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NETWORK VISIBILITY

Enable ad-Hoc 400G Traffic Capture with the Cubro EXA32400

CASE STUDY

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Industry » Service Provider

Summary: Portable 400G DWDM Traffic Capture Solution

A leading service provider needed a portable 400G DWDM traffic capture solution to capture and analyse high-speed backbone traffic on 400G DWDM (Dense Wavelength Division Multiplexing) networks. Their main challenges included direct DWDM connectivity, filtering massive data volumes to avoid tool overload, multi-speed network support for 100G and 10G, and portability for on-site troubleshooting. By deploying the Cubro EXA32400 Network Packet Broker, the provider gained a scalable, flexible, and portable solution that enables efficient ad-hoc traffic capture while future-proofing their network visibility strategy.

Customer Challenge: High-Speed DWDM Network Monitoring Needs

A major service provider required a portable and flexible solution to analyse high-speed backbone traffic running on 400G DWDM links. Their key challenges included:

- Direct DWDM connectivity – The solution needed to connect directly to DWDM system monitoring points and support tunable ZR+ transceivers.
- Traffic filtering – Existing 10G and 100G Capture tools cannot handle full 400G streams, so the solution had to provide intelligent filtering to deliver only the necessary data.
- Backward compatibility – While 400G is the target, the solution also needed to support 100G and 10G traffic for mixed environments.
- Portability – The equipment needed to be easily transported on-site for troubleshooting, with all devices and accessories fitting into a compact transport case.

Cubro Solution: Efficient, Portable, and Scalable Network Packet Broker

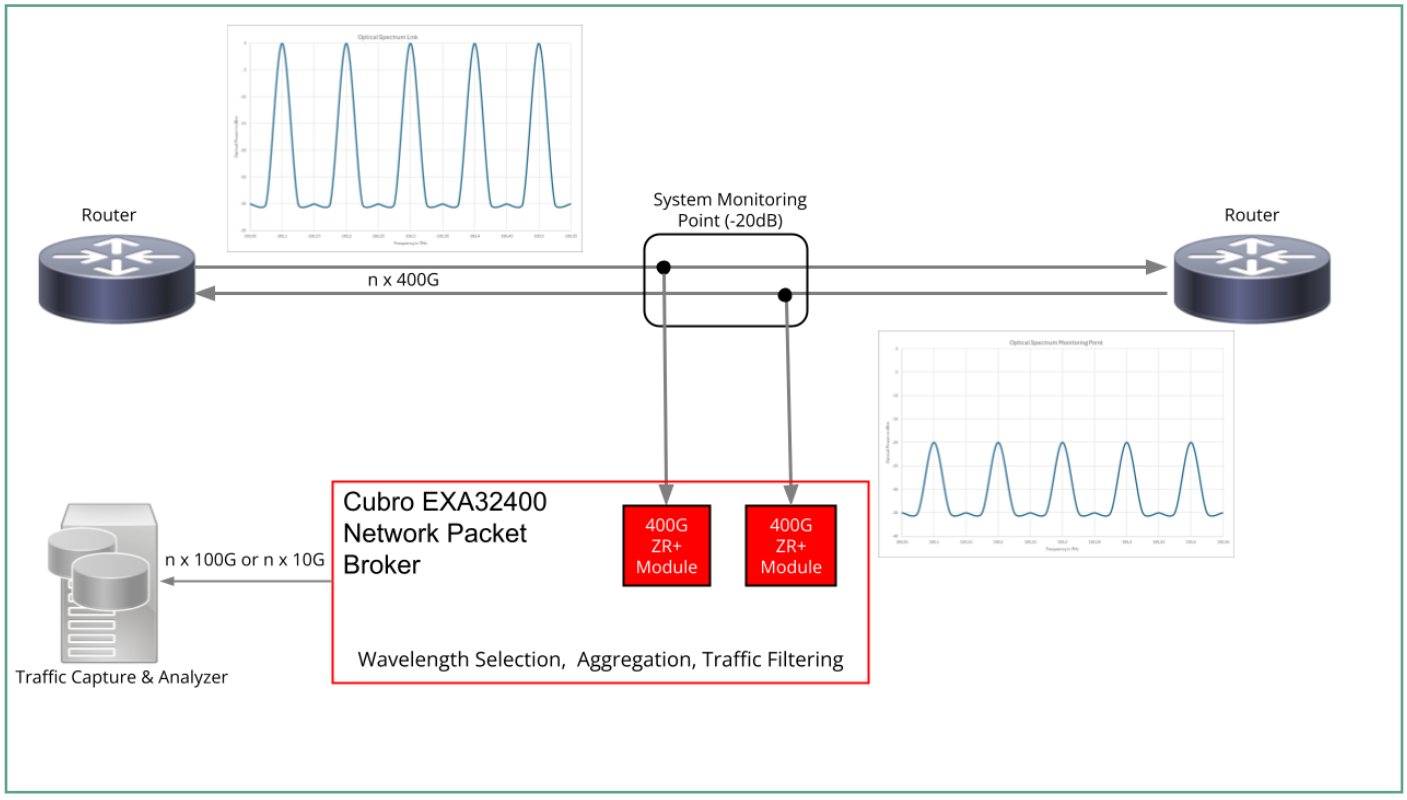
The Cubro EXA32400 Network Packet Broker was deployed to meet these requirements:

- **Direct DWDM Access**
  Connected to the DWDM network through protected monitoring points, the EXA32400 uses tunable QSFP-DD ZR+ modules to select specific 400G wavelengths for analysis.
- **Intelligent Filtering**
  The device filters and processes incoming traffic, ensuring only relevant packets reach the capture and monitoring tools. This prevents tool overload and speeds up troubleshooting.

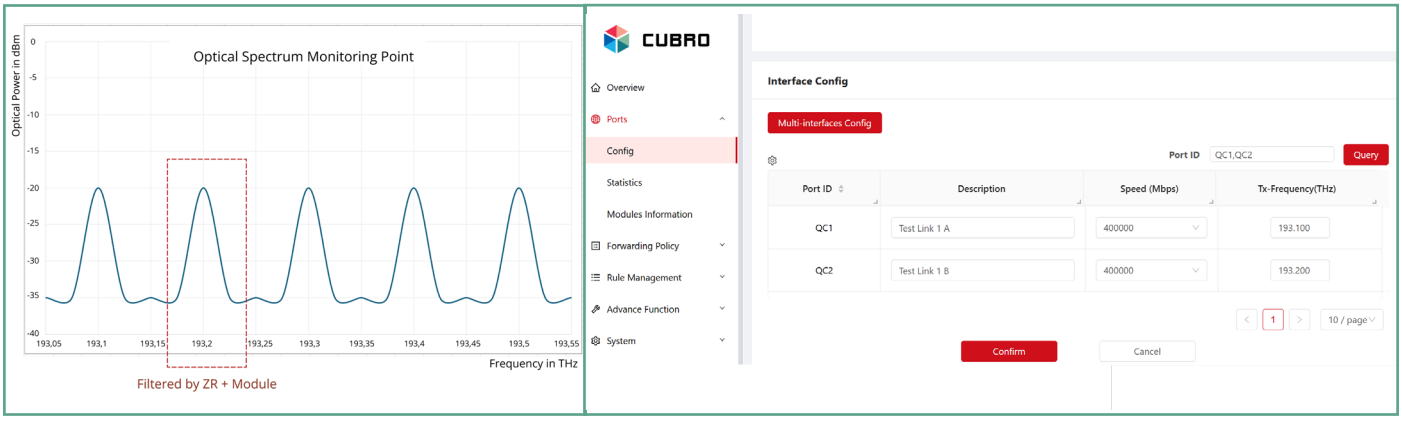
- **Multi-Speed Flexibility**
  The EXA32400 supports 400G, 100G, and 10G interfaces, allowing seamless integration in diverse environments and ensuring future-proof scalability.

- **Portable Deployment**
  All required equipment, including the EXA32400 and its accessories, is stored in a custom transport case, enabling engineers to carry the solution to any site where issues occur.

Solution Description



The Cubro EXA32400 Network Packet Broker connects directly to the DWDM system via protected monitoring points, providing a non-intrusive way to access live optical signals. Using QSFP-DD ZR+ tunable modules, engineers can precisely select the wavelength of the 400G signal that needs to be analyzed, enabling targeted traffic capture without disrupting production traffic.



Traffic from the selected 400G channels is forwarded to the EXA32400, where it undergoes advanced filtering and aggregation. This ensures that only relevant traffic (e.g., by protocol, IP range, VLAN, or application) is sent onward, preventing overload of capture and analysis tools that are not designed to handle the full 400G data rate.

Results: Tangible Benefits for Network Operations

- By implementing the Cubro EXA32400, the service provider achieved:
- Efficient troubleshooting of 400G DWDM backbone traffic on demand.
- Reduced risk of capture tool overload through advanced filtering.
- Future-ready investment with full support for 400G as well as 100G/10G compatibility.
- Improved operational flexibility, as the portable solution allows rapid deployment wherever network issues arise.

The Cubro EXA32400 provided a scalable, portable, and future-proof solution for capturing and analysing high-speed DWDM traffic. With support for tunable ZR+ modules, intelligent filtering, and backwards compatibility, the customer now has the tools to maintain network performance and reliability even at 400G speeds.