Autoconf Problem Statement
autoconfiguration of routers in a MANET
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Background

Terminology, scenarios, goals discussed since Vancouver.
Allow routers in a MANET to:

1. configure their MANET interface(s) with IPv6 addresses that are unique within the MANET.

2. be allocated IPv6 prefixes that are disjoint from prefixes allocated to other routers within the MANET.

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

4. be allocated topologically correct prefixes, in the subordinate MANET scenario.
Applicability of DHCP

Corresponding Goals

1. configure IPv6 addresses that are unique within the MANET, on their MANET interface(s).

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).
Applicability of DHCP

Corresponding Goals

1. configure IPv6 addresses that are unique within the MANET, on their MANET interface(s).

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

DHCP Assumptions

★ direct communication with server

★ communication through relay agent
Applicability of DHCP

Corresponding Goals

1. configure IPv6 addresses that are unique within the MANET, on their MANET interface(s).

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

DHCP Assumptions

★ direct communication with server

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Applicability of NDP/SLAAC

Corresponding Goals

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3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).
Applicability of NDP/SLAAC

Corresponding Goals

1. configure IPv6 addresses that are unique within the MANET, on their MANET interface(s).

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

NDP Assumption

★ a single multicast-enabled link
Applicability of NDP/SLAAC

Corresponding Goals

1. configure IPv6 addresses that are unique within the MANET, on their MANET interface(s).

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

NDP Assumption

★ a single multicast-enabled link
Applicability of DHCP-PD

Corresponding Goals

2. be allocated IPv6 prefixes that are disjoint from prefixes allocated to other routers within the MANET.

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

4. be allocated topologically correct prefixes, in the subordinate MANET scenario.
Applicability of DHCP-PD

Corresponding Goals

2. be allocated IPv6 prefixes that are disjoint from prefixes allocated to other routers within the MANET.

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

4. be allocated topologically correct prefixes, in the subordinate MANET scenario.

DHCP-PD Assumptions

★ direct communication with server

★ communication through relay agent
Applicability of DHCP-PD

Corresponding Goals

2. be allocated IPv6 prefixes that are disjoint from prefixes allocated to other routers within the MANET.

3. maintain, within the MANET, the uniqueness of configured addresses and the disjoint character of allocated prefixes (even in case of network merging).

4. be allocated topologically correct prefixes, in the subordinate MANET scenario.

DHCP-PD Assumptions

★ direct communication with server

★ communication through relay agent
Solution Requirements

See draft-ietf-autoconf-problem-statement-04

(14 requirements listed in Section 6.1.)
Next Steps

Improving draft-ietf-autoconf-problem-statement-04

★ list of requirements. Suggestions? Additions? Modifications?

★ security section. Need feedback/input.