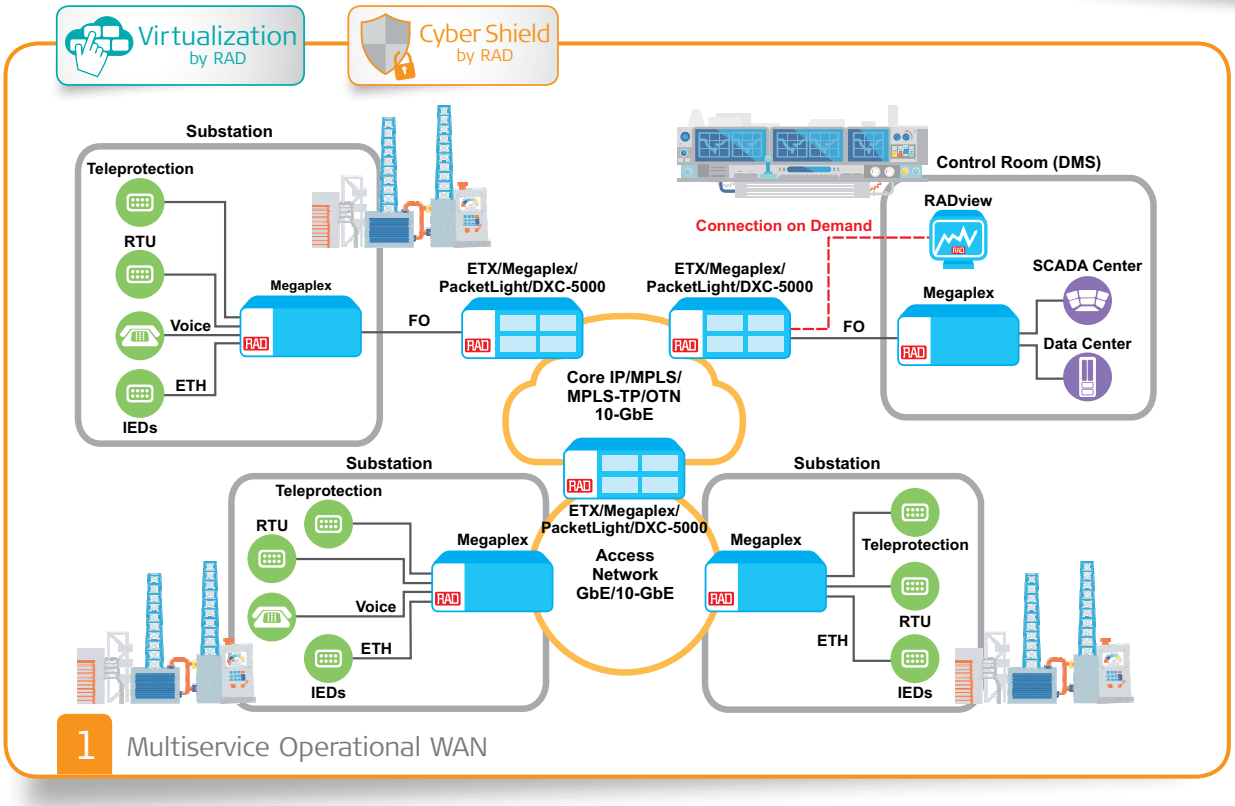
Utilities

Power Utility Communications

Application Page

Service Assured Networking Solutions



Your Benefits:

- Powerful cross-generation TDM and Ethernet capabilities, including TDM DS0 cross connect and SDH/SONET, Gigabit Carrier Ethernet with OAM and assured QoS, TDM pseudowire, Ethernet over NG-PDH/SDH/SONET, IP/MPLS, MPLS-TP and OTN/DWDM
- Complete cyber attack prevention suite, including encryption, authentication, authorization, and auditing
- Easily configurable connectivity of all serial automation and Teleprotection devices to either SDH/SONET network or to a packet network
- Supports analog and digital data and voice devices, as well as Ethernet IEDs, with versatile rates from RS-232 up to STM-4/OC-12 or GbE
- Guaranteed smooth migration to PSNs based on hybrid design for reduced latency and better resiliency
- Future-ready with virtualization capabilities for adding new applications (security, router, SCADA) using RAD's innovative x86 D-NFV module

Products Included in this Solution:

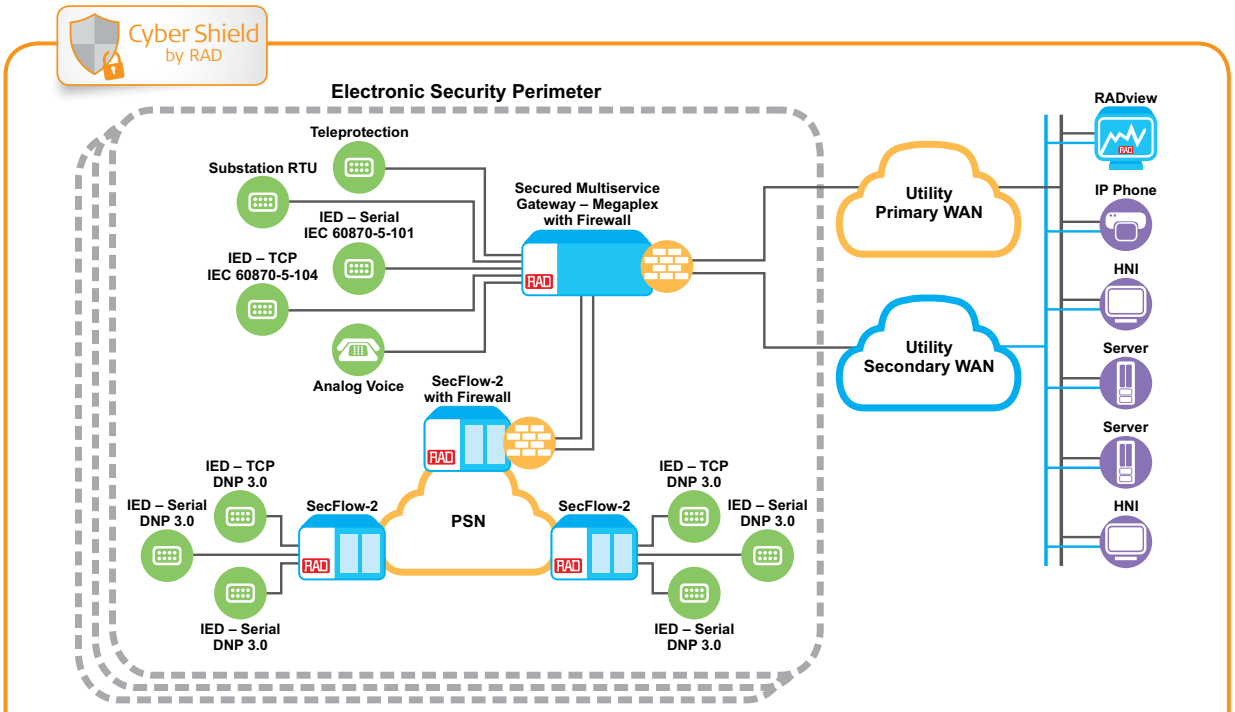
ETX-5
Ethernet Service Aggregation Platform

Megaplex
Next-Generation Multiservice Networking Nodes

DXC-5000
High Capacity Hybrid Cross Connects

RADview
Management and Domain Orchestration

Power Utility Communications



Your Benefits:

- Support Ethernet-based IEC 61850 substation communications for mission-critical automation traffic within the substation and between SCADA control centers
- Enable co-existence of serial-based RTUs and Ethernet IEDs with full redundancy over various topologies using fiber optic rings, 3G/4G cellular modems and external radio systems
- Comply with IEC 61850-3 and IEEE 1613 environmental standards
- Built-in router enables seamless communication of IP SCADA traffic to both old and new RTUs by converting IEC-101 and IEC-104, or Modbus serial and IP, DNP 3.0 and others
- Enable secure, dedicated networks over fiber and/or radio links using IPsec encryption and distributed security SCADA firewall suite

Products Included in this Solution:

Megaplex-4
Next-Generation Multiservice Networking Node

Megaplex-1
Multiservice Pseudowire Access Gateway

SecFlow-2
Ruggedized SCADA-Aware Ethernet Switch/Router

RADview
Management and Domain Orchestration

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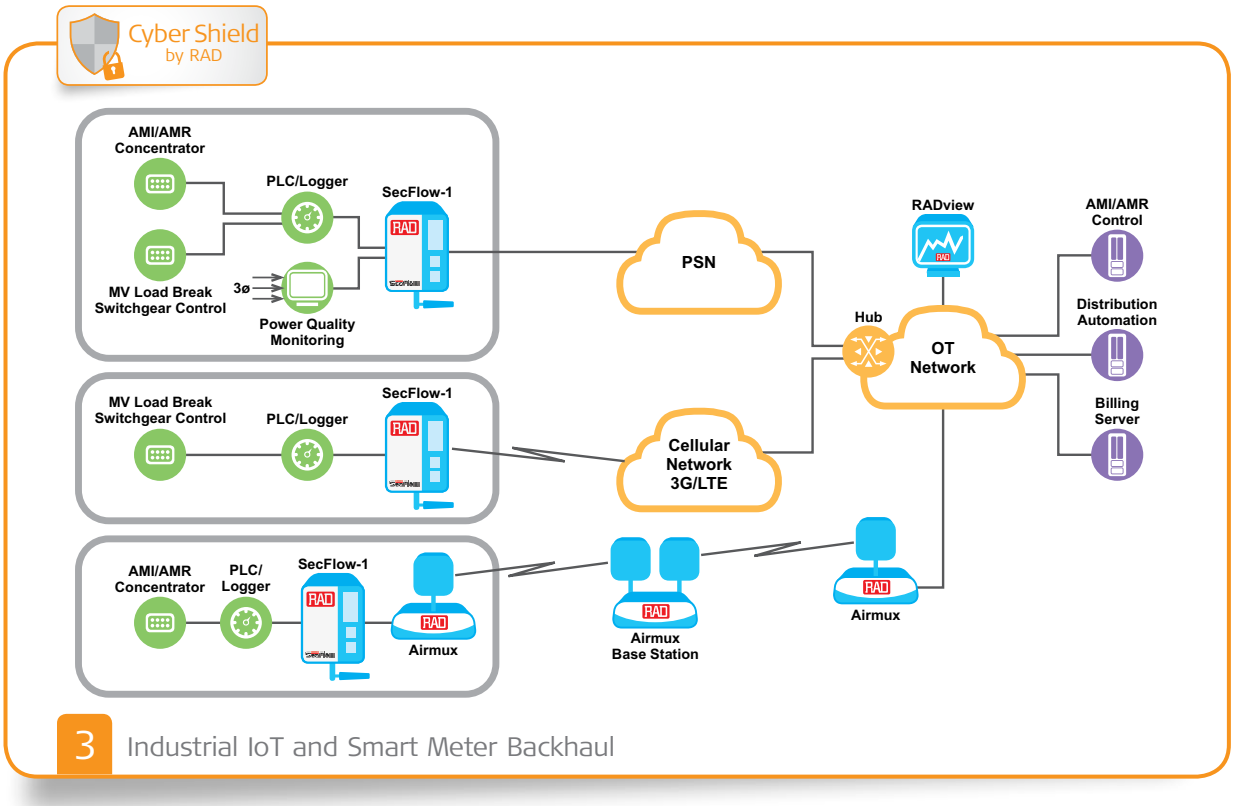

Service Assured Networking Solutions

Your Benefits:

- A comprehensive solution addressing communications to secondary substations, metering and automation network integration, and cyber security
- Complies with IEC 61850-3 and IEEE 1613 environmental standards for outdoor installations
- Seamless communications over fiber optics, radio links, 2G/3G/LTE cellular links and leased lines from a telecom service provider
- Integrated IPsec encryption
- Point-to-multipoint radio connectivity supports high capacity mission-critical traffic over licensed and unlicensed sub-6 GHz bands, with dedicated bandwidth allocation and service level agreement (SLA) per subscriber
- Transparent delivery of SCADA protocols

Products Included in this Solution:

Airmux-5000
Point-to-Multipoint Broadband Wireless Access

RADview
Management and Domain Orchestration

SecFlow-1
Ruggedized SCADA-Aware Gateway

Utilities

Power Utility Communications

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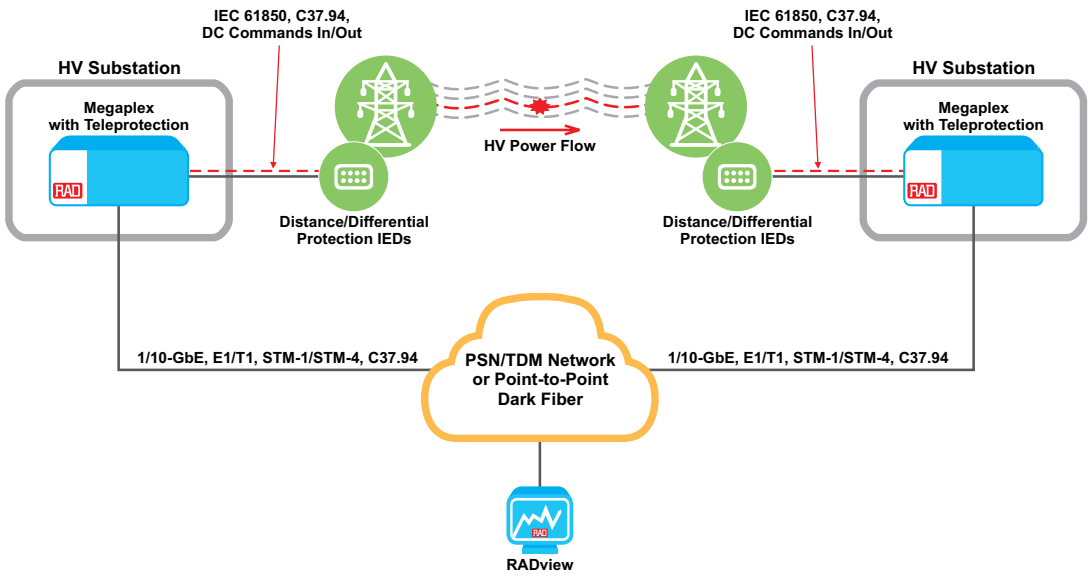
Service Assured Networking Solutions

Cyber Shield by RAD



4 Distance and Differential Protection Communications

Your Benefits:

- Single product supports both distance trip command relays and differential Teleprotection delivery over TDM or IP network
- Wide range of Teleprotection interfaces — serial, G.703 co-directional, E&M, C37.94 — to extend differential Teleprotection relay communication over any infrastructure
- Reduce CapEx and OpEx by using a single-box solution for all substation communication services, including voice, data, automation, and Teleprotection signals
- Redundancy hierarchy from the Teleprotection interface up to the communication link ensures 0 (zero) msec hardware protection
- Sub-2 msec end-to-end delay over PSN
- Tested interoperability with most Teleprotection contact relays from leading vendors (such as Alstom, ABB, Siemens, SEL, Schneider)
- Distance protection complies with IEC 60834

Products Included in this Solution:

Megaplex-4
Next-Generation Multiservice Networking Node

Megaplex-1
Multiservice Pseudowire Access Gateway

RADview
Management and Domain Orchestration

RAD
Your Network's Edge

www.rad.com

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