

The Separation Of Work And Place

Lessons from the pandemic
for the future of work



teradici®

The Separation Of Work And Place:

Lessons from the pandemic for the future of work

In the face of a year that has diverted everyone's most diligent plans (and their backup plans too), Teradici set off to find out how organizations were adjusting to remote work, and specifically, how desktop virtualization usage has contributed or influenced that adjustment.

We surveyed nearly 700 IT professionals across a range of industries about their transition to sending their employees home and what may or may not have changed in how their organizations are approaching work for the future.

A recent Gartner poll showed that at least some of the increase in remote work will persist after the pandemic is over—48% of employees will likely continue to work remotely at least part of the time, a significant increase from 30% before the pandemic began. With that in mind, our survey sought to determine what role virtual desktops could and did play in helping IT teams support remote workers, where the concerns and difficulties arose for IT teams supporting a remote or distributed workforce, and how this transition and support burden could be reduced.



The Remote Work Transition

When the pandemic began and companies started to shift employees to remote work, they didn't have a lot of time to do so, and in many cases, they were not fully prepared.

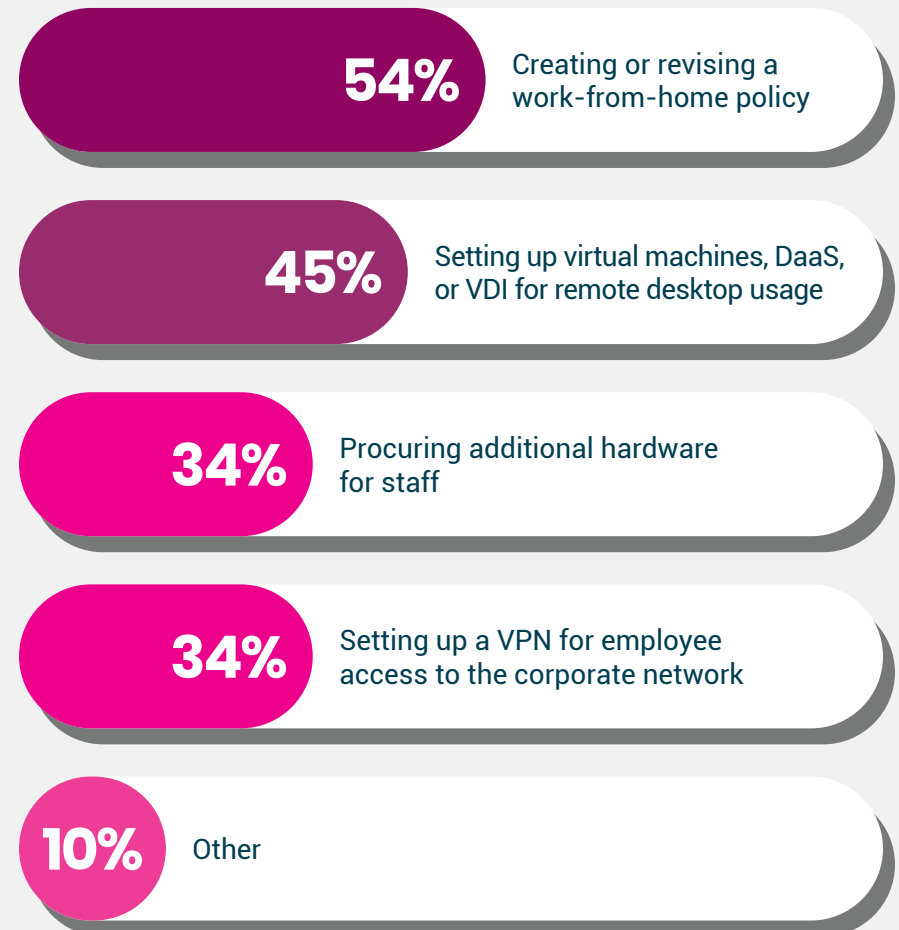
Over half of the survey respondents admitted that one of the first issues they needed to address was creating or revising a work-from-home policy. One-third had to procure additional hardware and the same number had to set up a VPN to enable remote access to their corporate networks.

Q: What were the most important computing issues you needed to address when the COVID-19 outbreak began?

A: Making more Virtual Machines readily available for more users to be logged in at once and allocating more resources to do so.

– Healthcare analyst with significant IT decision-making authority

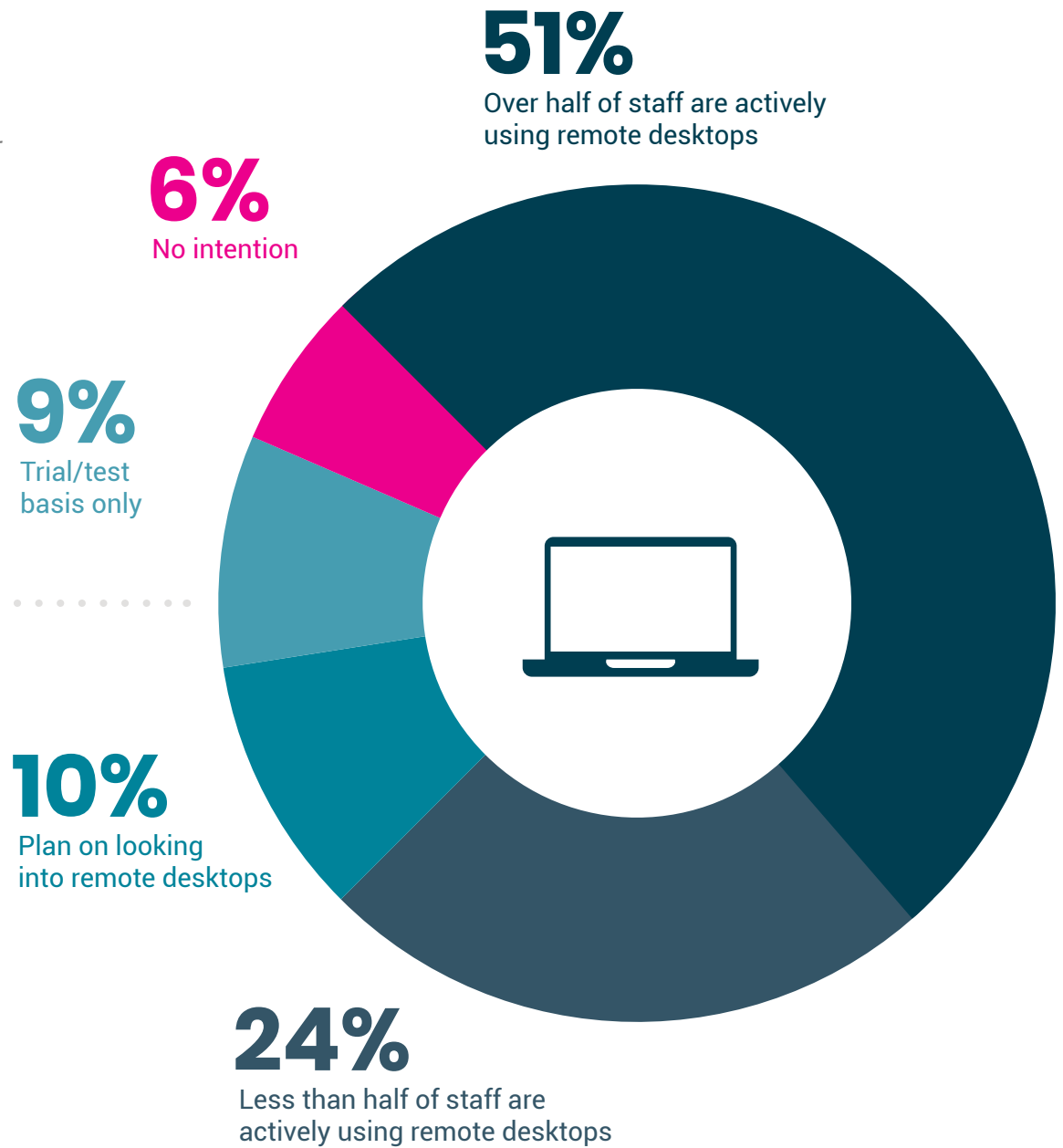
Computing issues that needed to be addressed when COVID-19 began



The Separation Of Work And Place:
Lessons from the pandemic for the future of work

It's important to note that this was the case in spite of the fact that over 75% of the respondents were using remote desktops in their organizations, though in many cases their remote desktop deployments were not company-wide.

Remote desktop utilization amongst respondents



The Separation Of Work And Place:

Lessons from the pandemic for the future of work

Respondents using remote desktops were doing so for several reasons, the most prominent of which was to provide remote access to high-performance workstations needed to run graphics-intensive applications like animation and visual effects applications.

Top reasons for remote desktops



Graphics-intensive applications require high-performance workstations



Cost savings where remote desktops are cheaper than upgrading staff hardware



Sharing of computing resources so multiple people can connect to remote desktops



Flexible working locations



Need to keep data or intellectual property in a secure central location for regulatory compliance or industry standard

The Separation Of Work And Place: Lessons from the pandemic for the future of work

The combined need for high-performance workstations and the need to keep data or intellectual property protected in a central location, along with the growing desire of employees for flexibility in working locations, has been driving the adoption of virtual workstations for some time, long before the pandemic.

Many of our customers in the media and entertainment industry have been shifting to this model as they expanded their teams into branch offices in separate locations or even just because teams wanted the freedom to be able to move around the studio to collaborate with others on a project. But usage of remote desktops and workstations is not limited to those in the media and entertainment industry. Significant portions of respondents from other industries were leveraging remote desktops as well.

Vancouver Film School shifts to online instruction in 11 days



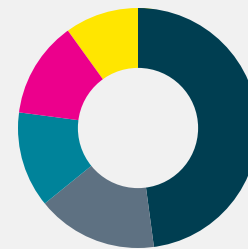
Vancouver Film School (VFS) delivers hands-on learning in film, visual effects, game design, and other aspects of production. The campus abruptly had to close for the pandemic in March 2020 – and the school needed an efficient way for students to access graphics-intensive applications and produce work of the same quality as in previous years.

“We trust Teradici because leading film, animation, and gaming studios use the software,” says Colin Giles, Head of Animation and Special Effects.

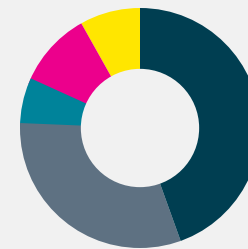
Students were able to start working on hands-on assignments from home just 11 days after the shutdown. “We tested Teradici Cloud Access Software on a Friday, and by Monday, students were using it for class assignments,” Giles says.

[Read the full story here.](#)

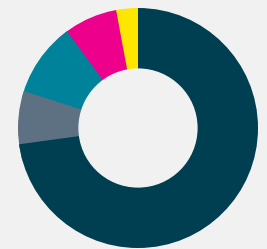
Usage of remote desktops by industry



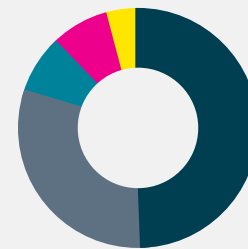
Technology, IT



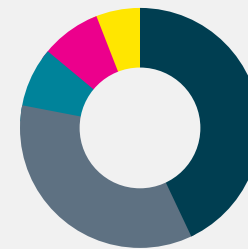
Education



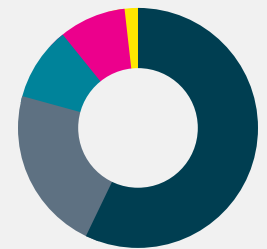
Finance



Manufacturing, Engineering, AEC



Government, Military



Media & Entertainment

teradici

The Separation Of Work And Place: Lessons from the pandemic for the future of work

Centralizing workstations in a data center or public cloud offers benefits that can endure beyond the current crisis:

Operational Efficiency – Expensive workstations can be kept together in a climate-controlled server room where they're easier for IT teams to secure, manage and maintain.

Cost Efficiency – A centralized data center reduces the space needed in the studio itself, which may be located in a high-rent area, and could even be located away from the studio in a lower-cost space.

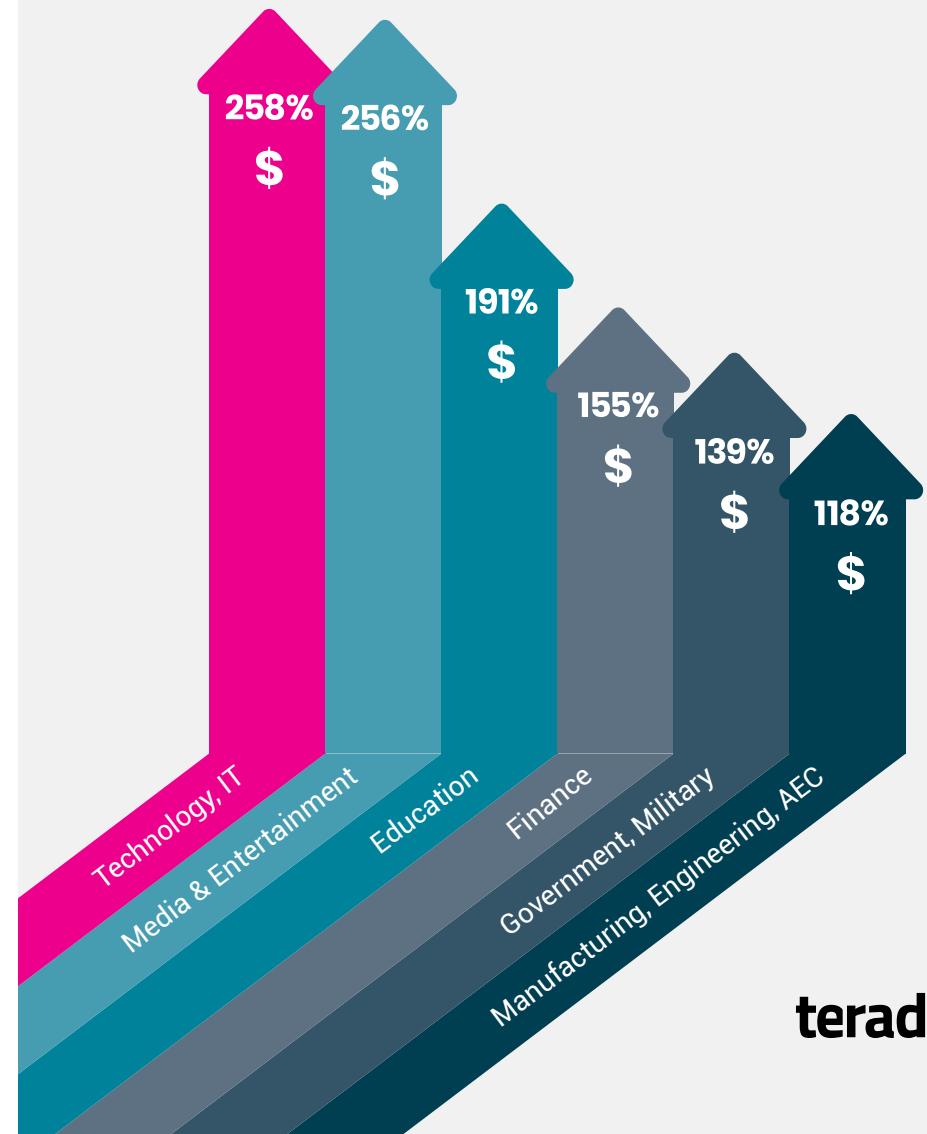
Resource Optimization – Workstation resources and computing power can be pooled and shared between users, providing the computing power they need at lower cost. Companies with workforces in different time zones, for example, can optimize between them and have less resources sitting idle.

Flexibility – Teams can rearrange themselves as often as they need to for project collaboration, without time-consuming workstation moves. Users can also log in from home or wherever else they need to be, providing more flexibility in work hours, which improves productivity and helps support diversity and inclusion mandates.

Talent Acquisition – Location flexibility enables companies to hire outside of their primary geographic locations, broadening their reach in competitive hiring markets.

Given these benefits, we were not surprised that the vast majority of those using virtual desktops were happy with their solution. Eighty-five percent of current virtual desktop users responding to the survey would recommend them to others. Most of them plan to significantly increase their budgets for remote desktops over the next year.

Average % increase in spending for remote desktops



The Separation Of Work And Place:
Lessons from the pandemic for the future of work

That said, they did offer some insight into what they would do differently if they had to face the transition again. Two-thirds of respondents said they would change something in their approach to shifting employees home.

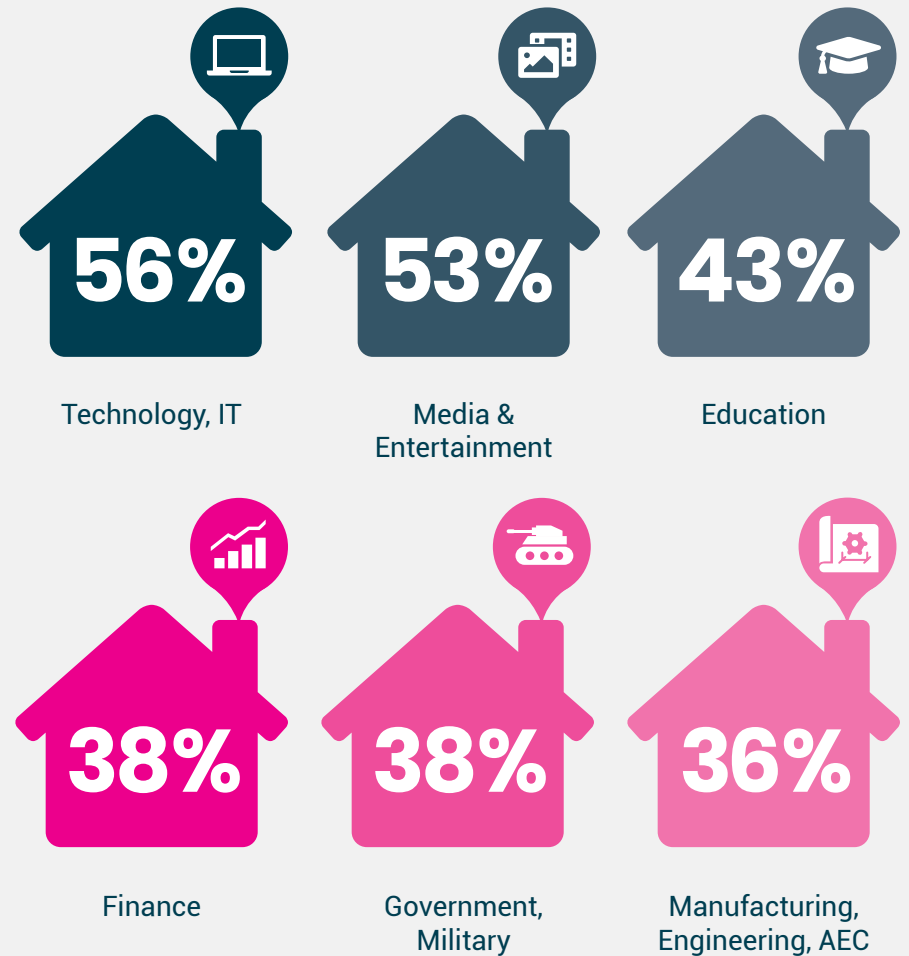
Some tips included:

Prepare hardware in advance – Ensuring workstations have remote host cards or remoting software installed even before they are needed can help facilitate a quicker, smoother transition when time is in short supply and small IT teams are scrambling to support everyone at once.

Provide client devices – While personal devices and laptops can (and did) work in a crunch, providing devices like thin clients, zero clients, or laptops with software clients installed can be more efficient for support in the long term. Even older laptops can be stored and repurposed for this in a pinch – one respondent noted that they had been able to use laptops that had been previously designated to be discarded.

Train employees for remote work – Training users on the software and corresponding policies around collaboration and security compliance requirements as part of day-to-day operations can help smooth the transition and reduce the workload for IT teams in a crunch.

Average % of staff that will continue to work from home



Q: What have you learned from shifting employees home during COVID-19?



Long term working from home is more viable than originally thought, may influence hiring in the future as an office is less important.

— Manager at an Enterprise-level technology organization



That our existing preparation for remote access was timely and ultimately put us in a good position to roll this out within hours rather than weeks. It was very fortunate.

— Manager at a mid-sized Media & Entertainment studio



Have a good work from home option in place. You don't want to have to build one from scratch in an emergency. We were able to quickly accommodate for increase in capacity, due to already leveraging VDI and a work from home policy.

— Analyst at an Enterprise-level Manufacturing/Engineering/AEC organization

Balancing security, usability, and productivity needs

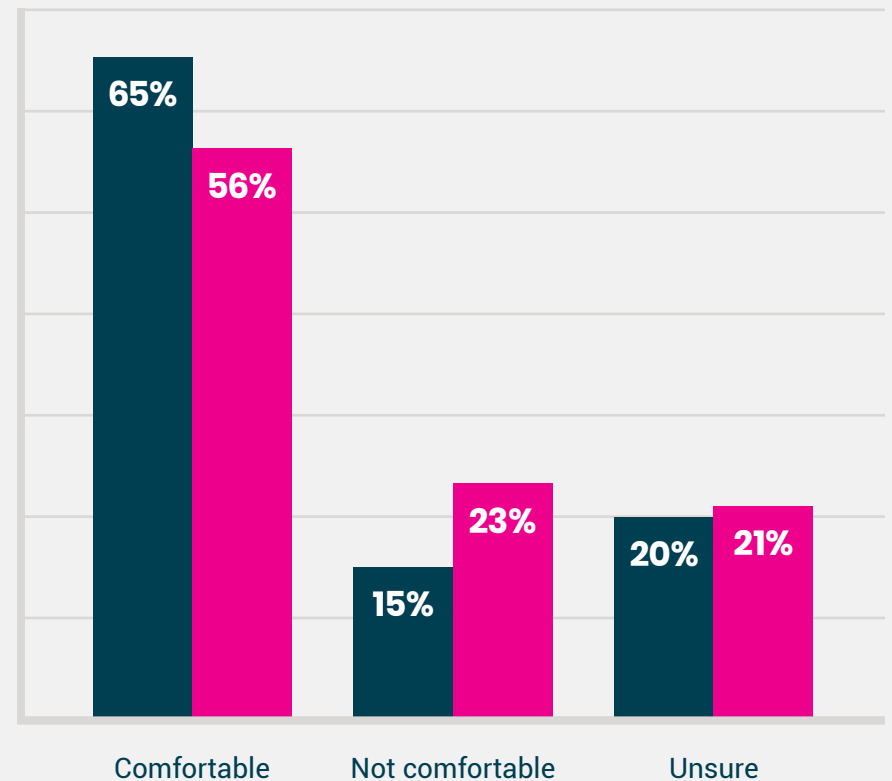
Modern corporate networks are designed and maintained for security, and many organizations now contractually require their vendors and suppliers to adhere to strict security compliance measures as well. These measures can be far more difficult to verify when employees are no longer located on the same premises and using the office network.

While most IT professionals who responded to our survey were comfortable with the level of security they were operating with after sending their employees home, a sizable minority was not. When we broke this down between respondents who were using remote desktops and those who were not, respondents using remote desktops showed higher confidence in their security level.

A traditional co-located office worker passes through several levels of security before even sitting down at their desk and logging in. They may enter a security gate or a locked building via a key card that gives them access to only their own floor. They probably have a designated desk, surrounded by others who know and recognize them. Their computer may be secured to the desk. They then log on to their computer and the tightly controlled corporate network with a unique ID and password,

Comfort with level of security for employees at home

● Utilizing remote desktops ● No intention of remote desktops



The Separation Of Work And Place: Lessons from the pandemic for the future of work

and perhaps even an additional authentication process like a verification code pushed to a mobile device.

In a situation like that in which many companies found themselves this year, with very little time to shift employees out of the office, the easiest solution was perhaps to have employees pack up their computers and take them home. In doing so, they removed the first four layers of security in the scenario above.


When properly set up and used, remote desktops can help alleviate some of the security concerns raised by operating with a distributed workforce, by:





- Ensuring that the physical location of the computer and its data is maintained and protected in the office, the data center, or in the cloud, instead of at the employee's home
- Encrypting network communications from end to end and adding a VPN in some circumstances, which deliver that corporate level security to the home or anywhere else the employee needs to be
- Eliminating local storage and therefore much of the opportunity for theft of digital assets.

Using a client device that doesn't support local storage can provide that extra peace of mind and meet even the tightest requirements.

Did you feel you had to compromise on security or user experience during the shift?

30% Yes, both security and user experience    

6% Only security    

24% Only user experience    

32% Neither were compromised    

7% Unsure    

The Separation Of Work And Place:
Lessons from the pandemic for the future of work

However, in a webinar earlier this year, part of the issue with security lies in the difficulty it presents to users in maintaining it.

“A big challenge around security is that it can often be incredibly complex to implement. Even more so in the context of remote access, with numerous components like firewalls and VPNs which can confuse users unaccustomed to them and increase the support burden of already overtaxed resources.”

**– Paul Austin,
Director of Global Channels, Teradici**

The proper level of security for any one organization may be different from another one, based on its unique needs, and identifying it usually requires IT teams to balance security with usability. Unfortunately, when IT teams feel they have to compromise one for the other, it's usually the usability that suffers, and that was borne out by our results. When asked whether they felt they had to compromise on their security or user experience during the transition, more than half identified user experience as the more common compromise.



Redbrick Associates seamlessly transitions to work from home

Founded in 2014, Redbrick Associates works with select top-tier venture firms to manage their business operations and financial reporting. When employees went home to work during the COVID-19 pandemic, the firm didn't lose a beat. Redbrick bought low-cost Chromebooks, installed the Amazon WorkSpaces client in a few minutes, and handed them out.

The laptops provided an immediate solution for business continuity. Now Redbrick is arranging to drop-ship zero clients and monitors to employees' home offices so that work is as convenient as it is in the office. "I'm comfortable using zero clients for work from home because they are low-cost, secure and easy to manage," Di Bona says.

IT is simple whether employees work from home or in the office. Teradici PCoIP technology saves Redbrick the cost of a VPN and ongoing management, and the IT team can update software from anywhere.

"Business continuity is essential for financial services firms like accountants, tax preparers, and financial advisors," Di Bona says. "With Amazon WorkSpaces powered by Teradici PCoIP protocol, we know we can work for our customers from anywhere, on any device—during ordinary times as well as disasters."

[Read the full story here.](#)

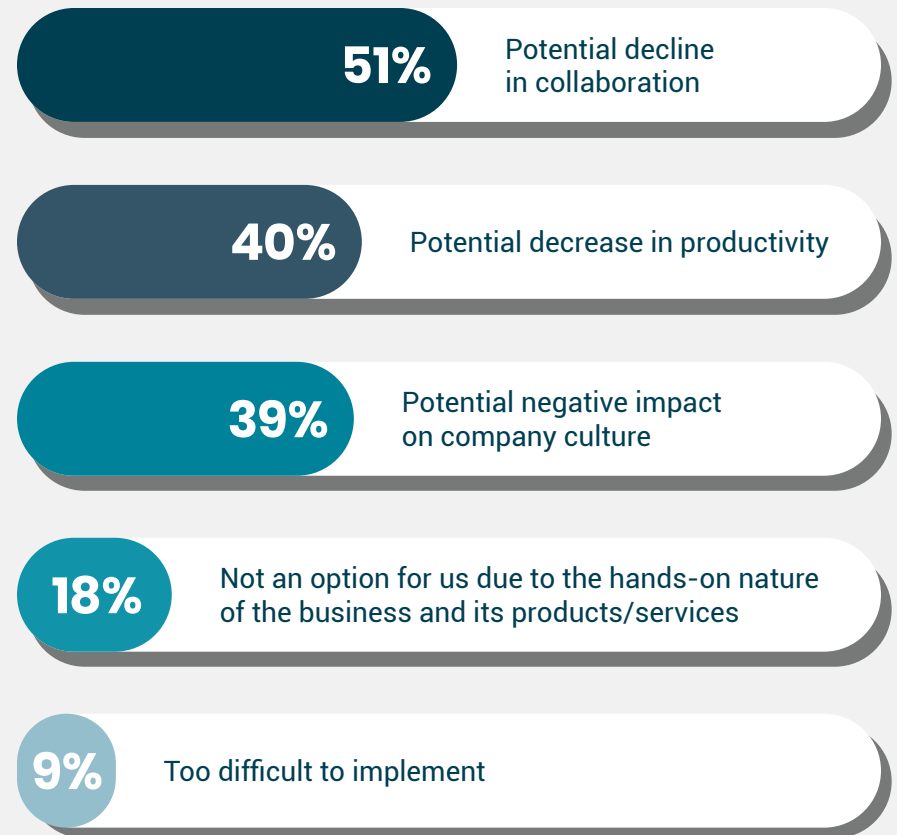
Managing the team, not just the tech

Even in a survey of IT leaders, one of the key findings was surprisingly not about the technology at all. When asked about their biggest struggles with transitioning their teams and their workforces home, many of them said the technology was not their biggest problem. They expressed concerns about how to maintain their team's motivation and loyalty at a distance, how to ensure that everyone is pulling their weight, how to mentor junior team members, and how to keep teams cohesive when they were lacking the regular social interactions of the day-to-day office life.

We asked about why they might not want to continue to have employees work from home permanently, and the highest scoring factors were about the human touch—concerns that communication, collaboration, productivity, and ultimately company culture may suffer in the long term if employees remained distributed rather than returning to the office.

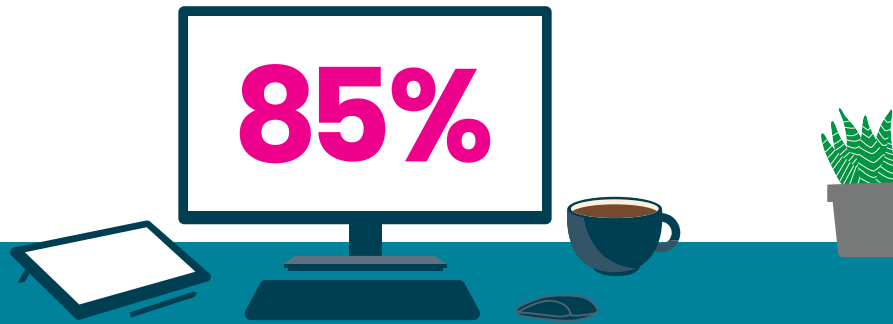
Even when it was about the tech, it wasn't all about the tech. Tech problems often have a human element to them as well—IT teams struggled to remotely support colleagues who were less tech-savvy and did not have the training to determine the source of their technical challenges, whether they be overloaded home networks or difficulties with their VPNs.

Reasons for not continuing to have employees work from home permanently



The Separation Of Work And Place: Lessons from the pandemic for the future of work

Ultimately, this is a shared responsibility. Users need to be trained to use the technology they need, but that technology shouldn't be so difficult that it becomes a drain on their productivity and motivation. Employees should be able to be trusted to keep company data secure, but the systems set up should not rely entirely on their voluntary compliance with security policies. And everyone needs to learn new ways and routines to communicate and collaborate with colleagues in order to maintain trust and cohesion within their teams.



**[85%] of those that are
utilizing remote desktops
would recommend the use
of desktop or workstation
virtualization**



Cascade Dafo increases factory workstation reliability and enables working from home

Cascade Dafo designs custom braces that provide more mobility for children. They operate a plant in Ferndale, Washington and have found that it is difficult to provide employees on the plant floor with direct access to design applications and files on workstations. "When foam is carved it throws up fine particulates that can cause workstation failures," says Steve Zehm, director of IT.

Zehm found the solution in [Teradici Cloud Access Software](#). Cascade Dafo hosts workstations in a server room, where they're safe from airborne particles. Employees log in to their workstations remotely, using Dell All-in-One PCoIP Zero Clients.

The solution offers strong security, a key consideration when dealing with patient information. Sensitive data is never stored on end devices and never appears on the network. The value of the solution became even clearer when COVID-19 disrupted normal operations in the spring. During the pandemic lockdown, Cascade Dafo employees were able to work from home on PCoIP Zero Clients.

Overall, the solution offers both operational and cost efficiencies. Zehm expects to eventually retire most the company's physical desktops. "Zero clients are much easier to maintain and have a longer life," he says.

[Read the full story here.](#)

teradici

The Separation Of Work And Place:

Lessons from the pandemic for the future of work

Let us help you

Teradici is not new to the world of remote desktops. In 2004, we set out to create the best virtual desktop and workstation experience in the world, and along the way we've enabled the most demanding use cases with requirements like top secret security, complex IT infrastructures, and intensive graphics performance. Our PCoIP® technology fundamentally simplifies how computing is provisioned, managed and used.

We've spent the last 16 years obsessed with the remote desktop and workstation experience, and it shows. We can help you thrive in the new normal, regardless of your industry, your location, or your existing IT infrastructure. Together with our partners, we've built a virtual desktop ecosystem that supports your work, your way, with no compromise to your flexibility, user experience, or security.

With over 15 million endpoints deployed around the globe, we're no startup. Top government agencies, media conglomerates, production studios, financial firms, and design houses trust Teradici to support their need for secure, high-performance virtual desktops and workstations delivered from private data centers, public clouds, or any combination of both. You can trust us too.

For more information about how Teradici technology can help you support your remote workforce, visit:

www.teradici.com/remote-work

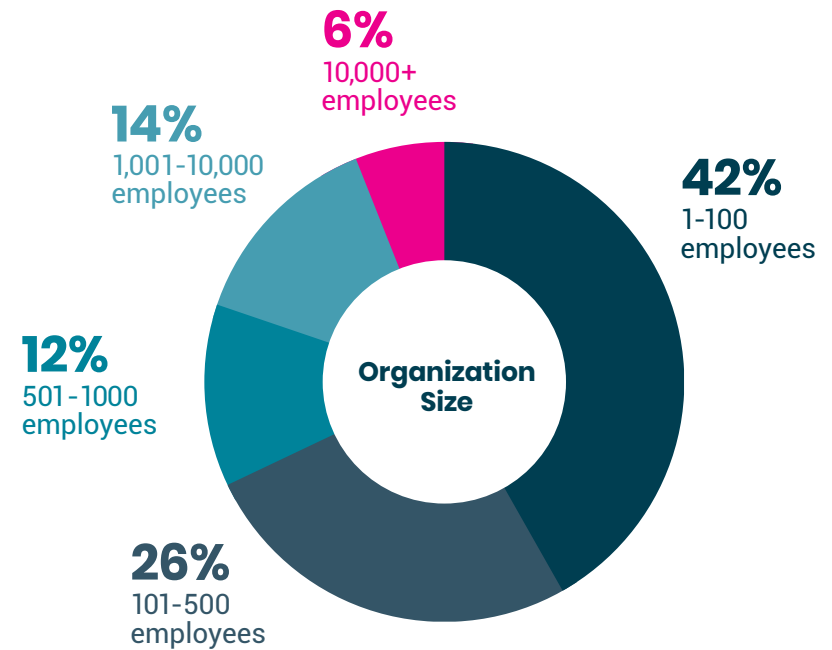
teradici.

Methodology

Teradici surveyed 698 respondents over the course of approximately four weeks in August about the use and effectiveness of remote desktops within their organizations and their perceptions of remote work at large. Approximately 96% of respondents were IT decision makers, and two-thirds were management level or above. Respondents were distributed across 64 different countries and represented a wide range of organizational sizes, from small businesses to enterprises of over 10,000 employees.

Teradici did not ask survey respondents if they were current Teradici customers but did promote the survey through the company's own channels as well as through external channels. Because of this, the breakdown of survey respondents by industry reflects a stronger presence in the media and entertainment industry.

Teradici is the creator of the PCoIP® remote display protocol, which delivers virtual desktops and workstations from the data center or public cloud to end users with the highest levels of security, responsiveness, and fidelity. Teradici Cloud Access Software powers the most secure remote display solutions with performance that supports even the most graphics-intensive applications. Teradici technology is trusted by leading media companies, design houses, financial firms and government agencies and is deployed to more than 15 million users around the world.



Industry of Respondents

