

# AudioCodes Quick Reference Guide How to Debug voice with Wireshark

# **Background:**

This quick reference guide is aimed at helping you understand how to debug issue like one-way audio, no audio, poor voice quality and essentially any issue related to audio is the calls.

## What Kind of logs to collect?

The 2 logs that are absolutely necessary to troubleshoot audio issues are:

- 1. Syslog
- 2. Debug recording log

# How to collect these log files?

1. Syslog: Go to Troubleshoot>>Logging>>Syslog Settings

Enable Syslog: Enabled

Syslog Server IP: Should point to the IP address where Syslog Viewer tool is running Debug Level: Detailed

Open syslog viewer tool and make sure logs are being received from the device on port 516 NOTE- It is not advisable to keep debug level=Detailed on for long duration and capture heavy traffic as it takes up CPU utilization of the device

#### Example:

MEDIANT 2600 TROUBLESHOOT				D Entity, parameter, value	
📀 🔿 SRD All 🔻					
MESSAGE LOG	Syslog Settings				
Svslog Settings	SYSLOG		ACTIVITY TYPES TO REPORT	ACTIVITY TYPES TO REPORT	
Logging Settings Logging Filters (0) CALL DETAIL RECORD TEST CALL DEBUG	Enable Syslog Syslog Server IP Syslog Server Port Syslog CPU Protection Syslog Optimization Debug Level	Enable  T  I92.168.10.101  S14  Enabled  V  Disabled  V  Detailed  V	Select All Parameters Value Change Auxillary Files Loading Device Reset Flash Memory Burning Device Software Upgrade Non-Authorized Access Sensitive Parameters Value Change Login and Logout CLI Activity Action Executed		
		Cance	APPLY		



#### 2. **Debug Recording:** Troubleshooting>>Logging Setting

Debug Recording Destination IP: Should point to the IP address where Wireshark tool is running Logging Filters: Click on New

Add a filter to capture the call on which issue is occurring

Log Type: Signaling Media and PCM

If Filter Type= Any and Value = Blank, then ALL calls are captured for debug recording logging Mode: Enable

Please refer User Manual for details on Filter type and value

NOTE- It is not advisable to keep debug recording on for long duration and capture heavy traffic as it takes up CPU utilization of the device

Open Wireshark tool and make sure logs are being received from the device on port 925

#### Example:

MEDIANT 2600 TROUBLESHOOT				C Entity, parameter, value
(+) (-) SRD All V				
MESSAGE LOG	Logging Settings			
Syslog Settings	GENERAL		DEBUG RECORDING	
Logging Settings Logging Filters (0)	Debug Level High Threshold	90	Debug Recording Destination IP	0.0.0.0
> CALL DETAIL RECORD			Debug Recording Destination Port	925
> TEST CALL				
▶ DEBUG				
			_	

MEDIANT 2600	TROUBLESHOOT	Logging Filters		– x		D Entity, parameter, value
📀 📀 SRD	All 👻					
		GENERAL				
☆ MESSAG	ie log	Index	0			
Syslog Settin	gs	Filter Type	Any			Q
Logging Sett	ings	Value		LO	G TYPE	MODE
Logging Filte	rs (0)	Log Destination	Debug Recording Server 🔻			
CALL DETAIL	RECORD	Log Type	Ţ			
> TEST CALL		Mode	Enable			
> DEBUG						
			Cancel APPLY			



# AudioCodes Debug Recording Plugins:

To view the AudioCodes Debug recording packets, you need the ACDR plugins installed in the Wireshark installation folder.

Link to install plugins:

https://audiocodes.sharefile.com/share/view/s83e2a13ed3444308/fof0a0ad-9aff-44b9-a13f-0f3197bf1e13

## How do I extract the Audio from the Debug recording trace?

- 1. Capture test call required
- **2.** Open the Wireshark trace file and put in display filter = sip (This displays all the SIP dialogs related to the call)
- **3.** Find the INVITE related to the call. On the bottom panel in the Wireshark, there will be a new option of AUIOCODES DEBUG RECORDING. Expand that option and expand the Full session ID
- **4.** Right Click on the session ID>>Apply as filter>>Selected. This will filter out all the packets corresponding to that particular call.



# Caudiocodes

- Add RTP to the current filter Example: acdr.full\_session\_id == "9a677d:11:3004" and RTP this filter will display all the RTP packets related to that call.
  (Note: Wireshark filter is case sensitive)
- **6.** Ideally, there will be 4 audio streams in a debug recording trace: *Example:* If the call flow is A>>AudioCodes device>>B, the media streams will be
  - Incoming from A to AudioCodes device
  - Outgoing from AudioCodes device to B
  - Incoming from B to AudioCodes device
  - Outgoing from AudioCodes device to A
- **7.** Each media stream will have a unique SSRC number using which the streams can be identified and filtered.
- **8.** To listen to the Audio corresponding to that SSRC, select that RTP packet>>Click on Telephony>> RTP>>Stream Analysis>>Play Stream
- **9.** TO Save the Audio corresponding to that SSRC, select that RTP packet>>Click on Telephony>> RTP>>Stream Analysis>> Save
- **10.** To View all the RTP streams, click on Telephony>>RTP>>RTP streams
- **11.** To view Source/destination IP address of an RTP packet, double click on the RTP packet>>Expand the AUDIOCODES DEBUG RECORDING>> Expand Header Extension

# For any further questions regarding this topic or other technical topics:

- Contact your AudioCodes Sales Engineer
- Visit our AudioCodes Services and support page at <a href="https://www.audiocodes.com/services-support">https://www.audiocodes.com/services-support</a>
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- Contact Technical Support to submit a support ticket at <a href="https://services.audiocodes.com">https://services.audiocodes.com</a>