

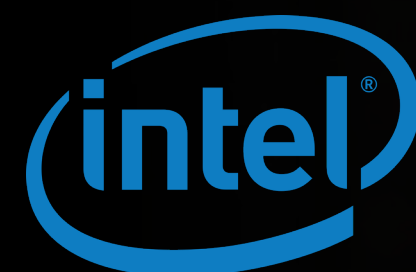
The Trusted Data Center and Storage Infrastructure:

Best Practices and Business Results
for Mid-Market Organizations

Insights from Dell Technologies & Intel Corporation's
Global Survey of Mid-Market IT Leaders

NOVEMBER 2019

DELLTechnologies





When Security Is At The Core, Everything Else Falls Into Place: The Trusted Data Center Maturity Model

Many mid-market organizations struggle to deliver the data center security and reliability demanded in this highly competitive segment of the market. Both line-of-business and IT stakeholders acknowledge room to improve:



38%

of line-of-business executives have serious concerns about IT's security capabilities and controls. **This is the most frequently cited issue line-of-business respondents have with IT.**



46%

of IT practitioners feel they have a problematic cybersecurity skills shortage. **This is the skills shortfall most frequently cited by IT respondents.**

Why Does Leading in Data Center Trust Matter?

By prioritizing the security and dependability of their IT environments above all else, mid-market organizations with trusted data centers experience very real and quantifiable business and technology outcomes that give them the edge and agility to win in today's highly competitive marketplace.

Data center risk has the potential to hurt organizations relative to competitors:

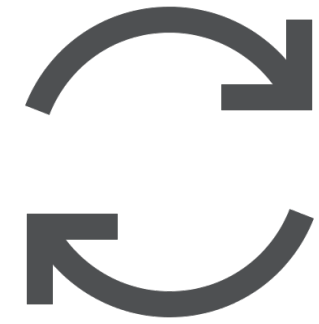
- Outages can disrupt customer service, leading to customer churn or negative reviews.
- Downtime also has direct financial implications. ESG's research shows the average hourly cost of downtime for **surveyed firms is between \$30,000 (median) and \$38,000 (mean).**
- Compliance violations often have direct financial consequences. For example, a GDPR violation could **result in a fine of up to 4% of an organization's annual revenue.**

This eBook is grounded in peer-based primary market research and is intended to highlight the behaviors and performance of organizations leading the market in data center trust **specifically as they relate to on-premises storage infrastructure.**

What It Means to Be a Trusted Data Center Leader

Dell Technologies, Intel Corporation, and ESG recently completed a survey of 1,650 IT executives and strategists at organizations with less than 1,000 employees. The research showed that just **7% of mid-market organizations could be categorized as trusted data center Leaders** that were in alignment with a broad set of best practices spanning different aspects of infrastructure, security, and data protection. On the other end of the spectrum, **33% of mid-market organizations were categorized as trusted data center Laggards**, in alignment with half or less of the best practices assessed.

Trusted Data Center Best Practices:



Refresh/retire data center infrastructure regularly

- Average server age is <3 years at all Leader organizations
- Average storage system age is <3 years at all Leader organizations



Believe strongly that trusted technologies matter

- All Leader organizations believe it is important to encrypt sensitive data
- All Leader organizations believe “built in” secure infrastructure is important



Act on beliefs by using trusted technologies

- All Leader organizations actually encrypt sensitive data
- All Leader organizations replicate most/all sensitive data to secondary systems

Download the full report for more information

[DOWNLOAD REPORT](#)





Why Embedded Data Protection Features Matter: Fewer Outages, Improved SLA Adherence

Leaders capitalize on their investment in purpose-built data protection technologies and their use of specialized protection technologies, such as flash acceleration and deduplication. As a result, **Leaders are confident in their ability to recover data in case of an unplanned outage.**

High confidence in system uptime and data recoverability

Compared to Laggards, Leaders are...

- » **2.7X** more likely to view their application and system uptime as excellent.
- » **2.5X** more likely to be very confident in their ability to recover data to resume business operations from an unplanned outage within one day.
- » **2.6X** more likely to be very confident in their ability to recover from a major data security event with negligible data loss.

Service Level Agreement for Data Recovery

Due to their investments in modernized infrastructure, Leaders are able to reduce their SLA-based data recovery time. Leaders are **4X more likely than Laggards to have an SLA-based recovery time of less than 2 hours. On average, Leaders aim for a 39% smaller recovery time window than Laggards.** More importantly, **Leaders are able to adhere to their SLAs 25% more often than Laggards,** despite the fact that their SLAs are more aggressive.

SLA DYNAMICS

SLA for data recovery from when recovery request is submitted (on average)	Leaders: 5.7 hours	Laggards: 9.4 hours
SLA adherence (on average)	Leaders: 71%	Laggards: 57%

Why Embedded Data Protection Features Matter: Uptime + SLA Adherence = Happy Customers

ESG compared organizations that both enjoy excellent or good uptime and availability and high SLA adherence to organizations that reported their uptime and availability was “acceptable” or worse and whose SLA adherence was lower than 50%. **The differences between these two groups of organizations were stark in terms of customer satisfaction, ability to grow market share, and future-facing business optimism.**

SUCCESS DELIGHTING CUSTOMERS



From websites to mobile apps, to ecommerce storefronts, customers expect companies to provide them with an always-on experience. Mid-market organizations with storage environments that include a robust set of native data protection capabilities excel at meeting these expectations. In turn, **they are 2.1X more successful at attaining customer satisfaction scores that exceed expectations.**

SUCCESS WINNING CUSTOMERS FROM COMPETITORS



Native data protection capabilities not only enable mid-market organizations to meet the expectations of their existing customers, but also to compete for and win new customers. By reducing churn and thanks to positive word of mouth, **these organizations are 3.6X more likely than lower performers to have grown market share in the past 12 months.**

The Result: Faster Revenue Growth

Ultimately, the customer benefits achieved in part thanks to operating a highly available, highly recoverable environment show up in organizations' top-line revenue projections.



**Increase revenue
23% annually**

On average, organizations that enjoy excellent or good uptime and high SLA adherence expect to increase their revenue by 23% annually over the next few years. This is 3.8X higher anticipated growth than lower performing organizations (6%).



**3.8X higher
anticipated growth**



How to Become a Leader: Refresh Storage Hardware Frequently

Leaders refresh storage hardware more often than their counterparts, allowing them to:

1. Take advantage of new hardened and multi-layered security capabilities that may not be present on older generations of technology.
2. Eliminate aging infrastructure that is more susceptible to failures that cause outages / downtime.
3. Keep up with current storage data demands with the improved capacity and performance of upgraded storage hardware.



Percentage of respondents reporting the average age of storage systems is <3 years old:

Leaders

100%

Laggards

3%

For Leaders, Newer Storage Systems = A More Feature-Rich and Reliable Storage Environment

Leaders' more modern storage frequently includes advanced data protection features that help ensure their on-premises data remains safe and secure.

ESG asked respondents about the proportion of storage hardware utilizing advanced data protection features. Leaders were much more likely than Laggards to report all of their storage hardware had each capability:



AUTOMATIC SECOND-SITE FAILOVER CAPABILITIES

Backup operational modes assumed by secondary system in case of primary system failure. **Leaders are 1.8X more likely than Laggards** to utilize this feature on all of their storage systems.



MULTI-SYSTEM REPLICATION

Copying and relocating data to protect against data loss from outages. **Leaders are 1.6X more likely than Laggards** to utilize this feature on all of their storage systems.



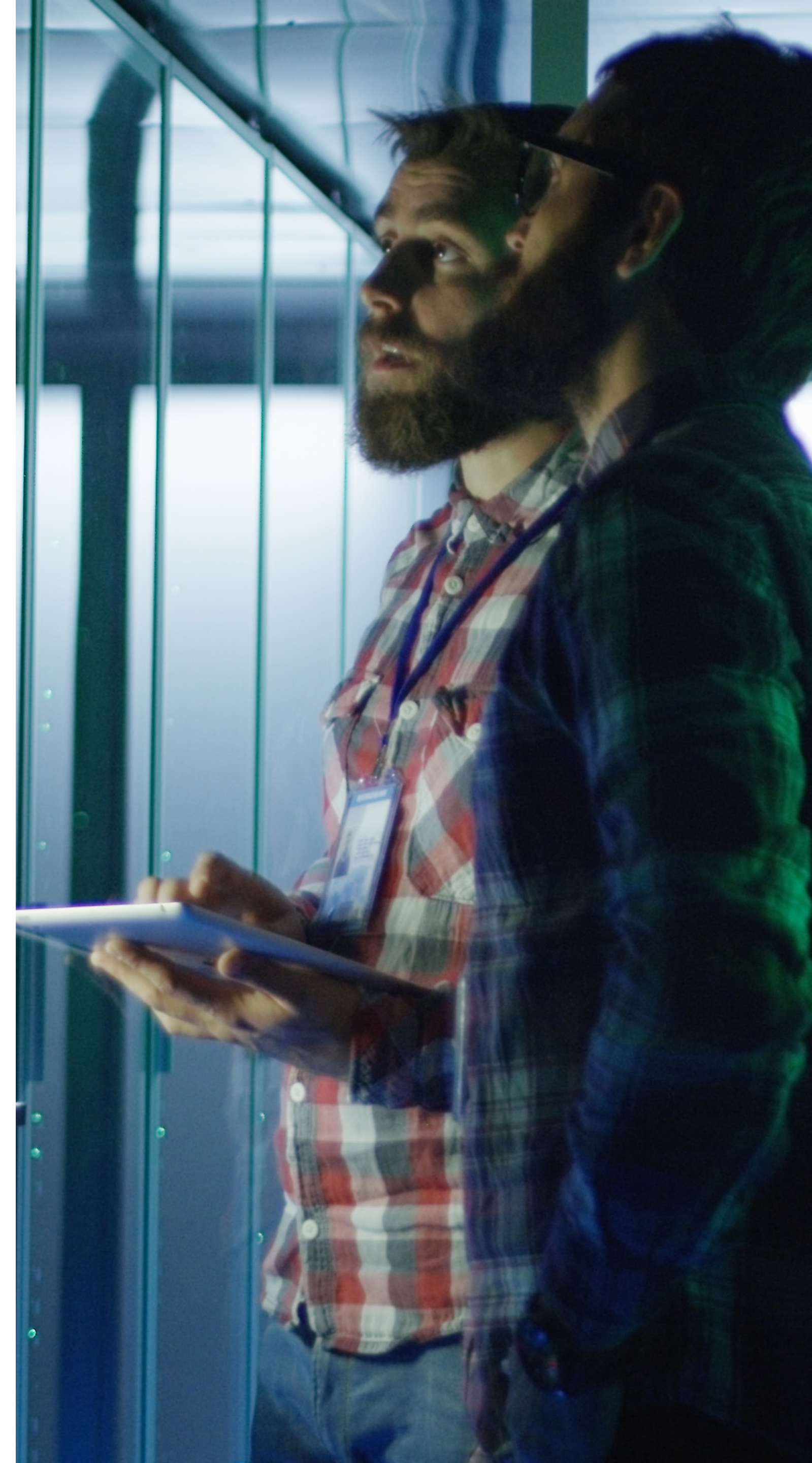
SELF-ENCRYPTING DRIVES

Have circuits built in the disk that encrypts and decrypts data autonomously. **Leaders are 1.8X more likely than Laggards** to utilize this feature on all of their storage systems.



SNAPSHOTS/CLONES

A data storage/duplication technique utilized to recover data from a disaster. **Leaders are 1.9X more likely than Laggards** to utilize this feature on all of their storage systems.



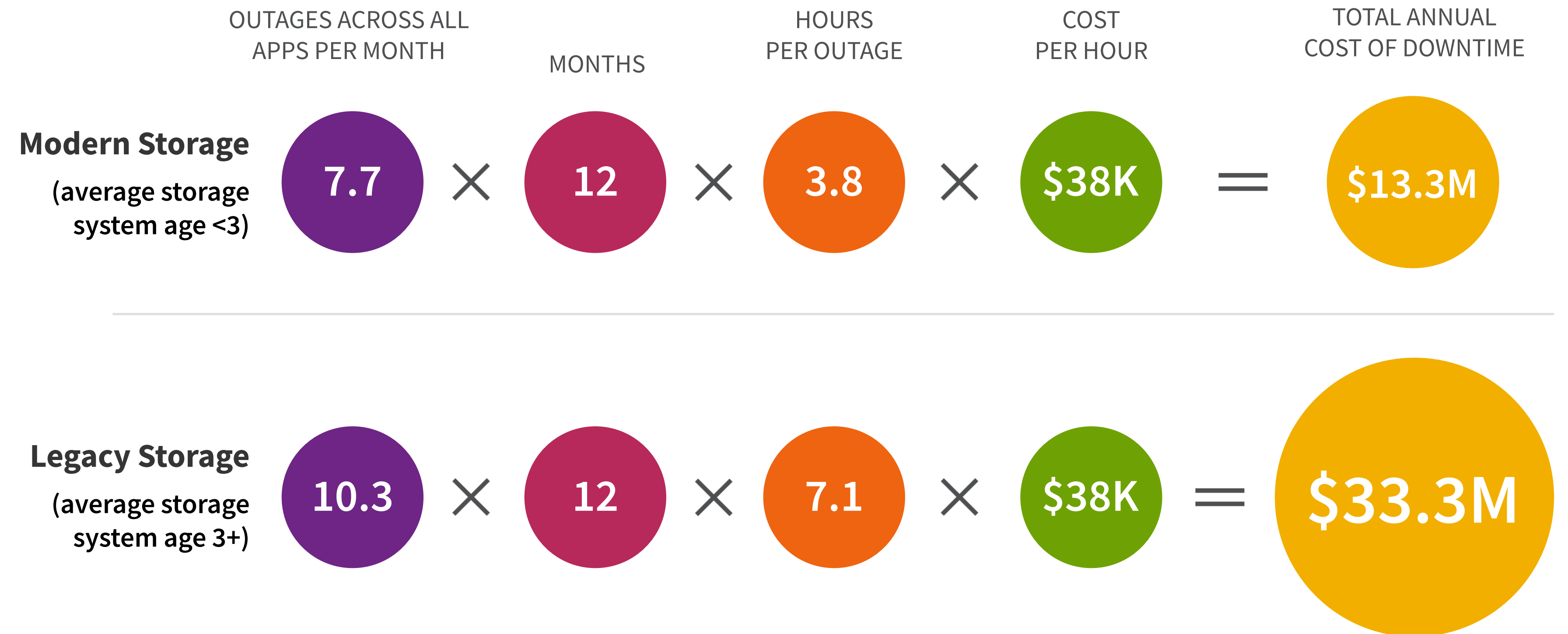


Quantifying the Value of Refreshing Storage Infrastructure Frequently

Due, in part, to their newer storage hardware, organizations that operate modern storage experience fewer application outages that are resolved faster. Combining this data with the average cost of downtime reported, **organizations with modern storage environments save as much as \$20M/year in avoided downtime compared to organizations with legacy storage.**



**60% reduction
in downtime cost**



How to Become A Leader: Self-Encrypting Drives Enable Hardware Encryption

Data encryption adds an additional layer of protection, improving data security and mitigating the potential for data loss. **Leaders are more vigorously encrypting their data particularly at the hardware layer via self-encrypting drives.**

Importance of data encryption

Leaders are 2.9X more likely than Laggards to consider encrypting sensitive data on-premises as very important. Furthermore, Leaders utilize encryption more frequently. **Leaders are 2.6X more likely than Laggards to always encrypt their sensitive data.**

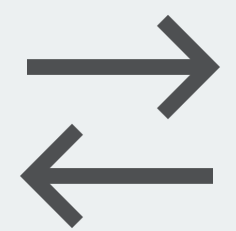
Encryption across layers

Leaders encrypt their data across multiple layers and are more likely than Laggards to encrypt their sensitive data across hardware, transport, and application layers.



HARDWARE

81% for Leaders versus 65% for Laggards



TRANSPORT

63% for Leaders versus 62% for Laggards



APPLICATION

74% for Leaders versus 69% for Laggards





Proving the Value of Becoming a Leader: The ROI of Risk Reduction

Investments in infrastructure technologies, like PBDPAs, are made in part to help organizations maximize uptime and availability and minimize security risk. But do Leaders, who make bigger bets on trusted technologies, get more bang for their buck?



92% of Leaders report that investments in infrastructure technologies to maximize uptime and availability and minimize security risk have **met or exceeded ROI forecasts.**



Leaders were also 1.6X more likely than Laggards to report ROI for these investments **has exceeded forecasts.**



Leaders are 2.2X more likely than Laggards to feel their investments in infrastructure technologies to maximize uptime and availability and minimize security risk **have greatly reduced organizational risk.**

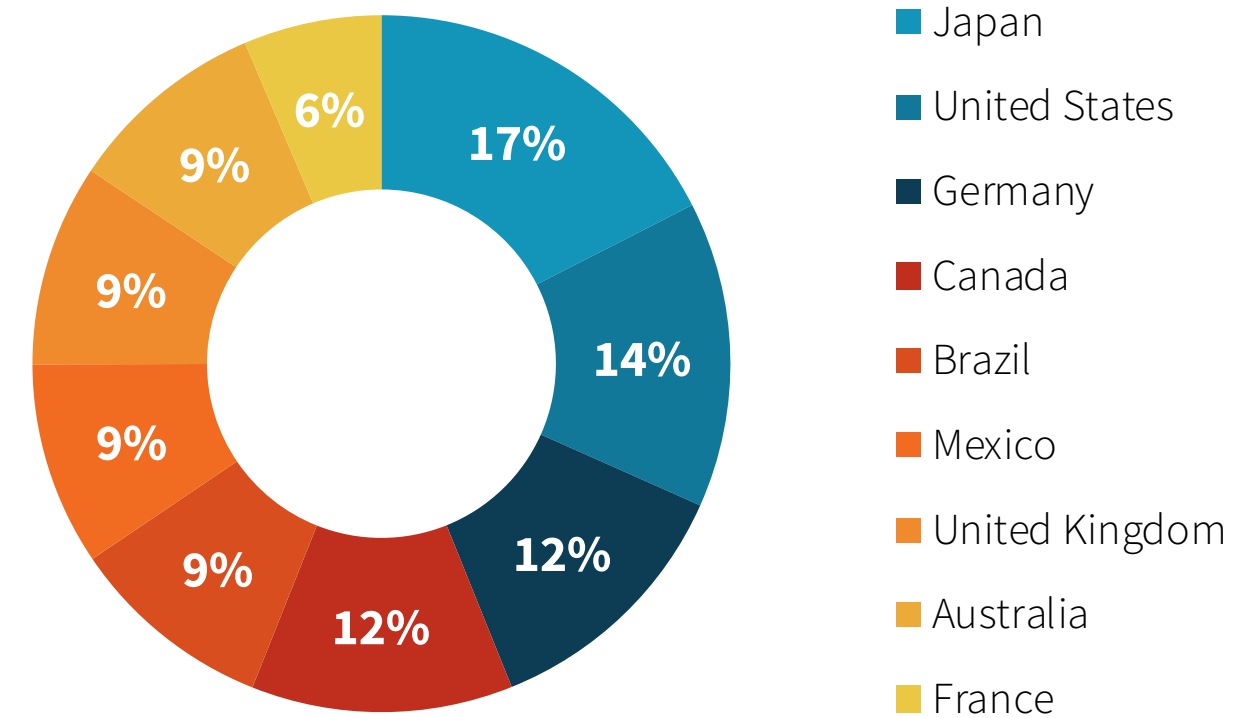
Methodology and Demographics

Data in this eBook comes from a comprehensive online survey of IT decision makers. The survey was fielded between June 13, 2019 and July 8, 2019. To qualify for this survey, respondents were required to be involved in the decision-making process for data center technology purchases at their organization. Moreover, they must have reported a high degree of familiarity with their organization's risk reduction strategies and priorities. Finally, the research was exclusive to the mid-market: All respondents must have been employed at organizations with between 100 and 999 total employees.

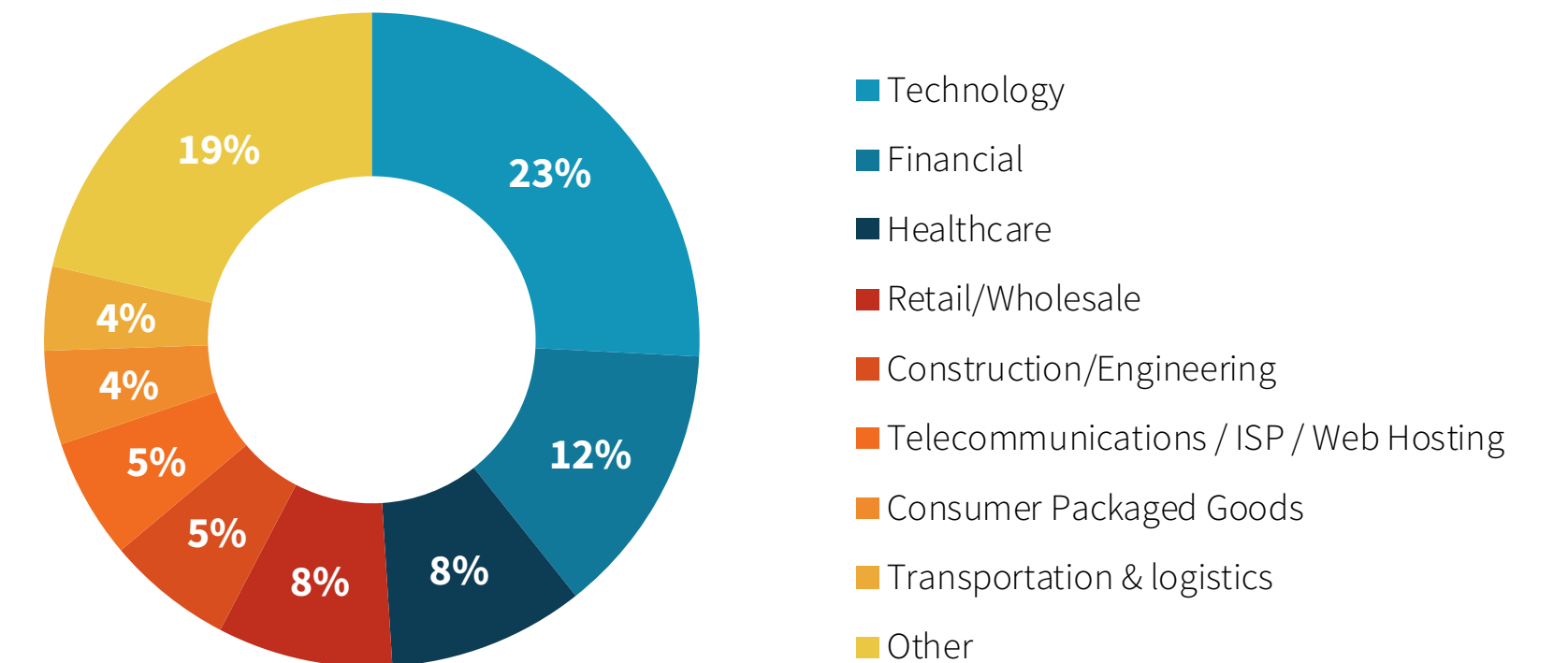
After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on several criteria) for data integrity, a final sample of 1,650 respondents remained.

These figures detail the firmographics of the respondent base, including respondents' country of residence, respondents' responsibility level, organizations' total number of employees, and organization industry.

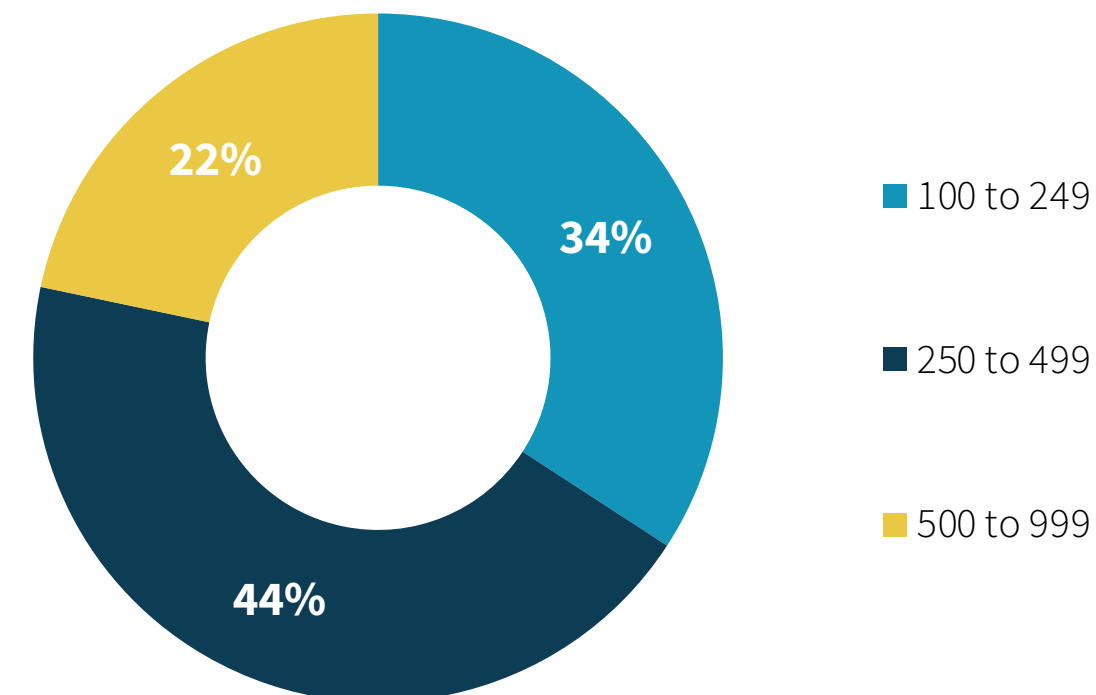
Respondents by Country



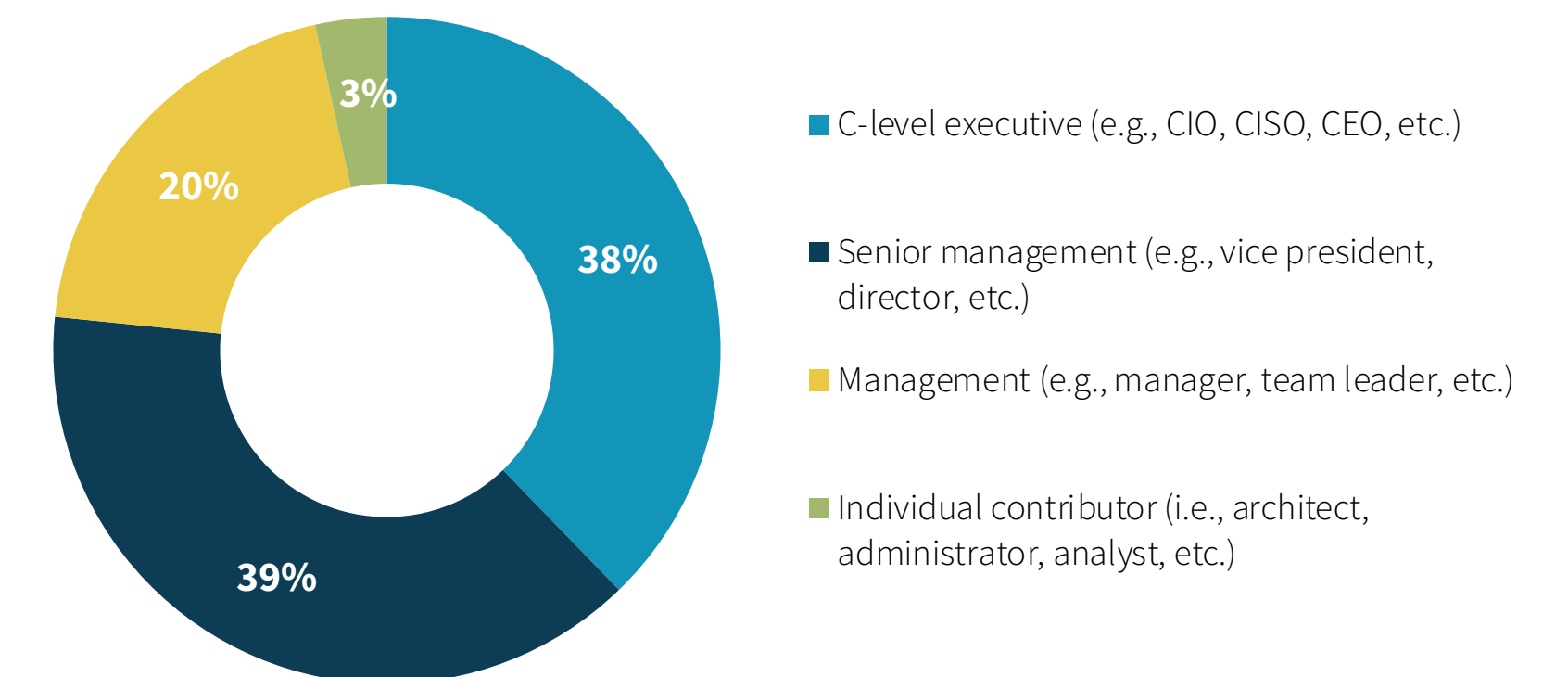
Respondents by Industry



Respondents by Company Size (Number of employees)



Respondents by Job Title/Level



About Dell Technologies:

With the broadest portfolio of trusted infrastructure and data protection solutions, Dell EMC Technologies provides real expertise for end-to-end security, enabling mid-market businesses to adopt transformative technologies to maximize performance, compete, and grow.

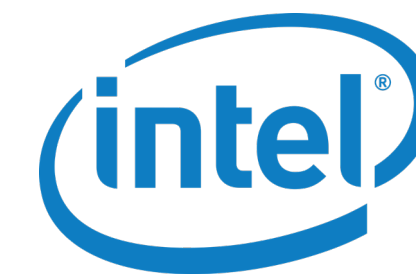
[LEARN MORE](#)

DELLTechnologies

About Intel®:

Today's organizations face strategic challenges as they modernize data centers and servers. Intel® is driving platform innovation and next-generation capabilities across every infrastructure domain—from compute to storage to network to memory to accelerator technologies. With Intel® architecture-based platforms, you have a clear path forward for the data-centric era.

[LEARN MORE](#)



All trademark names are property of their respective companies. Information contained in this publication has been obtained by sources The Enterprise Strategy Group (ESG) considers to be reliable but is not warranted by ESG. This publication may contain opinions of ESG, which are subject to change from time to time. This publication is copyrighted by The Enterprise Strategy Group, Inc. Any reproduction or redistribution of this publication, in whole or in part, whether in hard-copy format, electronically, or otherwise to persons not authorized to receive it, without the express consent of The Enterprise Strategy Group, Inc., is in violation of U.S. copyright law and will be subject to action for civil damages and, if applicable, criminal prosecution. Should you have any questions, please contact ESG Client Relations at 508.482.0188.



Enterprise Strategy Group is an IT analyst, research, validation, and strategy firm that provides actionable insight and intelligence to the global IT community.

© 2019 by The Enterprise Strategy Group, Inc. All Rights Reserved.