Reducing Costs while Improving Network Performance and Security for PM Pediatrics with Azure Virtual WAN

Challenges

A pediatric urgent care center found themselves struggling to manage their environment between dozens of sites. Sharing and accessing files, securing traffic, and managing a network that spanned over 60 locations was a challenge for their existing infrastructure. PM Pediatrics needed more than just a solution; they needed a trusted advisor to take the time to analyze their environment and recommend innovative, scalable solutions that would improve their security and end user productivity.

There were a few challenges that needed to be addressed; expansion of new branch offices was leading to growing MPLS costs and WAN infrastructure at their branch edge was nearing end of life and could not support newer routing technologies. With a focus on cost-effectively improving their security and end user performance, PM Pediatrics was open to both premise and cloud options that could meet the growing demands of their workforce.

Solution

The Vandis team's first priority was to improve security across the branch sites that spanned the United States. By leveraging Fortinet's secure SD-WAN solution and FortiManager, Vandis established unified security policies that were able to be centrally managed and rapidly deployed. By removing site-specific policies, PM Pediatrics could now quickly deploy security configuration updates globally. An added benefit of implementing SD-WAN was the meshed connections back to the datacenter. This reduced bandwidth requirements at each site and removed the need for the existing expensive MPLS circuits.

With an improved security foundation, Vandis Engineering could turn their attention to further reducing latency and improving user productivity across all sites. While the mesh network, in combination with SD-WAN routing policies, had reduced bandwidth requirements, enterprise application traffic at each location still needed to be backhauled to the primary datacenter in New Jersey. As PM Pediatrics expansion continued throughout North America, Vandis needed to architect a strategy to address the latency issues caused by locations in Alaska, California, and Texas that had longer routes back to the datacenter. Vandis recommended leveraging Azure Virtual WAN to create an uncongested, encrypted pathway that connected each remote site to the datacenter while avoiding public internet.

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Connecting Fortinet SD-WAN with Azure Virtual WAN allowed each branch location to automatically optimize business-critical application connections by intelligently routing Layer 7 (Application) traffic over redundant pathways. Leveraging Azure Virtual WAN content delivery nodes, branch sites are able to automatically connect to the closest Azure hub to reduce latency and improve productivity. Vandis' team used Fortinet's API library and Azure's DevOps functionality to build Infrastructure as Code that reduced the rollout time of this combined solution to new sites from days to hours.

Results

By introducing Azure Virtual WAN, PM Pediatrics has an improved infrastructure backbone that leverages Microsoft's extensive fiber network. Their users that depend on bandwidth intensive enterprise applications are now seeing improved performance thanks to direct connections into Azure

at the branch edge. The performance improvements seen from this initial deployment have convinced PM Pediatrics to accelerate their timetables for application workload migration to Azure.

Overall, this solution has led to significant cost savings by reducing dependency on expensive MPLS and by reducing their datacenter footprint. Ongoing management costs have also been reduced as policies can be seamlessly unified across Azure and premise environments from a centralized administration platform. New sites can be quickly spun up in under 10 minutes due to the automation tool Vandis' team created to deploy Fortinet SD-WAN in combination with AzureVirtual WAN.

This secure network is now protecting their PII across premise and cloud environments. Seeing the benefits of a hybrid datacenter, PM Pediatrics has already begun initiatives to migrate their premise VDI and SQL services to Azure Windows Virtual Desktop (WVD) and Azure SQL to improve application stability and performance.