

# Blaze a trail with **Intelligent Innovation**

How innovative server technologies are fueling success



# Introduction

Organizations and their IT teams are pulled in multiple directions. They have many different focus areas that are growing every day.

IT teams need to keep the day-to-day operations running and seamlessly support both the office-based and distributed workforce, all the while continuing to advance the business in an innovative way.

With so much to manage, **IT decision makers (ITDMs) need to rely on robust, simple to use and secure technology to help them get the job done.**

An intelligent, automated and uncomplicated server solution allows ITDMs to connect the people, applications and data that power their organization, regardless of where the user is based. Most importantly, it allows them to do so in a safe and secure way. **By utilizing this technology, ITDMs are afforded the time to focus on what matters, inspiring innovation.**

This paper, based on independent global research of 4,300 IT decision makers (ITDMs) across organizations with 100-10,000+ employees, looks to explore:

- » **How innovative technologies can transform server infrastructure for organizations**
- » **The business benefits that are achieved by embracing innovative server solutions**

Throughout this paper, we will be showing how the results differ by both ITDM personality and where organizations are on their innovation journey. Read on to find out more...

# Which IT Decision Maker are you?

While they all share similar objectives, the ways ITDMs approach tasks, react to situations, and of course, innovate can be very different. We asked our respondents a series of statements, and categorized them into the following personalities based on their responses.

**Look out for these icons that highlight how the different personalities approach innovation.**



**14%** of ITDMs

**Keen to share experiences and utilize the strengths of their team, the chameleon knows when, and how much, to lean on their support network.**

**Strengths:** Good at seeing the whole picture, will discuss and generate new ideas and innovations with the people around them.

**Weaknesses:** Can find it challenging to manage different teams' priorities as they want to take on-board all views and make them happen.



**16%** of ITDMs

**Always thinking into the future, the navigator likes to problem-solve and think strategically – looking to get closer to their goal with each step.**

**Strengths:** Good problem-solving skills, thinks logically and carefully about their next move.

**Weaknesses:** Can find day-to-day issues (inefficiencies, skills gaps, inflexible budgets etc.) frustrating as they stand in the way of their long term goal.



**14%** of ITDMs

**They are enthused and impassioned in everything they do and will stop at nothing to see their organization's vision realized.**

**Strengths:** Goes out of their way to understand new technologies, trends and techniques and isn't afraid to push boundaries in making them a reality.

**Weaknesses:** Can be frustrated by small details – works better by focusing on the final big picture, rather than how we get there.



**7%** of ITDMs

**So many fantastic ideas in their heads, it's tricky to know where to begin. Once that decision is made, jugglers stick it through to the end, ensuring it's as successful as it can be.**

**Strengths:** They are 'ideas' people, always thinking of something else to explore, or taking on other areas of responsibility that they know will strengthen their business.

**Weaknesses:** Sometimes, their plate is so full, that balancing those priorities becomes overwhelming.



**12%** of ITDMs

**There is a lot to take on board in a modern organization, and the thinkers would rather have all the information before they rush into any decisions.**

**Strengths:** Will take their time to make sure everything is right before proceeding with a decision.

**Weaknesses:** Can be easily influenced by other stakeholders and change their mind quickly on what the best course of action is.

# Innovation journey

Each organization is at a different stage in their innovation journey. We analyzed responses from participants and placed their organizations at different points on that journey. The percentages to the right show the breakdown, from those just starting out (inhibitor organizations) to those who are using innovation to their utmost advantage (pioneer organizations). We will be using these categories throughout the paper as a point of analysis and to show how focusing on innovation can be a key differentiator.

**Pioneer organizations** welcome innovation at every level. The majority of their IT departments adopt innovation into everything they do. Consequently, they experienced a marked improvement in business areas.

**Pioneers**  
9%

**Igniter organizations** are close to unlocking their innovation's full potential. Innovation is favored by more than half of their IT department which has positively impacted several business areas.

**Igniters**  
53%

**Inquisitor organizations** are slightly further ahead than inhibitors and as the name suggests, have started to investigate innovation and how it can best benefit their organization.

**Inquisitors**  
36%

**Inhibitor organizations** are at the very beginning of their innovation journey. Innovation is likely only embraced by the minority of their organization's IT department and as a result, innovation has had a limited impact.

**Inhibitors**  
2%

95%

of IT decision makers report experiencing challenges when it comes to **managing their organization's server infrastructure**

56%

of IT decision makers from pioneer organizations report having **intelligent automation** to anticipate and **mitigate threats** would help them to become more innovative

64%

of pioneer organizations' infrastructure will be **in the cloud by 2024**

22%

average **positive impact** that current technology solutions have had on security and resilience in pioneer organizations

18%

average **increase in efficiency** experienced by pioneer organizations because of server automation

79%

average percentage of **security threats** pioneer organizations can anticipate because of server automation

1,683

working hours gained each week on average by pioneer organizations because of the efficiency gained by server automation



## Section 1

# The challenges of managing server infrastructure

**Organizations find themselves in an ever-increasingly competitive market. Being agile to anticipate new opportunities and threats is crucial to their survival. Organizations have an opportunity to position themselves as disrupters in their market by implementing intelligent server infrastructure.**

**However, 93% of surveyed IT decision-makers feel that they require better tools and infrastructure to be quicker, more efficient and more responsive and 92% report they need these improved tools to manage their IT infrastructure in a simple manner.**

This is especially true for igniter organizations. They are the most likely to agree with both statements (93% respectively). This group is continuing to work on driving innovation forward. Given this laser focus, they are likely to be more in-tune with the superior tools that are available. These organizations are always striving for the best.

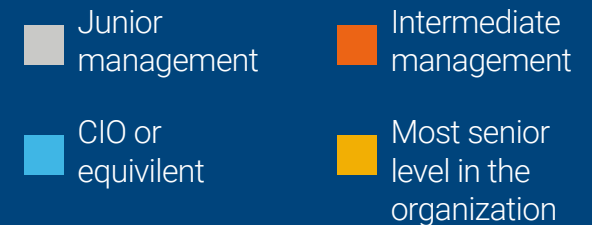
Those from the APJC region are the most likely to report they need better tools to be more efficient and responsive (96%) and to manage their IT infrastructure in a simple manner (95%). It is those from healthcare and government sectors who are most likely to agree with these statements.



### **Jugglers need better tools**

The juggler is slightly more likely to agree that better tools and infrastructure are needed to be more efficient and more responsive (94%) ahead of needing these tools to manage IT infrastructure in a simpler manner (90%). What this group should remember is that for organizations to be quicker, more efficient and more responsive, they need to have simpler server infrastructure, so the two go hand-in-hand.

**From a seniority point of view, the more senior the respondent, the more likely they are to agree with each statement.**



## Challenges are driving a push to improve

This need for better tools to simplify server infrastructure and make it more efficient and responsive could be grounded in the fact that **95% of ITDMs report experiencing challenges when it comes to managing their organization's server infrastructure.**

At a global level, these challenges include the complexity of processes and/or legacy technology (33%), lack of power to run emerging workloads (33%) and the inability to keep operating costs within budget (31%). If organizations are dealing with complex processes and legacy technology, it is no surprise that they are facing issues keeping operating costs within budget. On top of this, organizations seem to always be on the back foot, with a lack of power to run emerging workloads certainly hampering efforts to get ahead of the game.

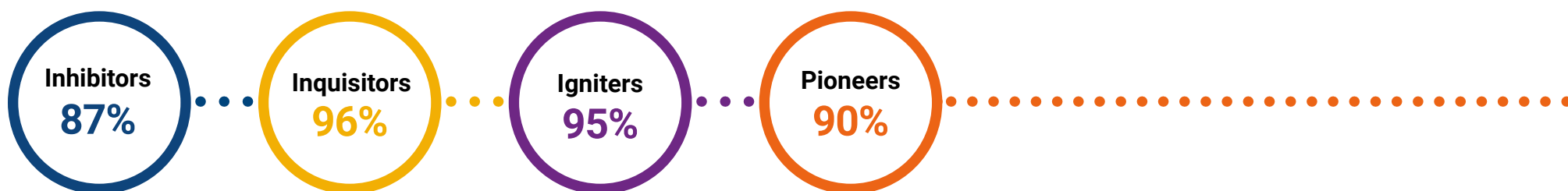
These challenges vary between organizations when looking at how innovative they are. Inhibitor organizations are less likely to report challenges than their more innovation-focused counterparts.

This is unusual as this group underperforms in most other areas, but their awareness of the challenges they face is lower, not just within the area of server, but also when thinking about storage and cloud as well.

*A head of IT systems within the government sector confirmed that legacy technology "causes us to have higher headcount, it causes us to be slower to change."*

**Head of existing IT systems, government (central/federal), EMEA**

## "We experience challenges when managing our server infrastructure" - split by innovation maturity



This is likely due to lack of awareness around how to approach the challenges they will face at some point over their innovation journey. Due to where they are on this journey, it is likely these challenges haven't become apparent to them yet. This group can learn from their more innovative counterparts about how to tackle these areas.

## Further innovation journey differences

Those who have made progress along their innovation journey (inquisitor and igniter organizations) are more likely to cite certain challenges, especially when compared to the top challenges flagged at a global level. It's clear that their awareness of these challenges is higher, but they are also further along their innovation journey so are perhaps more equipped to tackle them.

### At a regional level...

97%

North America

...it is those in North America who are the most likely to be experiencing challenges managing their server infrastructure. They are also the most likely region to find the lack of automation a challenge (32%).

38%

APJC

Whereas those in the APJC region are the most likely to experience complex processes or legacy technology and a lack of power to run emerging workloads (38%).

### At a sector level...

99%

Government

98%

Education

...those in government and education are most likely to experience these challenges. The challenges noted remain similar to those flagged at a global level.

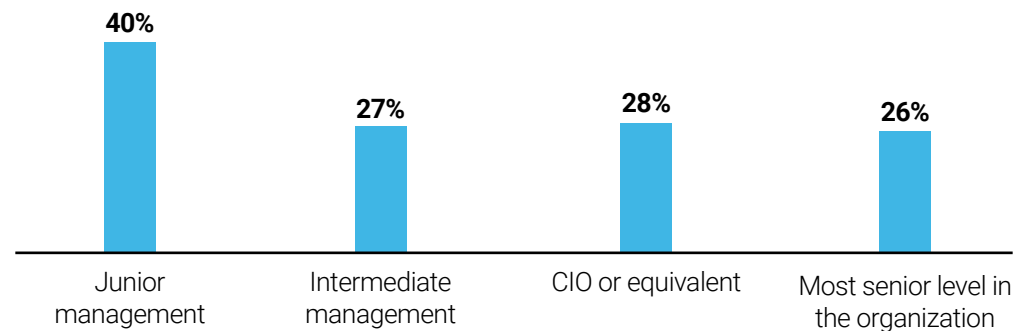


## Server infrastructure challenges across different management levels

It is those who are most junior who are slightly more likely to report challenges than their more senior counterparts (most senior level in the organization: 95%; CIO or equivalent: 95%; Intermediate management: 95%; Junior management: 97%). From most senior down to intermediate management, the challenges reported remain very similar.

### Transitioning to an as-a-Service model is a challenge

It is only when looking at the challenges reported by junior management that we begin to see some variation. One of their most cited challenges include transitioning to an as-a-Service model.



**These findings highlight there is a clear disconnect between more senior and junior management.** This could be due to a lack of optimal IT solutions. Junior management likely devotes more of their time to administrative IT tasks with fewer resources to allocate to more innovative activities like moving the organization to an as-a-Service model or other innovation focused initiatives. The fact is, **if they can move to these more innovative technologies or consumption models, they could have more time to focus on important high value initiatives.**



The Juggler is the ITDM that is more likely to experience challenges when managing server infrastructure (98%). Given its vital role at supporting the overarching IT resources of an organization, server infrastructure can pose the most challenges to those ITDMs that juggle with various areas of responsibility.

## Section 2

With some help,  
organizations  
**can tackle these  
challenges**



While organizations admit that they are experiencing challenges when it comes to managing their server infrastructure, it isn't all bad. They believe that when it comes to being more innovative, features within intelligent infrastructure can help them.

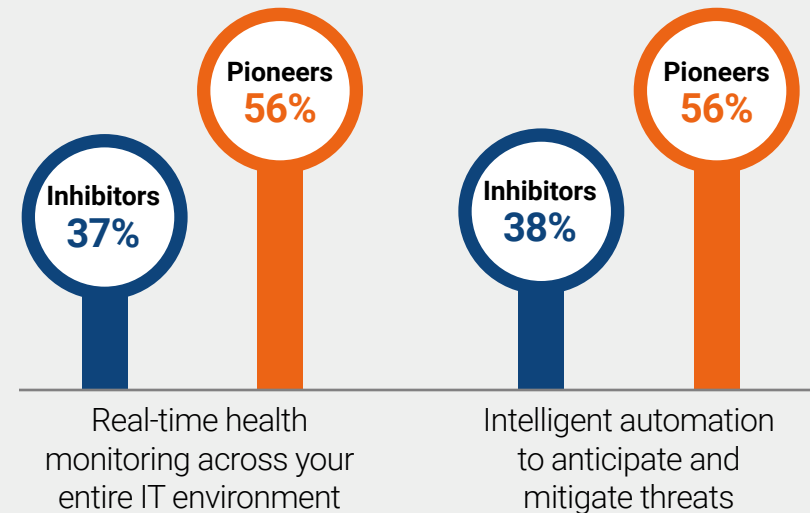
**These features include real-time health monitoring across their entire IT environment and intelligent automation to anticipate and mitigate threats.** As organizations move further along their innovation journey to becoming pioneers, they recognize that prioritizing intelligence and automation will advance them.

Regionally, it is those from APJC who are the most likely to believe these features would help them to become more innovative. Given that respondents from this region report challenges relating to complex processes, legacy technology and a lack of power to run emerging workloads, it's clear they understand that if they can tackle optimizing their server infrastructure for intelligence and automation, they can become more innovative.

From an industry perspective, it is those from IT and technology who are most likely to believe that real-time health monitoring across their entire IT environment would help them to become more innovative. This is because **real time health monitoring could save time, which in turn, allows IT professionals to focus more on driving innovation.**

Those who are more senior in the organization are more likely to report these features would help their organization be more innovative, continuing to emphasize the disconnect that senior management is more embedded in innovation efforts than their junior peers.

### Technology features that would help organizations be more innovative



The navigator and the adventurer are the most likely to believe these features would help their organization become more innovative. These ITDMs are inherently more open to new ideas and ways to drive innovation, so it makes sense they believe intelligent automation could help them. As they are open to all ideas available to them, they are arguably more equipped to help drive innovation.

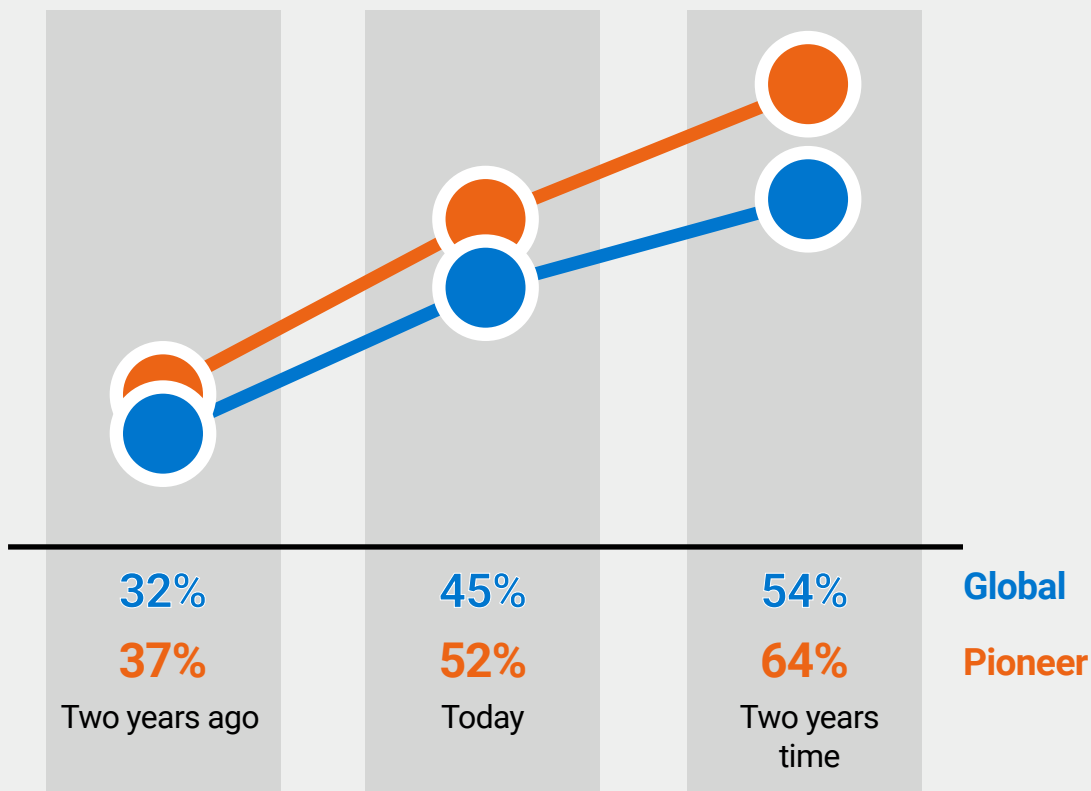


Section 3

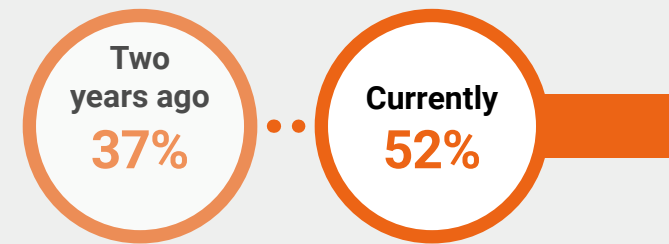
How a focus on  
cloud can support  
**server innovation**

Cloud computing offers many benefits for organizations, including scalability, flexibility and a simplified way to run their infrastructure. All of these benefits are key for organizations, especially when driving innovation is the end goal. With this in mind, it comes as no surprise that organizations are looking to the cloud to host their infrastructure.

#### Average percentage of infrastructure hosted on the cloud:



Pioneers of innovation are much more likely to have already moved their infrastructure to the cloud



Pioneer organizations also plan to increase the percent of their infrastructure in the cloud to 64% on average, over the next two years. It is likely that their move to the cloud has contributed to their more advanced innovation efforts. They are leveraging the benefits to propel their innovation endeavors.

**Organizations in North America are most likely to be embracing cloud. Two years ago this average sat at 35%. Today it is at half on average (50%) and in two years' time they plan to push this to 59%.**

The healthcare sector focused most on this area over the last two years. **They had the highest average percentage of infrastructure in the cloud two years ago and still do today, which could be due to the impact of the events of the last two years on this industry.** Embracing the benefits of the cloud, like scalability and flexibility, has been vital to digital transformation in healthcare.

Looking to the future, the retail and consumer products sector expect to have the highest percentage of their infrastructure in the cloud by 2024 (58%). Again, this sector was also heavily impacted by world events over the last two years. The way in which consumer habits have changed during this time could likely be driving this need to move more infrastructure to the cloud, in order to embrace agility and simplicity.



**In addition to being focused on cloud, organizations are using technologies that enable them to become more resilient and security focused.**

At a global level, security and resilience has seen an average positive impact of 12% based on organizations' current technology solutions. This increases to 22% for pioneer organizations. **As pioneer organizations are more likely to be embracing cloud, this could highlight its impact on resilience and security.**

APJC has seen the greatest impact in this area (13%). Even though North American organizations are the most likely to have embraced the cloud, those in APJC are not far behind, and have perhaps had more success harnessing the benefits aligned with resilience and security.

**The healthcare sector has leveraged their focus on the cloud and have seen an average increase in resilience and security of 13%.** They report the third highest average, with only the IT and technology (14%) and business and professional services (15%) industries ahead of them.

Continuing the themes witnessed when looking across seniorities, it is those who are more senior in the organization that are reporting higher positive impacts in this area compared to their more junior counterparts (more senior level in the organization: 13%; CIO or equivalent: 12%; Intermediate management: 12%; Junior management: 11%). These findings further cement the disconnect observed between the different management levels.



A man with a beard, wearing a blue denim jacket over a patterned shirt and dark trousers, is walking in a city courtyard. He is carrying a black bag over his shoulder. The background features modern buildings, a large potted tree, and outdoor seating areas with umbrellas. The scene is brightly lit, suggesting a sunny day.

## Section 4

# The benefits of **server** automation

Embracing server automation can unlock many benefits, all of which are increased for pioneer organizations. Findings demonstrate innovation really does breed innovation. Those who are more engaged with their innovation efforts are generating more hours on average to spend on further innovation efforts. This cycle of innovation feeds into itself, helping organizations to become more efficient and secure. These improvements will inherently disseminate around the organization, allowing all areas of the business to further embrace innovation and break through any barriers they might be facing.



13% ↑

Average increased efficiency across global organizations as a result of server automation. This increases to an average of 18% for pioneer organizations compared to only 6% for inhibitor organizations



It is clear that those who are more innovative are in a better position to harness the innovation potential of server automation. The two areas go hand in hand to help organizations really break through in this area

## Impacts of gaining efficiency

By gaining this efficiency, the impact is substantial, especially for pioneer organizations. Globally, organizations have gained an average of 6 working hours per week for each employee in their IT teams. For the average sized IT teams in our study, the outcome is 1,110 hours gained per week, on average.

**For pioneer organizations, this increases to an average of 7 working hours per week for each employee. Based on the average size of their IT teams, this equates to 1,683 hours per week, on average, compared to only 656 for inhibitor organizations.**

Global  
1,110

Pioneers  
1,683

Inhibitors  
656

While organizations gain efficiency, they are also able to use server automation to help them get ahead of security threats. At a global level, organizations believe they are able to anticipate an average of 63% of security threats due to server automation. This increases to an average of 79% for pioneer organizations compared to only 34% for inhibitor organizations.

Global  
63%

Pioneers  
79%

Inhibitors  
34%

## All regions experience the benefits of server automation...

...with APJC coming out on top when it comes to the number of working hours saved. This is encouraging given the challenges the region faces (complex processes or legacy technology and a lack of power to run emerging workloads). This affords them the time to help address these areas, further improving their ability to be innovative.

12% - 13%

**is the average gained efficiency as a result of server automation**

(LATAM, EMEA, APJC: 13%; North America: 12%)

5 - 6 hours

**are gained, on average, as a result of this efficiency boost**

(APJC saved the most working hours each week across their IT teams (1,493))

61% - 64%

**of security threats predicated due to server automation**

(LATAM: 61%; North America: 63%; EMEA: 64%; APJC: 64%)

**Across industries, server automation benefits are reported to varying degrees, highlighting that some industries are doing better than others.**



11% - 13%

**Efficiency increases are being felt equally across the different sectors with the average sitting at between 11% and 13%.**



67%

**Organizations in the healthcare and telecoms industries report they can anticipate the highest average percentage of security threats due to server automation. Given the focus healthcare and telecoms are placing on cloud, this could be a contributing factor to their success in this area.**

When looking at the impact of server automation by seniority level, those more senior report greater benefits. This further supports the disconnect witnessed between the varying seniority levels. Clearly, the most senior members are more focused on the broader picture, while the more junior ones focus more on day-to-day operations.

### Impacts of server automation

|                                                                                                                                                         | Most senior in the organization | CIO or equivalent | Intermediate manager | Junior management |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------|----------------------|-------------------|
|  Increased efficiency due to server automation                        | 15%                             | 13%               | 11%                  | 11%               |
|  The number of working hours saved by this increase efficiency       | 7                               | 6                 | 6                    | 5                 |
|  Percentage of security threats anticipated due to server automation | 69%                             | 65%               | 59%                  | 49%               |

# Conclusion

Server infrastructure plays such a pivotal role within any organization. It is the enabler of all operations and without it, organizations will struggle to function. It is therefore crucial that organizations are firstly using server infrastructure that is modernized and able to keep pace with organizational demands.

Secondly, it is vital they harness the benefits that investing in an automated server solution can bring. These benefits include increased efficiency, resiliency, and security.

Of course, increased efficiency is a bonus point for any organization, but in this context, it can afford them another invaluable benefit: more time to work on innovation and higher value initiatives. By having more time to work on innovation, organizations can increase the positive impact it can have. This cycle of innovation breeding innovation is vital to organizations as they strive to be disruptive and competitive in their industry.

**By embracing intelligent server solutions, organizations can build a real-time view allowing them to take security to the next level, both across hybrid and multi-cloud solutions and out to the edge. They can do while also reducing operational complexities and risk, leaving them more time for what matters: innovation.**

## How Dell Technologies Can Help

Dell Technologies brings together the trusted partnerships, innovative technologies and end-to-end simplicity you need to serve all your users and customers where they are. Our holistic and intelligent offerings enable you to simply, quickly and securely build your breakthrough beyond the reach of competitors.

PowerEdge servers features intelligent automation that lets you anticipate and outmaneuver threats to take your organization's security to the next level.

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Dell Technologies is among the world's leading technology companies, instrumental in developing solutions to help transform people's lives with extraordinary capabilities. We deliver the infrastructure, tools, and processes that help organizations create modern data pipelines across and between on-premises, edge and public clouds, rapidly reducing the time between data creation and innovation to help you overcome unplanned obstacles and seize unexpected opportunities - all tailored to the way you need to acquire and consume IT. Dell Technologies will stop at nothing to help you harness the transformative power of technology so you can be ready for whatever comes next.



On-premises, in the public cloud, or at the edge, Dell Technologies and Intel work together to ensure optimal performance across a broad range of workloads. Intel's data-centric portfolio is built on decades of application optimizations, designed to help your business move faster, store more, and process everything from edge to cloud.



Together, VMware and Dell Technologies provide unique value to our shared customers. Our integrated platforms and solutions, combined with global scale and deep customer engagements, accelerate the journey to digital transformation. VMware's innovative app modernization, multi-cloud, and Anywhere Workspace software work with Dell Technologies' broad IT portfolio spanning from endpoints to the cloud to help customers achieve secure, consistent operations and faster time to value.



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#### About the research

Dell Technologies, together with Intel and VMware, commissioned independent market research agency Vanson Bourne to conduct research into how organizations are embracing innovation and the impact it could have on the wider business, including the area of client modernization. The study surveyed 4,300 IT decision makers in February and March 2022 across North America, LATAM, EMEA and APJC. Respondents were from organizations with 100 or more employees across all public and private sectors, with a specific focus on education, retail and consumer products (including ecommerce), Government and the financial services and insurance sector. All interviews were conducted using a rigorous multi-level screening process to ensure that only suitable candidates were given the opportunity to participate. We also conducted a series of twelve in-depth interviews across a spectrum of IT decision makers from the same regions.