

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

(previous) **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

IETF 94, October 2015 Reality:

draft-ietf-dhc-dhcpv6-failover-protocol-00

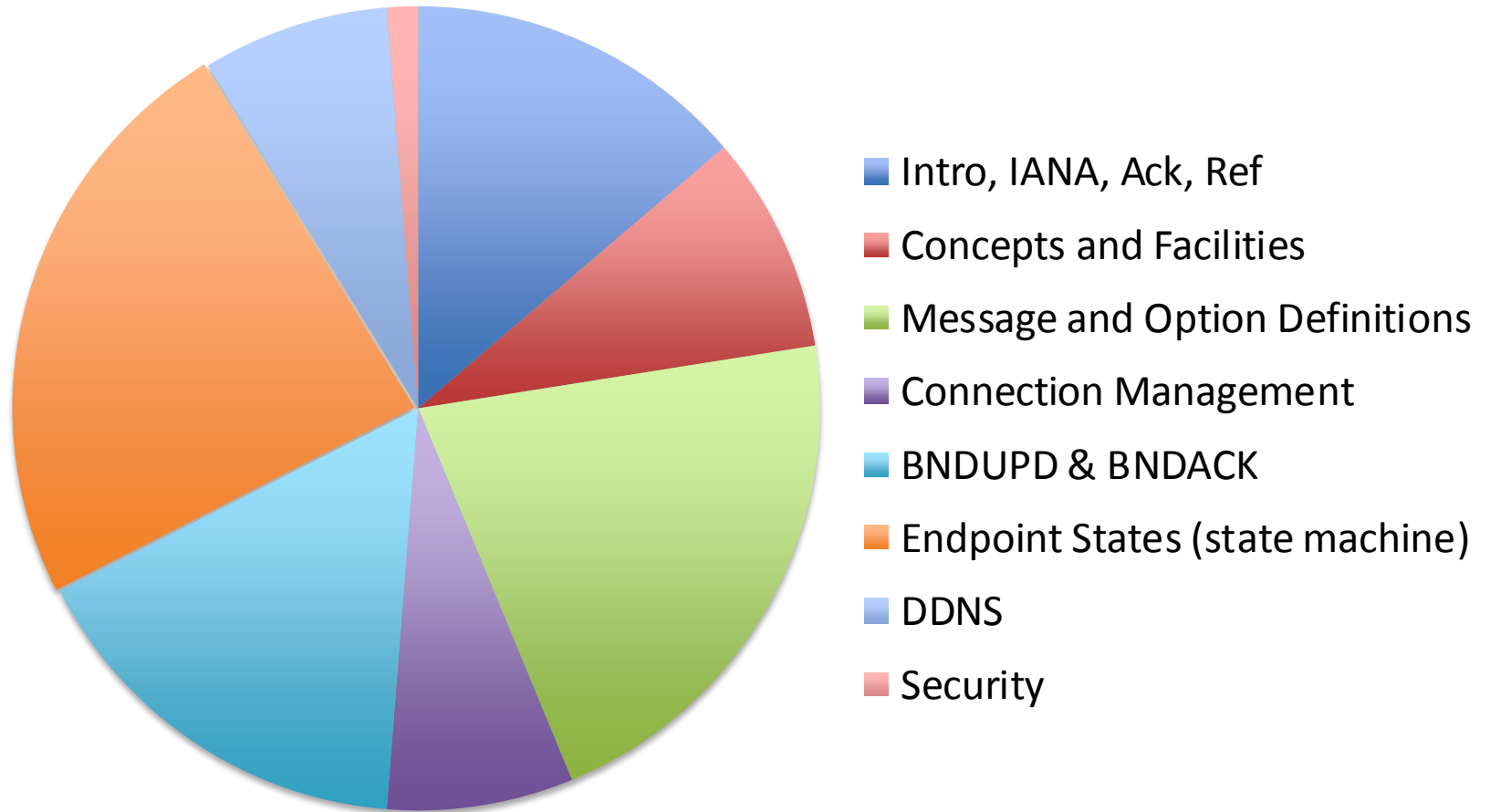
- **Contains the “how” of the protocol**
- **Moved minimal necessary “why” from design draft, added 9 pgs to protocol draft**
- **Does not have overview**
- **Not much substantive text left in design draft.** (Overview not considered substantive.)
- **Little current energy for chatty, informational,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

Protocol Draft Contents



Issues and Questions

- Ok with 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