

Highway 9 Networks Simplifies Private 5G

EMA IMPACT BRIEF



Enabling Enterprise IT with a Mobile Cloud for Hardware-Agnostic Private 5G

Highway 9 Networks emerged from stealth mode with its mobile cloud — a hardware-agnostic private 5G networking solution for enterprises. Founded by a team of former VMware executives and engineers who developed the company’s 5G telco cloud solution, Highway 9 aims to demystify private 5G solutions for enterprises IT organizations by simplifying deployments and integrating its technology with other aspects of IT architecture and operations.

Highway 9 came out of stealth with at least three customers: the Massachusetts Institute of Technology (MIT), an unnamed Detroit-based real estate developer, and a major carmaker. “You won’t need people to operate this,” said CEO and founder Allwyn Sequeira. “Customers are just using their existing Wi-Fi engineering team to manage it. None of them hired engineers.”

Highway 9 Mobile Cloud

The Highway 9 Mobile Cloud solution involves a three-layer architecture. In the hardware layer, the company tests, qualifies, and resells third-party cellular radio equipment designed for enterprise deployments from multiple manufacturers. The company’s goal is to enable an existing IT organization’s Wi-Fi team to deploy this hardware as they would their Wi-Fi access points.

The company’s technology development focuses on the other two layers of private cellular architecture: the mobile edge and mobile services, both of which are deployable on-premises or in the public cloud. The mobile edge is a distributed, scale-out packet core for 4G and 5G networking designed to integrate with existing IT architecture and operational tools. For instance, Highway 9 enables network teams to extend their existing VLAN and VXLAN network segmentation schemes into the private 5G network. It also integrates with existing core network services, like DNS, DHCP, and IP address management.

The mobile services layer enables network management control. From this centralized management console, network managers can create virtual mobile zones that allow devices with eSIM cards to connect from anywhere. It also offers comprehensive operational observability.

EMA Perspective

Enterprise interest in private 4G/5G networking solutions is growing for a variety of reasons. First, employees are increasingly mobile, using smartphones and tablets in corporate environments. However, public 4G/5G networks often perform poorly in indoor enterprise environments. A private solution enables these devices and boosts employee productivity.

Private cellular networks are also complementary to existing Wi-Fi networks. They can provide reliable connectivity to critical infrastructure for manufacturing, oil and gas, public safety, and other industries. Private 5G offers several advantages over Wi-Fi for such use cases, including lower latency connections, high-density concurrent connection capacity, and quality of service tiers via network slicing.

However, Enterprise Management Associates (EMA) research found that IT organizations perceive four top challenges with private 5G.¹

1. **Finding a trusted vendor:** Highway 9 was founded by a team of VMware veterans with a track record of developing networking solutions for both enterprises and service providers.
2. **Integrating with existing network architecture:** The company's solution is designed from the ground up to integrate with enterprise networks, including network security controls, network segmentation, and core network services.
3. **Technology complexity:** Highway 9's early track record of delivering solutions that existing network teams can implement on their own suggests that they have designed a solution that reduces private 5G complexity.
4. **Lack of monitoring tools:** The company integrated comprehensive observability and control into its mobile services layer, and it has plans to develop AIOps capabilities to optimize and automate operations.

Given the company's early focus on addressing the key challenges with private 5G solutions, Highway 9 is a promising new entrant in this expanding market.

¹ EMA, "Network Management Megatrends 2022," April 2022.

About EMA

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