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XT³Lab

TECHNOLOGY, TESTING & TRAINING

beyond the data sheets

The XT³Lab

Multi-vendor network environment equipped with latest technologies and specific test systems

TECHNOLOGY, TESTING & TRAINING

Based on three key aspects, the XT³Lab provides the optimal infrastructure for the qualification of high-performance systems and network architectures.

- In flexible setups, new technologies, products and configurations are tested with regards to function and vulnerability.
- The simulation of individual environments enables the proof-of-concept (PoC) of a design, provides certainty regarding the interaction of components within productive networks, and the reproduction of failure scenarios to assist in troubleshooting and recovery.
- Utilising the lab environment, engineering and operations teams gain practical know-how for further development and operation of their network.

EXPERT SUPPORT

- The test engineers and consultants have vendor-certified knowlegde in various network technologies.
- With longlasting experience in evaluation and practical know-how, they assist in the differentiation and selection of suitable solutions, create individual test plans and evaluate results from the expert's point of view.

LOCAL & VENDOR-NEUTRAL

- Located in the centre of Germany, the XT³Lab can easily be reached without much travelling effort, and is also flexibly available remotely.
- The neutral test environment enables the individual and realistic evaluation and independent positioning of providers and technologies on the market.

TIME AND EFFORT MINIMISATION, FLEXIBILITY & HIGHEST CAPACITY: AUTOMATION IN THE XT³LAB

• AUTOMISATION OF OPERATION

For meaningful results, it is essential to consider the network environment of a "Device Under Test" (DUT) as realistically as possible.

Due to the complexity of productive high-performance networks, however, this is an extensive and usually also cost-intensive task.

The XT³Labs setup is designed for the simulation of large parts or complete network topologies. The environment is operated largely automated based on OpenSource tools and own developments.

Thus, components can be easily managed, controlled and configured.

• TEST AUTOMATION FRAMEWORK

Qualification of hardware and software requires largescale testing with a multitude of runs – especially for the implementation in complex networks.

Depending on the DUT, Xantaro utilises appropriate automation tools such as Ansible, Puppet or Chef.

The automated test execution is based on a specially developed test library for the Robot Framework.

After setting up an appropriate test suite, a large number of tests can be composed and executed fully automatically.

TECHNOLOGY: RESEARCHING INNOVATIONS AND DEVELOPING SOLUTIONS

The lab environment serves for the simulation and test of complex scenarios, for researching innovations and for the development of individual solutions. Equipped with our partner's technologies, the infrastructure of the XT³Lab covers the diverse areas of the OSI model.

- Transport: Optical, DC & WAN/MAN, IP/MPLS, Wireless Access
- Aggregation & DC: Routing, Switching Fabrics
- Security: Network Security, DDoS Protection

A10 ARISTA ciena JUNIPER NETWORKS NETSCOUT

FORTINET Infinera infosim NOKIA paloalto NETWORKS smart optics

TESTING: 100G CAPABLE ENVIRONMENT FOR SIMULATING REAL WORLD CONDITIONS

Key elements of the 100G-enabled test environment are various IXIA test systems with two 100GE, four 40GE and sixteen 10GE interfaces; depending on the requirement also four 1000/100/10Mbit interfaces can be set up.

The capacities enable complex simulations such as those of an entire provider core network.

- Proof-of-Concepts: multi-vendor interoperability, validation of network designs and service integration
- Performance: scalability and resilience tests, evaluation of performance limits
- Evaluation: tests of single component, regression and acceptance tests, determination of optimal configuration and networking of all systems as well as of security requirements for designs or individual components
- Opperation & Support: failure reproduction and analysis, troubleshooting and recovery

ixia

TRAINING: KNOW-HOW TRANSFER IN THEORY AND PRAXIS

To transfer know-how, Xantaro develops its own training courses for engineering and operations teams. The trainers are actively involved in customer projects; they incorporate their wealth of experience and thus combine theory and practice. The know-how transfer is supported by access to the systems in XT³Lab and corresponding hands-on exercises.

- Standard Technology Trainings covering common technologies and solutions
- Customised Trainings according to individual requirements
- Project-specific Workshops as "Training-on-the-Job" within a customer project

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"(...) Xantaro provides the necessary hardware for the respective tests of our new infrastructure out of its XT³Lab. In addition, the Xantaro team knowsexactly how the tests need to be set up and how to analyse the results afterwards.

Thanks to the support of Xantaro we were able to safeguard the conversion to the new DE-CIX Apollon platform during a delicate project phase and ultimately completely it successfully. It was important to us to do everything possible to minimise the risk of incompatibility and failures prior to migrating our customers to the new platform. As usual, Xantaro always supported us professionally, safely and flexibly in this process."

Daniel Melzer, Chief Network Architect, DE-CIX