The New Normals of Network Operations in 2020

KENTIK SURVEY REPORT

kentik®

Overview

For the past several decades, networks have increasingly become a critical part of business operations. The 2020 global pandemic only intensified the importance of networking, with more companies and individuals taking their worlds almost entirely online. This shift also put the spotlight on the need for 24/7, always-on network connectivity.

Behind the scenes, the network teams that run the sites, services, and applications that keep us all connected have a huge responsibility on their hands. While maintaining highly performant, reliable, and secure networks, these teams have also faced new and unprecedented challenges, including everything from supply chain delays and network capacity concerns to the complexities of work/life balance amid work-from-home orders.

To understand the new normals of network operations in 2020, Kentik® surveyed 220 network professionals. Our goal for the survey was to surface new challenges and opportunities for network teams in order for our community to ensure we're working together to continue to keep the world connected.

Methodology

Kentik conducted its survey online, receiving input from 220 respondents across the globe who consider themselves to be a "networking professional." A majority of survey respondents (55%) reported working at large companies of more than 1,000 employees. Twenty-two percent (22%) work in a medium-sized company with 100-999 employees. Twenty-three percent (23%) work at small companies with fewer than 100 employees. For the purpose of this research, we split the respondents into two groups depending on company size: 55% of respondents are from enterprise companies and 45% of respondents are from small- and medium-sized businesses (SMBs).

Summary of Findings

- **Productivity levels vary.** The largest proportion of networkers (47%) reported feeling "more productive" while working from home during the COVID-19 pandemic, compared to pre-pandemic times. However, 20% reported feeling "less productive." Thirty-three percent (33%) said they have had "no change in productivity."
- **Network-capacity shortages cause concern.** Sixty-five percent (65%) of networking professionals reported feeling "extremely concerned" or "somewhat concerned" about their organization's network capacity during the pandemic.
- **Internet infrastructure supply chain delays are on the rise.** While 28% of network professionals said they do not see any supply chain delays for their network infrastructure as a result of COVID-19, 72% of respondents reported that they are experiencing delays anywhere from one week to more than two months.

- **Cloud reliance is not as widespread as it seems.** There's no mistaking that the cloud is in high demand. However, despite reports of increased cloud bursting to give networks more capacity, the majority of respondents (54%) said that their organizations have not increased their reliance on the cloud during the global pandemic. This could indicate usage of and a trend toward hybrid infrastructure.
- **Network budgets remain intact.** Forty percent (40%) of respondents said their networking budgets had not changed due to economic uncertainties caused by the pandemic. In fact, for 36% of respondents, budgets had either significantly or somewhat increased.
- **Work/life balance is a top networking challenge.** Over half of respondents (51%) expressed concern for their work/life balance. This is likely, in part, due to the increased pressure that work-from-home and shelter-in-place policies have put on networkers to maintain network performance and reliability.

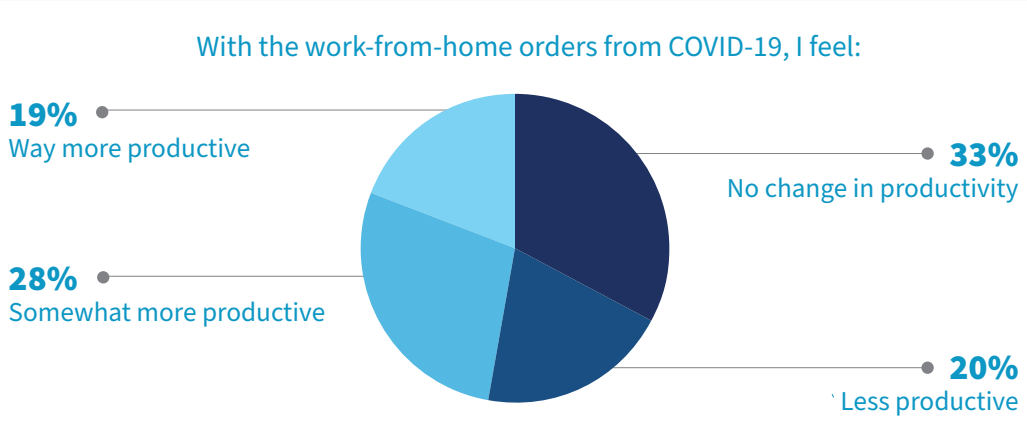
In the sections to follow, we discuss each of the key findings in more detail.

Productivity Levels Vary

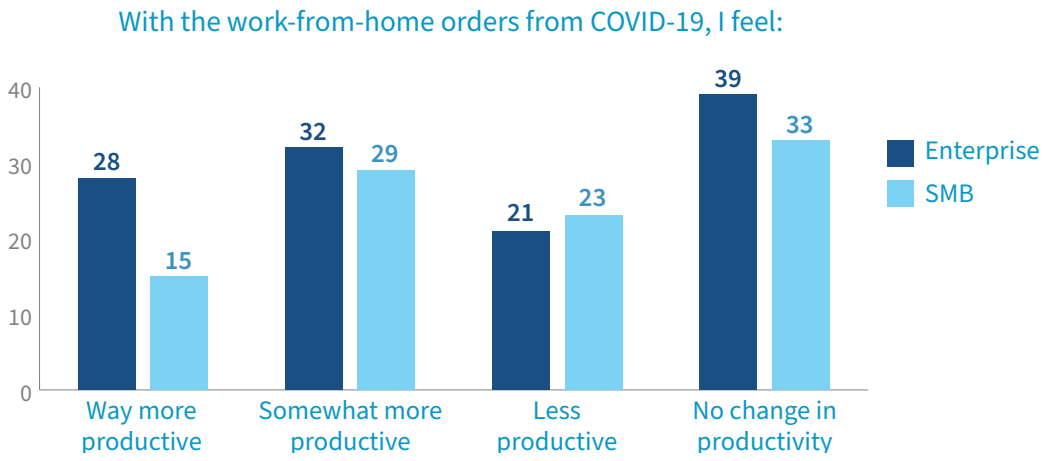
As a result of recent work-from-home policies, large companies like Apple, Facebook, and Twitter are now considering permanent changes to previous expectations that employees must be in an office to effectively get work done. While some of these decisions may be attributed to cost savings for less office space, some of the decisions may also be due to the high productivity levels these companies are seeing from their employees amid the work-from-home orders.

To the latter point, when we asked networkers about their own productivity levels, the largest proportion (47%) said they currently feel more productive while working from home. That includes a group of networking professionals (19%), who said they feel "way more productive."

On the contrary, one in five networking professionals (20%) reported feeling less productive during work-from-home orders. Another 33% of respondents said that their productivity has not changed while working from home.



When reviewing the results by company size, one of the most noticeable differences was that almost one in four (23%) networking professionals at enterprises reported feeling way more productive at home, compared to 15% of small and medium-sized businesses (SMBs) networkers.



Note: Chart depicts number of responses for each option, not percentages.
"Enterprise" denotes more than 1,000 employees; "SMB" denotes less than 1,000.

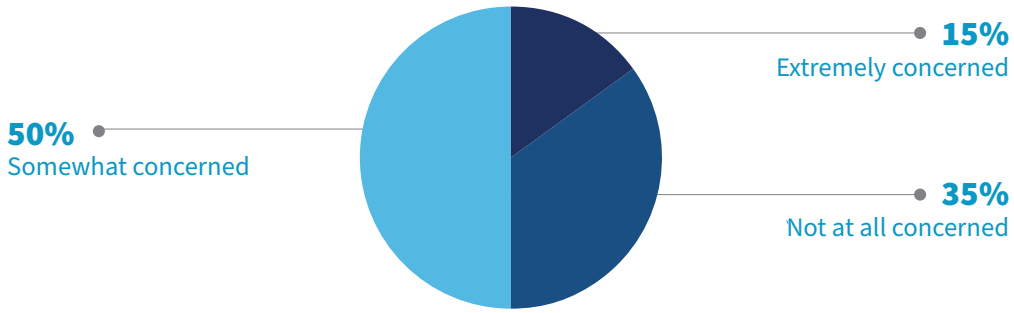
Network Capacity Concerns

There have been many uncertainties with the global pandemic, but one thing is clear: The internet has performed amazingly well and just as it was built to do. While there have been reports of short-term outages in certain regions and performance slow-downs from time to time, for the most part, users across the globe have been able to work, watch, download, listen, and do much of what they want to do online during COVID-19 and its corresponding shelter-in-place orders.

Behind the internet's success are many network teams and even larger amounts of network capacity that enable us all to stay connected. Even before the pandemic, it was typical for network teams to provision more than enough network capacity for their businesses' needs. This helps in the event of things like major company news developments, DDoS attacks, or other unanticipated events that can create huge spikes in traffic for a business and can result in delays or outages throughout a network.

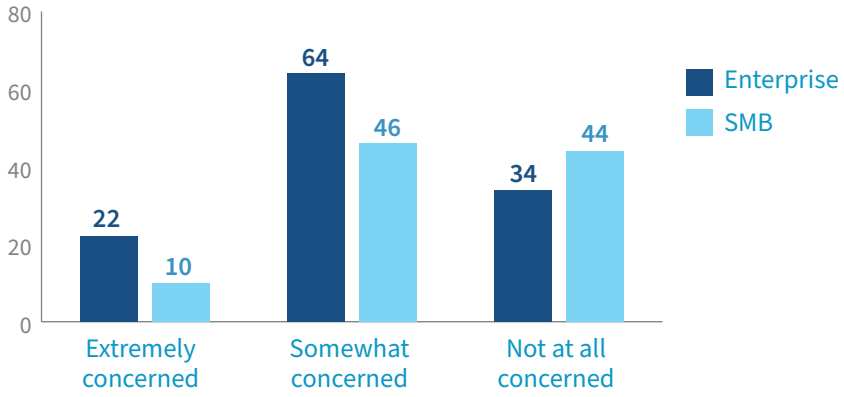
However, adding network capacity is not as easy as just placing an order. It requires more data center space, more cages, racks, servers, routers, etc., and as part of that, labor via field technicians who need to physically go to data center sites to build out the capacity. That is why we wanted to understand if network professionals are concerned about a shortage in network capacity — and 65% of our survey respondents expressed concern.

How concerned is your organization about a shortage in network capacity during COVID-19?



When looking at the numbers by company size, 71% of enterprise networkers expressed concern for network-capacity shortages. This is compared to 56% of SMB respondents. We believe more enterprise networkers may have expressed their concerns because many enterprises are working with multiple technology vendors, which can take longer to make system and service changes.

How concerned is your organization about a shortage in network capacity during COVID-19?



Note: Chart depicts number of responses for each option, not percentages.
"Enterprise" denotes more than 1,000 employees; "SMB" denotes less than 1,000.

Internet Infrastructure Supply Chain Delays

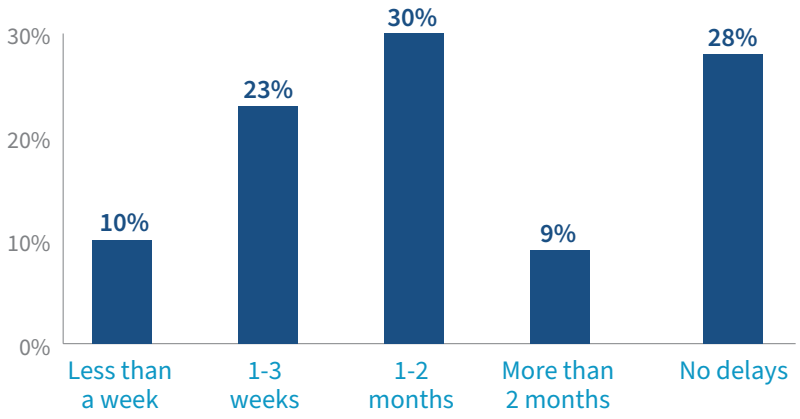
As more people across the globe carry out their work and lives through digital services and applications, more network infrastructure will be required to support them. However, many supply chains include factory-built hardware and software components from around the globe. In many cases, factories and other critical areas of the internet infrastructure supply chain have reduced

production operations or temporarily halted operations to avoid the spread of COVID-19. That is why we wanted to understand whether networking professionals have experienced any supply chain delays.

The good news is that 28% of respondents said they have not seen any networking supply chain delays as a result of COVID-19. However, 72% of respondents reported seeing a delay from anywhere between one week to more than two months. More specifically, 30% said they are seeing delays of one to two months.

Relevant to our previous section on network capacity, it's worth noting that supply chain delays can lead to delays in provisioning new capacity. For service providers, that can slow down the business' ability to meet demand and can impact customer relationships. For enterprises that manage their own hardware, supply chain issues can impact business expansion plans, hinder service improvements, and negatively affect customer experience.

The supply chain to support my network infrastructure has delays due to COVID-19 of:



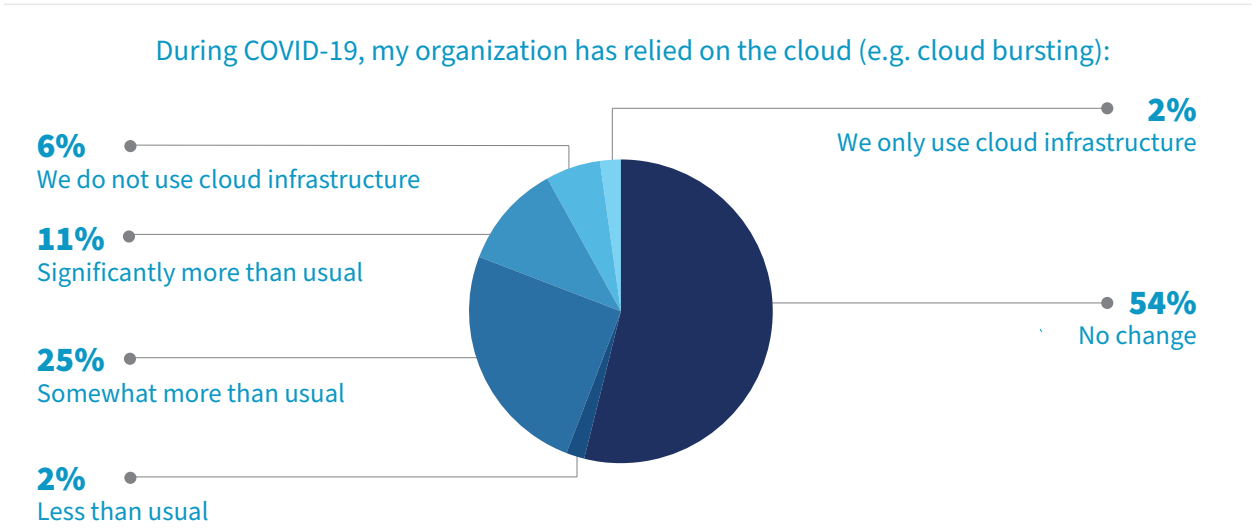
Reliance on the Cloud

The cloud is a critical part of many companies' digital transformation strategies. As applications and services move to the cloud, companies adopt cloud and multi-cloud infrastructure for a number of reasons, ranging from scalability and flexibility to cost efficiencies and high-performance processing. At the same time, we've also heard that many network teams have put more reliance on the cloud to support them during increased traffic spikes amid the pandemic. So, we wanted to know whether or not companies have placed more reliance on the cloud during the pandemic.

The majority of respondents (54%) said their organizations have not changed their reliance on the cloud or cloud services during the global pandemic. This may largely be due to the migration of applications and workloads to the cloud, as well as hybrid IT trends, which enable many network teams to support business continuity, disaster recovery, security and compliance, and much more.

These numbers may also represent the enterprise shift from data centers to the cloud as primary infrastructure. With cloud already being utilized in everyday systems and services, some network teams may not need to rely on it more than they already are.

Eleven percent (11%) did, however, report that they are using the cloud significantly more than usual. Included in the 11% could very likely be a group of organizations that did not rely on the cloud until the pandemic drove employees to remote locations, creating a need for more flexibility of services. It's also worth noting that 6% said their organizations do not use cloud infrastructure. Across the board, these numbers remained consistent even when breaking down the data by company size.

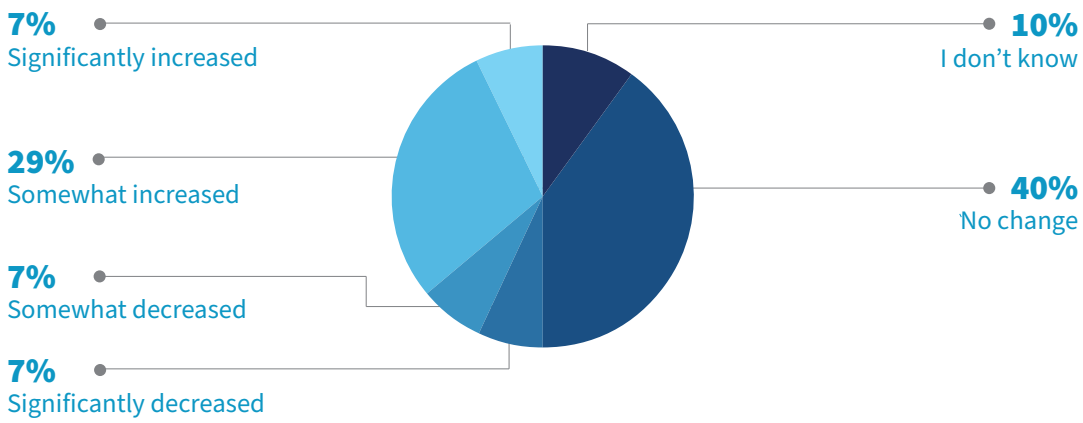


Purchasing Plans for Network Infrastructure and Services

With economic uncertainties associated with the global pandemic, some companies have frozen and, in some cases, cut budgets. However, networks remain the critical systems keeping many businesses moving forward in these times. That's why we asked network professionals if their organizations' purchasing plans for networking infrastructure and services had been impacted by COVID-19.

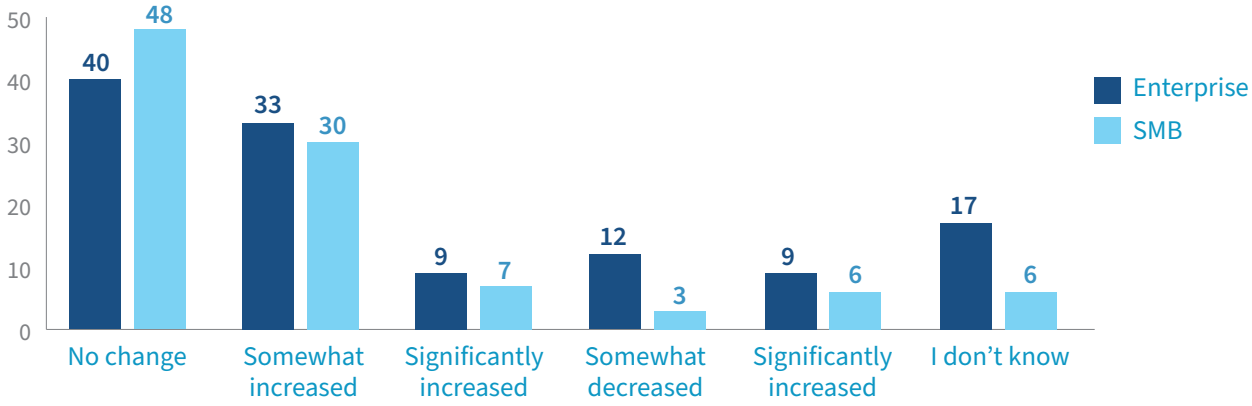
Forty percent (40%) of respondents said their networking budgets have not changed. In fact, for 36% of respondents, budgets have either significantly or somewhat increased. The latter is likely due to topics discussed in other sections, including the need for more network capacity and infrastructure to support increases in traffic. Only 14% of respondents reported either somewhat or significant network budget cuts.

My organization's purchasing plans for networking infrastructure and services due to COVID-19 have:



When looking at the data by company size, findings were similar.

My organization's purchasing plans for networking infrastructure and services due to COVID-19 have:



Note: Chart depicts number of responses for each option, not percentages.
"Enterprise" denotes more than 1,000 employees; "SMB" denotes less than 1,000.

The Biggest Personal and Professional Networking Concerns

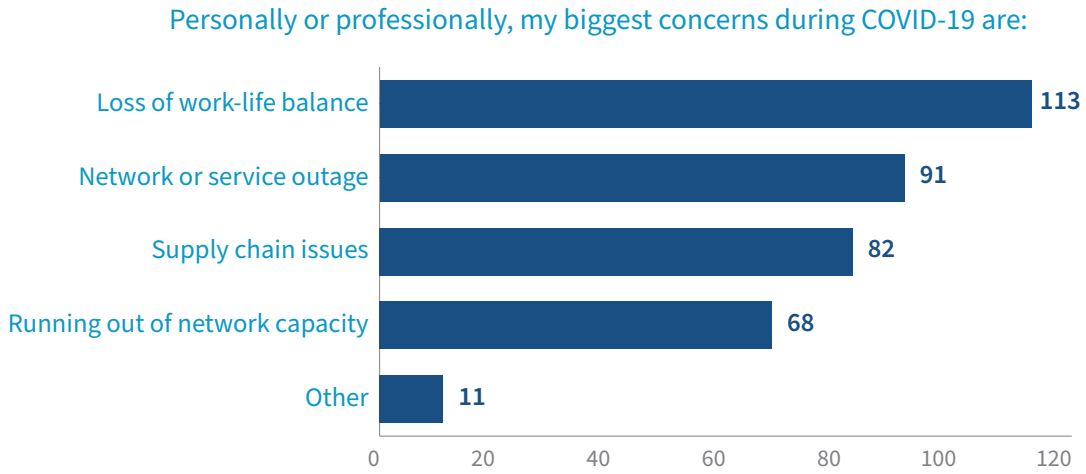
With the increased spotlight that work-from-home and shelter-in-place policies have put on network performance and reliability, our final survey question was to determine how our community is holding up. What are networking professionals' biggest concerns right now?

Loss of work/life balance topped the chart for networkers. A majority of respondents (51%) expressed concern for their work/life balance. When you take your work home and combine that with closures to

restaurants, retailers, and other external places of refuge, it can be difficult for some individuals to step away from professional projects. Not to mention, the added pressures of ensuring always-on networks in unprecedented times can also make it difficult to step away without keeping one eye on what's happening with their work.

Work/life balance was followed by concerns for a network or service outage (41%), supply chain issues (37%), and running out of network capacity (31%).

Some respondents also wrote in additional stressors, including: management of business continuity plans, physical access to data centers, as well as general economic concerns.



Note: Respondents were given the option to select all that apply.
Chart depicts number of responses for each option, not percentages.

Key Takeaway

Networks and the teams managing them are critical, more so than ever before. From these survey findings, we understand that network teams are navigating new challenges both professionally — network capacity shortage concerns and supply chain delays — and personally, with work/life balance and general economic concerns.

Overall, the new normals of network operations in 2020 require agility, flexibility, understanding, and balance — in many more ways than one.

ABOUT KENTIK

Kentik® is the network intelligence platform for the connected world, trusted by leading digital enterprises and service providers. With Kentik, businesses eliminate the visibility and intelligence gaps associated with running dynamic and complex networks, and achieve greater network performance, reliability and security. The Kentik Network Intelligence Platform ingests diverse data streams from the internet, edge, cloud, data center and hybrid infrastructures and provides real-time visualizations and AIOps-powered insights and automation. Learn more at kentik.com.

Products from Kentik have patents pending in the US and elsewhere.

kentik®

Revised 20200615