DRIAD Update

draft-ietf-mboned-driad-amt-discovery

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Proof of Concept

• Minor refinements
• Still running since November, reasonably stable
• Still pretty hacky (watching ‘tcpdump -v pim’)
• frr/pimd crash patch, upstreaming in progress

https://github.com/GrumpyOldTroll/multicast-ingest-platform
Draft Cleaned Up

• IANA number assigned
  • RRTYPE = 260

• Review comments, TBDs addressed
Deployment Status

2 global reverse DNS zones rolled out:
  • IPv4 23.212.185.0/24
  • IPv6 2600:014e::/48

Example addresses:

$ dig -t TYPE260 \n   5.185.212.23.in-addr.arpa

$ dig -t TYPE260 \n   3.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.e.4.1.0.0.6.2.ip6.arpa
Hackathon 104

3. AMT
Join: S=23.212.185.5 G=232.1.1.1

2. DNS-DRIAD
Query: 5.185.212.23.in-addr.arpa RRType=AMTRELAY?
Response: AMTRELAY=198.51.100.4

border + AMT gateway (with DRIAD)

1. wired
IGMP

Home Router mcproxy, OpenWRT
AMT relay

0. WiFi
DNS-SD; discovery (mDNS)

VLC + AMT gateway

sender1=23.212.185.5 relay1=198.51.100.4

Internet

access

PIM

23.212.185.5

198.51.100.4
3. AMT

Join:
S=23.212.185.5
G=232.1.1.1

1. wired IGMP

Join:
S=23.212.185.5
G=232.1.1.1

2. DNS-DRIAD

Query:
5.185.212.23.in-addr.arpa
RTT=AMTRELAY?

Response:
AMTRELAY=198.51.100.4

0. DNS-SD discovery

VLC + AMT gateway

PIM

border + AMT gateway (with DRIAD)

Internet

ATM relay

access

Home Router mcproxy, OpenWRT

sender1=23.212.185.5
relay1=198.51.100.4
Draft Update (pending)

3. AMT
Join:
S=23.212.185.5
G=232.1.1.1

2. DNS-DRIAD
Query:
5.185.212.23.in-addr.arpa
RRType=AMTRELAY?
Response:
AMTRELAY=198.51.100.4

0. DNS-SD Anycast discovery

Issue discovered @hackathon:
- DNS-SD iff ISP can provide DHCP search domain
- Which doesn’t happen in home routers
Solution: anycast IP for relay after DNS-SD, before DRIAD (instead of after DRIAD)
Next steps

- Fix anycast/DNS-SD ordering (section 2.4)

- Then wglc?