

San Juan Water District Taps Into Juniper Networks IDP and Firewall Solutions for Secure and Assured Networking

**Organization:**

San Juan Water District

Industry:

Government

Challenge:

Find secure and assured high-bandwidth IDP device and reliable firewall and virtual private network appliance

Solution:

Juniper Networks NetScreen network security appliances

Benefits:

- IDP device protects all systems, not just critical ones
- IDP monitors all traffic across the network
- Guarantee of flawless gigabit traffic
- Automatic paging feature provides IT team with peace of mind

Located in Granite Bay, California, the San Juan Water District is a water wholesaler and retailer currently serving more than 265,000 customers in eastern Sacramento and south Placer County. Formed in 1954, its core mission has always been to “take all necessary actions to ensure the delivery of a reliable water supply of the highest quality at reasonable and equitable costs.”

As part of that goal, the San Juan Water District strives to achieve the greatest possible efficiency throughout all areas of its operations. It recognized the need to improve network security in response to a recent vulnerability assessment; they knew they needed to come up with an inexpensive state of the art solution capable of meeting the District’s current and future needs with no significant addition to the IT workload.

Initially, Information Technology Administrator Bill Sugnet planned to build a SNORT based intrusion detection system (IDS) to notify their existing firewall that it should block a particular address if an intrusion event was detected, potentially turning any distributed scan or probe into a denial of service (DoS) attack. Sugnet explained, “We planned to develop an IDS that would work in tandem with our network routers to direct all network traffic through only one or two ports. We then planned to monitor the ports intensely to try to secure our network equipment and data.”

“Because of Juniper’s IDP, I sleep better at night knowing that our critical systems are protected.”

Bill Sugnet
Information Technology Administrator
San Juan Water District

Although Sugnet knew what the IDP needed to be able to do, the process of creating it from scratch turned out to be far more complex and time consuming than expected. The first challenge he faced was to research and critique the vendors currently providing IDP technology, a process that added to the already heavy workload. The second challenge was to analyze network needs to determine which of the new technologies could and should be incorporated into the system.

While still immersed in the process of creating their customized IDP system, Sugnet got a call from a Juniper Networks sales representative and a short time later found himself testing a fully functional version of the very solution the district had been struggling to develop. With a range of features even more robust than those the district had planned to implement, it was immediately apparent to Sugnet that a Juniper Networks solution was the best way to go.

The Solution

Working with Juniper reseller Apollo Information Systems, based in Los Gatos, California, San Juan Water District chose to install a Juniper Networks NetScreen - IDP 500 appliance, capable of passing gigabit traffic between the server farm and the rest of the LAN, which is on a gigabit backbone. The IDP 500 provides up to 500 Mbps of throughput and supports up to 220,000 sessions and comes with features capable of notifying select IT personnel when an intrusion event is detected and stopped. Using industry recognized stateful detection and prevention techniques, the IDP provides zero day protection against worms, Trojans, spyware, keyloggers and other malicious software, detecting and dropping direct attacks in real-time while minimizing the time and expense associated with intrusion recovery.

The district later added a Juniper Networks NetScreen-25 appliance between their LAN and Internet connection to provide denial of service (DoS) protection for their network. An integrated firewall and virtual private network (VPN), the NetScreen-25 is ideal for branch and remote offices and offers up to 100 Mbps of firewall and 20 Mbps of 3DES or AES VPN performance. It supports up to 32,000 concurrent sessions and 125 VPN tunnels, and comes with redundant VPN tunnels and VPN monitoring to help reduce failover time of VPN connections. An added feature that made it particularly appealing to the San Juan Water District IT team was its built-in dynamic routing support, which eliminates the need for manual intervention to establish new routes when a routing failure occurs.

The Benefits

Deployment of the Juniper Networks IDP and firewall solution has brought about significant improvements in the way the San Juan Water District is able to monitor, manage and secure their network infrastructure. Because of the robust functionality of the IDP device, the modest initial goals it had for their intrusion detection solution has been surpassed on every level. With the entire server farm now located safely behind the IDP and all traffic to and from the server farm monitored, the system is far more secure.

The IDP appliance's active prevention and automatic notification features have brought about the most significant positive change to the district's network security. The system's ability to detect and respond to attacks while simultaneously notifying IT personnel via pager/cell phone has helped reduce the amount of time Sugnet spends actively monitoring their systems while providing them with greater visibility into the current state of the network. Sugnet illustrates the positive impact Juniper Network products have had on his work when he says, "Because of Juniper's IDP, I sleep better at night knowing that our critical systems are protected."



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