NTP can be the basis for UTC traceable 1 microsecond accurate time.

- Many FSMLabs customers have production systems with 1microsecond or better time accuracy from NTP.
- 2. Claims that NTP is limited to one millisecond or worse are <u>not accurate</u>.
- 3. The technology of NTP and PTP is similar there is no magic protocol.

This is measurable.



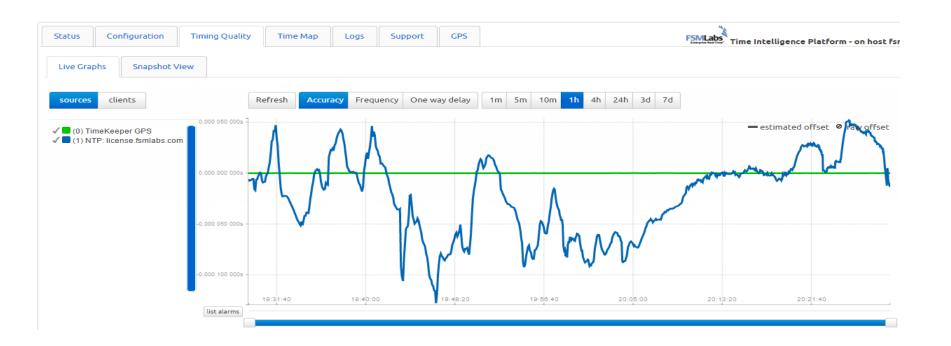
To meet MiFID II or FINRA Clock regulations: NTP can be a lower cost and lower disruption solution.

- PTP multicast is complex to manage and fragile.
- Existing NTP distribution networks are easy to upgrade incrementally with TimeKeeper.
- Expensive "Time enabled" network equipment is not necessary





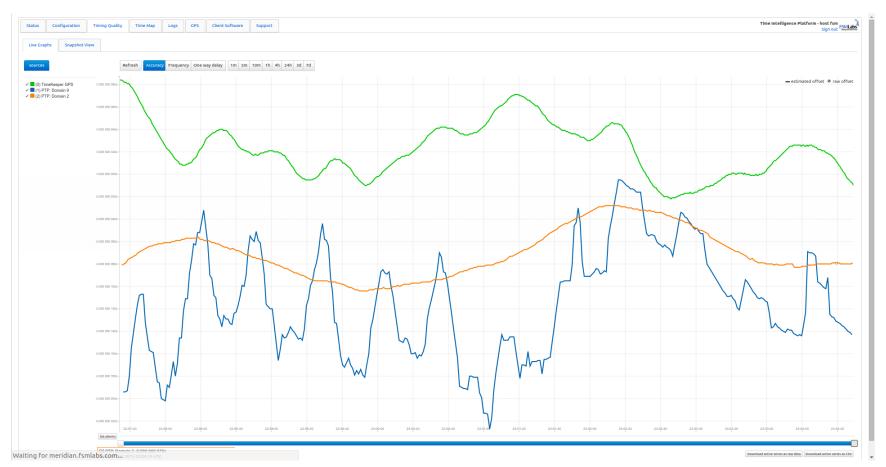
While NTPd and legacy GPS clocks have poor NTP quality, TimeKeeper has excellent NTP quality



 Here TimeKeeper shows a NTP over WAN source is within 100 microseconds of GPS.



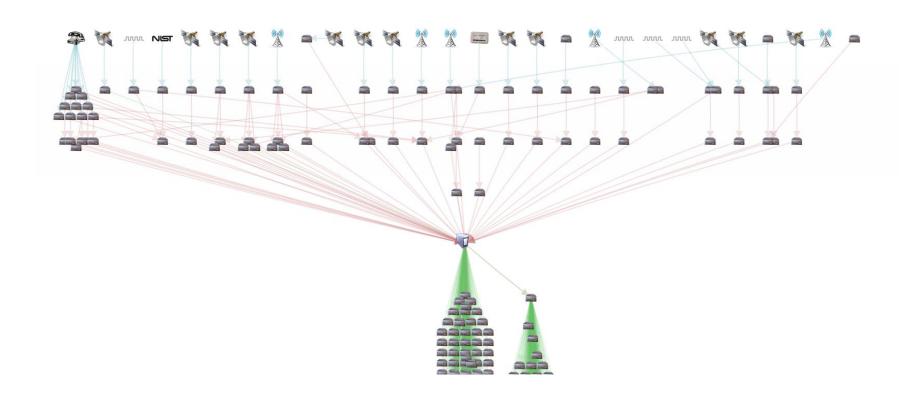
PTP is better in some specialized situations and for deep sub-microsecond accuracy.



TimeKeeper checking two PTP sources against a GPS device: Orange PTP source is within 80 nanoseconds, blue is within 200 nanoseconds.



TimeKeeper can manage both NTP and PTP sources and clients for optimized time quality and cost.





Objective is to maximize accuracy of clocks in application servers and not get caught up in marketing spin



UTC time is UTC time, whether on terrestrial feed or GPS, whether encoded in NTP or PTP packets.

Challenges of delivering time over enterprise networks are solved by engineering, not standards or marketing

Key is clock accuracy for application programs, not at point of entry or in data center.





Contact info

FSMLabs, Inc. 11701 Bee Caves Road, Suite 200 Austin, TX 78738 USA sales@fsmlabs.com

Telephone: 1-512-263-5530



