FORTINET | HIGHWAY 9 NETWORKS

Fortinet and Highway 9 Mobile Cloud for Private 5G/LTE

Executive Summary

The Fortinet and Highway 9 Private 5G/LTE solution delivers seamless and secure connectivity for highly dynamic enterprise environments. By integrating Fortinet FortiExtender 5G/LTE gateways with the Highway 9 Mobile Cloud, organizations can create virtual mobile zones that extend their network, security policies, and connectivity to devices across factory floors, warehouses, and other industrial settings. The result is a simple, easy-to-deploy solution that provides "everywhere mobile coverage" to power smart manufacturing, logistics, and more.

The Challenge

While enterprise networks can benefit immensely from private 5G/LTE deployments, there is no end-to-end solution on the market that allows for single-pane-of-glass management for uplink connectivity, radio and private AP equipment, and client and LAN access. Instead, enterprises are left with a disjointed solution across multiple management consoles, introducing risk, complexity, and even shadow IT into their network. Therefore, there is a sincere need for an end-to-end enterprise private 5G/LTE solution where all components of the IT stack are managed simply and seamlessly.

Joint Solution

Fortinet and Highway 9 have partnered to address the access challenges facing today's enterprise networks. The integration of Fortinet FortiExtender into the Highway 9 Mobile Cloud, enabled through the Fabric-Ready Program, delivers a comprehensive private 5G/LTE infrastructure that scales to meet the needs of even the largest organizations.

Solution Components

FortiExtender 5G/LTE gateways: Fortinet's broadband wireless WAN gateways support 5G and LTE and can act as secure uplinks for the Highway 9 mobile network. FortiExtender gateways can be deployed at the network edge, in vehicles, or anywhere cellular connectivity is required.

Highway 9 Mobile Cloud: A cloud-native platform that provides the control plane, user plane, and management capabilities for the private 5G/LTE network. The Mobile Cloud enables the creation of virtual mobile zones, seamless IT/OT integration, and AI-powered insights.

Solution Components

- Highway 9 Mobile Cloud
- Fortinet FortiExtender 5G/LTE gateways

Solution Benefits

- Simplified deployment and management of private cellular networks
- Expanded connectivity and coverage in security-sensitive environments
- Detailed logging, reporting, and AI-powered insights for the mobile infrastructure
- Seamless integration with existing enterprise network and security policies

FORTINET FABRIC-READY
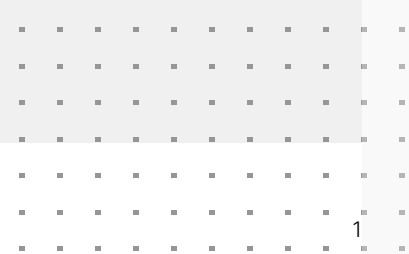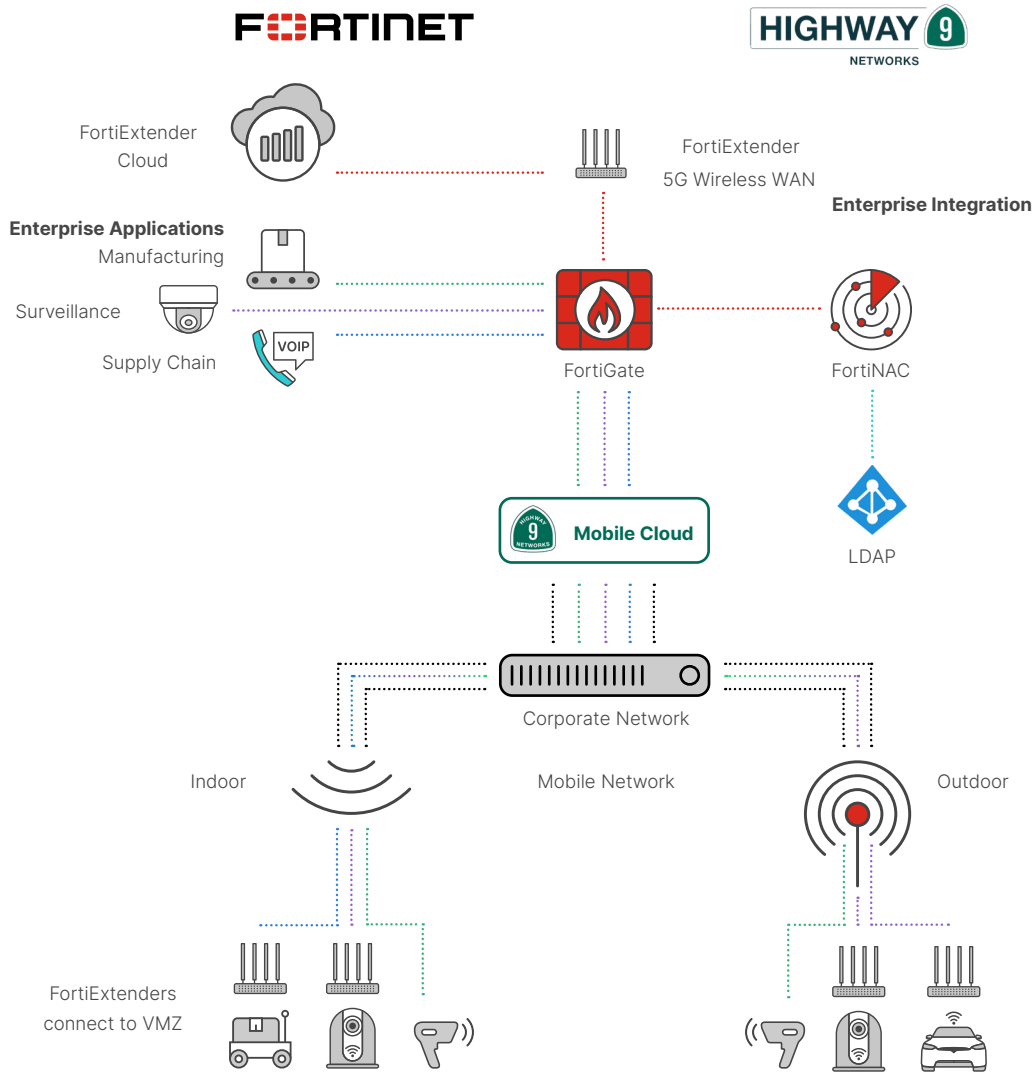
Solution Integration

Figure 1: Fortinet and Highway 9 Mobile Cloud for Industry 4.0

The diagram above shows the Fortinet and Highway 9 solution in action in a combined warehouse and manufacturing environment. FortiExtender connects devices to three Virtual Mobility Zones (VMZ) provided by Mobile Cloud.

Joint Use Cases

Manufacturing

AGVs are deployed in industrial facilities to move everything from individual boxes to whole containers. Connecting these vehicles via FortiExtender to the Automated Guided Vehicle (AGV) Telemetry Virtual Mobility Zone delivers reliable mobility and the flexibility to extend the network directly to the myriad sensors and control plane elements in every AGV.

Video Surveillance

FortiExtender gateways are deployed to enable secure access and extension of the enterprise LAN to indoor and outdoor IP cameras. These cameras must be directly reachable from the video analytics application on the LAN. The surveillance VMZ quickly extends the security VLAN directly to the IP cameras connected via FortiExtender. Everywhere mobile coverage and FortiExtender mean cameras can be placed wherever needed.

Supply Chain

Connectivity for inventory management devices must extend from the shop floor to the shipping yard. While Citizens Broadband Radio Service (CBRS) native devices are gradually added to device fleets, FortiExtender can connect Wi-Fi-only devices wherever coverage is needed. Existing customers have leveraged this capability to connect temporary tents outside their main buildings, simply and quickly extending all critical services where needed during high-volume periods.
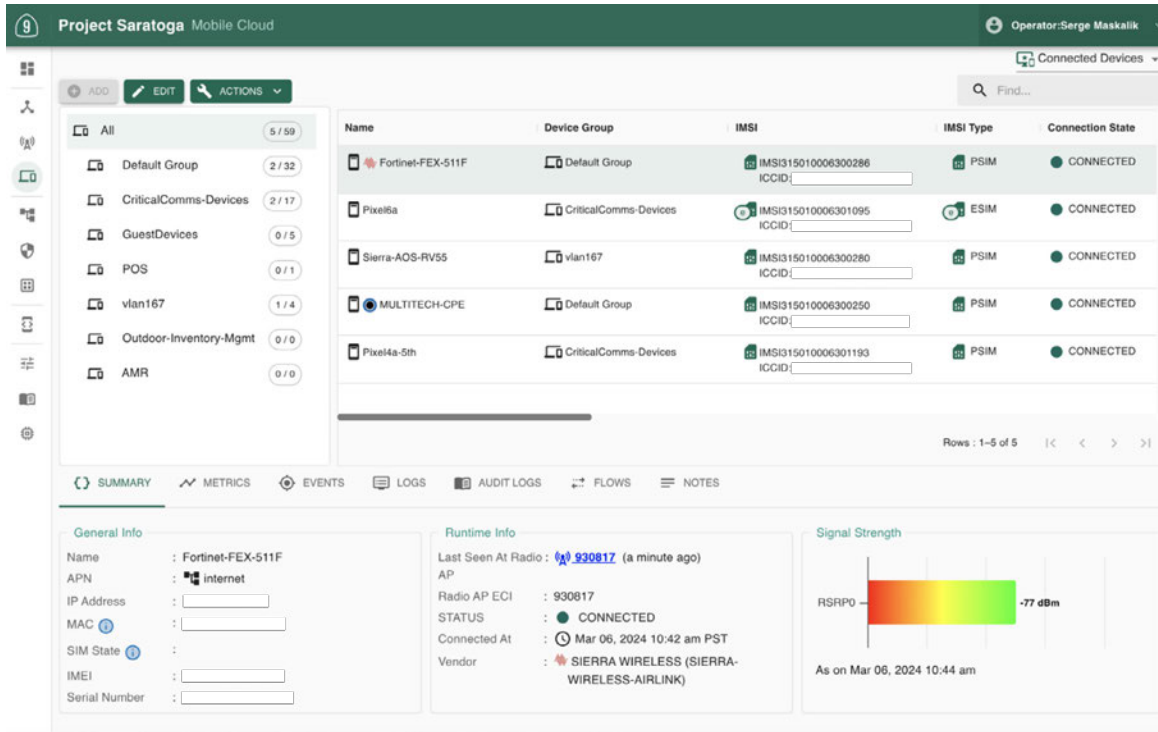

Figure 2: Real-time status of FortiExtender integrated into the Mobile Services dashboard.

About Highway 9 Networks

Founded by veteran cloud and networking innovators, Highway 9 Networks has developed a unique cloud-based approach to enterprise mobile networking that addresses everywhere, always-on mobile coverage and AI's dynamic connectivity requirements. Highway 9 Mobile Cloud leverages the key capabilities of private cellular technology and a cloud-native mobile platform to provide the consistent operations, IT integration, and ease-of-use that today's enterprises require.

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