



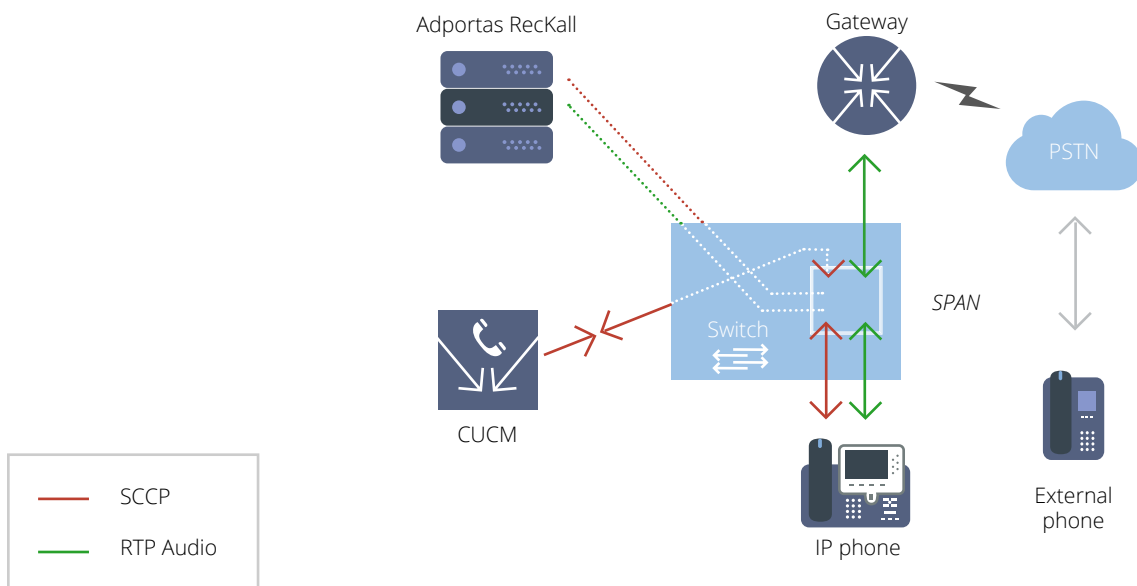
1. Description.

Passive Recording is a form of recording incoming and outgoing calls, in permanent mode or on-demand, that captures audio flows over *SPAN* (*Switch Port Analyzer*), a way of monitoring network traffic. Using an active mirror, the switch sends a copy of all the network packages seen by a port (or a complete *VLAN*) to another one where the package may be captured by the *Adportas Reckall Passive Recording* server.

The *SPAN* can be enabled in those ports connected to the *Cisco Unified Communications Manager* (*Unified CM*), to *Cisco Voice Gateway* or to *Cisco IP* phones, as required.

Optionally, using an application installed in each user's *PC*, *Adportas Reckall* is able to record the screen activity during the call, attaching the synchronized audio and video files and allowing later reproduction from the administrating web interface.

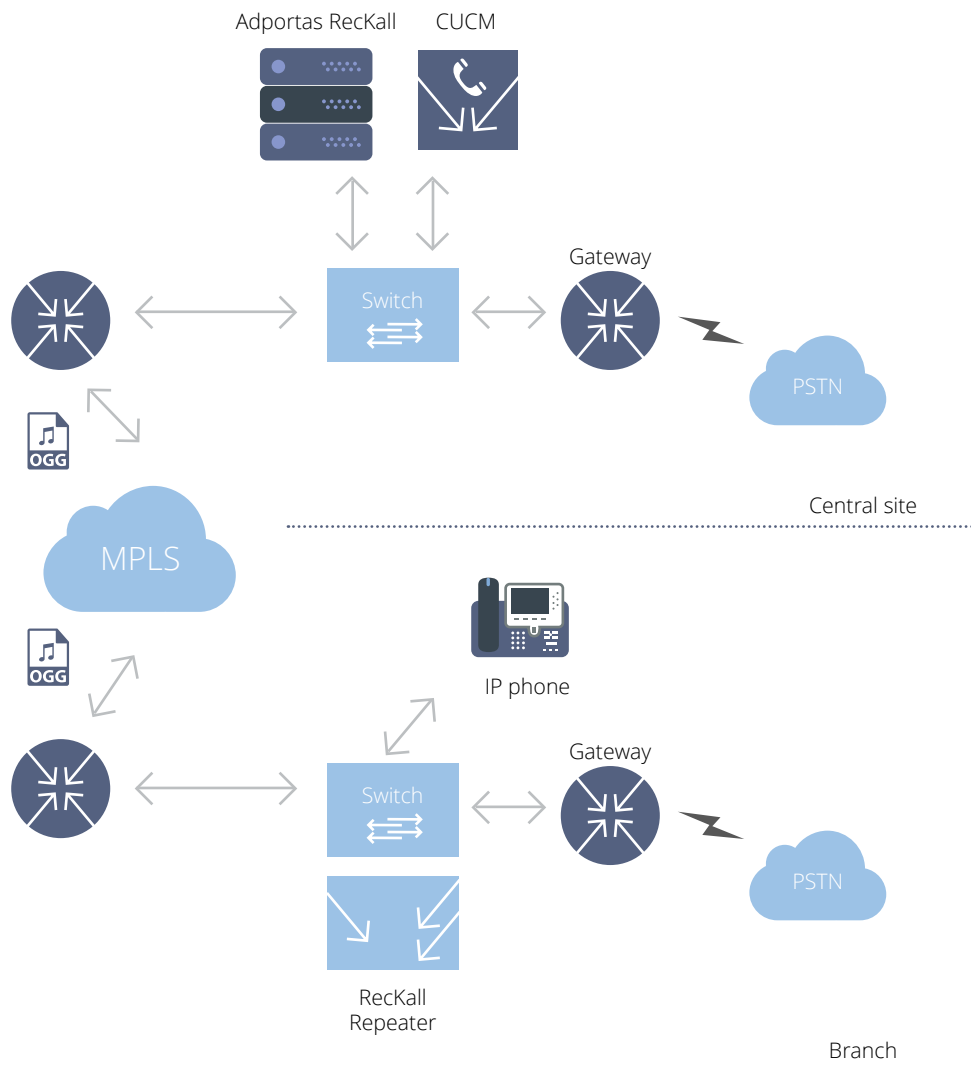
2. Adportas Reckall architecture.



SPAN recording.

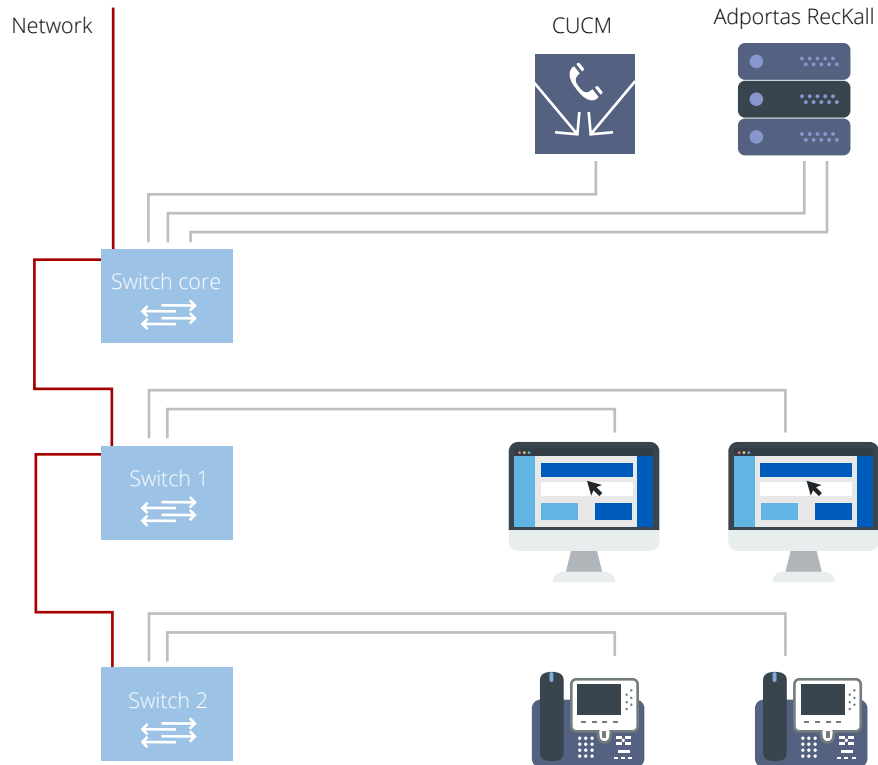
- Configuring switch ports for the *Adportas Reckall* central server.
- Configuring network ports for each monitored *IP* phone.
- SPAN* enabling in *CUCM*.
- Once all parameters are configured, the audio flow (*RTP*) generated by any monitored phone will be copied to and captured in the *Adportas Reckall* server.

3. Architecture for branch offices.



- a. Configuring switch ports for the *Adportas Reckall* central server.
- b. Configuring network ports for each monitored *IP* phone.
- c. *SPAN* enabling in *CUCM*.
- d. Installation of *Adportas Reckall* server (repeater) with the same network configuration than the central server in every branch office.
- e. The repeating server captures audio flow and sends them as data packages over *MPLS* network to the central server for centralized storage.

4. Adportas Reckall RSPAN architecture.



RSPAN switch configuration.

There are three switches in the network:

Switch Core: composed of the *CUCM* and *Adportas Reckall* server. One of its network cards is connected for device routing (normally eth0), and the other network card for recording (normally eth1).

Switch 1: work stations.

Switch 2: telephones.

In this case, the following must be applied for each switch:

Switch 2 (telephones):

1. Configuring a remote *SPAN VLAN* named *Adportas Reckall*.
2. Configuring a monitoring session indicating the origin of the ports connected to the telephones and remote *SPAN VLAN* as destination.

Switch 1 (work stations):

Configuring a remote *SPAN VLAN* named *Adportas Reckall*.

Switch Core:

1. Configuring a remote *SPAN VLAN* named *Adportas Reckall*.
2. Configuring a monitoring session with remote *SPAN VLAN* as origin and the switch gate where the *Adportas Reckall* server connects to the recording network card (eth1) as destination.

5. Main characteristics.

5.1 Recording.

- Passive recording mode
- Recording of incoming and outgoing calls, both internal and public network
- Permanent recording
- On-demand recording
- Screen activity recording (optional)
- Encrypted call recording
- Transferred call sequence and conference recording
- Video call recording

5.2 System.

- *Linux CentOS 6* or higher
- Compatible with CUCM version 8.0 or higher
- VMWare compatible
- Main site and branch office integration
- *G.729A*, *G.711 μ-Law* and *G.711 A-Law CODECS* support
- Open or encrypted storage formats: PCM (*CODEC G 729*), WAV (*CODEC G 711*) and OGG (*Speex CODEC*)
- Audio file compression (1:10)
- Optic media, shared folders and external systems backup
- Recording system (capturators/concentrators) on high availability

5.3 Administration web interface.

- Search by counterpart *ANI*, extension, type of call, date, duration, cost center, login, metadata
- Integration of additional metadata
- Multiple profiles for flexible configuration of users and supervisors
- Monitoring specific *ANIs*
- Administration of recording groups (cost center)
- Mark tags during playback to find points of interest
- User activity traceability
- System health control panel and reports

Requirements

Adportas Reckall server	<i>CallManager</i> V.8 or higher
Remote access via <i>VPN</i>	Port mirroring for recorded extensions
<i>Cisco IP</i> telephones	Two networks ports for central recording server
<i>SPAN</i> enabling	Supports phones with <i>G.711 A-Law</i> , <i>G.711 μ-Law</i> or <i>G.729A CODECS</i> .