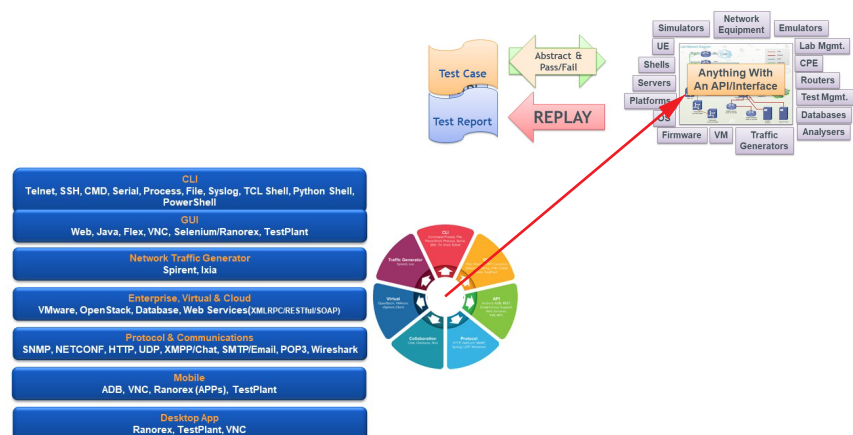


Automation Professional Services

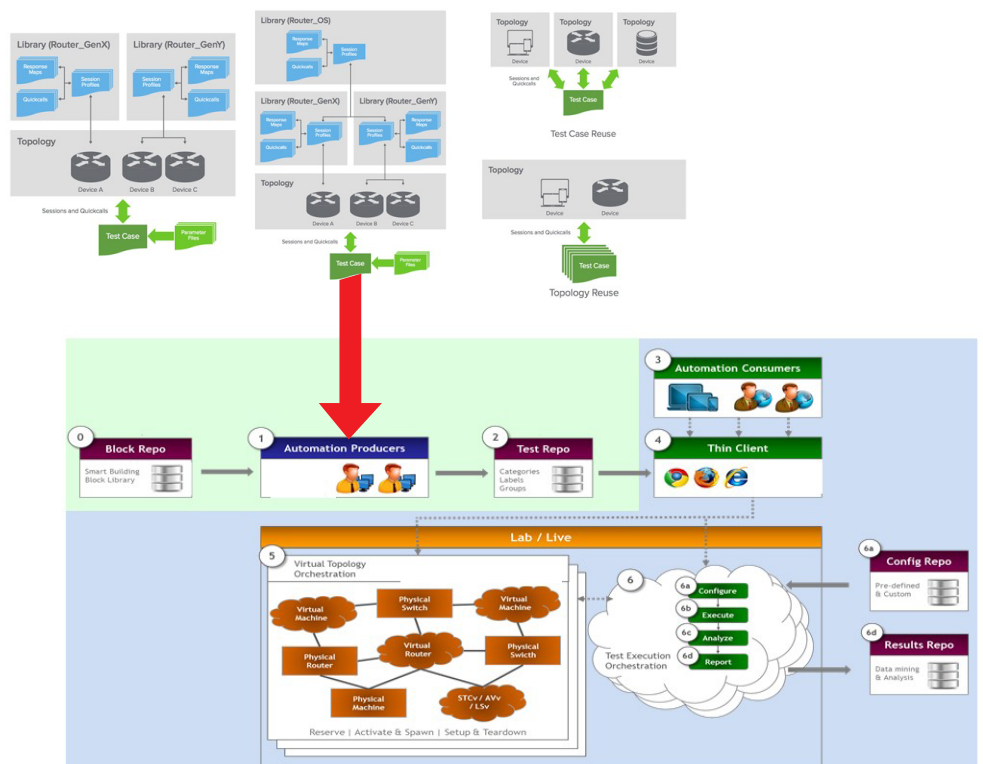
Key Benefits

- Save money by reducing time to market.
- Use industry recognized test reports for sales and certifications.
- Access to custom test equipment and software.
- Ability to shape our roadmap to better serve industry needs.
- Avoid High Level Programming.

NMX SPAIN, as part of **NETMETRIX GROUP**, provides Automation Professional Services in different areas, such as Wireless, Benchmarking, Network or Systems Environments.



NMX SPAIN contributes with Experience, Knowledge and necessary tools to satisfy all customer requirements.



Ability to test multiple standards against globally recognized products all in one lab.

Acts as an extension of inhouse test labs providing debug and technical expertise.

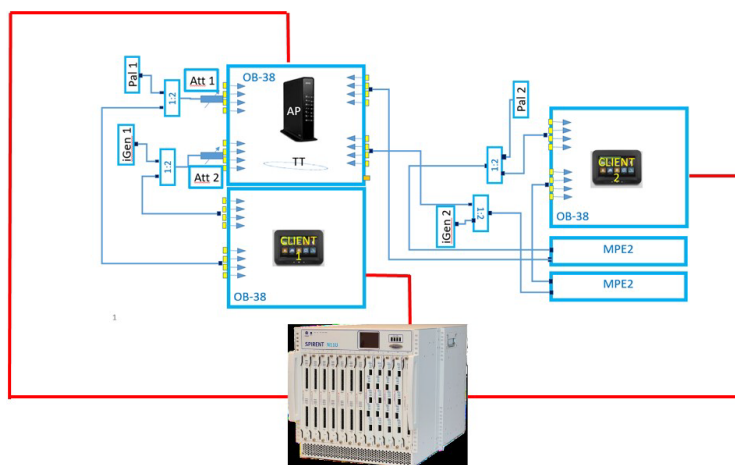
In-depth test suites with an expert analysis of 802.11 abgn/ac/ax.

Wireless Environments

Proposal includes a complete service portfolio to homologate all kind of radio devices.

This solution covers following industry sectors: Telecom, Enterprise, Healthcare, Hospitality, Education, as well as specialized environments like Manufacturing, Gas & Petroleum.

Our Wireless testing services are available for both consumer and enterprise 802.11 Stations and Access Points, including support for MIMO devices with up to 4 spatial streams. Testing focuses on performance and quality of experience for the 802.11 WiFi technologies with our manufacturer based test bed. We also offer TR-398 testing, a set of performance metrics for WiFi in different scenarios, and focuses on WiFi router performance.



Wireless Testing Services Include:

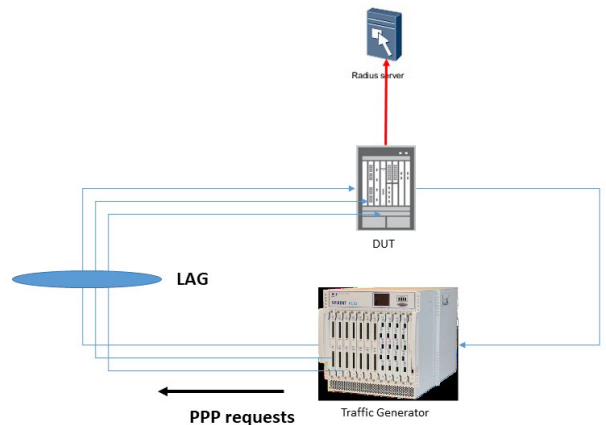
- Range vs Throughput.
- Quality of Experience Testing.
- TR-398 Testing.
- Roaming Test Cases.
- Mesh AP Testing.
- AP/station Load Testing.
- Interoperability.
- MAC Conformance.

Aggregated interfaces test plan

LAG correct implementation checkup. Validations are:

- LAG proper establishment.
- Radius is configured under testing premises.
- PPP sessions configured and established.
- Traffic generation.
- Check if traffic is received symmetrically over different LAG links:

- Typing dedicated commands in the DUT console
- Analyzing Traffic Generator Statistics



Automation over CPE PON interface test plan

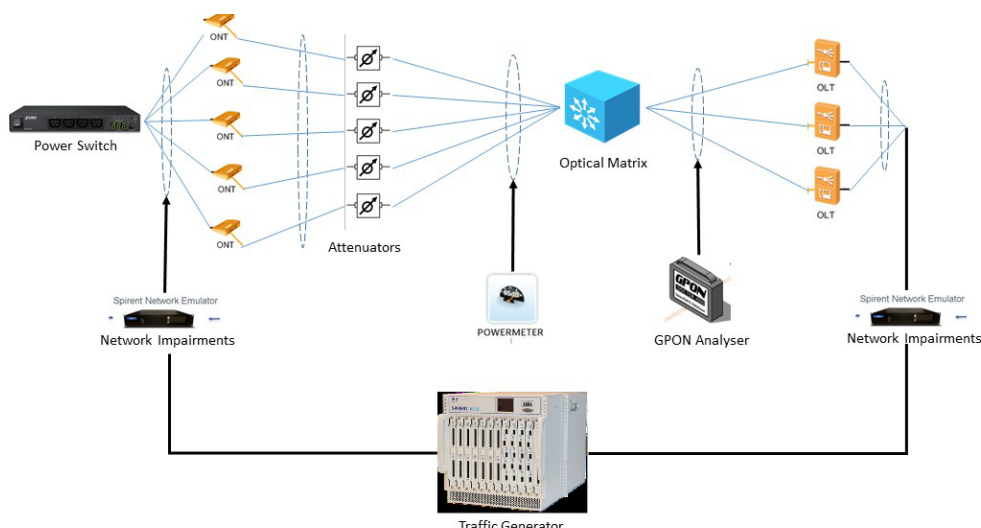
These tests are divided in several blocks:

Functional:

- ONT, PLOAM, OMCI Alarms.
- Activation/Deactivation.
- Software download.
- Diagnostics.
- MIB Upload.

Performance:

- Maximum Throughput.
- Maximum number of NAT sessions.
- Latency.
- QoS Preservation in maximum VLAN Video occupation, specially 4K.
- Services Support: VoD, IPTV, HTTP.



Intelligent supervision:

Alarms:

- Alarm prediction.
- Alarm correlations.
- Alarm management.

Workflow automation:

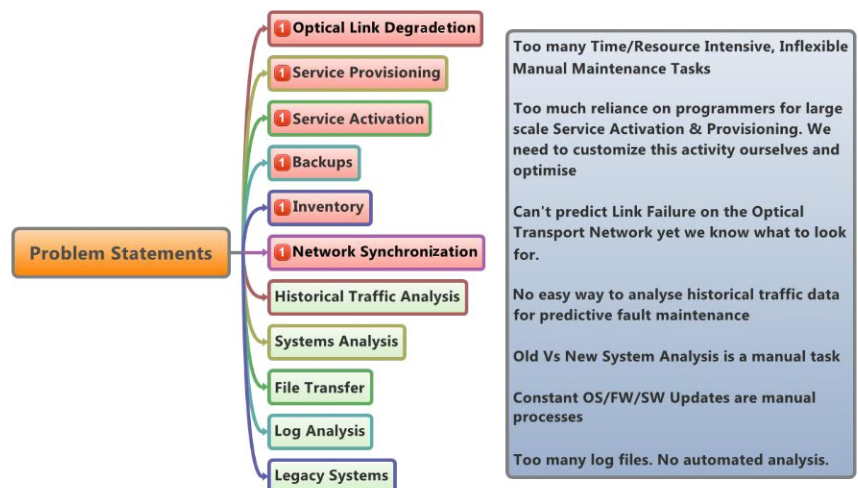
- Collect alarms and notifications: SNMP, Mail, Logs.
- Notify and process events & alarms: emails, ticketing.
- Select and execute appropriate actions: manually or triggered.

Optical transport network:

- Record inventory units.
- Record inventory interfaces.
- Registration optical measurements of DWDM spans.
- Predict failures in advance.
- Auto-configure systems on events.
- Automate backup on custom locations and from close & proprietary systems.
- Manage systems based on CLI, Web & Java.

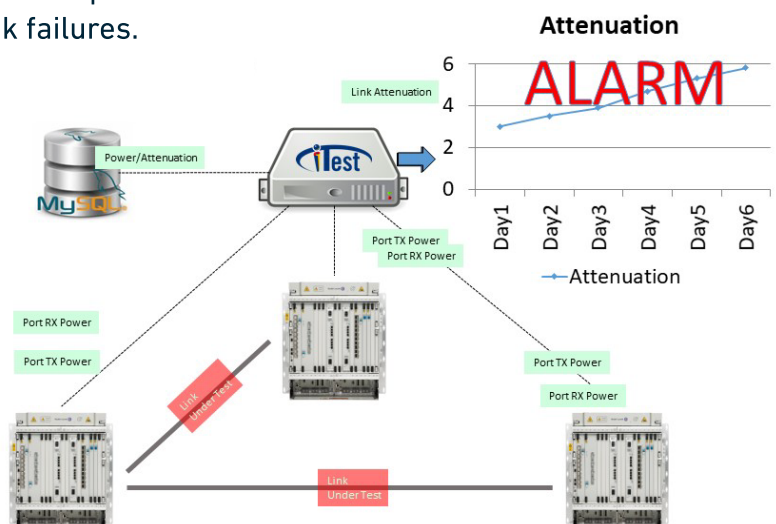
Intelligent supervision

- Automated Link Failure Prediction - Identify, Monitor & Predict.
- Automated NOC OA&M tasks – Backup, Inventory, File Transfer, Updates, Log Analysis, Health-checks.
- Service Activation & Service Provisioning Automation.
- Automated Historic Traffic Pattern Analysis.
- Code-free automation development environment.



Network Failure Prediction: Attenuation

- Predict network problems.
- Predict link failures.



iTest Development Time: 3h
iTest Sessions: Telnet, SQL