

Hughes Secure SD-Wan Gateway

Delivering high performance managed SD-WAN with strong security to distributed enterprises

In order to serve the customer, guest, client or constituent, the modern enterprise now requires a network that is always on, highly secure and completely reliable. Today's network must support personal devices (BYOD), Internet enabled Tools (IoT), private, public and hybrid clouds, a highly mobile workforce and geographically dispersed data centers. This is transforming the enterprise network into an ecosystem of connected networks. As enterprises adopt these new technologies and solutions, the corporate firewall protected networks no longer provide the security, flexibility, performance and bandwidth necessary. The modern network must have secure software defined networking (SDN) functionality built into the fabric of the network. With SDN your network will adapt immediately to changing conditions, update proactively to protect against current threats and manage traffic flows for maximum efficiency and throughput. This dynamic functionality will release your IT team to do important planning and developing.

Joint Solution Description

The Hughes Secure SD-WAN Gateway, based on the Fortigate NGFW security appliance leverages Fortinet Security Fabric, which is designed around a series of open APIs, Open Authentication Technology and standardized telemetry data.

The Hughes Secure SD-WAN Gateway offers security, routing, and optimization in one easily manageable and deployable device to empower businesses with dramatic cost savings over separate box solutions. The solution acts as the router in addition to providing broadband optimization benefits and combines the joint benefits of FortiGate with Hughes' proprietary ActiveTechnologies in the same powerful appliance.

The Hughes Secure SD-WAN Gateway runs on Fortinet's FortiOS, incorporating a powerful operating system and industry-leading security capabilities, giving Hughes the ability to remotely configure and fully manage next-generation firewalls. Data leak prevention, vulnerability scanning and intrusion prevention can also be centrally managed from the Hughes network operations center.

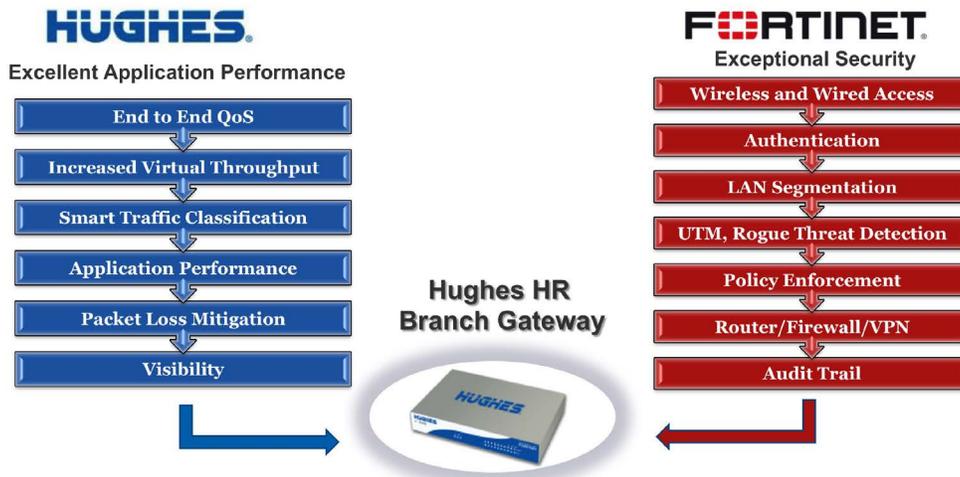
Designed for the unique needs of the distributed enterprise, the Hughes Secure SD-WAN Gateway delivers advanced threat protection, including next-generation firewall, intrusion prevention, VPN, and Web filtering. Along with robust security, the device transforms "best-effort" broadband solutions into enterprise-grade WANs, delivering powerful Quality of Service (QoS) and superior application performance through advanced compression and classification. The device supports higher throughput speeds without compromising on security functions. As a result, branch locations operate at a high capacity while being protected by next-generation firewall capabilities.

Joint Solution Benefits

- Best-in-class Fortinet security with industry-leading Hughes WAN Performance Optimization technologies (ActiveTechnologies™) in one cost-effective device
- Runs on FortiOS, the most powerful security operating system in the world, to guard against advanced threats
- Incorporates next-generation firewall functions including application control and intrusion prevention system
- Simplifies PCI compliance rollouts and includes advanced data leak prevention without sacrificing performance
- Multi-port interfaces and optional dual-band wireless connectivity enables flexible deployments
- Fully managed solution ideal for distributed enterprises such as retail, restaurant, gas stations, hospitality and banking

FORTINET.

Fabric-Ready



Hughes Secure SD-Wan Gateway

Hughes integrated its innovative Hughes ActiveQoS™ technology into the Secure SD-WAN Gateway, providing true end-to-end QoS over cost-effective broadband networks, such as DSL and cable. Operating in tandem with Hughes ActiveCompression™, which uniquely combines long-range and short-range compression algorithms for optimum compression gains, this pairing enables the Secure SD-WAN Gateway to deliver superior performance from your business-critical applications, even in the presence of other non-critical network traffic. To further enhance network performance, the Hughes Secure SD-WAN Gateway also includes Hughes ActivePath™ which uses Intelligent Multipath Replication (IMR) to automatically replicate mission critical application traffic across the available WAN paths. This allows ActivePath to eliminate the impact that brownout and blackout conditions have on sensitive applications, such as VoIP, when individual paths experience degradation. By proactively replicating the most important traffic, ActivePath can prevent the short but impactful outages that occur when applications are re-routed to alternative paths.

FortiGate Enterprise Firewall

The Fortinet FortiGate Network Security Platform provides high performance, layered security services and granular visibility for end-to-end protection across the entire enterprise network. Innovative security processor (SPU) technology delivers high-performance application layer security services (NGFW, SSL inspection, and threat protection), coupled with the industry's fastest SSL inspection engine to help protect against malware hiding in SSL/TLS encrypted traffic. The platform also leverages global threat intelligence to protect individual customers, by using Fortinet's FortiGuard Security Subscription Services to enable visibility and control for next-generation protection against advanced threats, including zero-day attacks.

Use Case - Consumer Finance Company

Mergers and acquisitions can be disruptive and strain customer loyalties if not handled correctly. When two leading consumer finance companies recently merged, they decided to bring all their nationwide branches under one network structure. Maintaining business continuity while delivering a unified customer experience was critical to keeping customers satisfied and loyal to the institution.

The newly merged organization turned to Hughes—a longtime trusted network partner—to guide it through its next-generation network evolution. The company believed it was wise to build on this partnership because of Hughes' unique understanding of the ever-changing performance and application needs of widely distributed financial organizations.

Challenges

The newly merged company suddenly found itself with a complicated mix of different network connectivity services and inconsistent performance levels across a nationwide network that had swelled to more than 1,700 branch locations. This complex network environment stitched together a variety of MPLS and other primary broadband circuits, along with mix of satellite and other terrestrial based networks for backup. The company needed to quickly consolidate all of its branches under a unified, next-generation network architecture to reduce operating costs, smoothly run new banking applications, and most importantly deliver a consistently exceptional customer experience.

Like most financial services companies, the new company had transitioned from paper-based systems to online banking, shifting away from simple to value-added services. Loan applications now required Internet connectivity to complete the

submission and process all required forms with local court and government agencies. Enabling this online experience required a robust and secure network to keep customers happy with their in-bank service, and keep operations moving smoothly.

Solution

The company saw Hughes as a trusted, long-term partner who understood the complex needs transforming the financial services industry. Hughes architected a fully managed SD-WAN solution utilizing a multipath network design featuring true path diversity optimized for the needs of each location.

“We needed a robust and stable network to support our usage patterns, which relied heavily on accessing online forms and compliance sites, as well as supporting our new VoIP system,” the bank’s Senior Vice President of data networking and responsible for network integrations said. “We decided to move to an SD-WAN because it could deliver reliable application performance to each branch while reducing our bandwidth costs. Further, having our SDWAN delivered as a managed service greatly reduced complexity and management overhead, while also providing low initial transition costs and predictable monthly operating expenses.”

The network solution utilizes Hughes ActiveTechnologies™, including ActiveClassifier™, ActiveQoS™, ActiveCompression™, and ActivePath™ to deliver optimal performance and reliability out of each broadband connection.

- **ActiveCompression:** Two-step compression delivering up to 300% greater throughput on a circuit.
- **ActiveClassifier:** Automatically and dynamically identifies and prioritizes network traffic without manual rules configuration.
- **ActiveQoS:** Monitors network capacity and priority queues to optimize network traffic flow to available bandwidth. It is especially critical for VoIP and video.
- **ActivePath:** Uses intelligent path control to maximize availability of critical applications, delivering an optimized SD-WAN solution.

Results

Hughes deployed the unified network across more than 1,700 branches in less than 18 months. The company now enjoys 10–20 Mbps performance at every branch with optimized speeds and reliability for high-priority applications. Dual-broadband access into each location with a multipath network architecture ensures the branch banks stay online in the event of a primary network outage. And the customer has reduced its operational costs and met the merger goals of the acquisition by leveraging the cost-effective and ready-to-deploy Hughes managed SD-WAN solution.

About Hughes

Hughes Network Systems, LLC (HUGHES) provides fully managed network solutions, including an award winning SD-WAN platform, to distributed enterprises leveraging the best of broadband technologies to deliver highly secure, reliable connectivity to all sites. With 40 years of experience, companies continue to choose Hughes to help lower IT costs, expand the businesses and provide new technologies that keep them ahead of the competition. For additional information about Hughes, please visit business.hughes.com and follow @HughesON on Twitter.

About Echostar

EchoStar Corporation (NASDAQ: SATS) is a premier global provider of satellite communication solutions. Headquartered in Englewood, Colo., and conducting business around the globe, EchoStar is a pioneer in secure communications technologies through its Hughes Network Systems and EchoStar Satellite Services business segments. For more information, visit echostar.com. Follow @EchoStar on Twitter.

