

AudioCodes Quick Reference Guide

Understanding Quality of Service (QoS)

Background:

Quality of Service is a necessity for voice and video over the network to ensure that the service is provided within the expected standards.

In a voice call, packets are transmitted as an ordered stream, losing even a few packets will result in the voice quality becoming choppy and unintelligible. Additionally, packets are sensitive to what's known as jitter. Jitter is the variation in delay of a streaming application.

In enterprise networks, there will be times where links become congested to the point where routers and switches start dropping packets because they are coming in/out faster than what can be processed. As a result, your voice and video streaming application are going to suffer. This is where Quality of Service comes in.

How does QoS work?

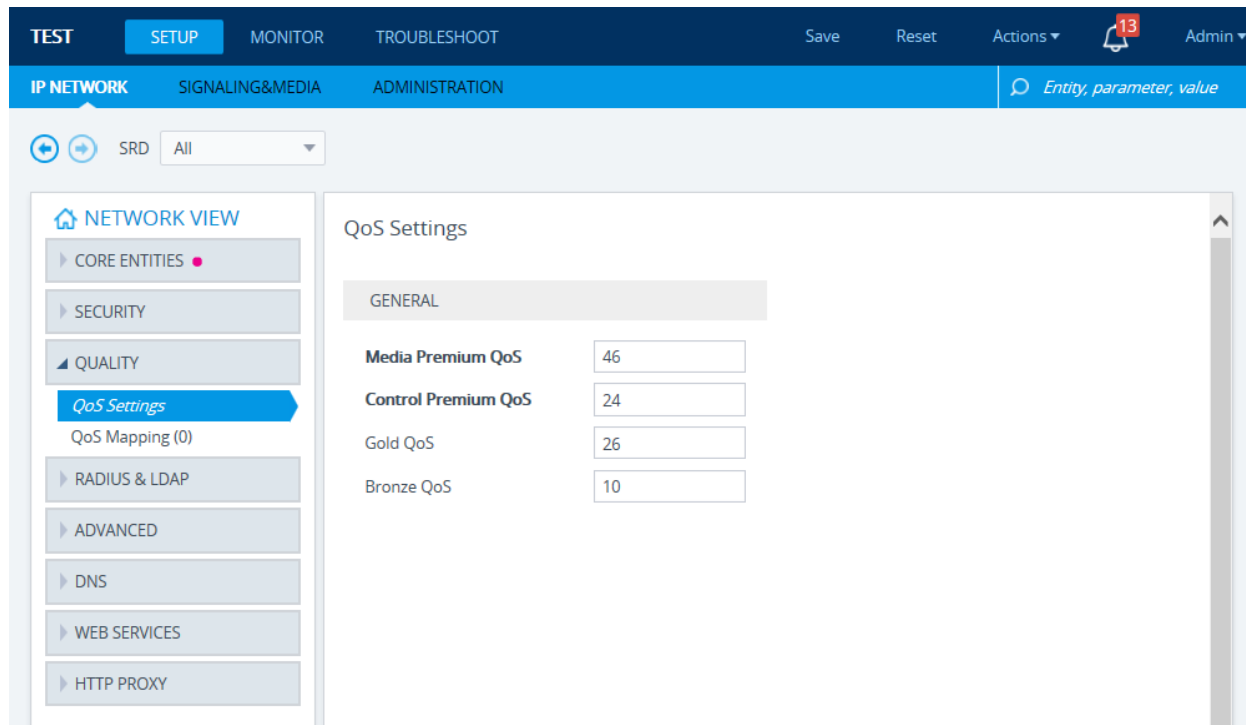
Quality of Service helps manage packet loss, delay and jitter on your network infrastructure. Two ways to mark QoS in voice or video applications are Class of Service (CoS) and Differentiated Services Code Point (DSCP). CoS will mark a data stream in the layer 2 frame header while DSCP will mark a data stream in the layer 3 packet header.

Various applications can be marked differently, which allows the network equipment to be able to categorize data into different groups. Now that data streams are categorized into different groups, we can use that information to place policy on those groups in order to provide preferential treatment of some data streams over others. This is called queuing.

For example, if voice traffic is tagged and policy is created to give it access to the majority of network bandwidth on a link, the routing or switching device will move these packets/frames to the front of the queue and transmit them immediately. But if a standard TCP data transfer stream is marked with a lower priority, it will be queued until there is sufficient bandwidth to transmit. If the queues fill up too much, these lower priority packets/frames are the first ones to be dropped.

How do I configure QoS on the AudioCodes device?

The QoS settings are located under Setup → IP Network → Quality → QoS Settings



The screenshot shows the AudioCodes management interface. At the top, there are tabs for TEST, SETUP, MONITOR, and TROUBLESHOOT. Below these are sub-tabs for IP NETWORK, SIGNALING&MEDIA, and ADMINISTRATION. The main content area is titled 'QoS Settings' and is divided into a 'NETWORK VIEW' sidebar and a 'GENERAL' configuration section. The sidebar lists various network settings, with 'QoS Settings' highlighted. The 'GENERAL' section contains four configuration items, each with a text input field:

Setting	Value
Media Premium QoS	46
Control Premium QoS	24
Gold QoS	26
Bronze QoS	10

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>