

# **Updates on IPv6 Scoped Address Architecture**

**<draft-ietf-ipngwg-scoping-arch-03.txt>**

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# Proposed changes to the 03 draft

- according to several on/off-line comments
  - revise the mobility section to clarify issues about site-local and MIP6
  - revise the textual representation section to be more generic

# Site-local addresses and MIP6

□ within the mobile node's home site

○ site-local home/care-of addresses can be used

□ in general, there are several issues:

○ When the care-of address is a site-local address,

▸ an off-site MN cannot communicate with the home agent.

<----home site----> <----foreign site---->

HA

X<-----MN

binding update w/ site-local src

○ When the home address is a site-local address

▸ if CN is in a different site from home agent, CN cannot send packets back to MN (w/o route optimize)

<----home site----> <----foreign site---->

HA

MN

|src=CoA w/ site-local HA

V

X<----CN

dst: site-local HA

# Revise the mobility section to clarify issues

- We'll need an ability for MN to tell if the home agent or CN is in the same site to deal with the issues.
  - but there is no standard way for such an ability...
- Recommendation
  - use global home/care-of addresses whenever possible
    - ▷ (not prohibit mobile nodes from using site-local addresses)

# Revise the textual representation section

- change <zone\_id> part in <address>%<zone\_id>
  - to be more generic and to cover all possible scope types
  - new format: <scope\_type>.<id\_in\_the\_scope>
  - <scope\_type>: a decimal number from 0 to 15 to specify a scope type
    - based on the "scop" field of multicast addresses
  - <id\_in\_the\_scope>: a decimal number to identify a zone
  - ".": a delimiter
- example: fec0::1 on site 2
  - => fec0::1%5.2
- the previous format will be deprecated
  - numeric identifiers(?)
  - aliases like "link2" or "site5"
  - implementation-dependent readable IDs (e.g. IF names) can be used as before

# Open issues and next steps

## ☐ TODO

- consideration about bidirectional tunneling of MIP6

## ☐ Open issues

- scope type of "::"
  - link-local, global, no scope, or undefined?
- representation of <zone\_id> with <address>
  - <scope\_type> in <scope\_type>.<id> is redundant
  - omit <scope\_type> when it comes with <address>?

## ☐ The 04 draft will be out after the cut-off period