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?

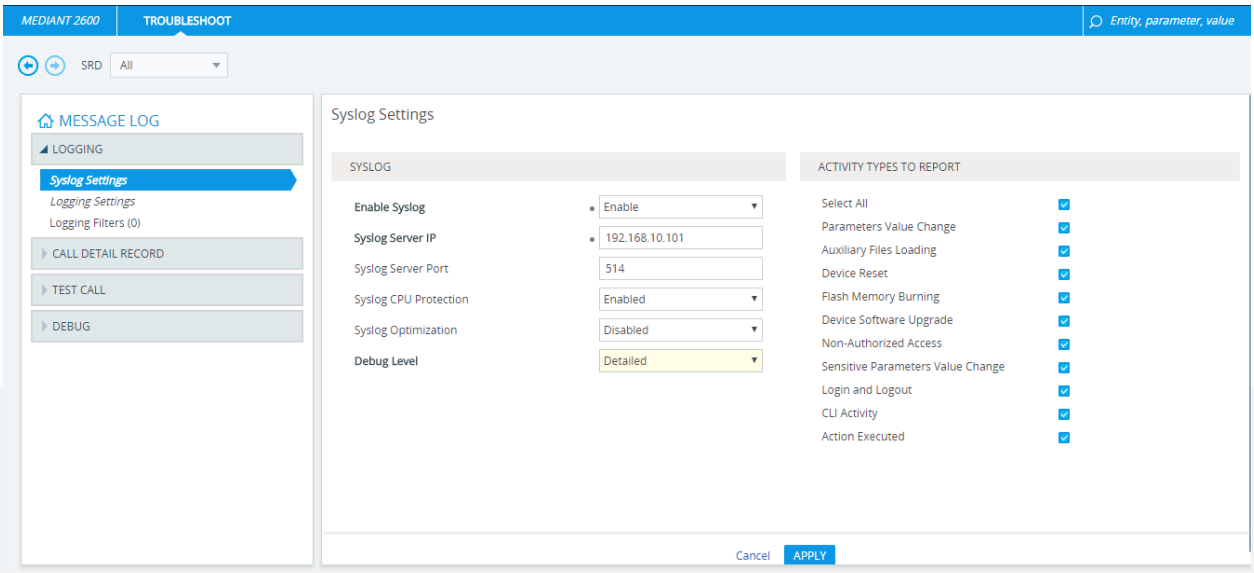
The 2 logs that are absolutely necessary to troubleshoot audio issues are:

1. Syslog
2. Debug recording log

How to collect these log files?

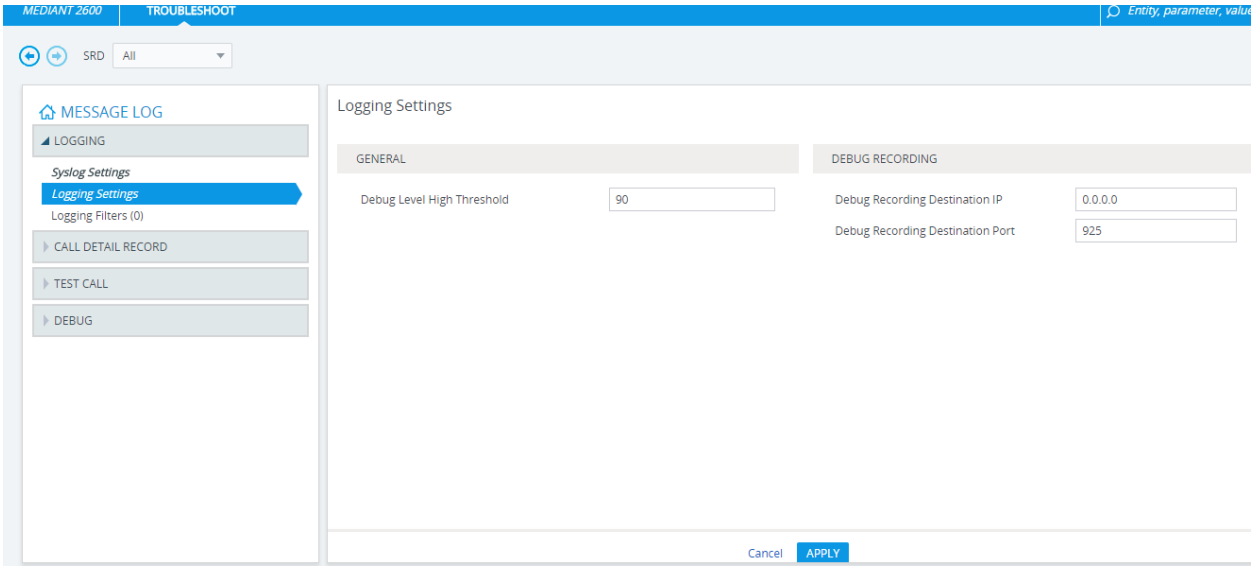
1. **Syslog**: Go to Troubleshoot>>Logging>>Syslog Settings
   Enable Syslog: Enabled
   Syslog Server IP: Should point to the IP address where Syslog Viewer tool is running
   Debug Level: Detailed
   Open syslog viewer tool and make sure logs are being received from the device on port 516
   NOTE- 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

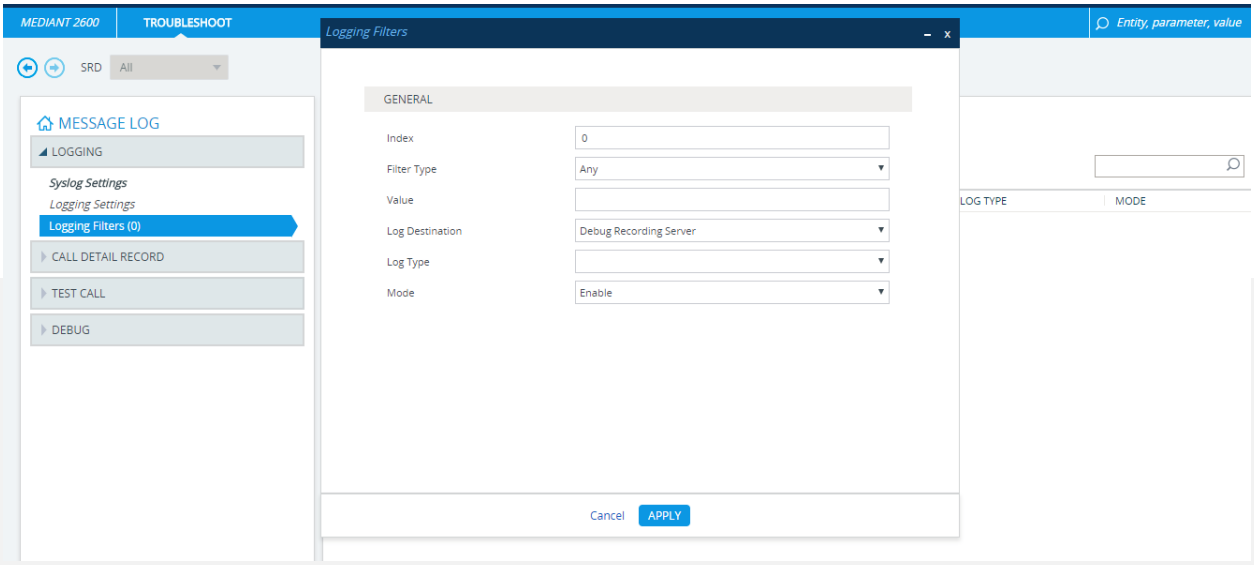
Example:



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:





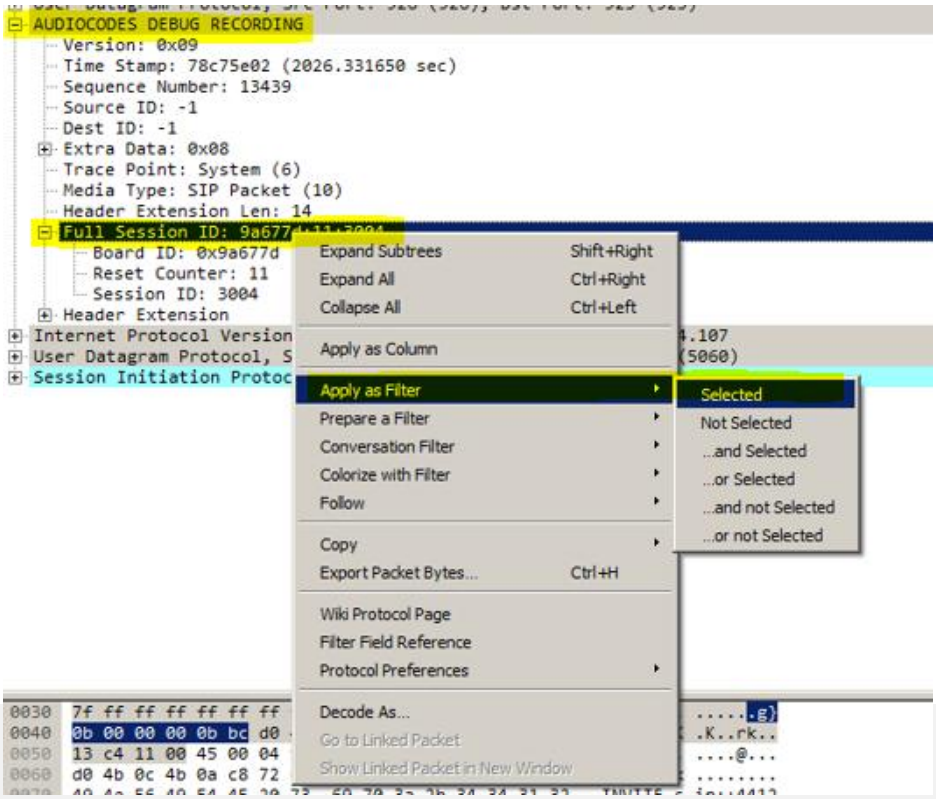
AudioCodes Debug Recording Plugins:

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.



5. 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 https://www.audiocodes.com/services-support
- Access our technical documentation library at https://www.audiocodes.com/library/technical-documents
- Access to AudioCodes Management Utilities is available at https://services.audiocodes.com/app/answers/detail/a_id/20
- Contact Technical Support to submit a support ticket at https://services.audiocodes.com