Kimley»Horn

Expect More. Experience Better.

[Kimley-Horn](#) is one of the nation's premier planning and design consulting firms. With more than 7,000 staff members in more than 100 offices across the U.S., the firm offers full services in a wide range of disciplines.

Industry
Business services

VMware footprint
- VMware SD-WAN™
- VMware SASE™
- VMware vSphere® vMotion®
- VMware Horizon®
- Azure VMware Solution

Kimley-Horn Builds Better Connections with VMware SD-WAN

Civil engineering consultancy Kimley-Horn is growing fast and modernizing its IT. When productivity was repeatedly stalled by connectivity outages, the company turned to AT&T to provide AT&T SD-WAN with VMware. AT&T and VMware are helping Kimley-Horn move to the cloud and connect 7,000 colleagues with speed, efficiency and an excellent user experience.

Expanding IT infrastructure and connectivity

Engineering company Kimley-Horn is growing rapidly. From an IT perspective, including expansions and moves to larger offices, Kimley-Horn adds as many as 20 new sites per quarter.

The company was using legacy MPLS circuits for its wide area networks (WANs). These links could take 60 to 90 days to provision. Backup connectivity—critical in cases of provider or power outages, or equipment failures—was difficult and expensive to provision using MPLS. "When one circuit would go down, the other one wouldn't automatically come back online," says Frank Nguyen, IT manager, Kimley-Horn. "There would have to be manual intervention, plus we're also paying for this additional backup circuit every month that's not even being utilized if there are no outages."

> "AT&T SD-WAN with VMware is a game-changer. You can get an internet circuit in place within a week, even for a home office, and have it fully meshed and operational without sacrificing quality of experience or SLAs."
>
> Frank Nguyen, IT Manager, Kimley-Horn
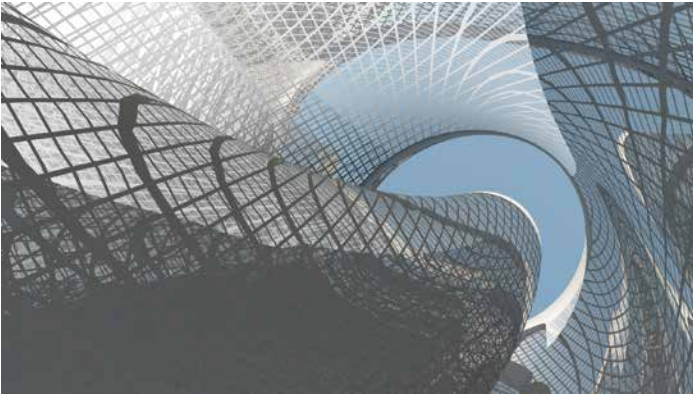
vmware®

VMware SD-WAN increases reliability, flexibility

Kimley-Horn decided to move to flexible, cost-effective software-defined WAN (SD-WAN) technology. Already a longtime VMware customer, Kimley-Horn conducted a rigorous proof of concept among several SD-WAN vendors and chose AT&T SD-WAN with VMware. "Every company has unique scenarios that infrastructure has to support," says Nguyen. "Other platforms were either too cookie-cutter, too complex, or didn't support our needs. But AT&T and VMware had customizable feature sets that supported what we needed to achieve our business outcomes."

Kimley-Horn switched to dual internet links at each site, provisioned in active-active mode. This gave the company more reliable connections, critical to maintain business uptime. "Using AT&T SD-WAN with VMware technology, we were able to use both circuits at the same time," says Nguyen. "And when one went down, we were still fully operational with no manual intervention."

The features and configuration flexibility of the VMware SASE Orchestrator suited the needs of Nguyen's team and the teams across Kimley-Horn that share application and connectivity data. Says Nguyen, "The orchestrator is easy to use and read. We can allow different read access privileges to share data with other internal teams. For teams that are not so technical, we don't have to have a training session each time, and they can easily understand what they're looking at. For more technical people, we can surface even more information, and they always tell us that, yeah, this is exactly the information they were looking for."

Nguyen noted that one of the benefits of the VMware SASE Orchestrator is that it is easy to create a "golden config" as the firm brings up new offices rapidly. "The orchestrator allows us to make sure there's no configuration drift," says Nguyen. "That's a best practice in VM environments. Taking that same best practice into the networking world was a big bonus for us. When we stood up new offices, we didn't have to worry about someone typing in an incorrect IP address or forgetting a key setting. It really keeps us honest."

Noticeable savings in time, cost and quality of service

Because VMware SD-WAN is so powerful and easy to use, Nguyen and his team have noticed savings in time and cost. They spend less time on troubleshooting and sending IT staff to different sites to solve problems. Nguyen also noted that with the previous solution, connectivity outages would stop work for an entire office. "That's a huge loss," says Nguyen. "Every minute that we're down, it takes away from the company's bottom line." Now, with dual circuits, outages are rare and short.

> "Dynamic Multipath Optimization has proved to be extremely valuable because selecting the best circuit path based on the packet destination really improves user experience."
>
> Frank Nguyen, IT Manager, Kimley-Horn

AT&T SD-WAN with VMware not only provides more reliable connectivity, but it also enhances the quality and speed of the connections. Nguyen singled out Dynamic Multipath Optimization™, a VMware SD-WAN feature that monitors and adapts to changes in underlying WAN transports in real time. Kimley-Horn regularly sends and receives gigabits worth of engineering drawings and site photos, so increased download speeds are very helpful for its engineers. "Dynamic Multipath Optimization has proved to be extremely valuable because selecting the best circuit path based on the packet destination really improves user experience," says Nguyen.

Modernizing in the cloud: AT&T SD-WAN with VMware and Microsoft Azure

Kimley-Horn began using virtual instances of VMware SD-WAN in the cloud with Microsoft Azure when the firm started to exit a data center in favor of the cloud. "AT&T SD-WAN with VMware allowed us to get away from the traditional tunnel that's typically done on the firewall in a data center and allow a fully mesh network to our cloud environment," says Nguyen. Virtual SD-WAN even plays a part in the company's disaster recovery plans, creating fast and stable paths for VMware vSphere vMotion to move workloads to the cloud with a disaster recovery-as-a-service (DRaaS) solution.

AT&T is working with Kimley-Horn to move VMware workloads to Azure using Azure VMware Solution, which seamlessly migrates or extends existing workloads from on-premises environments without the cost, effort or risk of rearchitecting applications or retooling operations.

The firm also hosts VMware Horizon virtual desktops in Azure. "One of our use cases is hosting client projects in the Horizon environment," says Nguyen. "For example, a consulting firm can create web services for external-facing clients." During the past two and a half years especially, Kimley-Horn relied on Horizon to spin up multiple virtual workstations so the staff members who did not have laptops could keep working from any location.

> "AT&T SD-WAN with VMware allowed us to get away from the traditional tunnel that's typically done on the firewall in a data center and allow a fully mesh network to our cloud environment."
>
> Frank Nguyen, IT Manager, Kimley-Horn

"VMware SD-WAN is an amazing technology," says Nguyen. "I think any engineer who knows the struggles and challenges of MPLS would agree that Dynamic Multipath Optimization and the ability to use multiple circuits efficiently really contribute a lot to user experience."