

Reboot Loop on Huawei Router since FW 2.6.xx

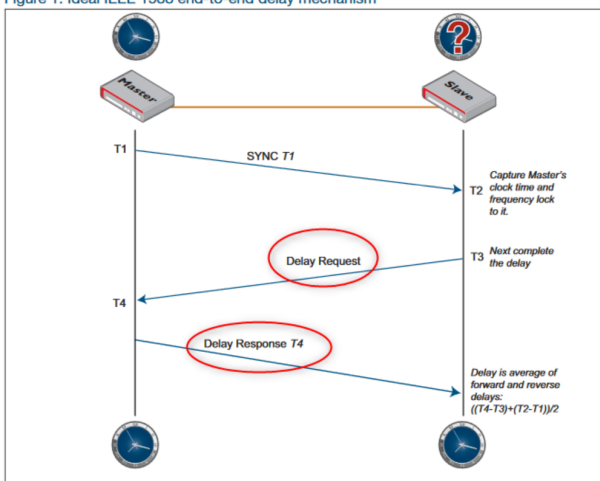
Description

Due to changing technology to PTP for our synchronous audio play-back in the version 2.6.12.03, combined with an Issue in the Huawei router firmware, all Huawei routers show a reboot behaviour when starting up 2 or more Audioserver in your installation.

PTP = Precision Time Protocol (IEEE 1588v2) has been a standard since 2008 and helps computer systems to be time synchronous with differences in nanoseconds. This is a great way to explore synchronous music from several speakers.

We did not experience any problems on devices of other manufacturers because this is a widely used protocol. Only Huawei Routers seem to have improper software. In our opinion routers should not crash with this network protocol usage. Not even cause a problem. Loxone is trying hard with Huawei developers to improve routers software.

Figure 1: Ideal IEEE 1588 end-to-end delay mechanism



```
PTPv2 68 Delay_Resp Message
PTPv2 78 Announce Message
PTPv2 60 Sync Message
PTPv2 60 Follow_Up Message
PTPv2 60 Delay_Req Message
PTPv2 68 Delay_Resp Message
PTPv2 60 Delay_Req Message
PTPv2 68 Delay_Resp Message
PTPv2 60 Delay_Req Message
PTPv2 68 Delay_Resp Message
PTPv2 60 Delay_Req Message
PTPv2 68 Delay_Resp Message
```

Affected Devices

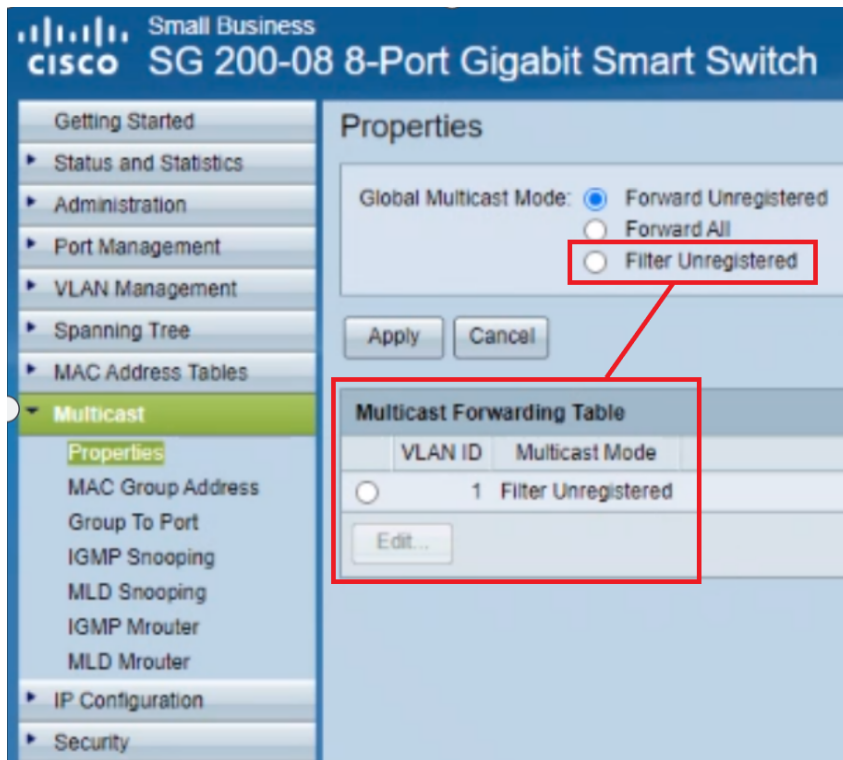
Since Audioserver firmware version 2.6.12.03 and higher

Reported Huawei Devices:

- B528s-23a
- B535-232

Temporary Workarounds/Solutions

If you have such a router please stay on the existing version of Audioserver or install a proper working router. If you have a managed switch in your installation, it is also possible to overcome this problem by activating the “filter unregistered multicast” function. This filter-switch has to be set up between the router and the switch for other PTP devices (Audioservers).



Fix

The problem is in the firmware version of the Huawei devices, which means to fix the problem, the firmware of Huawei has to be updated. Loxone reported this issue to Huawei and other providers to find a solution as soon as possible.