

Advanced Remote Monitoring

Advanced Remote Monitoring, or Link Layer Monitoring, is often used by service providers for residential and business services. Advanced Remote Monitoring offers a best-effort service with the addition of Link-Monitoring, which allows for fault detection on the physical link between two devices. When implementing Advanced Remote Monitoring services, remote devices will need to share a simple lower-level protocol that can exchange information on fault conditions, along with the status of each device on a single link.

In an Advanced Remote Monitoring application, the detection of a fault condition may be all that an operator really needs for fault isolation—therefore delivering a notification for the need to restore service. Additional information, if desired, such as the duplex status of each device on the link may also be beneficial to determine limited accompanying fault isolation. For example, Advanced Remote Monitoring equipment provides information like Far

End Fault (FEF) notifications—where the far-end device (endpoint) sends an error message to its immediate peer, that it is no longer receiving traffic. The exact cause of this fault could be several different factors including: a cable cut, faulty receiver, or faulty transmitter. Transparent Link Pass Through (TLPT) will then notify the end device of the failure over the fiber link instructing the remote device to shut down the copper port and thus notifying the local device of the failure.

Advanced Remote Monitoring uses an additional feature called Loopback, which is most commonly used as an aid in troubleshooting physical connection problems within the network. With this feature you can quickly pinpoint a problem between two end-points in different locations of a particular segment. By sending a test signal through the circuit in one location, and having the end device at the other location send the signal back through the circuit, you can confirm that the circuit is functioning correctly.

Features

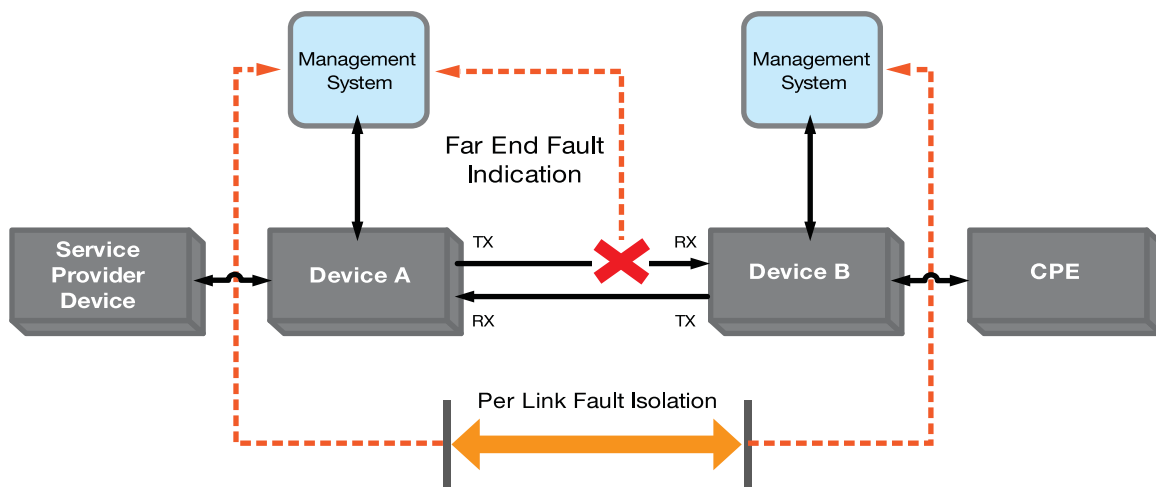
- Far End Fault (FEF)
- Error Message Transmission
- Transparent Link Pass Through (TLPT)
- Loopback
- Dying Gasp
- Automatic Link Restoration
- Remote Firmware Upgrade



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Application

A typical Advanced Remote Monitoring application requires a user who is looking to quickly isolate physical connection faults and will probably deploy this technology with connectivity assurance only—rather than with the use of a detailed Service Level Agreement (SLA).



To determine and fix the actual fault will require several steps that could involve a service dispatch, but the fault has been isolated along the transmitted path and allows the operator to focus their resources on correcting the identified fault conditions.

