Protect Critical Fiber Links and Ensure Rapid Fault Location and Recovery

## ONMSi Remote Fiber Test and Monitoring of Electric Power Operator Fiber Infrastructure

Electric power utility operators employ extensive fiber optic networks for mission critical electric grid applications such as tele-protection, monitoring of critical infrastructure or equipment, and data acquisition. Damage or degradation of the fiber network can directly impact the reliability and resilience of the electric grid. It is therefore essential to rapidly identify, diagnose, locate, and resolve faults on the network. Security of grid infrastructure and associated communications systems is also a critical concern. Inexpensive taps give access to 100% of in-flight data. Finally, some utility operators can lease dark fiber to generate additional revenue. The third parties or network operators under contracts have SLA metrics such as MTTR and availability. Failing to meet these metrics leads to penalties and excessive OPEX.

VIAVI Remote Fiber Test System (RFTS) provides an efficient solution to all these challenges by automating the process of detecting and locating faults, degradation and/or intrusion in fiber optic networks. The Utility companies can start simple with the cost-effective solution called SmartOTU and moving into more complete server solution (ONMSI) with third-party GIS integrations for more accurate and faster fault location.

Key Benefits

- Enhance overall reliability by ensuring uptime and performance of fiber network

- Improve resilience by reducing mean-time-to-repair (MTTR) by 30% when damage to the fiber network does occur through more rapid fault identification and location

- Anticipate service disruptions by detecting fiber degradation before it impacts network performance

- Eliminate erroneous truck-rolls by identifying and locating problems correctly the first time

- Reduce risk of penalties for failing to meet SLA metrics for leased dark fiber

- Leverage your current GIS investment with grid and fiber dashboards

- Protect your fiber network from unwanted tapping or disruption with anti-theft security

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VIAVI Solutions
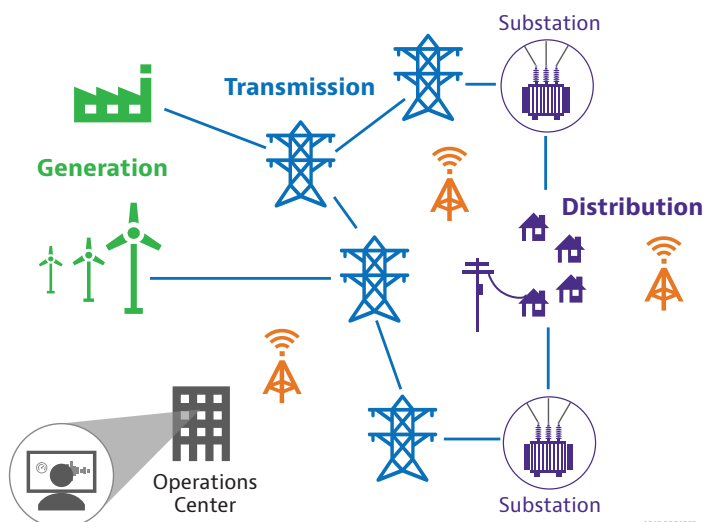
VIAVI ONMSi RFTS collects and analyzes data from remote test probes, called Fiber Test Heads (FTH) allowing comprehensive performance or fault demarcation impact diagnosis to assist with mean time to repair and SLAs by automatic fault detection with pinpoint location prior to dispatching emergency crews.

Deployed at strategic points in the network, the FTH permanently test the optical fiber network and generate alarm reports back to the ONMSi management system when faults, security breaches or security threats are detected at the fiber infrastructure level.

Two Flexible Choices: Which Fiber Test Head hardware and which software is right for me?

OTU-5000 Small, Fixed OTDR Form Factor
Up to 16 ports 1/3 RU wide and 1RU high

Optimized for rapid scan Data Center use cases or small PON exchanges, short and medium distances with 1625nm or 1650nm OTDR. Small footprint and low power consumption. Test over 4000 fibers per unit based on switch configuration.

Or

FTH-9000 Adaptive, Modular OTDR Form Factor
1 RU wide and 2RU high with many port combinations

Modular platform with multiple OTDRs to choose from, including the new tunable DWDM OTDR and high dynamic range OTDRS for long-haul and P2MP networks. Test over 4000 fibers per unit based on switch configuration.

+

SmartOTU Software for dedicated point P2P fundamental monitoring use cases, no server needed.

or

ONMSi Software for or advanced construction, activation, security, and monitoring, including PON/DAA P2MP network use cases. Offers network wide mapping, history, policy control, trending, network domains and permissions.

and

ONMSi Fiber Analytics for network wide diagnostics and reporting Server(s) required. Optional high availability setup using a redundant server in another location.
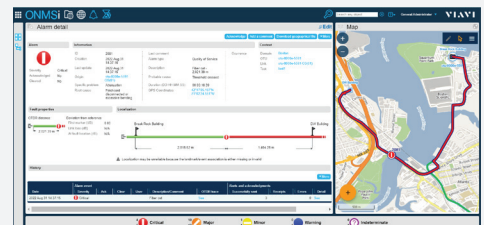
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