

NeXt-Hop- Performance (NHP): now a cost effective reality with Infosim[®] StableNet[®]

David Poulton, COO, Infosim[®] UK, discusses the introduction of Infosim[®]'s newest advances in Agent Technology using the cost effective Raspberry Pi hardware

It has always been the vision for most telecommunications operators, managed service providers (MSPs) and enterprise corporations to have a cost effective solution for implementing a performance measurement and simulation capability that spans every hop within a network or service delivery path.

Imagine being able to orchestrate performance measurements and simulate synthetic real-time communications, between the first to last hop, and every hop in between, of a network delivery path in order to determine the actual Next Hop Performance (NHP). The dream of an affordable option for implementing this type of solution is now a reality thanks to the continued innovation from Infosim[®].

The Infosim[®] StableNet[®] unified management system now introduces new cost effective agent technology based around the use of the Raspberry Pi hardware. Infosim[®] has developed a unique combination of the Debian operating system with the StableNet[®] Agent. This new agent availability with Infosim[®]'s award winning StableNet[®] Enterprise and Telco products makes for a very powerful and compelling cost effective performance option.

Types of Use

So let us take a look at some of the options available to the telecoms and enterprise sectors whereby greater performance insight and visibility can be gained through the flexible deployment of this new agent.

Telecom and Managed Service Providers

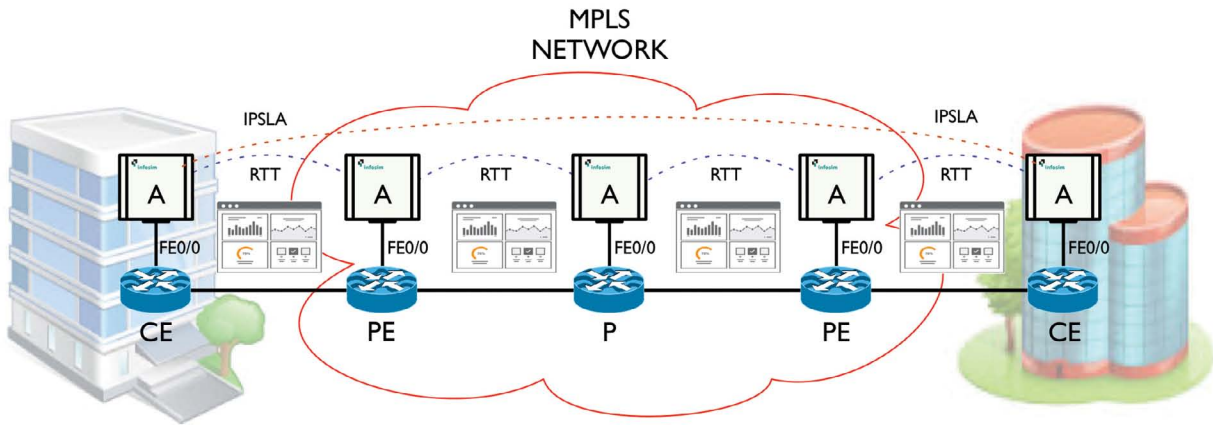
MPLS networks are typically very complex and resource intensive, hence, there has always been reluctance in some cases to enable additional features, for example, IPSLA, as these configured functionalities take additional resource from the devices already transporting huge volumes of network traffic. With the cost effective agent option from Infosim[®], this mitigates any resource concerns, as the agent is external to any devices within the MPLS cloud.

Figure 1 details a simplified view of how an inexpensive piece of hardware can now be deployed and interconnected into a single Ethernet port on every router, switch or Tap within the MPLS cloud.

Agent-to-Agent media scripts can be configured to perform detailed measurements. Media scripts are coded packages that are installed on the agent and placed in strategic areas of the network in order to conduct specific path tests, record, collect and report on real-time performance data. Types of media scripts include:

- Availability
- Bandwidth Usage
- Inter-Hop Propagation Delay
- Packet Loss
- Jitter
- MOSS
- R-Factor
- QoS Class Performance Reporting
- Route Changes
- IPSLA

Figure.1:



StableNet® can then display and report on these statistics within a dashboard, web-service reports, or export the data into other analytic tools, e.g. Splunk™, integrate with other telco tools like Netcool™, or service tools, e.g. ServiceNOW™. The flexibility of how data is displayed or exported is one of the unique selling points of using StableNet® because it is a SOA (Service Orientated Architecture) based developed tool, which means it has an exceptionally flexible suite of API connect options.

A lot of Telecom operators and MSPs also provide a huge amount of ‘Wires-Only’ services to customers that, in most cases, provide no ‘tail-end’ performance or availability management as the CPE is owned by the customer. With new carrier Ethernet services and NTE termination equipment it is now possible to deploy the cost effective agent together with the termination NTE device so as to provide additional performance monitoring, eliminate tail-end black hole visibility, and differentiate your ‘Wires-Only’ services that will delight your customers, improve retention and increase margins.

For Telcos and MSPs, the deployment of this technology not only provides greater insight of the performance within the MPLS clouds they operate, it also serves as a great ‘UP-Sell’ opportunity with additional ‘Value Add-Services’ to their customers and partners. Differentiating services

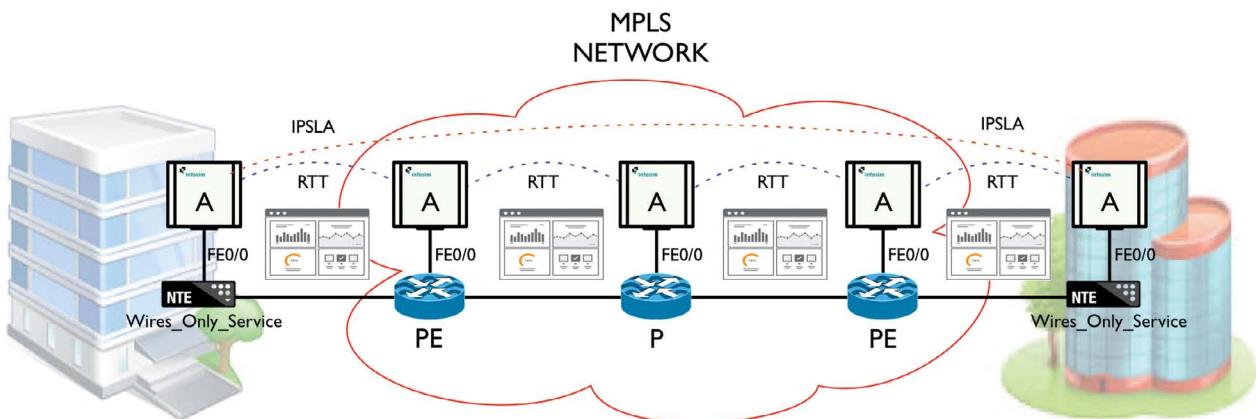
by providing MPLS ‘In Cloud’ visibility will provide the transparency so many customers are now demanding.

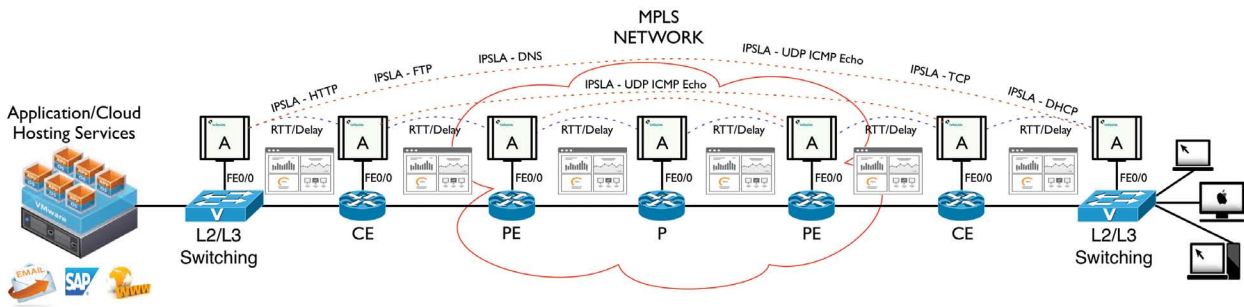
Enterprise and Cloud Service Providers

For enterprise corporations and cloud service providers, the reality of being able to visualize the performance of the infrastructure an application service traverses End-to-End is now an affordable possibility. You want to know the inter-hop delay and round-trip-times between every hop in the communication delivery path, so as to quickly identify where bottlenecks or service affecting performance degradation is taking place. Being able to visualize the End-to-End performance in a single dashboard with detailed inter-hop performance metrics provides even greater understanding of the overall service experience.

Outsourced Enterprise

For enterprise corporations who have outsourced networks, data centers and cloud based services, this is a unique opportunity to deploy a cost effective End-to-End solution whereby greater visibility of the service performance and experience can be visualized. This unique insight is revolutionary for enterprise corporations with outsourced service operations as you can deploy the StableNet® solution as a service and accurately measure





▶ and cross-reference your contractual performance SLAs and, more importantly, experience 'single pane of glass' service visualization.

StableNet® is also extremely scalable, so small to extra-large deployments are easily accommodated, for example, we have deployments where 50,000+ agents are in operation, and supporting in excess of 100,000 devices.

VoIP and Video Services

VoIP and video real-time services require packet prioritization throughout the End-to-End delivery path of a given network. Assurance that your QoS configuration is being correctly marked, policed and trusted along the communications delivery path is essential.

VoIP in particular is sensitive to delay and needs to be prioritized and expedited from the VoIP hosting environment to the handset.

Call quality is an expected deliverable and being able to measure inter-hop QoS markings, delay, jitter, packet loss, MOSS, R Factor, IPSLA, and perform RTP call simulation means you have the control and knowledge of knowing exactly what the performance experience is of your VoIP services.

Conclusion

Infosim®'s introduction of this cost effective agent option affords customers the ability to deploy solutions that provide the most detailed insight into the End-to-End performance of their networks and applications.

This new agent from Infosim® is like no other product available today, it provides differentiated visualization into the performance and operation of your networks and applications, with invaluable insight into the strengths and

weaknesses of every communications hop within the service delivery path, so your mission critical networks and business applications can perform at the highest optimal level.

About StableNet®

The Infosim StableNet® unified management solution provides a complete all-embracing multi-functional management wrap around your entire infrastructure enabling consistent End-to-End management, resulting in faster resolution (*MTTR*), smarter operational management through lower operating costs, seamless support, flexibility in scaling and provisioning a changing environment to meet new business products and developments, providing for a great customer experience and service differentiation.

The StableNet® solution is a flexible service provisioning, and service assurance multifunctional platform that provides customers with a much broader range of capabilities that include:

- Asset Management
- Configuration and Compliance Policy Management
- Fault & Event Management (*with Root-Cause-Analysis RCA*)
- Performance & Capacity Management
- Visualization
- Lifecycle Management (*EOx*)
- Vulnerability Management

For further information on Infosim® products and services, please visit: www.infosim.net

If you wish to contact us for further solution options and discussions or demonstrations of our products, please Email: sales@infosim.net

