

DHCPv6/SLAAC Address Configuration Interaction Problems and Operational Guidance

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IETF 90@Toronto, July 2014

Reminder

- ietf-v6ops-dhcpv6-slaac-problems
 - Adopted after IETF88
- liu-v6ops-dhcpv6-slaac-guidance
 - Posted and discussed in IETF89
 - ML discussion supports a dedicated operational guidance draft rather than merging with Problem Statement
 - Version 02 will be posted soon after IETF 90

Problem Statement Draft (Version 01)

- Main body focuses on problem statement, rather than detailed behavior of specific operating systems
- The structure was adjusted, to emphasize the problem statement as a standalone section
- Test results moved to an Appendix
- Rewording both in main body and the Appendix

Guidance Draft Update

(Version 02: Not Yet Posted)

- Update in “General Guidelines”
 - Old: “SLAAC could be considered as a Bottom line for address provisioning”
 - Because SLAAC is mandatory in [RFC6434]
 - While DHCPv6 is not
 - New: “DHCPv6/SLAAC Co-existence is a Safe Way to Guarantee Address Provisioning”
 - there might be corner cases that one host might be mistakenly configured as DHCPv6-only configuration
 - might only be a safe way rather than an optimal way
 - Co-existence has potential problems need to caution (described later)

Guidance Draft Update: Continued

- Update in “Guidance for DHCPv6/SLAAC co-existence”
 - Clearly state two motivations for co-existence
 - For provisioning redundancy: operators want to make sure every host gets at least one address
 - For diverse provisioning: configure two prefixes from DHCPv6/SLAAC respectively.
 - E.g. one prefix from SLAAC for normal connectivity; one special prefix from DHCPv6 for a specific service.

Guidance Draft Update: Continued

- Update in “Guidance for DHCPv6/SLAAC co-existence”
 - Added potential problems description
 - Might configure too many IPv6 addresses which might cause ND cache overflow
 - Typically 4 IPv6 addresses: link-local+SLAAC+Privacy+DHCPv6, 2 times than DHCPv6-only configuration
 - Conflicting DNS information in RAs and DHCPv6 options. The operators should make sure DNS configuration in RAs and DHCPv6 are the same.

An Open Question

- In last meeting, there was concern that SLAAC/DHCPv6 addresses from the same prefix might cause some applications to fail.
- But we haven't identified real problems in practice. Has anybody experienced issues in the case?

Next Steps

- Problem Statement
 - One last revision for readability and grammar
 - WG Last Call
- Guidance Draft
 - Call for adoption as WG item

Comments?

Thank you!

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