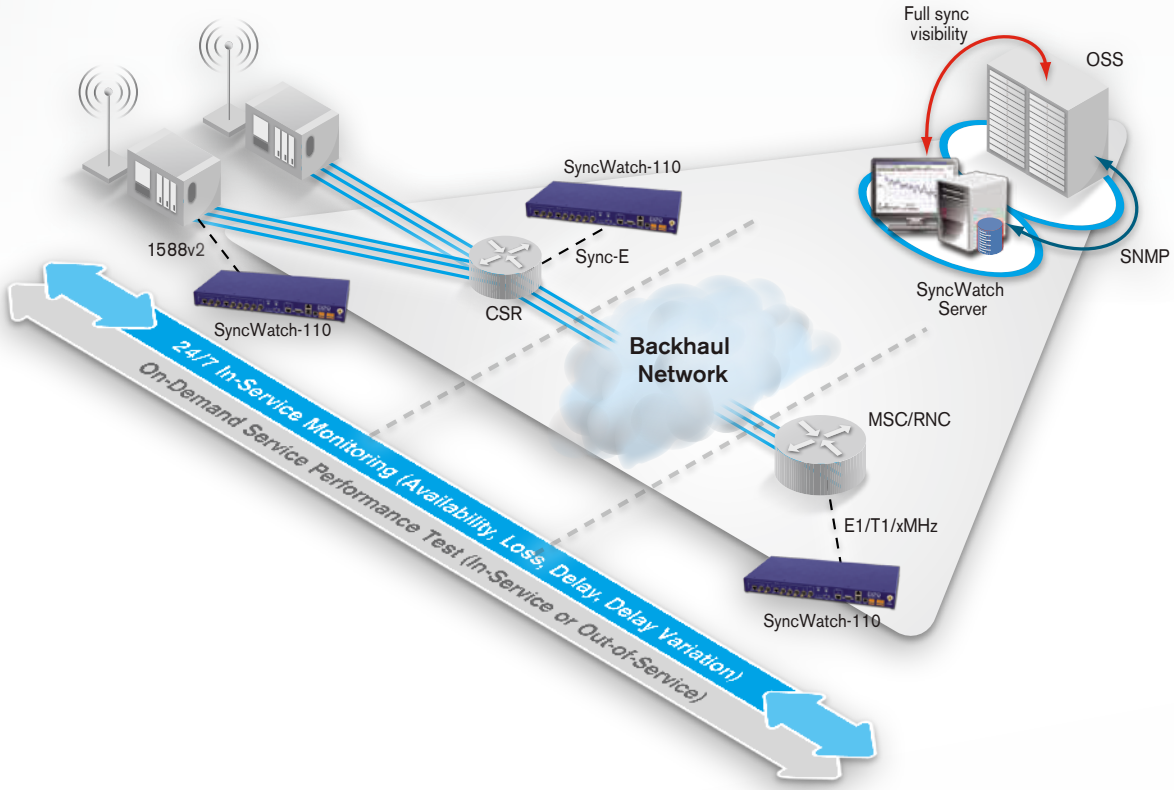
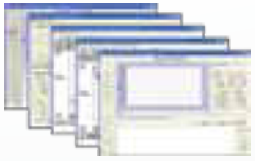
QUALIFYING AND MONITORING NEXT-GEN NETWORK SYNCHRONIZATION



Measuring the pulse of the network

- Real-time testing (on-demand or automated)
- Seamless integration with any operations support system (OSS)
- Based on industry standards
- Fully scalable
- Configurable key performance indicators (KPIs)
- Advanced reporting
- Remote troubleshooting
- 4G/LTE-ready
- Precision Time Protocol (IEEE 1588v2)
- Synchronous Ethernet (SyncE) frequency and 1 pps signals
- Traditional synchronization protocols
- Cost-effective deployment
- OPEX and CAPEX reduced

SyncWatch-110



Local Software

SyncWatch Server Software

SyncWatch Operational Modes

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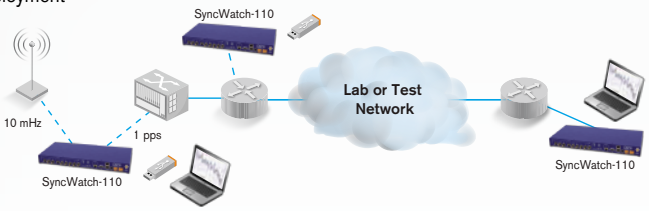
Synchronization Equipment Benchmark

Objectives:

- Standardize new equipment to ensure accuracy after equipment upgrade
- Compare synchronization solutions before investing capital
- Benchmark network solutions in a lab network before field deployment

How:

- Stand-Alone mode allows for real-time analysis
- Up to two interfaces can be tested at the same time
- Extensive analysis via powerful post-processing analysis



Key Concerns:

- Ensuring accuracy when deploying new synchronization equipment
- Making the right synchronization choice
- Testing and simulating in the lab before deploying
- Establishing a synchronization service-level agreement (SLA)

EXFO Solution—Key Benefits

- Interface flexibility with support for legacy, Precision Time Protocol (IEEE 1588v2 PTP) and SyncE support
- Port flexibility allows to test up to two interfaces simultaneously
- Accurate and precise reference options, ensure the highest precision in results
- Ease of use and powerful post-processing analysis for advanced testing

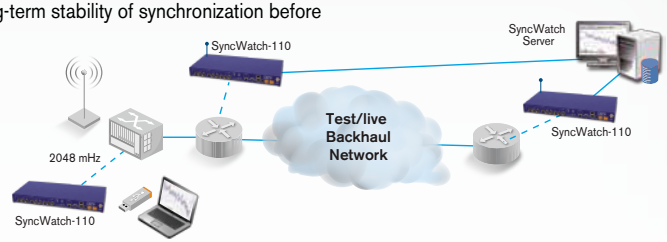
Synchronization Service Turn-up and Burn-in

Objectives:

- Test synchronization on the production network and ensure synchronization performance before activation
- Identify areas of risk and adapt the solution to real-world network conditions
- Analyze long-term stability of synchronization before activation

How:

- Perform real-time analysis of the synchronization metrics
- Long-term data collection to assess the stability of the synchronization service



Key Concerns:

- Reference options for accurate field measurements
- Reduce OPEX by efficiently using personnel for data collection

EXFO Solution—Key Benefits

- Stand-Alone and USB modes for efficient testing and management of technical resources
- Compact and flexible solution that's ready for field use
- USB mode enables easy and secure long-term data collection

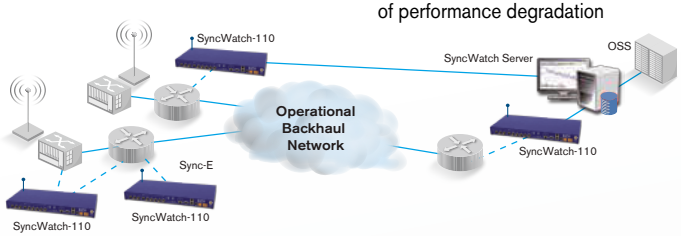
Network-Synchronization Monitoring

Objectives:

- Continuously monitor synchronization
- Determine faulty links and the data trend

How:

- 24/7 monitoring of synchronization via SyncWatch Managed mode
- Advanced reporting and operations support system (OSS) integration
- Alarm threshold for immediate notification of performance degradation



Key Concerns:

- Continuous data collection for performance assessment
- Quick reaction to degradations or network synchronization issues
- Speedy identification of faulty links and analysis of issues to determine their root cause

EXFO Solution—Key Benefits

- EXFO's SyncWatch Managed solution allows for monitoring of synchronization events and error collection
- Highly expandable to support large-scale deployment
- Correlation of results allows root-cause analysis and per-link performance assessment
- Seamless OSS integration to enable real-time SNMP notification of threshold crossings

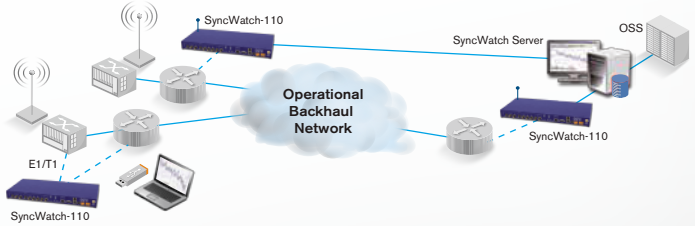
Troubleshooting

Objectives:

- Troubleshoot synchronization issues to determine the cause of failure
- Locate synchronization issues and perform root-cause analysis
- Test the impact of the corrective measures taken

How:

- Perform accurate synchronization testing across the network to identify the root cause of an issue
- Validate troubleshooting by benchmarking a new solution



Key Concerns:

- Minimize the service outage and troubleshooting time
- Maximize the service window
- Reduce truck rolls, only send technicians when necessary

EXFO Solution—Key Benefits

- A versatile solution for field and lab use
- Monitoring mode and remote control provides remote troubleshooting capabilities
- USB mode enables fast data collection

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