HYBRID WORK

Optimizing Network Infrastructure for the Distributed Enterprise

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WHITE PAPER

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Although companies had no choice but to enable Work From Home (WFH) as part of pandemic lockdown orders, many businesses are apprehensive about adopting a fully-remote workforce for the long haul. Despite recognizing the benefits of giving employees greater flexibility when it comes to where they get the job done, there are functional and technical barriers to overcome before many executives will be comfortable giving employees full workplace agency.

When workers say they want flexibility, however, they mean it: Almost 40 percent of adults polled by Bloomberg in Spring 2021 say they would quit if their employer took away remote work privileges.

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It's an even stronger sentiment among Millennials and Gen Z (the youngest cohorts of the adult workforce), as almost half would leave their job if their employer backtracked on worker flexibility. That's because many remote teams proved more than capable of staying productive from home when the world locked down.

Fortunately, enterprise decision makers aren't turning a blind eye to remote work, and understand that offering a hybrid work policy will be table stakes in attracting new talent going forward. According to a January 2021 PwC Pulse survey of 133 executives, for instance, fewer than one in five said they want to go back to pre-pandemic routines.

INTRODUCTION

However, only 13 percent of those same execs were prepared to let go of the office for good.

Of course, offering hybrid or Work-From-Anywhere (WFA) flexibility isn't an all-or-nothing indictment on the office. And many tech companies are blazing a trail to hybrid work that other businesses may be wise to follow. Google CEO Sundar Pichai, for instance, offered a three-day, in-office work week to up to 60 percent of employees when mapping out his company's post-pandemic path to the office.

And there are still roles that will continue to be office-based indefinitely, while most workers still want to collaborate in person in some capacity, even if their role is primarily WFH.

In this context, supporting hybrid work actually calls for enterprises to expand their idea of the enterprise footprint to mirror that of the network infrastructure supporting remote work.

Top remote work gripes during the pandemic included:

44%
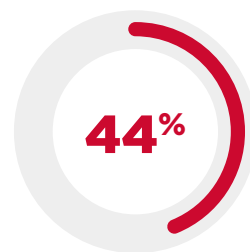
Internet Connectivity
of respondents expressing their frustration

40%

Freezing Screens and Apps
identified freezing screens and challenges with popular tools such as Zoom

33%

Technology Challenges
shared they're frustrated by technology challenges and experiences with their employer's IT team—21% of respondents acknowledged that the IT team may be doing their best in the circumstances

RETHINK THE "OFFICE" FOOTPRINT"

Historically, enterprise network management was centered around the physical real estate (and associated network connections) that the enterprise owned and controlled; specifically, remote offices and HQ.

With eyes on the locations and assets that the majority of workers leveraged in a traditional 9-to-5, office-first setting, managing end-user experience wasn't easy, but was relatively predictable. After all, the majority of team members were leveraging the same access to commercial-grade Internet across a carefully planned wired or wireless LAN when they shared the same office network, making it fairly straightforward to understand when performance issues were the fault of the network delivering applications to workers, or flaws with the applications/providers themselves.

In a WFH setting, this predictability gets completely thrown by the wayside, as users are now leveraging their own unique, perhaps far-flung or insuffiecient connections to access apps and workflows across a potential litany of network hops.

Remote Network   Last-mile ISP   Transit – Backbone   Cloud/SaaS Infrastructure
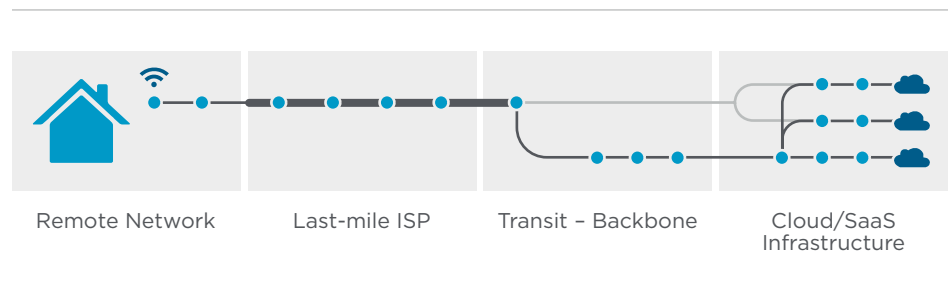
In the past, when users reported pain it was limited to a branch or application being down, and the time to resolution (and IT's understanding of performance against a baseline) was a lot more clear. Basically, IT's ability to baseline what experience should be was easier.

Now, it's a death by 1000 cuts scenario.

The one-to-one ratio of issue to end user forces IT to scale their management scope by an order of magnitude compared to the old days: It's far more impactful to resolve an issue plaguing hundreds of users from one office than it is to serve hundreds of unique issues across hundreds of residential workstations. The management scope goes from 1 task serving a broad user base to each IT activity almost happening in a silo.
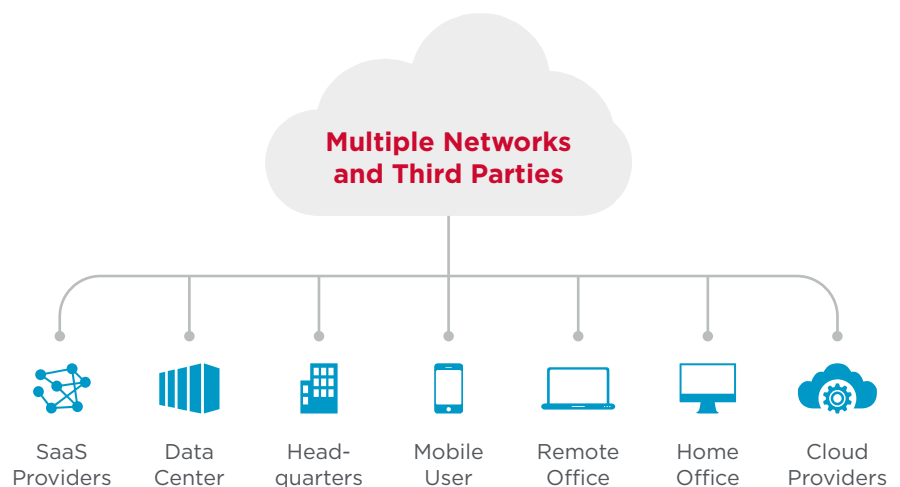
This new way of visualizing the network for remote work, however daunting, needs to be applied to the main office in the context of hybrid work to eventually get a handle of holistic network performance.

RETHINK THE "OFFICE" FOOTPRINT"

When workers have the freedom to travel between offices and home (and potentially anywhere in between), IT needs to start fresh with their thinking and deploy solutions that can deliver an end-user specific understanding of app and network performance. While monitoring performance at the remote office or HQ isn't taking a backseat, per se, those locations no longer represent the primary stakeholders in a hybrid work setting; end-users do.

On its face, approaching app and network management on a per-user basis may seem daunting for IT, or sound like something that's simply out of scale for the staff and toolkit most enterprise teams have on hand. But gleaning insights into end-user experience doesn't have to come at the expense of network capacity, or add another layer of complexity to an increasingly complex network management system.

Rather, with per-user insight in hand, teams can start gaining a better understanding of chronic or trending performance issues, the overall performance of specific teams (or even geographic regions), and, at the highest level, a true understanding of organization-wide performance that can be sliced and diced to address any number of issues.

Multiple Networks and Third Parties

| SaaS Providers | Data Center | Head-quarters | Mobile User | Remote Office | Home Office | Cloud Providers |

ORCHESTRATE AN ECOSYSTEM OF VISIBILITY

Teams need to leverage solutions that can help them flex their capabilities, not overcomplicate their management workflow when they're already overwhelmed. This means gaining comprehensive network and end user insights without calling for a patchwork of solutions to tie it all together.

This single solution should readily offer teams visibility into the tools that all workers are leveraging at any time or location so that going forward, IT can identify poorly performing apps that may be hindering performance beyond the traditional network.

All of this isn't to say IT can abandon visibility into the office, data center, or any physical locations as teams adopt a per-user management posture.

For general performance, IT teams need to continue leveraging the office as a "gold standard," as it provides an environment that has been fine-tuned over time to handle high volumes of users and traffic: It's repeatable, it's consistent and it's hands on.

But the office is changing, so IT needs to be cognizant of that. While the office is the 'control environment,' IT still needs more sources of data to get a complete picture of performance from the end-user perspective.

In a hybrid work world, IT requires solutions that can pull together an ecosystem of data to deliver this end-user image, including:

- The ability to proactively isolate end-user-impacting issues to either the network or app
- Cost-effective scalability to cover the enterprise and networks from the 10-100 Gbps data center down to a residential office of one
- In the world of SaaS, performance insight into 3rd party internet connections and cloud services—even from home WiFi
- Seamless integration into existing operational processes and workflows.

GAIN COMPREHENSIVE VISIBILITY WITHOUT NETWORK OVERHEAD

AppNeta by Broadcom Software conducts high-frequency testing to ensure that teams have a near real-time idea of network performance, allowing them to address performance issues quickly and avoid unnecessary project derailments. This goes far beyond just extending visibility into residential workstations, as teams will need to be able to zero in on the performance of any app, for any user, at any time, and from any location to meet the demands of the future of work.

With the deployment of flexible, cloud-based native Workstation Monitoring Points out to end-user devices, AppNeta arms enterprise IT with visibility into the service delivery chain, third-party networks, and last-mile transmission connecting their remote employees to the core network. Along with the ability to more quickly address remote user complaints, this insight also helps IT teams identify when wireless and residential Internet connections are causing connectivity issues instead of network-wide outages.

With AppNeta, IT can establish real-time monitoring out to relevant users/locations—Including cloud environments where apps live— to broaden understanding of actual end-user experience. This includes outside-in monitoring from the end-user perspective into cloud environments to visualize the path between these locations, including the new remote error domains that multiply the footprint for performance degradation.

To learn more about how AppNeta can help your organization scale network visibility for the future of hybrid work, schedule a demo today.

About Us

For more information, visit our website at: software.broadcom.com