How SD-WAN, SASE, and NaaS Are Changing the Networking Technologies Game in 2021

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While the move towards remote employment and cloud collaboration has been in the works for years, the events of 2020 helped jumpstart the shift for many businesses. With no choice but to adapt to the restrictions and overwhelming health threats, businesses were forced to make tough decisions about moving forward in the face of the COVID-19 pandemic.

For many, that meant quickly adopting new technologies to minimize interruptions to operations. Now that things are slowly returning to normal, the need for more sustainable, dependable technology and software solutions is clear.

In this guide, we'll cover the trends in networking technologies that you need to know in 2021 if you want to ensure your business is properly prepared for the move to remote, geo-distanced, and cloud-collaborative operations.

MEETING THE CHALLENGE OF THE REMOTE-WORK SURGE

COVID-19 drove businesses in nearly every industry to allow at least a portion of their employees to begin working from home. But even as vaccines roll out and restrictions are lifted, many companies are opting to keep at least part of their workforce remote for the foreseeable future. In fact, 80 percent of company leaders report planning to allow their employees to work remotely at least part of the time, even after COVID-19 restrictions have fully lifted.

When the pandemic first began its spread, many businesses rushed to accommodate a sudden influx of remote employees and cloud-based operations. As a result, they utilized tools that were fast, easy to use, and accessible – but not necessarily the right fit. Now, as companies have a chance to evaluate their operations, many will be looking to improve their approach to allowing employees to work from anywhere.

For instance, many businesses opted for VPNs to add a layer of protection to their employees, their clients, and themselves. In fact, some companies, such as Cisco, offered free or low-cost VPN client licenses to help support sudden and heavy demand.

While VPNs were a quick and obvious solution during the sudden influx of remote work following COVID-19, they aren't necessarily a long-term solution for most businesses. Already, increased traffic on these VPNs has become a serious problem.

SD-WAN combined with SASE (secure access service edge) offers a secure, effective solution. SASE allows IT departments to add a variety of security services, including next-generation firewall, data loss protection, cloud access security broker functionality, and more. It's also a scalable solution in that companies can instantly turn on additional SASE services to accommodate a sudden influx of remote workers. Because there's no need to purchase additional VPN concentrators and licenses, costs are also lowered.

CONNECTING WITH GEO-DISPERSED EMPLOYEES AND MULTIPLE SITES

Another challenge facing both companies with a heavy remote workforce and those operating multiple branches in different locations is controlling internet connections and security features at all locations and providing for communication and collaboration between teams, regardless of where they are located.

With NaaS (network as a service), businesses no longer have to rely on traditional technology infrastructure for their internet and other services. NaaS enables businesses to outsource their network functions, including SD-WAN.

While still a growing technology, NaaS is increasing in popularity as businesses look to expand their operations without having to expand their infrastructure. Companies can pay for the services they need on a subscription basis that allows for easy scaling and onboarding of new team members, whether remote or working from any of a business's locations. IT departments can control WiFi, SD-WAN, and security features, and employees can access networking and the shared cloud from anywhere. This makes NaaS technology an

ideal solution for businesses that need to connect geo-dispersed employees.

MAKING THE MOVE TO THE CLOUD

Cloud-based operations have been the norm in nearly every industry for a number of years now. But while the benefits of moving operations to the cloud are clear, the challenges in doing so, as well as the increased security threats, make it a sensitive, often difficult transition for businesses.

With employees working from various locations and different enterprise locations utilizing disparate technology, software, and network providers, bringing operations together in the cloud – and migrating data without losing any vital pieces – is key. Making that move without interrupting your business operations for a lengthy period is even harder. Outsourced networking technologies allow businesses to bring these services together in a single source that's easier to manage – and upgrade as the business grows.

IOT CONTINUES TO PRESENT UNIQUE SECURITY THREATS

The internet of things (IoT) has made our lives, as well as our work, easier in a variety of ways. But for businesses, an influx of "smart" technology can wind up doing more harm than good – especially if care isn't taken to ensure security at every point.

From printers and scanners to security cameras and even cash registers, there is no shortage of internet-connected and cloud-connected devices all operating within a business's network. If the same network these devices are connecting to also connects to sensitive business or customer data, the threat of a hack becomes very real.

Many IoT devices are susceptible to security threats. Any devices that gather data on users, connect to a network, or even connect to a complex network of other smart devices are at risk of hacks or other cyber attacks. In fact, even seemingly "safe" devices, like smart coffee machines, are being found to pose a security risk in business settings.

Does this mean that businesses should abandon the use of any and all smart devices? Not necessarily. But it does mean that taking extra precautions and safeguarding your network security becomes a top priority.

New WAN edge technology allows businesses to keep their information safe without having to say no to IoT devices. This new technology implements granular segmentation based on an individual device identification process. That way, devices only have access to the connection that they must have to operate, and don't have access to any areas that they shouldn't. This allows enterprise businesses to reap the benefits of IoT devices, whether those benefits are streamlining work operations or just making your employees' workdays more enjoyable, without putting the safety and security of their business or their employees at risk.

AUTOMATION IS ADVANCING

Automation is another tech trend that has made its way into nearly every industry. For enterprises, automation is helping to streamline application management, manage threat analysis, and even automate diagnostics in order to make an entire network run more smoothly – all with minimal need for input from IT departments. IT professionals can check in on diagnostic warnings without a need to oversee every step of the process, and without overlooking real threats and other problems.

Implementing automation once meant taking a hands-off approach to the management of a network and its systems. But with today's automation, that's no longer the case. Network engineers are now able to let the network "drive itself" in a variety of ways, giving them more time to focus on the growth of their business rather than spending time on routine day-to-day tasks.

Along the same lines as automation, AI technology is also giving network engineers and employees the ability to off-

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load routine tasks and responsibilities. From responding to common client questions to fielding and sorting new leads, AI gives businesses a way to manage their current employees' workloads without the need to bring on new team members. While saving the expense of expanding your employee base is always a positive, the chance to avoid adding to a complex, remote-team environment is yet another benefit in today's world.
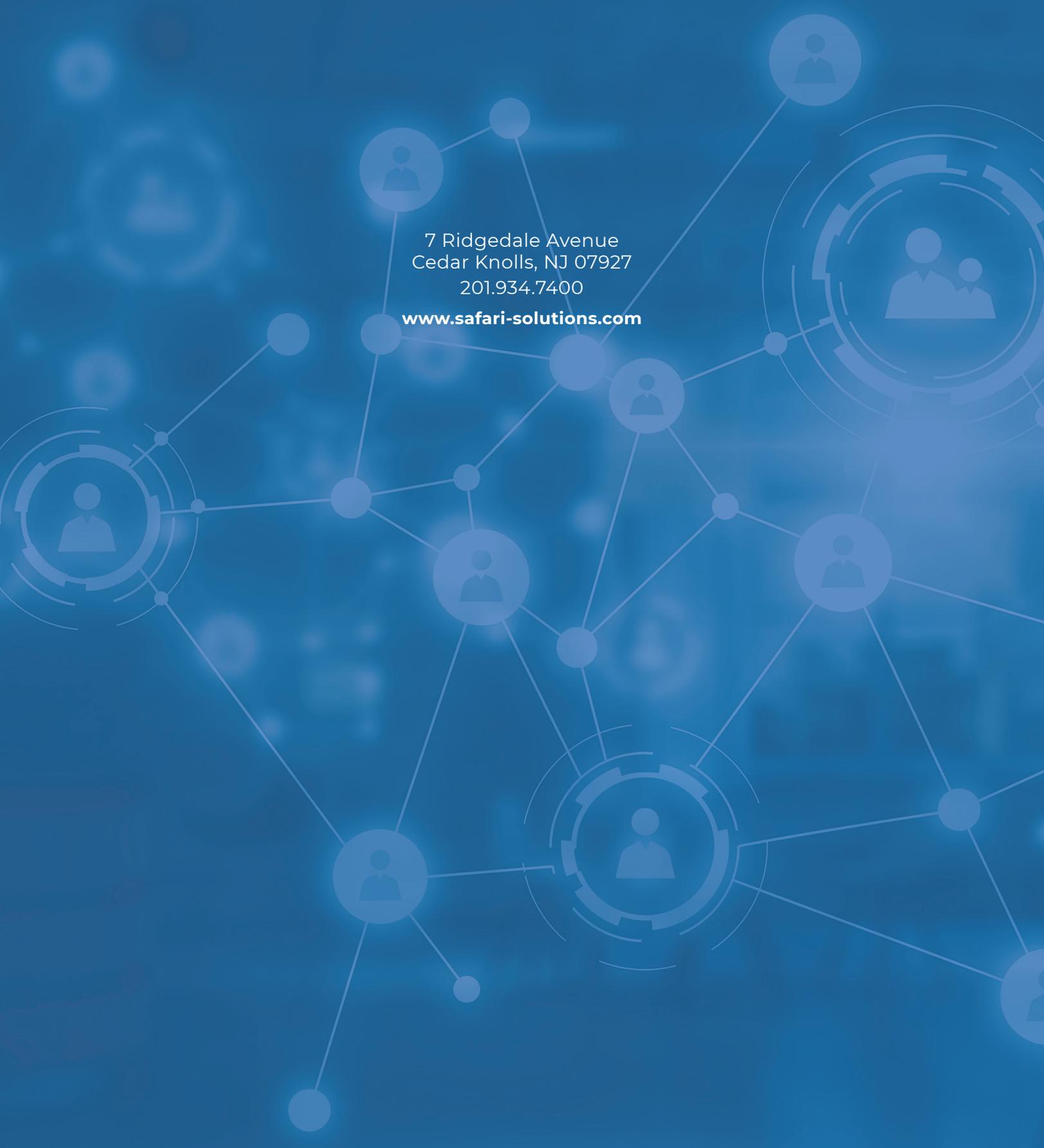
ENTERPRISE SOFTWARES ARE MERGING

With increased demand and dependence on the latest enterprise software, many are now coming together and combining in order to offer unified, streamlined solutions for businesses. For instance, SD-Branch has already unified a variety of popular software, including SD-LAN, SD-WAN, and branch security. Going forward, it's likely that mergers like this will continue as businesses continuously look for solutions that allow them to simplify their operations while simultaneously expanding their ability to operate from anywhere, without sacrificing speed, efficiency, or security.

KEEPING UP WITH THE LATEST NETWORK TECHNOLOGY ADVANCES

With an influx of people working from home and higher demand on enterprise networks and technology, 2021 is poised to be a year of experimentation, trial and error, and advancements. Keeping up with the latest technology trends, including SD-WAN, SASE, and NaaS, will allow you to implement changes that will benefit your company.

A continued merger of enterprise software, the advancement and widespread adoption of AI and automation, the adaptation to security threats brought on by IoT devices, the move to cloud-based operations, and the continuing growth of remote work are driving change and offering solutions to businesses to combat changes in the market and various industries. If your business isn't already, now is the time to start adopting new software and testing solutions to help your employees and your company operate more efficiently, effectively, and securely.

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