

NGtrans IPv6 DNS requirements

draft-ietf-ngtrans-dns-ops-req-01+

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NGtrans DNS requirements

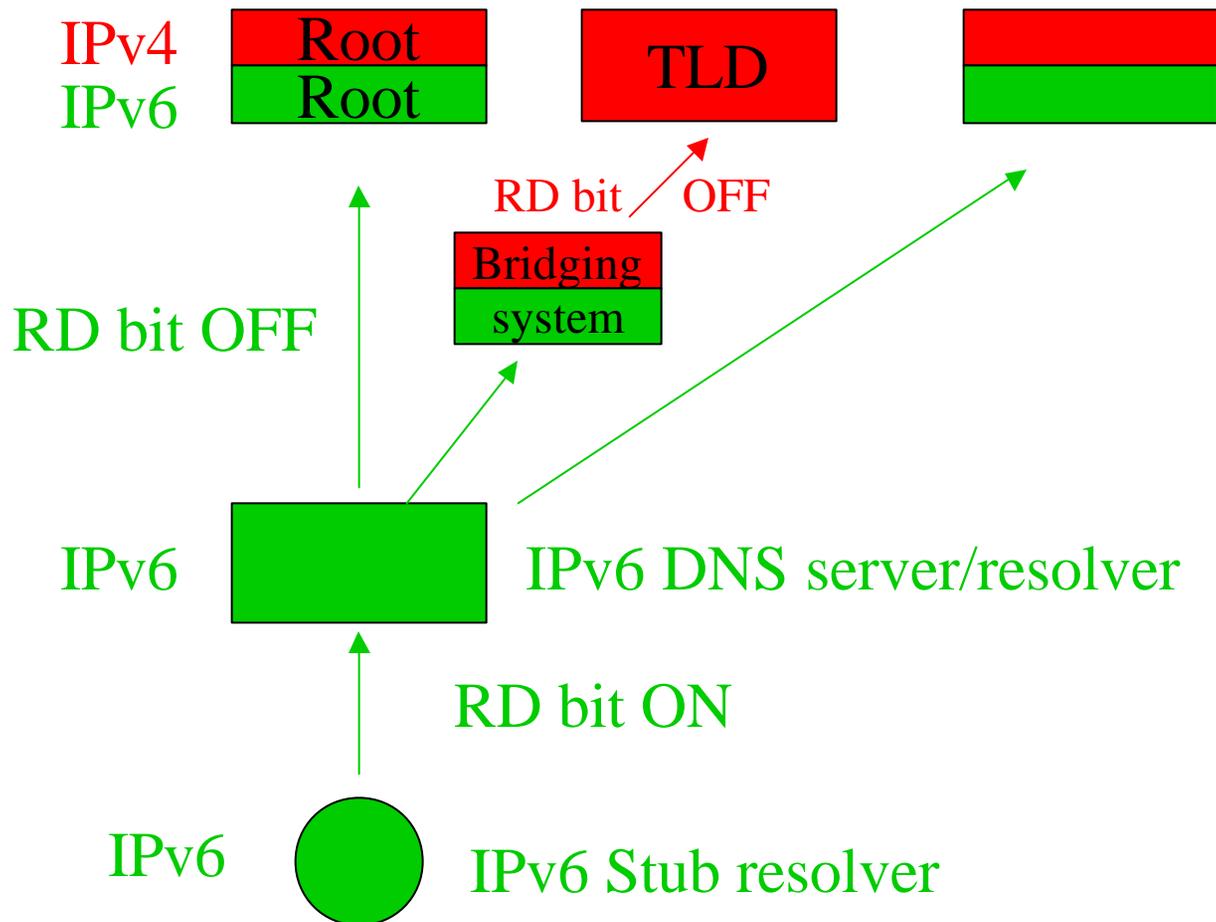
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- Given a requirement for transparent DNS lookups regardless of IP version, there is a need for some sort of bridging solution.

Why is bridging important?

- While processing the NS chain, a resolver will follow a chain of referrals. In that chain, it may happen that one of them is not directly reachable with the resolver IP stack

Example why bridging is necessary



IPv4 bridging vs IPv6 bridging

- Both are necessary
- Although desirable, both solution do not need to be the same.
- Constraints are different

Bridging IPv6 only resolver to IPv4 only server

- Constraints due to installed base
 - Can modify IPv6 resolver code
 - Can modify IPv6 resolver configuration
- Fall back, last resort forwarder
 - “Forward Last”
 - Recursive
- DNS lookup proxy
 - Non recursive

Bridging IPv4 only resolver to IPv6 only server 1/2

- Constraints due to installed base
 - Can not change IPv4 resolver code
 - Can not change IPv4 resolver configuration
- Why?
 - An unmodified IPv4 only MTA may want to check validity of any email address in the DNS, even if this address belongs to an IPv6 only domain.

Bridging IPv4 only resolver to IPv6 only server 2/2

- Solutions
 - all zones **MUST** have at least an IPv4 NS
 - ...?