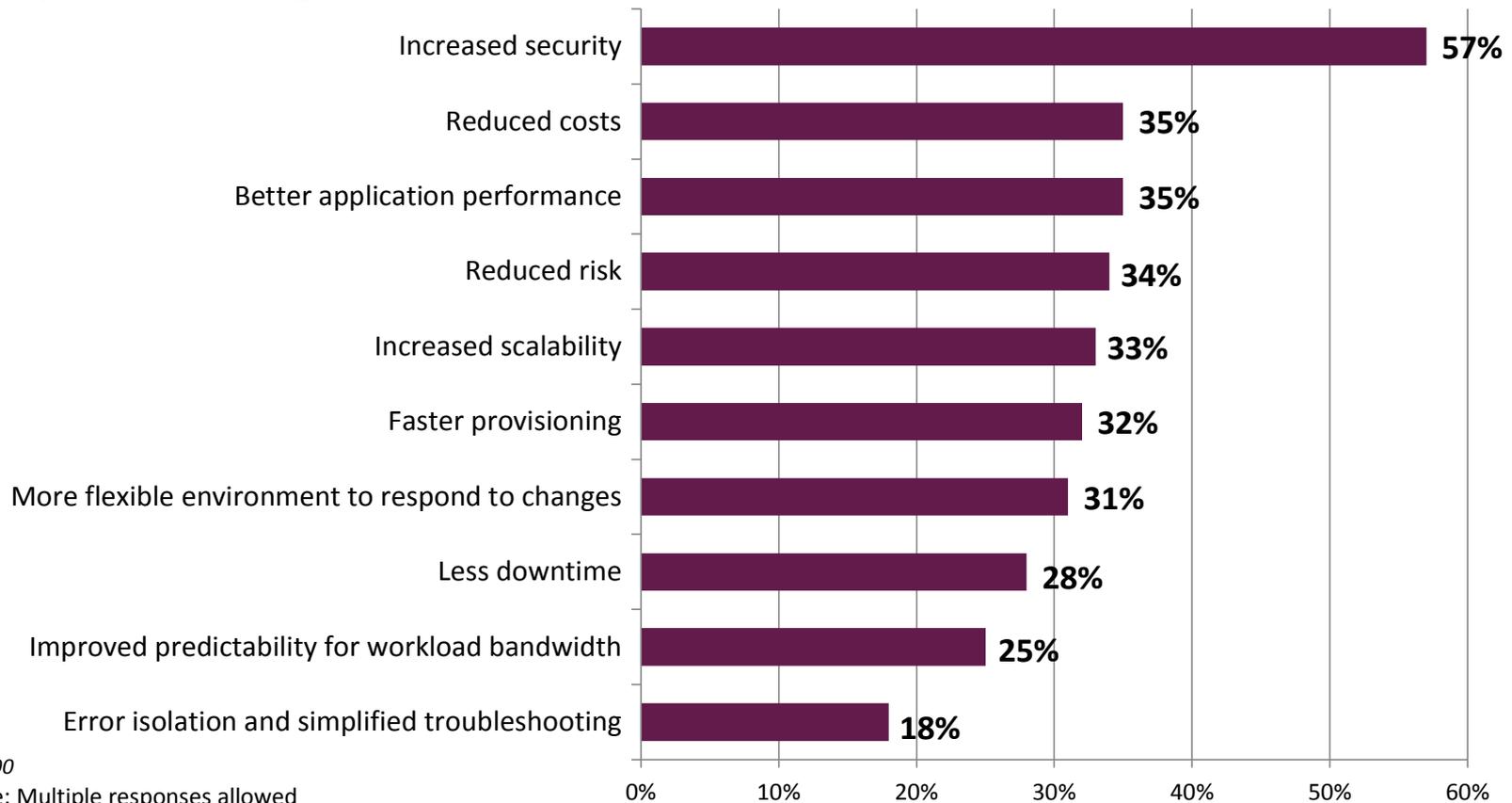
= statistically significant difference



What are the main reasons your agency has not deployed a dedicated IP storage network for its mission or business critical workloads? (select all that apply)

Top Benefits of a Dedicated IP Storage Network

Increased security is the top benefit associated with a dedicated IP-storage network versus a shared IP-storage network. This is followed by reduced costs, better application performance, and many other advantages.



N=200

Note: Multiple responses allowed



What do you see as the top benefits associated with a dedicated IP-storage network vs a shared IP-storage network? (select all that apply)

Research Takeaways

- **Agencies top concerns regarding data storage are data security, data loss and insufficient budget**
- **Close to half of agencies' total storage capacity is IP-storage based**
- **Over four in five use a shared network for their IP storage for mission critical or business critical workloads**
- **Increased security, reduced costs and better application performance are the top benefits associated with a dedicated IP-storage network versus a shared IP-storage network.**

About the Survey

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

- Two hundred completed interviews yields a +/-6.9% margin of error.
- Fifty-seven different agencies participated in the survey.

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%

Sample Agencies Represented (In Alphabetical Order)	
Air Force	Department of Transportation (DOT)
Army	Department of Treasury (TREAS)
Department of Agriculture (USDA)	Department of Veteran Affairs (VA)
Department of Commerce (DOC)	General Services Administration (GSA)
Department of Defense (DOD)	House of Representatives
Department of Energy (DOE)	Internal Revenue Service (IRS)
Department of Health and Human Services (HHS)	Judicial/Courts
Department of Homeland Security (DHS)	National Security Agency (NSA)
Department of Housing and Urban Development (HUD)	Navy
Department of State (DOS)	Social Security Administration (SSA)
Department of the Interior (DOI)	US Postal Service (USPS)

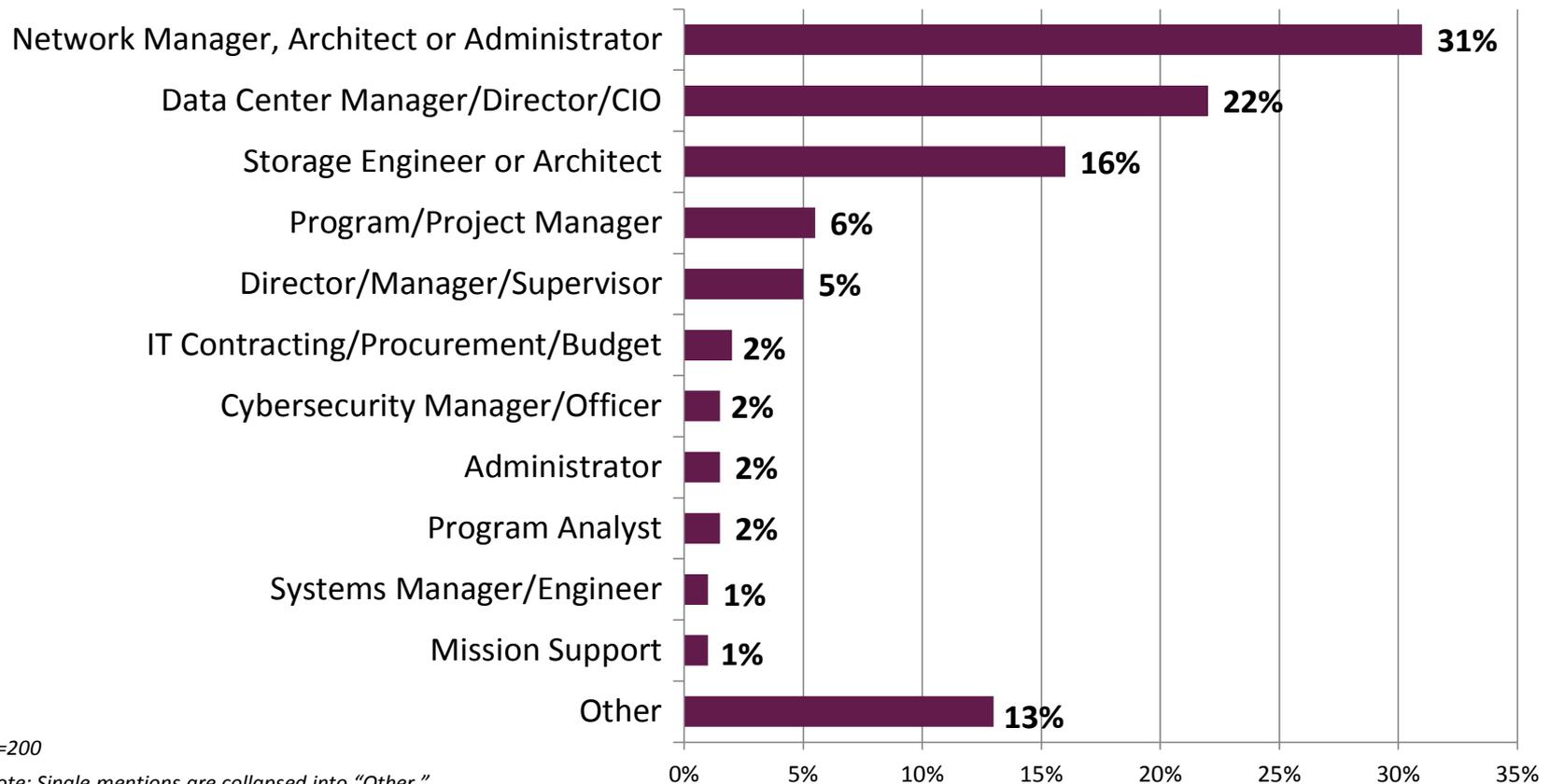
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*What is your agency type?
What federal agency do you work for?*

Job Role

A wide variety of agency roles are represented, the most common of which are Network Manager, Architect or Administrator; Data Center Manager/Director/CIO; and Storage Engineer or Architect.



N=200

Note: Single mentions are collapsed into "Other."



What is your role at your agency?

Decision Making Involvement

About six in ten respondents mention they evaluate or recommend network and/or data storage solutions, or are part of a team that does so. About half also describe their role as managing or implementing network or data storage solutions. One quarter make the final decision in this regard.

Data Storage Involvement



Networks Involvement



N=200
Note: Multiple responses allowed

Q How are you involved in decisions or recommendations regarding your agency's networks and/or data storage? (select all that apply)

Contact Information



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