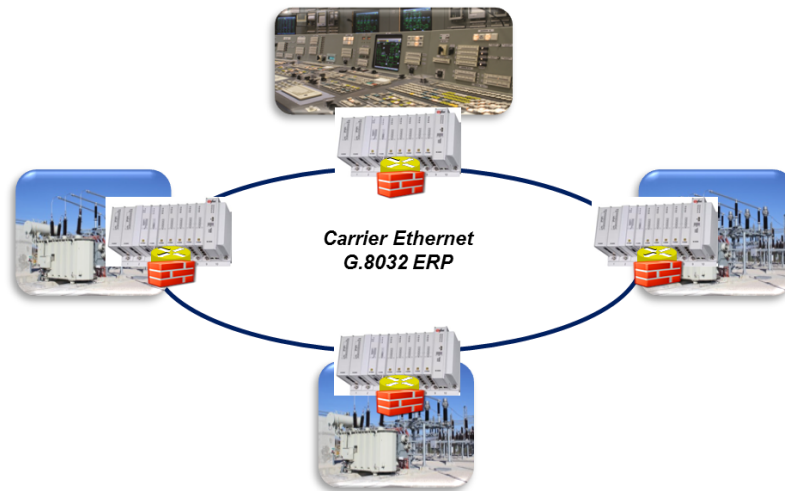


Substation WAN

Connecting the substations over a Robust Ethernet Network

Many Power Distribution Operators (DSOs) prefer the Ethernet technology for the operational backbone between the substations instead of a complex IP/MPLS design. Such an Ethernet backbone should use a robust ring topology with IP segmentation per site to ensure a reliable connectivity. Together with the network robustness protection from cyber-attack such as IP spoofing or man-in-the-middle is necessary for the network stability. Radiflow's switches/routers are the network infrastructure and for this reason the capability to protect with distributed deep packet inspection firewall is enabled without transmit the traffic to external server.



The Radiflow 3180 and 3700 secure switches are ideally suited for deployment as a robust Ethernet backbone between the substations:

- **Ruggedized switches** designed for installation in harsh substation environmental conditions in compliance with IEC 61850-3/IEEE 1613 requirements
- Support **G.8032 Ethernet Ring** with 50 mSec switchover time
- **IPsec VPN** for inter-site secure connectivity
- Validation of the SCADA behavior per user using **per-port DPI firewall**
- **Detailed log** of user activities for auditing
- Support **Ethernet and Serial interface** to connect new and legacy devices
- Support **IEEE 1588 Precision Time Protocol** for clocking automation equipment