

## Unlocking the Power of Customer Contact

Avaya NES Contact Recording and Quality Monitoring solution is a “must-have” for companies that need recording for: compliance with regulatory requirements, risk reduction and dispute resolution, operations optimization, agent interaction analysis, employee development, and enhanced customer care.



Avaya NES Contact Recording and Quality Monitoring is a secure and reliable solution that is easy to deploy, integrate, configure, administer, maintain and use. It is a software-only solution running on industry-standard servers and does not require complex and costly proprietary hardware. This solution is completely integrated into the Avaya NES Contact Center and Avaya Communication Server (CS) 1000, eliminating the need for middleware and custom integration points. What sets the Avaya NES solution apart is that it is unnecessary to undertake extensive and expensive replacement of your phone terminals or underlying telephony infrastructure. Avaya NES Contact Recording and Quality Monitoring easily integrates with the existing IP, TDM or IP/TDM hybrid telephony infrastructure. It is a feature-rich application with functionality that contact centers and enterprises need to deliver exemplary customer care at a reduced Total Cost of Ownership (TCO).

Avaya NES has productized a well-integrated, reliable and comprehensive suite of Contact Recording and Quality Monitoring solutions that meet, and in many cases exceed, the business, technological and operational requirements of contact centers and enterprises.

There are two main components to the solution:

- Avaya NES Contact Recording, which provides the recording, playback and storage of voice interactions
- Avaya NES Quality Monitoring, which leverages the use of these audio recordings by additionally capturing and synchronizing the on-screen activity of the agent and providing a number of contact center agent performance enhancement tools.

This technical brief provides an overview of the features, specifications and prerequisites of each.

### Key Features - Avaya NES Contact Recording

Avaya NES Contact Recording provides conversation recording in Avaya CS 1000, CS 2000 and CS 2100 enterprise and contact center environments. Key features include the ability to:

- Scale from one to many thousands of channels within an enterprise



- Leverage existing Ethernet infrastructure for optimized IP recording
- Record IP, digital and analog handsets and digital trunks
- Make ad-hoc or scheduled recording decisions
- Enable the user to control recording through keys on the telephone set or desktop PC application
- Record inbound and outbound calls, selectively or in bulk
- Use DTLS/SRTP encryption to secure call recordings, in transit and while stored
- Comply with the technology requirements of Payment Card Industry (PCI) Data Security Standard v1.2
- Record, search and replay based upon a wide variety of parameters

- Record calls based on business rules such as Agent ID, Activity Code, DNIS and Skill Set
- Integrate into business applications such as CRM using the Custom Adapter
- Access via Contact Center Manager Administration window

### Key Features - Avaya NES Quality Monitoring

Avaya NES Quality Monitoring captures the on-screen activity of agents, such as data entry, screen navigation and data retrieval, and synchronizes it with the voice recording captured by Avaya NES Contact Recording. Avaya NES Quality Monitoring also provides key contact center agent performance enhancement tools, such as evaluation forms and scorecards with enhanced reporting. The key features include:

- Audio and screen recordings triggered by business rules specified by the contact center manager
- Easily created customized agent evaluation forms tailored to business needs
- Powerful historical graphing and reporting capabilities to display trending data
- Integration into business applications such as CRM using the Custom Adapter
- Categorization of recordings as defined by contact center managers
- Rich Computer Telephony Integration (CTI) delivering robust and intelligent monitoring of interactions that can be set to be recorded based on specified event triggers
- An easy-to-use tool for agents to record a Quality Monitoring session
- A patented data capture technique that significantly reduces network traffic
- Ability to share recordings throughout the enterprise
- Call Recording Card as an inexpensive option for 'live monitoring' in TDM or hybrid IP/TDM configurations
- Access via Contact Center Manager Administration window

### Avaya NES Contact Recording Solution Components

Avaya NES Contact Recording supports IP, traditional telephony (TDM) and hybrid IP/

TDM environments and scales from a single server solution to large enterprise deployments with many thousands of channels.

### Contact Recording Master

The Master server resides between the Contact Recorders and Contact Center Manager Server. Avaya recommends that the Contact Recording Master and the Contact Center Manager Server be co-located. The Contact Recording Master utilizes the Meridian Link Services (MLS) interface, delivering native CTI. This distinguishes the Avaya NES embedded solution from all third-party recording products. The MLS interface links the Contact Recording solution, the Quality Monitoring solution and the Call Recording Cards to the Contact Center Manager Server. One Master server is required for each Contact Recording solution. The Contact Recording Master can be configured to control IP or TDM Contact Recorders and may co-reside with either server. Each Master server can control up to 32,000 channels distributed between IP and TDM phones. Solution resiliency is enhanced by the addition of a standby Master.

### IP Contact Recorder

IP Contact Recorder is provisioned to record IP telephone sets. An IP Contact Recorder may co-reside with the Contact Recorder Master. Supplementary IP Contact Recorder slave servers can be deployed, to scale IP recorder capacity or to provide n+1 redundancy to both the master and slave servers. Each IP Contact Recorder could record up to 260 channels with G.711 codec and up to 400 channels with G.729

A codec. The distributed architecture allows the IP Recorder to be located at either the host Communication Server location or at a remote branch location.

### TDM Contact Recorder

This component provides recording of digital or analog phones, line-side T1/ E1 or T1/ E1 trunks (with or without ISDN PRI). A TDM Contact Recorder can record up to 360 channels per server and multiple TDM recorders can be deployed to create a solution that scales well to fit any customer's needs. Supplementary TDM Contact Recorder slave servers can be deployed to scale TDM recorder capacity or to provide redundancy to both the master and slave servers in a 2n configuration. The TDM Contact Recorder must be physically close to a connection point of the lines or trunks it is recording.

### Contact Recording Viewer

The Contact Recording Viewer is a search and replay engine that captures metadata (CLID, time of call, duration of call, etc.) associated with every recorded call in an SQL database, regardless of where they were recorded or where the recordings are currently stored. Granular access control allows definition of specific rights and privileges for search and replay. In addition, users can define custom search queries and display formats using a browser across a LAN/WAN. In an IP-only Contact Recording deployment, enterprises don't necessarily have to implement the Viewer application. A version of Viewer functionality, known as ViewerX, can be enabled on the Contact Recording Master server to consolidate data from other IP Contact Recorders. A Contact

Recording Viewer is mandatory in TDM or hybrid telephone recording environments. The Viewer can be co-resident on the IP Contact Recorder, TDM Contact Recorder or Archive Manager server.

### Contact Recording Archive Manager

Archive Manager selectively archives calls, based on enterprise business rules, to Redundant Array Independent Disks (RAID), Digital Versatile Disk (DVD), Blu-Ray DVD (BRD), HD DVD, Network Assisted Storage (NAS) or Storage Area Network (SAN) where they can be readily accessed. This is a useful tool for enterprises that have many recording servers or those that want immediate access to historical recordings. The Archive Manager requires Viewer. When a recording is archived, the database in Viewer is updated with the new location of the file. Archive Manager can co-reside on the Viewer server subject to engineering considerations. As an enhancement, the IP recorders can provide their own business rules-based archiving without the need for a discreet Archive Manager. An Archive Manager server is mandatory in TDM or hybrid environments.

## Avaya NES Quality Monitoring Solution Components

### Avaya NES Quality Monitoring

This solution is designed for comprehensive monitoring of contact center agent interactions. In a typical Quality Monitoring environment, business rules are used to define a sample of agent calls to

be recorded. These recordings include on-screen activity and are available for review by the supervisor, both to evaluate agent performance and to evaluate call flow and customer experience. Supervisors know not only how well agents are verbally interacting with customers, but also how well agents are using in-house software applications for handling orders or providing customer care. Avaya NES Quality Monitoring allows contact center managers to identify and reinforce good practices and remedy performance shortfalls that could undermine competitiveness. There are five components that together make up the Quality Monitoring solution.

- **Business Decision Rules Server** — The Rules Server communicates with the Contact Recorder. It tells the Call Recorder which calls (audio) the eRecorder Server wants recorded based on CTI events. It also tells the capture engine at the agent workstation what screens to capture.
- **SQL Database** — The repository of the business decision rules, evaluation scores and other metadata for the QM system.
- **Web Server (Internet Information Server)** — Runs the user components: Search and Replay, Evaluations and System Administration.
- **eRecorder Server** — Sets up the recording and playback channels so the agent screens may be captured and paired with the audio.
- **Enterprise Reporting** — Uses the Cognos analysis engine to parse the scoring and evaluation data to produce summary

(historical, trend) and detailed analyses (adherence, productivity, quality and others) in a report, graph or exported medium. In a smaller configuration, all five components may reside on a single physical server. The Quality Monitoring solution can scale to concurrently record up to 250 agent desktops across 1,000 defined agent positions and 1,000 defined agent profiles. Supporting this capacity requires the full complement of three servers to house the above mentioned components. A second full Avaya NES Contact Recording and Quality Monitoring solution can be deployed if requirements exceed this capacity.

### Avaya NES Call Recording Card

The Avaya NES Call Recording Card delivers a low-cost, 'live monitoring' feature, whereby the supervisor listens in and observes a live call in real-time. Both the customer/ agent conversation and the agent's screen can be observed in this 'live monitor' mode. This card is deployed only in Quality Monitoring scenarios and is installed as Intelligent Peripheral Equipment in the Avaya Communication Server 1000 for recording in TDM or hybrid TDM/IP environments. The Call Recording Card has a total of 32 ports, 16 of which are used for observation/recording and 16 for live monitoring. These recording ports are dynamically assigned to capture conversations from the defined pool of agents. Up to eight Call Recording Cards may be deployed in an Avaya Communication Server 1000 for simultaneous monitoring of up to 120 concurrent sessions.

### Avaya NES AudioCodes Card

These PCI e or PCI x cards are used for

Contact Recording and/or Quality Monitoring in TDM environments to record either extension side or trunk side conversations. The ports on the cards are dedicated to specific TNs or spans on the Communication Server. Therefore, sufficient cards must be provisioned. There are three versions of the card, each available in different port densities:

- **Digital AudioCodes card** — For digital extension side recording with digital telsets when extension-to-extension conversations need to be recorded
- **Analog AudioCodes card** — For analog extension side recording with analog telsets when extension-to-extension conversations need to be recorded
- **Trunk AudioCodes card** — For economical trunk side recording when extension-to-extension conversations do not need to be recorded

## Server Requirements

Industry-standard Intel x86 32-bit servers and equivalent AMD processor based servers support Avaya Contact Recording and Quality Monitoring. Server sizing is based on the following hardware factors:

- Type of recording — Contact Recording and/or Quality Monitoring
- Number of channels and agent desktops that need recording
- IP, TDM or hybrid environment
- CODECs selected (e.g., G.711, G.726, G.729A)

- Busy Hour Call Attempts (BHCA) metrics
- Other recording applications on server
- Server configuration is also based on the following software platform needs:
  - Microsoft Windows 2003 server (SP 2 or higher)
  - Microsoft SQL 2005 server (SP2 or higher)
  - Microsoft Internet Explorer 6.0 or above

Please consult your Avaya Sales Engineer to determine the appropriate server requirements for your requirements.

## Storage Requirements

Storage needs vary by company based on regulatory requirements and operational practices and the audio standards used. Recordings are stored in industry standard “.wav” file format using one or more of the following CODEC audio standards:

- G.726 ADPCM (16 kbps)
- G.729A (8 kbps)

Storage format depends on the type of recording and the format the audio was



originally received in. Recordings provided by Avaya NES Contact Recording are stored in G.726 compressed form or as a pair of G.729A files if high volumes of recordings need to be stored in the available disk space. Avaya recommends RAID arrays for online storage of recordings on the recorder platform. Available disk storage space is managed as a circular buffer providing instant access to the most recent recordings. For longer-term retention of recordings, two options are available:

- A DVD+RW drive can be connected to the recorder. All recordings made on the recorder are automatically archived to the removable media, which can be stored in a safe location.
- Archive Manager can be added to this system for selective archival of recordings to multiple destinations (e.g., RAID, DVD, HD-DVD, NAS, SAN, etc.).

In all cases, Viewer is aware of the location of all copies of the recordings so that all user replay requests can be accommodated with minimal manual intervention. By deploying Avaya NES Contact Recording and Quality Monitoring, businesses have the ability to record interactions and monitor the quality of those interactions. Contact center managers can identify and reinforce good practices and remedy performance shortfalls that could undermine competitiveness. This in turn results in efficient and exceptional customer service.

Feature and Benefit Summary: Avaya NES Contact Recording and Quality Monitoring

- Lower Total Cost of Ownership — Deploy and integrate into existing IP, TDM or IP/TDM hybrid telephony environments
- Software-only solution — Industry-standard server hardware
- Reliable recording — Dedicated Duplicate Media Stream (DMS) recording for IP environments
- Convenience and ease of use — Configure, administer, maintain via Web-based interface and Contact Center administrative window
- Flexibility and robustness — Rules-based recording, search, replay and archiving
- Meet regulatory compliance requirements — Encryption and tamper-proof security with full audit trail
- Agent performance improvement tools — Evaluation forms and scorecards with enhanced reporting

## Learn More

For more information on Avaya NES Contact Recording and Quality Monitoring, please contact your Avaya Account Manager or Avaya Authorized Partner or visit us at [www.avaya.com](http://www.avaya.com).

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## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).



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References to Avaya include the Nortel Enterprise business, which was acquired as of December 18, 2009.

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