

RFC 6724 update

Prioritising known-local IPv6 ULAs through address selection policy

draft-ietf-6man-rfc6724-update-09

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Previously in 6724-update...

The original rationale for 6724-update was to promote preference for ULA-ULA address pairs ahead of RFC1918-RFC1918, such that **preference for IPv6 ULA address pairs over IPv4 was consistent with IPv6 GUAs over IPv4**.

There was concern over potential preference for ULA-ULA should the destination ULA not be local to the source (in the same site).

This led to the idea to define “**known-local ULAs**” as ULA prefix(es) that are known to be local to a site, through observation of prefixes seen in RIOs, PIOs, or other configuration information (such as DHCPv6 or manual configuration).

New in -09

- The draft's title has changed to reflect the new focus on known-local ULAs
- Added heuristics (section 5.3) on how a host maintains a list of known-local ULA prefix(es) to include in the address selection policy table
- This leads to known-local ULA address pairs being preferred to GUA-GUA, but GUA-GUA remaining preferred over other ULAs
- ULA-ULA is preferred over all IPv4-IPv4 through having a higher precedence
- Added clarifications from David Farmer (thanks!) - some very useful list discussion to improve text - included retaining reference to type C hosts as type A and B are out there

Open questions (2/2)

Should we treat fc00::/8 differently to fd00::/8? (List: no consensus but no strong views)

Proposal: condense section 5.3 to only refer to fc00::/7

Is all ULA-ULA being preferred over all IPv4-IPv4 OK? (List: yes)

Proposal: keep ULA at precedence 30 and IPv4 at precedence 20

Should we support addition of other off-link known-local prefixes? (List: yes)

Proposal: Include text explicitly in section 5.3

Should we add additional precedence (and entries) for RFC1918? (List: no)

Proposal: Do not add RFC1918 entries to default policy table

Open questions (2/2)

Are the heuristics in section 5.3 good? (List: yes, but a question over PIO-derived prefixes...)

Current: “PIOs of length /64 with A=1 or interface addresses from within fd00::/8 that are not already covered by the known-local ULA list **SHOULD** be added to the list with an assumed prefix length of /48.”

David Farmer’s proposed new: “Regardless of how the PIO flags are set, PIOs of length /64 and from within fd00::/8 that are not already covered by the known-local ULA list **MUST** be added to the list with an assumed prefix length of /48.”

So: do we want SHOULD or MUST?

*Note: RIOs are the preferred method for deriving known-local ULA prefixes, and override information in PIOs (“2: RIOs within fd00::/8 with a prefix length of /48 or longer **MUST** be added to the known-local ULA list”)*

Comments?