

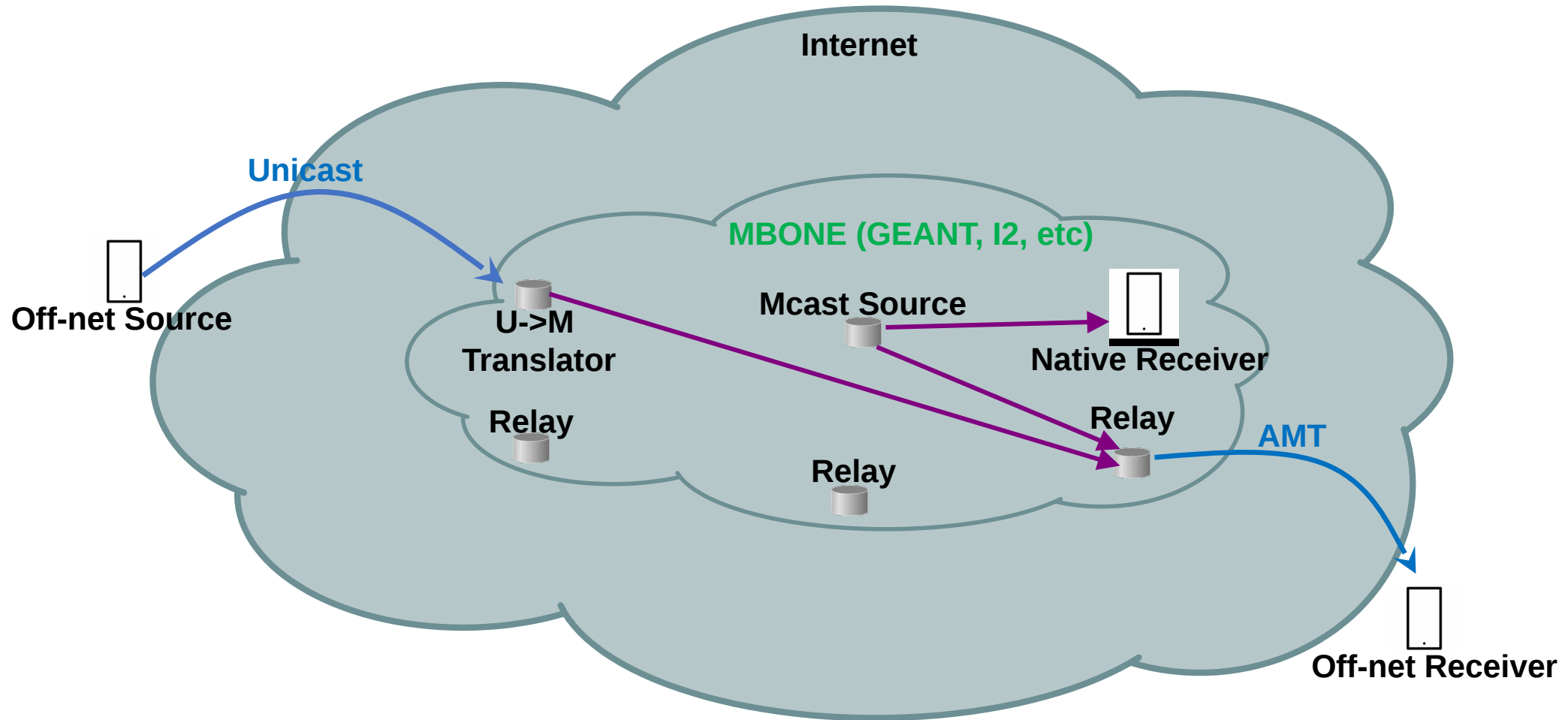
Off-Net Sourcing for Multicast Streams

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Why Off-Net Sourcing?

- Native sourcing from MBONE is available today (On-Net)
 - ... but most sources will be on unicast-only networks (Off-Net)
 - Off-Net receiving available today with AMT: see Multicast Menu @ <https://multicastmenu.herokuapp.com>
- Off-Net sourcing- users on unicast-only nets can stream to a “translator” on MBONE, which converts stream to multicast
 - Then accessible natively to on-net receivers and via AMT to off-net receivers
 - Demonstrated successful off-net sourcing with Juniper intern team in summer '21 with Unicast2Multicast Translator

MTTG Architecture: Putting it all together




Unicast2Multicast Translator

- Linux VM with python script deployed on MBONE that translates unicast streams to multicast
 - Rewrites source and destination address (random group address in 232/8)
 - Generates new entry on the Multicast Menu
- Developed by Janus Varmarken
 - In collaboration with Larry Un and Lanmingqi (Maki) Ma
 - Deployed at GWU by Andrew Gallo

Next Steps for Off-Net Sourcing

Requirements

- Get iPhone/Android camera to stream video to Unicast->Multicast Translator in the mCloud
-  Translator translates destination *and* source address of stream
 - Indexes stream for search
 - Optionally, records for lookback
- Receiver App on iOS/Android to search, subscribe and watch streams
 - Can use VLC initially

References

- Unicast2Multicast Translator
 - <https://github.com/JNPRAutomate/unicast2multicast-translator>
- Lauren's Multicast Menu
 - <https://multicastmenu.herokuapp.com>
 - Source code @ <https://github.com/Laur04/multicast-menu>
- Natalie/Wayne's VLC with AMT GW build (and usage notes)
 - <https://github.com/Juniper/amt-vlc>
- William's AMT Relay Deployment docs
 - <https://github.com/willzhang05/senior-research>
- MTTG Slack group- send email to lenny@juniper.net to join

