MasterTC of just:play/live is not sync with the local time.

Georg - 2026-05-11 - just:live/play

I realized that the NTP of the Mac (running just:out) and the MasterTC of just:play/live are not in sync once the machine has been on air for some time. What is the problem and how can it be avoided?

First it is important to understand how we generate the MasterTC.

The same time just:out is started, it grabs the NTP from the local machine and sends it over to just:connect. Unfortunately the NTP used by the Mac is not very stable. In fact it can vary by several frames within one hour and synchronization between the NTP server and the local machine happens only a few times a day. Because of this you must refresh the NTP manually before starting just:out. just:connect then reads this information and sends it to the user interface. To keep the video playout stable we synchronize to the clock of the video device (which is usually more stable than the NTP) as soon as the NTP information has been received. To make the video device itself as stable as possible you must attach a stable and continuos reference signal (BB or Tri-level sync) at the Ref.In. WARNING: Using one of the available switch to live methods means, that the video card synchronizes to the incoming video instead of the reference signal and therefore the incoming video must be stable!!

So what can cause the difference?

1. NTP shift: Because the way the OS handles the NTP, the time of the local machine will vary over time. This is ok as long as the difference is not too much.

2. MTC shift: This could be caused by an bad video signal attached to the input of the video card, or by a bad reference signal. Use a Frame Synchronizer like this http://www.aja.com/products/fs/ to stabilize the signal in such a case.

Solution:

just:out supports other sources than the NTP of the local machine to generate the master time. This allows to read the tc from a much more accurate time source like an LTC generator. In addition we also support to resync the master time to the tc source at the end of every playlist, where we resync for a maximum of 5 frames per playlist. This function can be turned off completely or turned off for certain playlists to avoid shortened clips or black frames every time the time has been resynced.