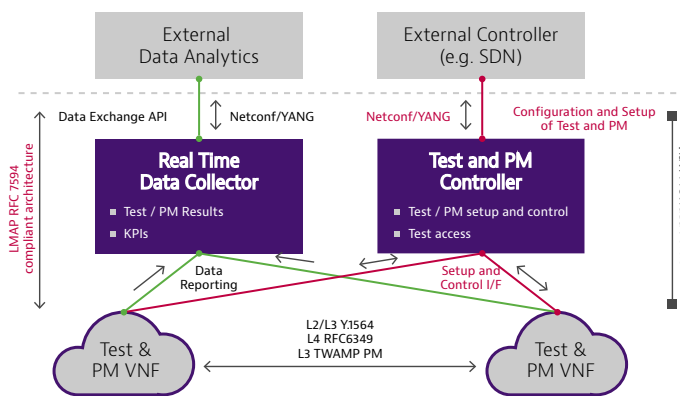VIAVI

LASER
COMPONENTS

Virtual Test & Activation

Virtual Ethernet Lifecycle Management Solution for Test, Service Activation, Performance Monitoring and Troubleshooting on all Network Layers

Viavi Solutions' Virtual Test & Activation provides network operators and enterprises a valuable set of tools that deliver repeatable, standards-based test methodologies. Virtual Test & Activation monitors and ensures network performance and verifies Service Level Agreements in both virtual and legacy wired networks.

SDN (Software Defined Networks) and NFV (Network Function Virtualization) are changing the way network services are offered. Carriers and enterprises are migrating away from hardware-centric, proprietary network infrastructure towards a standardized, SDN and NFV-based model built on standard x86 compute platforms.

Key Benefits

- Resolve customer complaints faster
- Increase customer satisfaction with Ethernet and IP services
- Divert technician truck rolls with helpdesk based remote testing
- Reduce technician coordination for RFC6349-compliant TrueSpeed tests

Key Features

- RFC7594 (LMAP) compliant architecture with NetConf/Yang I/F
- Virtual probes running standards-based, repeatable tests:
  - L2 - Y.1564 SAMComplete
  - L3 - Y.1564 SAMComplete
  - L4 - RFC6349 TrueSpeed
  - L3 – PM TWAMP
- Solution combines/supports:
  - Virtual probes
  - PC SW clients
  - Legacy Test Instruments
  - Pluggable optics probes
- Performance optimization through use of packet acceleration, DPDK and SRIOV
- KVM and OpenStack compatible

Applications

- Business services and residential customer care testing
- Mobility backhaul qualification, PM and troubleshooting
- Residential ISP installation testing
- Metro and core network mesh testing

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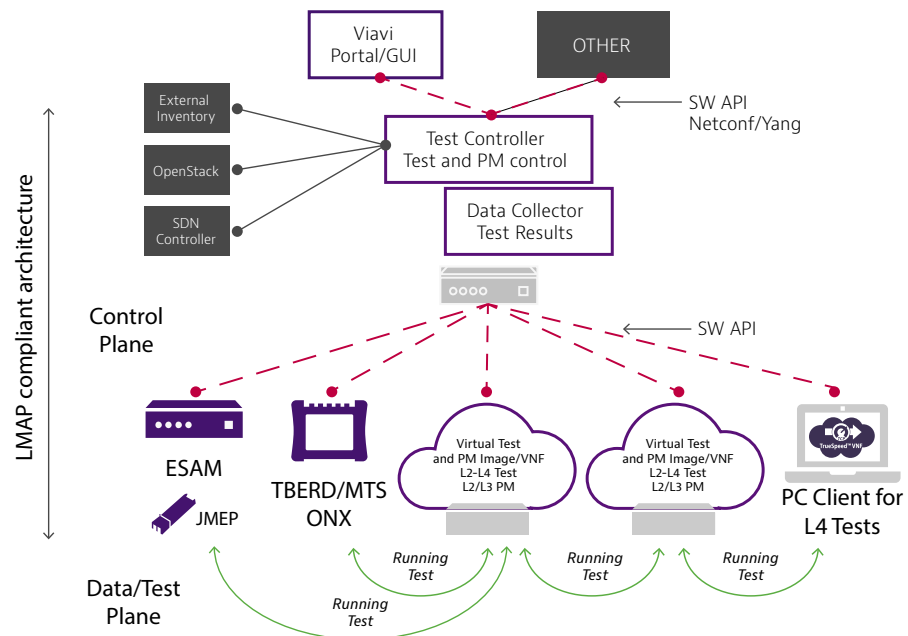www.lasercomponents.com

Virtualization creates a new set of challenges—specifically assuring, monitoring, managing and testing those virtual services. Those traditional assurance solutions and processes must transition from a static, slow, reactive model to a much more dynamic approach allowing for pro-active monitoring, real-time intelligence and analytics. Those functions must be tightly coupled with orchestration and policy systems.

With Viavi's Virtual Test & Activation solution, operators can add virtual test and performance monitoring probes to their network whenever and wherever required. At the same time, Viavi's legacy test sets will continue to support the large installed base of legacy network technology,

helping carriers manage a network that is a blend of traditional and virtual technology.

Virtual probes running on x86 servers or compute platforms comprise the foundation of the solution by providing test functionality for network layers 2-4. Using Viavi's industry-acknowledged Y.1564 SAMComplete and RFC6349 TrueSpeed technologies, the virtual probes measure network performance and evaluate network quality. They are also capable of monitoring a live service using TWAMP and Y.1731.

The entire test environment is managed via a test controller and results are stored in a test data collector.

This architecture, as defined in RFC7594 (LMAP), coupled with the available northbound interface using NetConf/Yang ensures maximum scalability and interoperability with all other elements in an NFV environment. It is easily deployed and tests reliably in all parts of the network.
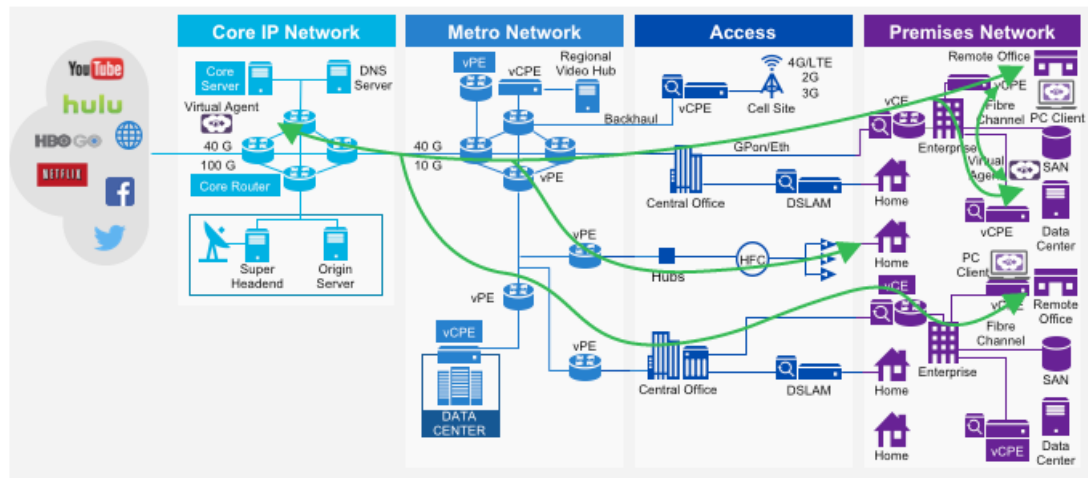
Use Case:

Customer-care evaluation of network performance complaint (TrueSpeed for L4 throughput measurements)

Call center agents can use TrueSpeed to accurately evaluate a customer's network performance remotely, without dispatching a field technician. An easy-to-use, web-based interface lets the call center agent configure all test parameters so that the customer just has to click on a customer-specific URL and press "Start." Detailed, easy-to-read results and interpretations indicate key RFC6349 metrics such as TCP throughput, TCP efficiency, and buffer delay.

Use Case:

Virtual test agent on vCPE used for automated Service Activation and Troubleshooting testing

A virtual test agent on the service demarcation device (vCPE) is activated on request and can be used as a traffic generating test point for L2-L4 tests. Those tests can be run from edge to edge (vCPE-to-vCPE) or from the edge to the core of the network thereby eliminating the need for dedicated test equipment and coordination requirements with a far-end technician. In situations where no vCPE device is available legacy test equipment can also be used to test against a virtual instance.

Use Case:

Virtual TWAMP agent located anywhere in the network for permanent monitoring of network quality and performance

A virtual TWAMP agent can be hosted on any device that allows for onboarding of VNFs. Since the TWAMP agent only requires very few resources while at the same time supporting hundreds of TWAMP flows it enables the creation of a monitoring web that spans across the network. Permanent measurements of packet delay, delay variation and packet loss enable seamless monitoring and ensure fast reaction times. The flexible nature of the TWAMP agent allows for the combination with 3rd party agents for example in mobile backhaul scenarios.

Ordering Information

Description	Package Number
VTA-SW-ISO	DVD ISO Image for download
VTA-BASE	Base license per contr/coll 1G/10 tests/10 users/10 flows
VTA-10-TESTS	10 addtl. concurrent tests per controller/collector
VTA-10-USERS	10 addtl. login users per controller/collector
VTA-1GB-AGGR-BW	1G addtl. bandwidth per controller/collector
VTA-1000-FLOWS	1000 addtl. TWAMP flows per controller/collector
VTA-Y1564-MA	License for Y.1564 L2/L3 test, virtual test agents/loop back
VTA-TWAMP-MA	License for TWAMP test, virtual test agents
VTA-TRUESPEED-MA	License for RFC6349/TrueSpeed, virtual test agents
VTA-TRUESPEED-ONX	License for RFC6349/TrueSpeed, ONX
VTA-TRUESPEED-MTS-TBERD	license for RFC6349/TrueSpeed, TBERD/MTS
VTA-TRUESPEED-PC-CLIENT	license for RFC6349/TrueSpeed, PC SW client
VTA-NETCONF	license for Netconf/YANG support on Controller/Collector
VTA-1YR-MAINTENANCE	1 yr maintenance contract