



SERVICE FULFILLMENT: ACTIVATION TESTING & DIAGNOSTICS FOR ETHERNET/IP SERVICE PROVIDERS



Super quick diagnosis of faults, automated service turn-ups, flexible, comprehensive and standards-based Service Assurance Platform

KEY FEATURES

- Inbuilt verification
 - L2/L3 (Y.1564, RFC2544, MEF CE 2.0)
 - L4 (TCP benchmarking)
 - L7 (HTTP/VoIP)
 - Multiple class of service testing
 - Bandwidth profile as per MEF 10.2
- Physical and Virtual (VNF) Test Probes for Active Testing
- Automated testing
- Auto-Diagnostics
- Flexible test profile selection
- Centralized Control
- One-touch execution
- Test Queuing
- Flexible reporting, Birth certificates
- Customer portal

APPLICATIONS

- Business Services
- Mobile back-haul & front-haul
- Wholesale Interconnect
- Cloud and Data center interconnect

BENEFITS

- Roll out new services quickly, confidently and profitably
- Eliminate faulty turn-ups
- Minimize truck-roll
- Reduce service activation OPEX
- Gain market share and maximize customer retention
- Compete on quality and build customer loyalty
- Ensure and verify high-quality service for all subscribers
- Isolate partner /interconnect issues



SAMTEST Overview

Veryx SAMTEST provides automated testing, benchmarking and diagnostics for managing Carrier Ethernet/IP networks. Veryx SAMTEST provides the efficiency and capability required by service providers to effectively roll-out and manage their Carrier Ethernet network services such as Business Services and Mobile backhaul. It also enables service providers to benchmark specific sections of Access, Metro and Core networks and expedite end-to-end trouble shooting.

SAMTEST deployment includes a centralized controller (VT-1000), distributed physical probes (VT-1004 or VT-1002) and virtual test probes. Veryx vProbes perform Virtual Test Agent functionality as defined by ETSI.

The centralized controller orchestrates the test probes to initiate tests, gather logs and generate reports. Veryx test probes generate Ethernet/IP data traffic, 802.1ag, or Y.1731Messages to enable active testing of Service Attributes and SLAs as initiated by the SAMTEST controller. The traffic generated by Veryx test probes can be either received at the other end by a peer Veryx test probe or looped back by a peer Network Element, to perform the required measurements.

SAMTEST Controller

SAMTEST's user friendly GUI allows easy configuration of service definitions and Veryx test probes to enable verification of various test parameters.

Using SAMTEST users can perform long performance duration test for up to 48 hours. SAMTEST live performance graph shows the measured performance during the course of the test execution.

Users of SAMTEST need not wait for testing of one circuit to complete and test resources to free-up before initiating test for another circuit. SAMTEST's test queuing features helps users to queue tests for several circuits which are executed automatically when the resources become free.

SAMTEST's standardized reports with detailed test logs facilitates quick interpretation of test results and troubleshooting. SAMTEST birth certificate and customer portal enables per customer based reporting. SAMTEST also provides PDF reports for easy sharing.

SAMTEST's Northbound XML/REST-API interface facilitates easy integration with existing OSS and back office systems.

Pre-built Automated Test Libraries

SAMTEST provides automated testing and benchmarking test libraries based on standardized test methodologies as defined in MEF CE 2.0, ITU-T Y.1564, and RFC 2544.

SAMTEST also supports TCP (RFC6349) throughput benchmarking and application performance measurements such as HTTP and VoIP.



Figure 1 : Veryx test probe hardware

SAMTEST Probe Configurations

SAMTEST support testing using Veryx test probes in the following configurations.

Loopback Testing: SAMTEST performs testing using test probes (physical or virtual) at a suitable aggregation point and looping back the traffic from third party Network Elements. Testing using this capability would require the Network Elements to support either smart loopback (MAC swap) or Y.1731 for L2 testing and L3 loopback for L3 testing. Loopback testing is convenient and normally relied upon by service providers who wish to reduce OPEX as well practically eliminate ship the test probes to the access network. However the level of testing using loopback testing is lower compared to peer probe testing.

Peer Probe Testing: This variant of SAMTEST performs testing using test probes (physical or virtual) at both the ends. It can be between end to end CPEs or between any two network elements. This variant could be especially useful in the wholesale service scenario, where the service providers do not have control over the access provider network devices to perform the required testing as part of benchmarking the partner network circuit.

Virtual Probe Testing: Veryx vProbes can be deployed as VNFs at centralized NFVI PoPs on x86 servers or on distributed NFVI devices such as virtual aggregation router, vCPE etc. Veryx vProbes are supported on popular industry standard hypervisors ESXi and KVM.

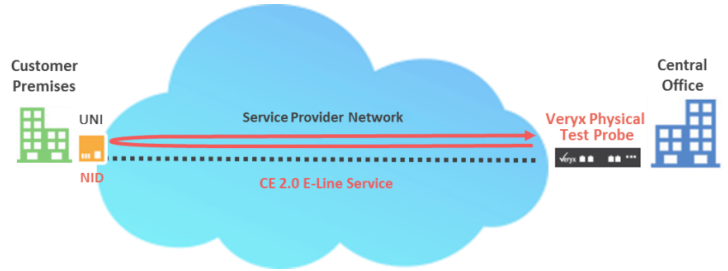


Figure 2: SAMTEST Loopback Testing

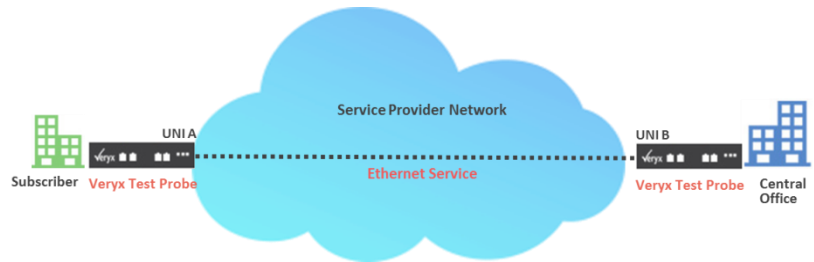


Figure 3: SAMTEST Probe to Probe Testing

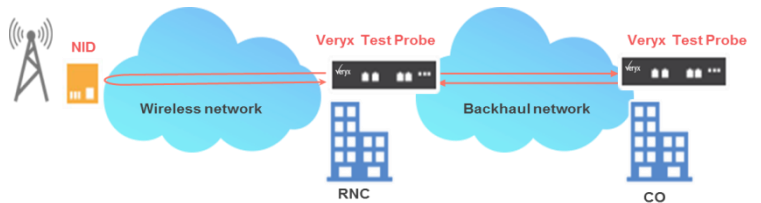


Figure 4 : SAMTEST usage for testing mobile back-haul

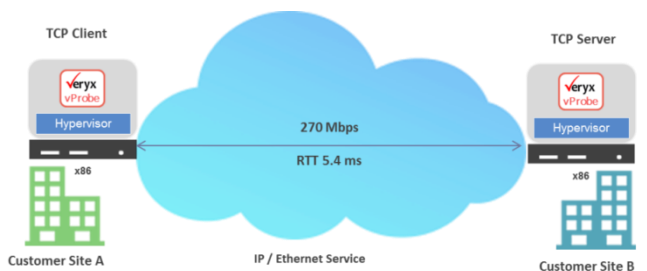


Figure 5: TCP Benchmarking using vProbes

Features

Testing and Troubleshooting

L2/L3 Tests : RFC 2544, Y.1564, MEF CE 2.0

L4 Tests: TCP (RFC 6349) Benchmarking

L7 Tests: HTTP, VoIP

802.1ag/Y.1731, Smart Loopback, TWAMP, Ping, Trace route

CE 2.0 service attribute verifications - VLAN/CoS Transparency, Bundling, MTU, Service Leakage, L2CP/SOAM

Bandwidth profile and Ethernet/IP SLA measurements such as delay, jitter, loss, etc.

Burst Testing as per MEF 10.2

Tagging Support: 802.1q, Q-in-Q

CoS – VLAN P-bits, DSCP, MPLS Experimental bits

Multi-Cos Testing

Auto diagnostics

Birth Certificate, Customer Portal, Graphical charts and PDF reports.

Hardware Test Probe

Physical

Dimensions: 1.75"H x 17.5"W x 8.8"D (44.45mm x 444.5mm x 223.52mm)

Weight: 10 Lbs.

Interface and Indicators

Test port options :

- 4x1GbE SFP ports,
- 2x10GbE SFP+ ports

Virtual Test Probe

vProbe System Requirements

1G - 2 vCPUs, 2 GB RAM, 5 GB HDD, Intel SR-IOV enabled NICs

10G - 4 vCPUs, 2 GB RAM, 5 GB HDD, Intel SR-IOV enabled NICs

Hypervisors: KVM(Qemu 2.0.0, libvirt 1.2.2) and VMWare ESXi 6.0

For more information

Contact sales@veryxtech.com

PARTNERSHIPS



About Veryx Technologies

Veryx Technologies is a leader in IP and Carrier Ethernet testing and offers comprehensive range of test solutions to enhance the Carrier Ethernet service assurance. Veryx provides innovative testing, automation and monitoring solutions for network service providers, cloud service providers, data centers, Enterprise IT and network equipment vendors. Leading service providers and equipment vendors rely on Veryx solutions for network testing, performance monitoring and equipment testing applications for technologies such as Carrier Ethernet, IP, Cloud, SDN, NFV and Smart Networks.

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