



Background

This product solution is based on a testing that was carried out by one of our partners who needed to precisely synchronize OROS' OR35 noise analyzers over the Ethernet network. These noise analyzers were located in different locations; therefore, our partner aimed to seek a way to have these analyzers to start and stop at the same time. After receiving the needs of our partner and having several discussions with our partner, CTC Union identified the following considerations that should be taken into account in our partner's testing.

Considerations

- In our partner's networking design, These noise analyzers are designed to be placed in different locations. Therefore, the proposed solution needs to cope with constraints of long distance connection between the management computer and each device.
- This testing requires stable and reliable fiber optic and Ethernet transmission over the network.
- Each noise analyzer needs to start and stop at the precise time. Therefore, time synchronization is the key to the success of this noise testing.

Network Architecture

In this product solution, our partner used a daisy chain (line) network. In order to extend transmission distance from one location to another, IGS-804SM-SE switches were suggested to be used to connect devices in different locations via fiber optic connection. To deal with time synchronization concerns, IGS-804SM-SE switches, equipped with Synchronization Ethernet (SyncE) and IEEE 1588 protocols, also played an important role in facilitating phase and frequency synchronization of each noise analyzer in this testing network.



