

EXFO Worx Ethernet/IP Service Activation Solution

A Centralized Turn-Up Strategy

Solution Description

The EXFO Worx Ethernet/IP Service Activation Solution has been designed from the ground up with the goal of reducing the complexity of the service activation process while delivering trustworthy and accurate network performance data. A centralized solution, it brings together active test probes (**EXFO Verifiers**) and process optimization (automation) with multi-user/multi-instance capabilities to perform various complex service activation routines while leveraging various responder capabilities. **EXFO Worx** and EXFO Test Automation Management (TAM) manages and orchestrates tests while **EXFO Xtract** provides data analytics.

Solution Benefits

Multi-user/multi-instance approach increases efficiency and productivity

- EXFO Verifiers supporting simultaneous test instances are remotely controlled by multiple concurrent users.
- Customized hardware platform designed to manage combined sessions at up to interface rate, while delivering accurate measurements.

Automated tools decrease deployment costs

- Range of APIs and automation tools designed to decrease both manual tasks and overall cost required to complete jobs.
- Template-approach reduces complexity to the minimum "need-to-know" for technicians.

Flexibility reduces implementation costs

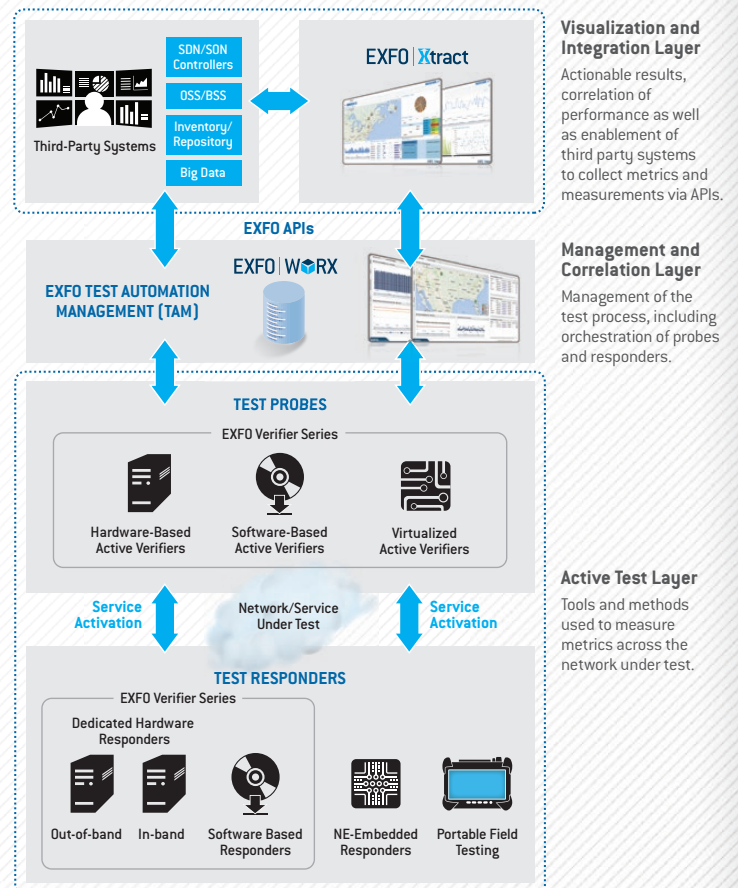
- Hardware, software and virtualized probes available for facilitating path to NFV/SDN architectures.
- Standards-based methodologies and test procedures designed to interact with a variety of test responders in order to reduce overall implementation costs.
- One system for turn-up to monitoring of layer2-layer7 makes CAPEX spend easy to justify.

Remote, centralized testing reduces truck rolls

- Centralized orchestration and distributed-reach approach combines innovative test modes with the deployment of hardware probes at key locations for complete network visibility.
- Operators can perform complete service activation routines or on-demand QoE tests without having to dispatch a single technician.

Solution Architecture

The **EXFO Worx Ethernet/IP Service Assurance Solution** consists of four layers, each providing different functionalities that contribute to the overall solution:



Test and Troubleshooting Capabilities

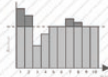
Service activation and validation requires sound and proven methods to assure the quality and the accuracy of the metrics, leveraging the latest standards-based techniques as well as a complete suite of QoE tests which can be used to exercise the service from end-to-end.

Y.1564 (EtherSAM)



- Full capability including CBS/EBS, random and EMIX frame size
- Up to 16 simultaneous tests per port

RFC-2544



- Up to 16 simultaneous tests per port

RFC-6349 (ExactTCP)



- Fully compatible with FTB ecosystem
- Local and remote capabilities
- Simultaneous instances

Smart Loopback



- Layer 2-4 Loopback
- Support for trigger VLAN/UDP ports
- Loopback up to 10GigE

Service Testing (On-Demand Service Tests)



- VoIP troubleshooting (signaling and media)
- Video transport performance
- Internet infrastructure troubleshooting

Solution Use Case: Centralized Activation

The EXFO Worx Ethernet/IP Service Activation Solution provides a complete solution enabling mobile operators to perform circuit activation faster and in an automated fashion.

- 1 EXFO Active Verifiers deployed in strategic locations.
- 2 End-point responder capabilities that are dedicated hardware-based or NE-embedded, or portable field testers.
- 3 Service activation routine is performed using standards-based approaches.
- 4 Birth certificates automatically generated at test completion.
- 5 Automate the test creation and execution process by integrating EXFO Worx with external systems via APIs.

