Multicast over SPRING @hackathon

Relevant specifications:

Project Champions:
- Jake Holland
- John Brzozowski
AMT+mcproxy Implementation Update

Plusses:
• IPv6 support added (gateway and relay)
• Gateway+mcproxy on openwrt
• several bugs fixed

Minuses:
• broke bsd build, if it worked before

https://github.com/GrumpyOldTroll/amt
https://github.com/GrumpyOldTroll/amt-openwrt
https://github.com/GrumpyOldTroll/mcproxy
https://github.com/GrumpyOldTroll/mcproxy-openwrt
Hackathon

Requirement:
• native multicast over CMTS without PIM upstream
  • insert reasons from John here

Solution:
• dump data packets from relay raw with a shim (instead of forwarding AMT-encapsulated)
  • IP lookup for configured SRH shim
  • send once per SRH (shared across gateways)
Topology

- John's
- Jake's
- Main hacking target
  - Linux host
  - Lives in John's network
  - Forwards traffic

Home
- Receiver
  - Native joins
- Home router
  - Fwd native + AMT gw control
- Cable modem
- AMT relay control+ SRH shim on data

ISP
- CMTS
  - Unpacks native multicast
- Router
  - Forwards with segment routing header
- Gateway
  - AMT gw

Sender
- AMT relay

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AMT project: useful next steps

• Conformance test suite (packetdrill, fuzzing)
• Gateway source-filtering (+ permit multiple gw instances)
• pimd support (report from /proc/net/mcfilter[6] or ioctl)
• Automated CI
• High-performance forwarding path
• Package for distros
• Deployable containers

Progress as time permits
Volunteers very welcome ^w