SD-WAN APPLICATION SECURITY THROUGH DPI INTELLIGENCE

R&S®PACE 2 is featured in a smart SD-WAN solution by Nubewell that also delivers security for cloud and branch office connections

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WAN technology, used to connect enterprises to the cloud and branch offices, is quickly being supplanted by software-defined WANs, either conventional or hybrid. Nubewell, a major provider of cybersecurity solutions, has now embedded the deep packet inspection (DPI) software R&S®PACE 2 by Rohde & Schwarz into their next generation of secure Smart SD-WAN offerings.

SUMMARY

Business area
▶ IT security vendor, providing SD-WAN security, inline traffic management, next-generation firewalls and SSL interception

Challenge
▶ Securing company policies for traffic flows (allowed and blocked traffic) and eliminating obfuscation and network abuse

Solution
▶ Embedding the DPI engine R&S®PACE 2 within Nubewell's Smart SD-WAN solution to facilitate high throughput cybersecurity network functions

Benefits
▶ Enhanced SD-WAN security with reduced time to market as licensing leading-edge technology enables Nubewell to focus on core competencies

CHALLENGE
Providing DPI-enhanced security across SD-WANs for cloud and branch offices

Today's enterprises are moving rapidly to implement software-defined WANs (SD-WANs) which use the Internet to address the twin challenges of high cost and limited flexibility of traditional WANs. Developers of SD-WANs today face multiple challenges. One of these is ensuring that modern networks are fully enabled to manage company traffic policies to allow or block traffic. A second one is managing the traffic flows that are obfuscated. Obfuscation is the use of advanced methods to hide potentially disruptive protocols or applications. These challenges require sophisticated traffic monitoring and DPI.

To deal with these specific issues, Nubewell—a leading Indian cybersecurity provider—developed a Smart SD-WAN featuring high-throughput network functions. The solution utilizes a centralized WAN for easier deployment, control and monitoring, while security is addressed with network analytics, traffic management and traffic monitoring enabled by DPI. DPI is based on the advanced DPI engine R&S®PACE 2 from Rohde & Schwarz. Nubewell's next-generation hardware uses this solution to enable company firewall policy (allowing or blocking traffic) and eliminating network misuse by employing DPI, encryption, scheduled packet processing, and control path operation.

Nubewell relies on R&S®PACE 2—the industry leading DPI software, including behavioral, heuristical, and statistical analysis—to classify network protocols and applications and extract metadata in real time. With the power of Nubewell's Smart SD-WAN and seamless DPI resourcing from R&S®PACE 2, the challenges of company security policies can be addressed and network misuse resulting from obfuscation can be eliminated with Nubewell's conventional or hybrid SD-WANs.

SOLUTION

Reliable, real-time DPI classification to secure SD-WAN networks

R&S®PACE 2 provides highly reliable classification of thousands of protocols and applications with custom metadata extraction. The advanced metadata extraction capabilities deliver the network intelligence needed to make informed and timely decisions that directly affect network security and reliability.

Nubewell integrated the advanced DPI engine R&S®PACE 2 into their innovative Smart SD-WAN solution. In doing so, the company can rely on the best-performing DPI software on the market to accurately classify network traffic while concentrating their efforts on developing their own hardware and software architectures more efficiently. Other reasons for choosing R&S®PACE 2 were the product's reliability, easy integration, and excellent service and support.

Without the R&S®PACE 2 DPI software library, it would be difficult to accurately classify even well-known applications without inserting significant latency, as per the expectation of Nubewell's hardware requirements and throughput. The design and build effort was streamlined with the experience of the team at Rohde & Schwarz—leading to an early launch of the new Smart SD-WAN.

Nubewell's SD-WAN solutions simplify WAN architecture to provide cloud application optimization and acceleration with traffic steering and shaping for large enterprises and even Work-from-Home (WFH) users. With the ability of R&S®PACE 2 to identify and analyze traffic, Nubewell's clients now benefit from high-speed DPI-based classification, combined with Nubewell's HFA engine—the first in the industry to create real-time custom-defined signatures interactively using a custom GUI.

The benefits of licensing R&S®PACE 2

- ▶ Weekly signature updates
- ▶ Highest classification accuracy on the DPI market
- ▶ Classification of encrypted and obfuscated traffic
- ▶ Fast performance with 14 Gbps per core on average
- ▶ Ultra small memory footprint
- ▶ Flexible SLAs to fit customer needs
- ▶ Maximized ROI and reduced TCO through licensing leading-edge OEM software

RESULT

Partners enabling the next generation of secure SD-WAN solutions

R&S®PACE 2 enables Nubewell's Smart SD-WAN to identify all types of applications with Nubewell's hardware and software to serve the needs of enterprises migrating to the cloud. With adoption statistics as a positive indicator, Nubewell's secure SD-WAN has rapidly gained recognition in Southeast Asia, including India, and the Middle East.

Nubewell was able to address the dual challenges of ensuring company policies for traffic (allowed or blocked) and eliminating obfuscation by using the R&S®PACE 2 DPI feature set. The DPI solution delivers a mature set of capabilities that helped Nubewell to develop solutions that enable firewall policies as well as provide complete visibility, classifying both protocols and applications in IP-traffic. With weekly signature updates available from Rohde & Schwarz, they can continue to handle these issues dynamically in the future.

Nubewell decided on the Rohde & Schwarz DPI solution based on its professional quality and the close and versatile working relationship between the companies. Running seamlessly on Nubewell's Octeon core, R&S®PACE 2 integration was smooth and the results exceeded performance expectations. Over the past decade, Nubewell notes that Rohde & Schwarz has always, even in the most challenging times, provided timely assistance. This project was no exception. With R&S®PACE 2 and the Rohde & Schwarz team at their side, Nubewell was able to enter the SD-WAN market swiftly, securely, and successfully.

> "We appreciated Rohde & Schwarz' support from our startup days and we knew that there were others globally working with their solutions. For us, this meant that Rohde & Schwarz' DPI library would keep growing, enabling us to secure SD-WANs proactively and in real time. Our investment in R&S®PACE 2 has paid off early because of their knowledge of DPI and the high-value support that Rohde & Schwarz provides."
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> **Ramakrishnan Govindhan, Co-Founder and Chief Technologist at Nubewell**

ipoque

ipoque, a Rohde & Schwarz company, is a global leader in the world of network analytics software. We leverage our deep domain expertise to create customized software solutions that empower our customers to transform data into intelligence. As a subsidiary of Rohde & Schwarz, we take advantage of potential synergies.

Rohde & Schwarz

The Rohde & Schwarz technology group develops, produces and markets innovative information and communications technology products for professional users. Rohde & Schwarz focuses on test and measurement, broadcast and media, cybersecurity, secure communications and monitoring and network testing, areas that address many different industry and government-sector market segments. Founded more than 80 years ago, the independent company has an extensive sales and service network in more than 70 countries.

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