

# Mobile access and backhaul transport monitoring

Meet 4G and 5G low-latency targets—  
and detect issues before your customers do

EXFO

## Grow 5G services revenue, optimize transport network performance



Minimize  
latency

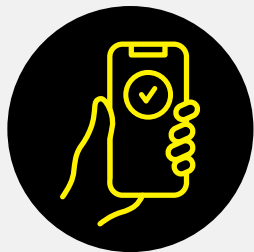


Deploy network  
efficiently



Excel in user  
experience

Mobile operators want to develop new markets and partnerships and grow new 5G services revenue. This requires end-to-end control and visibility into how networks are performing—visibility that's necessary in order to minimize latency for latency-sensitive 4G and 5G services. Customers see problems immediately and can be lost in seconds, impacting churn and Net Promoter Scores (NPS). With accurate insight on how services are performing across mobile access and backhaul networks, operators can optimize network efficiently and maximize end-user experience.



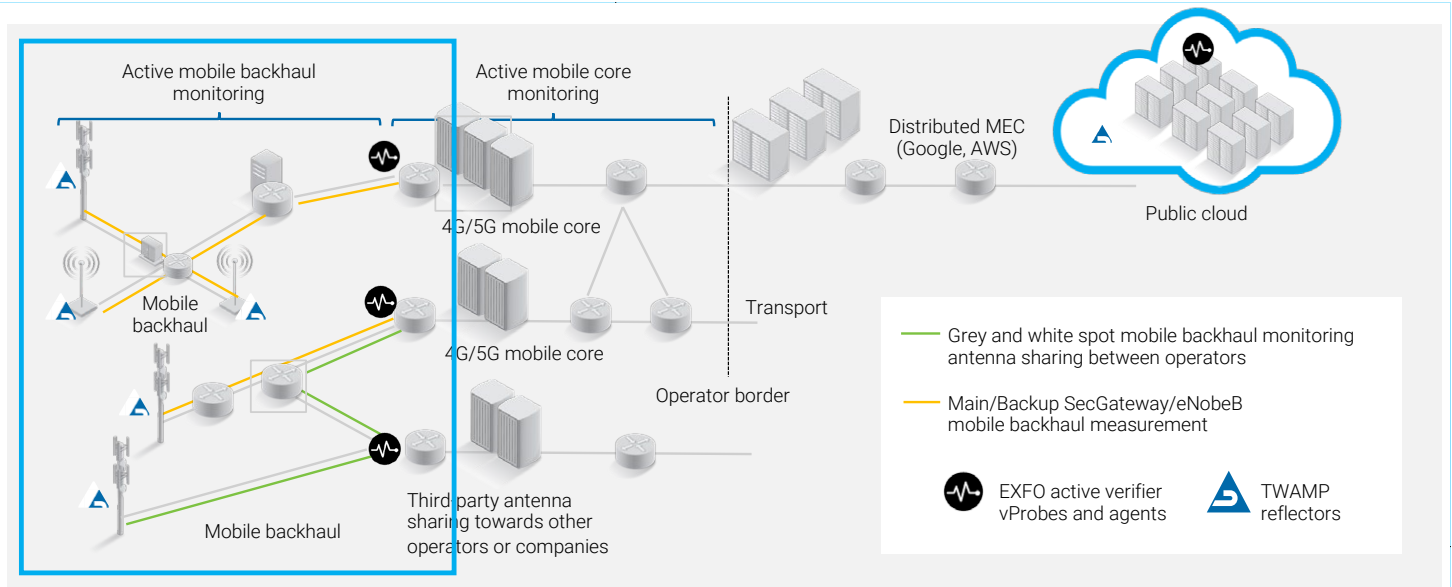
### Optimize user experience with end-to-end service visibility

Understand the end-to-end service path for latency, packet loss and jitter by injecting layer 3 synthetic test traffic between the security gateway and the eNodeB/gNode. This user experience insight is critical to proactively identify problems and troubleshoot service quality issues before users are impacted.



Proactively test user experience and pinpoint where issues are occurring on video, voice and data QoS classes using a high-performance EXFO virtual verifier probe in the service path. This helps transport planning and mobile transport access and backhaul operations teams to optimize actual end-user experience.

# Mobile backhaul network putting things into perspective



**EXFO mobile backhaul transport monitoring addresses thousands of eNodeB/gNodeB active tests on service paths for voice, data, video.**

## How it works

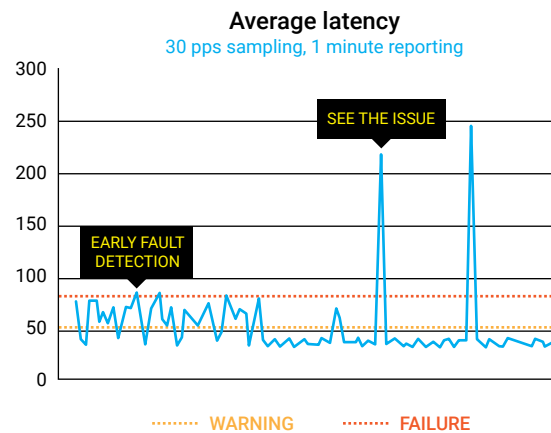
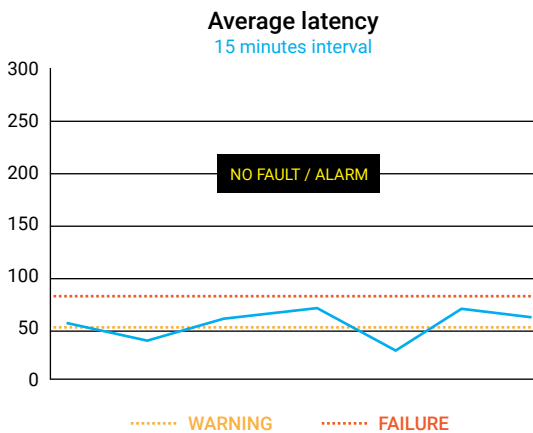
EXFO active verifier probes test user experience in the mobile backhaul service path.

The virtual active test probe can be instantiated at the security gateway to inject synthetic test traffic on a per-second basis towards each eNode in the network. This provides granular per-second visibility into user-plane traffic. The test instance can be located close to the packet core where thousands of eNodeBs can be measured in parallel, without overloading the network. In addition, the performance of third-party antenna tower sharing can be tested and validated.

EXFO active verifier probes deliver performance, scale and accuracy with per-second testing and reporting.

- Up to 25,000 TWAMP tests per EXFO verifier to reach a high number of nodes
- Per-second testing and reporting interval
- Precise uplink and downlink KPIs using TWAMP
- Easy to orchestrate and configure via API
- IPv4 and IPv6 supported

Highly accurate sensor data is important for automation and real-time service degradation analysis. EXFO active verifiers provide per-second analysis and the KPIs required to see each performance degradation that impacts user experience in the end-to-end transport network.



# Features

- **Real-time, per-second user QoS visibility** measures uplink and downlink latency, packet loss, jitter and availability
- **High performance and quality measurements at scale** for QoS classes across thousands of nodes on a continuous per-second basis
- **Modern architecture** with KAFKA streaming capability, open APIs and virtualized architecture framework
- **Support automation and zero touch operations** with high quality network performance data
- **Cost-effectively deployed** on a single server and combined with GTP mobile core performance tests

# Benefits



**Reduce mean time to repair (MTTR) by getting end-to-end visibility** of the service layer router through to the packet core and the Gi firewall.

**Prevent outages by gaining early warning on degradations** and anomalies in EXFO's adaptive service assurance platform.



**Detect issues impacting user experience on the access and mobile backhaul network.**

Identify latency and packet loss caused by:

- Traffic shaper overload or misconfiguration
- Microwave, low-capacity link
- Main and backup routing issues
- Virtualized security gateway overload or configuration issue



**Provide meaningful SLA reports** for the project teams responsible for distributed MEC introduction and SLA reporting to cloud partners (e.g., Google, AWS).

Highly accurate performance data to support zero-touch operations and automation.



## EXFO adaptive service assurance

The EXFO adaptive service assurance platform combines performance data from networks, services, devices and users with machine learning-enabled analytics to deliver unique insight and diagnostics into networks and services. Open integration and third-party data analysis—including network topology—adds context to enrich troubleshooting and minimize latency.

Learn more about access and backhaul transport monitoring  
[EXFO.com](http://EXFO.com)

