Operational Issues of RA M/O flags

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Guidance of rfc2462

- On receipt of a valid Router Advertisement (as defined in [DISCOVERY]), a host copies the value of the advertisement's M bit into ManagedFlag. If the value of ManagedFlag changes from FALSE to TRUE, and the host is not already running the stateful address autoconfiguration protocol, the host should invoke the stateful address autoconfiguration protocol, requesting both address information and other information. If the value of the ManagedFlag changes from TRUE to FALSE, the host should continue running the stateful address autoconfiguration, i.e., the change in the value of the ManagedFlag has no effect. If the value of the flag stays unchanged, no special action takes place. In particular, a host MUST NOT reinvokes stateful address configuration if it is already participating in the stateful protocol as a result of an earlier advertisement.
Questions on the Guidance of rfc2462

• Q1. Why the M flag's change from TRUE to FALSE should not stop DHCPv6 clients?
  – If DHCP is really no longer to be used (and no longer works), the addresses obtained via DHCP will expire after their lifetime expires.
  – [RFC3315 18.1.4] After bindings expire, clients will keep searching another server infinitely instead of being disabled. This is the same case where clients initially begin to locate servers ignoring the M flag indicating that no servers are available.
  – Infinite bindings ?
Alternative Choice

Q2. What if the M flag's change from TRUE to FALSE can stop DHCPv6 clients?

- Refer to the MS Vista.
- Simple behaviors without consideration previous flag values.
- Stateful DHCPv6 client is triggered by an RA with M flag set to 1.
- Stateless DHCPv6 client is triggered by an RA with M flag set to 0 and O flag set to 1.
- DHCPv6 client is stopped by an RA with M flag set to 0 and O flag set to 0.
Scenario 1. Sing Router on the link

1. Prefix PA::/48 Delegated
2. Prefix PA:SLA::/64 Advertised. M/O flags = 0/x
Scenario 2: Different flags from multiple Routers on the link

1. Prefix PA::/48 Delegated
2. Prefix PA:SLA::/64 Advertised. M/O flags = 0/x
4. Prefix PB::/64 Advertised. M/O flags = 1/x
5. Vista DHCPv6 client is triggered and obtain a stateful global address and other configurations.
6. Prefix PA:SLA::/64 Advertised. M/O flags = 0/x
7. Vista DHCPv6 client releases the binding.
8. Prefix PB::/64 Advertised. M/O flags = 1/x