

# Solution Brief



## VoIP QoS Management and Service Level Assurance

Delivering solid IP voice quality and reliable IP voice services requires solutions capable of managing the specialized metrics and issues of high availability, real-time applications like VoIP, IP Telephony, and UC.

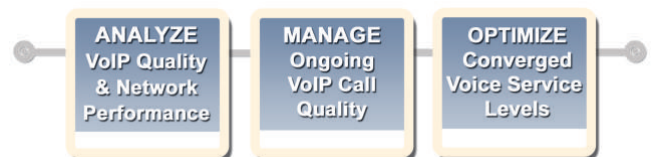
Tone's ReliaTel VoIP QoS Management and Service Level Assurance Solution is designed specifically to expertly manage VoIP quality in converged voice environments.

ReliaTel manages the entire life cycle of convergence through a vendor-agnostic design, delivering real-time management of QoS and the underlying VoIP network – across virtually any mix of manufacturers and technology.

Regardless of where experience-affecting VoIP quality issues originate, ReliaTel provides the deep-dive metric analysis and integrated remediation tools to monitor, troubleshoot, resolve and prevent quality issues that negatively impact service levels and user experience.

ReliaTel VoIP QoS Management is an ideal solution to:

- **Analyze VoIP Quality & Network Performance** with ReliaTel integrated QoS and converged infrastructure management that delivers end to end visibility and control of VoIP quality throughout your entire converged environment.
- **Manage VoIP Call Quality and Services** in real time through ReliaTel QoS metrics and dashboards that provide deep, integrated views of live quality analytics and network transport issues, for full control of VoIP quality and services.
- **Optimize Converged Voice Service Levels** through ReliaTel VoIP QoS interactive trending and reporting of critical and recurring quality issues and problem areas.





## Ensure IP Voice Quality and Service Delivery with ReliaTel...

The ReliaTel VoIP QoS Management technology is a vendor-agnostic solution that manages voice QoS in real time across VoIP switches, gateways, PBXs, voice mail servers, applications, routers, and call servers from virtually any manufacturer. As the IP voice network evolves, ReliaTel easily adapts to manage the entire convergence technology mix, including:

- Avaya-Nortel
- NEC
- Mitel
- Microsoft
- Cisco
- Ericsson
- HP
- IBM
- Siemens
- Alcatel-Lucent
- Sun
- Many others

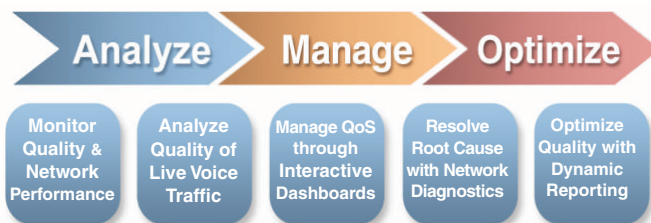
ReliaTel delivers the most comprehensive, cost-effective method of managing IP voice quality and service levels. Utilizing ReliaTel's web-based management portal, the platform fully manages VoIP and Unified Communications without the need to integrate multiple tools, undertake expensive system changes, and perform lengthy implementation cycles.



## Manage the Entire Converged VoIP Environment...

ReliaTel expertly manages the entire converged voice environment – from analyzing quality of live VoIP calls to monitoring the performance of the underlying IPT service delivery network – through three key functions: **Analyze, Manage, and Optimize.**

Armed with these powerful capabilities to manage all aspects of VoIP quality throughout your converged voice infrastructure, ReliaTel ensures your VoIP investments deliver the necessary ROI, while supporting your business objectives now and into the future.



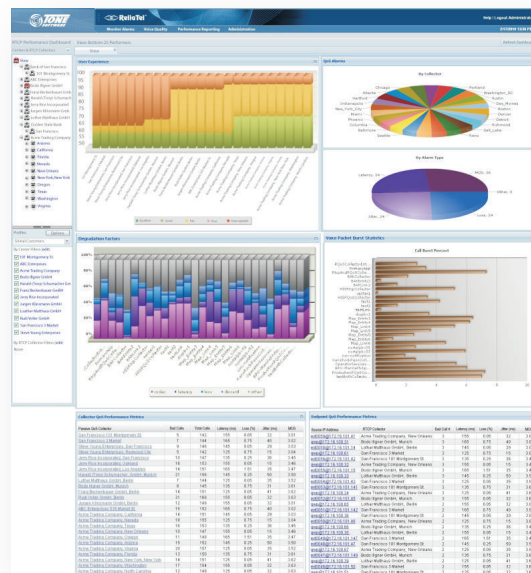
## Leverage Comprehensive VoIP Quality and Performance Analytics...

ReliaTel comprehensively manages real-time VoIP call quality and traffic occurring throughout the entire converged network. Passive analysis of live RTP sessions provides in-depth quality metrics on each individual call, including calls in progress, as well as the aggregated quality and performance impact of multiple concurrent calls.

Using industry-standard metrics such as delay, jitter, loss, R-factor, and Conversational Quality MOS scoring, ReliaTel enables users to quickly pinpoint VoIP quality degradation as it happens. Further, ReliaTel provides deep visibility into underlying network performance events occurring at the time of degradation, enabling users to identify and resolve the true root cause of VoIP quality issues.

### ReliaTel Monitors & Analyzes 200+ VoIP Quality Metrics:

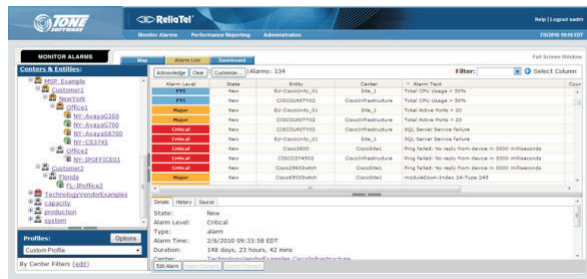
- 60+ passive QoS metrics, plus QoS pulsed routes
- Real-time live-call / full-time per-call detail
- Summarized conversation user experience
- QoS attributes: delay, jitter, packet loss on each VoIP session in progress
- Real-time MOS for every call, both listening & conversational quality
- Passive metrics from IP header, without breach of voice payload
- Multiple concurrent RTP streams
- Degradation factors, burst and gap metrics



ReliaTel detects quality issues as they occur, pinpoints their exact cause, and provides interactive dashboards that enable staff to rapidly resolve quality-affecting problems before users are impacted.

## Manage VoIP QoS Issues in Real Time...

The ReliaTel VoIP QoS management portal provides a deep, real-time view of quality issues, based on true user experience and actual call quality statistics. When voice quality fluctuates or drops, or performance issues are detected, ReliaTel triggers alarms in real time based on customizable thresholds, SLA violations, recurrence settings, and condition rules, eliminating spurious spikes that cause excessive alarms. Key staff members are automatically notified, and escalation is activated based on customizable rules and medias.



ReliaTel's management portal provides detailed QoS alarm, diagnostic, metric, and root cause data, integrated with underlying device and application status in a single view.

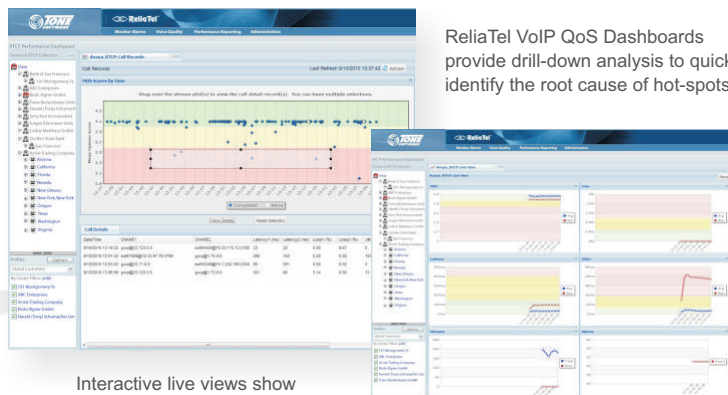
## Resolve QoS Issues Rapidly and Effectively...

ReliaTel VoIP QoS management dashboards combine granular views of metrics and conditions for every VoIP call with the performance of underlying network transport devices. As a result, users can rapidly identify and resolve the **correct** cause of VoIP quality and service issues.

Interactive ReliaTel dashboards provide continuous analysis of live VoIP QoS statistics, including the poorest performing calls and aggregated statistics from QoS collectors for:

- Overall VoIP QoS User Experience, Alarm Distribution and Types
- VoIP QoS Collector Statistics and End Point QoS Call Statistics

Through ReliaTel, users can effectively ensure VoIP quality and the health of the voice network across the entire communication path.



Interactive live views show results of active RTP sessions and VoIP QoS collectors.

ReliaTel VoIP QoS Dashboards provide drill-down analysis to quickly identify the root cause of hot-spots.

## QoS Data Collection...

ReliaTel collects real-time VoIP QoS metrics through the Data Acquisition Point (DAP), available in both a stand-alone hardware appliance and a software-only agent. ReliaTel DAPs support all major codecs, and perform dedicated, outbound only communication to the ReliaTel host. Stand-alone DAP hardware appliances support multiple Gigabit Ethernet access for efficient, high volume traffic analysis.

## ReliaTel Key Benefits

### Business Enabling Technology to Ensure VoIP Success and Convergence ROI:

- Manages Broader, Deeper Range of Convergence Technologies and Service Factors
- Increases VoIP and Convergence Service Levels, Availability, and Reliability
- Manages all TDM, VoIP, IP Telephony Platforms
- Supports Advanced Converged Communications: UC, Collaboration, Workforce Mobility, etc.

### Maximizes Total Cost of Ownership while Driving Strategic Business Objectives:

- Provides Unified Solution Across the Environment, Eliminating Multiple Proprietary Tools
- Reduces NOC Overhead and Operational Costs
- "Vendor-smart" Technology Extends and Augments Staff Expertise and Workflow
- Integrates with Existing OSS Tools, Ticketing, Network Management Systems
- Provides In-Depth Alarm, Quality, Performance, and SLA Reports for Remediation and Planning
- Assures Converged Communications Investments meet the needs of both users and the business

### Ensures IP Voice Quality and Service Levels:

- Increases Real-Time VoIP Operational Visibility
- Manages Quality, Faults, Events, Metrics, SLAs
- Knowledge Base Educates: Expands Staff Expertise and Ability to Support VoIP Network
- Speeds Diagnostics, Mean Time to Repair
- Automates and Improves Support Process
- Provides Key Quality, Performance, Capacity, Traffic Analytics, Alarming, and Reporting

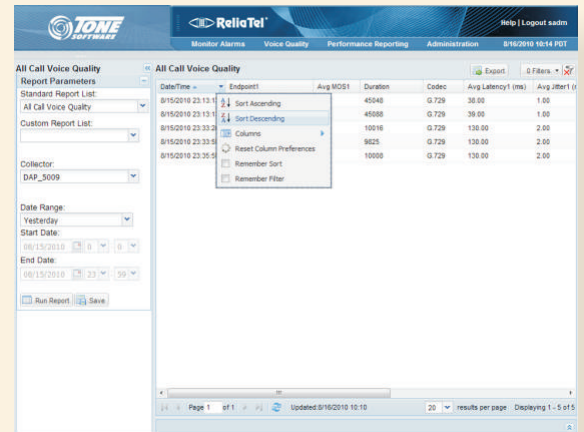
## Optimize VoIP Quality and Service Levels with Interactive QoS Reporting...

ReliaTel provides powerful, interactive reporting of VoIP quality, performance, degradation, and MOS statistics for all voice traffic, locations, and devices. Advanced reporting capabilities demonstrate actual voice performance in quantitative terms, and provide RTP session search and analysis capabilities that enable users to quickly identify end-points violating acceptable VoIP quality and user experience levels.

ReliaTel VoIP QoS Assurance Reports Include:

- Historic Performance - Hourly and Daily Trends
- Voice Alarms and Alerts, Degradation Factors
- QoS Summaries, Per Call QoS
- Burst and Gap Characteristics
- MOS-based Customer Experience Reports
- Poorly Performing Calls for each RTP stream

All ReliaTel VoIP QoS reports are generated on demand, with interactive capabilities to drill down into further details, including QoS metrics, QoE metrics, and degradation factors for each RTP stream. Through the ReliaTel interactive QoS reporting facilities, users gain critical insight into recurring quality degradation patterns based on time of day, VoIP call traffic patterns, and device issues occurring within the selected time frame. Armed with this actionable data, VoIP network optimization can be effectively performed to ease congestion and reduce quality degradation during peak hours.



Dynamic filtering, sorting, and inline export capabilities deliver a powerful analysis tool to pinpoint VoIP quality degradation trends and call traffic problems. Through ReliaTel, users can optimize VoIP quality and service levels.

## ReliaTel Architecture

### Hardware:

- Operates on Sun Sparc or Intel host processor

### Software:

- Requires Sun Solaris or Linux Red Hat OS
- Compatible with IE 7.0 or later, or Firefox 3.0 or later
- Supports both Oracle and PostgreSQL databases

### Scalability:

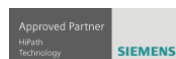
- Architecture supports both distribution / redundancy

### Security:

- Adheres to site security, firewalls, SSH, SSL, VPN
- Advanced customizable access, user permissions

### Reliability and Interoperability:

- Meets 99.999% service level expectations
- Manufacturer compatibility tested and approved



## About TONE SOFTWARE

TONE SOFTWARE CORPORATION is a high technology software development firm specializing in global business, telecommunications, network, and IT infrastructure management solutions.

Based in Anaheim, California, TONE SOFTWARE is a privately-held corporation free from the pressures of investors' demands, and is fully dedicated to delivering quality solutions that best serve the needs of our valued clients. For over 35 years, TONE has leveraged this customer-responsive business model to build a solid reputation for delivering premier software solutions, exceptional technology expertise, and unparalleled customer service and support 24 hours a day, 365 days a year.



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