AMT / Multicast

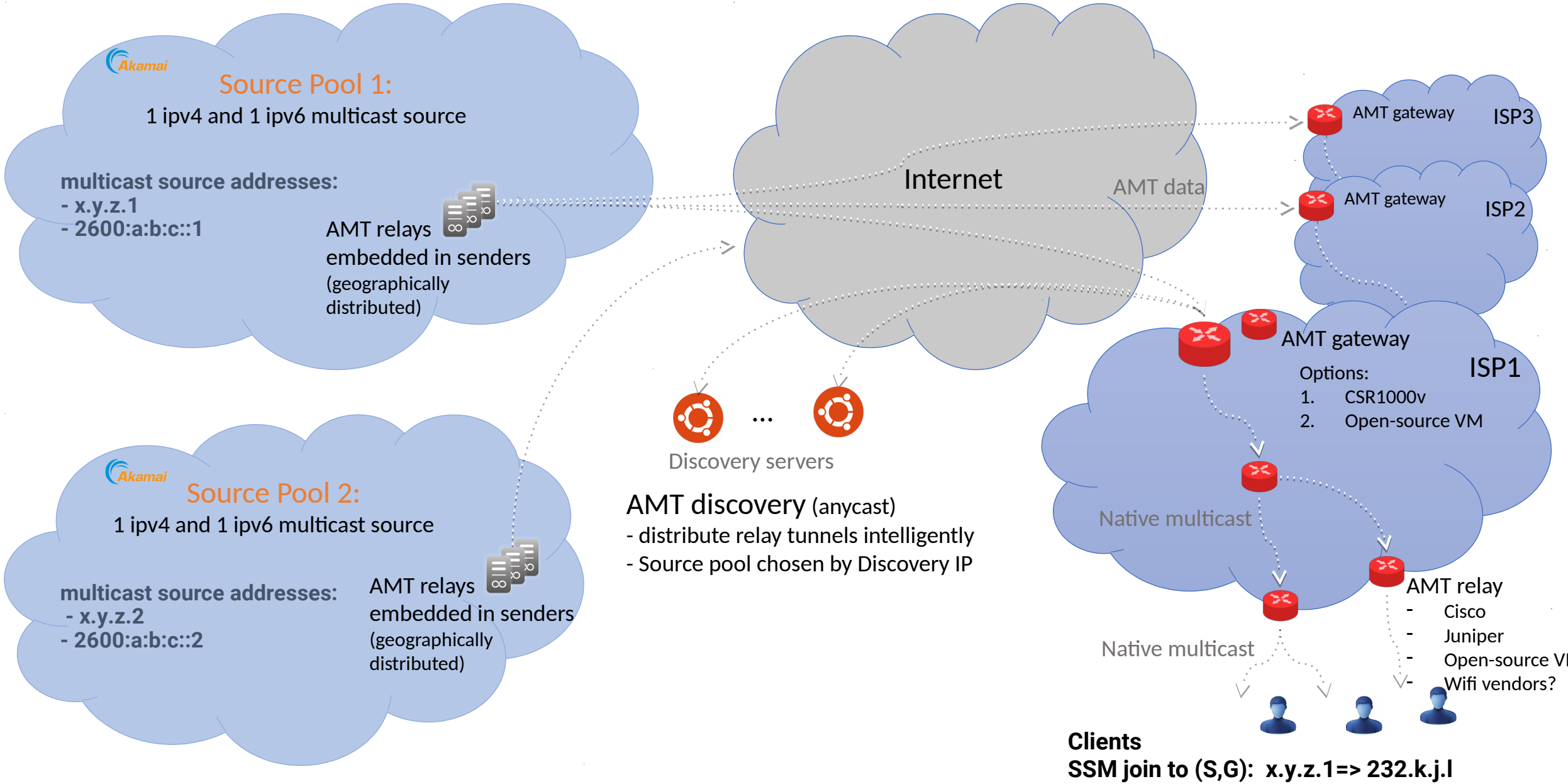
(RFC 7450, Automatic Multicast Tunneling)

Extending AMT’s reference implementation
toward deployment

https://github.com/GrumpyOldTroll/amt

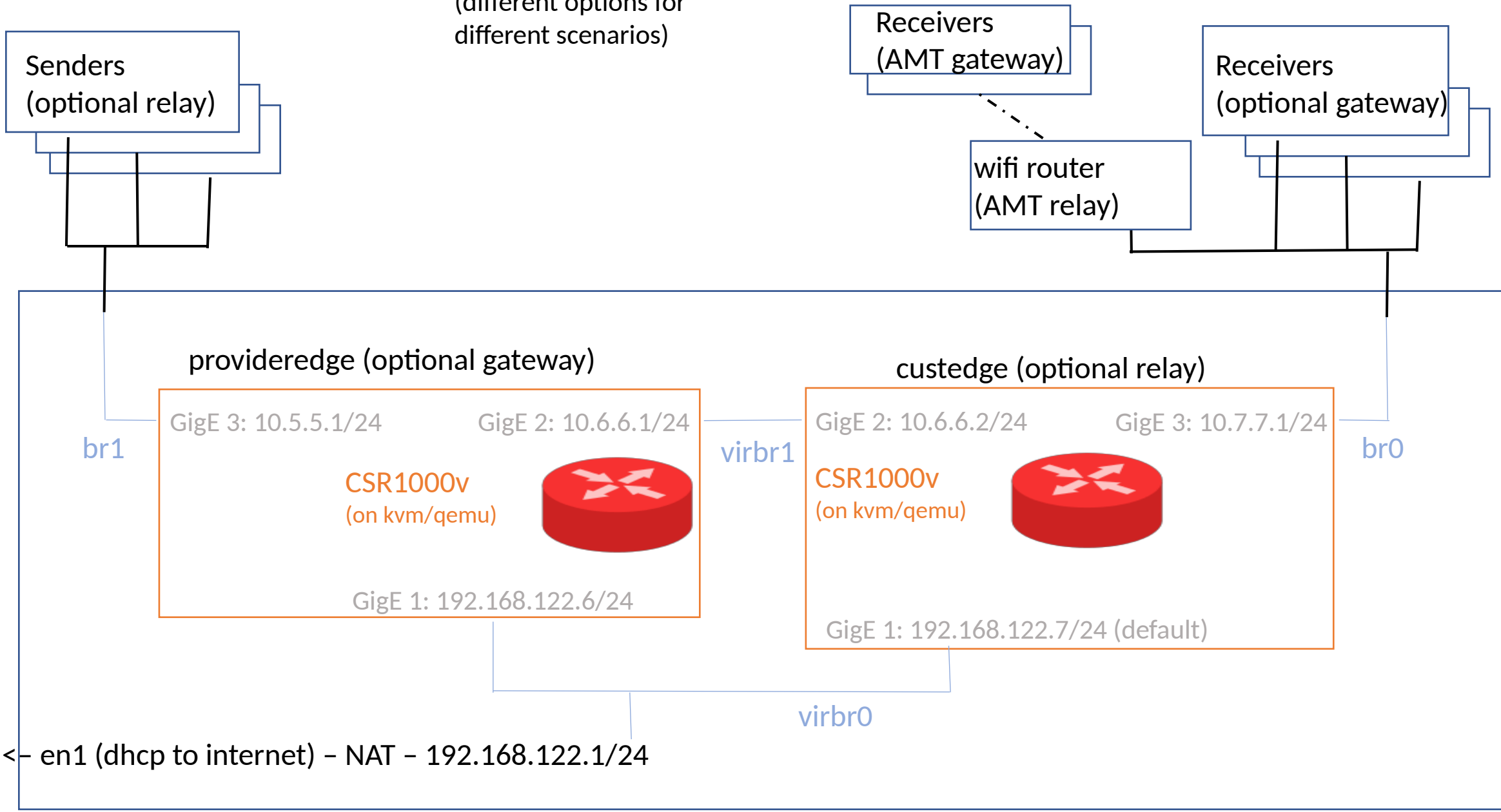
Jake Holland, Akamai

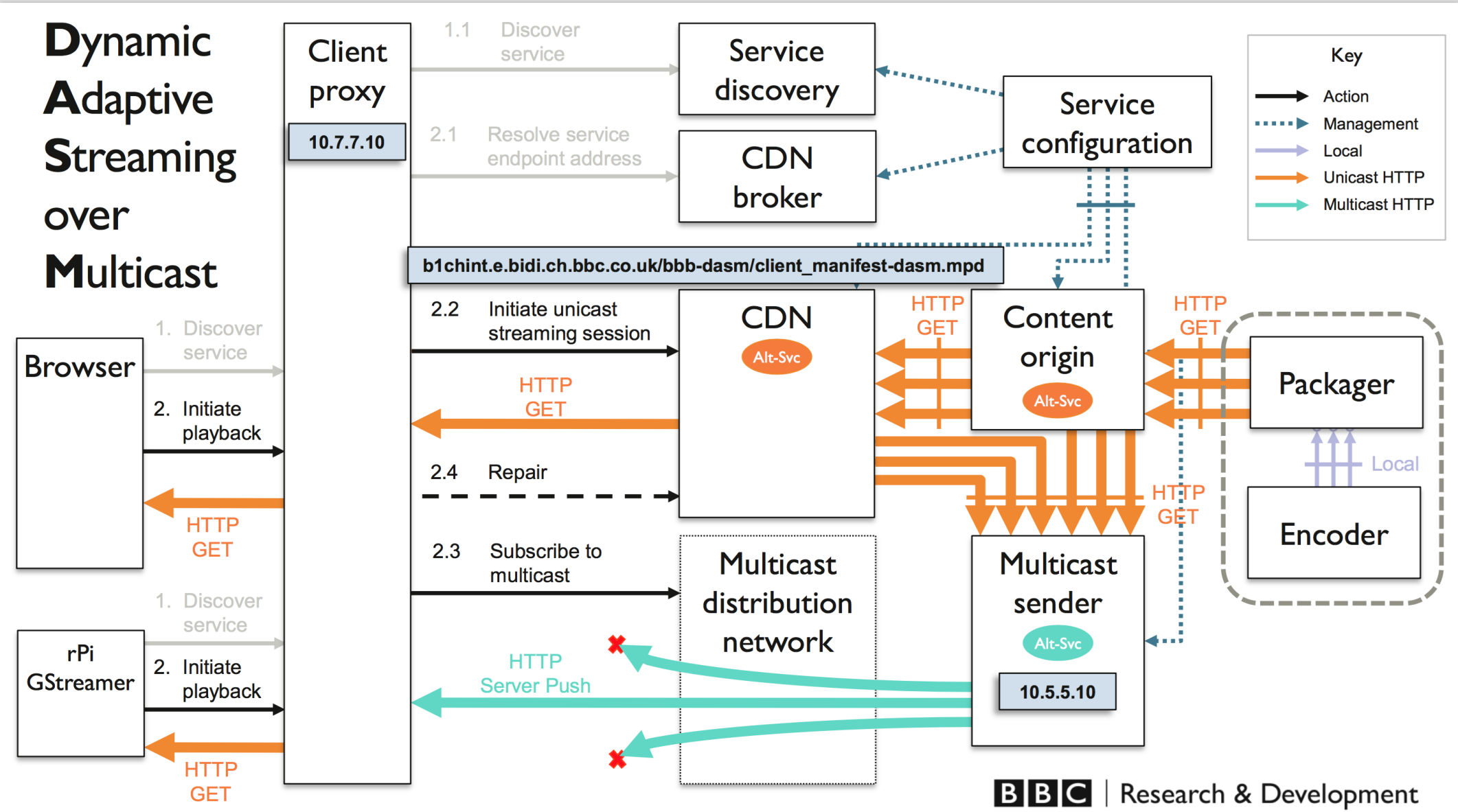
Planned Deployment Overview



Lab setup

(different options for different scenarios)




Dynamic Adaptive Streaming over Multicast
Client proxy
10.7.7.10
1.1 Discover service
2.1 Resolve service endpoint address
Service discovery
CDN broker
Service configuration
Key
Action
Management
Local
Unicast HTTP
Multicast HTTP
b1chint.e.bidi.ch.bbc.co.uk/bbb-dasm/client_manifest-dasm.mpd
2.2 Initiate unicast streaming session
HTTP GET
2.4 Repair
CDN
Alt-Svc
HTTP GET
Content origin
Alt-Svc
HTTP GET
Packager
Local
Encoder
HTTP GET
Browser
1. Discover service
2. Initiate playback
HTTP GET
2.3 Subscribe to multicast
Multicast distribution network
Multicast sender
Alt-Svc
10.5.5.10
HTTP Server Push
rPi GStreamer
1. Discover service
2. Initiate playback
HTTP GET
BBC | Research & Development

At the hackathon this weekend:

- Ported amtrelayd to OpenWRT
- Bugfixes, cleanup
- Testbed setup documented
- Experiments running video
  - native multicast
  - AMT-encapsulated

Acknowledgements

This weekend:

- Lucas Pardue, BBC
  - working on multicast video
- Codarren Velvindron, Orange (remotely contributing)
  - installing AMT on his home OpenWRT

Prior work:

- MBONED working group members
  - Previous work on initial AMT project
- Bill Atwood, Concordia University
  - Previous work on VLC integration, testing