AudioCodes Quick Reference Guide

Transcoding

Background:

By default, the AudioCodes device forwards media packets transparently between SIP endpoints, i.e. no media negotiation. However, when there are no common coders (codecs) between two SIP endpoints that need to establish voice communication you can configure the device to perform audio coder transcoding between the inbound and outbound legs to enable media flow between them. For instance, if the (A) inbound leg offers a G.729 coder, but the (B) outbound leg only supports G.711 ulaw the device can be configured to transcode the G.729 to G.711. In layman's terms it acts as an interpreter between the two endpoints.

When is Transcoding Used?

Transcoding is used in instances as mentioned above, when two sip endpoints do not have common coders. It can also be used when both media legs use the same coder, but have different packetization times, i.e. G.729 at 30 ms vs G.729 @ 20 ms. The coders that are added to the outbound leg are referred to as 'extension coders'.

Coder Transcoding Prerequisites?

For coder transcoding, the following prerequisites must be met (otherwise, the extension coders are not added to the SDP offer):

- √ The device must support at least one of the coders listed in the incoming SDP offer.
- √ The device must have available DSPs for both legs (inbound and outbound).
- √ The incoming SDP offer must have at least one media line that is audio ('m=audio').

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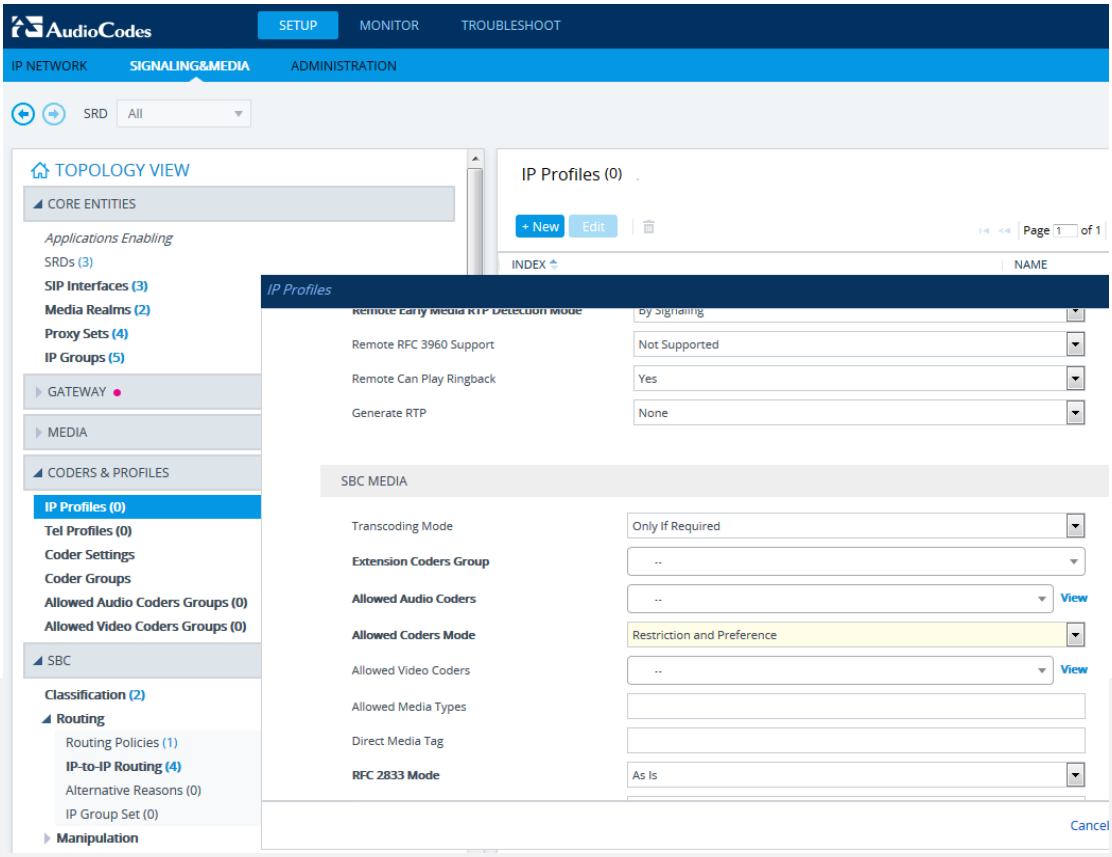
How to Configure Coder Transcoding?

1. From the Setup Menu =>Signaling & Media => Coders & Profiles. In the Coder Groups Table configure a Group for Extension Coders.
2. In the IP Profiles Table, configure the IP Profile for the IP Group of the sip entity that you want to extend coders for.
    a. Assign the Coders Group to the IP Profile using the 'Extension Coders Group' parameter under the SBC Media section.
    b. Enable extension coders by configuring the 'Allowed Coders Mode' parameter to Restriction or Restriction and Preference under the SBC Media Section.

Note:

- To implement transcoding, you must configure the number of required DSP channels for transcoding (for example, MediaChannels = 120). Each transcoding session uses two DSP resources.
- The transcoding mode can be configured globally, using the TranscodingMode parameter or for specific calls, using the IP Profiles table.
- It is recommended to use the MPM modules when transcoding is required.



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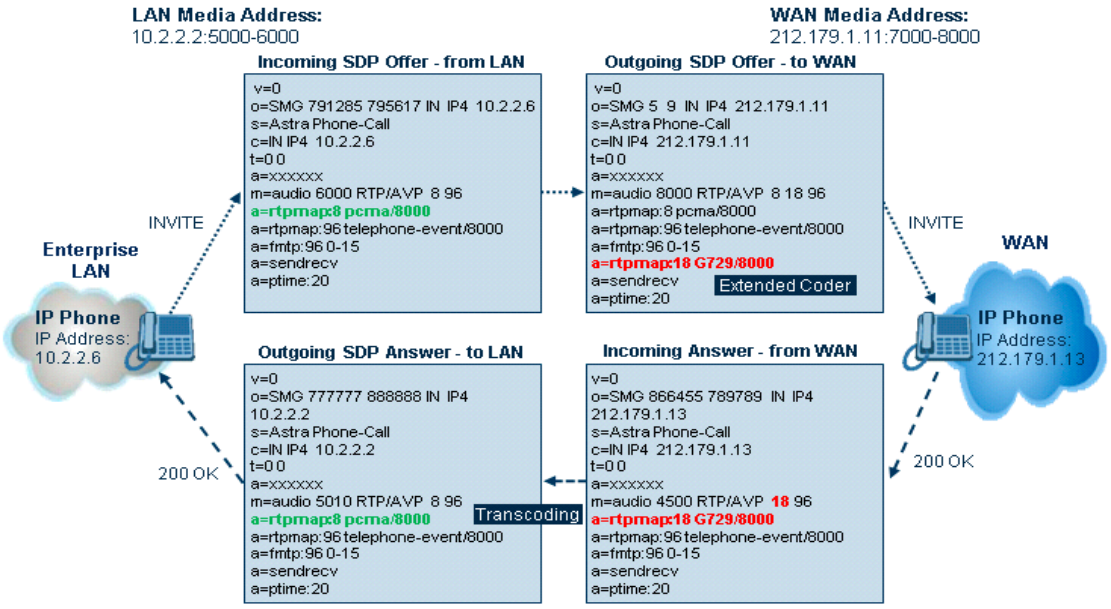
Transcoding using Extended Coders (Example)



How are coders defined for use?

Coders are defined in groups called 'Coder Groups' on the AudioCodes device. See the Quick Reference Guide article on Profiles and Coders for further explanation on how to Configure Coder Groups or the AudioCodes User Guide for your device.

What other resources are there on Transcoding?

AudioCodes provides documentation for Transcoding in our device User Manuals located on the AudioCodes website under the Resource Center, Technical Documents.

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

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