

Data Center INFRASTRUCTURE Report



Priorities and the Outlook for 2020

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EXPRESS

INTRODUCTION

IT professionals continuously tackle new and ongoing challenges in connection to the operation and performance of their infrastructure. Managing an organization's IT infrastructure is a demanding responsibility requiring experience, strategic thinking and the ability to balance current technology challenges and future opportunities.

Service Express surveyed IT professionals on a variety of topics from changing technology to plans regarding the use of a hybrid approach to finding the optimal solutions within their data center environments. We think you will find these insights useful in understanding how IT professionals are prioritizing and acting on current and future needs and opportunities.

Meet Todd & Jake



Todd Piper

CIO, SERVICE EXPRESS

Todd drives the development and execution of IT strategy, ensuring alignment with overall business objectives and direction for design, development, operation, security and support of IT systems and business applications.



Jake Blough

CTO, SERVICE EXPRESS

Jake leads research and development of new products and services, provides insights and solutions to improve processes margins, and sets the technical direction for Service Express.

Survey Objectives

The following research is based on Service Express' 2019 IT Priorities and Infrastructure Survey of more than 500 IT professionals in the United States.

- ▶ Identify the top priorities and challenges of changing technology in business that IT professionals are facing in the next 12-month cycle
- ▶ Share insights into current server deployment methods and anticipated changes
- ▶ Research the current outlook on strategic planning for data center infrastructure, colocation and server deployment.

Key Findings FOR 2020



Security

Security remains the number one priority for today's IT professional.



Disaster Recovery

Disaster recovery needs continue to drive appropriate server deployment infrastructure strategies, such as off-prem deployment, colocation and cloud-based operations.



Price is King

The most influential driver affecting IT decision-makers today is price.



Budget & Costs

The biggest challenge faced by IT professionals is budgeting and cost reductions. Implementing cost-saving initiatives and cost-saving efficiencies are always on the radar.

38% of respondents plan to increase colocation in the future.



Colocation



Hybrid Strategy

A customized hybrid server deployment strategy will provide the best computing options and help meet customer requirements and expectations.

Top Priorities

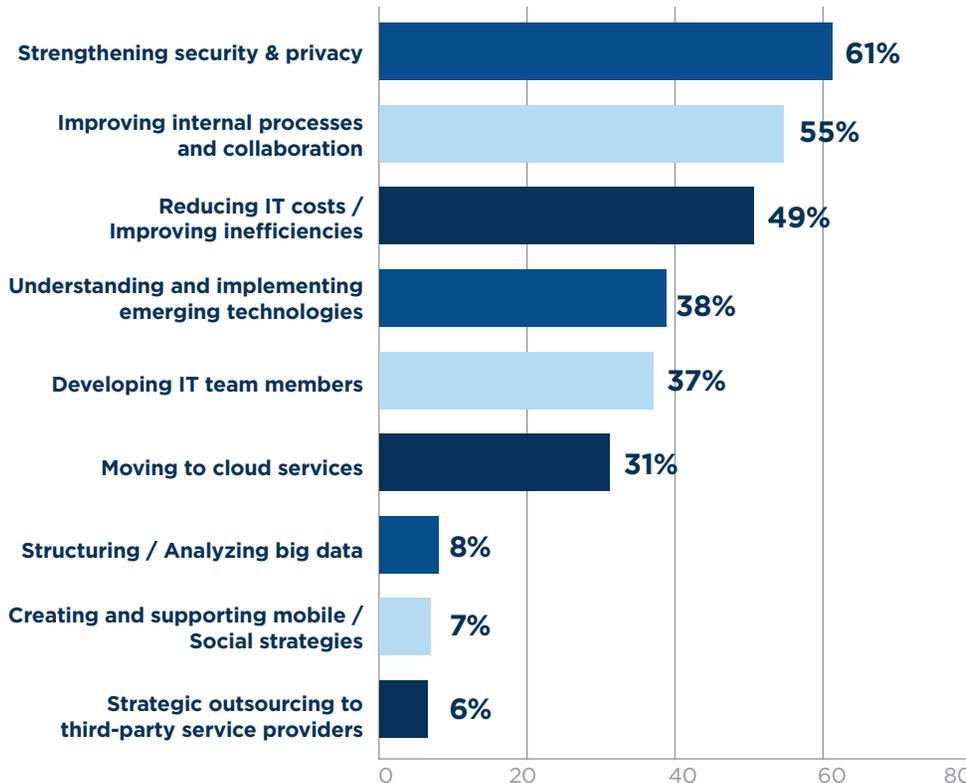
**TOP PRIORITY FOR 2020:
Strengthening Security & Privacy
61%**



On a weekly basis, we see a new large corporate data or security breach. Big companies seize the headlines but small and midsize businesses have even more to lose when it comes to cyber security. From the immediate damage of lost productivity and financial matters to the lasting harm to a company's reputation and brand credibility.

Participants identified their top three priorities from the list below:

Top Priority Overall



Top Priority by Organization Revenue

REVENUE	PRIORITY
\$1 Billion +	Developing IT team members and improving internal processes and collaboration
\$501 Million - \$1B	Strengthening security and privacy
\$51 - \$500 Million	Strengthening security and privacy
< \$50 Million	Strengthening security and privacy

From CIO, Todd Piper

Cybersecurity is about equipping your business with the right technology and educating your employees on how to avoid falling into the traps cyber thieves create. It's also about creating a culture of security and data privacy; security priorities need to come from the top of the organization and be built into all facets of your business and decision-making process. It's a giant but necessary mandate to always stay ahead of the ever-changing ecosystem.

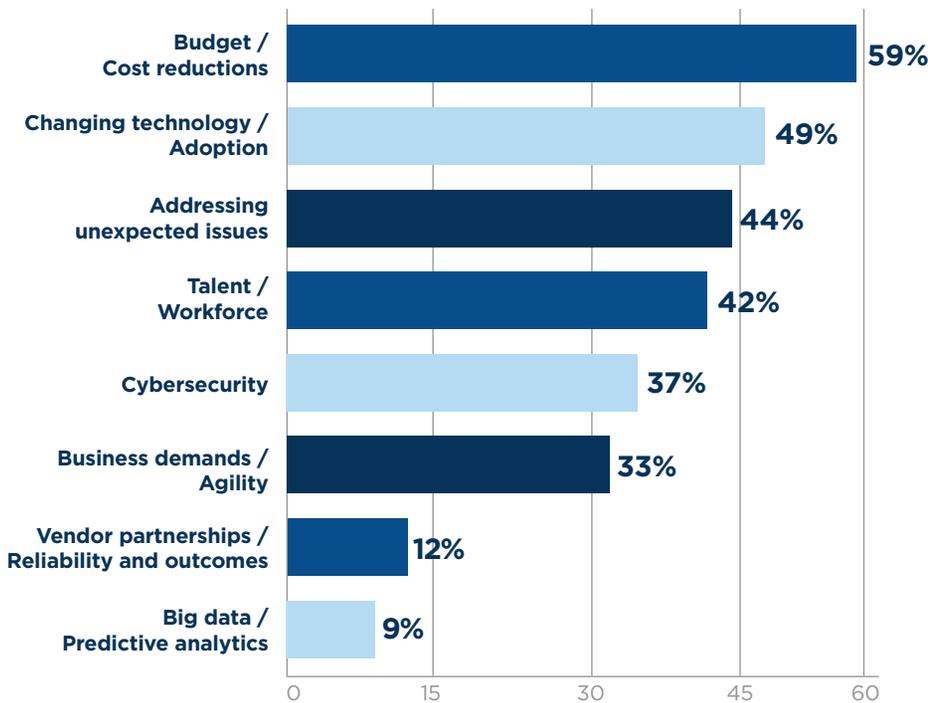
Top Challenges

Next, we asked survey participants to select three challenges they might encounter from a list that included:

TOP CHALLENGE FOR 2020:
Budget / Cost Reductions
59%



IT costs are a sizable component of any organization’s budget. Cutting these costs is difficult when there are so many competing priorities and daily demands. Regardless of the organization, size or vertical, controlling and reducing IT costs is a universal challenge.



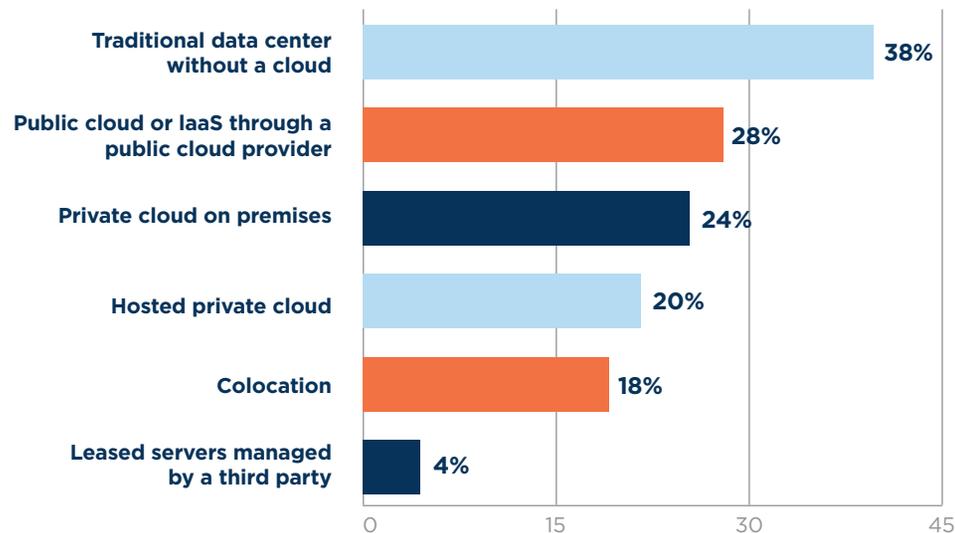
From CIO, Todd Piper

IT organizations are challenged to do more with less. Cost-saving initiatives help create investment dollars that can then be spent on other critical priorities, such as cybersecurity and data privacy. CIOs must develop a culture of managing IT costs and identifying areas of opportunity both within and outside of IT by establishing trustworthiness as efficient financial stewards and service delivery managers.



Server Deployment Methods

To learn more about which deployment methods IT professionals use for their servers, we asked participants to select which methods their organization is investing in the next twelve months. Participants chose all applicable methods from the list below:



Organizations continue to focus and leverage the traditional data center. They are also looking at other options as they scale and address new computing demands. IT leaders will need hybrid and multi-cloud environments comprised of the right tools and infrastructure to help get their jobs done more efficiently.

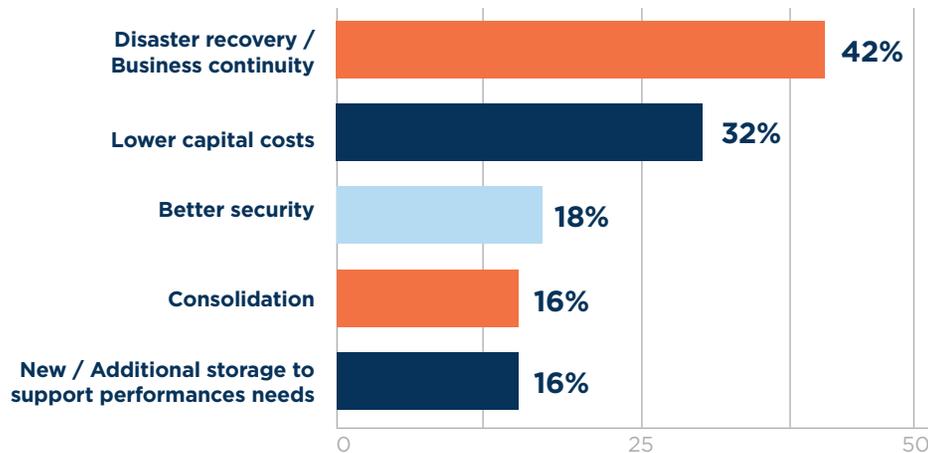
From CTO, Jake Blough



Companies are being more strategic than ever on how they deploy workloads. Determining the best and most cost-effective way to host an application is complicated. We are seeing a shift towards Edge data centers and private/hybrid cloud providers that is accelerating, while public cloud deployments are still growing but at a slower pace than the last year. We expect this trend to continue as the rollout of 5G commences which will accelerate the need to place data closer to the consumer.

Off-Premises - Drivers

What do IT professionals consider when deciding to deploy off-prem? Participants selected drivers from a list that included:



TOP DRIVER TO
DEPLOY OFF-PREM

Disaster Recovery /
Business Continuity

42%



Businesses still tend to keep their most critical applications on-prem for minimum latency, while moving DR or high availability environments into colocation centers. We expect as edge computing strategies go mainstream that this trend could shift.

From CTO, Jake Blough

Disaster recovery is no longer a nice-to-have for most companies. More frequently the choice is to house DR or high availability systems in colocation facilities that are built to handle natural and other disasters. DRaaS is also more common with companies utilizing cloud providers to house their secondary systems. Best practice is to have this infrastructure housed in a purpose-built redundant colocation center with multiple power and communication connections located within a 4-hour drive from the primary data center.

Colocation

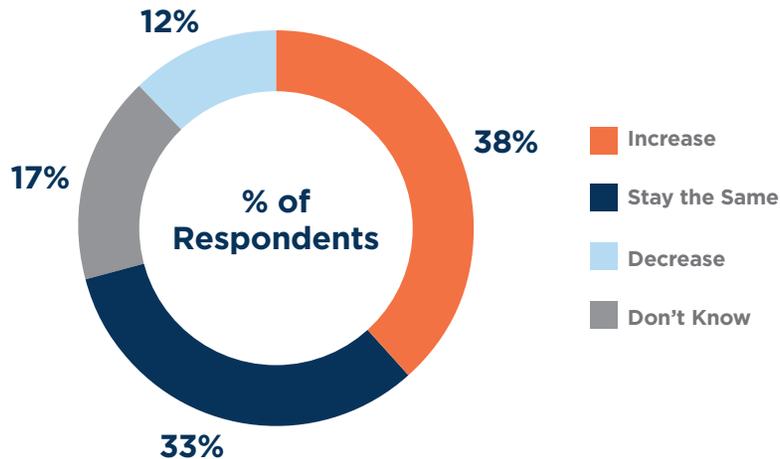
The process of deploying and hosting an organization-owned server within a managed service environment or data center colocation facility has an essential role in an organization's IT data center strategy.



When organizations decide to implement a colocation strategy, they need to think about not just signing a contract and moving in. Business deliverables and an evaluation matrix must be defined. Key areas to think about include location, network connectivity, and service level agreements.

Future Colocation

We asked participants to estimate what percentage (0 percent to 100 percent) increase in colocation they anticipate.



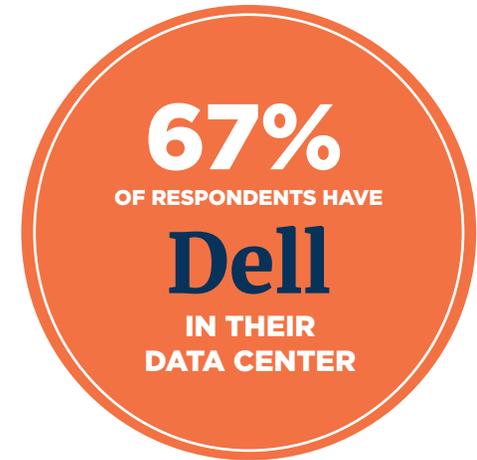
From CTO, Jake Blough

There is an inflection point with every growing business where IT needs have surpassed the capacity of their owned data center. With the rise of IOT and edge computing, customers will need to begin locating IT assets in many regional colocation centers to reduce latency to their customers. 5G is also expected to increase these needs. Colocation operators are building data centers faster than any other point in history.

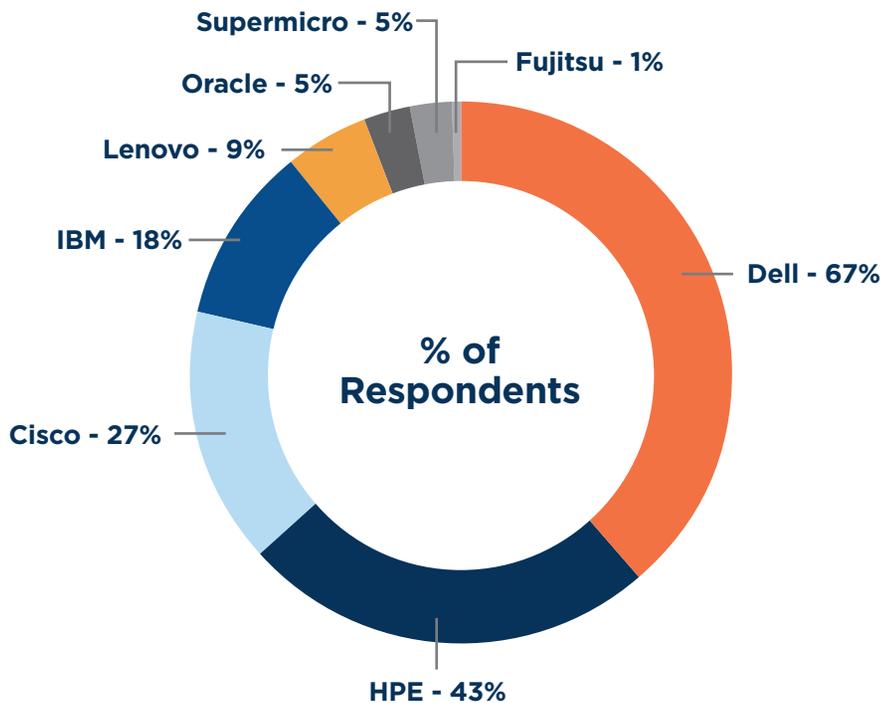


Servers & Maintenance Programs

Organizations of various sizes operate a variety of servers. Server manufacturers used by the survey participants include Dell, IBM, Lenovo, Cisco, Oracle, and HPE.



Server Manufacturers



From CTO, Jake Blough

Over the past five years, Dell has overtaken HPE as the market leader for x86 servers. This trend is expected to continue with Dell absorbing EMC's VxRail line of servers. While Cisco made initial gains with the UCS rollout, their sales have become somewhat stagnant in the last 12 months. Vendors that concentrated more in non-x86 servers such as Oracle and IBM have continued to decline in install base and market share.



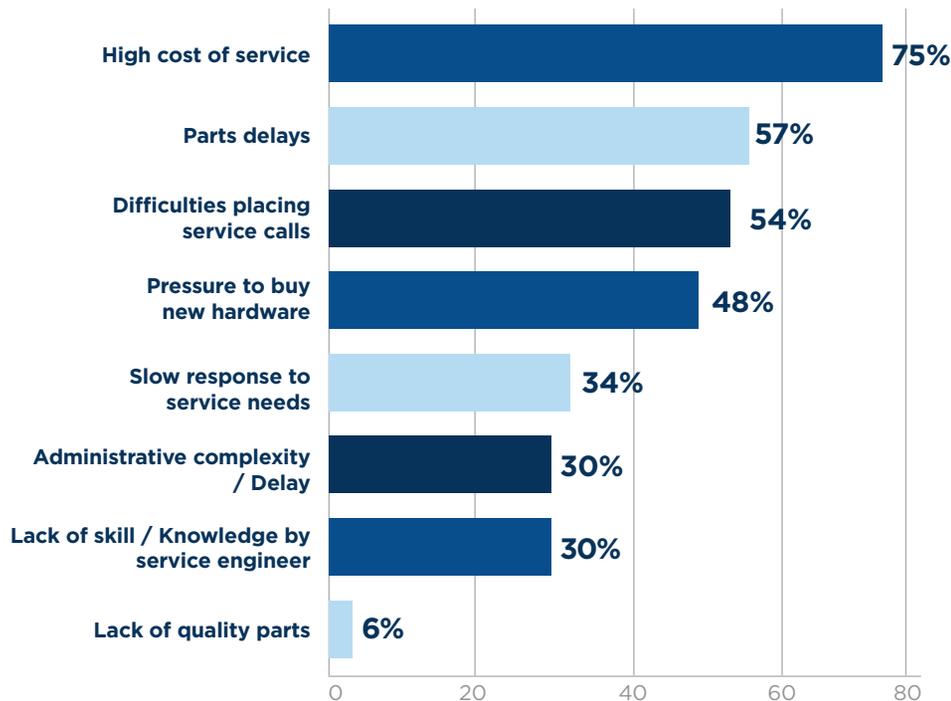
Maintenance Challenges

We asked participants to identify the challenges they face when working with their current maintenance provider(s). Participants selected from the following list:

TOP CHALLENGE FOR 2020:
High Cost of Service
75%



Controlling the high cost of service in terms of maintenance can be accomplished by looking outside of the traditional OEM support model, assessing equipment performance and extending life cycles.



From CIO, Todd Piper

To address maintenance challenges head on, CIOs and infrastructure leaders need to embrace a hybrid hardware maintenance strategy. Leveraging third-party maintenance (TPM) helps drive lower costs and can provide more responsive service.



Decision Makers

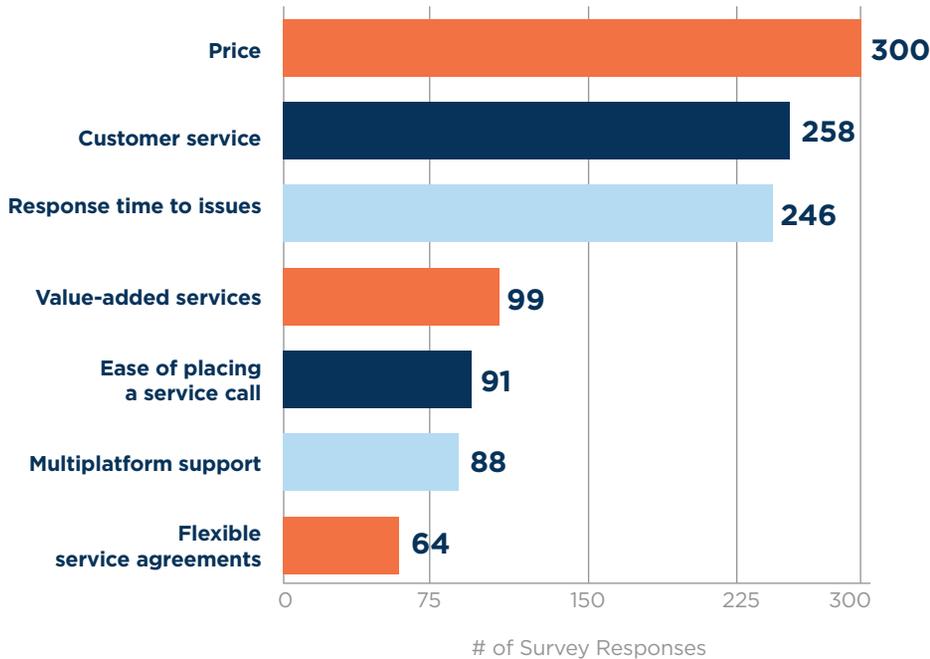
**MOST INFLUENTIAL
DECISION-MAKING
DRIVER:**
Price



IT leaders who utilize cost-saving strategies for infrastructure support can then use those dollars to help fund other key initiatives including security, technical training and business process improvements.

Many factors influence the IT professional decision-making process regarding their organization’s IT infrastructure support. We asked participants to select three decision-making influences.

Top Decision-Making Influences Overall



Top Decision-Making Influences by Organization Revenue

REVENUE	PRIORITY
\$1 Billion +	Response time to issues
\$501 Million - \$1B	Response time to issues and price
\$51 - \$500 Million	Price
< \$50 Million	Price

From CIO, Todd Piper

Although price is a key driver in the technology decision-making process, other factors need to be identified and evaluated within a comprehensive assessment strategy. This should include customer service, technical support capabilities and response time. All these factors equate to an improved service delivery and cost savings within the IT organization. If you have equipment that needs to be serviced, uptime is a critical performance measure.

Todd's Insights



CIOs need to continue to innovate and define cost saving opportunities that will allow them to invest in enhanced security, digital transformation and other strategic initiatives.

► Infrastructure

Businesses still tend to keep their most critical applications on-prem for improved latency and security, while moving DR and high availability environments into colocation facilities.

Embrace a hybrid computing model that will allow you to leverage many different types of computing platforms in order to meet a variety of customer requirements.

► Security

Embed security and data privacy as a core competency across the entire organization. Creating a culture of security and data privacy needs to come from the top of the organization.

Employees need to know they are accountable and create a security-first culture that is built into all facets of your business.

► Budget

Research proven cost-saving initiatives to help fund new technology products and strategies that help meet demands.

Opportunities to lower costs include lengthening your hardware refresh cycles, leveraging used and refurbished equipment, plus identifying third-party maintenance options. A technology strategy should maximize resources and incorporate the targeted use of colocation and cloud service options to drive significant OPEX and CAPEX budget savings.

Survey Background

Five hundred and fifty participants took part in the Survey of IT Professionals in 2019 conducted by Service Express. Participants represented organizations of differing sizes and held a variety of responsibilities within their respective organizations.

Participants by Responsibility/Role

ROLE 1

Responsible for the upkeep, configuration, and reliable operation of an organization's computer systems.

ROLE 2

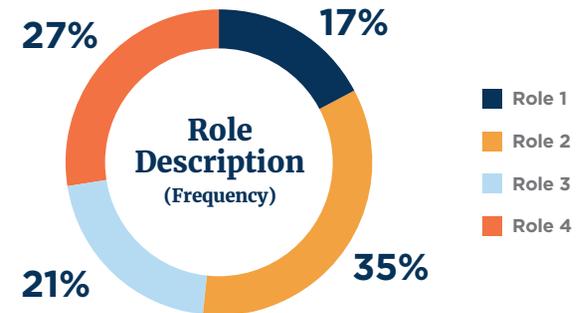
Responsible for implementing and maintaining an organization's technological infrastructure.

ROLE 3

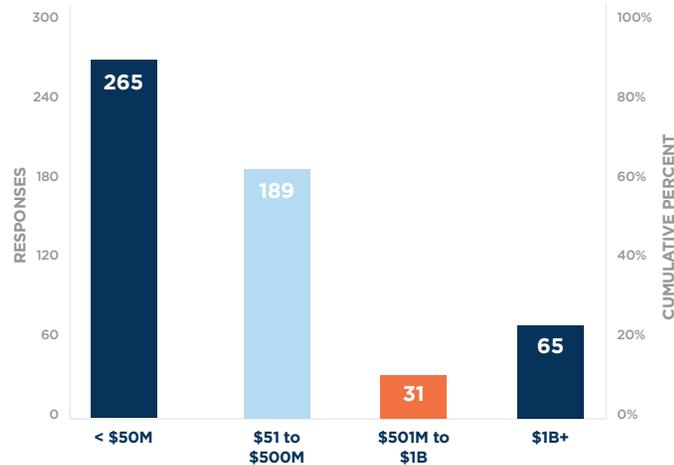
Oversees the information technology strategy for an organization.

ROLE 4

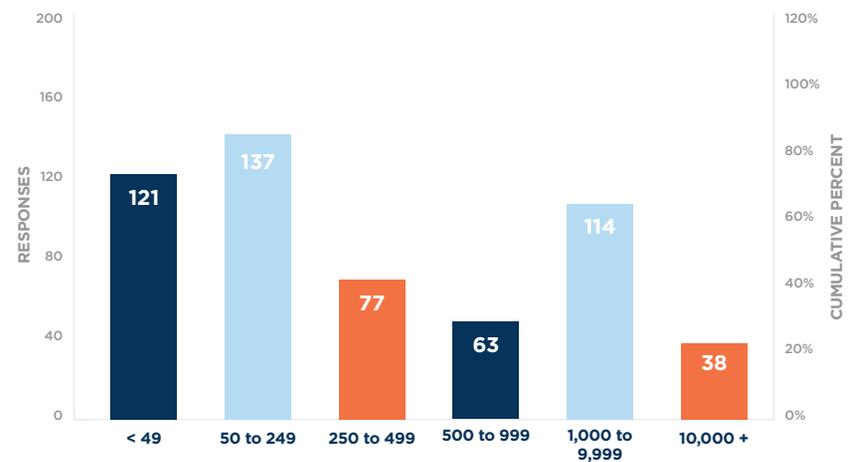
Administrative and/or supervisory authority of IT in an organization.



Participants by Revenue



Participants by Number of Employees



About Service Express

As a leading Third-Party Maintenance (TPM) provider, Service Express specializes in onsite data center maintenance for server, storage and network equipment. We partner with IT professionals to reduce costs, connect to user-friendly service and optimize infrastructure strategy. Founded in 1993, Service Express maintains multivendor data center equipment for healthcare, manufacturing, education, finance, government and other Fortune 500 companies worldwide.

In addition to post-warranty maintenance, we help with hardware system and sales solutions, OS support, IT asset recovery and data center relocations. For more information about Service Express, visit serviceexpress.com.

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