



Automation Solutions

TECH TOPICS

Time Synchronization Issues with Your Network?

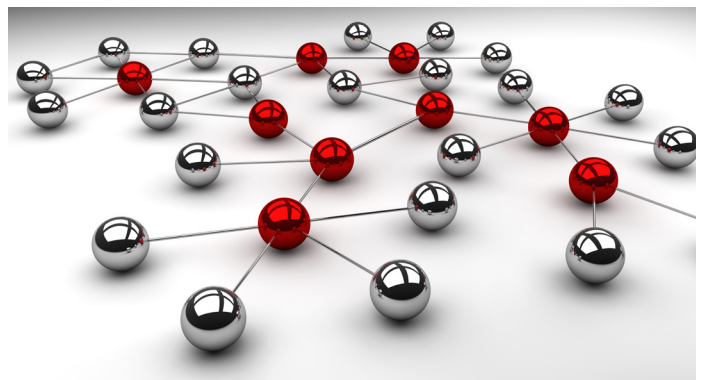
Time synchronization serves a pivotal role in an Ethernet-based controls network, but it's too often treated as an afterthought.

Certain industrial automation devices like servo drives, VFDs, or even PLCs require synchronization accuracy in the sub-millisecond range. This is especially true in distributed high-speed motion applications.

In order to obtain this high level of time accuracy, Rockwell Automation devices utilize a protocol called Precision Time Protocol.

PTP is a network-based time synchronization standard. However, instead of the millisecond-level synchronization that is prevalent with NTP (Network Time Protocol), PTP can achieve nanosecond or picosecond synchronization.

PTP timestamping is so accurate because it uses hardware timestamping instead of software. PTP devices timestamp the amount of



time that synchronization messages spend in each device, which accounts for device latency. Since PTP is hardware based, it is necessary for network devices connecting your automation devices to support PTP.

Learn More about PTP

If you're experiencing issues like dropped communication or lost synchronization with your drives, PLCs, or integrated safety devices, contact a HESCO specialist at (860) 236-6363, info@hesconet.com for a free assessment of your network.

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