Overview

- Dynamic management of shared IPv4 address leases
  - Through the combination of IPv4 address and OPTION_V4_PORTPARAMS
  - Relevant for use with DHCPv4 over DHCPv6
  - Enables more efficient use of scarce IPv4 addresses
- Changes since adopted
  - NOT an update to RFC2131
  - Improvement of client/server behaviors
  - Compatibility with normal client/server

Further specifics on Behaviors

- Client:
  - MUST renew and release with the option
  - When receiving multiple replies, selects the one it prefers
- Server:
  - MUST implement a mechanism for address sharing through address and port-leasing
  - Specify the logic to select an address with PSID for allocation, similar to that of address selection in RFC2131
  - Remove the statement that PSID is related to client state determination
  - Reserves WKPs from allocation to clients

Client/Sever Logic for the option

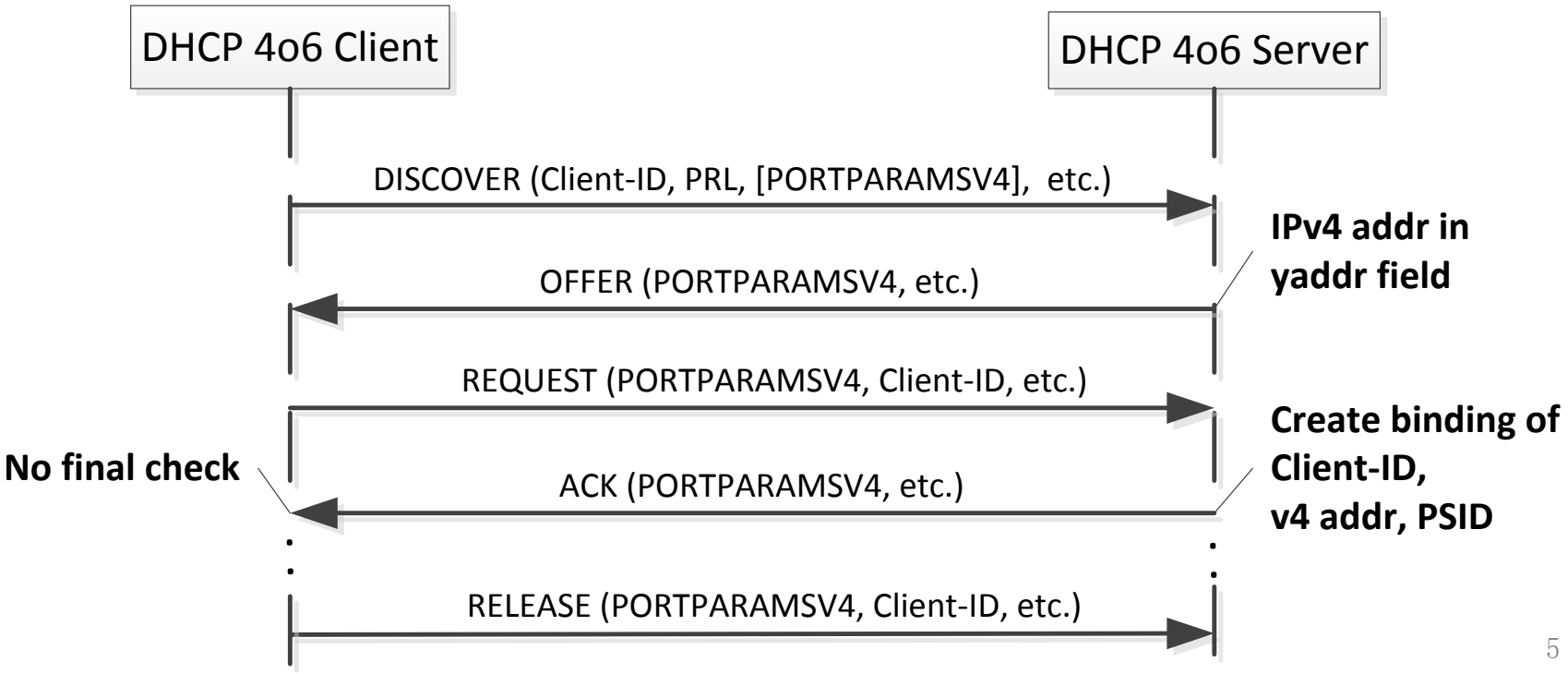
No.	Client	Server(s)	Result
1	Support	Support	Client gets an IPv4 with PSID
2	DOESN'T support	Support ONLY PSID pools	Server drops requests, client fails
3	Support	Some support, others DON'T support	Clients selects the one it prefers
4	Support	DOESN'T support	Client gets a full v4

Next step

- Request WG's review
- WGLC?

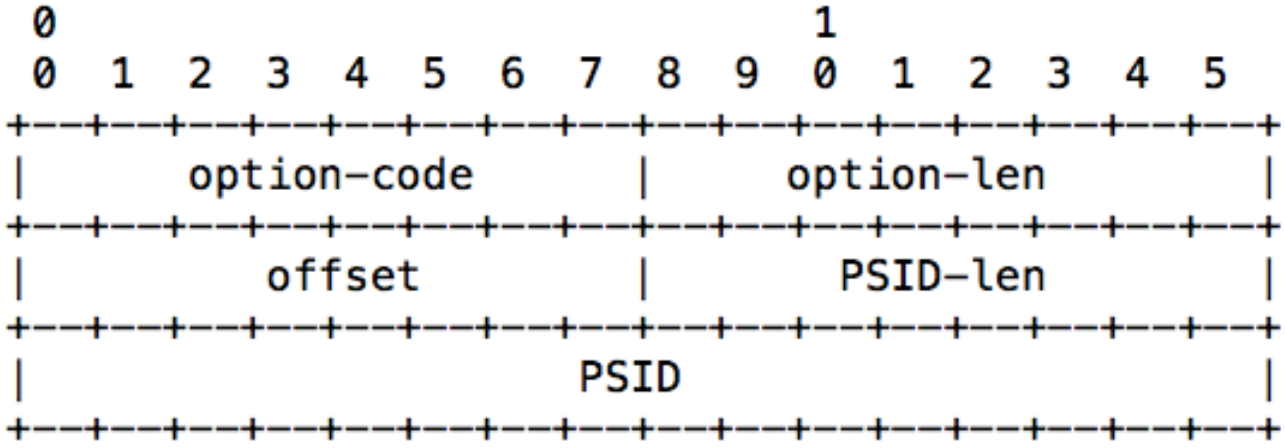
Server-Client Interactions

- Include OPTION_PORTPARAMSV4, Client-ID in related DHCPv4 messages
- Transported within DHCPv4-query/DHCPv4-response messages over an IPv6 network



DHCPv4 Port Parameters Option

- OPTION_PORTPARAMSV4 format
  - Similar format to OPTION_S46_PORTPARAMS in draft-ietf-softwire-map-dhcp-06



Logic for Interworking with non-shared DHCPv4oDHCPv6 Servers?

- A client's DISCOVER doesn't contain OPTION_V4_PORTPARAMS, and times out. Either:
  - Available full IPv4 addresses have run out, or
  - All servers ONLY support address sharing

⇒ Client then requests an IPv4 address with OPTION_V4_PORTPARAMS in PRL

Is this behavior necessary?