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12 Networking Considerations for the Post Pandemic Era

Preparing for the #NewNormal

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Introduction

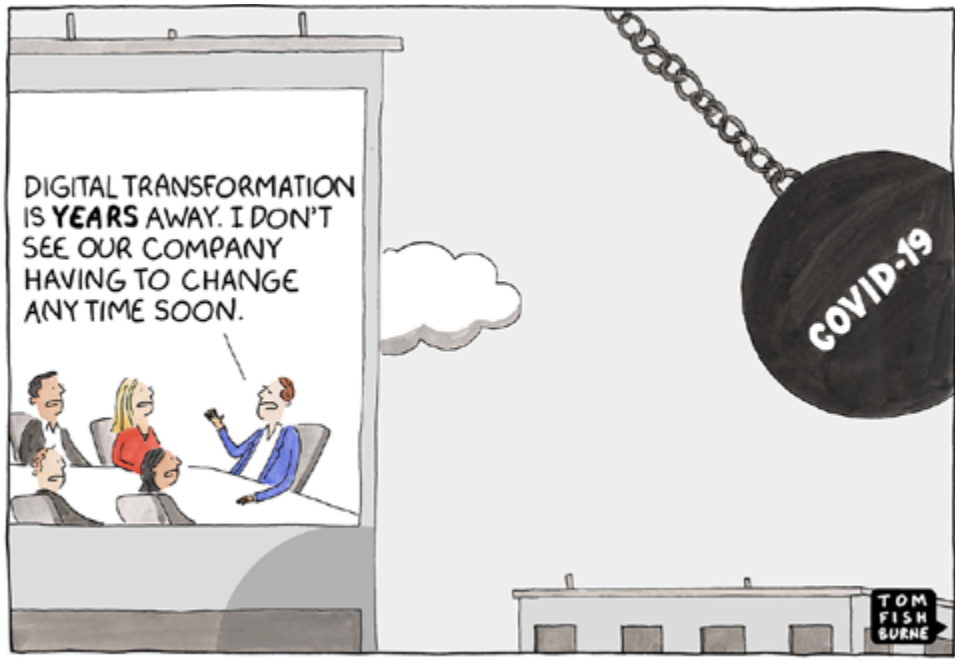
The COVID-19 pandemic has changed our lives. Nations in lock-down, shuttered businesses, billions of children out of school, hospitals over capacity. There is no business, regardless of size or industry, that has not been impacted by the pandemic.

As the primary threat subsides, governments and businesses must determine what is required to get back to some sense of normalcy. There is no one-size-fits-all strategy for the return-to-work phase.

What is clear is we are all entering a #NewNormal, and technology will play a key role in keeping us connected and safe in the future.

At Extreme Networks, we believe progress is achieved when we connect. Our effortless networking experiences can help ensure you stay connected and safe wherever you are – whether in the office or at home. Our flexible, secure network is designed for the needs you have today and the changing circumstances we will all inevitably face tomorrow.

Leverage this Top 12 Networking Considerations eBook to help you prepare your network for the #NewNormal.



Consideration

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Network Assessment

Consideration #1: Network Assessment

Is It Time to Modernize Your Infrastructure?

The impact of the pandemic has been different for every industry. Retailers have struggled with store closures, inventory challenges, and eCommerce. Educators have struggled with online learning and how best to address the digital divide. Healthcare providers have struggled to secure enough beds and supplies; while providing remote care to patients confined to their homes.

As we prepare for a return to the #NewNormal, including more distributed work environments, IT teams should assess what they learned, what worked, what didn't work, and how best to move forward.

- How well did the network perform?
- What, if any, changes should be made? Key considerations should include security, remote access, performance, availability, etc.
- Was the network maximized to its full potential?
- If a second wave occurs, is my network ready? How/where can I modernize?

Recovery requires a change in mindset for most organizations...There needs to be a reset focused on moving forward. Customers are looking to upgrade aged equipment and using the pandemic as a wakeup call to modernize their infrastructure... Some CEOs say they will never be this unprepared again

Gartner

"The response to COVID-19 has focused IT modernization efforts toward network infrastructure agility and scalability"

FCW

Consideration

Agile Work Environments

Consideration #2: Agile Work Environments

Maximize Productivity at Work and Home

The most significant impact of the COVID-19 pandemic was the mass adoption of telecommuting. Many businesses and educators were tasked with setting up remote workplaces or enabling remote learning overnight.

A key lesson learned by IT departments was the importance of remaining flexible and creating agile work environments.

Different users and industries have diverse remote access requirements. For example, a doctor working from home who requires remote access to patient data and scans has greater security and compliance requirements than that of a student accessing Google cloud for remote learning.

Key considerations include:

- Remote Use Case: teleworking, remote learning, remote patient care, etc.
- Bandwidth: how much data does the remote worker need to access.
- Quality of service: what applications need to be supported? E.g. real time video, etc.
- Security: Sensitivity of data; compliance obligations (HIPAA, FIPS, etc.).

"74% of businesses will move at least 5% of their previously on-site workforce to permanently remote positions post-COVID-19."

Gartner Survey

"The ways that contact centers (call centers) operate has been changing drastically in the face of COVID-19, accelerating a number of pre-existing trends. Not just the obvious–Work from Home (WFM)–but a new push for AI and automation and a preference for the cloud."

Forbes

Consideration

Analytics and Insight

Consideration #3: Analytics and Insight

Data Is King in a Post-COVID World

How can retailers, schools and businesses ensure a safe environment for their customers, students and employees?

The answer lies in technology. There is an ever-increasing number of solutions, such as people counting, real-time computer vision, and thermal cameras. All solutions rely on a robust network infrastructure and all have a single common requirement: data.

It is data in its rawest form that provides information - how many users are in a building; where are they going; what is their temperature.

Fortunately, the networking infrastructure that businesses rely on is continually monitoring and recording data associated with users.

IT teams should:

- Recognize that data is king - the ability to collect, analyze, and act on data has never been more important.
- Assess the network data and analytics that your network can provide.
- Ensure adequate data duration/history.

"To stay viable and thrive in this rapidly changing environment, businesses need to be good at anticipating what's next and reacting in real time. Data growth and analytics-driven decision-making are likely to continue proliferating."

Forbes

Consideration

Occupancy Management

Consideration #4: Occupancy Management

Create Safer Workplaces

One area where network data and analytics can help enable safer mobility throughout workplace environments is occupancy management.

Occupancy Management refers to methods used to identify, control and influence the number of users in a workspace and their movement. Occupancy management data can provide insights to management, such as areas that require more frequent cleaning or high occupancy areas where users may congregate.

For example, Wi-Fi enabled location and presence tracking and positioning can support an organization's safe social distancing tools and applications within their facilities.

Businesses should:

- Evaluate how to leverage network presence analytics, location monitoring, building monitoring and Real Time Location Services (RTLS)/Indoor Positioning services to monitor the number and movement of users in workspaces.
- Set triggers based on exceeded thresholds - for example, excessive levels of congregation, volume of traffic over time, no go zones, etc.

"We will not be returning to workplaces as we knew them. Aspects of health surveillance, physical distancing, scheduled occupancy, personal hygiene and pro-active cleaning will need to be implemented and documented for several months. Communication and awareness of these new requirements will be essential to keeping building occupants healthy and safe."

10 Things We've Learned About Covid-19 in Buildings

Consideration

Contact Tracing

Best Practice #5: Contact Tracing

Historical Data Helps Enable Contact Tracing

Contact tracing is viewed as a critical health measure in minimizing the spread of Covid-19. Contact Tracing refers to the ability to identify and track, real-time or historically, the movement of compromised individuals. This tracing may be used to identify where the individual was, who they may have been in contact with and even alert the individual or others via SMS, email, Apps, etc.

While there are different contact tracing applications in the market today - public health and enterprise apps - all are fueled by data.

Networking data, such as MAC address and associated identities of attached smartphones, PCs and tablets connected to the Wi-Fi network, provides valuable insight that can help enable easy identification and tracing of employees, guests or residents. For example, if an individual is identified as COVID positive via testing, data can identify a users' trail or path through the network, and scope of exposure.

IT teams should:

- Evaluate what, if any, tracking data is available on their network.
- Explore whether the data can assist/enhance the efficacy of opt-in contact-tracing apps, such as those by Apple and Google, by providing more concise tracking data.
- Ensure adequate data history - ideally unlimited data duration.

"Businesses may be highly incentivized to put contact tracing apps in place because there's a lot at stake. A workplace COVID-19 outbreak can cause closures, kill clients or employees, reduce profits, interrupt supply chains, or continue community spread that lengthens shelter-in-place closures. There's also the prospect of legal liability or negligence claims."

PWC

Consideration

Business Continuity

Best Practice #6: Business Continuity

Minimize Disruptions to Business Operations

Organizations depend on their business and IT operations to be resilient and the COVID-19 pandemic has put significant pressures on business continuity plans. With many employees including IT working from home, physical access to networking equipment has become challenging.

The crisis has accelerated digital transformation, causing IT to rethink everything from their network architecture, to capacity and security considerations, to WFH enhancements.

With no finite end to the pandemic and uncertainty over the future remaining:

- Business continuity/resiliency plans must be fluid and able to rapidly evolve and respond to emerging needs.
- Business continuity should assume more distributed environments in the future with large scale work at home. New models of redundancy and resiliency will be needed to reflect this new way of working.
- Centralized management and the ability to increase/decrease capacity on demand to address rapid changes.

Business resilience in the face of this crisis will be a competitive advantage. Forrester defines business resilience as "the ability of an organization to deliver on its mission and vision regardless of the crisis or disruption." Companies must recover faster, navigate hybrid work seamlessly, and deliver to customers — hitting these marks while keeping employees and their families as safe as possible"

Forrester

Consideration

IoT Enablement

Consideration #7: IoT Enablement

Secure and Manage the Increase in IoT Devices

The growth of Internet of Things (IoT) devices has only accelerated since the pandemic began. For example, IoT robots are being used to clean, disinfect and deliver medicines in hospitals resulting in reduced virus transmission and better scale for nursing resources. Other use cases include temperature scanners, unique audio monitoring (e.g. excessive coughing), CO2 quality/air quality, and more.

While there are many benefits of IoT, such as optimized operations, safer workplaces, remote control and a wealth of data; there is also increased risk. Every new IoT device that is connected to the Internet opens new attack vectors for cyber-criminals.

As businesses across different industries embrace new devices, a measured and thoughtful approach to IoT adoption is essential:

- Develop enterprise-wide frameworks for IoT procurement, deployment, and monitoring.
- Security must be top of mind. Many low cost IoT devices have minimal security so enterprises must ensure they adequately secure and segment devices to reduce exposure to other parts of the network.

"The COVID-19 pandemic is sure to shake the present technological revolution of its inertia and accelerate the realization of IoT adoption on a truly global scale."

Forbes

"Among the more than 200 known applications for IoT in enterprise settings is its hallmark advantage of minimizing the need for physical, human-machine interaction with an asset. The hundreds of government-mandated lockdowns worldwide only add to the relevance of this feature and demonstrate the critical nature of the IoT."

Forbes

Consideration

Cyber-Security

Consideration #8: Cyber-Security

Protect Your Network and Users

Since the COVID-19 pandemic began, the World Health Organization has reported an increase in cyberattacks. Any change in routine creates new opportunities for hackers and, given the vastly different world we now live in, cyber-criminals are capitalizing on it.

For example, cybercriminals are targeting hospitals with an increased number of ransomware attacks. In education, where teachers increasingly turn to video collaboration solutions to facilitate online learning, there have been reports of Zoombombing. And government agencies have seen an increased number of phishing scams taking advantage of government benefits in response to COVID-19.

Businesses must protect themselves, their employees and customers from cyber-attacks during this time. Key considerations include:

- Get the Basics Right: Security training, patch management, password controls and off-line back-ups.
- Enforce Proper Security Practices: Policy-based access control, network segmentation and isolation, IoT security, etc.
- Continued Vigilance: Do not wait when you see anomalies; early detection and intervention is key.

"Cybersecurity matters more than ever during the coronavirus pandemic"
World Economic Forum

"Nearly 70% of major companies will increase cybersecurity spending post-coronavirus"
Tech Republic

Consideration

Automation

Consideration #9: Automation

Reduce Physical Contact and Increase Efficiencies

The coming months will see an increase in businesses automating processes, as a means to accelerate recovery, protect workplaces and better prepare for future outbreaks.

It is a time when many businesses - from manufacturing to healthcare to retail - are assessing their operations, from production through the supply chain, to better prepare for the future. The pandemic has been a wake-up call for many, highlighting process inadequacies and accelerating digital transformation initiatives.

By implementing automation tools and practices, networks can better withstand the current environment, provide a new level of agility and speed, and reduce costs.

- Review current network automation capabilities: how dynamic is your network? Can it quickly respond to change?
- What repetitive manual processes can be automated to minimize human errors and help keep the network functioning at an optimal level?
- Do you have analytics and insights into performance utilization, security and resource allocation? Consider full automation that removes human intervention with the use of ML/AI that allows the network to adapt as needed based on the analysis of data and information collected in context.

"Increased use of automation has also had an impact by enabling network engineers to quickly manage traffic. Service providers who invested in software-defined networking prior to the coronavirus crisis may have been more responsive to changing traffic patterns than ones that are still using legacy or hybrid networks".

Consideration

10

Data Center

Consideration #10: Data Center

Delivering the 'essential' in essential services

Data Centers are critical cloud infrastructure in a Post-COVID World. The increased demand for SaaS solutions to support more distributed users will only increase demand for data center capacity.

How can Regional Service Providers, Internet Exchange Providers and Mobile Operators ensure continues operation for their customers and employees?

The answer lies in robust, interoperable data center technology that can manage the ever increasing bandwidth demands of working from home, streaming TV and staying in touch with friends and family with voice and video over IP.

Fortunately, fabric networks can deliver the speed, reliability, automation and security needed for a 24x7 operation.

IT teams should:

- Develop a strategy that is based on fabric networks with built-in automation
- Assess which network fabrics allow for multivendor, foundational services

"Data centers have certainly been put to the test during this pandemic and demonstrated that they put "essential" in essential services by successfully delivering the capacity to make working, learning, exercising, grocery shopping, socializing, having doctor's appointments, attending church, and being entertained – all from home – a reality."

Data Center Knowledge


Consideration
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Cloud Networking

Consideration #11: Cloud Networking

The New Network for the #NewNormal

The rapid response to COVID-19 has highlighted the benefit of cloud technology. Not so long ago, such a pandemic would have crippled businesses but today, thanks to the availability of IT resources in the cloud, millions of users were able to seamlessly transition to working from home. The cloud has transformed connectivity between people and businesses on a global scale.

As organizations and IT teams work to implement new ways of learning, working, and living through evolving mobility, IoT, and application dynamics, there is a need for greater network management, agility, control, and data insights — achievable only in today's world with next-generation cloud-driven networking capable of collecting, consuming, and correlating vast amounts of meaningful network data.

- Evaluate your current network architecture – can it centrally manage, orchestrate and support highly dispersed remote and dynamic environments
- Is it AI/ML driven? Can it support the exploding data requirements resulting from emerging IoT?

"COVID-19 shifted the way work is done by most organizations overnight. Companies are now operating in remote environments, with less staff to run key processes, and under immense cost pressure. This has resulted in companies moving more quickly to the cloud, applying more robotics to their processes, and exposing the need for advanced analytic technologies to plan effectively in this environment"

Gartner

Consideration

12

Trusted Advisor

Consideration #12: Trusted Advisor

In times of crisis, who do you depend on?

Is your networking provider your trusted advisor?

During these times of change, as businesses evolve and workspaces are re-imagined and redesigned, look to networking vendors who have the solutions, expertise and experience to help you in your transition.

Key considerations include:

- Ability to offer end to end network infrastructure - from the edge to the data center, including wired, wireless and SD-WAN products
- Cloud-driven solutions, including flexible support for public, private and local deployments
- Open, standard-based architecture
- Strong services and support capabilities, ideally insourced

"Extreme Networks is "hands down" the best complete Networking Solution. From the edge, to the core, to the data center, to customer service."

Network Administrator in the government industry via Gartner Peer Insights for Wired and Wireless LAN Access Infrastructure

Conclusion

Now more than ever, technology is the enabler in helping us advance to the #NewNormal. Whether enabling remote workers, bolstering network security, or helping ensure safe workplaces, the network is the foundation.

At Extreme, we are proud to connect our customers, their customers, and communities. We know that it's not easy to get connected and stay connected, which is why we are helping thousands of organizations, schools, and people adjust to these new times. To ensure they can access the essential tools that they need to continue working, learning, and living.

We help you to create effortless networking experiences no matter where you and your people are.

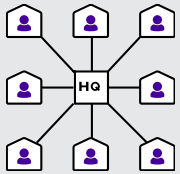
Reach out to Extreme to learn how our industry leading networking solutions can help.

Advance Your Network With Extreme

Trusted Advisor

Extreme can help you adapt to the #NewNormal and connect and protect your people, devices, and data

Agile Solutions

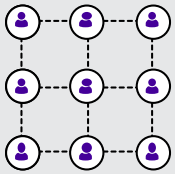


Flexible remote and temporary connectivity solutions support your adapting access needs

AI/ML Driven Insights

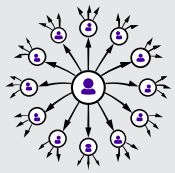
Collect, consume, and correlate >6PB of network data insights per day

Location and Analytics



Cloud-driven network analytics enable location and presence tracking, to support occupancy management

Unlimited Data Duration



Unlimited live and historical data insights (longest in the industry) help support contact tracing

Business Continuity

100% Uptime of ExtremeCloud IQ and Extreme fabric-based, data center solutions keep your business running

IoT Onboarding

Confidently incorporate IoT devices in to your network with secure onboarding and visibility

Comprehensive Security

Comprehensive user, network, IoT and cloud Security - only vendor ISO27001 cloud certified

Automation

Automate your processes and services, reduce risk, and minimize staff exposure

Gen 4 Cloud Network

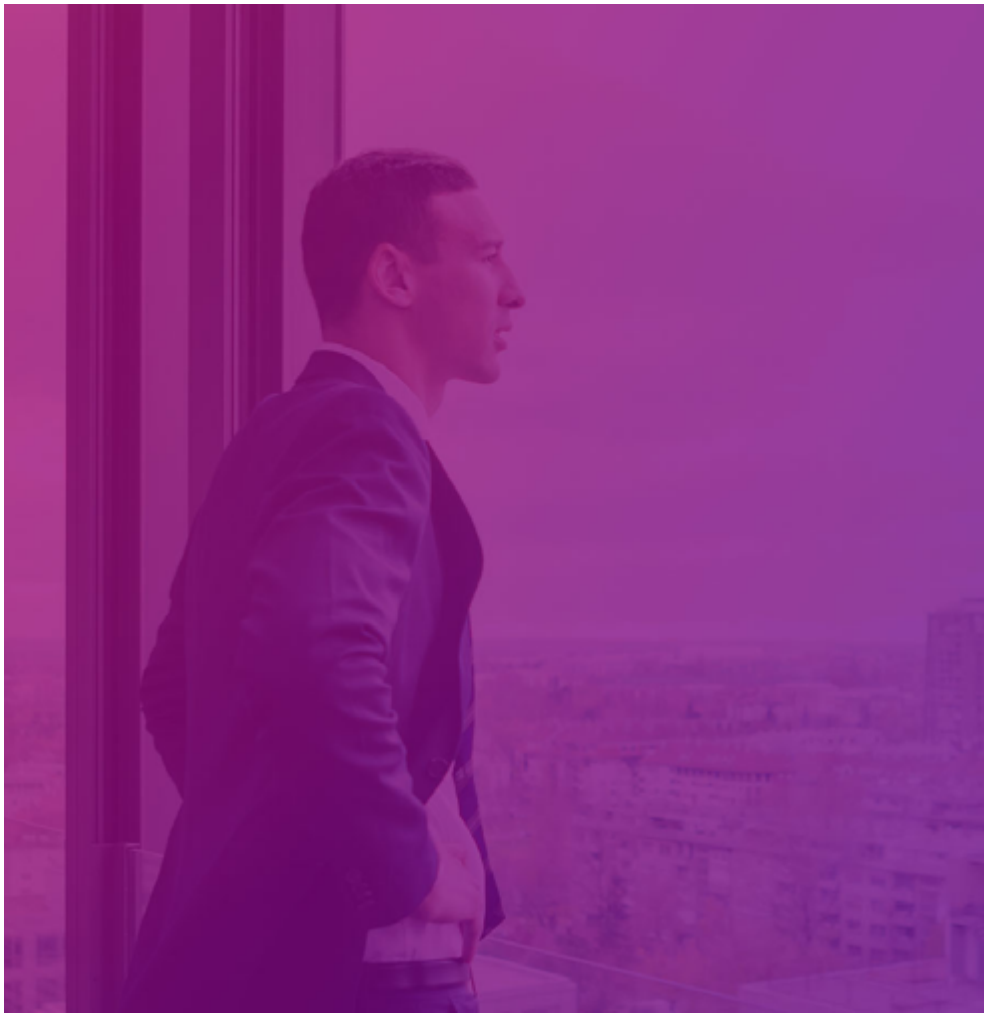
Delivers flexible management, greater agility, control, and data insight

Learn How Your Peers Are Adapting to the #New Normal

Hear first-hand how IT leaders in Healthcare, Education and Hospitality are preparing their organizations for success in a changed world:

- What the future of healthcare looks like for West Suffolk NHS Foundation in the U.K.
- The steps the University of North Carolina is taking to prepare for a safe, on-campus learning environment for students and faculty.
- The Kraft Group's plans to extend the fan experience from the stadium to the home.

Register to listen to the playback



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