NTP Standardization Issues

Network Time Protocol BoF
61st IETF, Washington D.C., November 11, 2004

Dave Plonka <plonka@doit.wisc.edu>
University of Wisconsin - Madison
NTP Standardization Issues

- Operations
  - Public Service Identifiers
  - Access Control
- Client Implementation
  - Embedded SNTP Clients
- Server Implementation
  - Current specification is insufficient
- Organizing a new NTP standard
NTP Standardization Issues

- Operations: Public Service Identifiers
  - Public directories are duplicated by vendors, sans acceptable use policy
    - e.g. Microsoft support documents
  - IP addresses of NTP servers from the public directories are being embedded in firmware
    - Being addressed by draft-grow-embed-addr in the Global Routing Operations WG
NTP Standardization Issues

● Operations: Access Control
  - It is difficult to protect public NTP servers from abuse
    ● NTP needs the threats/security assessment that would be required as part of the standardization process today
NTP Standardization Issues

• Client Implementation: Embedded SNTP Clients
  – Large pool of homogenous clients rapidly deployed in low-cost residential routers
    • Minimal ability to correct problems when they occur
NTP Standardization Issues

- Server Implementation: Current specification is insufficient
  - “Network Time Protocol (Version 3) Specification, Implementation” (RFC 1305) is half research paper, half RFC. It is a 120 page document combining algorithm details and the on-the-wire packet layout.
  - AFAIK, there is really only one NTP server-side implementation today, which does not meet the goals of the RFC2026-defined standardization process.
NTP Standardization Issues

• Organizing a new NTP standard
  - The Internet Standards Process (RFC2026) suggests a good structure
    • Technical Specification
      - Consider splitting it into protocol (on the wire) and algorithm documents
    • Applicability Statement / Requirements
      - document(s) could cover operational, deployment, and some robustness issues and performance requirements
NTP Standardization Issues

• Organizing a new NTP standard
  – Staffing ideas:
    • Candidate draft editor(s) willing to use IETF process and document structure
    • Invite NTP community to perform expert document review, in addition to any other level of participation in a proposed Working Group