

Recommendations of Unique Local Addresses Usages

[draft-ietf-v6ops-ula-usage-recommendations-01](#)

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Background

- [draft-liu-v6ops-ula-usage-analysis-05](#)
- Adopted after IETF86 as [draft-ietf-v6ops-ula-usage-recommendations-00](#)
- This update version aims to:
 - ✓ Include the most important comments
 - ✓ Move forward the draft

Updates since draft-liu-05 & draft-ietf-00

- Added two part of new content in in section 3
“Enumeration of Scenarios Using ULAs”
 - ✓ Pros/Cons analysis for each scenario
 - ✓ Operational guidelines for each scenario
- Extracted the most important “General guidelines of Using ULA” as a separated Section 4
 - ✓ Emphasize “Do NOT treat ULA equal to [RFC1918]”, and added some more detailed analysis
 - ✓ Added another point of “Using ULAs in a limited scope”
 - [ULA in the Wild]
- Some other minor/editorial revisions

Operational Considerations

Isolated Networks

- Prefix generation: especially care about the uniqueness when generated manually
- Prefix announcement: might need a mechanism to announce prefix (e.g. V2V networks)

ULA+NPTv6

Firewall issue

- Admins need to care about where the firewall need to be, in or out of the ULA domain, since NPTv6 is stateless and one-to-one mapping which makes the ULAs wide open to the outside
- And when renumber, the firewall(s) needs to be reconfigured when it is located outside the NPTv6 translator.
- If the firewall(s) is inside the translator, the administrators need to use the ULAs for filtering instead of the global ones.

Operational Considerations(Cont.)

ULA+PA

- SLAAC/DHCPv6 co-existing
 - Admins need to carefully plan how to assign ULA and GUA prefixes in accordance with the two mechanisms.
 - Admins need to know the current issue of the SLAAC/DHCPv6 interaction
([draft-liu-bonica-v6ops-dhcpv6-slaac-problems](#))
- Address selection
 - old standard [RFC3484] doesn't distinguish ULA out of GUA in the default policy table
- DNS relevant
 - if administrators chose not to do reverse DNS delegation inside of their local control of ULA prefixes, a significant amount of information about the ULA population will leak to the outside world. (Also refer "ULAs in the Wild")

Operational Considerations(Cont.)

- IPv4 Co-existence considerations
 - [3484] prefers ULA over IPv4 in the default policy table, so a site with IPv4 Internet connectivity and ULA for site-local, would cause connection failure problem
 - [6724] has revised it to prefer IPv4 over ULA in the DPT
- ULA as NAT64 prefix in 464XLAT
 - [6724] prefers IPv4 over ULA, so in 464XLAT, the ULA NAT64 prefix would never be used for CPEs.
 - Need specific address selection rules

Regarding ULA+NPTv6

In this draft

- It appears in the enumeration of scenarios
 - ✓ It is identified as a valid use case in some specific situations
- It is NOT in the recommended use cases
 - ✓ It is NOT encouraged to be a common/wide deployment model

Next Step

- Solicit for review/comments
- WGLC?

Comments?

Thank you!

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