NORTEL

Technical Brief

Nortel Contact Recording and Quality Monitoring

Nortel Contact Recording and Quality Monitoring are robust, embedded recording solutions designed specifically to eliminate middleware, proprietary servers and custom integration points. Working in IP, traditional (TDM) and hybrid TDM/IP environments, these are future-proof solutions that reduce your Total Cost of Ownership (TCO) while delivering productivity and profitability benefits.

Nortel Contact Recording solutions provide conversation recording in Nortel Communication Server (CS) 1000 enterprise and Contact Center environments. IP-based Nortel Contact Recording solutions utilize the Nortel-exclusive Duplicate Media Stream (DMS) technique for the most tightly integrated IP call recording in the industry. This technique provides a speech path separate from the main conversation dedicated exclusively to conversation recording, thus ensuring your conversation is captured. TDM-based Nortel Contact Recording utilizes Ai-Logix tap cards to capture conversations. Nortel Contact Recording offers *three methods* of call recording:

- Recording All Calls — 'Logging'
- Recording Percentage of All Calls — 'Sampling'
- Contact Recording Desktop — 'Ad Hoc'

Nortel Quality Monitoring solutions provide video screen capture of agent workstation and other activity including agent scorecard creation, agent scoring and evaluation, and report generation in Communication Server 1000 Contact Center environments. Nortel Quality Monitoring may also utilize Call Recording Cards to provide 'live monitoring' capability in TDM or hybrid IP/TDM configurations when a Quality Monitoring-only, cost-sensitive implementation is desired.

Nortel Contact Recording and Quality Monitoring solutions are "must-have" solutions for companies that need recording for:

- Compliance with regulatory requirements
- Risk reduction and dispute resolution
- Operations optimization
- Agent interaction analysis
- Employee development
- Customer relationship expansion

Solution components

Nortel Contact Recording — Nortel Contact Recording supports both IP and traditional telephony (TDM) equipment and scales from a single server solution to large enterprise deployments with many thousands of channels.

Nortel Contact Recording Master — This is the server between the recorders and Contact Center Manager Server that utilizes the Meridian Link Services (MLS) interface, delivering the native Computer Telephony Integration (CTI) that distinguishes this 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 via the MLS interface. One Master server is required for each Contact Recording solution. The Nortel Contact Recording Master is configurable for IP or TDM environments.

Nortel Contact Recording IP Slave — This component provides IP recording when the capacity of the Nortel Contact Recording Master is exceeded. Multiple slave Contact Recording solutions can be deployed, creating a solution that scales well to fit any customer's needs.

Nortel Contact Recording TDM Slave — This component provides recording of digital or analog phones or T1/E1 trunks (with or without ISDN PRI) when the capacity of the Recording Master is exceeded. A Slave recorder can record up to 360 concurrent channels per server, creating a solution that scales well to fit any customer's needs.

Nortel Contact Recording Central Search and Replay — This is the central repository to search and play back all recorded calls across a CRQM configuration. It contains the MetaData (CLID, time of call, duration of call, etc.) associated with each call. Central Search and Replay allows up to 10 simultaneous users to search and replay calls on a PC via a browser interface and can be deployed across the WAN. This enables either local or remote management capabilities.

Nortel Contact Recording Archive Manager — Archive Manager selectively archives calls (based on customer requirements) to a Redundant Array Independent Disks (RAID) Configuration, Digital Versatile Disk (DVD), Blu-Ray DVD (BRD) or HD-DVD, or Storage Area Network (SAN) where they can be readily accessed for historical retrieval. It is used by customers who have many recording servers or who want immediate access to historical recordings. Archive Manager resides on a dedicated, standalone server.

Nortel Quality Monitoring — As a complement to Contact Recording, Nortel Quality Monitoring supports both IP and TDM environments. Quality Monitoring is based on the same recording technology as Contact Recording, but is designed for use in contact center environments. It provides call and screen recording of up to 120 concurrent selected recordings and allows playback and evaluation of those recordings.

Call Recording Card — Deployed in Quality Monitoring-only scenarios, this card is installed in the Communication Server 1000 Media Gateway to support cost-effective recording for Quality Monitoring in TDM or hybrid TDM/IP environments. The Call Recording Card is based on the Media Card architecture (similar to other applications such as IP Line, IP Trunk, Agent Greeting and Remote Agent Observe). It has a total of 32 ports, 16 of which are used for observation/recording and 16 of which are used for live monitoring. Up to 8 Call Recording Cards may be deployed in the same environment for simultaneous monitoring of up to 120 concurrent sessions.

Figure 1. IP environment

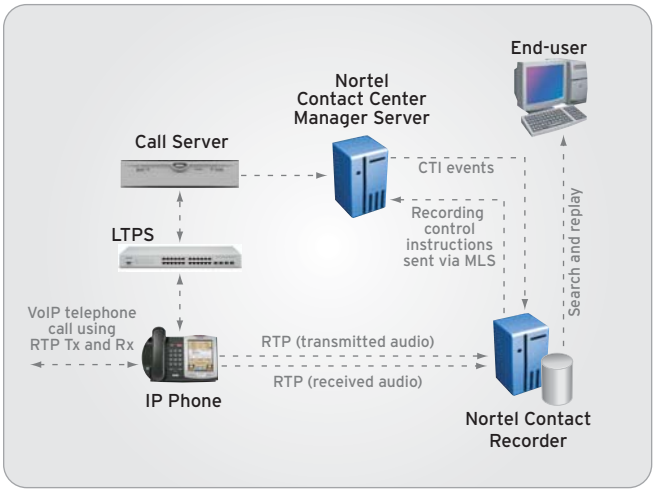
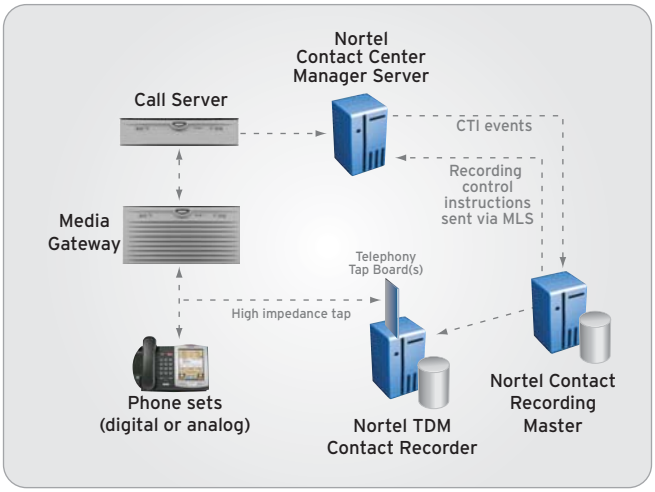


Figure 2. TDM environment (extension side)



Ai-Logix Card — This card may be used for TDM or hybrid TDM/IP environments to deliver either extension side or trunk side recording. (Optionally, Meridian Link Services can be used if more tagging information is needed for recordings.) There are three versions of the card:

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

Prerequisites

Nortel Contact Recording (IP environments)

The following minimum releases are required:

- Communication Server 1000 Release 4.5
- Contact Center Manager Server with Meridian Link Services (MLS) 5.0 SU07
- Phase 2 Nortel IP sets

Note that one AST ISM is required for each telephone to be recorded (i.e., each device to be monitored via MLS).

Nortel Contact Recording (TDM environment)

The following minimum releases are required for TDM recording:

- Communication Server 1000 Release 2.0, release X11 24C
- Contact Center Manager Server with Meridian Link Services 5.0 (Optional for extension side recording)

Trunk side recording requires the Meridian Link Services interface to provide correlation between the trunk channel and the telephone to be recorded.

Extension side recording has two options:

- *Recording with Ai-Logix cards extract signaling information from the D-channel which can be used for tagging calls.*
- *Recording with Meridian Link Services interface provides a number of additional tagging fields which can be used for search and replay purposes.*

Nortel Quality Monitoring (IP environment)

The following minimum releases are required:

- Communication Server 1000 Release 4.5
- Contact Center Manager Server with Meridian Link Services 5.0 SU07 (with Call Recording patch)
- Phase 2 IP sets

Nortel Quality Monitoring (TDM or hybrid environment)

The following minimum releases are required:

- Communication Server 1000 Release 2.0, release X11 24C
- Contact Center Manager Server with Meridian Link Service 5.0 SU07

Nortel Quality Monitoring can operate in conjunction with a Nortel Contact Recording solution in a bulk recording IP environment or via the Call Recording Card for TDM environments. When operating in a bulk recording environment, the prerequisites for Nortel Contact Recording — TDM or IP apply.

Server requirements

Industry-standard Intel x86 32-bit servers are supported for Nortel Contact Recording and Quality Monitoring.

Server sizing is based on the following hardware factors:

- Type of recording — Contact Recording or Quality Monitoring
- Need for screen-based recording
- Number of resources 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 applications on server
- 32-bit single- or dual-core processor(s)

Server configuration is also based on the following software platform needs:

- Microsoft Windows 2003 Operating System (server)
- Microsoft SQL 2000 Database (server)
- Microsoft Windows XP Operation system (client)
- Microsoft Internet Explorer 6.0 or above

Consult your pre-sales technical resource or by calling 1-800-4Nortel to determine the appropriate server requirements for your operations.

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.711 PCM A- or μ-law (64 kbps)
- 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 Nortel 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 on the available disk space. RAID arrays or redundant Storage Attached Network (SAN) devices for online storage of recordings on the recorder platform are recommended.

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 remotely stored in a safe location for historical preservation.
- Archive Manager can be added to this system for selective archival of recordings to multiple destinations (e.g., RAID, DVD, BRD, HD-DVD, SAN, etc.).

In all cases, the system automatically notes the location of the additional copies of the recordings such that when a user wishes to replay a call that is no longer in local online (disk) storage, they will be prompted to insert the appropriate removable media.

By deploying Contact Recording and Quality Monitoring, businesses have the ability to record interactions and monitor the quality of those interactions. This in turn can provide more efficient and exceptional customer service. For more information on Nortel Contact Recording and Quality Monitoring, please contact your Nortel representative or visit us on the Web at *www.nortel.com/contactrecording* or *www.nortel.com/qualitymonitoring*.

Feature/benefit summary

Nortel Contact Recording

- Future-proof: Works in TDM, hybrid or pure IP environments
- Software-only solution: standard server hardware
- Unprecedented integration — embedded solution
- Dedicated Duplicate Media Stream (DMS) recording for IP environments
- Web-based interface
- Simple search and replay
- Rules-based archiving:
  - Customer-defined retention
- Full audit trail
- Reduced TCO:
  - Single support interface
  - Flexible administration options

Nortel Quality Monitoring

- Future-proof: Works in TDM, hybrid or pure IP environments
- Software-only solution: standard server hardware
- Unprecedented integration — embedded solution
- Voice and data recording
- Rules-based recording
- Agent evaluations
- Performance reporting
- Simple search and replay
- Reduced TCO:
  - Single support interface
  - Flexible administration options

Nortel is a recognized leader in delivering communications capabilities that make the promise of Business Made Simple a reality for our customers. Our next-generation technologies, for both service provider and enterprise networks, support multimedia and business-critical applications. Nortel's technologies are designed to help eliminate today's barriers to efficiency, speed and performance by simplifying networks and connecting people to the information they need, when they need it. Nortel does business in more than 150 countries around the world. For more information, visit Nortel on the Web at **www.nortel.com**. For the latest Nortel news, visit **www.nortel.com/news**.

For more information, contact your Nortel representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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