

High Availability Security Upgrade

Organization

- U.S. based multinational financial services corporation, servicing consumers and businesses around the world.

Challenges

- Newly purchased security systems could not cluster and exchange state, a major issue since multiple appliances were needed to deal with traffic volume.
- Failover was required since uptime was business-critical.
- Customer wanted maximum security resilience.

Solutions

- Keysight Vision ONE Network Packet Broker (NPB), including 64 ports of aggregation, filtering and load balancing
- Keysight Bypass HD switches
- Keysight Indigo Pro Central Management

Results

- Visibility solution provided:
- High availability network resilience
- Intrusion Prevention System (IPS) for better performance and resilience
- Session integrity to identify security threats more efficiently
- Easy scaling of IPS capacity
- Improved IT productivity

Stronger Deployment of LPS Ensures Protection and Uptime

A secure, highly resilient network is an imperative for financial service firms, especially when they provide credit card products and travel services to consumers, as well as businesses around the world. Trust and integrity were essential to delivering the customer experience this firm stands for. The services delivered needed to be reliable and fast, without compromising any financial or personal information belonging to their vast, global customer base.

Consider the fact that in 2015, there was a 38% increase in global security incidents according to The Global State of Information Security Survey 2016¹. In a world of increasing cyberterrorism, organizations must strengthen their security, user authentication, and compliance checks, whether those are in the cloud or in a virtualized hybrid data center. With customers using a growing number of devices to access financial services from this firm, it was clear IPS technology was required. But, there was a major roadblock to overcome.

Achieving Failover in High-Volume Environments

The organization had already implemented IPS systems from multiple vendors. But, worried that high traffic volume could overwhelm their new systems, they wanted a high availability solution that could ensure network uptime and maximum security inspection of live network traffic. Due to the importance of inline security, the company executed a proof of concept with Keysight solution, including external bypass switches and NPBs.

Keysight iBypass HD switches with microsecond heartbeat technology were deployed to monitor the viability of each IPS system and path. External switches also allowed the security team to perform maintenance without waiting for a network maintenance window. Keysight Vision ONE network packet brokers (NPBs) were configured for high availability in active-active mode, with complete synchronization for simultaneous shared processing. Tests confirmed that in the event of an IPS outage—such as a power failure, cable disconnect or software error—the Keysight iBypass HD switch rerouted traffic around the problem to prevent a network outage. And failover tests demonstrated that Keysight's solution delivered nearly instantaneous recovery, allowing the company to meet targeted service levels.

The Keysight fabric solution delivered the extreme high availability required.

Reducing Capex for Tool Purchases

Another advantage of Keysight solution is the ability to share the capacity of security appliances across multiple network links and use load balancing to distribute traffic and prevent congestion on any one device. With these benefits, the company was able to handle increasing traffic volume without having to purchase additional appliances. Keysight NPBs also enable automatic rebalancing whenever a device is removed or added. This greatly simplifies the process of adding scale, since new devices are instantly detected and traffic is allocated without manual intervention.

The session integrity of Keysight NPBs in active-active mode was also an important feature and ensured that each IPS saw a complete transaction from beginning to end, making it less likely that a security threat would go undetected. Load balancing enhances both resiliency and security.

Increasing Tool Efficiency to Reduce Tool Purchases

To reduce the cost of acquiring additional IPS systems to handle growing traffic volume, Keysight NPBs performed load balancing across the company's existing devices, to allocate traffic more equally and prevent congestion on any one network link. In addition, Keysight NPBs enable automatic rebalancing whenever a device is removed or added to the overall security fabric. This greatly simplifies the process of adding scale, since new devices are instantly detected and traffic is allocated without manual intervention. Load balancing enhances both resiliency and security.

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Greater Efficiency with Single Pane of Glass Management

Finally, using Keysight's Vision ONE GUI, the company was able to significantly improve IT team productivity, with the ability to centrally manage the entire build-out of over 50 sites.

Together with Keysight, this firm implemented a highly-secure, resilient network, achieving substantial cost savings with an easy-to-implement and manage solution for even greater efficiency.

NPBs manage data flow, limiting the need for additional tool capacity.



About Keysight

Keysight provides testing, visibility, and security solutions, strengthening physical and virtual network elements for enterprises, governments, service providers, and network equipment manufacturers.



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