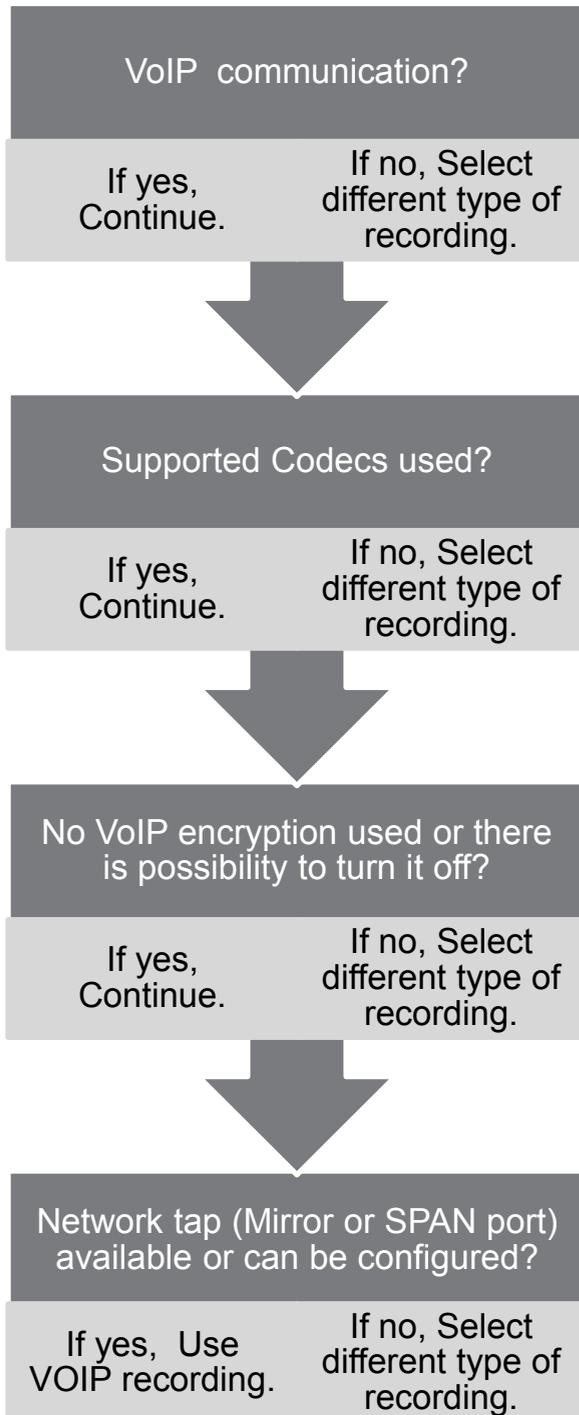# Passive VoIP Recording Checklist

VERSADIAL #

Before Voice Over Internet Protocol (VoIP) extension recording can be offered, a site survey at the customer site must be performed to determine the possibilities. The following flowchart will help you to determine if and when VoIP extension recording is possible. The step-by-step diagram poses questions for you to answer in order to understand the VoIP extension recording. When VoIP extension recording is not possible, the alternative could be trunk side recording.

VoIP communication?	
If yes, Continue.	If no, Select different type of recording.

Supported Codecs used?	
If yes, Continue.	If no, Select different type of recording.

No VoIP encryption used or there is possibility to turn it off?	
If yes, Continue.	If no, Select different type of recording.

Network tap (Mirror or SPAN port) available or can be configured?	
If yes, Use VOIP recording.	If no, Select different type of recording.

VoIP communication

VoIP is the new architecture that provides some unique challenges for recording solutions. The functional components are distributed around IP networks that are unlike traditional PBX environments, in such that there is no centralized point to capture the audio such as at a MDF in traditional technology.

Codecs

Versadial VSLogger supports following audio codecs G.711, G.729A, G722 (wideband Cisco). It is preferable to use the G.711 codec because

it is uncompressed and unlicensed.. The G.729a, codec needs additional licenses. If the codec is not listed at this support section, contact Versadial for availability.

Using a compression codec (G729) requires extra processing power and can reduce the maximum number of recorded channels per recording server.

Encryption

Versadial VSLogger doesn't support passive recording of encrypted VoIP. The only option is to turn encryption off. There are several encryption possibilities like IP-SEC, VoIP audio encryption, VoIP signaling encryption. Some switches encrypt VoIP signaling without the option to turn encryption off, then recording of audio is still possible, but some of the call information (dialed number etc.) could be lost.

CISCO Compatible

Network tap

Network taps (SPAN ports or Mirror ports) are used to create permanent access ports for passive monitoring. The traffic to and from a number of network devices (VoIP telephones) is copied to a single port of a network switch. Usually, this port could be any of the switch ports; the port is simply configured as SPAN port. This SPAN port allows customers to record several VoIP telephones by spanning the VoIP telephones to this particular port on the network

switch. The network switch might have the option to SPAN traffic received (Rx) and/or send (Tx) per network device. In this case there are two configurations possible:

1) SPAN all received traffic (Rx) for all VoIP phones AND the Call Manager.
2) SPAN all received (Rx) AND send (Tx) traffic only for all VoIP phones/extensions.

Option 2 is preferred as it only SPANS the traffic for the recorded VoIP telephones..

VLAN

In order to make the SPAN port configuration easier, a VLAN is useful. In practice, some customers will already use a separate VLAN for VoIP traffic for QoS purposes. QoS stands for 'Quality of Service' and is used to prioritize network traffic to guarantee sufficient bandwidth for VoIP telephony. A VLAN is a 'logical' group in the network. All traffic from this group could be recorded by SPANNING this VLAN. When a customer adds more phones to this VLAN they are automatically put on the SPAN port.

RSPAN

stands for REMOTE SPANNING. This is used to put traffic on a SPAN port from different network switches. In case more switches are used in a building, all VoIP traffic is put on one SPAN port on a singe network switch. In order to do so the following steps must be taken:
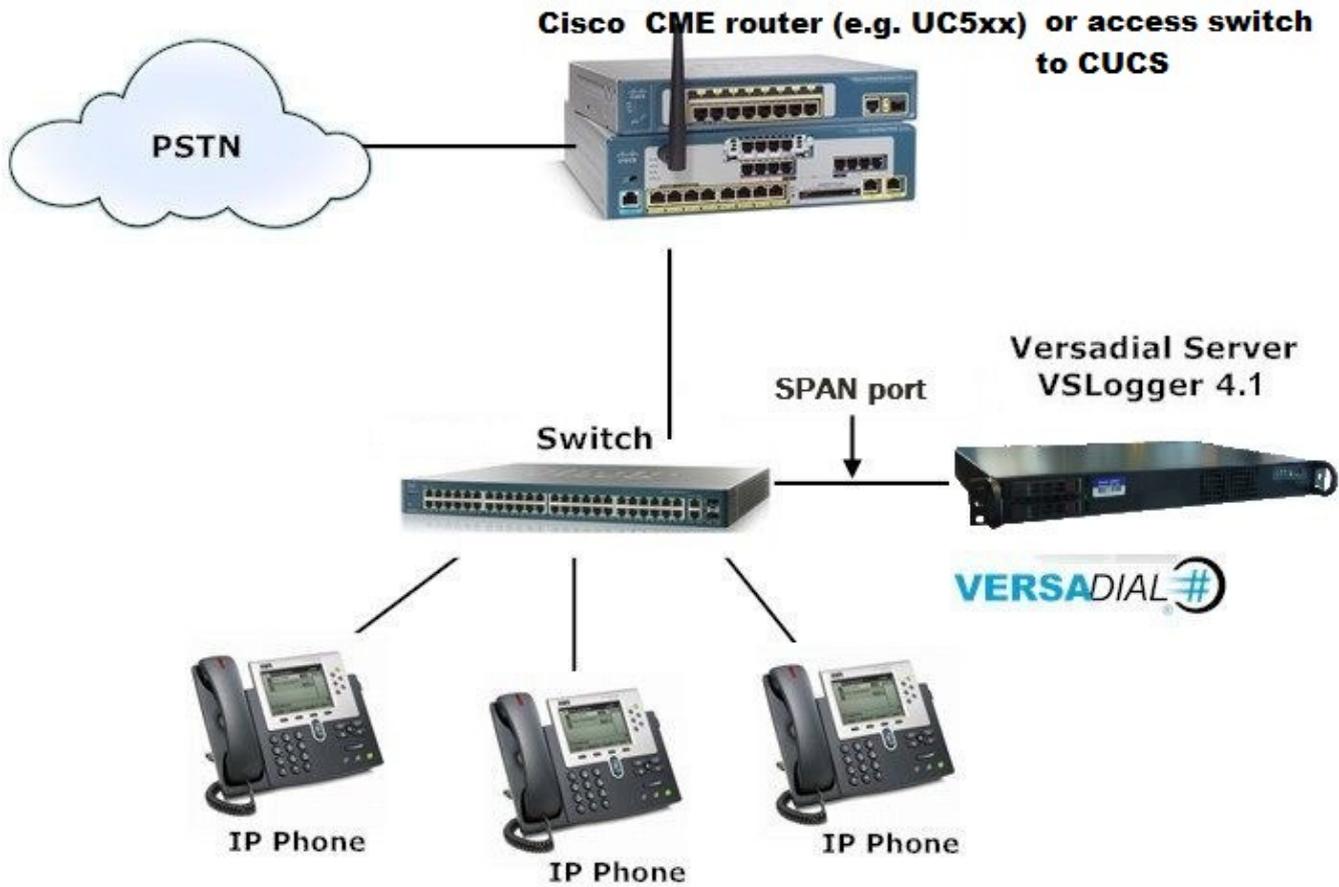
1) Create a VLAN and configure this VLAN as REMOTE SPAN VLAN.
2) All network switches must have this VLAN using the same VLAN name.
3) Put all VoIP devices on this VLAN either by spanning per network device or by a local
4) VLAN with all devices, which is spanned to the remote SPAN VLAN.
5) Create a SPAN port spanning the REMOTE SPAN VLAN on one of the switches.
6) This SPAN port will output all network traffic from the several switches.

This technology is also used to record multiple sites with a central recorder. In this case bandwidth (WAN) is an issue and audio compression is no expectance.

KNOWN SPAN/SWITCH ISSUES: Many of Cisco switches support SPAN. Some more expensive switches support the RSPAN technology. Several other brands only support PORT MIRRORING. This technology copies the traffic from a single network device to a specific switch port. Number of the mirrored ports can be limited. Your ability to record VoIP greatly depends on your ability to SPAN/Mirror traffic from the recorded devices to single network tap. To request help from the Versadial support team please provide following details:

• Network Switch Vendor (Cisco,Nortel, 3Com, D-Link etc) and Switch Type/Model
• Network Switch Firmware, SPAN /Mirror Limitations
• VoIP system to be recorded
• If trunk side recording is an option for this customer

Cisco CME deployment Model

Cisco CME router (e.g. UC5xx) or access switch to CUCS

PSTN

Versadial Server
VSLogger 4.1

SPAN port

Switch

IP Phone

IP Phone

IP Phone

Cisco CUCM Deployment models