

NetOptimize™

Broadband IP Service Assurance



Highlights

- Active call generation for proactive detection of problems
- Passive call monitoring for accurate time-of-day problem analysis
- Detailed R Factor and MOS scoring for isolating and evaluating impairments
- Comprehensive NE and EMS interface supports easy monitoring of critical metrics and rapid problem isolation
- Off-the-shelf problem navigation scenarios allow for efficient problem detection and analysis
- 100% Web-enabled GUI minimizes training requirements and maximizes operational efficiency
- Modular components can be leveraged across multiple SAS applications and solutions, reducing costs and increasing consistency
- A carrier-class performance management OSS with a fully scalable architecture keeps pace with network growth and protects your investment

Ensuring VoIP service quality and network performance

Decreasing average revenue per unit (ARPU) for legacy voice services, due to competition from new VoIP services, and increasing operational costs, due to service and network complexity, have significantly impacted the need to maximize VoIP profitability. The rapidly growing VoIP market expands service complexity and network scale, requiring effective and proactive performance management to ensure adequate voice quality and hence, customer retention. Service providers increasingly are looking to operational support systems (OSSs) to consolidate service and network visibility and provide concise problem detection and isolation analysis capabilities.

NetOptimize is a powerful operational support system, and as part of the JDSU NetComplete™ Service Assurance Solution (SAS), it resides at the core of a successful service assurance strategy. By providing comprehensive VoIP service and network visibility via a simple, common, and intuitive graphical user interface (GUI), NetOptimize enables efficient and proactive performance management, a critical component in the overall service lifecycle model.

To provide visibility into VoIP service performance problems, the NetOptimize Connections Manager allows service providers to set up a matrix of active “test” calls throughout the network in order to measure service quality on a 24/7 basis. For detailed quality “studies,” the same probes can be used to perform passive monitoring of particular network links or customer traffic. For visibility into network performance issues, NetOptimize interfaces with a number of network elements and element management systems via a library of off-the-shelf network equipment modules (NEMs).

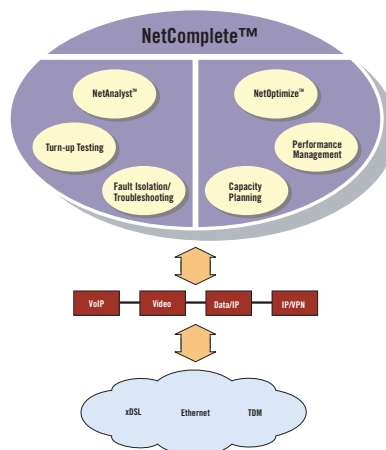


Figure 1: NetOptimize Performance Management

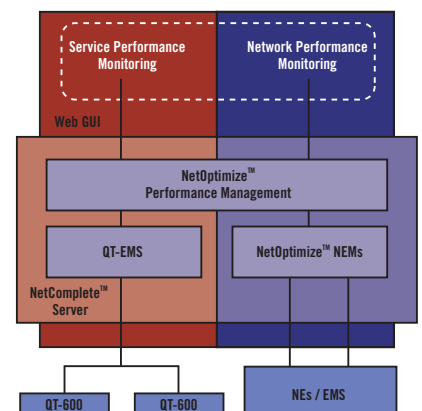


Figure 2: NetOptimize Service Visibility

Server Requirements

Platforms supported: Sun™ Solaris™ 8, 9

Database supported: Oracle® 9i

NetOptimize scales from a single uni-processor server to a distributed environment with multi-CPU clustered servers.

Contact your JDSU sales representative for details of hardware requirements to match your application.

Client Requirements

Web Browsers:

Microsoft® Internet Explorer version 5.5 SP2, 6 SP1/2

Netscape® 7.1/7.2

Operating Systems:

Microsoft Windows® NT 4.0, 98 SE, 2000 SP4, XP Professional SP1/SP1a/SP2

Service Visibility

By utilizing QT-600 probes distributed throughout the network and connected at key aggregation points, NetOptimize can perform “active” monitoring of VoIP call quality. By defining test connections between the probes, service providers can verify voice quality thresholds, or service level objectives (SLOs), on a continual basis. These SLOs define service-level key performance indicators (KPIs) and key quality indicators (KQIs), which are chosen to match service level specifications (SLs). Individual customer service level agreements (SLAs) are then derived from the SLs. For example, voice quality mean opinion scores (MOS) are banded into good, fair, poor, and unacceptable categories.

Because active call monitoring provides a constant and deterministic method of measuring network VoIP call quality that is independent of actual call loading and dispersion, NetOptimize can alert users to impending service problems. With pre-configured report navigation scenarios, NetOptimize guides users through common problem “signature” areas so that generic or customer-specific issues are identified and isolated, allowing preventative maintenance remedies to be applied quickly and effectively.

To isolate intermittent problems, the NetOptimize Connections Manager can be used to configure passive monitoring on the QT-600 test head for more time-sensitive analysis of the network link or a specific customer’s traffic. Additionally, in combination with the network visibility capabilities NetOptimize offers, users may be guided to network performance analysis reports that can highlight systemic network problems as the root cause of poor VoIP quality of service (QoS).

Network Visibility

NetOptimize collects detailed performance metrics from a wide variety of VoIP and data network elements, applying them against thresholds and comparing them to forecasted trends. Default pre-configured thresholds, or network level objectives (NLOs), for these detailed measurements are supplied, but they can be customized to match individual service provider requirements. These NLOs define KPIs and KQIs chosen specifically to match and maintain the performance of predicted traffic loads across a wide breadth of VoIP services and customer types.

NetOptimize automatically aggregates and computes the KPI/KQI values to enable proactive detection of performance degradation so that preventative measures can be taken before service quality is affected. Network-level KPI/KQIs may also indicate systemic network problems, which when compared to service-level metrics from the QT-600 probes, turn out to be the root cause of service problems.

By combining both network and service visibility applications with NetOptimize, service providers can increase their VoIP service quality, retain customers, and protect their profit margins.

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