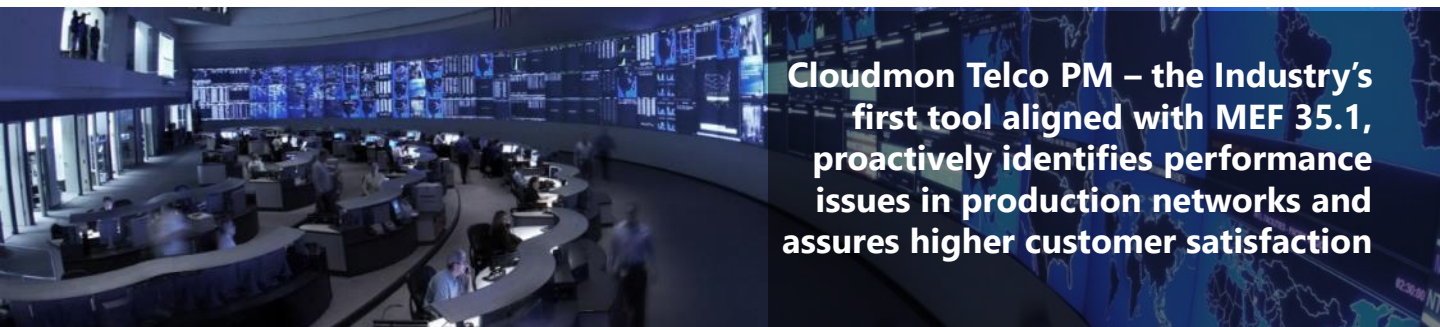# CLOUDMON
Telco Performance Monitoring

veryx

ACTIVE PERFORMANCE MONITORING FOR IP, CE & MPLS SERVICES

Cloudmon Telco PM – the Industry's first tool aligned with MEF 35.1, proactively identifies performance issues in production networks and assures higher customer satisfaction

KEY FEATURES

- Active performance monitoring using synthetic frames
    - Layer 2: IEEE 802.1ag, ITU-T Y.1731
    - Layer 3: ICMP, UDP Echo (RFC 862), TWAMP Light (RFC 5357)
- Compliant to MEF 35.1
- Supports IPv4, IPv6, MEF CE2.0, MEF3.0, MPLS circuits
- Performance Parameters:
    - Layer 2: FD, FDV, MFD, FDR and FLR (as per MEF 10.3)
    - Layer 3: PD, PDV, MPD, SD and PLR
- Frame sizes: 80/128/256/512/1024/1518 Bytes
- Auto-diagnostics on SLA violation
- Fault isolation/correlation, path trace, and path changes
- Supports Multi-CoS services monitoring
- SLA violation Alarms, Threshold Crossing Alerts (TCA)
- Continuous, periodic and on-demand monitoring
- On-demand diagnostics
    - Layer 2: IEEE 802.1ag/ITU-T Y.1731, Layer 3: ICMP, UDP Echo
- Dashboard, Reports, Email, and SMS alerts
- Open RESTful northbound API – easy to integrate with Service Orchestrator

APPLICATIONS

- Business Ethernet Services
- Cloud & Data Center Interconnect
- Mobile backhaul
- Enterprise
- SD-WAN

KEY BENEFITS

- Vendor independent
    - Zero integration, no inter-operability issues
- Reduces MTTR
- Maximizes customer retention and gain market share
- Enhances quality and builds customer loyalty
- Supports both Layer 2 and Layer 3 services

Figure 1: VT-201-L Initiator/Reflector

CLOUDMON Telco Active Performance Monitoring - Overview

Veryx CLOUDMON Telco PM provides comprehensive standards aligned IP and Carrier Ethernet service performance monitoring. It is industry's first MEF 35.1 compliant tool for Service Assurance and is far superior to monitoring capabilities provided on NIDs.

CLOUDMON Telco PM provides device independent monitoring, it will perform reliably even when NIDs fail. CLOUDMON Telco PM performs monitoring of layer 2 service links using synthetic SOAM frames and layer 3 service links using ICMP and UDP Echo.

CLOUDMON Active Performance Monitoring - Components

CLOUDMON Telco PM solution includes CLOUDMON Telco PM Controller and Veryx performance monitoring (PM) Initiators.

- CLOUDMON Telco PM Controller is centrally located and accessed using a web interface.
- PM Initiators generate synthetic SOAM frames for layer 2 and ICMP or OAM packets for layer 3 service links. SAMTEST supports monitoring using PM Initiators (physical or virtual) placed at suitable aggregation nodes.
- Veryx PM Reflectors augments performance monitoring in legacy networks.

CLOUDMON Telco PM supports continuous, periodic and on-demand monitoring with configurable monitoring interval and frame sizes. Whenever CLOUDMON Telco PM detects SLA violation, it not only raises suitable alarms, but also provides further insights on the violation to facilitate quick resolution of issues.

CLOUDMON Telco PM also offers virtual PM Reflectors and Initiators to support service provider transition to NFV based networks. Figure 3 shows a sample deployment of CLOUDMON Telco PM for monitoring IP circuit using PM Initiator along with PM Reflector.
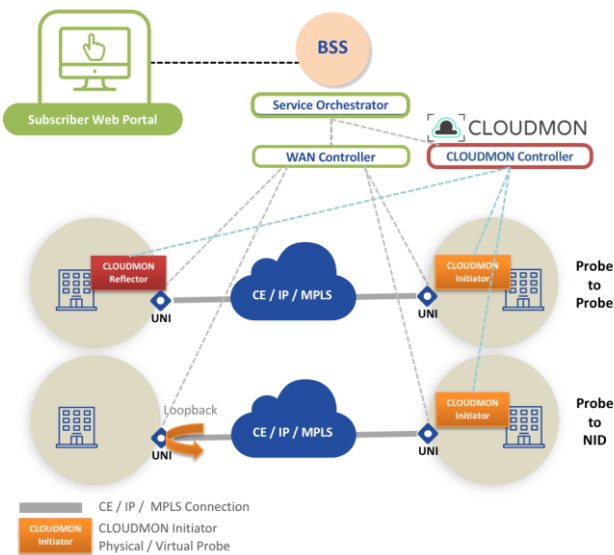

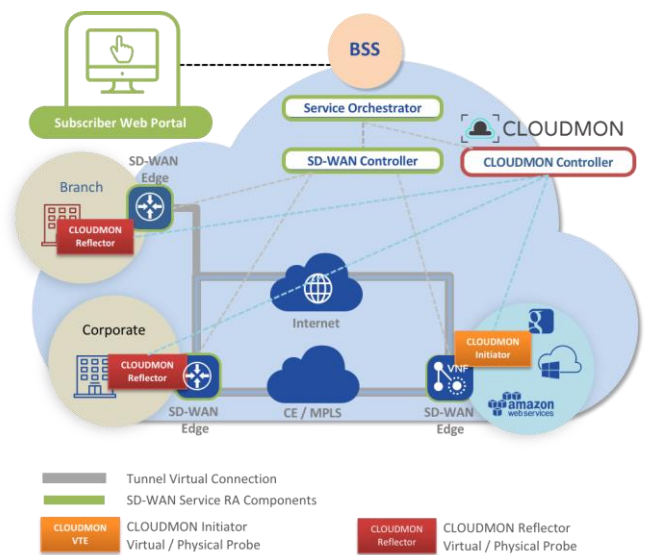Figure 2: Monitoring using Veryx PM Reflectors and Initiators

Figure 3: Monitoring using Veryx Virtual PM Initiators and Reflectors

Reporting and Integration with OSS

CLOUDMON Telco PM reports address the needs of a broad audience from technical to executive levels to provide comprehensive insights into SLA performance at various levels.

CLOUDMON Telco PM Northbound RESTful API interface facilitates easy integration with existing OSS and back office systems.

On-demand Diagnostics

CLOUDMON Telco PM supports on-demand diagnostics for enhanced troubleshooting in live networks.

CLOUDMON Telco PM performs diagnostics and standards based measurements at Layer 3 using ICMP, UDP Echo and at Layer 2 using IEEE 802.1ag/ITU-T Y.1731.
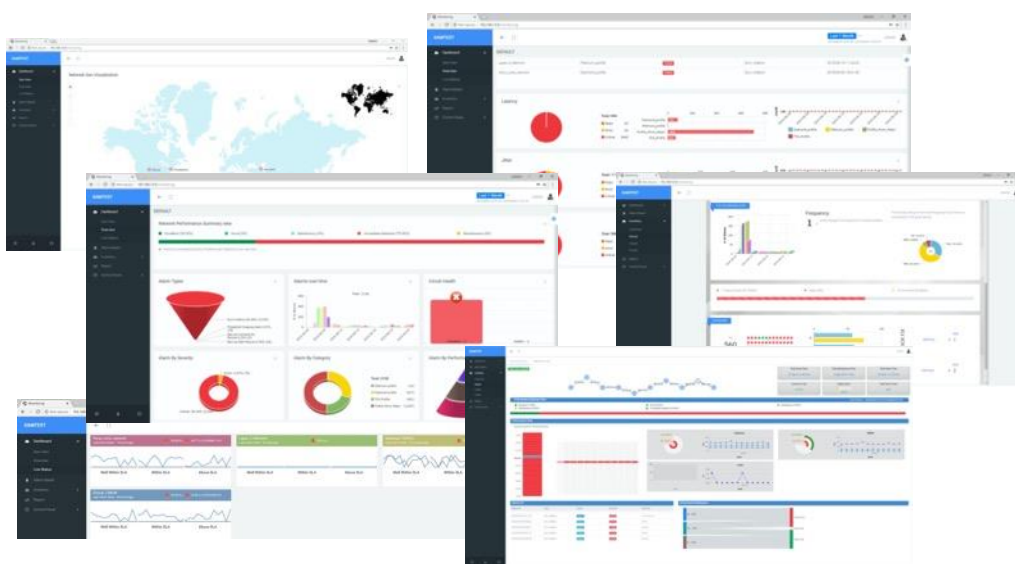

Figure 4: CLOUDMON Telco PM performance monitoring dashboard and analytics

Features

Monitoring Features

Active Performance Monitoring:

- Layer 2: IEEE 802.1ag/ITU-T Y.1731
- Layer 3: ICMP, UDP Echo (RFC 862), TWAMP Light (RFC5357)

Complaint to MEF 35.1

Continuous, periodic and on-demand monitoring

Performance Parameters:
Layer 2: FD, FDV, MFD, FDR and FLR (as per MEF 10.3)
Layer 3: PD, PDV, MPD, SD and PLR

Frame sizes:
80/128/256/512/1024/1518 Bytes

Monitoring interval – 100ms/1s/10s

Up to 1000 circuits monitoring per probe port

Up to 25000 circuits monitoring per controller

Alarm generation on SLA violation

Auto diagnostics on SLA violation

Network behavior logging during SLA violation

Fault isolation/correlation, path trace, and path changes

On-demand diagnostics :

- Layer 2: IEEE 802.1ag/ITU-T Y.1731
- Layer 3: ICMP, UDP Echo

Physical PM Reflector and Initiators

Physical

Dimensions
VT:201: 1.61"H x 7.7"W x 5.78"D
(41mm x 196mm x 147mm)

Weight
VT-201: 2.2Lbs.

Interface and Indicators

Front I/O
VT-201:
1xRJ-45 GbE LAN ports, 3xUSB ports
Test ports: 1GbE Electrical

Power

Power Supply
VT-201: 11.4W, 90-240V AC

Environmental

Operating temperature
0 to 40 degree Celsius

Storage temperature
-20 to 65 degree Celsius

Regulatory
FCC Class A, and CE Certified

Virtual PM Reflector and Initiators

Virtual PM Initiator/Reflector

vCPU: 2, Memory: 2 GB, HD Space: 4 GB

Hypervisors: KVM, Openstack, Red Hat OPS and VMware ESXi 6.0 or above

Partnerships

For more information

Contact sales@veryxtech.com

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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