Cybersecurity Solution for Transportation

- End-to-end IPsec Layer-3 VPN for secure inter-site connectivity
- Power over Ethernet (PoE): up to 140W (30W per port)
- Reliable WAN interface over Ethernet utilizing copper and fiber, as well as private wireless and cellular (3G/4G) connectivity as a backup link
- Authentication Proxy Access (APA) provides preconfigured task-based access

Secure, Intelligent Solutions for Transportation

Many transportation companies rely on wireless communication between their vehicles—buses, trains, metro rail and others—and their control centers to provide real-time intelligent transportation services (ITS) such as fleet management, load control, video surveillance and payment. These services significantly increase customer satisfaction through increased operational efficiency and cost savings.

However, while intelligent transportation services make operations more streamlined and cost-effective, they rely on public networks for connectivity, which greatly increases the probability of cyber incidents. Terrorist and activist groups have set their sites on critical infrastructures, including the transportation sector, to disrupt civilian life.

As far as system architecture, the network topology inside a bus, for example, is quite simple compared to an electric substation or an oil rig. The main challenge is to have reliable network for both communication and cyber protected in order to assure all data reported in real time is secure properly.

The Radiflow 3180 Secure Gateway enables keeping the network that serve the ITS safe and reliable. To isolate the services from the public network, the 3180 employs VRF (Virtual Routing and Forwarding). Once the 3180 divides the traffic, it sends it to the control center via a cellular network VPN which creates an encrypted tunnel between the bus and the control center.

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WHY RADIFLOW?

Radiflow is a recognized leader in industrial cybersecurity, offering dedicated solutions designed to meet the unique requirements of industrial infrastructures:

EXPERIENCE

Over 10 years' experience discovering and analyzing advanced persistent threats and targeted attacks, including attacks on critical and industrial infrastructure

UNIQUE METHODOLOGY

Radiflow offers a unique scan methodology to detect industrial attack vectors that can cause downtime.

EXPERTISE

Dedicated team of industrial cybersecurity experts who understand the colliding worlds of automation and security.

END-TO-END PORTFOLIO

Radiflow offers a holistic portfolio of services and technologies, including SCADA gateways, routers and firewalls, industrial network IDS and many more.

For network resiliency, the 3180 offers dual SIM slots, which enable automatic switching between cellular providers.

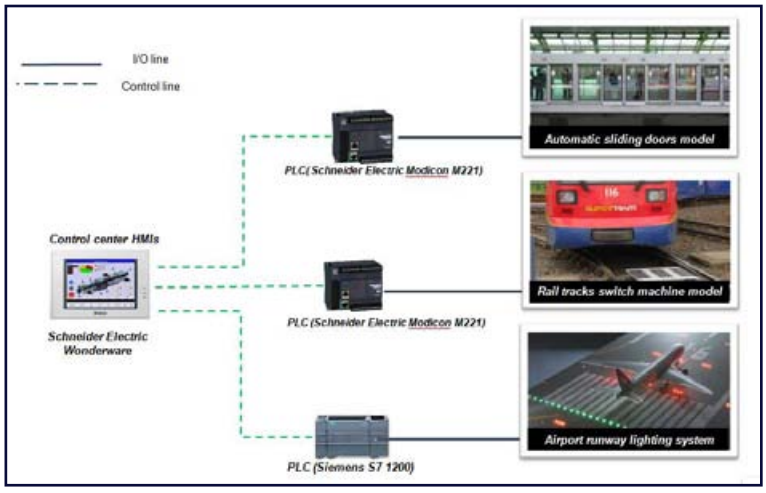
Beside network security and resiliency, the 3180 offers a host of features developed according to real-life industry requirements, including Power over Ethernet (PoE) which converts vehicles' 12V current to 48V for surveillance cameras, and forwards the data traffic to control center for video surveillance system for analysis.

One of the 3180's most useful features for vehicles is the Authentication Proxy Application (APA). The APA enables a secure connection from a remote location to payment boxes, cameras, GPS etc, allowing for easy device maintenance such as software upgrades, export logs from the devices.

Finally, at the end of each day when the bus parked and the engine is off, the 3180 stays on (using low power) for a few more minutes, to synchronize data with the control center.

Features

- End-to-end IPsec Layer-3 VPN for secure inter-site connectivity
- Power over Ethernet (PoE): up to 140W (30W per port)
- Reliable WAN interface over Ethernet utilizing copper and fiber, as well as private wireless and cellular (3G/4G) connectivity as a backup link
- Authentication Proxy Access (APA) provides preconfigured task-based access
- Detailed log of all user activity within a remote access session for compliance and auditing
- Virtual routing and forwarding (VRF) for traffic separation for service
- Support for Ethernet and Serial interfaces, for connecting modern and legacy devices including protocol gateway functionality
- Ruggedized security gateway hardware compliant with E-MARK requirements for operation in harsh environments



Typical deployment diagram

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