SAVI in a LISP network
draft-ramanathan-lisp-savi-00

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Motivation

- The goal of the draft:

Document the use of SAVI procedures to provide source address protection for IP addresses (both IPv4 and IPv6) in LISP networks.

- SAVI: Source Address Validation (also know as source-guard)
  - IETF WG concluded with 6 RFCs and Standard proposal
  - Provides a very generic solution, applicable equally to IPv6 & IPv4, covering DHCP, SLAAC & Static addresses, Link-Locals & Globals

Brief introduction to SAVI

- SAVI entities validate IP addresses by tracking address assignments and *binding* the address to a specific *anchor (*MAC is the common one)
- Two main strategies for validating:
  - (1) Rely on DHCP assignment “authority” to allow Source address [RFC7513]
  - (2) First Come First Serve (ND, SLAAC, applicable to ARP) [RFC6620]
- SAVI scales by distributing the binding database across access switches
- SAVI keeps a *binding state* for each one of the address bindings. Validated bindings are considered active.

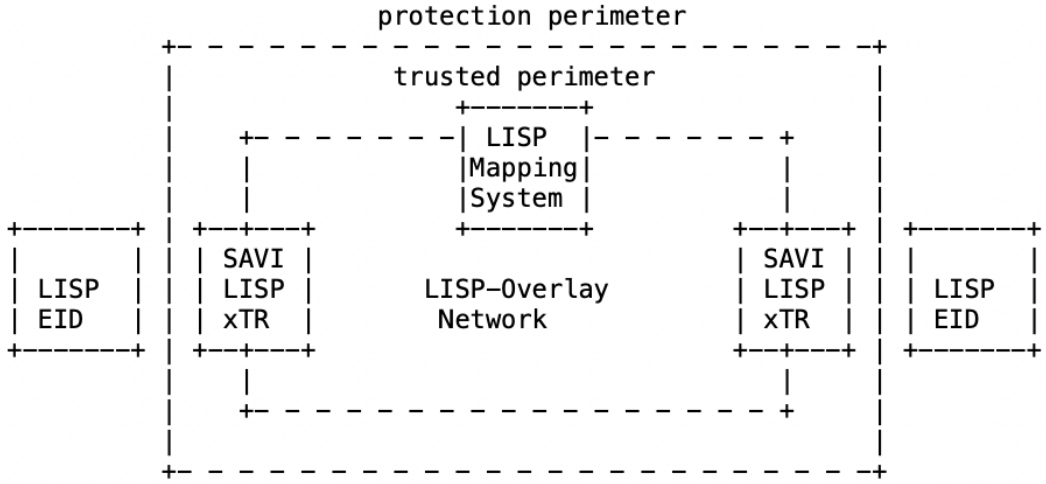
SAVI in a LISP Network

- SAVI can operate over a LISP network (supporting l2 extension as in [I-D.ietf-lisp-eid-mobility]) without modification.
  - It requires L2 replication/flooding
  - Moves may take long time using default SAVI timeout values

- Tighter integration with LISP may optimize resource usage and latencies
  - While still preserving integrity of source addresses

SAVI in a LISP Network

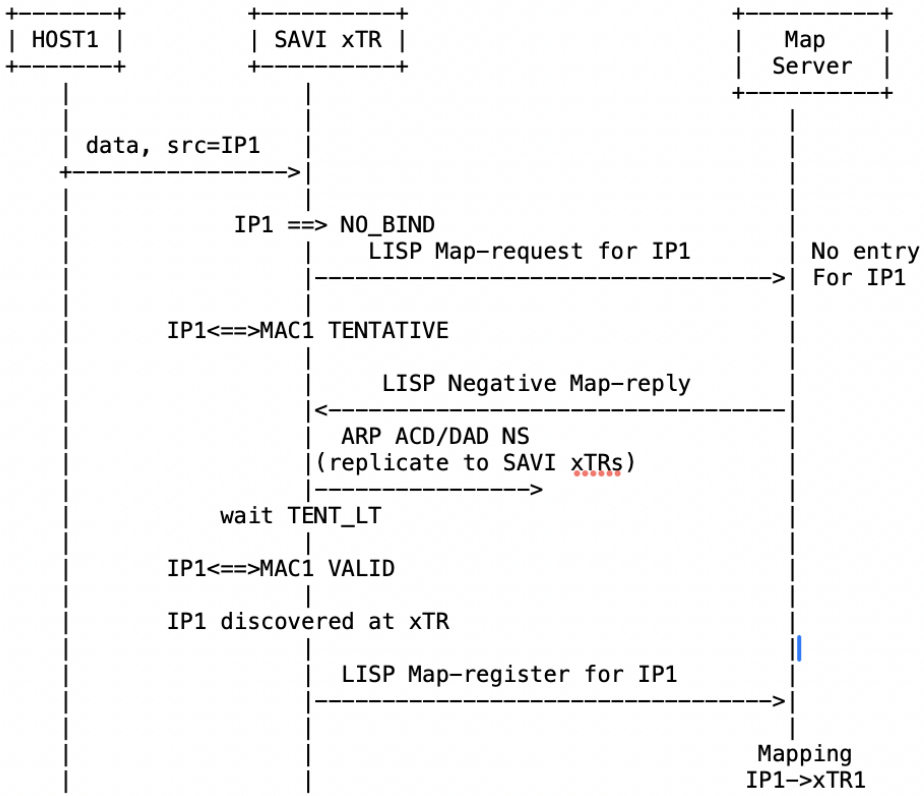
- SAVI perimeter established at LISP xTRs (SAVI xTR)



SAVI in a LISP Network

- EID onboarding as an example

- Inter-relation between
  - SAVI binding states
  - LISP interfaces (Map Resolution, Map Registration)



SAVI in a LISP Network

- The specification describes SAVI – LISP interaction to support
  - EID mobility
  - IP Theft prevention
  - Fast roaming

- Document focuses on FCFS SAVI, it can be extended to DHCP support too

Comments, Questions?

- Version 00 just uploaded
- Interest for the WG group?
- Has been in production for some time now