Mtrace Version 2:
Traceroute Facility for IP Multicast
draft-ietf-mboned-mtrace-v2-17

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Changes (from 15 to 16)

- Revised the introduction to clarify the criteria for directing the mtrace v2 query to either a last hop router or a rendezvous point.
- Scanned for and corrected deviations from conventions (e.g. capitalization of “MUST” and “SHOULD” keywords), description of field ranges, etc.
- Broadened the description of circumstances in which a reply may be sent before the mtrace reaches the FHR
  - Clarified the considerable errors.
- Expanded on the criteria described in section 3 (Packet Formats) for validating TLVs within the message and for handling invalid TLVs.
Changes (from 15 to 16) – cont’d

• Corrected the minimum length requirement in section 3.
• In the “forwarding code” item in section 3, added an explicit definition of the reserved error code range.
• Section 4.2: Defined the term “outgoing interface” before using it in the subsequent paragraphs.
• Corrected/clarified the steps specified for section 4.2.2 “Request Normal Processing”; These changes included clarification of the handling for the “ADMIN_PROHIB” forwarding code.
Changes (from 15 to 16) – cont’d

• Section 4.5: Corrected the description for the “number of hops” field adjustment made when proxying an mtrace v2 query
  – “decreases # Hops by ((number of the Standard Response Blocks that were just returned in a Reply) - 1). The "-1" in this expression accounts for the additional Standard Response Block appended by the gateway router.”

• Added more specific details and wording corrections to the descriptions of the mtrace2 forwarding codes registry and TLV types registry in section 8.1 and 8.2.
Change (from 16 to 17)

- Formula converting from a UNIX timeval to a 32-bit NTP timestamp for Query arrival time (because POSIX.1-2008 recommends clock_gettime())

```c
query_arrival_time
= (((tv.tv_sec + 32384) << 16)
  + ((tv.tv_nsec << 7) / 1953125)

struct timespec {
    time_t tv_sec;   /* seconds */
    long tv_nsec;    /* nano seconds */
};
```
Next Step

• 2nd WGLC