LISP Predictive-RLOCs

Mobility with Near-Zero Packet Loss

draft-farinacci-lisp-predictive-rlocs-01

Dino Farinacci and Padma Pillay-Esnault

Mobility

ID/LOC separation solutions works well for session continuity across movement.

However, in flight packets need to be re-forwarded if we do not want to drop packets. Some ways to solve this problem

- rely on anchor points with re-forwarding
- change the destination

… depends on update on location was fast enough

Packets may be dropped or have high latency

But what if you know the future?

Is mobility really random?

It may look random but not really …

A train have a predefined destination...

Plane have flight plans ...

A bus will have a specific route …

Cellular towers and access points are at specific points ...

If all future locations known in advance, the source can send packets to all the locations

Tradeoff between bandwidth vs latency

In a nutshell

The locations are preregistered in the MS

EID-x RLOC: pathA

EID-y RLOC: pathA

pathA:

 RLE: RLOC-a, RLOC-b, RLOC-c

The source EID xTR replicates to all locations

The draft has several examples with other scenarios.

Next

- The implementation relies on use of RLE LCAFs for unicast map-cache
- Request comments/feedback from the wg

Backup Slides