



Case Study

Protecting a Geothermal Energy Company's Distributed Network with Hillstone Secure SD-WAN

This bleeding-edge geothermal energy producer supplies the latest in clean-energy solutions. It is critical for them to ensure redundant WAN links to all sites for business operations, but more importantly to assure continuous connection of telemetry for energy monitoring, management and billing. To protect the critical power infrastructure from cybercriminals, IT security is of the utmost importance.



The Challenges

Ensuring Secure and Always-on WAN Connectivity

A major geothermal energy company serves a large, and growing region spanning several provinces, with both business and residential clients. Clean, green geothermal energy is increasingly important for governments and customers alike for its reduced energy costs and minimal carbon footprint. For this geothermal company, a secure, always-on network is essential to ensure that administrative communications and telemetry are distributed without impedances to all sites.

In recent years, power generation companies have increasingly been targeted by bad actors through ransomware and other attacks. The avoidance of the costs and business disruptions caused by these attacks has made cybersecurity top of mind for the company's security team. In addition, the government has mandated best practices for cybersecurity in all such organizations, requiring layered security services to protect the vital power generation infrastructure.

The security mandates issued by the government change often and require best-practice implementation of cybersecurity frameworks. As a result, the company must consider both how best to implement the best practices while achieving the best possible return on investment.

Meeting the Requirements

After extensive research and discussion, the security team determined that implementing SD-WAN across the organization was essential to securing resources, assuring high availability and meeting compliance requirements while using cost-effective bandwidth. Zero-touch provisioning would also be crucial in standing up new branch offices as the organization grew.

In the course of the decision process, a number of solutions were considered. The first, while meeting all requirements, came in far over the target budget. Other solutions offered lower costs but could not demonstrate functionality that covered all the security requirements, either for compliance or for the team's needs.

Hillstone Networks' secure SD-WAN solution met all requirements, was well within budget, and was quickly short listed.

Customer Profile

Customer

Geothermal Energy Company

Sector

Energy

Location

China

Focus

To provide clean, green geothermal energy across a growing area

Size

More than 300 locations

Challenges

Modernizing security infrastructure to better protect all network resources against cyberthreats and to ensure high availability

Requirements

- Deliver highly redundant SD-WAN infrastructure for security and business continuity
- Secure data center against leaks and breaches
- Meet best practices mandated by federal government
- Provide layered security infrastructure across head office and branch sites

Result

A layered security architecture with Hillstone NGFWs including redundant SD-WAN services



“ We needed to realize secure service access from the branch nodes to the data center through IPsec VPN, but also to isolate the internet services and office network of each branch to fully protect our group’s business network. Through Hillstone’s SD-WAN solution, we achieved both goals, while streamlining deployment and operations.

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The Solution

Layered Security at the Data Center and Distributed Edge with High Availability

After a thorough evaluation, the cybersecurity team selected Hillstone’s SD-WAN solution consisting of **next-gen firewalls (NGFWs)** and the **Hillstone Security Management Platform** for SD-WAN. Together, the solution provides layered security services for branch offices, at the network edge and for the data center. The elements of the Hillstone SD-WAN solution are deployed in an active/passive, high-availability configuration for continuous uptime for crucial energy management, operations and other functions.

The Hillstone cybersecurity solutions were chosen in large part due to the IT team’s positive experiences with the Hillstone support team. During initial testing, a number of questions and concerns arose that were quickly addressed by Hillstone sales and support engineers.

A Specific Focus on Security

Hillstone’s rigorous focus on security also impacted the team’s decision. “We needed to realize secure service access from the branch nodes to the data center through IPsec VPN, but also to isolate the internet services and office network of each branch to fully protect our group’s business network,” said the security group’s team leader. “Through Hillstone’s SD-WAN solution, we achieved both goals, while streamlining deployment and operations.”

Hillstone’s SD-WAN is the next-generation edge security solution for organizations of all sizes. It offers the key capability of routing traffic via dissimilar links to take advantage of lower-cost broadband services, MPLS and even mobile data networks where required. It features easy deployment and centralized management, coupled with robust data security features.

Key Components of SD-WAN

At the edge, Hillstone NGFWs provide secure IPsec data transmission and flexible access control. Comprehensive security services include antivirus, anti-spam, intrusion protection, abnormal behavior detection and other functions. Models are available in desktop, 1U and 2U form factors, and with firewall throughput from 1 to 320 Gbps, to accommodate nearly any size branch or headquarter location. Dedicated data center NGFWs offer features and capacities tailored specifically for the demanding needs of



high-performance data centers. For all models, Automated failover helps ensure continuous operation, while node isolation helps further protect business operations.

The Hillstone Security Manager (HSM) platform for

SD-WAN provides centralized control, management and orchestration for Hillstone NGFWs. HSM for SD-WAN supports a comprehensive display of devices and links; device, user, application and alarm monitoring; and other capabilities for broad and deep visibility and control across the network.

The Conclusion

Meeting Compliance Requirements, Achieving High Availability

Through Hillstone's SD-WAN solution, the geothermal energy company has modernized their network security infrastructure, achieved compliance with regulatory and other requirements, and gained a high-availability architecture that helps assure continuous business operations and telemetry. Most importantly, the solution is easy to deploy across the rapidly expanding branch network, provides quick visualization and management of network status, and supports non-disruptive operation of business applications.

Learn more about Hillstone products mentioned in this case study

[Next Generation Firewalls \(NGFW\) ⇒](#)

[Hillstone Security Manager \(HSM\) ⇒](#)

Read about Hillstone solutions

[Cloud Workload Protection \(CWPP\) ⇒](#)

[Extended Detection & Response \(XDR\) ⇒](#)

[Zero-Trust Network Access \(ZTNA\) ⇒](#)

[Secure SD-WAN ⇒](#)

[Micro-segmentation ⇒](#)

[Network Detection & Response \(NDR\) ⇒](#)

