For Telcos

Description

Service Assurance For Software Defined Networks

Telco Network Monitoring And Testing Solutions

Home

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For Telcos

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Service Assurance & Test Solutions For Telcos

Telcos And Network Carriers Have To Cater To Ever-Increasing Bandwidth Demand And Subscriber Growth. Thus Deploying And Maintaining An Increasing Network Footprint With Limited Technical Resources, Time And Budget Could Quickly Become A Challenge. How Can They Deliver Services At Lower Opex Without Sacrificing Network Performance Or Jeopardizing Quality Of Service?
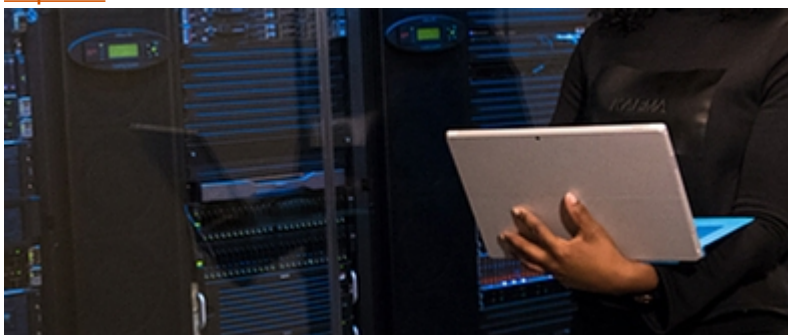
Veryx Telco Network Monitoring And Testing Tools Speed Up Validation And Monitoring Capabilities, Ensure Efficient Operation And Alignment To The Latest Industry Standards. They Have Been Deployed With Several Leading Network Carriers.

Monitoring

- Telco Cloud IT Monitoring
- Service Performance Monitoring
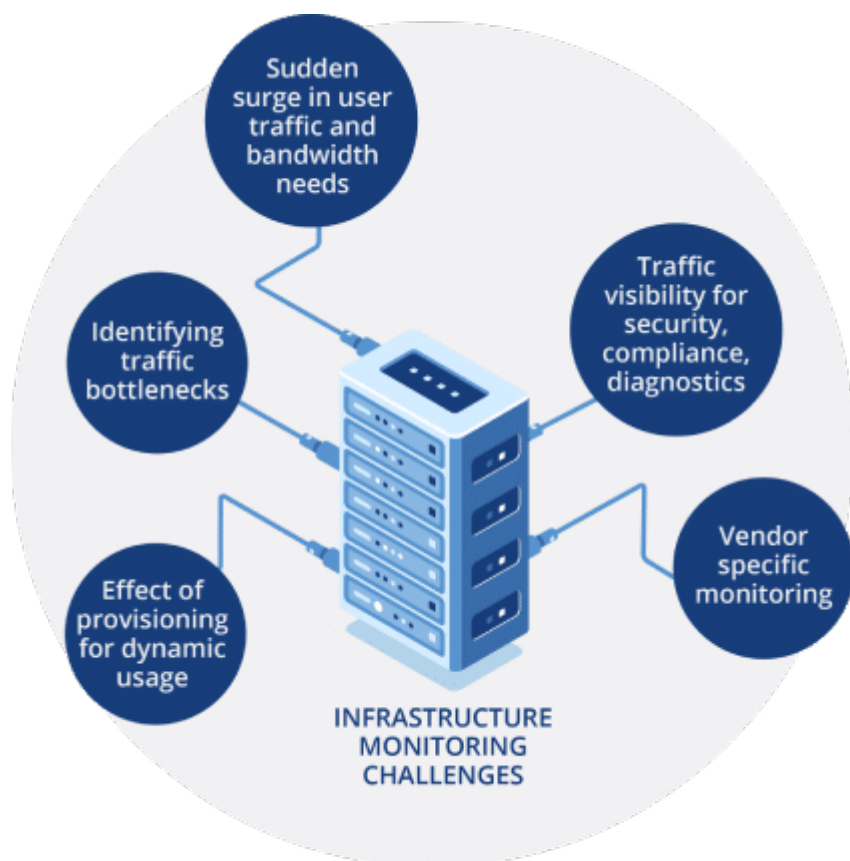- NFV Infrastructure Monitoring

Explore

Testing And Benchmarking

- Service Design Testing
- Service Activation Testing and Diagnostics
- Service and Application Benchmarking
- NFV Performance Benchmarking

Explore

Solutions For Monitoring

Telco Cloud It Infrastructure Monitoring

Telcos Rely On Their It Infrastructure – Network, Servers And Applications Whether On-Premises, Or In A Hybrid It Environments To Provide A Trouble-Free Customer Experience.

Since Potential Problems May Be Lurking Anywhere – In Applications, Servers Or The Network, Data Center And Enterprise It Teams Need The Right Tool To Monitor The Performance And Availability Of Their It Infrastructure And Easily Understand The Root Causes Of The Problems. Downtime Could Cost The Business A Lot Of Money, If It Teams Don't Respond Detect And Fix The Problems Quickly.

Veryx Cloudmon Itim Takes The Guesswork Out Of Your Operations, With A Proactive Infrastructure Monitoring And Diagnostic Solution That Covers:

- Performance and health of all servers & network devices
- Network congestion and hop-by-hop analysis
- Availability of network links, network devices and Servers

COMPLIANCE & GOVERNANCE

IMPROVED PERFORMANCE

CAPACITY PLANNING

MINIMIZED DOWNTIME

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Service Performance Monitoring

Telco Service Assurance Teams At Nocs Face Many Operational Challenges To Efficiently Monitor Service Performance To Assure Customers' Qos And This Ensures Sla Guarantees, Including:

- Customer experience management
- Accurate SLA measurements based on device statistics
- Errors introduced during network expansion or changes

Service Assurance Teams Have Traditionally Depended On Alerts And Alarms Generated On Their Centralized Dashboards For Troubleshooting Using Passive Monitoring Tools. However, More Often Than Not, They Find It Challenging In Correlating Events And Faults In Live Networks.

Isolating Errors For Analysis And Ensuring Adequate And Relevant Capture Of Data Traces During Failures Is A Key Challenge That Service Assurance Teams Face.
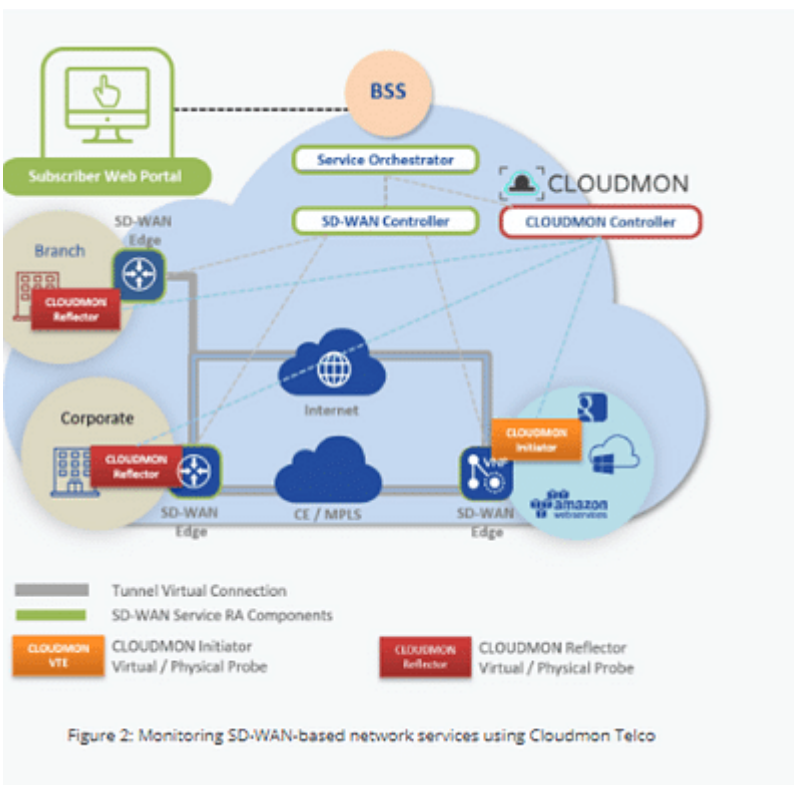
Cloudmon Telco Has Been Designed Keeping These Challenges In View And Delivers Substantial Reduction In Time And Effort In Performing Diagnostics With Ease.

Cloudmon Telco Provides Active Monitoring Capabilities Based On Synthetic Frames For

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

Unlike Nid-Based Offerings, Cloudmon Telco Is A Vendor Independent Solution That Not Only Eliminates Interoperability Issues, But Also Ensures Monitoring Capabilities Independent Of The Network Elements.

Cloudmon Telco Helps Substantially Reduce The Mean Time Taken To Repair (Mttr) And Enhances The Quality Of Service Assurance. Thus, Cloudmon Telco Helps Increase Customer Satisfaction And

Loyalty.

Cloudmon Telco Provides A Centralized Data Store At The Cloudmon Telco Controller. Cloudmon Telco Pm Initiators May Be Distributed To Optimally Monitor The Network. Cloudmon Telco Provides Both Physical And Virtual Pm Initiators & Reflectors.

Figure 1: Monitoring CE/IP/MPLS-based network services using Cloudmon Telco

Figure 2: Monitoring SD-WAN-based network services using Cloudmon Telco

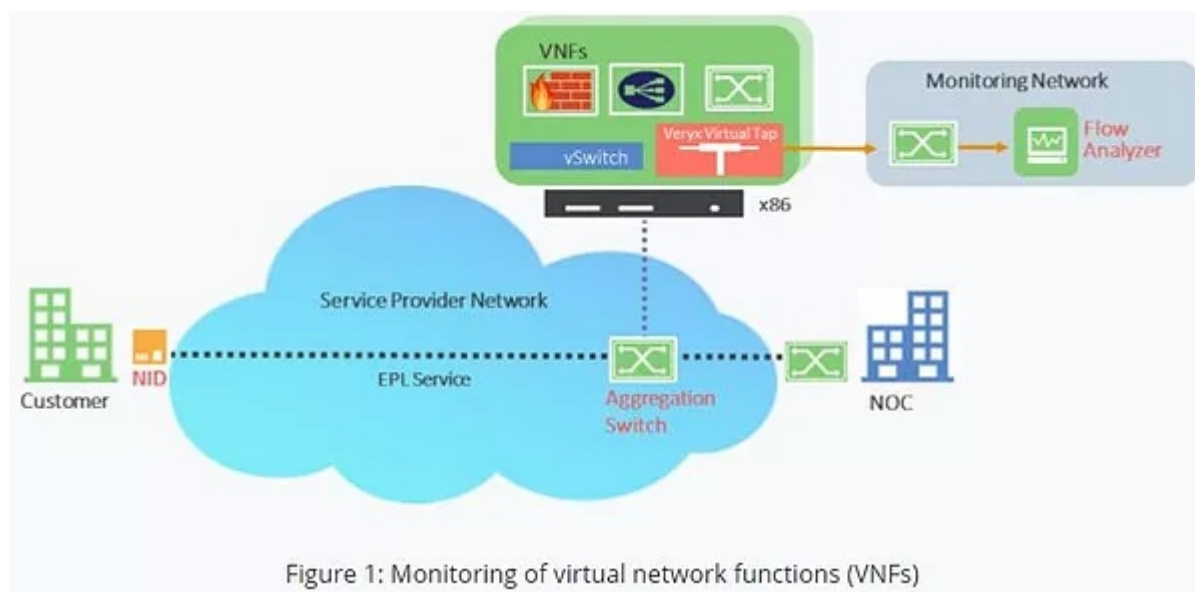Learn MoreBack To Top

Nfv Monitoring

Network Functions Virtualization (Nfv) Is A Network Architecture That Implements Virtualization Of Network Node Functions To Deliver Communication Services Efficiently.

While This Brings In A Major Shift In Manner In Which Networks Will Be Deployed, Service Providers Need To Ensure That Their Sla Metrics Will Not Be Degraded By Performance Of The Data Center And Cloud Infrastructure.

Monitoring Virtual Environments Is More Complex Than Their Physical Equivalents Because Nfv Servers Are Expected To Contain Dozens Of Service Chains And Hundreds Of Network Functions.

Monitoring Virtual Environments Is More Complex Than Their Physical Equivalents Because Nfv Servers Are Expected To Contain Dozens Of Service Chains And Hundreds Of Network Functions.

With Veryx Vtap, Complete Visibility Of Vnf Traffic Is Provided And The Data That Is Tapped Can Be Analyzed With Veryx Cloudmon Ntm Or Other Third-Party Analyzers.

Figure 1: Monitoring of virtual network functions (VNFs)

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Solutions For Benchmarking And Testing

Telco Network Service Design Testing

Telco Service Design Teams Typically Need To Perform The Following Tasks When Validating Service Design.

- Network equipment validation for real world traffic and SLAs
- Network benchmarking, stability and scalability testing
- Validation of service definitions and optimizing equipment configuration
- Service compliance testing
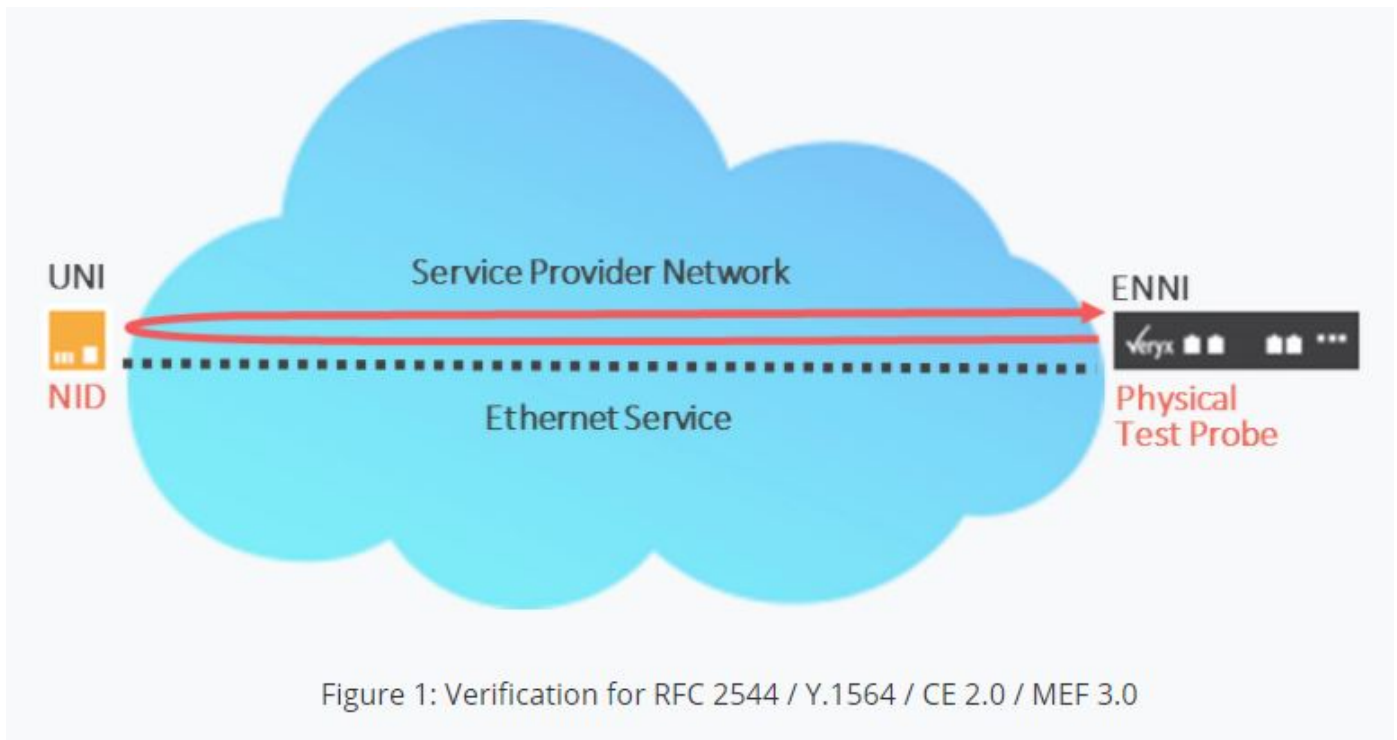- Regression testing after upgrades to network elements

Samtest Has Been Designed Keeping These Tasks In View And Delivers Substantial Reduction In Time And Effort In Performing These Tasks With Ease.
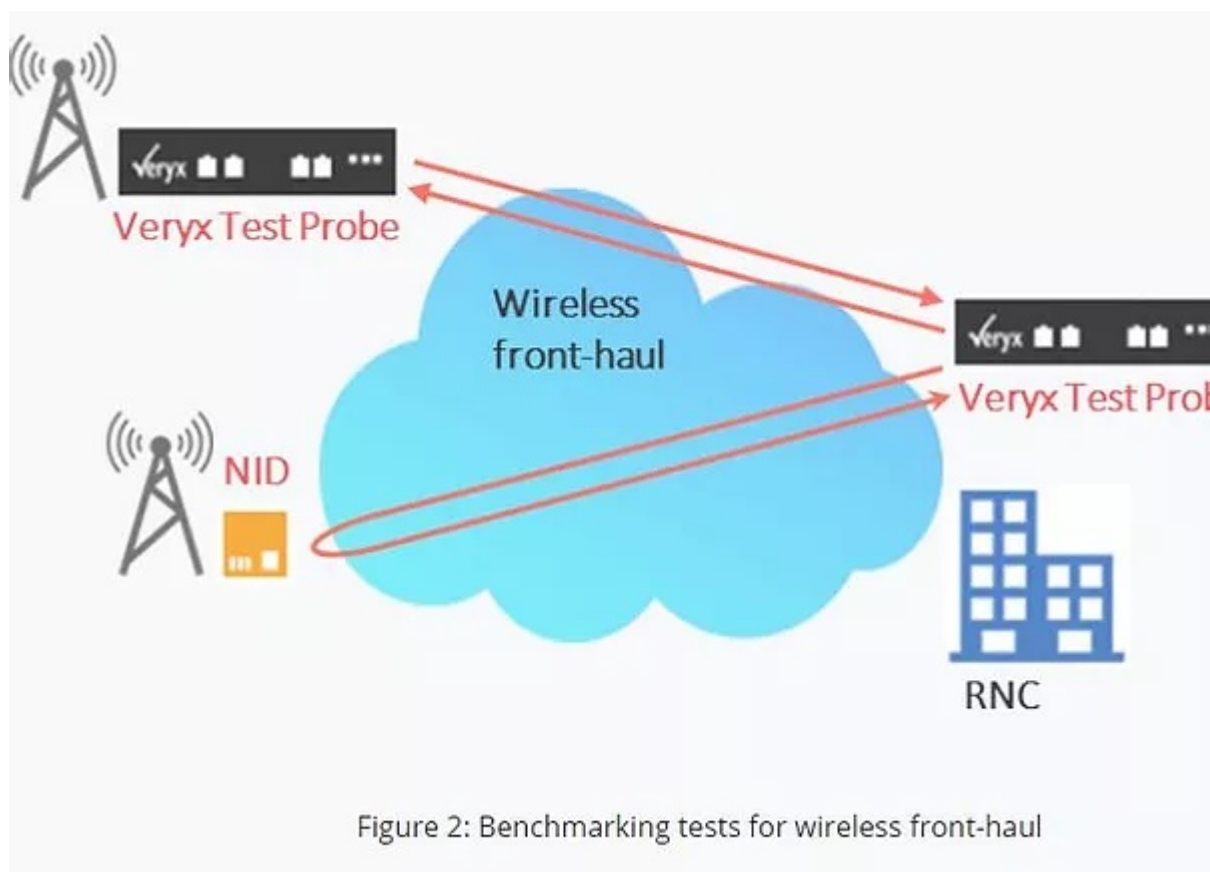
Samtest Supports A Full Range Of Automated Test Libraries For:

- IP and Carrier Ethernet and testing based on ITU-T Y.1564 and RFC 2544 methodologies
- MEF 3.0 and CE 2.0 Carrier Ethernet testing for comprehensive service verification including service attributes and bandwidth profile (as per MEF 10.3) and SLAs.
- TCP benchmarking (RFC 6349), UDP benchmarking

- HTTP, VoIP and video on demand (VoD) testing▯

▯Samtest Enables You To Thoroughly Test The Equipment And Network And Ensure That There Are No Surprises In The Field. Also, When Changes And Upgrades To Networks Are Needed, Samtest Helps Ensure That The Service Attributes And Slas Are Intact.

Figure 1: Verification for RFC 2544 / Y.1564 / CE 2.0 / MEF 3.0

Figure 2: Benchmarking tests for wireless front-haul

Service Activation Testing And Diagnostics

Telco Service Fulfillment Teams Typically Need To Perform The Following Tasks When Turning Up Ip & Carrier Ethernet Services:

- Validation of service definitions and SLAs
- Benchmarking and stability testing
- Diagnostics on failures

However When Relying On Nids To Perform Turn-Ups, They Risk An Inadequate Level Of Testing That Potentially Lead To Faults When Start Using The Services. Nids Do Not Support Exhaustive Testing And Troubleshooting Capabilities.

Also, Many Of The Traditional Tools Need Manual Testing That Is Time-Consuming And Error Prone. And Often, Lack Of Expertise On Could Be A Bottleneck When Diagnosing Failures.
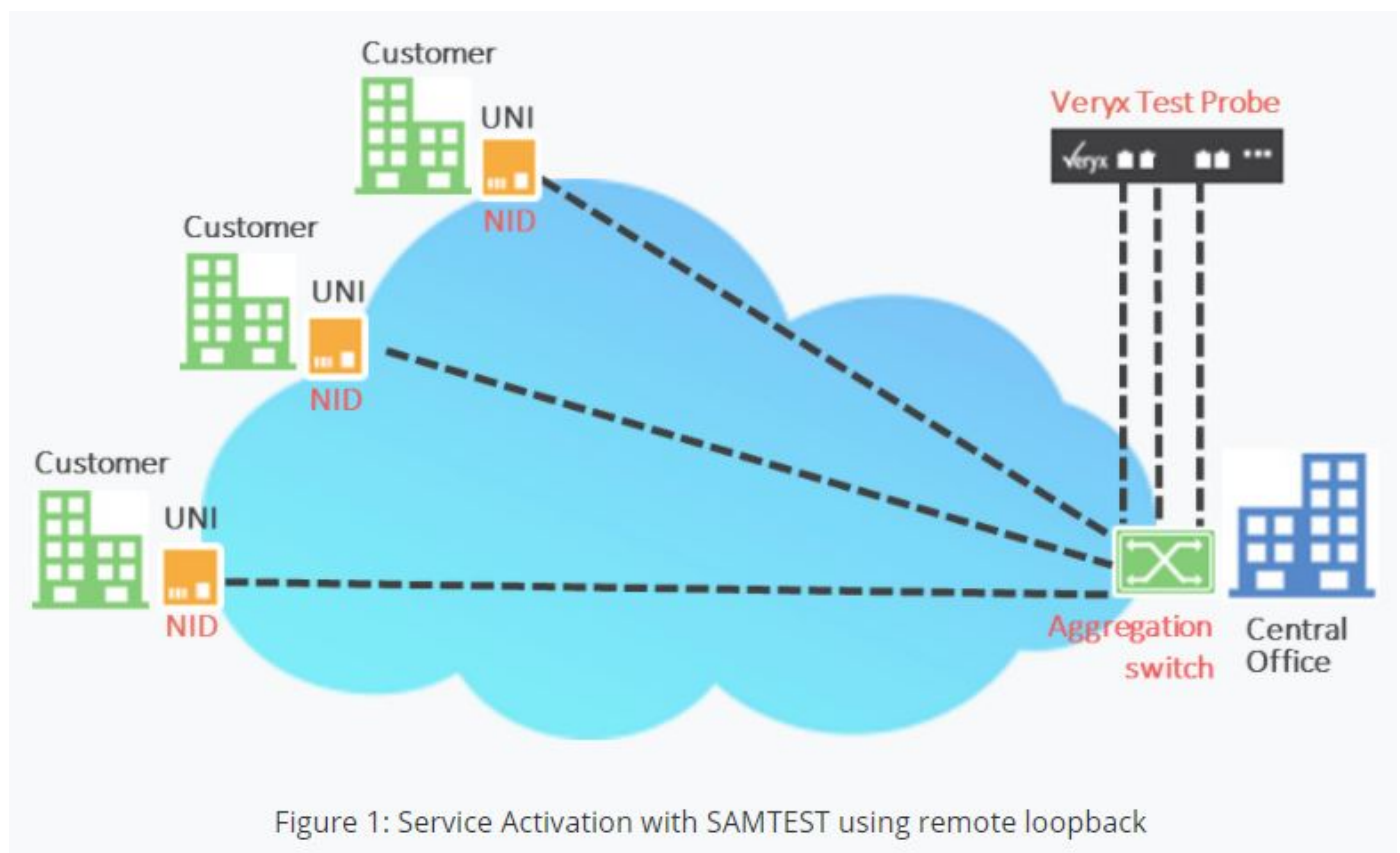
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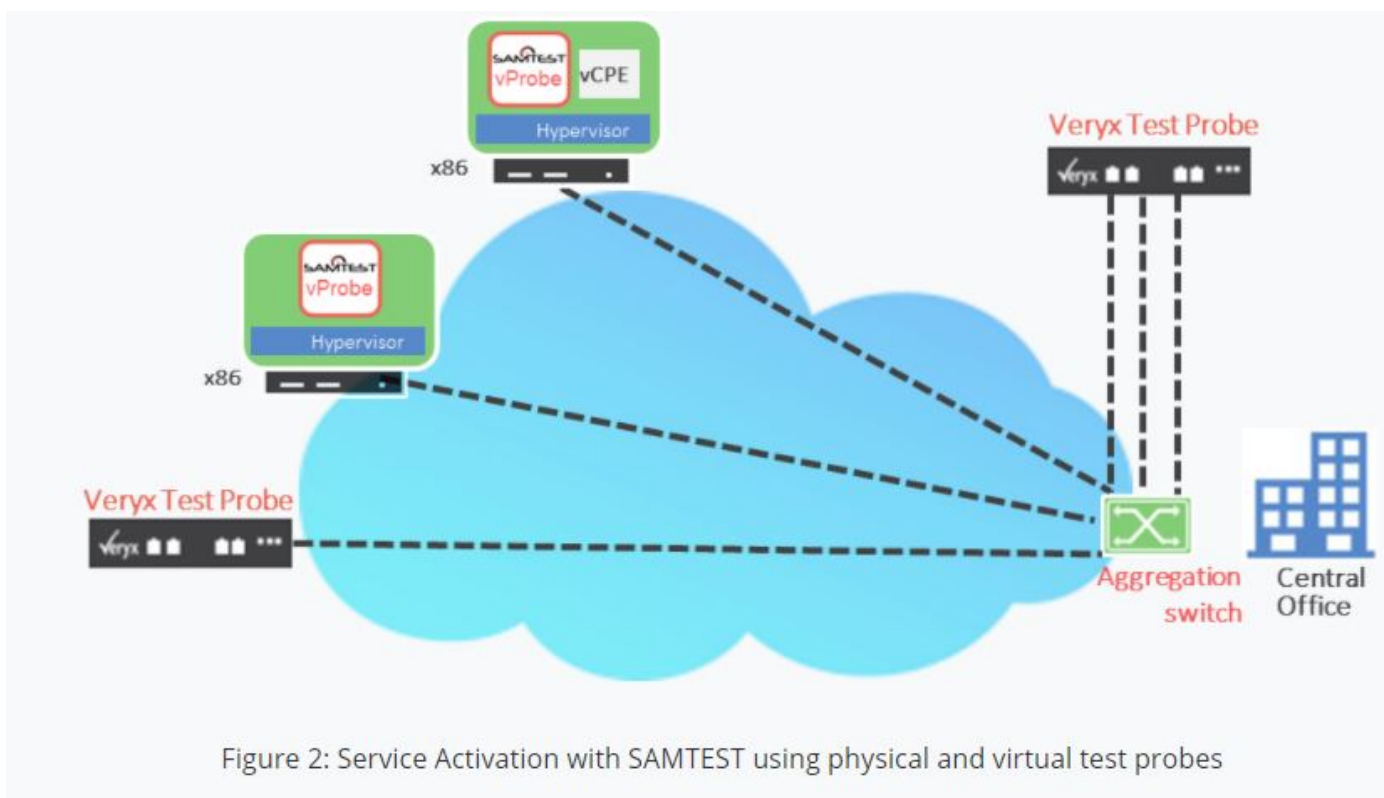
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- HTTP, VoIP and video on demand (VoD) testing

Samtest Enables You To Thoroughly Test Network Services During Turn-Up To Ensure That Customers Do Not Encounter Unexpected Failures In The Field.

Figure 1: Service Activation with SAMTEST using remote loopback

Figure 2: Service Activation with SAMTEST using physical and virtual test probes

Service And Application Benchmarking

Telco Field Teams Typically Need To Perform Service And Application Benchmarking For Ip & Carrier Ethernet Services To Ensure Sla Guarantees.

However When They Rely On Nids To Perform Turn-Ups, They Risk An Inadequate Level Of Testing That Could Lead To Faults When Customers Start Using The Services. Nids Do Not Support Exhaustive Testing And Troubleshooting Capabilities.
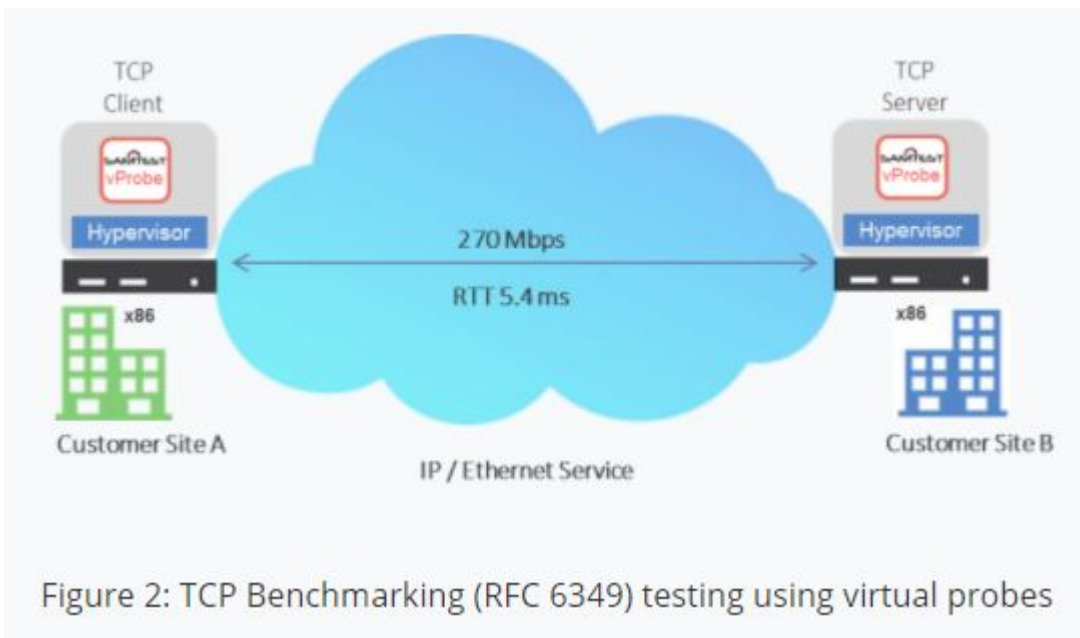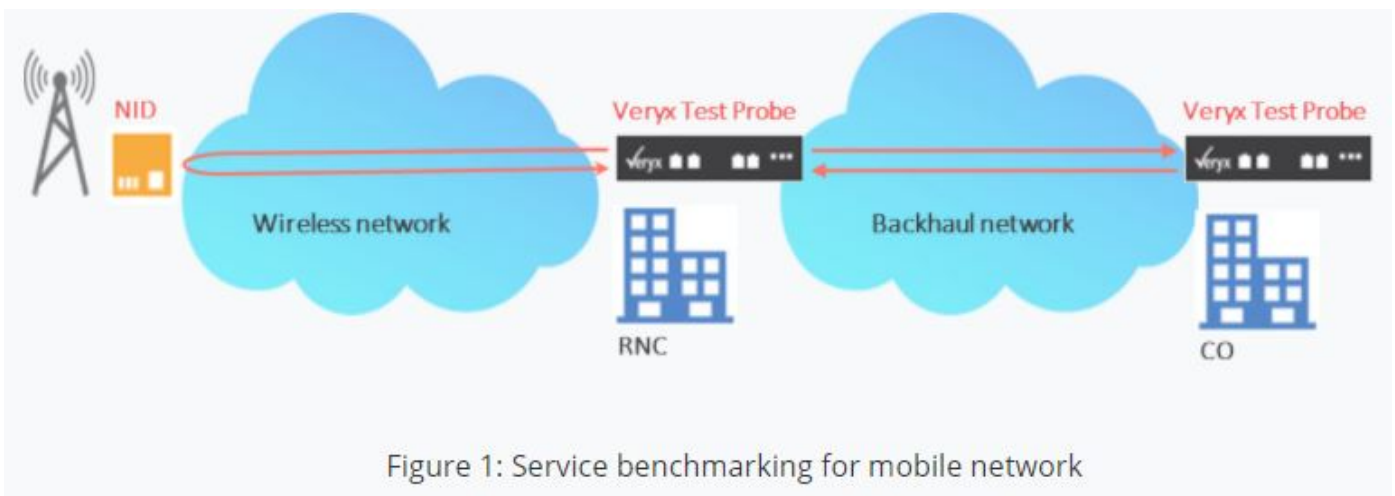
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- TCP benchmarking (RFC 6349), UDP benchmarking
- HTTP, VoIP and video on demand (VoD) testing

Figure 1: Service benchmarking for mobile network

Figure 2: TCP Benchmarking (RFC 6349) testing using virtual probes

Nfv Performance Benchmarking

Performance Testing In Nfv Environments

For Telcos, Transition To Nfv, Cloud And Sdn-Based Infrastructure Opens More Opportunities To Innovative Services. However, As Network Functions Are Moved From Dedicated Hardware To Cloud

Infrastructure, An Additional Performance Impact Is Introduced In Network Services. Thus, Service Providers Need To Assess The Potential Impact Of Sla Metrics Getting Affected Due To Transition To Nfv.

In Addition To This, Troubleshooting In A Next Generation Network Involves Correlation Of Information Across Various Cloud Resources. This Increases Operational Costs And Makes It Challenging For The Administrator To Correlate Information Across Heterogeneous Entities And Determine The Root Cause.

The Above Factors Mandate Specialized Verification And Diagnostics Of Networks Which Support Nfv Capabilities. The Diagnostics Capabilities Should Be Enabled On-Demand During Both Validation And Live Deployment. Further, Gaining Visibility Into The Network And Awareness Of The Performance Levels Is Paramount Importance.

[Samtest](#) For Nfv Service Testing Helps Service Providers To Measure Key Performance Indicators And Troubleshoot The Service Degradation. The Solution Includes A Virtual Probe Entity Called Samtest Vprobe, Which Has An Compact Foot-Print And Can Be Quickly Spun Up. Samtest Nfv Is Hence Ideal For The Life-Cycle Service Orchestration (Lso) World Where Dynamic Service Configuration, Turn-Up Testing, On-Demand Monitoring Is Required.

Veryx Is Partnering Part A Solutions Partner In The Intel Network Builders Ecosystem. Visit [Veryx Microsite](#) At Intel Network Builders.
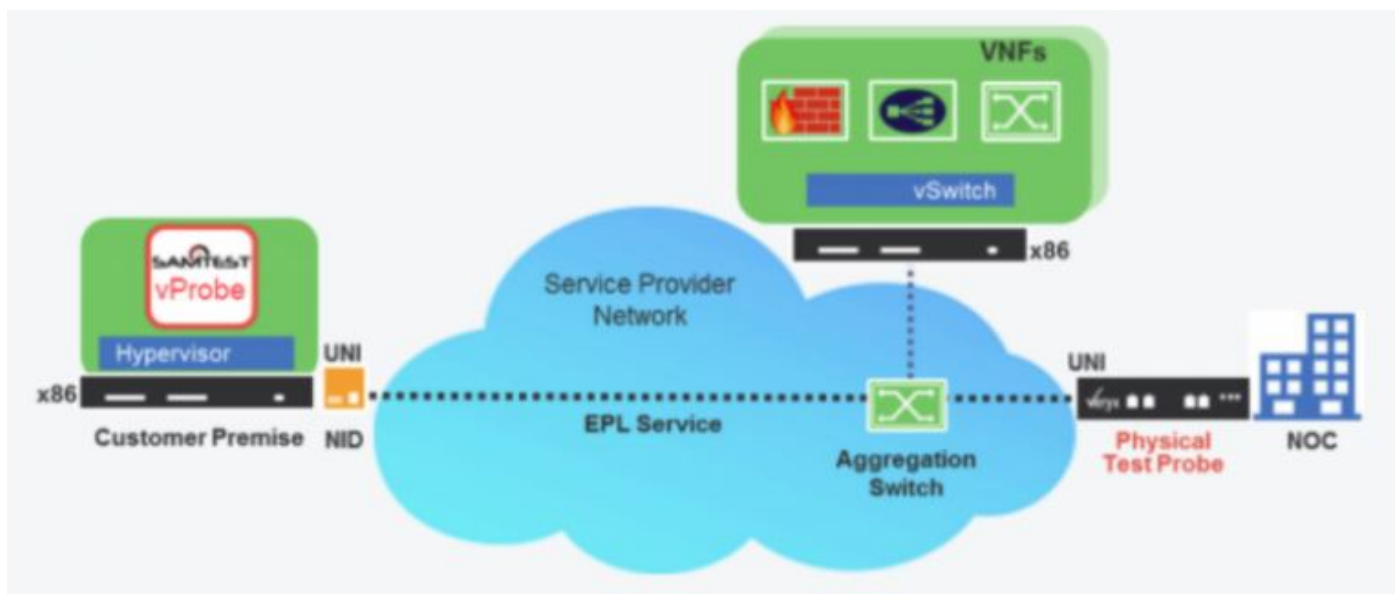

Network And Vnf Performance Testing

With Samtest Nfv, Service Providers Can Measure Various Performance Metrics Including Bandwidth, Frame Delay (Fd) Frame Delay Variation (Fdv) And Frame Loss Ratio (Flr), Utilizing Physical Or Virtual Probes. Further, Samtest Nfv Workflow Provides Automated Service Turn-Up Testing And Generates Birth Certificate Reports Encompassing Range Of Pre-Built Standards-Based Test Scenarios Covering 802.1 Ag, Y.1731, Y.1564, Ce 2.0 And Mef 3.0.

Samtest Nfv Provides The Ability To Ensure That The Performance Measurements Of Individual Vnf Entities That Relate To A Service, Are Associated Correctly. For Instance, The Dns Query Request And Response Time Taken By A Vdns Can Be Measured. Similarly The Relevant Performance Metrics For Other Vnfs Like Vrouter, Vcpe And Vepc Can Be Measured.

Pre-Deployment Performance Benchmarking

In This Scenario, A Service Provider Can Validate Nfv-Based Network Service Offerings. Pre-Deployment Validation Can Be Achieved Utilizing Physical Probes Or Virtual Probes Or A Combination Of Both.

Service Providers Can Validate Sla Metrics Leveraging Multiple Features Such As Bandwidth Profile Test. In Addition, The Performance Can Also Be Determined Using Live Application Servers.

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