DHCPv6 Failover Update

dhcp-ietf-dhc-dhcpv6-failover-protocol-00

Presented by Bernie Volz
Kim Kinnear
kkinnear@cisco.com
2015-11-5
(Former) DHCPv6 Failover Grand Plan

• **Step 0: Redundancy considerations**
  - Published as RFC6853

• **Step 1: Requirements document (info)**
  - Published as RFC7031

• **Step 2: Design document (std)**
  - Passed WGLC
  - AD review
  - IESG submission

• **Step 3: Protocol document (one of many possible) (std)**
  - TBD

• Possible extension drafts
AD feedback for dhc-dhcpv6-failover-design-04

- Not implementable on its own
- Design decision discussion not really appropriate for standards track RFC
- What if protocol draft (step3) needs some changes that belong to the design?

Not ready for IESG

Ted, Kim and Tomek decided to split failover-design and move forward to produce failover-protocol draft.
IETF 90, July 2014 Plan:
draft-ietf-dhc-dhcpv6-failover-design-04 becomes two drafts

failover-design-05 (info)
• Answers question: why?
• Intro
• Protocol overview
• Resource Allocation
• Information Model
• Failover mechanisms overview
• Time skew
• MCLT
• Lazy Updates
• Overview of DDNS

failover-protocol-00 (std)
• Answers question: how?
• Connection management
• Failover states
• DDNS details
• Messages
• Option Formats
• Sending/receiving BNDUPD
• Reallocating leases
• Acknowledging reception
draft-ietf-dhc-dhcpv6-failover-protocol-00

- Contains the “how” of the protocol
- Moved minimal necessary “why” from design draft, added 9 pgs to protocol draft
- Does not have overview
- Not much substantive text left in design draft. (Overview not considered substantive.)
- Little current energy for chatty, informational, design draft

Evolving plan: deprioritize design draft, decouple design and protocol draft, shift focus to protocol draft
Protocol Draft Contents

- Intro, IANA, Ack, Ref 11
- Concepts and Facilities 7 design+
- Message and Option Definitions 17
- Connection Management 6 design+
- BNDUPD & BNDACK 13
- Endpoint States (state machine) 19
- DDNS 6
- Security (uses RFC 7653 connection mgmt) 1

Total 80
Issues and Questions

- Ok with deprioritizing design draft? (at least for now)
- Better name for “Concepts and Facilities”
- Probably `OPTION_F_DNS_REMOVAL_INFO` should use IANA (top level) encapsulated options, instead of defining its own suboption space
- What is missing?
- Does DDNS belong (i.e., is 6 pgs too much)?
- Does the protocol hang together?
  - Time definitions and use in BNDUPD/BNDACK
  - Endpoint states and state transitions
Next steps

• Finish protocol draft (90% complete, 80 pages so far)
  – Looking for 2-4 reviewers!
    • Check for correctness
    • Tighten up text – remove maybe 3-5 pages max
  – Republish based on review and WG comments
  – Move to WGLC