

# A Data-Center Use-Case of

`draft-ietf-lisp-signal-free-multicast-00`

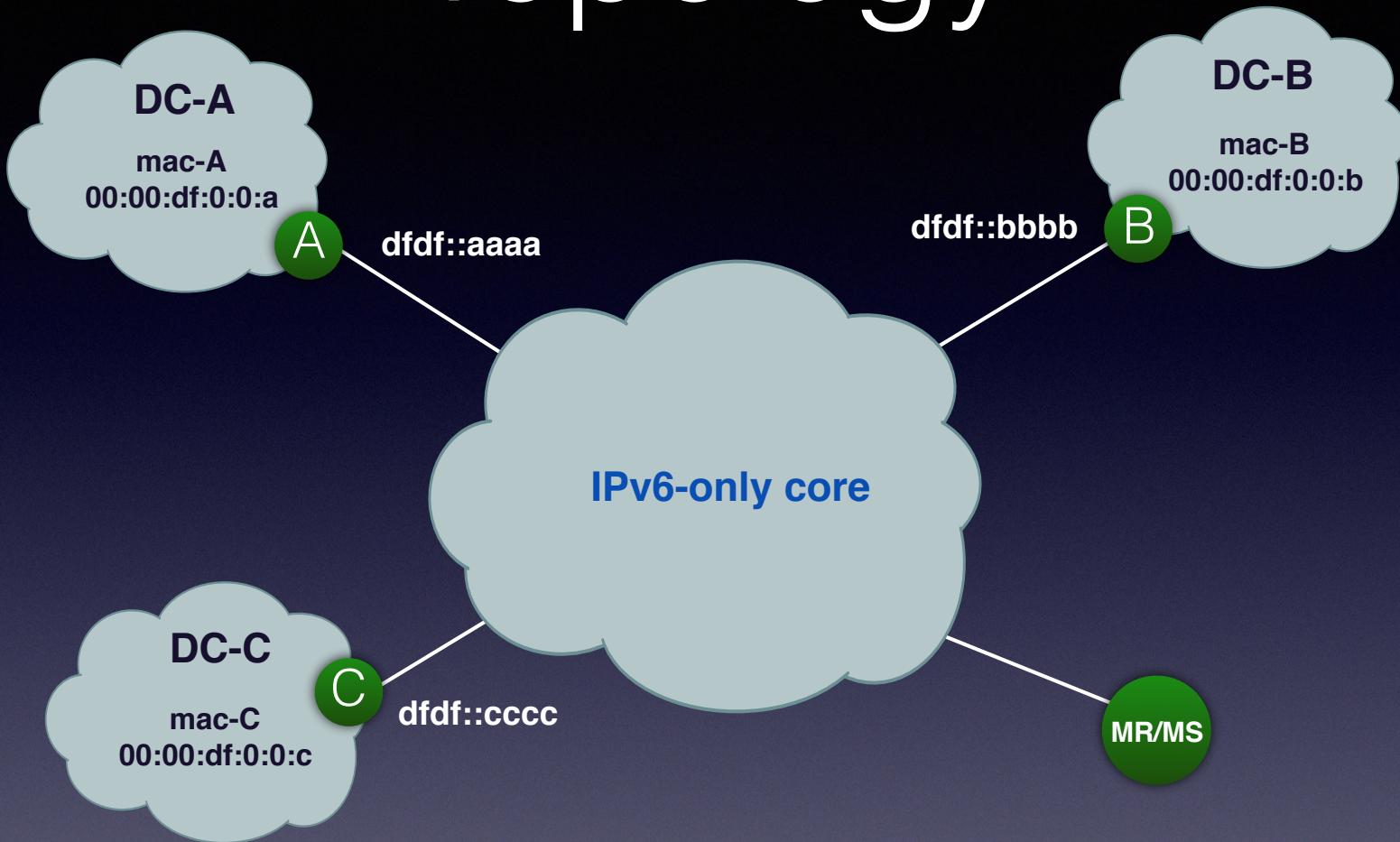
*LISP Working Group - Buenos Aires IETF  
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# Problem Statement

- Show how the LISP mapping database can store (S,G) multicast entries
- S and G are MAC addresses
- We are extending a layer-2 service
- Underlay is IPv6-only with no multicast support

# Topology



- (1) xTRs configured for L2-overlay for a specific instance-ID
- (2) xTRs (S,G) register (0000-0000-0000/0, FFFF-FFFF-FFFF/48) with map-server
- (3) mac-A sends ARP-request
- (4) ITR-A lookups (S,G) and replicates ARP-request to ETR-B and ETR-C

# Demo Details

- xTRs run in separate docker containers
- xTRs are multi-homed using RLOC `dfdf::x` and RLE `dfdf::xxxx`
- MR/MS runs in its own container
- Host MACs are talking in each LISP site
- A single layer-2 broadcast domain is realized by an IPv6 unicast-only underlay

# Mapping Database

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[mrms](#)

Enter EID for Site-Cache lookup:

## LISP-MS Site Information:

Site Name	EID-Prefix or (S,G)	Registered	Last Registerer	Last Registered	First Registered	Registration Flags
any	[0]	no (ams)	--	never	never	--
	<a href="#">[0]'xtr-A'</a>	yes (dynamic)	[0]dfdf::a ←	0:00:31	0:01:31	p-s-l-t-r-m-n
	<a href="#">[0](0000-0000-0000/0, ffff-ffff-ffff/48)</a>	yes (dynamic)	[0]dfdf::c	0:00:28	0:01:28	P-s-l-t-R-m-n
	<a href="#">[0]0000-df00-000b/48</a>	yes (dynamic)	[0]dfdf::b ←	0:00:29	0:01:31	p-s-l-t-r-m-n
	<a href="#">[0]0000-df00-000a/48</a>	yes (dynamic)	[0]dfdf::a ←	0:00:07	0:01:31	p-s-l-t-r-m-n
	<a href="#">[0]'xtr-B'</a>	yes (dynamic)	[0]dfdf::b ←	0:00:29	0:01:29	p-s-l-t-r-m-n
	<a href="#">[0]'xtr-C'</a>	yes (dynamic)	[0]dfdf::c ←	0:00:28	0:01:28	p-s-l-t-r-m-n
	<a href="#">[0]0000-df00-000c/48</a>	yes (dynamic)	[0]dfdf::c ←	0:00:04	0:01:28	p-s-l-t-r-m-n

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# MAC-based (S,G) Entry

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mrms

Site name: any, EID-prefix: [0] (0000-0000-0000/0, ffff-ffff-ffff/48), registered: **yes**, dynamic  
Description:  
Last registerer: [0]dfdf::c, xTR-ID: 0xa2405ea8ba101f3b, site-ID: 0  
First registered: 0:03:07, last registered: 0:00:07, auth-type: sha2, registration flags: P-s-I-t-R-m-n  
Default registration timeout TTL: 180 seconds  
Forcing proxy Map-Reply: yes  
Forcing proxy Map-Reply for xTRs behind NATs: no  
Send drop-action proxy Map-Reply to PITR: no  
Proxy Map-Reply action: not configured  
Allowed RLOC-set: any

Registered RLOC-set (merge-semantics):

[0]no-address, state: up-state, up/uw/mp/mw: 255/0/1/100  
rle: dfdf::cccc (L128), dfdf::bbbb (L128), dfdf::aaaa (L128)

Individual registrations:

Registerer: [0]dfdf::c, xTR-ID: 0xa2405ea8ba101f3b, site-id: 0, registered: **yes** ←  
First registered: 0:03:07, last registered: 0:00:07, auth-type: sha2, registration flags: P-s-I-t-R-m-n  
Registered RLOC-set:

[0]no-address, state: up-state, up/uw/mp/mw: 255/0/1/100  
rle: dfdf::cccc (L128)

Registerer: [0]dfdf::b, xTR-ID: 0x36691e03c7b3e8c8, site-id: 0, registered: **yes** ←  
First registered: 0:03:08, last registered: 0:00:08, auth-type: sha2, registration flags: P-s-I-t-R-m-n  
Registered RLOC-set:

[0]no-address, state: up-state, up/uw/mp/mw: 255/0/1/100  
rle: dfdf::bbbb (L128)

Registerer: [0]dfdf::a, xTR-ID: 0xd096d50655bfed5c, site-id: 0, registered: **yes** ←  
First registered: 0:03:10, last registered: 0:00:10, auth-type: sha2, registration flags: P-s-I-t-R-m-n  
Registered RLOC-set:

[0]no-address, state: up-state, up/uw/mp/mw: 255/0/1/100  
rle: dfdf::aaaa (L128)

Questions?