

Tech Brief for U.S. Federal Agencies

# At-Home Workers' VPN Traffic Strains Agency Networks

Gigamon Visibility and Analytics Fabric Helps Solve VPN Congestion

## Tech Brief at a Glance

- The coronavirus pandemic is forcing government agencies to send much of their workforce home while still providing crucial services
- The resulting massive increase in VPN traffic threatens to overload VPN concentrators and NetOps and SecOps monitoring tools
- The Gigamon Visibility and Analytics Fabric can remove duplicate network packets and help ensure that only relevant traffic is sent to monitoring and security tools to optimize their performance
- Agencies can now maintain total visibility into network infrastructure and blind spots, as they add VPN concentrators to support work-from-home users

## Gigamon Products Used

- Gigamon Visibility and Analytics Fabric
- GigaSMART® De-Duplication
- Gigamon Application Filtering Intelligence

Agency NetOps teams: Please check your VPN concentrator. The sudden surge in federal employees working from home and connecting via VPNs has strained agency networks. This dramatic increase is endangering agency continuity as IT infrastructures buckle under the strain.

In recent days, an important U.S. federal agency alerted Gigamon about its VPN traffic surge and made an emergency acquisition request for Gigamon solutions. The implemented solution is a good model for other organizations already facing similar problems.

## Working from Home Means Drastically Higher VPN Traffic

In normal times, many organizations let some employees work from home, but that isn't the same as the near-universal telework that the coronavirus crisis requires. Unlike most businesses, many remote federal employees are required to connect via VPN to gain access to resources on protected internal networks.

The ability to handle the resulting VPN traffic is often the factor that limits an organization's capacity to support remote workers. In the case under discussion, due to VPN restrictions, the U.S. federal agency could accommodate only about one-third of its workforce signing in remotely, but this month it needed to send many more home.

## Consequence: Blind Spots

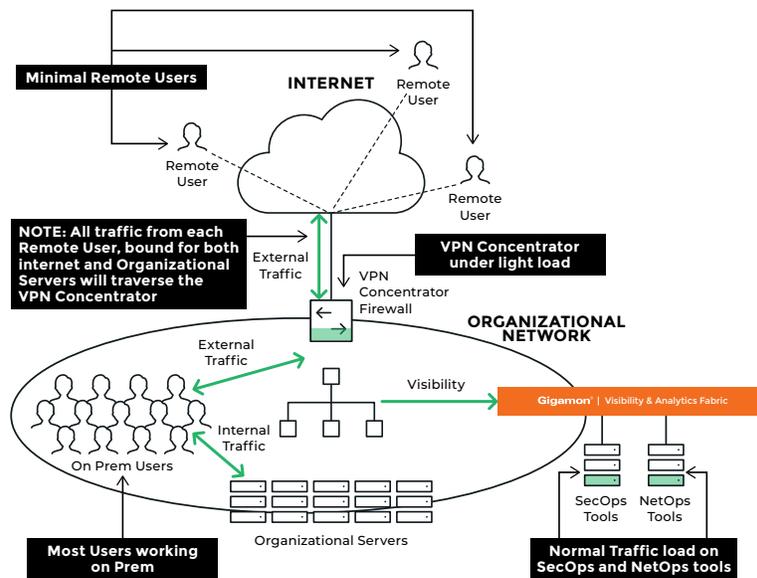
Specifically, the increase in work-from-home traffic led to an oversubscription of their VPN concentrators. To alleviate the oversubscription, the agency added VPN infrastructure that unfortunately added blind spots that have the potential to become security vulnerabilities.

## Consequence: Boomerang Effect Doubles Network Traffic

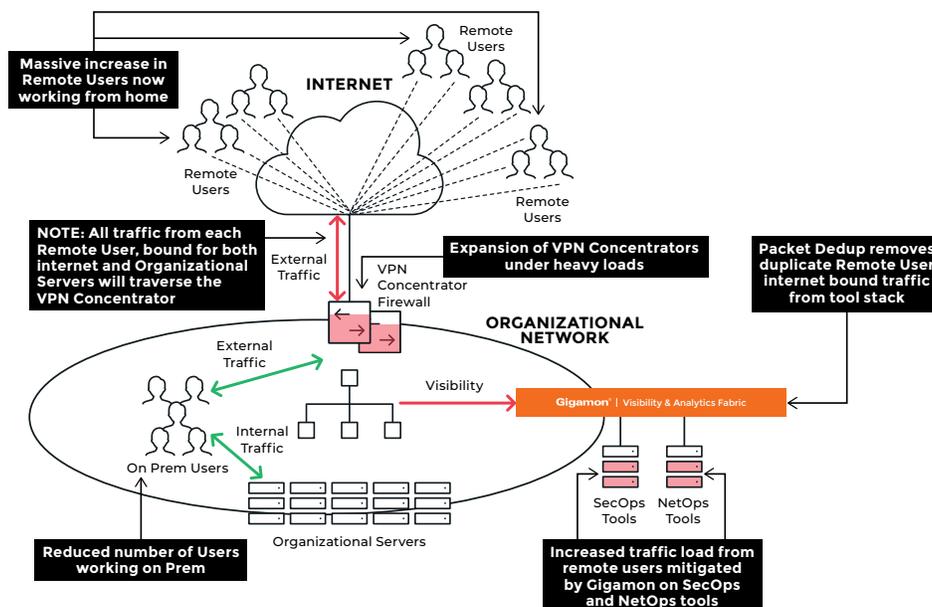
Another unforeseen consequence was that traffic roughly doubled on the internal agency network. When remote VPN users access the internet — including non-work-related sites like YouTube and Facebook — traffic first comes into the agency's VPN concentrator and then U-turns (or boomerangs) out to the internet, seriously straining internal network links. And all that traffic is funneled through the agency's VPN concentrator and processed by network monitoring and security tools. (See Figure 1.)

The massive increase in remote users placed an unsustainable load on the agency's infrastructure. Network and security monitoring tools were no longer able to accommodate the surge of traffic. The agency was losing visibility into its network, and the reliability of connections of work-from-home users were at risk.

### Before Social Distancing Scenario



### After Social Distancing Scenario



## Solution: Removing Irrelevant Traffic to Support Remote Users

By its emergency procurement of Gigamon Visibility and Analytics Fabric, the agency was able to manage the additional traffic and maintain visibility into the newly added VPN network infrastructure.

Specifically, Gigamon de-duplication capabilities removed packets and filtered out irrelevant applications before feeding traffic into security and network monitoring tools. Now only relevant traffic is sent for inspection, allowing monitoring tools to work as intended. Moreover, fewer NetOps team members are needed to monitor the network. The agency can also now ensure there are no blind spots throughout their VPN aggregators.

## Gigamon Can Help Quickly

If your network is feeling the strain as you shift to a work-from-home model, or if you're worried about maintaining visibility as you add VPN infrastructure, contact your Gigamon rep to see how we can help.