How This Client Designed Work-From-Home IT Plans for Multiple Enterprises

This client came to MDSi when tasked with designing IT network plans for enterprises that were sending employees to work from home.

In this article, MDSi explains the strategic thought process for selecting the right hardware and sub components as well as the consultative design needed for securely sending hundreds of employees to work remotely.

Continue reading to learn what infrastructure was needed and why Juniper Networks was ultimately selected.

I received a call from a client who was contracted by multiple enterprises to help send people home to work.

As you can imagine, designing full-proof IT network plans for multiple enterprises across industries was no easy task. There was also the increased demand for a fast turnaround. Enterprises didn't plan to send hundreds of people from finance, HR, marketing and other departments to work from home within a matter of days and weeks. It was mandated due to COVID-19.

This client already started solving the first two problems of sending hundreds of employees per enterprise to work from home who were previously not set up to do so. This client came to us to help them meet the challenge of designing multiple initiatives.

If you haven't already, read our previous article about the three problems enterprise IT leaders must solve during and after work-from-home.

We worked through the three problems that needed solved, as discussed in the previous article.

Solving for these problems brought us to two components: 1) selecting the right hardware and sub components and 2) consultative design.

Identifying the Best Infrastructure for COVID-19 and Beyond

When it came to selecting manufacturers, we recommended Juniper Networks and Mist Wireless because it would help enterprises be successful in remote working while laying the foundation for innovative success.

What we wanted to see from the infrastructure included:

Reliability

Juniper is carrier grade equipment and first started manufacturing for tier one service providers. Now enterprises and other industries benefit from those beginnings. For example, the meantime for failure is much less with Juniper than other manufacturers.

Flexibility

Juniper is built with one operating system and doesn't change as new products roll out. This creates simplicity with less room for errors when IT staff configure, deploy, and manage the technology.

This simple configurability is especially important for multiple site roll outs. We can zero touch provision (ZTP) and constantly deploy hardware as needed. This means we can deploy devices, such as access points and firewalls, within minutes instead of hours and days.

Now we add Mist to the design. Mist was born in the cloud so flexibility is tied to its microservices architecture. For example, components can be upgraded without impacting the overall availability of the system. This is why networks that require high availability with multiple users, like Netflix and Amazon, run on Juniper and Mist.

Enterprise Work-from-Home Solution

Majority of the people sent home to work are not IT professionals. It's not feasible at any time to send a technician to every employee's house to set up a great connection, but especially during COVID-19. The whole point of working from home is to social distance.

With Juniper, you send a remote worker home with an access point and provide simple instructions to plug in and connect to Wi-Fi just like he/she would do at the office. That makes the remote connectivity a lot easier.

Employees need the right bandwidth to do their work, but other people in the home streaming videos, school work, or games can interfere with that needed bandwidth. In the Juniper universe, the access point device segments and prioritizes traffic so that other internet users within the house don't interfere with the employee's connection.

Security

We wanted infrastructure that encrypts the data from the from the laptop all the way out to its final destination. This helps us ensure that no one else can intercept, replay, or break the encryption.

AI-Driven Solution

With its acquisition of Mist, Juniper incorporated an AI engine into their wired, wireless, security, and data center products. This brings a new level of operational efficiency and high network reliability. We'll have to go into this in another post. For now, let's stick with the work-from-home scenario.

Because employees are taking home an access point device that has wireless assurance (meaning it's constantly providing and receiving data from the AI engine) this makes it a lot less difficult for the tech people to remotely troubleshoot. IT staff type into the virtual AI network assistant's search bar just like doing a search with Google, "Why is Bob having Wi-FI issues?" The AI engine analyzes the data from across the 150+ states of connection and gives the answer. There's no need to hunt through dashboards. When you suddenly have hundreds of employees working from home, this makes a big difference.

Wi-Fi and Bluetooth Enabled Asset-Tracking

Before COVID-19, we were seeing a growing trend for productivity and revenue-driving applications within the enterprise.

This includes access applications that help healthcare professionals better find assets like wheelchairs. Or, customers using a grocery retailer's app to help locate merchandise and receive coupons within the store. We see use cases in every industry.

We predict an even larger demand for these services during and after COVID19 as less workforce is on site, people social distance, and brands need to make the most of every customer engagement.

Juniper's Mist is the only access point that offers converged Wi-Fi and virtual BLE technology that enables these services. This means no more physical beacons. You can now condense your needed hardware and be more accurate. These virtual beacons are configured and deployed from the cloud so no one has to go on site.

Enterprises may have a location services use case in mind that is six to 12 months down the track, but they can make the investment now and not need additional investment in hardware later.

Network Design for During and After COVID-19 Work-From-Home

The client in this story is very capable and good at what they do, obviously, or so many enterprises wouldn't have contracted them.

Why did the client come to MDSi if they already started (and neared completion) of the design?

Sometimes, teams need a specialized consultant to help check work and design the intricates that solve really hard problems. Some of the problems this client brought to us required high expertise that they just didn't have on staff.

One of the problems we solved included:

Design That Makes the Most of the Infrastructure

Why purchase five boxes or subscriptions when you can do the same with three?

This requires a thorough understanding of exactly how hard a box will work and the implications of every feature.

I always ask questions that help me understand the desired user experience. This helps me identify which features are best to turn on. For example, I ask questions about the size of internet connection. We want to design a solution so that throughput is not impacted by security services.

For example, we found that some of the hardware needed to be bumped up a size. If we didn't catch this minor error, our client would have unintentionally designed a solution that is the bottleneck on the customer's network.

Conclusion

Solutions to big problems come from people with special skills working in teams. That's why so many enterprises contacted our client, and our client in-turn came to MDSi.

Next Steps

We're here to be a resource when you need it.

Continue getting to know us by following us on LinkedIn and visiting the News section of our website where we're sharing more stories and insights.

Better yet, send a contact message so one of our team members can reach out to you for a one-to-one conversation about your goals and challenges.