



VoIP Call Recording



Overview

VPI, a Cisco Technology Developer Partner, has developed the most advanced VoIP recording solution available today – **Activ! IP**. Through collaboration with Cisco, VPI ensures that organizations are able to effectively leverage VoIP recording solutions to capture, evaluate, analyze and improve multimedia interactions over converging networks. **Activ! IP** leverages open architecture and is platform independent to integrate seamlessly into your existing and evolving infrastructure.

Minimize Impact on Precious Network Resources

Activ! IP can record all VoIP traffic, including SPAN and RSPAN, with very little impact on your network resources. **Activ! IP** utilizes a special network device which does not have the scalability limitations other “port mirroring” solutions may incur. This is the first solution to make true video quality screen recording in a VoIP environment a reality without compromising the quality of video recording or impacting network performance. Unlike other technologies that constantly stream data over the network, file transfer of screen recordings originally captured at local PC workstations can be either continuous upon conclusion of every recording session or via scheduled bursts after hours, when the network is less busy.

Capture All Audio in Standard GSM File Format

Activ! IP's unique interface has the ability to perform trans coding on the fly, normalizing and compressing all audio (including G.711, G.723.1, etc.) into industry standard, non-proprietary GSM file format regardless of disparate audio sources. This allows for simple, centralized storage and playback using any standard media player (does not require CODECS to be installed on the PC prior to playback).

Flexible Licensing Options

VPI offers customers two recording licensing options to meet your needs:

Dynamic or “Concurrent Connection” Recording Licensing – In this mode the first unused available recording channel will be used for recording the call. This in turn allows more efficient use of the recording channels as a smaller number of recording channels are needed to record the same number of phones as Static mode. It's limited only by the maximum number of simultaneous recordings which in turn is limited by the number of available channels in **Activ! IP**. For example, a 64 channel recorder can be used to record 256 telephones/devices but can only record 64 calls simultaneously. When the channel capacity is exceeded by the number of simultaneous calls, recordings are then ignored in the order received. This mode is “plug and play” – it requires no configuration for the channels, extensions, IP settings, or anything else to work properly.

Static Recording Licensing – For organizations requiring 100% call recording, VPI recommends the static licensing option which provides for recording all agents anytime they are in a conversation. The extensions or the IP addresses of the telephones are setup manually. Static recording configuration is very flexible as the channels are configured with either the IP address and/or the Directory Number/Extension of the phone.

Note: You cannot combine Dynamic mode with Static mode.

Architecture

Recording Internal, Incoming and Outgoing Interactions

In addition to recording incoming and outgoing calls, **Activ! IP** can be configured to record internal station-to-station calls by monitoring the routers that connect individual handsets to each other. RSPAN Tapping is also a potential lower cost, less hardware intensive solution for recording station-to-station interactions, but can have scalability limitations as all routers where tapping traffic occurs require the ability to mirror traffic to a port (i.e. requires VLAN and RSPAN spanning support).

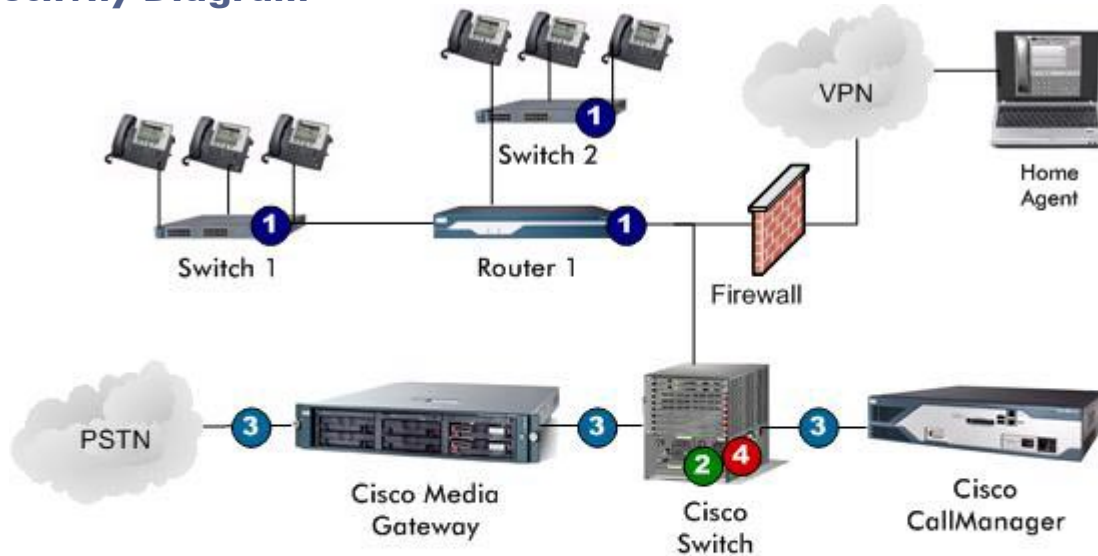
Recording Incoming and Outgoing Interactions

If internal handset-to-handset interactions are not required to be recorded, VPI offers two recording options requiring minimal hardware. **Activ! IP** has the ability to monitor and record traffic via a span port at the Cisco switch. **Activ! IP** is also able to support simple networks with restricted port spanning to recording incoming and outgoing interactions. For networks that can only support limited spanning, **Activ! IP** spans two tap points - one tap at the trunk port and one at the Cisco CallManager port. If port spanning is not supported an in-line tap box can be used to mirror the data.

Recording Remote Employee/Home Agent Interactions

Activ! IP records off-site Cisco IP Communicator calls on the trunk-side, in conjunction with a Cisco CallManager interface to ensure that only the appropriate interactions are recorded. This relatively simple measure enables you to avoid the unnecessary implementation of extensive recording resources for all other trunk-side traffic, which is already being captured by **Activ! IP**.

Connectivity Diagram



- 1 Recording All Interactions** - Mirror the span port on Switch 1, Switch 2, and Router 1 to capture all local and remote interactions.
- 2 Recording All Interactions** - Mirror the RSPAN port (if available) on the Cisco Switch.
- 3 Recording Incoming and Outgoing Interactions** - Create either a physical tap at the trunk port (T1, E1, PRI, etc.) or a physical tap between the Media Gateway and the Cisco 6509 Switch, and one physical tap (tap box) at the Cisco CallManager port.
- 4 Recording Incoming and Outgoing Interactions** - Mirror the SPAN port on the Cisco Switch.

Software Specifications

Configuration

- 16 to 192 channels (ports) per server, and can be networked to up to unlimited channels

Operating System Support

- Server - Windows™ 2000 and 2003
- Client - Windows™ XP and ME

Playback Client Software Specifications

- Windows™ 95 Version B (WIN 95 Build A is not supported) /98SE/ME/2000/XP
- Minimum PC hardware requirements are Intel® Pentium III 1 GHz, 256MB SDRAM
- Hard Drive 20GB, 16-bit digital audio Sound Card (preferably Creative Labs® branded)

Screen Client and Host Software Specifications

- Min. Screen Admin Client – Pent. III 1GHz, 256MB SDRAM, Windows™ 2000/XP/Windows™ Media Player 9
- Minimum Screen Host – can record screen resolution up to 1600x1200 (> 16Mb video card preferred for high resolution / high color depth recording) as resolution goes up so do CPU requirements.
- Minimum CPU is Intel® III 1 GHz (@ 1024x768, 16 bit color), 512MB SDRAM preferred, (256MB min.)

Client Server Protocols

- TCP/IP
- IPX-SPX
- NetBeui
- RAS
- Windows Sockets Standard

Voice Recording

- Host-based record/play, WAV format (G.711, G.723.1, MS-GSM)
- Playback speed control with pitch correction
- Record/play via standard HTTP Web interface

Voice Processing

- G.711 and G.723.1
- Voice Activity Detection (VAD) and CNG
- Echo Cancellation: G.168 compliant 32, 64 msec echo tail;
- 128 msec tail available with reduced channel capacity
- Trans-coding of G.711 RTP to any Low Bit Rate Coder RTP stream
- Gain Control: Automatic (AGC) or Programmable

Physical Interfaces

- TDM Interfaces - MVIP, SCbus, H.100
- Telephony - 120 Ohm - RJ48C connectors
- Ethernet - RJ-45

Playback Output

- Speakers - Multimedia PC Speakers
- Headphone Jack - 1/8" Headphone jack
- Remote - 600 ohms nominal
- E-Mail – play e-mailed calls as compressed WAV file, in any Windows™ environment.

Searchable Event Information Captured

(see *Acivl IP Channel Manager Manual* for more detailed information on each of the following)

- Start/Stop
- Agent ID
- Extension (in most cases)
- Calling Party / Caller ID (in most cases)
- Calling Party Name
- Called Party / Number Dialed
- DNIS
- Call Duration
- Call Type / Call Direction
- Last Redirect Information
- VoiceMailbox Information

Cisco® Specific Features Supported

(see *Acivl IP Channel Manager Manual* for more detailed information on each of the following)

- Barge
- Call Forward
- Call Park & Pickup
- Caller ID
- Call Waiting
- Conference Features
- Direct & Announced Transfers
- Extension Mobility Service
- Hold / Resume
- Immediate Divert
- Join
- Meet-me Conference
- Multiple Calls per Line & Phone
- Programmable Buttons
- Redial
- Remove Conference Participants
- Speaker Mode
- Speed Dialing

Security

- Multiple Login levels available for administration and installation, play-back, compliance and monitoring. Complete audit trails of all activities, i.e., call searches, DVD changes etc.

Alarms, Remote and On-site Diagnostics, and Reports

- Event Center Leverages Standard Network Monitoring Services to Support Windows™ Performance/Event Monitor, HP™ Openview, Tivol™, etc.
- Alarms generated locally or via the LAN, can be dialed out to pagers, E-Mailed, or provided audibly to fixed or cellular telephones. Audit trails, call usage, login/logout, call search and much more.

Hardware Requirements

Activ! IP Hardware (VPI or customer provided)

- Activ! IP voice server (minimum 1U server with full length 64-bit PCI board slot)
- AudioCodes IPX-C board

Optional Hardware

- AudioCodes TX100 PSI
- AudioCodes TX100 PSA
- AudioCodes TX100i
- AudioCodes 19" rack kit for TX100. 3 slots.
- AudioCodes Blank panel for rack kit.