CUSTOMER
CASE STUDY

MERIPLEX | BGE

Engineering in Cloud App Access and Network Uptime With SD-WAN

Expanding offices, increasing supported job sites, and migrating critical apps and data to the cloud via Azure and AWS is a snap for BGE with SD-WAN.

Industry:
Civil Engineering

Challenges

- Frequent network outages impacted ability to connect to critical business applications
- Legacy network infrastructure inhibited shift to cloud-based applications
- Deploying new and pop-up sites was slow and painful

Results

- Speedy deployment to quickly turn up new sites
- Increased bandwidth efficiency
- Streamlined cloud application access
- Network-wide visibility and control
- Eliminate outages for business continuity

Problem Situation

BGE, Inc. has a reputation for its agility and nimbleness in meeting community and customer needs. Its workforce operates in close collaboration to ensure the results of its labor is of the highest quality and incorporates a long-term view in all it does.

To continue to support these goals, BGE needed to rethink its approach to its network. Because the bulk of its work was based on ensuring its engineers and field teams had continuous and uninterrupted access to large-sized files and applications, it also needed to ensure that offices and remote locations could be spun up quickly to reduce downtime. Its legacy network was unable to efficiently support these goals and its need to shift to cloud storage and use of cloud applications.

BGE has 12 offices which used a mix of MPLS and VPN over public broadband. Its smaller offices typically only use a single transport connection but when it reached a certain size threshold, multiple connections would be used (anywhere from two to four or five). Those offices were static offices, but because BGE also used temporary, site-located office locations, it needed to rely on transport connections that were less permanent and easier to deploy such as consumer-grade internet circuits or LTE. Locations may include remote construction sites or vacant units in shopping centers.

With a vision to expand its offices, increase the number of job sites it would support, and migrate critical applications and data to the cloud via Azure and AWS, it needed to adopt a new network architecture that would support future growth and opportunities. Rather than continue to pay for costly and inflexible MPLS and invest in this transport that did not support BGE's need for cloud connectivity, it sought a solution.

"NSX SD-WAN just works and keeps our business running, even when there are outages with one of our transport methods."

- Michael Franklin
CIO, BGE

Solution Selection and Implementation: Meriplex Communications and NSX SD-WAN by VeloCloud

BGE chose Meriplex Communications as its partner in re-thinking its network infrastructure. With a collective goal of completely redundant connectivity throughout its entire environment, Meriplex suggested adopting software-defined WAN (SD-WAN), which satisfied all of BGE's requirements.

Meriplex is a long-time partner of VeloCloud, now part of VMware, the leading vendor of SD-WAN in the industry. Using the NSX SD-WAN by VeloCloud solution, Meriplex worked with BGE to begin the process of replacing existing MPLS circuits with SD-WAN across all connected sites. With SD-WAN, BGE now has redundant connectivity.

The management of the network now is completely co-managed by Meriplex and BGE, forging a true partnership of network responsibility, where Meriplex manages the circuits on a 24/7 basis. BGE enjoys white glove customer service from the Meriplex team, something it feels it would not have with larger vendors.

Speedy Deployment to Quickly Turn Up New Sites

BGE often has to spin up a new site very quickly, which requires network connection to be initiated. Without SD-WAN, establishing connectivity to these often-remote sites can take weeks. But with SD-WAN, Meriplex and BGE can install an NSX SD-WAN Edge by VeloCloud connected to an LTE device and be up and running in a matter of minutes.

To further add efficiency to the new-site-turnup process, BGE stocks “office in a box" kits that contain an NSX SD-WAN Edge, an LTE card, and all required cabling that can be shipped quickly to a new site for fast installation and network connectivity.

Increased Bandwidth Efficiency

SD-WAN operates in hybrid mode, so it maximizes the use of bandwidth across all sites. It is able to connect each location to the internet and office-to-office shifting the use from single-purpose to multi-purpose. With this type of configuration and bandwidth efficiency, BGE has twice the amount of bandwidth than before the installation of SD-WAN.

Streamlined Cloud Application Access

BGE has shifted much of its applications to cloud-based systems, including AWS. This includes an engineering specific ERP system and a global file system with controllers at every office location that enables collaboration in real-time, such as local access between offices and groups.

An additional business driver for SD-WAN was to support the shift to Microsoft O365 and the adoption of Skype for Business. As the application has been rolled out across the organization and utilizes SD-WAN for connectivity, it has worked amazingly well.

Network-Wide Visibility and Control

Using the NSX SD-WAN Orchestrator by VeloCloud, BGE and Meriplex now have complete visibility of the network, making it much easier to understand which applications (such as Panzura, O365, and Windows) are consuming bandwidth and why. Meriplex is able to make adjustments to rules and policies on the fly to improve performance. BGE is also provided a view into the NSX SD-WAN Orchestrator to see traffic behavior and write its own rules if needed.

Eliminate Outages for Business Continuity

With its traditional network infrastructure, BGE was using single-purpose circuits and outages were a regular occurrence that impacted the workforce's productivity. But with SD-WAN in place, the redundancy and resiliency that has been introduced keeps the business up and running continuously, increasing efficiency and revenue generating time. Additionally, the team at BGE and Meriplex have simulated outages to determine impact and remediation time. They did this by unplugging one of the MPLS circuits from the NSX SD-WAN Edge and no impact was ever realized by anyone on the network. The NSX SD-WAN Edge intelligently knew to failover to the other connection and keep the business functional.

> “With SD-WAN in place, we can now start planning how to make widespread application and technology improvements because we have a flexible and robust solution that supports those goals."
>
> **- Michael Franklin**
> CIO, BGE

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