Mtrace Version 2: Traceroute Facility for IP Multicast

draft-ietf-mboned-mtrace-v2-17

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Change

- Formula converting from a UNIX timeval to a 32-bit NTP timestamp for Query arrival time

- Query arrival time
  - 32-bit NTP timestamp specifying the arrival time of the Mtrace2 Query or Request packet
  - Middle 32 bits of the full 64-bit form
  - The low 16 bits of the integer part and the high 16 bits of the fractional part
Old Formula

query_arrival_time
= (tv.tv_sec + 32384) << 16
  + ((tv.tv_usec << 10) / 15625)

struct timeval {
    time_t tv_sec;        /* seconds */
    suseconds_t tv_usec;   /* micro seconds */
};

- POSIX.1-2008 marks gettimeofday() as obsolete
New Formula

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 */
};

• POSIX.1-2008 recommends clock_gettime()
Next Step

• WGLC (really)