DHCPv6 Failover Update

`dhcp-ietf-dhc-dhcpv6-failover-design-04.txt`

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2014-07-23

(Former) DHCPv6 Failover Grand Plan

- **Step 0: Redundancy consider**ations
  - 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 (std)**
  - TBD
- Possible extension drafts

AD feedback for

dhc-dhcpv6-failover-design-04

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  - 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.

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

Table Of Contents

failover-design-05 (info) 35 pages

failover-protocol-00 (std) 49 pages

Next slides

Lots of them

Protocol Connection Management

Messages	Options
CONNECT	OPTION_F_RELATIONSHIP_NAME
CONNECTACK	OPTION_F_TLS_REQUEST
DISCONNECT	OPTION_F_TLS_REPLY
	OPTION_F_RECEIVE_TIME
	OPTION_F_PROTOCOL_VERSION
	OPTION_F_MCLT
	OPTION_F_MAX_UNACKED_BNDUPD
CONTACT	
STATE	OPTION_F_SERVER_STATE
	OPTION_F_SERVER_FLAGS
	OPTION_F_START_TIME_OF_STATE
	OPTION_F_PARTNER_DOWN_TIME

Protocol Lease State Data Transmission

Messages	Options
BNDUPD	OPTION_CLIENT_DATA (from RFC 5007)
BNDACK	OPTION_LQ_BASE_TIME
	OPTION_F_BINDING_STATUS
	OPTION_F_START_TIME_OF_STATE
	OPTION_F_STATE_EXPIRATION_TIME
	OPTION_F_FAILOVER_EXPIRATION_TIME
	OPTION_F_PARTNER_RAW_CLT_TIME
	OPTION_F_NEXT_PARTNER_LIFETIME
	OPTION_F_NEXT_PARTNER_LIFETIME_SENT
	OPTION_F_REQUESTED_FQDN
	OPTION_F_DNS_INFO
	OPTION_F_DNS_REMOVAL_INFO

Additional Messages

Messages

UPDREQ

UPDREQALL

UPDDONE

POOLREQ

POOLRESP

Next steps

- Finish protocol draft (60% complete, 49 pages so far)
  - Failover state operations: 85% complete
  - Connection management: 70% complete
  - Message overview: 90% complete
  - Options: begun, 10% complete (+15 p)
  - BNDUPD time usage needs depth (+5 p)
  - DDNS needs depth (+5 p) – defer to extension?
- Design draft (85% complete, 35 pages so far)
  - Needs editing after surgery
  - May need more explanations of what is in protocol draft