LOADBALANCER

WHITE PAPER

Hybrid working: delivering robust services for a flexible future

Reimagining business-critical applications for accessibility anywhere

> *Employees would prefer to work remotely at least two days per week, and 75% of IT leaders believe the future of work will be remote or hybrid*

Executive Summary

2020 changed the definition 'workplace' forever. As offices closed and millions of employees worlwide rapidly adjusted to working from home, the covid-19 pandemic did away with the traditional concept of the co-locating workspace. Work culture switched from one extreme, the traditional nine-to-five, to full-time working from home. Now, with the global vaccination program in full swing, and infection rates falling in many parts of the world, are employers and, more importantly, employees ready to flock back to the old way of working?

The evidence suggests not. Organizations across the world, together with their workforces, are now deciding on the new normal for work practices. Rather than a complete investment in remote working or a full return to offices, the overriding trend is that of hybrid working – a flexible blend of the two. While some large organizations have formalized or even established the norms and policies to address the new world of hybrid working, many have yet to do so.

In order to facilitate an effective hybrid working model, core digital services such as desktop and office applications, business communication and collaboration tools, storage and printing solutions will all need to be accessible, reliable, and secure at all times – from all locations. A survey of 2,000 working professionals and 250 IT decision-makers found that only 11% of working professionals are willing to work entirely from the office in a post-pandemic world[1]. Rather, employees would prefer to work remotely at least two days per week – the report confirms that 75% of IT leaders believe the future of work will be remote or hybrid. Meanwhile, Microsoft has cited hybrid work as 'the next great disruption'[2], while workers have deemed the shift a success, reporting higher happiness levels, despite working longer hours[3].

And while IT teams broadly coped with the rushed, mass-transition to home-working in 2020, the ultra-flexible new normal presents challenges: should you implement robust, long-term bring-you-own-device policies, or provide every individual with laptops? Or both? Is it possible to optimize on-premise solutions to perform acceptably for users that only come to the office two days a week? Or is a hybrid-cloud approach more appropriate?

This sector-agnostic white paper, explores a comprehensive overview of the shift to hybrid working, ensuring business leaders understand the main considerations around effective delivery of business applications for the workplace of the future.

1 https://www.tessian.com/research/the-future-of-hybrid-working
2 https://www.microsoft.com/en-us/worklab/work-trend-index/hybrid-work
3 https://www.economist.com/special-report/2021/04/08/the-rise-of-working-from-home

What does a hybrid workplace look like?

'Hybrid' work arrangements describe a flexible work environment that entails a mix of in-office and remote work – while maintaining company culture. This type of model offers autonomy around when and where to work – allowing employees the freedom to fit their job around their lives, instead of fixed office hours and a daily commute. Typical approaches comprise a skeletal staff that's always present onsite – while other employees are free to come and go as they choose, within reason.

It could be that the same roles are always mandated to be onsite, or a staggered approach can be taken, enabling different employees to attend the office on different days. Alternatively, organizations may simply request that employees are present on specific days to attend in-person meetings.

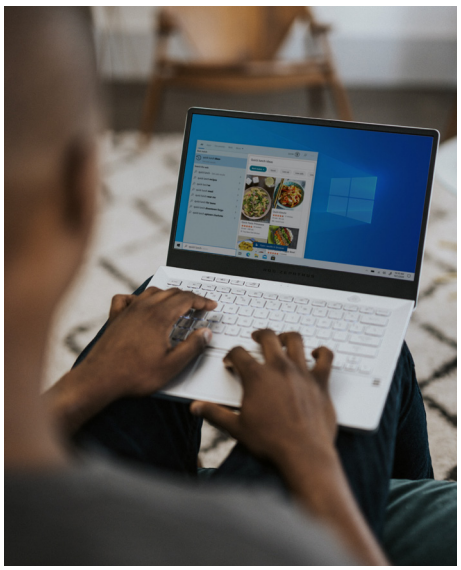
> *"The hybrid approach aims to deliver the optimal balance of productivity, with reduced stress."*

Irrespective of the arrangements you choose, the hybrid approach aims to deliver the optimal balance of productivity, reduced stress and fewer commutes. It's a more economical concept as organizations do not have to rely on large-scale offices – potentially saving thousands of dollars in real estate and site maintenance costs. Furthermore, with a robust work-from-anywhere policy, organizations can recruit from a larger talent pool, no longer requiring employees to relocate in a specific geographical region.

With the corporate world gearing up for some form of return to the office, a Gartner survey revealed that 90% of respondents plan to allow employees to work remotely, at least part of the time, after the Covid-19 vaccine has been widely adopted[4].

4 https://www.computerweekly.com/news/252486043/Gartner-Remote-working-shifts-CIO-priorities

Indeed, the past year has proven that employees can be just as, if not more, productive working from home as they are working in the office[5]. Meanwhile, corporates such as Microsoft, PwC, Google and Siemens have already formalized their hybrid working policies[6]. Microsoft announced that its employees would be allowed to telecommute up to 50% of the work week, or seek their managers' approval to permanently work remotely. It has described the process of empowering remote productivity as requiring "new collaboration tools, robust cloud infrastructure and a new way of thinking about network security."[7]



As the lines between physical and digital are fast blurring, many more organizations are reimagining the future of work, and considering the hybrid model as a long-term or permanent solution – and if that describes your organization, does it have the appropriate IT infrastructure in place to accommodate the needs of hybrid working?

Getting the hybrid approach right

Once your organization has decided that hybrid working is appropriate, it'll need to effectively implement the right digital tools and services to make it a success – here are some of the key considerations:

Desktop virtualization

An important element of hybrid workspaces, which enables users to access a virtual desktop from a connected device, remotely or locally. The technology gives IT teams central control over how desktops are deployed across an organization's devices. With desktop virtualization, IT doesn't necessarily need to manually setup and ship a new hardware device for each user. Rather, they can simply deploy a ready-to-go virtual desktop to the user's device and the user can interact with the organization's network, applications and systems on that desktop from any location with the same user experience.

While the concept of desktop virtualization is nothing new – Virtual Desktop Infrastructure (VDI) services have been available from Citrix, VMware, Microsoft and others for some time – organizations now have alternative options in the form of cloud-based Desktops as a Service (DaaS) offerings.

Traditionally, VDI was the only way to run a virtual desktop. It's a variant of the client-server model of desktop virtualization that uses host-based virtual machines (VMs) to deliver persistent and nonpersistent virtual desktops to all types of connected devices. VDIs are centrally located. Therefore, it's the IT team's responsibility to manage them – meaning, the software, hardware, deployment, and licensing are all handled in-house.

5 https://blog.hubstaff.com/remote-workers-more-productive/
6 https://www.forbes.com/sites/kristinstoller/2021/01/31/never-want-to-go-back-to-the-office-heres-where-you-should-work
7 https://blogs.microsoft.com/blog/2021/03/22/the-philosophy-and-practice-of-our-hybrid-workplace/

> *Organizations taking the hybrid route have a responsibility to embed robust protection against cyber threats.*

DaaS meanwhile, can be described as "VDI that's someone else's problem"[8]. It's VDI hosted in the cloud, and also offered by software giants inclusing Microsoft, Amazon, Google, VMware, and Citrix – all users need is an internet-connected device, with all of the hardware being managed by the provider. As such, organizations don't need to worry about hardware breakdown, rackspace, or maintenance issues. Today's bandwidth availability and preference for service-based software makes DaaS an attracive option.

In August 2020, Gartner listed DaaS as one of six trends to keep an eye on, largely because of how quickly the pandemic accelerated shifts to remote work. While VDI as a technology is more mature than DaaS, it requires costly up-front investment, whereas DaaS usually operates on a per-user subscription model, with costs varying widely from vendor to vendor. With remote work likely to be permanent even after the pandemic ends, those costs may be preferable to in-house deployments Gartner concluded[9].

Safety and reliability

Organizations that have adopted or are planning to adopt a hybrid working model, must rethink ways to effectively deploy tools and resources to keep employees and company data safe and secure. Considering 88% of companies across the globe experienced phishing attempts in 2019[10], 68% of leaders feel that cybersecurity risks are on the rise[11].

So, organizations taking the hybrid route have a responsibility to embed robust protection against cyber threats for their digital assets – although there's no one-size-fits-all approach to acheive this. While some organizations will need to move towards solutions that drive imporved team collaboration and engagements, others may need to implement invasive or restrictive policies for remote working connectivity. Consider these ways organizations can better manage security risks in a hybrid work environment:

1. Upgrade your BYOD (Bring Your Own Device) policies to better secure your organization and get it ready for hybrid working.
2. Introduce more security training (both virtually and in-person) making it relevant and tailored to employees, to instill greater awareness of risks among the remote workforce.
3. Implement two-factor or multi-factor authentication as a security method for your hybrid workplace.

8 https://www.techrepublic.com/article/vdi-vs-daas-what-is-the-difference-and-which-is-best-for-your-business-virtualization-needs/
9 https://www.gartner.com/smarterwithgartner/6-trends-on-the-gartner-hype-cycle-for-the-digital-workplace-2020/
10 https://www.proofpoint.com/sites/default/files/gtd-pfpt-uk-tr-state-of-the-phish-2020-a4_final.pdf
11 https://www.accenture.com/_acnmedia/PDF-96/Accenture-2019-Cost-of-Cybercrime-Study-Final.pdf

4. Upgrade or improve your endpoint protection to better safeguard all devices that access the company network.
5. Enhance your VPN to protect the accounts and access used by remote employees.
6. Establish ID-management strategies to ensure employees within the business perimeter, as well as those working remotely, are protected and secure at all times.

Security across the hybrid working model is a top concern, so IT and security teams must work together to achieve a common goal: supporting the hybrid workforce to access digital services from any location seamlessy, safely and securely.

Collaborative digital platforms

Choosing the right technology for employees makes a big difference – especially if they work at a central office part of the time, and from remote locations in between. Organizations must provide their workforce with the devices and tools that support the hybrid approach effectively, so they can be fully productive – no matter where they're working from. Increasing availability, functionality and popularity of collaboration and workflow tools, as well as online conferencing tools, have made this possible.

> *"We've seen two years' worth of digital transformation in two months."*

Furthermore, the Covid-19 outbreak sped up this digital transformation when organizations had to quickly react to the urgent need to enable employees to work safely from locations other than the office. Microsoft CEO Satya Nadela put it best: "We've seen two years' worth of digital transformation in two months"[12]. Aiming to help organizations adapt and stay open for business in a world of remote everything, the company has, in fact, designed its Surface portfolio of devices to optimize the hybrid work experience[13]. Investing in the following technologies can help organizations make sure that their teams' workflows are smooth and productive:

Video conferencing

Simple and cost-effective tools like Zoom, Skype, Google Meets, Highfive, and others, enable employees to talk to each other in real-time and host meetings that feel similar to in-person gatherings – irrespective of location.

Project management

Trello, Asana, Monday.com and other project management applications make it easy for teams to stay on the same page – even if members work from different locations across the world. Features to look for include in-app commenting, progression indicators, due dates, and the ability to assign tasks to specific team members.

12 https://www.microsoft.com/en-us/microsoft-365/blog/2020/04/30/2-years-digital-transformation-2-months
13 https://blogs.windows.com/devices/2021/04/13/introducing-surface-laptop-4-and-new-accessories-for-enhanced-meeting-experiences

Messaging apps

Slack, Microsoft Teams, Glip, Hangouts Chat and many other equivalent apps make it easy for teams to quickly communicate with colleagues, leave group conversations when no longer needed to participate, and find previous messages without having to search through long email threads.

Document distribution tools

Dropbox, Google Drive, Box, Microsoft OneDrive and other alternatives offer simple, reliable file sharing, syncing and storage, enabling employees to upload and transfer files to the cloud, then share them with stakeholders both inside and outside of their organization. These tools also help backup and sync docs, photos, videos and other files to cloud storage.

Visual communication tools

CloudApp, Loom, Camtasia and other apps enable teams to share curated screen recordings, with optional webcam functionality – employees can annotate screenshots to share on-screen training or process clips, to quickly get their points across in an asynchronous, but personalized manner.

Print and document management infrastructure

As businesses adapt to hybrid working with teams split between the office and working remotely, so too must their print and document management infrastructure evolve. Remote and flexible working demands controlled, managed printing, and document management. The implementation of managed print services and document management systems will help organizations successfully ensure business continuity – even with a distributed workforce:

Document management systems

These solutions can substantially help in the transition to hybrid working. Digitizing files with electronic document management enables teams to access documents anytime, anywhere – securely. It makes sharing and collaborating much easier between co-workers. By enabling several employees to work together on the same document at once, a document management system allows for work to be accessed in real-time from any location.

Multifunctional devices (MFDs)

MFDs offer state-of-the-art scanning technology to digitize information, and make it easily accessible to others. These devices can efficiently scan mixed media, use intelligent Object Character Recognition (OCR) technology and machine learning (ML) to identify, then categorize company documents – automatically making recommendations for saving documents in designated destinations based on rules set by the user. MFDs offer seamless integration with business software for print and scan workflows – making it easier than ever to print and scan documents straight to cloud storage destinations.

Print management software

Utilizing print management software alongside MFDs can remove risks related to who has access and visibility of what is being printed, and also reduce

print waste. Documents sent to print can only be released from a secure print queue after a valid identity card is presented. The software also provides organizations with insight and analysis of where, how and who is printing – enabling them to audit and forecast for future print costs.

Desktop printer solutions

A desktop printer in a home office can be supported and managed alongside company printers, resulting in consistent processes and workflows and potentially saving time, effort, and costs for businesses.

Smart print workflows

Workflows ensure print jobs are routed to specific devices. For example, if there's a company meeting, all the documents that'll be required in the meeting could be routed to the device in the meeting room – ready for when everyone arrives. Or, if a high-quality poster needs printing, the marketing team can work on it remotely and then direct it to the central print room at the main office to be printed.

Secure data storage and management

For hybrid working to be successful, data and information must always be accessible – it can't be forgotten at home, or left in the office. Therefore, as your organization takes the next steps to transform and grow with the changing workplace, you may consider migrating services to the cloud.

> *"Moving to the cloud makes it easier for employees to collaborate and save their work in a centralized location, irrespective of where they are."*

The ability to access, manage and work with company data and documents is critical for all employees – whether they're working in the office, at home, in a co-working space, or from any other location. Moving to the cloud makes it easier for employees to collaborate and save their work in a centralized location, irrespective of where they are. Cloud storage enables employees to stay productive from wherever they choose to work – while keeping organizational data secure.

Cloud storage offers greater accessibility and, potentially, improved performance. It's at least as secure as on-premise solutions, and can deliver built-in compliance for many regulatory requirements, including Health Insurance Portability and Accountability Act (HIPAA) and Payment Card Industry Data Security Standard (PCI DSS).

With cloud document storage, co-located, remote, and hybrid workers can quickly search and share files, apply reliable version control, and mostly, get their work done without wasting any time. Other benefits include integration with other cloud applications, business analytics, and AI services, integration with SaaS productivity, messaging and collaboration applications, and the availability of multiple storage tiers and price points.

Ensuring always-on access to applications

Uptime is essential to be able to work from anywhere, and with hybrid working, organizations need to be able to guarantee uptime for their employees to work from anywhere. If systems fail, there's almost nothing that can be done to immediately resolve the issue. Another big consideration is usability – ensuring that systems aren't just working, but working efficiently. What would

> *If you're considering hybrid working as a long-term solution, determine whether existing business systems are resilient enough to introduce new ways of working.*

happen if your IT systems and applications were super slow due to everyone being connected to the same server? Organizations need their networks to run smoothly, while being easy to manage. Scalability is another important factor – it's great that your systems are up and running for the current workforce, but what happens in five years when the organization doubles in size? Adding more servers should be seamless process that doesn't impact existing users.

Load balancers are IT infrastructure solutions, available as hardware or software, that ensure optimal performance of systems and applications. Also known as Application Delivery Controllers (ADCs) load balancers ensure that your users' connections are spread between multiple backend servers, rather than a single server – reducing the chances of server overload, and enabling IT teams to scale backend servers for future growth. This helps minimize costly downtime, ensuring employees continue to access business systems uninterrupted.

In scenarios where organizations require users from certain subnets to connect to one data center, and users from another subnet to connect to a different data center, the topology feature in Global Server Load Balancing (GSLB) is an elegant solution. GSLB and can also help form part of a disaster recovery plan – during a potential downtime event, it can be used to ensure failover between separate locations. If one data center has a failure, the other data center will automatically take over, ensuring users can continue accessing services, while the core issues are resolved. If you're considering hybrid working as a long-term solution, ask yourself whether your existing business systems are resilient enough to introduce new ways of working – if not, load balancing delivers a simple solution for guaranteed uptime.

The time to evolve is now

The way we work has shifted – possibly forever. And regardless of the industry you're in, a hybrid future beckons: a mix of office and home-based working. Most organizations will hope that this approach enables employees to do focused work remotely, cut down commuting time, and achieve a better work-life balance. In turn, offices will become a destination for innovation, collaboration, coaching, networking, and socializing. But to ensure a healthy transition to hybrid working and establish it as a permanent solution, business leaders must remember that there is no one-size-fits-all method. The shift will involve a considerable amount of evaluation and learning. Organizations need robust technological backbones that can handle the various needs of employees working in different spaces.

They also need to establish the technical foundations of security and connectivity, ensuring that network bandwidth and cloud applications can handle in-office and remote loads – without forgetting the needs of the workforce (and future workforce) in the process. Many executives say that their hybrid work model won't be ready until 202214 – but once organizations are set up for work's new normal, maybe we'll look back and wonder 'why we didn't do this sooner?'

14 https://www.computerweekly.com/news/252498968/Over-a-quarter-of-C-suites-say-their-hybrid-work-model-wont-be-ready-until-2022

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