

# Host-based IPv6 Multicast Addresses Allocation

draft-park-host-based-mcast-01.txt

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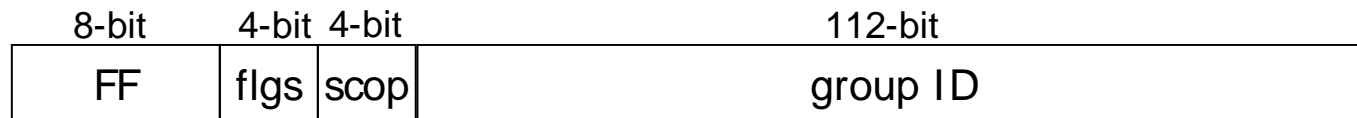


# What is this about

- An extension to the multicast addressing architecture of IPv6
- Each host (interface) uses Interface ID to allocate its own multicast addresses **without any server**
- Especially useful in Zeroconf environment

# Background

- Multicast addressing architecture of IPv6
  - Does not contain any built-in support for dynamic address allocation



# Unicast prefix-based M. A.

(by Brian Haberman & Dave Thaler)

- Multicast address format

8 bits	flags	4 bits	8 bits	8 bits	64 bits	32 bits
11111111	00 <b>P</b> T	scope	reserved	<b>plen</b>	<b>network prefix</b>	group ID

- P flag is used to indicate a multicast address that is assigned based on the network prefix
- plen indicates the actual number of bits in the network prefix field that identify the subnet

# Host-based multicast address (I)

- Link-local multicast address format

8-bit	4-bit	4-bit	16-bit	64-bit	32-bit
11111111	flgs	scop	reserved	Interface ID	group ID

- flgs field should use the same flags defined in section 3 of unicast prefix-based method
- $scop \leq 2$
- interface ID field is used to distinguish each host and is derived from unicast address

# Host-based multicast address (II)

- Site-local multicast address format

8-bit	4-bit	4-bit	16-bit	64-bit	32-bit
11111111	flgs	scop	SLA	Interface ID	group ID

- $2 < scop \leq 5$
- SLA value is obtained from the network prefix contained in the RA message to distinguish a site

# Discussion & Proposal

- Distinction between host-based and unicast prefix-based M. A. is required
  - Because the flgs field use the same flags defined in section 3 of unicast prefix-based draft
  - The value of scope field can be used
    - For scope  $\leq 5$ , host-based MA
    - For scope  $> 5$ , unicast prefix-based MA
- Modifications in unicast prefix-based draft ?
- IPv6 WG draft

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