PTP Enterprise Profile

Doug Arnold & Heiko Gerstung Meinberg Radio Clocks

TICTOC Working Group IETF 91 Honolulu, Nov 2014

Enterprise Profile TICTOC, IETF 91

Purpose

- PTP Profile for Enterprise IT Networks
 - Driven by Financial Industry for HFT
 - Register time of events
 - Timestamp event data for playback in algorithm
 development
 - Measure network and algorithm latencies
- Existing PTP Profiles and those under development are tailored toward specialized applications distinct from enterprise networks

Current Status

- draft-ietf-tictoc-ptp-enterprise-profile-04
- Changes since version 03
 - A number of editorial issues identified by Laurent Montini, addresses. Posted to tictoc reflector.
 - More have been submitted.
 - Expanded description of the use of multiple domains to support multiple simultaneous masters has been added.
 - Note: Domains to support multi-master operation has also been proposed in the IEEE 1588 Working Group

Multiple Domains

- Preferred Master clocks SHOULD move to another domain if they are not the best master
- BCs and syntonizing TCs SHOULD support multiple domains
 - Maintain separate servo loops and spanning trees for each
- Slave clocks SHOULD operate multiple independent OCs
 - Each in a different domain
 - Time ensembling, voting, etc. outside of PTP

Master Domain Selection

For each configured domain If I am the best clock While still the best clock Stay in this domain End while End if End for

Multi-Domain Slave Clock



Thank you for your attention

- Please review document and post comments on the reflector
- Authors
 - Doug Arnold: doug.Arnold@meinberg-usa.com
 - Heiko Gerstung: heiko.gerstung@meinberg.de