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Enterprise Profile for Precision Time Protocol

ITSF 102 - Montreal

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- Question on the logMessagePeriod in the enterprise profile delay response header
- Add unicast discovery and unicast negotiation to the section on "Forbidden PTP Options"
- Additions to security considerations:
 - General security considerations of time protocols are discussed in [RFC7384]". (and add to reference section)
 - Mention that PTP management is not secure and is not recommended
- Editorial nits

PTP Enterprise profile at the ISPCS Plugfest



Tested at the last three ISPCS Plugfest events

ISPCS 2015 Beijing
ISPCS 2016 Stockholm
ISPCS 2017 Monterey

- HW and SW implementations tested
- Commercially available solutions
- Up to nine participating organizations
- Multidomain
- IPv4 and IPv6





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Thank you for you attention.

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Intended for enterprise networks, especially in financial companies

Main PTP features:

- Mixed multicast/unicast operation

- Multi domain operation for grandmaster redundancy

Proposed by Pedro Estrella of IMC Trading

Challenges Deploying PTPv2 in a Global Financial Company, Pedro V Estrella and Jan L Bonebakker, ISPCS San Francisco, 2012

Draft RFC in IETF

tictoc Working Group

Enterprise Profile for Precision Time Protocol with Mixed Multicast and Unicast

Tested at ISPCS IEEE 1588 Plugfest

2014-2017

Layer 3

IPv4

IPv6

Delay Request-Response propagation delay measurement

BCs, TCs allowed but not required

Mixed multicast and unicast operation

Pure multicast slaves allowed

Delay Responses sent in same communication mode as Delay Request

Native management allowed, but unicast when directed at one PTP instance

Message rates

Default Sync rate (Follow Up): 1/sec

Default Delay Request rate (Delay Response): 1/sec

Default Announce rate: 1/sec

Minimum message rate: 1/128 sec

Maximum message rate: 128/sec

Multi-domain operation

Network elements may include PTP instances in multiple domains for redundancy

No performance criteria defined