STABLENET®
AUTOMATED NETWORK & SERVICE MANAGEMENT

Performance & Service

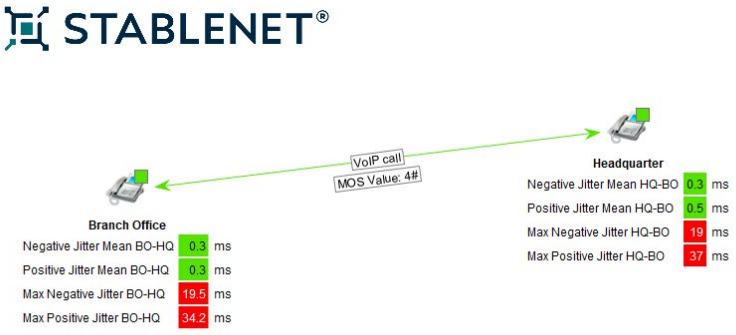
End-to-End VoIP and Video Quality of Service Management: A Single Tool for Infrastructure Management, Quality Control and Delivery Assurance

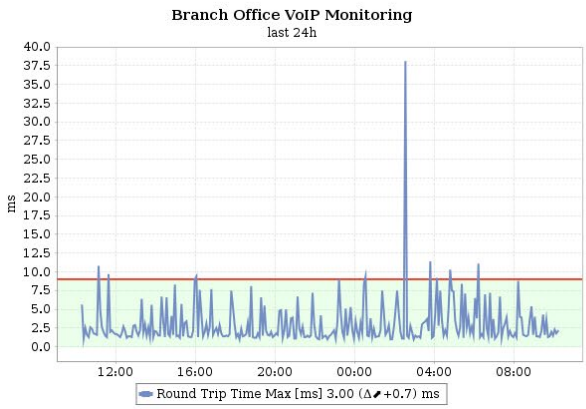
Find out how StableNet® empowers you to take control of your end-to-end VoIP and video services with a vendor-independent solution that monitors the performance of the underlying packet transport network.

Background & Motivation

Imagine the following: Your firm recently made the decision to implement Voice over IP (VoIP) in order to capitalize on the countless advantages that the technology has to offer. However, since making the switch, you've noticed that complaints about call quality and reliability have steadily increased. While service providers are able to access their vendor-specific tools to assist in troubleshooting (assuming it is on their end!), you are often finding that you are not in a position to perform a similar analysis on your side. When you call, they inform you that the problem may not even lie with them, that you are most likely having issues with either your Local Area Network (LAN) or Wide Area Network (WAN). While the assessment sounds plausible, you need a solution which consistently and continuously controls for reliability and quality of experience (QoE) across the board.

VoIP communication systems have overcome many of their initial shortcomings and are nowadays the default choice for a wide range of consumer markets and enterprise businesses. Service providers have steadily increased not only the reliability of packet voice transport, but the portfolio of service offerings and options as well. From multiple-line systems to hosted VoIP solutions and Private Branch Exchanges (PBX), services are reasonably priced, convenient to use, and offer numerous advantages to their circuit-switched counterparts. Whereas traditional telecommunications relied on a time-division multiplexing (TDM) network with dedicated connections to carry voice calls, VoIP technology offers the advantage of running on top of a converged IP infrastructure. Wide-ranging VoIP platforms benefit from increased availability of broadband technologies, allowing for ever-increasing consolidation. This opportunity to achieve both improved call quality as well as the ensuing synergistic effect for network and data transmission relies on strict quality assurance.





Visualization Example: VoIP Call Monitoring between Branch Office and Headquarter

StableNet® Solution

A solution is an answer to a problem. For VoIP quality assurance, this requires controlling for network infrastructure, transmission protocols as well as end user hardware and connection quality/signal strength. A multi-faceted and comprehensive approach (like StableNet®) must then be able to acquire a wide range of KPIs from diverse end-to-end measurement perspectives. While some are end user-focused (e.g. Mean Opinion Score or MOS), others are network-centric performance parameters (e.g. latency, jitter, packet loss, etc.). Each measurement amongst a wide array of possible KPIs provides a different lens to examine and understand quality. MOS, for example, offers insight into customer satisfaction (QoE) regarding the experienced call quality as well as the potential impact of end-user environments (hardware, software and connectivity).

Session Initiation Protocol (SIP) is the signaling portion and used, as the name implies, to establish and terminate sessions. Based on Real-time Transport Protocol (RTP), Real-time Control Protocol (RTCP) is a critically important Quality of Service (QoS) measurement component and provides access to such information as packet loss, round-trip time delay, jitter, and more. Finally, Call Detail Records (CDRs) contain voice call-specific metrics about call time, length, to whom it was made, etc.

With StableNet®, you can collect, consolidate, query and intelligently filter call data sources. By executing this across multiple systems, you are able to achieve a complete assessment of hitherto fragmented information in order to analyze and assess call quality. StableNet® allows you to augment this information with a complete overview of your network infrastructure (including Fault Management, Performance and Capacity Analysis, Lifecycle Monitoring and Vulnerability Compliance Tracking), providing you with a platform that empowers you to truly control for End-to-End Service Quality Assurance. With auto-generated topological overviews and customized weather maps, along with automated reporting, you can visualize and share packet voice communication insights easily and effectively.

Benefits & Results

Many VoIP tools focus solely on performance metrics to manage the technical aspects directly related to a particular voice call and determine the overall service quality. But the underlying network infrastructure is an equally important component to guarantee a good end user experience. What you need is a complete end-to-end, multi-functional management wrap that spans and proactively monitors the entire VoIP communication path. Combining this with a vendor-independent platform such as StableNet®, your network operators are freed from using countless proprietary tools and can benefit from simplified workflows.

StableNet® is an all-in-one, unified, End-to-End Service Quality Management tool capable of monitoring and visualizing VoIP services while simultaneously managing Fault and Configuration requirements, on a single platform. With proven RoI (Return-on-Investment) in reducing capital (CAPEX) and operating (OPEX) expenditure, it provides an invaluable, holistic control mechanism for VoIP and video streaming network and service management.

Key Benefits

- Distributed Agents for QoE measurements to analyze and improve upon real-world experience
- Holistic QoS by handling various measurement protocols and call assessment tools
- Continuous measurement of network performance (bandwidth, latency, transfer rates, etc.)
- CDR consolidation in a single source database with sophisticated filter and querying capabilities
- Simplified and advanced reporting functionalities for actionable intelligence
- Vendor-independent and cross-technology approach designed for real-life enterprise networks

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