

# LISP Gap Analysis for NVO3

**<draft-maino-nvo3-lisp-cp-02>**

F. Maino, V. Ermagan (Cisco)

D. Farinacci

M. Smith (Insieme Networks)

March 2013

# NVO3 Status

- NVO3 problem statement, framework on last call
- Architectural document on the works

–Solution Categories:

### Data Encapsulation (NVE)

		IP-based	MPLS-based
Network Service	L2 (Ethernet)	Yes	Yes
	L3 (IP)	Yes	Yes

**LISP**

- WG is now looking for Gap Analysis
  - GA documents addressed in NVO3 WG
  - Solutions documents addressed in related WGs

# LISP Control Plane

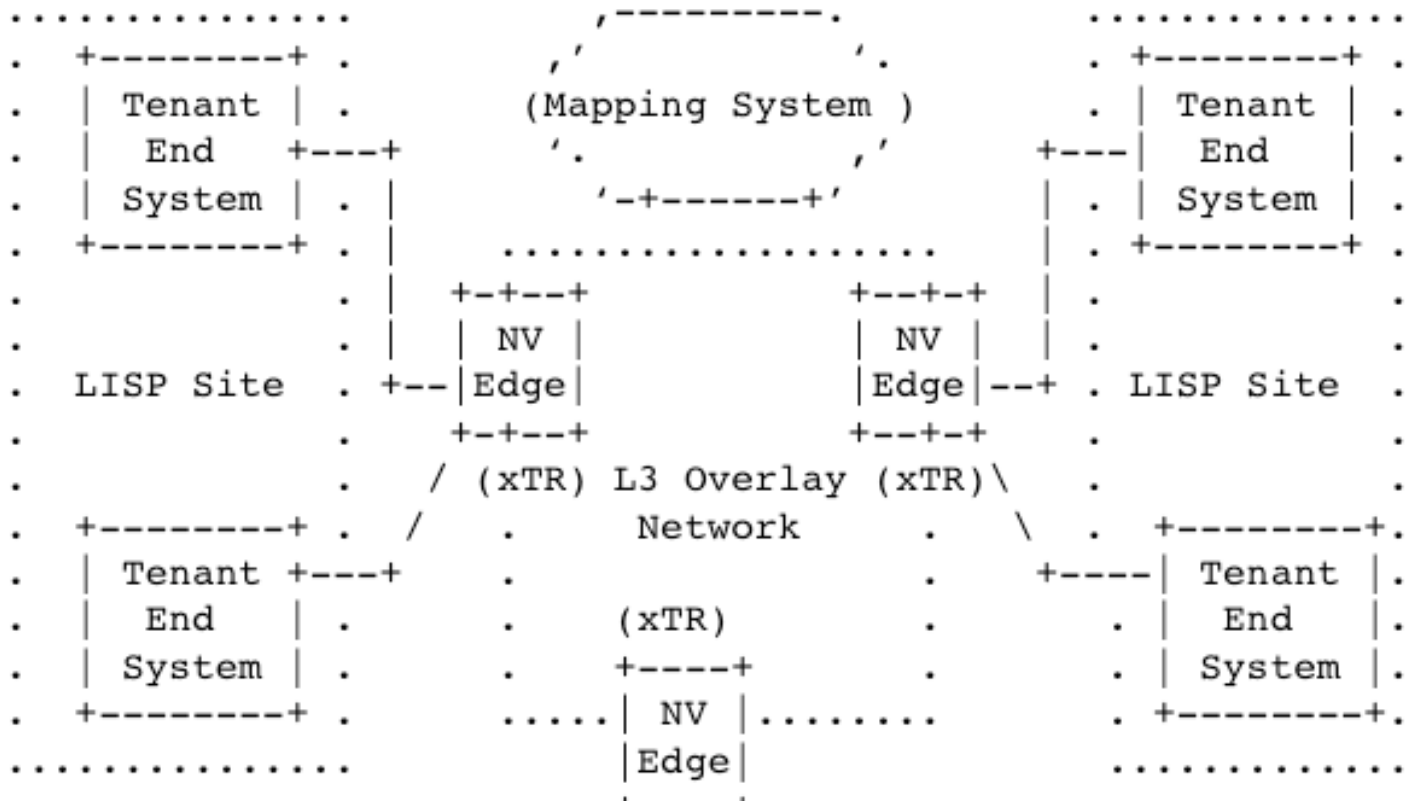
- Support multiple data path encapsulations:
  - L3 LISP (draft-ietf-lisp) } **L3 NVE Services**
  - L2 LISP (draft-smith-lisp-layer2)
  - VXLAN (draft-mahalingam-dutt-dcops-vxlan) } **L2 NVE Services**
  - NVGRE (draft-sridharan-virtualization-nvgre)
- Extensible via LISP Canonical Address Format (LCAF)
  - draft-ietf-lisp-lcaf
- Scalable and Modular Mapping System
  - DDT (hyerarchical)
  - ALT (BGP overlay)
  - DHT
  - Database, ...

# Benefits

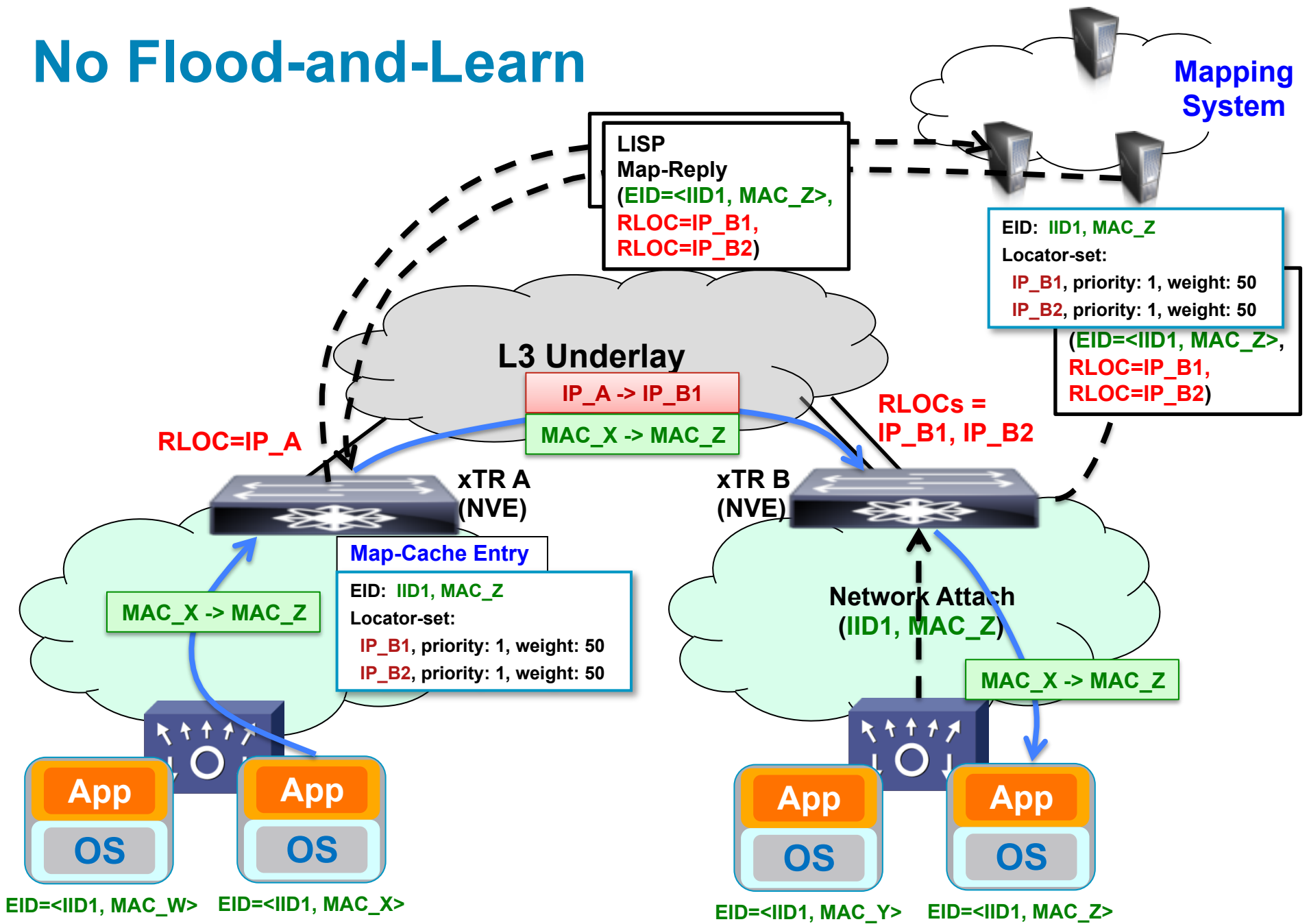
- Reduced use of Multicast
  - Replace “flood-and-learn” with unicast mapping system lookup
  - Contained ARP broadcast domain
  - Underlay multicast not needed for unicast overlay services
- Support multi homing
- Support fast mobility
- Support L2/L3 NVE services
- Address Family independent (IPv4/IPv6)

# Terminology

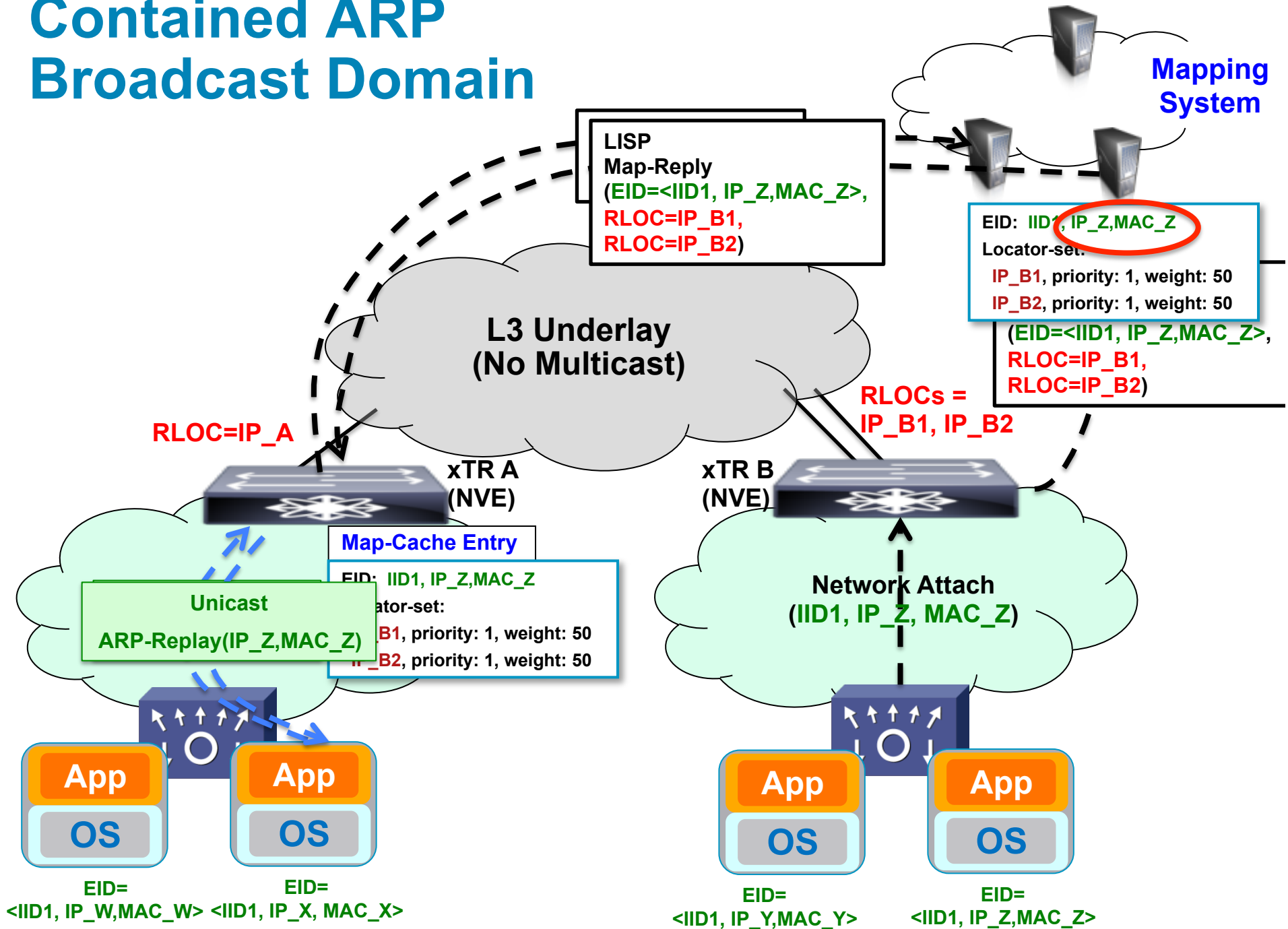
NVO3	LISP
NVE (Network Virtualization Edge)	xTR (Tunnel Router) Ingress Tunnel Router (ITR) Egress Tunnel Router (ETR)
VNID (Virtual Network ID)	IID (Instance ID)



# No Flood-and-Learn



# Contained ARP Broadcast Domain



**THANKS!**