Privacy considerations for IP broadcast and multicast protocol designers

draft-winfaa-intarea-broadcast-consider-02

Rolf Winter (rolf.winter@hs-augsburg.de)

Michael Faath

Fabian Weisshaar

Origin of this work

- Experiment on a campus network with 5000+ users
  - Recording of multicast and broadcast messages
  - Anomymization of PII-relevant data
- Same experiment was conducted on selected SSIDs during the Yokohama meeting during a 24h period

Privacy Problems

- Host naming (hostnames often contain PII)
  - https://tools.ietf.org/html/draft-ietf-intarea-hostname-practice-03
- Usage of persistent IDs
- Protocol behavior
  - E.g. frequent broadcasts
- Potential data correlation
- No configurability (as part of the app)

Problem: proprietary protocols

- IETF-specified protocols receive attention
  - WG and directorate reviews
  - Privacy documents
    - draft-huitema-dnssd-privacy-00
    - RFC 7819
    - ...
  - Operational support
    - E.g DHCP snooping
    - ...
- Proprietary protocols receive none of this

Protocol design guidance...

- ... to avoid privacy problems observed in operational networks
  - E.g. reveal identity and social graph of users
- ... to avoid impact on ongoing work in the IETF and elsewhere
  - E.g. IP address or MAC address randomization
- ... To help build better protocols

Next steps