LISP-MN Demo

draft-ietf-lisp-mn-05

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What We Are Demoing

- LISP-MN on an iPhone
- RTRs deployed in GCP and AWS
- LISP-MN to LISP CN behind NATs
- LISP-MN to non-LISP CN behind NATs
- Interworking via LISP-NAT

Some Magic Sauce

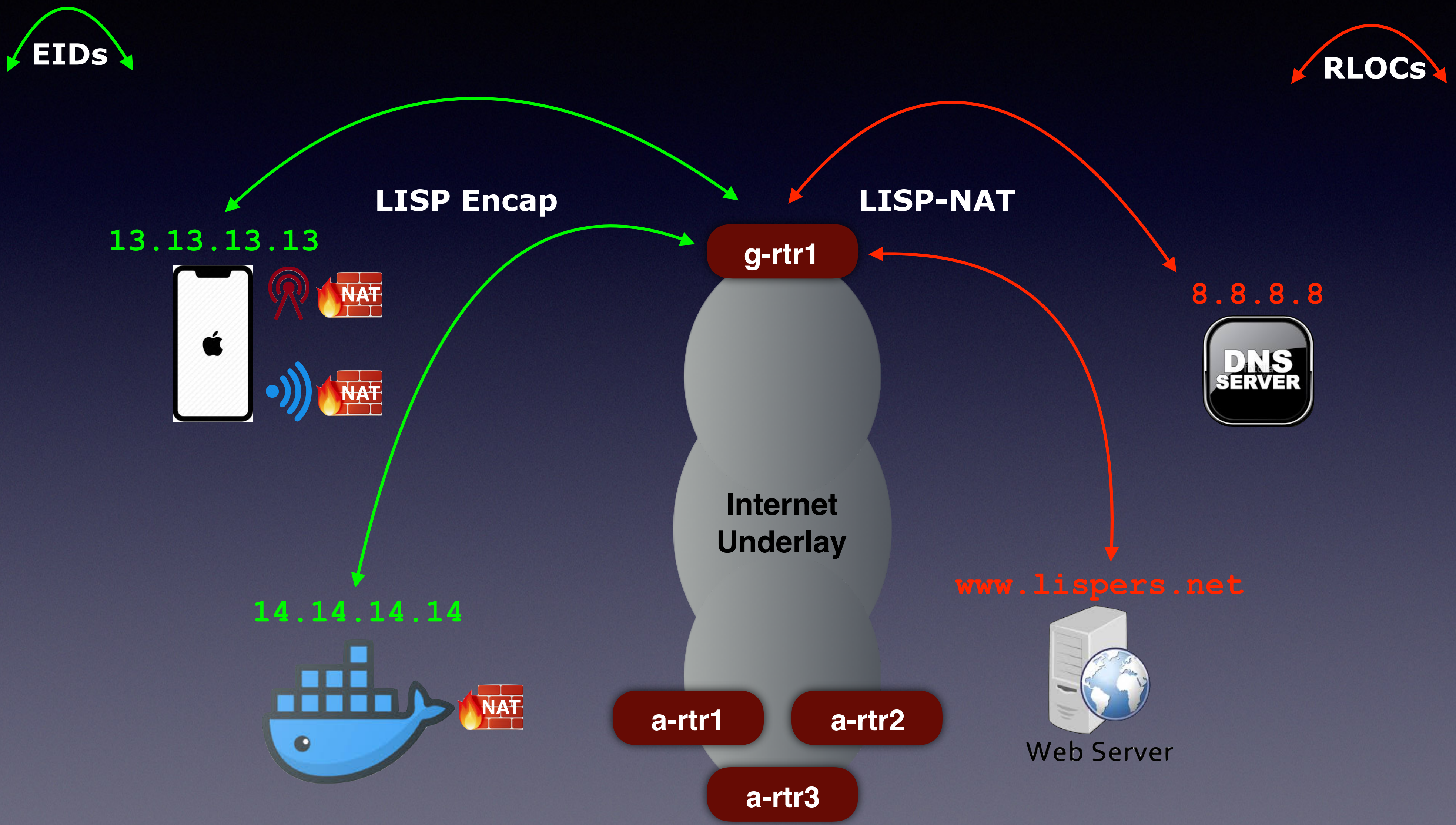
- LISP-MN **is not** running a control-plane
- LISP-MN map-cache configured with:

  `0.0.0.0/0` -> PETRs (RTRs)

- RTRs configured to glean xTR mappings
- NAT-traversal logic occurs in data-plane
- An effort to implement an even lighter weight xTR

  One that runs in a dash-cam perhaps

Demo Topology



EIDs

RLOCs

LISP Encap

LISP-NAT

13.13.13.13

NAT

NAT

g-rtr1

8.8.8.8

DNS SERVER

Internet Underlay

www.lispers.net

14.14.14.14

NAT

a-rtr1

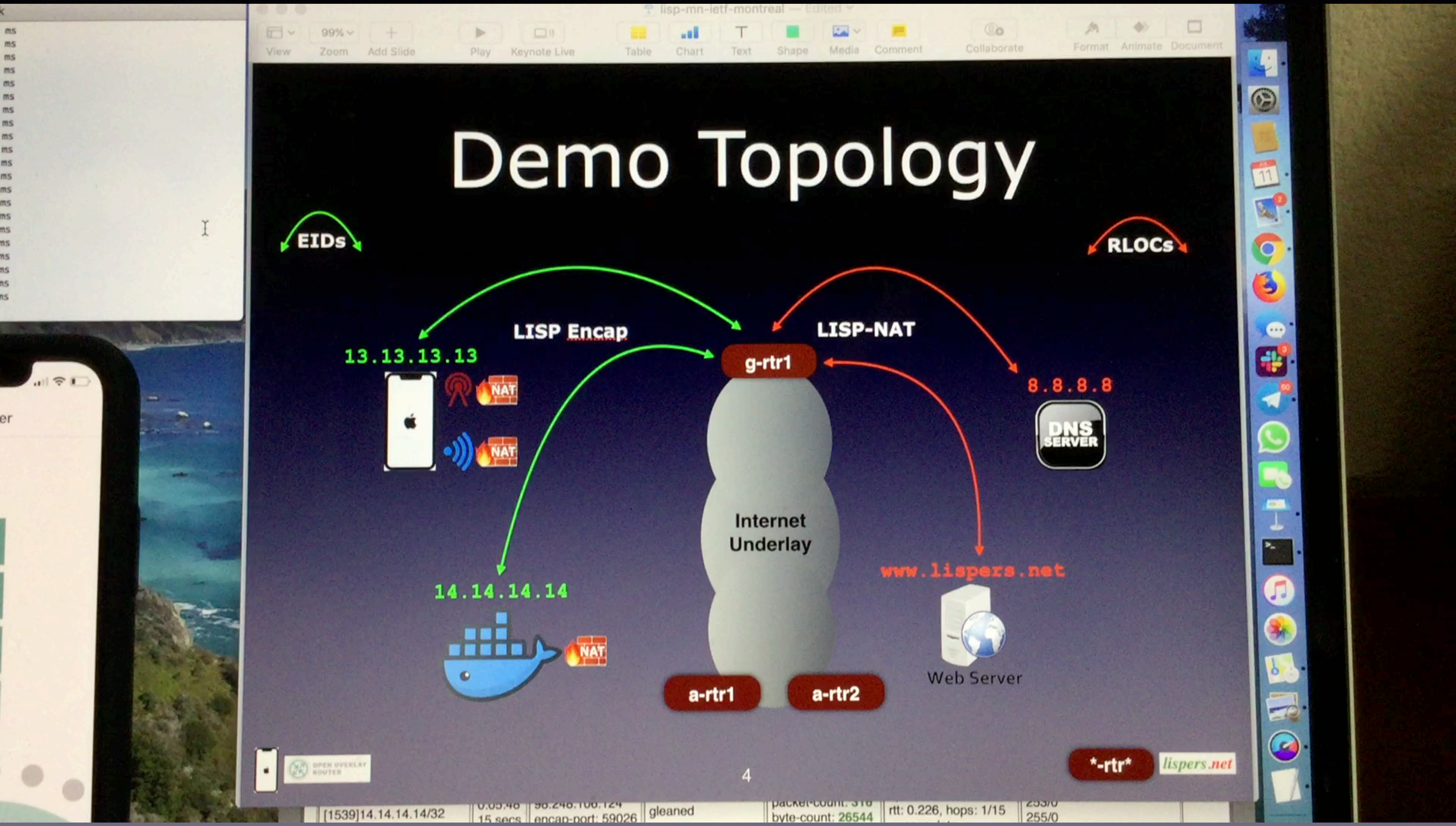
a-rtr2

a-rtr3

Web Server

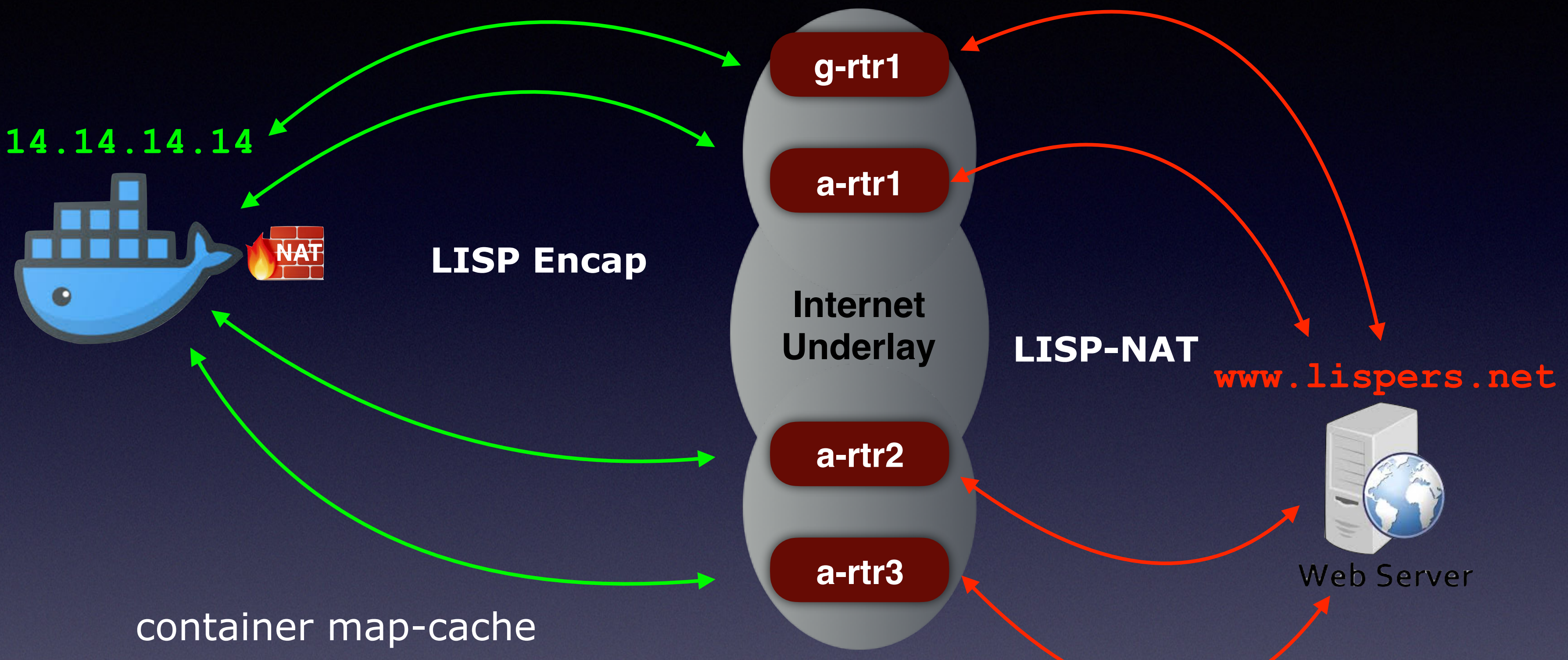
-rtr

Live Ping Demo

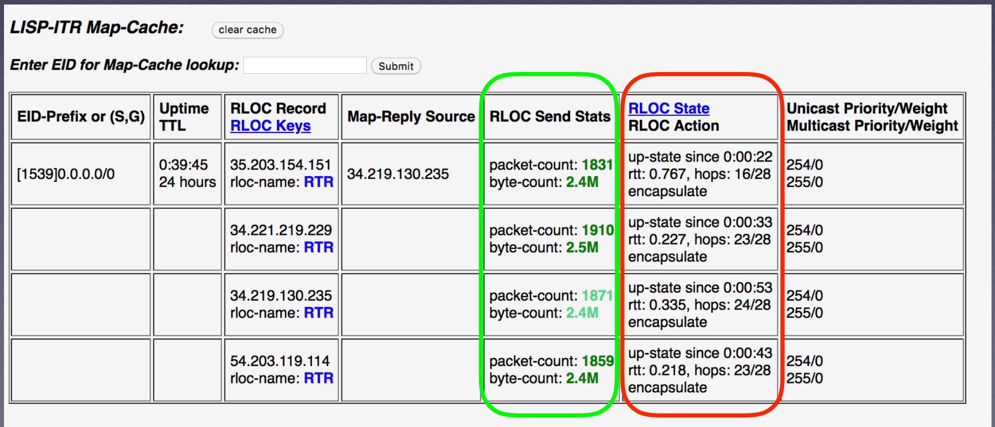


Demo Topology

Load-Splitting Pings



container map-cache



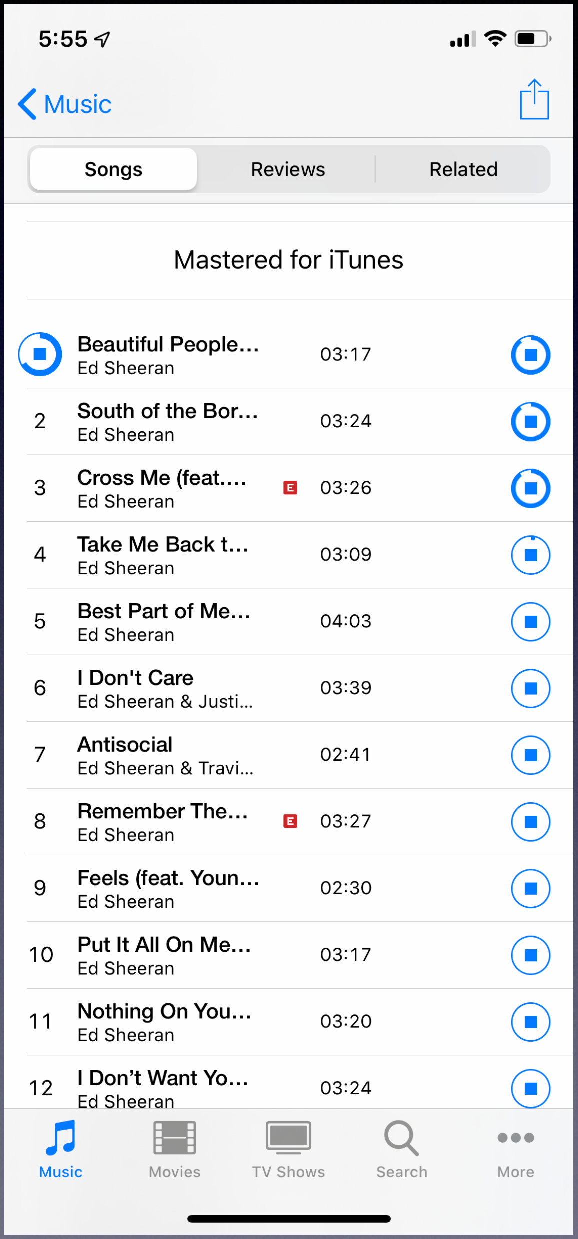
LISP-ITR Map-Cache: clear cache

Enter EID for Map-Cache lookup: Submit

EID-Prefix or (S,G)	Uptime TTL	RLOC Record RLOC Keys	Map-Reply Source	RLOC Send Stats	RLOC State RLOC Action	Unicast Priority/Weight Multicast Priority/Weight
[1539]0.0.0.0/0	0:39:45 24 hours	35.203.154.151 rloc-name: RTR	34.219.130.235	packet-count: 1831 byte-count: 2.4M	up-state since 0:00:22 rtt: 0.767, hops: 16/28 encapsulate	254/0 255/0
		34.221.219.229 rloc-name: RTR		packet-count: 1910 byte-count: 2.5M	up-state since 0:00:33 rtt: 0.227, hops: 23/28 encapsulate	254/0 255/0
		34.219.130.235 rloc-name: RTR		packet-count: 1871 byte-count: 2.4M	up-state since 0:00:53 rtt: 0.335, hops: 24/28 encapsulate	254/0 255/0
		54.203.119.114 rloc-name: RTR		packet-count: 1859 byte-count: 2.4M	up-state since 0:00:43 rtt: 0.218, hops: 23/28 encapsulate	254/0 255/0

Load-Split pings
use symmetric path

Audio Demo



Mastered for iTunes

	Beautiful People… Ed Sheeran		03:17
2	South of the Bor… Ed Sheeran		03:24
3	Cross Me (feat.… Ed Sheeran	E	03:26
4	Take Me Back t… Ed Sheeran		03:09
5	Best Part of Me… Ed Sheeran		04:03
6	I Don't Care Ed Sheeran & Justi…		03:39
7	Antisocial Ed Sheeran & Travi…		02:41
8	Remember The… Ed Sheeran	E	03:27
9	Feels (feat. Youn… Ed Sheeran		02:30
10	Put It All On Me… Ed Sheeran		03:17
11	Nothing On You… Ed Sheeran		03:20
12	I Don't Want Yo… Ed Sheeran		03:24

Streaming audio and downloading music while (driving) moving across:

xfinity wifi

peets wifi

AT&T LTE (5GE LOL)

AT&T 4G

No audible packet loss!

Caveats

- LISP-MN must send before it can receive
  - 2 LISP-MNs can talk to each other as long as they have talked to another LISP node or non-LISP node
- Latency exists to learn LISP-MN when it is discovered
  - But less than doing a mapping system lookup
- Asymmetry Problem:
  - If LISP-MN1 uses RTR1 and LISP-MN2 uses RTR2, they can’t find each other
  - Each must use same 5-tuple hash

Todo List

- Enable RLOC-probing for reachability
- Enable RLOC-probing for LISP-Crypto Key Exchange
- Enable multiple EID and multi IID support
- Multicast Support (can show at next IETF)

Questions/Reactions/Tomatoes?