draft-ietf-dhc-dhcpv6-stateful-issues

IETF 90 DHC WG

Toronto

Wednesday, July 23, 2014

Revised 7/22/2014 09:20 EDT

Recent Activity

- 06 Published
  - Added Marcin Siodelski as co-author
  - 1. “Introduction” added info about IA_TA
  - 3. “Terminology” added more terminology, such as “(allocable) resource”
  - 4.1 “Advertise Message” / 4.2 “Placement of Status Codes” sections swapped
    - CHANGED 3315 – Moving NoAddrsAvail Status Code option into IA_NA/IA_TA
  - 4.4 “Renew” / 4.5 “Rebind” text significantly reworked by Marcin
    - Sections to update 3315 and 3633, and provide “unified text” (i.e., for RFC3313bis)

Recent Activity (Cont'd)

- 06 Published (Cont'd)
  - 4.6 "Confirm Message" now requires Rebind for IA_PD; Confirm OK for addresses
  - 4.7 "Decline Should Not Necessarily Trigger a Release" replaces previous "Release Message" section
- Some discussion on mailing list – thanks Jinmei and Cong Liu
  - Improve section 1 and 4.0 regarding scope and assumptions

Open Issue – Advertise Status Codes

- Is changing RFC 3315 Advertise to moving NoAddrsAvail Status Code option into IA_NA/IA_TA acceptable for case when server is unable to return any addresses
  - Apparently there are servers already doing this without any known issues?
  - Makes Advertise/Reply consistent
  - Could break existing implementations?
  - Document suggests clients handle 3 possible Advertise results

Open Issue – Advertise Status Codes

- Possible Advertise Response when no addresses are available across all IA_NA/IA_TAs
  1. Advertise with top-level Status Code option - as per RFC 3315
  2. Advertise with Status Code option in IA_NAs/IA_TAs (no top level) - proposed
  3. Both top-level and in IA_NA/IA_TAs

New Issue (3315bis) - Advertise

- RFC 3315 (17.2.2) does not specify what a server should do if it is unable to assign address(es) to an IA_NA/IA_TA, but has assigned address(es) to another IA_NA/IA_TA?
  - Send IA_* with an encapsulating NoAddrsAvail Status Code?
  - Send empty IA?
  - Do not include IA_* option at all?
- Should we add to draft for 3315bis work?

Recommendation for Advertise No Address Assigned Issues

- While it is a change …?
- Server should send IA_NA/IA_TA and encapsulate a Status Code with NoAddrsAvail
- There is no special consideration as to whether “any” addresses assigned across “all” IA_NAs/IA_TAs
- Simpler and consistent with Prefix Delegation (RFC 3633) processing and (RFC 3315) Request processing

Open Issue – Renew/Rebind Reply Status

- When “new” binding added to Renew or Rebind and server is still unable to provide address/prefixes:
  1. IA_* containing Status Code of NoBinding – current draft text and matches 3315 though 18.1.8 causes client to send a Request (and draft has no text to change 18.1.8)
  2. IA_* containing Status Code of NoAddrsAvail / NoPrefixAvail – this matches Reply to Request
  3. IA_* that is empty
  4. No IA_* - not a good idea as 18.1.8 indicates client should send Renew/Rebind (might be something to fix as it could result in a Renew/Rebind storm)

New Issue - Renew/Rebind Hints

- Clarify that a client is only allowed to include addresses and delegated prefixes it is currently using (i.e., those with non-zero valid lifetimes)
  - Hints (lifetimes, delegated prefix length) can be provided but only with “all-zero’s” address field
  - This could help servers that have lost stable storage
  - If client wants to request explicit address or delegated prefix, it must use Request

New Issue (3315bis) - Confirm

- RFC 3315 says client MUST use Confirm (for addresses)
  - Relax to SHOULD? Must be conditional on PD anyway
  - Testing shows that clients do not always Confirm in cases listed
  - Clarify conditions (i.e., “the client reboots” can only if client has persisted information to stable storage)

Next Steps

- Publish updated draft
  - To resolve open issues
  - To address comments (Jinmei/Cong and hopefully others)
  - Please review 06 and updated (07) when published!
- Start WG last call after 07 published?
- Reminder - This work is important for 3315bis!

Reviewers

IETF-89 Volunteer Reviewers:

1. Tim Winters
2. Cong Liu
3. Sheng Jiang
4. Suresh Krishnan
5. Jason Weil
6. John Brzozowski
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