

Technical White Paper



SmartRecord®'s System Integration with Cisco Unified Communications Manager (UCM)

The following is an explanation of the technical integration of CTI Group's call recording application, SmartRecord® with Cisco's Unified Communications Manager (UCM).



About CTI Group

CTI Group (Holdings), Inc. is an international provider of electronic invoice processing and management, enterprise communications management software and services solutions, and carrier class voice over internet protocol (VoIP) management applications. CTI Group's SmartBill®, SmartRecord® and Proteus® product suites offer a full array of solutions for traffic analysis, post-billing call analysis, customer care and call recording. CTI Group's products are used by some of the top service providers in North America and the United Kingdom, and play a trusted role in managing telephony costs at major corporations internationally. Headquartered in Indianapolis, CTI Group maintains overseas offices in London and Blackburn, UK. For more information, please visit CTI Group's website at www.ctigroup.com



How does the system integrate with Cisco UCM and how does it work?

The SmartRecord® Recording Server uses the call recording feature inherent in Cisco Unified Communications Manager (UCM) and third generation Cisco Unified IP phones to monitor and record call traffic for incoming and outgoing call traffic. Additionally, SmartRecord captures internal, extension-to-extension call traffic.

This is made possible through integration with the Cisco Unified Communications Manager (UCM) v7 and 3rd Generation Cisco IP phones. Using this technology, extensions or phones on this system are set up to record in the Cisco UCM. When a call for that extension is received, the recording application is notified from the UCM and the recording application receives a call detail record (CDR) or event record. This CDR is sent to the recording application in the SKINNY protocol. The audio portion of the call is sent directly from the phone to the recording system in the form of RTP. This captures both channels of the call conversation.

Highlights

How to Configure SmartRecord on Cisco UCM

- Turn on IP phone BIB to allow recording
- Add user for recording application
- Add user to groups that allow recording
- Configure tones for recording
- Configure monitoring calling search space
- Enable recording for a line appearance
- Create recording profile
- Create a SIP trunk that points to recorder
- Create a route pattern for the recorder
- Create recorder redundancy
- Configuration checklist for monitoring and recording
- Setting the monitoring and recording service parameters

Compression

SmartRecord utilizes MPEG 2.5 which compresses call recordings at a variable rate of approximately 24 kb/s.

The following displays the number of recorded minutes for different storage amounts.

	4.7 Gb	160 Gb	250 Gb	500 Gb	1 Tb
Minutes	27,880	628,792	1,483,000	2,966,000	6,074,368
Hours	465	10,479	24,716	49,433	101,239

What types of recording are available to me? Can I selectively record calls? Can I record all my calls?

- Automatic – also known as blanket recording, records all incoming and outgoing calls for extensions that are set up in the system to record.
- Handset Invoked Recording – this type of recording only records calls for extensions that are set up in the SmartRecord system and requires participation from a system user to select a SAVE RECORDING button from the handset in use during the call.

What are the benefits or competitive differentiators for SmartRecord?

Highlights

- Rapid installation and configuration
 - VM ready
 - No proprietary media player
 - True multi-tenant
 - Scalability & high availability architecture
- Storage – storage is flexible and can be configured at different levels in the account hierarchy. Number of days to store calls, amount of storage space, and storage locations are configurable. Once a storage device reaches its limit, calls can be archived to offline storage.
 - Account Hierarchies – the administrative interface provides the enterprise with the ability to recreate their business hierarchies with relation to locations, divisions, and departments. This provides storage and reporting flexibility by account level
 - Software Only – SmartRecord is a software only installation and can be installed on a variety of off-the-shelf hardware systems (that meet minimum requirements).
 - VMware Ready – SmartRecord is certified as VMware Ready on VMware ESXI. This greatly reduces the time for installing and configuring the software and allows the enterprise to share existing VMware ESXI installations that meet minimum hardware specifications.
 - Cisco Compatible – SmartRecord has passed Cisco IVT testing and is certified as Cisco Compatible for Cisco UCM v7. SmartRecord uses recording and monitoring features inherent in Cisco UCM allowing it to be quickly and easily configured.
 - Inbound/Outbound/Internal – SmartRecord records all inbound and outbound traffic for extensions that are set to record. ADDITIONALLY, SmartRecord also records extension-to-extension traffic and DOES NOT REQUIRE complicated recording architectures and additional hardware found in other types of installation.
 - Scalable – SmartRecord has been tested on carrier class installations and meets carrier level requirements for ability to scale to high volumes as well as high availability and redundancy.
 - Multi-Switch – SmartRecord is capable of obtaining recorded calls from a variety of switches and recording implementation types (active vs passive). These recorded calls can then be presented through a unified, centralized interface. Recorded calls can be stored anywhere on the network using the multi-tenant hierarchy features built in to the system.
 - High Availability and Redundancy – implementations are available.
 - APIs Available – open APIs allow for flexibility in integration with individual enterprise business processes and further integration into Cisco UCM.
 - CRM Integration – Sugar CRM and Salesforce.com integrations available.
 - No proprietary clients – the system uses the default media player on the users system. MP3 players include Quicktime®, Windows Mediaplayer®, and others. No proprietary client media player.
 - Browser Based Interfaces – no clients to install or maintain.
 - Supported Codecs - G711, G722, G729

Call Flow

1. Cisco UCM uses active recording to fork a copy of the call to be recorded directly from the Cisco 3G phone to the SmartRecord Recording Server.
2. Calls to be recorded from Cisco Unified Communications Manager Express (CME) must be directed using a SPAN port on the switch through a media gateway (IPX) into the SmartRecord Recording server.
3. Cisco Contact Center Enterprise (UCCE) and Contact Center Express (UCCX) can be recorded by adding the subscribers directly to the CUCM and routing these calls using the active recording mechanism.
4. Incorporate call recordings from other switch types using similar implementations dependent upon the type of recording (active vs passive).

