RAD

Your Network's Edge®

Secure Industrial IoT Backhaul

The Age of Digital Transformation

The industrial internet of things (IIoT) is set to enable digital transformation across all industrial and critical infrastructure sectors. By 2020, IIoT is expected to be a $225 billion market[1], encompassing millions of highly distributed intelligent devices:

Power Utilities
- Smart Grid
- Re-closers
- Load breakers
- RTUs/SCADA
- Secondary substations
- Meters concentrators

Gas Utilities
- Flow meters
- Volume/pressure/level sensors

Water Utilities
- Flow control
- Quality
- Leakage detection
- Pump/valve control
- Meters

Transportation
- Traffic control
- Info boards
- Kiosks

Connected Industry
("Smart Factory/Industrie 4.0/Society 4.0")
- Production floor monitoring
- Remote PLC control
- Automated quality control

Smart Cities
- Smart parking
- Traffic monitoring & control
- Bike sharing
- Smart lighting
- Public safety
- Payment kiosks (PoS)

This signifies a revolution in the industrial world, which is now shifting its focus to increased efficiency and lower costs using smart edge devices and Big Data analytics.

[1]Source: http://www.ioti.com/industrial-iot-iiot/why-edge-computing-iiot-requirement

The challenges

Cyber Security Threats

"Intelligent" doesn't equal "protected". IIoT devices' connectivity over unreliable public networks (e.g., the internet) creates countless vulnerability points for hackers to exploit, with potentially disastrous results.

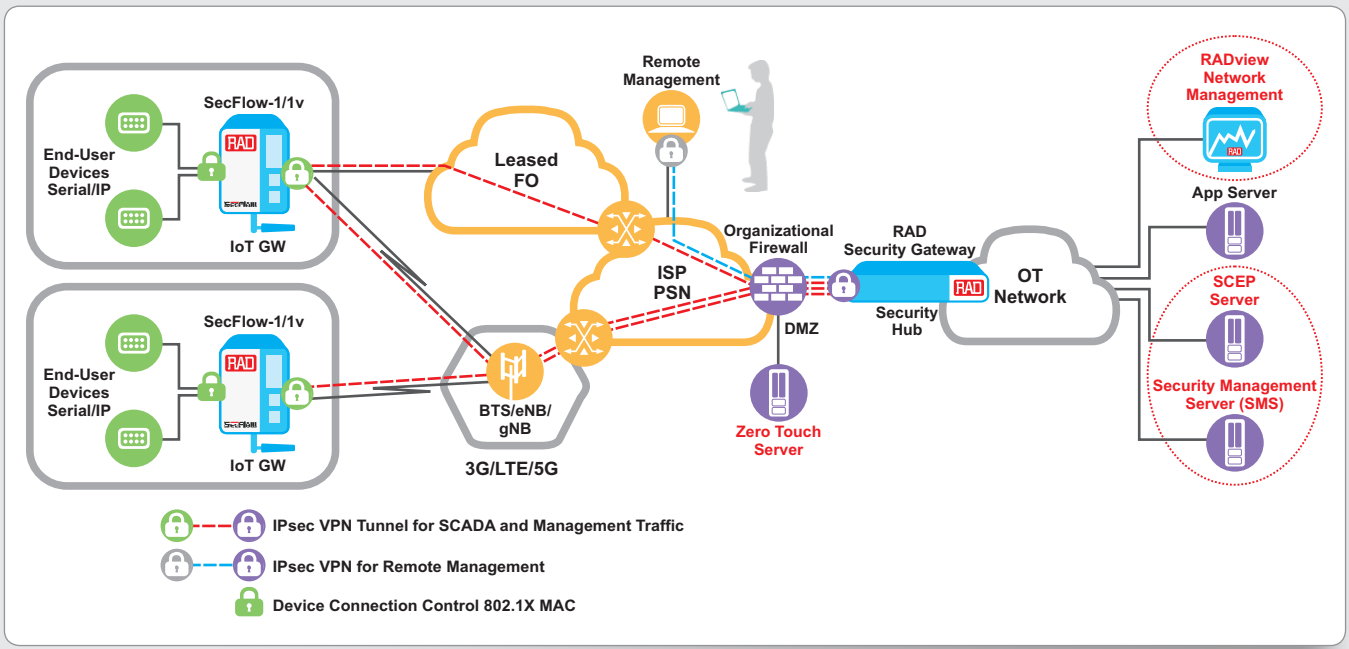
Operational Complexity

High operational costs for provisioning and maintenance/field replacement of thousands of edge devices.

Data Usability

Massive data transmissions to and from IIoT devices in remote sites over diverse network connections in a timely manner is challenging.
That, together with the need for actionable information (i.e., real-time analytics), has led to the growing use of edge/fog computing. Finding the right edge/cloud balance is key to optimize asset performance and costs.

» RAD's Secure Industrial IoT Backhaul Solution



» RAD's Industrial IoT Backhaul Solution

RAD offers a comprehensive solution for secure networking for Smart Cities, Connected Industry, Smart Transportation, Smart Energy (generation, transmission and distribution), and more, to allow fast, secure and economical deployment of thousands of new remote IIoT sites with always-on reliability and mission-critical protection.

» Key Benefits

1

Extensive built-in cyber security:

End-to-end secure VPN tunnels over private and public networks using IPsec with SCADA-aware firewall and encryption. Advanced security includes, among others, automated PKI (SCEP, Certificate Authority, X.509) and stateful firewall, as well as intrusion prevention and detection system (IPS/IDS) for controlling and logging SCADA commands.

2

Always-on communications:

Seamless connectivity over any access, such as fiber optics, private wireless and cellular networks, including LTE and future 5G. In addition to industrial-grade ruggedized enclosures for outdoor installations in harsh environments, the solution allows transparent delivery/conversion of SCADA protocols, while VPN redundancy, dual modem and dual SIM, as well as other redundancy options ensure complete network resiliency.

3

Simplified operations:

Secure zero-touch configuration for easy and automated installation and provisioning. This enables fast deployment of thousands of IIoT gateways while reducing error potential and, thus, lowering total cost of ownership (TCO) for deployments and field replacements.

4

Complete control:

Security event collection with geographical view of cyber threat sources, configurable dynamic update and a searchable database with RADview's security information and event management (SIEM).

5

Fog/edge applications:

IIoT gateways with virtualization infrastructure enable select data processes to be pushed to the edge to reduce bandwidth requirements, minimize latency and maximizing efficiency.

SecFlow

Ruggedized SCADA-Aware Gateway/Switches and Routers

SecurityGateway

VPN Aggregator, Router and Firewall

RADview

Network Management, Firewall Configurator and Security Management (SIEM)

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» For more information visit www.rad.com