



Avaya Contact Recording

Solutions Guide: Features and benefits of
Avaya Contact Recording

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Preface

Newer and stricter regulatory environments, changes in customer expectations and behavior, increasing competitiveness and advances in communications technology have forced organizations to take a comprehensive approach to customer care. Organizations in industries such as investing and finance, banking and healthcare are required by law in certain jurisdictions to record calls and store those recordings, maintaining a clear audit trail. A few have started recording financial transactions as verbal agreements instead of on paper. While this reduces paperwork, recording for business verification can also decrease the number of disputes, substantially improving business efficiency. Other companies use call recording to discourage abuse and protect their employees, which can greatly improve employee morale.

At a fundamental level, by recording customer interactions, contact center managers can easily identify areas of good agent practice and reinforce them across the contact center. Similarly, managers can isolate performance shortfalls and take steps to remedy them, as well as assign training to improve performance. Finally and most importantly, contact recording and quality monitoring provide early insights into customer expectations and behavioral trends, which can be used by business managers to make decisions critical to the continued competitiveness of the business.

Organizations that accomplish these goals practice **customer-centric cost containment**. Customer-centric cost containment means implementing unbiased analytic tools to find activities that have the greatest cost/impact on customer satisfaction and detect changes in customer behavior rapidly. Organizations that do this grow faster than the competition when the economy rebounds.

Avaya Contact Recording can help.

This Solutions Guide explores how Avaya Contact Recording can help you improve quality company-wide and transform your contact center into an enterprise intelligence center.

Avaya delivers customer-centric cost containment on a daily basis. One example is a leading insurance company that is using speech analytics to cut costs by reducing repeat calls and increase usage of self service. Another is a financial services company that estimates increasing quality monitoring supervisor efficiency by 500%. Yet another is a home mortgage company that is reducing thousands of back office errors a month. These organizations are moving ahead of their competitors by making informed decisions on how to cut costs by leveraging one of the greatest competitive advantages they hold – actionable intelligence from their own customer interactions. All these solutions are based on Avaya Contact Recording.



Figure 1 - Customer Centric Cost Containment



Avaya Contact Recording Solution Overview

With Avaya Contact Recording you can automatically capture customer interactions, or simply press a button or key sequence on the phone to record selected calls. With rich integration to the Avaya Communications and Contact Center Portfolio, Contact Recording makes it easy to record calls by using the same recording application for calls originating from either IP or traditional phones. You can tag, search and retrieve the captured phone conversations using a variety of identification criteria, and use the information to help optimize your business processes as well as your customer relationships.

Authorized users across the enterprise can use the intuitive browser-based solution to retrieve and replay particular calls using powerful search criteria. You can graphically display a call and rapidly identify points of interest for review, such as a prolonged silence, higher volume or raised voice portions of conversations. The resulting information can help you improve call handling and employee productivity.

By tagging outstanding customer interactions, you can create a library of best practices. Additionally, the solution can help you identify breakdowns in your service delivery chains, and share sound files for maximum impact.

Avaya Contact Archive provides a local or enterprise-wide solution to efficiently and securely archive the recordings on external, industry-standard storage devices, such as Storage Area Networks (SANs), Network Attached Storage (NAS), network disk and EMC Centera. This can help businesses leverage their existing storage systems and maximize their return on investment. The Archive module is rules driven, giving organizations the flexibility to choose what, when, where, and for how long contacts should be archived.

Improved business efficiency and safety

With the flexibility to make ad-hoc decisions to start, stop and save recordings from an IP desktop, users can capture and store verbal agreements, commitments and any threat or abuse at any time. This can significantly reduce paperwork, facilitate quicker dispute resolution and address the safety concerns of customer-facing employees. It helps provide a sense of protection and can enhance agent morale, which can lead to improved agent performance.

Security and peace of mind

With the Secure Call Recording application available in IP environments, businesses can trust that sensitive information captured in a recording is protected from unauthorized use. DTLS/SRTP encryption helps protect the secure voice recordings while in transit for archiving and also during replay. Recordings are encrypted in storage as well, and periodically audited to maintain their integrity. The solution complies with Payment Card Industry (PCI) technology requirements to protect sensitive customer data such as credit card numbers and passwords. It allows administrators to strictly control user access rights through password protection.



Avaya Contact Recording Key Features:

- Scalable, software-only voice recording application
- Leverages existing Ethernet infrastructure for optimized IP recording
- Specifically Designed for the Avaya Aura Communications Platform
- Can record any Avaya voice contact via SIP, DMCC, Duplicate Media Streaming, TDM trunk/station or Passive IP recording intercept.
- Optional full-time screen recording feature
- Live monitor agent voice or screen in real time
- Records both inbound and outbound calls selectively or in bulk
- Can use encryption to secure call recordings, in transit and while stored
- Complies with the technology requirements of Payment Card Industry (PCI) Data Security Standard
- Record, search and replay based upon a wide variety of parameters
- Records calls based on business rules such as Agent ID, Activity Code, DNIS and Agent Skill Set



Avaya Contact Recording Packages

The Avaya Contact Recording is marketed as package within the Avaya Workforce Optimization suite. Please note that Contact Recording capabilities are also included in the Quality Monitoring and Workforce Optimization packages:

Avaya WFO Solution Packages: Operational and Advanced Series

Package Functions	Avaya WFO Quality Monitoring		Avaya WFO Workforce Management		Avaya WFO Workforce Optimization		Avaya WFO Recording
	Op.	Adv.	Op.	Adv.	Op.	Adv.	Op.
Recording & Quality Monitoring							
Voice Recording, Search and Replay	•	•			•	•	•
Real Time Monitoring (via ACR)	•*	•*			•	•	•*
Screen Capture	•	•			•	•	
Quality Monitoring	•	•			•	•	
WFM							
Forecasting and Scheduling			•	•	•	•	
Advanced Adherence			•	•	•	•	
Media Blending			•	•	•	•	
Time Off Manager				•		•	
Strategic Planner				•		•	
eLearning							
Content Producer	•	•			•	•	
Lesson Management		•				•	
Coaching	•	•		•	•	•	
Performance Management							
Basic Scorecards	•		•		•		
Advanced Scorecards (includes Coaching)		•		•		•	

* Real time Monitoring in ACR includes voice (and will include screens if Screen Capture license is added)



Avaya WFO Optional, Add-on Functions: Operational and Advanced Series

Optional, Add-on Functions	Avaya WFO Quality Monitoring		Avaya WFO Workforce Management		Avaya WFO Workforce Optimization		Avaya WFO Recording
	Op	Adv	Op	Adv	Op	Adv	Op
Recording & QM							
Full Time Screen Capture	•	•			•	•	0
Playback via Telephone	0	0			0	0	0
Encryption Management	0	0			0	0	0
Workforce Management							
Time Off Manager			0	•	0	•	
Strategic Planner			0	•	0	•	
Shift Bidding			0	0	0	0	
Desktop Activity Tracker			0	0	0	0	
eLearning							
Lesson Management	0	•	0	0	0	•	
Competency-based Learning	0	0	0	0	0	0	
Interaction Skills Courseware and Desktop Learning Library	0	0	0	0	0	0	0
Coaching	•	•		•	•	•	
Analytics							
Desktop Application Tracker			0	0	0	0	
Advanced Desktop Analytics	0	0	0	0	0	0	0
Data Propagation and Process Guidance	0	0	0	0	0	0	0
Strategic Desktop Process Analytics	0	0	0	0	0	0	0
Speech Analytics (Essentials or Advanced)	0	0			0	0	0
Customer Feedback							
Advanced Customer Feedback	0	0	0	0	0	0	0

Option Key	
Available as priced option	0
Included in package	•



Avaya Contact Recording Features

Product Overview

Avaya Contact Recording is a voice-recording solution capable of providing bulk recording (100% of calls), on-demand recording, and event-driven recording.

Avaya Contact Recording is a software-based call recording product designed to meet the recording needs of businesses and contact centers that have either traditional endpoints, IP endpoints or a mixture of both. Standard and advanced recording modes include Bulk (100% recording of all calls), On-Demand (user initiated recording from any station), Meeting (user initiated recording of meetings), and Event-driven recording (external trigger). These recording modes give businesses the tools they need to track and review customer voice interactions.

Avaya Contact Recording provides flexible and sophisticated voice recording capabilities on top of the latest versions of Avaya Communication Manager, AACC and CS1000 platforms. Avaya Contact Recording can scale from 1 Channel to 1000 channels on a single server dependent configuration. A customer may have multiple Avaya Contact Recordings on a single ACD.

This server integrates to your Avaya communication infrastructure to record calls that are subsequently stored on its hard disk and can be archived to DVD+RW or more sophisticated management and network storage using the native Archive capability for long-term archival. Search and replay is accomplished through a browser-based user interface that can allow any user in the enterprise to access any call that has been recorded. Telephone Replay is also available via the optional Telephone Replay software.

Product Details

As the convergence of voice and data drives the adoption of new technology such as IP Telephony and IP Contact Centers, it is also driving new and better ways of delivering valuable business applications. Such applications include call recording that were often based on proprietary hardware.

Avaya Contact Recording leverages the power of Avaya's interfaces to all supported environments:

- With Communication Manager (CM), the Device and Media Call Control API (DMCC API) is used in conjunction with Application Enablement Services (AES) 4.2.2 or newer environments. TDM and Passive IP recording options are available.
- With Avaya Contact Center/CS1000, IP phones supply duplicate media streaming capabilities pair with Meridian Link Services CTI. TDM recording options are available.
- In Avaya Aura Contact Center environments, the Avaya Contact Recorder leverages Avaya Media Server's SIP conferencing capabilities to record voice via IP.

The result is an open, flexible offering capable of providing standard and advanced call recording features to businesses and contact centers.

This release of Avaya Aura™ Workforce Optimization introduces the ability to use the unique value-add of "AES Application-Specific Licensing (ASL)" with this solution. AES 4.2 introduced ASL for Avaya Applications using TSAPI and/or DMCC. Application Specific Licensing allows Avaya to simplify the pricing and ordering of its applications by bundling in the price of the required TSAPI and DMCC licenses into the price of the application. Avaya Applications that take advantage of AES ASL are granted unlimited TSAPI and DMCC licenses. This is the case with Avaya Aura™ WFO, assuming the proper CM



and AES platform environment. These TSAPI and DMCC licenses will not appear in the AES license file and will not be able to be used by other applications. With Avaya Aura™ WFO, the required CM IP Station licenses are also bundled into the base WFO package.

Customers deploying Aura™ Workforce Optimization in environments with CM 5.1 (or newer) and AES 4.2.2 (or newer) will be able to take advantage of the bundled-in ASL, and not have to configure and purchase these licenses separately. Avaya Contact recording was designed to meet these and other challenges of traditional recording solutions:

- The cost and overhead of administering moves, adds and changes is an expensive operation in a cabled recording environment;
- The need to accommodate mixed TDM and IP environments and to provide a graceful migration for those customers evolving from TDM to IP;
- Provides a more flexible approach than that of “Trunk Side” or “Extension Side” recording.
- Moving recording solutions to IP based applications running on industry standard hardware and operating systems;
- Recording in an encrypted environment between IP phones and/or IP phones and IP trunks (Communication Manager and CS1000 only).

Avaya Contact Recording addresses these challenges by:

Enhanced and Flexible Recording Control

Through tight integration with all Avaya communication platforms, the solution has enhanced capabilities and several options for recording control. Conferenced mode recording allows you to target the calls you want to record based on preconfigured rules set up in the User Administration. Customers are no longer restricted to the limitations of TDM recording where you need to define the interface point. The application simply monitors the CTI and when a call to be recorded is identified then a conference is set up to record the call.

Recording calls on a software-based platform

Without the need for proprietary hardware, Avaya has enabled call recording through software applications that can be installed on standard servers. The result is a lower total cost of ownership, lower administrative costs and improved operational performance.

Recording Types

Four flexible recording modes are available in Avaya Contact Recording:

- **Conferenced Recording** —Conference Recording uses the Single Step Conferencing (SSC) feature of the Communication Manager along with AE Services to provide targeted recording. Conferenced mode does not support bridged appearances.
- **On Demand Recording** — Any user on the Communication Manager can decide to begin recording a call from a certain point in the call by conferencing in a port from a hunt group of recording ports or using a phone or PC workstation application button.
- **Meeting Recording** — Any phone on the Communication Manager can be used to record a meeting e.g. in a conference room and the recording can be ‘assigned’ to specific users for access later.
- **Event-Driven Recording** — Using a middleware platform, such as Avaya Desktop and Process Analytics, recordings can be initiated from events occurring in other applications, such as CRM, CIS

or other desktop applications. In addition, data tags can be extracted from these systems and added to the call recording index to facilitate search functions.

Contact Management and Review

Avaya Contact Recording solution enables users across the enterprise to gain rapid access to review and replay the audio captured and stored in Avaya Contact Recording environment. This requirement may come from a Compliance team who needs to replay an individual interaction or selection of interactions for sales verification and compliance; it may be a customer service supervisor reviewing the recent call history with a customer in order to be able to respond to an inquiry or complaint promptly; or a marketing or field service manager who wishes to listen to customer feedback which will help improve their product and service offerings, or to improve the efficiency of their business processes.

Integral Search and Replay

The screenshot displays the Avaya Contact Recorder web interface within a Microsoft Internet Explorer browser. The interface includes a search filter panel on the left and a results table on the right. The search filter panel allows users to filter calls by Call Start Range, Parties, Agent, Length, Service, Universal Call ID, and Call Set. The results table shows a list of calls with columns for Call Start, Len, Agent, Parties, Service, and Univ. Call ID. The table is currently displaying 8 results, with a total of 678 results available.

Call Start	Len	Agent	Parties	Service	Univ. Call ID
05/02/10 12:55:01	00:17	N/A	2504 (Extension 2504), 2625 (UK SoftDialer Agent Phone), 2637 (CMAPI Tel-Aviv OEM)	N/A	108824 1265374495
05/02/10 12:58:20	00:10	N/A	2504 (Extension 2504), 2625 (UK SoftDialer Agent Phone), 2753 (CMAPI Tel-Aviv OEM)	N/A	108880 1265374692
05/02/10 13:02:04	00:06	N/A	2504, 2625 (UK SoftDialer Agent Phone), 2754 (CMAPI Tel-Aviv OEM)	N/A	108935 1265374920
05/02/10 13:41:51	00:09	N/A	2504 (Extension 2504), 2625 (UK SoftDialer Agent Phone), 2635 (CMAPI Tel-Aviv OEM)	N/A	109546 1265377302
05/02/10 13:44:37	00:10	N/A	2504 (Extension 2504), 2625 (UK SoftDialer Agent Phone), 2636 (CMAPI Tel-Aviv OEM)	N/A	109593 1265377468
05/02/10 13:52:30	00:10	N/A	2504 (Extension 2504), 2625 (UK SoftDialer Agent Phone), 2753 (CMAPI Tel-Aviv OEM)	N/A	109711 1265377941
05/02/10 14:03:40	00:19	2179 (Agent 3 (UK))	2057 (UK), 2625 (UK SoftDialer Agent Phone), 2626 (UK SoftDialer Cust Phone)	1929 (Q to HG57)	109857 1265378616
05/02/10 15:43:24	00:14	N/A	2625 (UK SoftDialer Agent Phone), 2626 (UK SoftDialer Cust Phone)	N/A	111732 1265384598
05/02/10 15:44:51	00:15	2179 (Agent 3 (UK))	2057 (UK), 2625 (UK SoftDialer Agent Phone), 2626 (UK SoftDialer Cust Phone)	1929 (Q to HG57)	111736 1265384686
05/02/10 16:11:34	00:23	N/A	2648 (UK - Raj), 2645 (UK - Raj Dialer Agent)	N/A	112148 1265386288

Avaya Contact Recording includes an intuitive, web-based search and replay GUI (shown above) that allows users access to recordings according to the station or agent that made the call. They can search on call party details including:

- ANI/DNIS
- Agent Name (where known to the ACD) / Agent ID



- Universal Call ID (Communication Manager environments)
- VDN/CDN Skill name and number
- Call duration and call start time
- Call direction
- Contact IC
- Parties on the call
- Skills
- Services
- Hold count
- Transfer count
- Conference count
- Ring duration
- Total duration
- Call history
- Trigger type
- Call set
- User-definable fields

Details of those calls meeting the specified criteria are displayed in a simple, tabular view. Simply clicking on a selected call record and the visual rendering of the recording will invoke the replay of that call, either through the PC soundcard (or via a telephone headset if the optional Telephone Replay Software is purchased). Call activity can be visually reviewed using the “energy envelope” which illustrates the audio volume from both parties on the call. This can rapidly indicate to the user where there are unusual or key points in the call for instance, prolonged periods of silence or “music on hold.” The user can then use the replay controls to move to the exact point in the call that they wish to review, as well as providing the ability to undertake other functions such as “start”, “stop” and “pause.”

Central Replay Server

For customers with more than one recorder the Central Search and Replay Server (CRS) feature can be used. This allows for the integral Search and Replay engine that comes native to the recorder to be placed on a dedicated server and provides an overall view across all your recorders. All database records are uploaded to this server and a user can search across multiple recorders allowing them to search for records without needing to know what recorder it was recorded on.

The Central Replay Server provides:

- Browser-based User Interface
- Search Filter and Results Grid
- Replay Control and Energy Envelope
- Supports enterprise-wide archival for all associated recorders



- Customizable Filters and Results layout
- Recordings from multiple recorders can be consolidated into a single database so that users can then search across all recorders at once
- The export and e-mailing of calls as attached WAV files
- Listen to calls via the PC soundcard or a telephone headset using telephone replay ports
- Audit of replay requests

Please refer to the Avaya Contact Recorder Planning, Implementation and Administration guide for more details.

Archive

The integral Archive functionality provides a local / enterprise wide solution that enables contacts recorded by Avaya Contact Recording to be archived efficiently and securely on external industry-standard storage environments such as Storage Area Networks (SAN) and Network Attached Storage (NAS).

Archive provides:

- Rules-Based Archiving
- Archive Scheduling
- Archive Reporting
- Blu-ray DVD+RW, NAS, SAN and EMC Centera support

Administration

Administration of the recorder is performed via a simple web-based application that allows users to:

- The user interface has been refreshed and brought in line with the rest of the workforce optimization suite
- A status screen on Master and Standby recorders now shows the status of all recorder servers in the system, simplifying day to day operation
- Enter and update licenses to increase capacity
- Configure the recorder and how it interacts with the Communication Manager
- Administer moves, adds and changes
- Determine how each recording mode operates
- Determine which stations are recorded in each mode
- View status of the recorder as a whole and of individual ports



- View alarms and events – which can also be e-mailed automatically to the administrator
- View peak usage statistics
- View an audit trail: of Configuration changes, Successful Logins, Changing of passwords, search, replay requests
- Create custom layouts and search and replay interfaces using ACR's Layout Builder interface.

ACR Layout Builder

- Changing the names of columns or filters (e.g. 'associates' instead of 'agents')
- Changing the order of columns or filters
- Pre-setting (and, optionally, locking) one or more filters to specific values (e.g. duration longer than 30 seconds)
- Hiding certain columns, which may contain confidential information
- Adding columns to display user-defined field information

Users can be assigned default ACR layouts by system administrators.



High Availability Designs and Redundancy

In any environment, but particularly those recording for compliance reasons, maintaining a complete and accurate record of every call is a business imperative, even where there has been a failure in any element of the system.

Avaya Contact Recorder supports several redundant designs to meet any high availability requirements for mission-critical contact center recording deployments.

Master / Standby

A simple and effective high availability design - one or more standby recorders can take over the role of a master recorder in case of failure. This design can be implemented in a single data center or standby recorders can be geographically distributed in remote call centers to provide geographical redundancy.

Master / Slave

Providing both scalability and high availability, **Master / Slave** configurations feature a Master recorder configured as a controller for several other recorders. In this scenario, the Master distributes recording duties across all available Slave recorders. In case of failure, the Master will re-distribute recording ports to the remaining available Slaves. A *Standby Recorder* can be deployed to assume the role of a failed *Primary Master*.

Supported Standby Failure Modes

To guard against potential standby failure, Avaya Contact Recording supports the following features and failure modes:

- RAID1 or RAID 5 disk arrays are strongly recommended for online storage, which have dual power supplies and an automatic rebuild capability
- Optional ability to detect a complete failure in the recorder and to switch recording to a hot-standby recorder.
- Catastrophic server failure
- Total network isolation
- Accidental power down or power failure
- Sustained failure of CTI services
- Disk full



Features and Benefits

The following tables provide a summary of features, functions, benefits, and differentiating elements of Avaya Contact Recording.

Avaya Contact Recording Features and Benefits

Avaya Contact Recording Recorder provides the following features and benefits.

Feature/Function	Capability Explained	Benefit	ACR Distinctives
Free Seating	Recordings are automatically “tagged” with the name and number of the agent logged on at the recorded station.	Contact centers operate in environments where agents are frequently shifting from one group to another or one workstation to another. As a result, the task of trying to keep track of them and monitor their interactions with customers on a regular basis is a difficult one at best.	
Multiple recording modes	Conference, Selective retain of recordings, On-demand, Meeting Recording Event Driven	Many more uses for recording in the enterprise can be found, allowing the company to capture, store and share access to calls, which contain enormous amounts of valuable insight into the company’s customers, processes and products.	Other vendors usually only offer one or two recording modes and are essentially built for just bulk recording with CTI required to achieve on-demand recording
Recording of any call irrespective of the station device used	Softphone, analog, digital, IP phones	Ability to record any call made on the switch irrespective of the type of terminal device	Multiple interface cards are typically needed for traditional TDM loggers for the various station types.



Support for encryption, different codecs.	Encrypted calls to IP handsets can be recorded	Encryption can be used where needed in the organization without needing to be concerned about whether or not the call will ever need to be recorded	Passive-tap IP recorders will not be able to record encrypted calls. Also as trunks migrate to IP, the option of TDM trunk-side recording will also be removed.
Flexible recording	Records all calls on configured extensions OR selectively based on user commands from the phone	Recording can easily be made to fit the company's various business needs for recording rather than being seen as technology that can only be deployed in the call center.	Some of the new uses for recording that traditional recorders will find it difficult to cost-effectively support include: <ul style="list-style-type: none"> • Record and train others with the perfect sales call • Record complaints, suggestions, or praise and pass them to the right people in the company to take action • Record verbal commitments, emergencies or threats for protection • Record conference calls or actual meetings for those unable to attend
Recording Rules	Ability to configure rules to control recording for Conferenced Recording.	This allows the system to provide targeted recording based on data about the calls. This provides a more focused recording solution.	
Support for station mobility	Recording follows the station number, not the cabling.	No need to re-wire the recorder if an extension is moved	Traditional extension side recording is often wired to physical devices, irrespective of the extension numbering. Avaya Contact Recording is less prone to error as there is now no "mapping table" of ports to station numbers.
Use of Avaya Communication Manager API (DMCC) and Avaya Media Server (AMS) SIP Conferencing capability.	DMCC and AMS allow calls to be recorded without the need for "special" telephony recording hardware.	Main benefits: <ul style="list-style-type: none"> • No cabling (other than LAN connection) needed • Ease of configuration and upgrade • TCO lower with improved MAC costs 	<ul style="list-style-type: none"> • Much simpler pricing than other recording systems • Easier to install and configure • Easier to upgrade • Simpler design means fewer problems in the field



Software-only design	Ability to deploy the recorder on an industry standard server without the need for ANY proprietary hardware.	As industry standard servers become more powerful customers can expect to get better performance from the recorders.	Not locked into proprietary hardware from one recording vendor. Proprietary hardware recorders rapidly become out-dated in performance vs. industry standard server platforms with performance increases almost monthly. Ability to purchase more recording ports in increments of 1 rather than being tied into 16 or 32 port board purchases
Archive	DVD+RW, Blu-ray, SAN, NAS and EMC Centera.	DVD archiving device in the recorder for low volume archiving. Option to archive to SAN/NAS for high volume deployments.	No need for additional archival platform or servers.
Online storage	Online disk storage (Volume dependent on server hard disk configuration)	Ability to calculate on-line storage requirements and use appropriate sized hard disk	Can use SAN as alternative to local disk
Compression of online calls	Calls can be stored as 16 kbps G.726 or 8kbps G.729a	Calls are compressed at a ratio of 4:1 G.726 or G.729a 8:1 for efficient storage	International standards not proprietary ones
Database support	On-board PostgreSQL	PostgreSQL is the database which is most commonly used for websites and is a robust, industry standard, database	Small footprint, no DBA skills required
Standby Recorder	A fault tolerant configuration allowing a "standby" recorder to shadow a "primary" recorder, with automated switch-over on recorder failure	Provides customer with a fault tolerant system that gives them piece of mind that if a server fails they are still recording.	
Higher Capacity	Up to 990 concurrent (dual/quad processor) recording channels per server (see Server Sizing Matrix)	Fewer servers to manage, more cost effective solution	Can achieve higher rack density
Avaya branded and sold exclusively by Avaya and Avaya partners	Recording solution ordered through Avaya	One less contract and simplified purchasing process. Single owner for solution's installation and support.	



Standard Search and Replay

Feature/Function	Capability Explained	Benefit to Customer	ACR Distinctives
Record, search and replay solution on a single server	Web based replay from the on-board search and replay application	Thin client access to replay calls allows anyone within the organization with the rights to replay to be able to easily access calls	Other vendors may require a client install for replay which greatly restricts the accessibility of the recording system and places additional load on the installation process and subsequently on the IT department. Many competitors' solutions require two servers – one recording and the other for call details/search and replay.
Sophisticated Search Features	Display results can be display in a single page or partitioned into multiple pages. Calls can be managed using call sets.	Search Parameters remembered between logins	These features allow customers to more easily manage the call lists and more quickly find calls they are looking for. The ability to save call sets and remember search patterns means they do not have to start from scratch on each set.
Call retrieval and replay to the PC soundcard	Via standard search and replay GUI	Replay to the PC soundcard can avoid the telephony costs between sites. Note- requires each replay PC to be equipped with a soundcard.	Other vendors may offer its standard replay through the telephone
Call Export	Ability to export single or multiple recordings from the Standard Viewer app to a format readily accessible by a Windows Media player.	Portability of recordings – can be emailed or saved to disk.	
Central Replay Server	Deployment of separate recorder server licensed as a Central Replay Server	If a customer has multiple recorders on a single site then they can use an additional Server to act as a Replay Server to provide a single view for all contact recordings.	
Energy envelope support	Ability to visually see the profile of the call being replayed in the search and replay GUI	Allows the user to visualize the conversation so that they can decide to go to certain sections of it, dramatically increasing the efficiency of listening to calls	



Audit	The Audit feature monitors interactions to identify who did what and when	<p>This allows system administrators to know:</p> <ul style="list-style-type: none"> • Configuration changes made via the administration web pages that directly affect recording • Successful user logins • Failed user logins • Password changes • User Searches • Replay Requests 	
Multi-site	Can enable multiple sites with Avaya Contact Recording, and a central database server providing a unified view of the enterprise	Ease of administration and retrieval; allows growth to multiple systems	Ease of implementation. Architecture fits perfectly into Avaya architecture
Enterprise View	A single view of multiple systems	Search and replay for calls regardless of which site took the call.	
Export	With the proper security, you can export contacts to non-system users. The system exports the audio as a .WAV file that can then be distributed as required, for example, via e-mail.	Once exported, the audio files are independent of Avaya Contact Recording and can be saved to a CD or e-mailed to another recipient who can replay the audio on any workstation with a web browser and a media player, for example, Windows Media Player, RealPlayer®, and so on.	
Audit	The Audit feature monitors interactions to identify who searched for which range of calls and which of those calls were replayed, and when.	The Audit feature allows users with the appropriate security access to view the history of interactions with Contact Viewer.	
Customer Filters and Layout	Ability to create custom filters and layouts	Allows users to search and view recordings with custom tags	



Feature/Function	Capability Explained	Benefit	ACR Unify Distinctives
Advanced Recording Rules	For Complex recording control not satisfied by the standard product Unify can be used to provide the ultimate flexibility.	The customer can define exactly what calls or portions of calls they need to record and tag with information relative to the call.	
Call Tagging	Ability to Tag calls if the source provided is not intelligent.	If the source is non intelligent like a straight event feed then Unify will be needed to interpret the events and provide recording control.	The flexibility of Unify in tagging calls allows customers to get real business.

Technical Specifications

1. Architecture

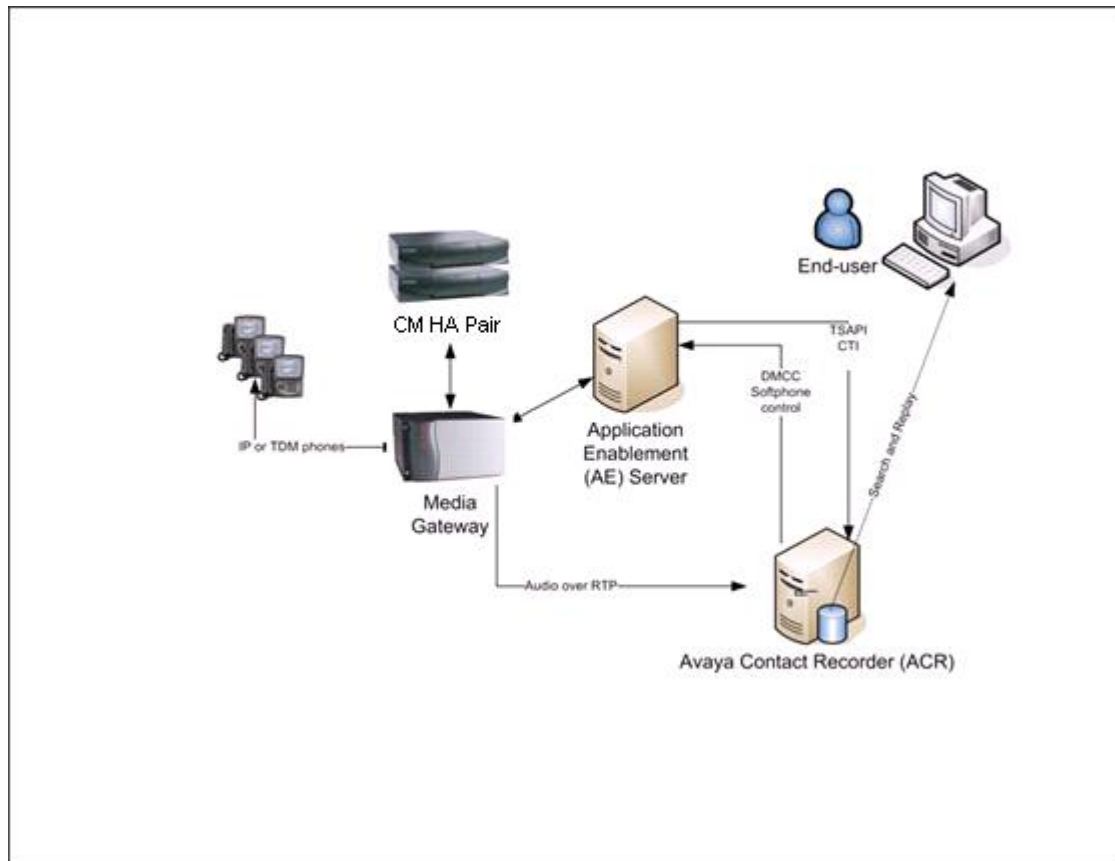


Figure 1: Avaya Contact Recording R12 with AES 4.2.2 or higher

Unlike traditional compliance recorders that use passive taps on either the trunks or extensions, Avaya Contact Recording recorder uses the DMCC interface to connect a port to the Avaya switch to record calls. This more flexible approach to recording offers the following benefits:

- The recorder can record potentially any call on the switch. Traditional trunk and/or extension recording would put restrictions on how calls were recorded and were inflexible especially after installation.
- There is no cabling to maintain to take account of the shifts moves and changes that take place in enterprises on a regular basis.

Avaya Contact Recording server contains several distinct components, as follows:



- Avaya's Device and Media Call Control API (DMCC) platform and the recording application that controls the softphones.
- A directory into which call contents and derived files are written as industry standard.wav and .xml files.
- FIFO disk space management in which the oldest recordings are automatically deleted, as required, to allow space for new recordings.
- A PostgreSQL database into which details of all calls are stored.
- A browser-based call search and replay application.
- A browser-based system configuration and status monitoring application.
- Archive system where recordings can be automatically written to a DVD+RW drive, NAS, SAN or EMC Centera.



Compliance Recording & Resiliency

Compliance recording has traditionally been achieved by a recording system that is separate from the telephone system it is trying to record. The audio “taps” are across either telephone lines or trunks. Neither approach is perfect; both require additional cabling with additional points of failure. Should any cabling be disconnected, recording will not take place – often without the company even being aware of the failure. Trunk side recording represents additional points of failure, and must be maintained.

Impact of IP Telephony on Compliance

Avaya’s ability to deploy encrypted IP telephony to the desktop enables a level of security previously unavailable. Avaya Contact Recording provides the ability to not only present encrypted voice, but record encrypted audio. Due to the tight integration, the Communication Manager’s native features allow access to the calls recorded. In doing so:

1. It is a “trusted party” on the call and hence automatically gains access to the unencrypted audio.
2. It is a pure software, pure IP implementation with much less hardware and cabling to go wrong and be maintained than traditional solutions.
3. It can support traditional and IP-based telephones.
4. It can record any call on the system: internal and external.

Point 1 above dictates that this style of recording will be required as encrypted IP is deployed to the desktop. The remaining points accelerate the change and mean that this solution makes sense to invest in today.

Note that recording of encrypted audio via SRTP is available in Communication Manager and CS1000 deployments only.

Reliability

Avaya Contact Recording provides an extremely reliable recording system, suited to both Quality Assessment and Compliance Recording tasks. Since the product was introduced, it has been reliably recording large volumes of calls for some of the most demanding customers. The key points to note are:

- Call audio is transmitted to the recorder over an IP network, rather than through additional cabling, failures due to incorrect or damaged wiring are eliminated entirely. The IP connection is just another part of your overall voice network and is subject to the same high assessment and design standards that Avaya applies to the rest of your IP telephony networks. The solution similarly takes advantage of other fault tolerant features of your Avaya platform such as pools of media processing resources.
- All proprietary recording hardware has been eliminated from the recording solution and you can utilize the same, high availability server platforms that you rely on for your other mission critical systems. These typically include hot-swappable power supplies and fans in addition to the RAID storage that is recommended in all cases.



- Those who require automated recovery in the rare event of server failure can install “Standby” recorders that automatically detect failure of the “Primary” recorder and take over from it.

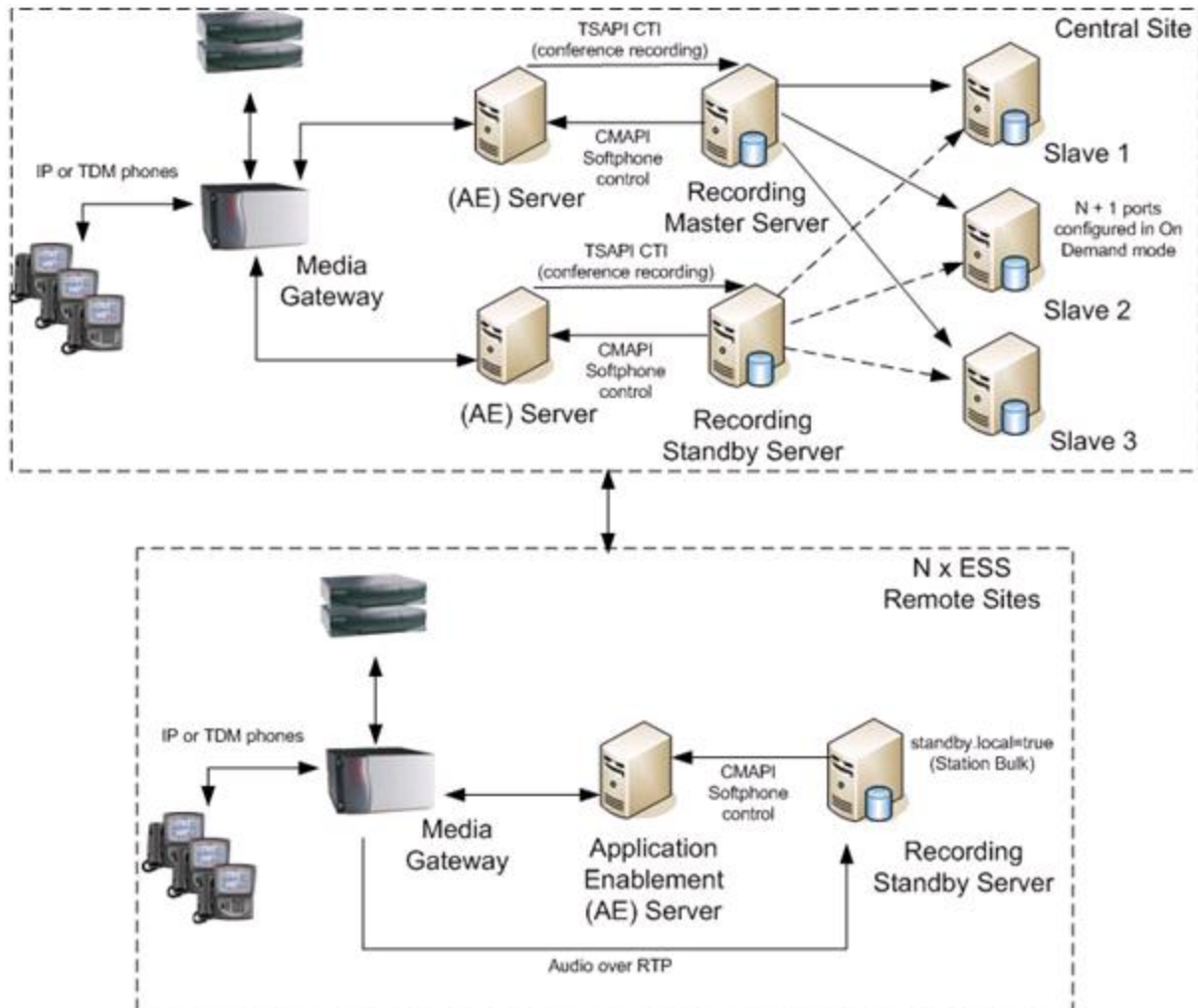
Resilience

Traditional bulk digital recorders will often have duplicated power supplies, multiple fans and RAID disk arrays. Their voice processing cards are typically not fault tolerant and hence an “N+1” switchover unit that allows a spare recorder to be configured can often be added as an optional extra.

With Avaya Contact Recording, since it runs on industry standard platforms with no proprietary hardware, the user can choose how fault tolerant they would like this platform to be.

This flexibility is particularly useful with the N+N standby unit. Provisioning an additional server – without the need for proprietary switchover unit - gives a very cost effective fault tolerant solution. Unlike some traditional solutions, there is no additional switchover unit – that in its self becomes a single-point of failure, and makes the approach uneconomical for single recorder installations.

The following example shows a more complex multi-site deployment with full component N+1 redundancy. This design eliminates any potential point of failure and can provide survivable recording in the event of primary ACD or WAN failure:



If recordings are acquired at multiple sites (e.g. multiple call center sites, offshore locations, work-at-home agents, etc.) can a user access all recordings from a single site independent of where they originated or are stored? What third party database software, if any, is required to support this requirement?

Avaya's ACR platform provides a scalable and flexible recording architecture that permits customers to locate recording acquisition servers anywhere in the enterprise (data center, contact center, etc.) and allow any user with network access and appropriate ACR credentials to access any recording, regardless of location.

This functionality is enabled by 'promoting' or designating an ACR server as a *Central Search and Replay* server. ACR servers in this role store call details regarding all call recordings made at any location, enabling enterprise-wide search/replay capabilities from a single search point.

Unlike competing solutions which require server and client access licenses for Microsoft SQL Server to enable this function, this functionality is provided as a native function without the need for expensive third party software licenses.



Scalability

Avaya Contact Recording is a highly efficient, software only, recording server that leverages the power of Avaya communication platforms to provide solutions from a few concurrent recording channels to many thousands of channels.

- Subject to the detailed system planning and design guidelines in the Planning Installation and Administration Guide.
- Each Avaya Contact Recording server can support up to 1000 concurrent recording channels in its most optimal configuration.
- Because Avaya Contact Recording is compatible with the other products in the Avaya WFO product range, it can act as an independent component in a larger scale deployment of WFO applications. These include CTI control and central search and replay applications. Hence any number of these recorders can be deployed throughout an organization's call centers and/or branches.



The Power to Improve Everything

Avaya Contact Recording is a fundamental building block of the whole Avaya Aura™ Workforce Optimization (WFO) suite. Avaya Contact Recording has interoperable functional components with several unique WFO business integrations. Avaya Aura™ Workforce Optimization is an integrated solution that enables the contact center and enterprise to have the right workforce with right skills doing the right things and doing them well to achieve corporate objectives. The challenges of the current economy are forcing enterprises to rethink their approach to customer service as customer retention becomes a key focus area. Enterprises must align contact center operations to new corporate objectives while keeping costs low. WFO applications encourage businesses to use their contact center strategically, rather than just as a mechanism to field customer calls. Furthermore, businesses can gain a deeper understanding of customer trends and balance efficiency with effectiveness to create an optimized customer experience. WFO enables the Customer Centric Enterprise.

The Avaya Aura™ Workforce Optimization solution includes the following primary applications:

- Avaya Contact Recording (CR)- as discussed in this Solution Guide
- Avaya Quality Monitoring (QM)
- Avaya Workforce Management (WFM)

In addition, there are WFO Voice Analytics and Customer Feedback applications closely integrated with the WFO offering that are available as optional add-ons to WFO.

Avaya Aura™ WFO not only converges these components, but it unifies them such that Avaya customers can benefit from reduced costs of ownership and higher return on investment vs. addressing WFO application needs with disparate systems.

So, why is Avaya Aura™ Workforce Optimization with Avaya Contact Recording the best choice?

It's Integrated ... Unlike other solutions, Avaya Aura™ WFO does not require the separate configuration and licensing of Avaya Application Enablement Services (AES) DMCC, TSAPI and CTI

It's Fully-Backed by Avaya ... Avaya is your sole vendor for WFO, from initial sale through to installation and on-going support

It's a Truly Unified Suite ... Unlike the competition, Avaya Aura™ WFO components share a single database and common management Graphical User Interface (GUI)

It Grows with your Investment ... Future releases will offer single sign-on, an integrated workspace, and data/KPI sharing with Avaya Performance Center resulting in more accurate scheduling, more effective coaching and ultimately, a better customer experience

In summary, there is no better option for Avaya Contact Center Customers who want to extract maximum value from current and future investments.



Conclusion

ACR is designed to help organizations achieve customer-centric cost containment by providing strategic tools and workflows that allow them to identify and impact the customer experience, service performance, customer behaviors and customer loyalty so they can navigate through economic uncertainty and consumer attitude changes.