Enhancing wireless connectivity for mission-critical applications

RĀJANT

By Robert Schena

Rajant's Kinetic Mesh

At a time of ever-increasing technological complexities, Rajant Corporation's suite of products simplifies the complicated with out-of-the-box, ready to deploy networking and integrated smart devices. Rajant's legacy Kinetic Mesh® is unlike other wireless options for its ease of use, no infrastructure required, and the ability to completely mesh and backhaul over any network. Unlike high-risk possibilities, such as private LTE, Rajant is more affordable. With built-in redundancies, extremely low latency, and the ability to scale the network to meet the exact needs of any operation, Rajant Kinetic Mesh® is helping businesses maintain mission-critical operations that depend on reliable and capable continuous connectivity anywhere.

With automation becoming pervasive, combined with a demand for mobility and edge computing, administrators need the reassurance that equipment, applications, and personnel will experience minimal downtime and never be out-of-range of a dependable connection. Rajant BreadCrumbs® vary in design from lightweight to rugged to weather-resistant, meeting the demands of whatever environment they are deployed in.

Through the talents of our encryption team, products like our newly released RiSM make networks secure from bad actors looking to exploit vulnerabilities in communications. Any data deemed critical to your operation can and will be protected at a FIPS level. The RiSM is a commercially available Hardware Security Module (HSM) that allows users to meet the latest NIST standards for encryption (FIPS 140-3) and requirements for protecting Sensitive But Unclassified (SBU) and Controlled Unclassified Information (CUI) data.

No industry wants the negative headlines or risk associated with a breach or ransom attack. By protecting data with RiSM, users benefit by limiting access to cryptography keys to just crypto officers. Again, RiSM is easier to set up than alternative HSM solutions and more reliable than software solutions requiring a multi-tunnel approach. In addition, encrypting and decrypting data with RiSM instead of a PC or network device frees up processing power on those devices, improving CPU and network speed.

Traffic monitoring and DPI

Traffic visibility is crucial for any connectivity service, and is a key component of our Kinetic Mesh® solution. Traffic visibility enables organizations to monitor, analyze, and manage network traffic effectively. For example, deep packet inspection (DPI)-based packet capture tools allow users to isolate and inspect network traffic in real-time. This provides detailed insights into packet headers, payloads, and protocols, enabling network administrators to identify potential issues, analyze performance, and troubleshoot network problems. By aggregating and summarizing flow data, it delivers insights into network usage, traffic patterns, and bandwidth consumption, helping organizations optimize network performance and resource allocation.

Additonally, by collecting data from network devices and systems, DPI provides visibility into network health, uptime, and utilization, helping organizations detect anomalies and proactively address issues before they impact operations.

Similarly, DPI-based intrusion detection and prevention systems (IDS/IPS) help organizations detect and mitigate security threats by monitoring network traffic for suspicious

activity and known attack signatures. By analyzing packet payloads and traffic flows, these systems can identify and block malicious traffic, helping to enhance network security and protect against cyber threats.

In 2001, Robert Schena co-founded Rajant Corporation, the pioneer of Kinetic Mesh® Networks. Schena has successfully grown this once-small startup in Wayne, Pennsylvania, to have a strong international presence in a broad array of markets, including military, industrial, transportation, utilities, and telecommunications. Schena was appointed to the State of Pennsylvania's Ben Franklin Technology Board by Governor Ridge in 2001, reappointed by Governor Rendell in 2004 and 2008, and reappointed by Governor Wolf in 2016.