



# Address Selection problems that should be solved by RFC3484-bis

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# What rfc3484-bis should cover

- Incorporate universally useful policy:
  - ULA should have less priority than other IPv6 addresses and IPv4 addresses.
- Follow-up to de-facto standard behavior:
  - Teredo address should have lower priority.
  - We should not spoil DNS Round-Robin.
- Follow-up to other IETF standard:
  - Obsoleted site-local unicast address.

# ULA's priority

- Dst Host has
  - 2001:db8::80 and 192.0.2.80
- Src host has
  - fd01::100(ULA) and 192.0.2.100
- Now, src host chooses ULA for a originating session, which probably fails.
- Suggested behavior:
  - If dst is also ULA, ULA should be chosen.
  - If not, IPv4 should be chosen.



# Teredo's priority

- As implemented in Windows,
  - Teredo should be the last resort.
- Suggested behavior:
  - When the dst is IPv6-only, and the src does not have any other IPv6 address.
  - When the dst is dual-stacked and src has Teredo only and not IPv4.



# DNS Round-Robin life or death

- RFC 3484 dst. address selection rule 9 defined the longest matching address selection for IPv4 and IPv6.
  - This spoils DNS based load balancing technique that is widely used at least in IPv4.
  - For IPv6, hierarchical address assignment (was believed to) make rule 9 reasonable.
- Suggested behavior:
  - Dst. Rule 9 should not be applied to IPv4
  - For IPv6 also, this feature is vital. So this rule should be disabled by default. Site-local tweak should be achieved by policy table distribution.



## Next Step

- RFC3484 has several serious issues that should be addressed.
- Any other issue to be in this draft ?
- Mature enough for 6man WG item ?
  - RFC3484 is from ipv6 WG, so this is the right place ?