Support of IEEE-1588 time stamp format in TWAMP

draft-mirsky-ippm-time-format-01

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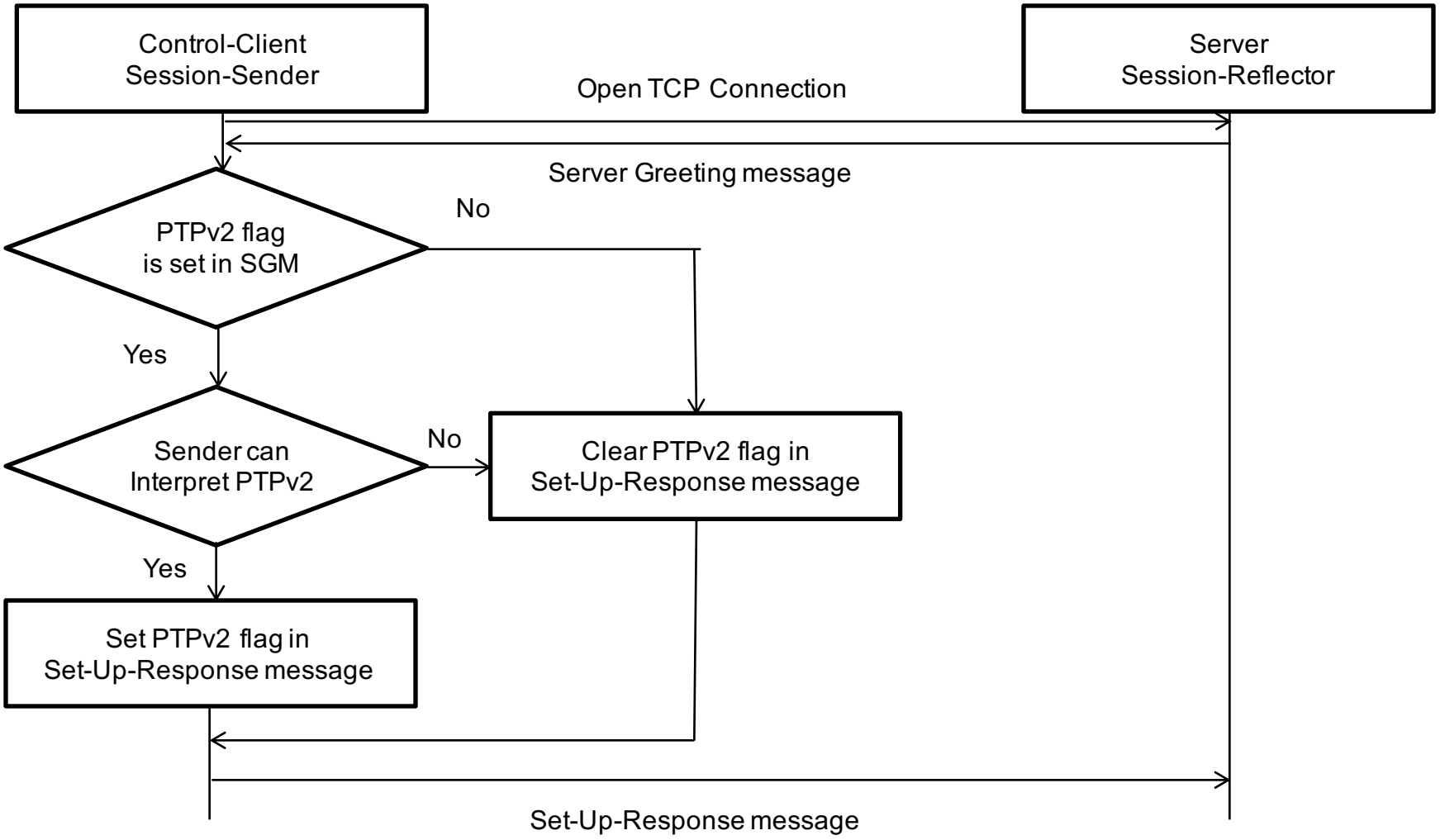
Problem Statement

- OWAMP and TWAMP allow only use of 64 bit-long NTP time stamp format
- IEEE-1588v2 has gained wide support and now is supported by many fast forwarding engines
- Provide ability to use other than NTP time stamp format in backward compatible manner
- This proposal defines OWAMP and TWAMP extensions to enable use of 1588v2 truncated format (64 bit-long)

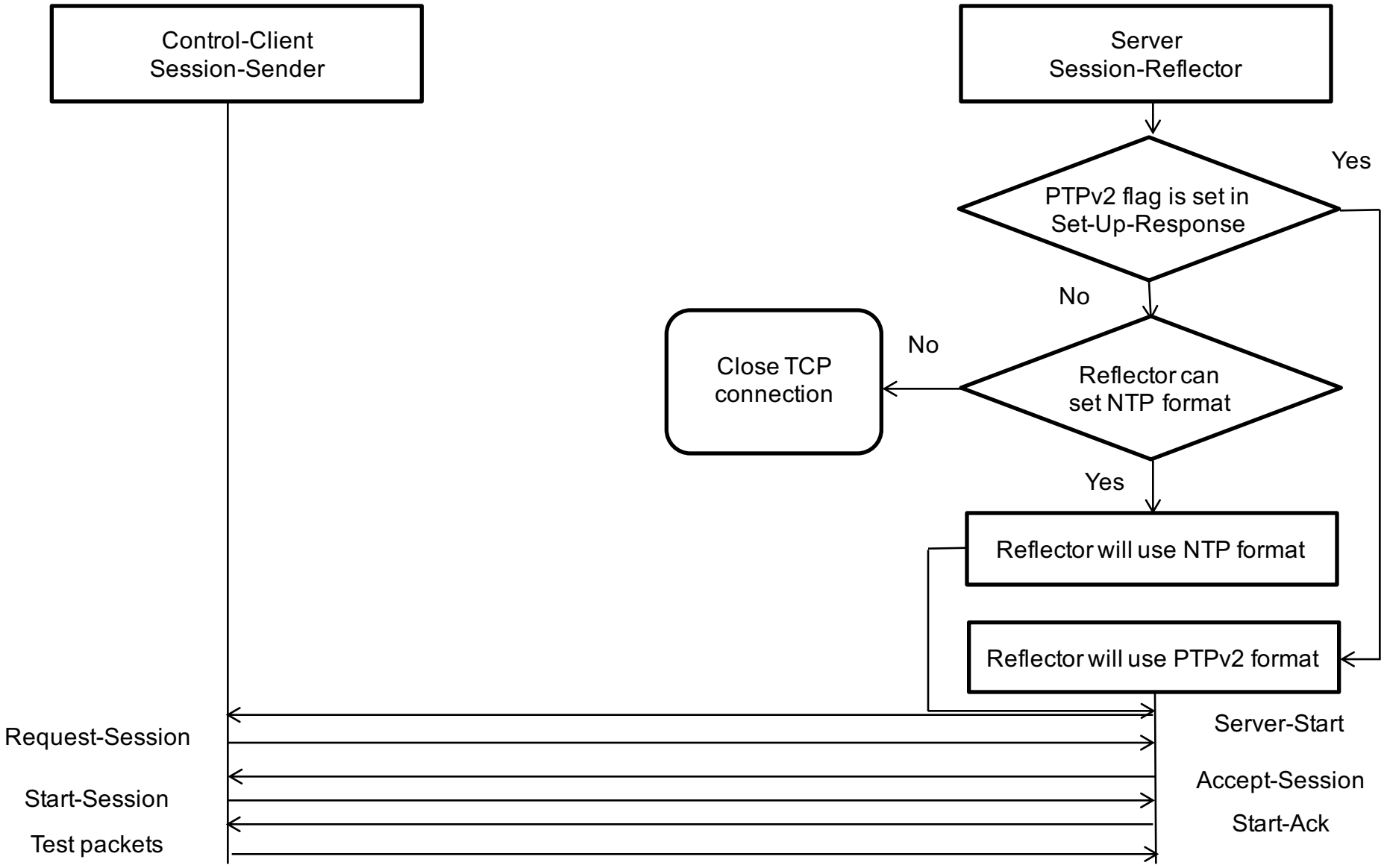
Updates to Control Protocols

- Use Modes field to advertise and negotiate time stamp format between Server and Control-Client
- Define ONE new flags:
  - PTP Timestamp Capability
- MUST be capable to INTERPRET NTP and PTPv2 time stamp formats
- Timestamp Capability advertisement and negotiation procedures for OWAMP and TWAMP Control protocols defined:
  - Open TCP Connection
  - Server Greeting Message
  - Set-Up-Response

TWAMP Use Case



TWAMP Use Case (cont.)



Update to Test Protocols

- Use Z field in Error Estimate to indicate time stamp format used by the network element:
  - 0 – NTP 64 bit-long format
  - 1 – 1588v2 truncated 64 bit-long format

TWAMP Light Consideration

- Session-Sender and Session-Reflector MAY be informed, e.g. through configuration, of time stamp format to be used, according to their capabilities and rules used to negotiate time stamp format between Server and Control-Client

Next steps

- Welcome comments from the WG
- Asking WG to consider draft adoption