DHCPv6bis update

DHC WG, IETF'92
draft-ietf-dhc-dhcpv6bis-00

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3315bis adoption

- Adopted ietf-dhc-rfc3315bis-00
- Summary:
  - RFC3315 + most of RFC3633 + RFC3736 + RFC7083
  - 108 tickets addressed
  - Bigger changes listed in Appendix A
- Tickets kept in http://wiki.tools.ietf.org/group/dhcpv6bis/
- Where to send ticket notifications: dhcpv6bis or dhc?

Work organization

- Monthly calls (1st Wednesday of the month)
- The next meeting: April 1st
- 14:00CET, 8:00am EDT, 9:00 CDT
- http://jitsi.tools.ietf.org/dhcpv6
- Volunteers are welcome to join
- Agenda will be sent to the dhc list in advance

Stateful-issues

- Now in RFC-Ed queue
- Thanks to Ole, Bernie and Marcin
- Unblocked tickets #59, #60, #61, #62, #63, #64, #65, #66, #85
  - Will apply to 3315bis

Restructuring client/server sections (#142)

Existing layout

18. DHCP Server Solicitation
    - 18.1. Client Behavior
    - 18.2. Server Behavior
    - 18.3. Client behavior for Prefix Delegation
    - 18.4. Server Behavior for Prefix Delegation
19. DHCP Client-Initiated Configuration Exchange
    - 19.1. Client Behavior
    - 19.2. Server Behavior
    - 19.3. Requesting Router Behavior for PD
    - 19.4. Delegating Router Behavior for PD
20. DHCP Server-Initiated Configuration Exchange
    - 20.1. Server Behavior
    - 20.2. Receipt of Renew or Rebind Messages
    - 20.3. Receipt of Information-request Messages
    - 20.4. Client Behavior
    - 20.5. Prefix Delegation Reconfiguration

Planned layout

18. Client behavior
    - 18.1 Server solicitation
    - 18.2 Client-initiated configuration exchange
    - 18.3 Server-initiated configuration exchange
19. Server behavior
    - 19.1 Server solicitation response
    - 19.2 Responses to client-initiated configuration exch.
    - 19.3 Server-initiatied confiugration exchange

Clarify unknown options handling (#144)

- RFC3315 section 16 says:

  ```
  Clients and servers might get messages that contain options not
  allowed to appear in the received message.  […]. Clients and
  servers MAY choose either to extract information from such a
  message if the information is of use to the recipient, or to ignore
  such message completely and just drop it.
  ```

- Some implementors confused **not allowed** with **unknown**
- Should clarify that client/server MUST NOT drop just because message contains:
  - unknown options
  - unknown enterprise-id in vendor options

#81 – Should protocol options be included in ORO?

- Should the following be included in ORO?
  - IA_NA, iaaddr, IA_PD, iaprefix
  - Server-id, client-id
  - Preference
- What to do when client requests FQDN code in ORO, but does not send FQDN option?
  - Server should ignore FQDN code
- Do we want to explicitly define list of “protocol” options?
  - Put text that lists options in 3315bis as an example. Additional protocol options may be defined in the future.
- Better term for “protocol options”?

#18 – ORO - mandatory?

- Is ORO mandatory and for what requests?
- RFC 7083 section 7 language is a bit odd:
  - A DHCPv6 client MUST include the SOL_MAX_RT option code in any Option Request option [RFC3315] it sends as required by RFC 3315.
  - A DHCPv6 client MUST include the INF_MAX_RT option code in any Option Request option it sends as required by RFC 3315.
- To me this means send these options IF client sends ORO – but perhaps it was to require ORO?
  - MUST send ORO with SOL_MAX_RT for Solicit,Request,Renew,Rebind and INF_MAX_RT for Inf-Request
- And should both options always be sent in ORO?
  - No, but they may

#68 – Prefix Length of Addresses

- Question from March 2007 DHCPv6 Bakeoff Event:
  What prefix length should the client use if no RA or Prefix Information Option in RA for address assigned via DHCPv6
- RFC5942, Section 5 says /64 is wrong
- Recommend /128
- Should we document this in bis document?

#82 – IA_ADDR with :: Address

- Some clients send IA_ADDR with 0::0 address and non-zero lifetimes
  - Valid usage to suggest lifetimes to server

```
In a message sent by a client to a server, values in the
preferred and valid lifetime fields indicate the client's
preference for those parameters. – RFC 3315, section 22.6
```

- Some clients send IA_ADDR with 0::0 address and zero lifetimes to “request” address
  - Will recommend clients NOT include this as there is no “hint”
  - Will do the same for IA_PREFIX with no hints

#114 – Clarify “hints”

- Most hints are just that:
  - Addresses or Prefixes
  - Lifetimes
- But what about Prefix Length?
  - If server already has PD assigned but hint in Solicit is different, which should it prefer?
  - Can client send hint in subsequent requests (i.e., Renew) if it didn’t get what it hinted for? Client sends IA_PD with IA_PREFIX of current PD and IA_PREFIX of ::/N (for hint)
- Clarify only one :: hint allowed (for prefix length or lifetimes) per IA_*

#70 – Validate address in IA

- How to validate IPv6 address in the IA Address option.
- RFC 3315 section 11 says:

  -A server MUST NOT assign an address that is otherwise reserved for some other purpose. For example, a server MUST NOT assign reserved anycast addresses, as defined in RFC 2526, from any subnet.

- Are there other reserved address ranges to be listed here? RFC numbers?
- Should the spec include the client behavior for the case when it receives a reserved address (e.g. multicast or link-local)?

#86 – Information-request in Delayed Authentication Protocol

- DAP uses Solicit-Advertise to pass client's preference and select the key.
- Solicit is not sent when performing the stateless configuration using Information-request.
- Possible approaches:
  - Server processes the auth request in Information-request in the same way as for Solicit.
  - Information-request should be preceded by a Solicit-Advertise exchange to perform authentication.
  - DAP should not be used for stateless configuration.
  - Other?