

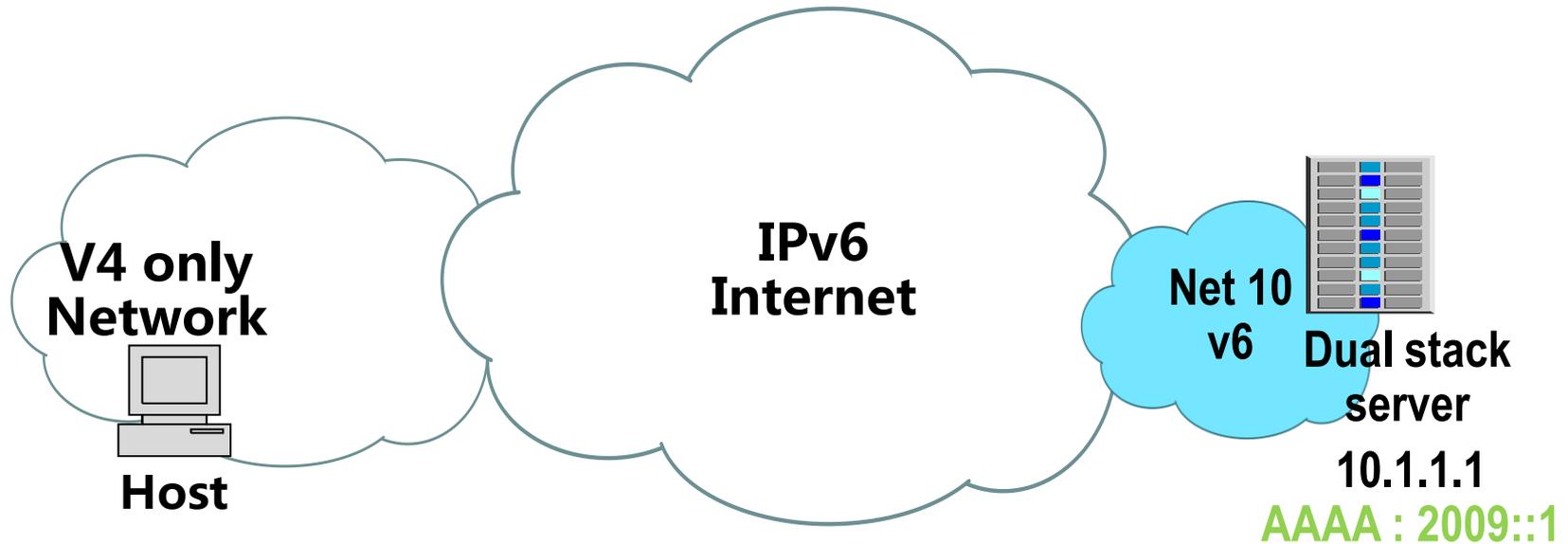
NAT46 considerations

(<http://www.ietf.org/id/draft-liu-behave-nat46-02.txt>)

IETF #77

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NAT46 Scenario



- Server located in IPv6 Internet may have private IPv4 address, but only has AAAA record
- Application class:
 - 1: Work through NAT without ALG
 - 2: Do name resolution

Function Modules of v4-v6 Translation

- DNS Handling
 - V4 application always sends type A DNS query; but IPv6 server does not have type A record
 - DNS handling function is needed
- Address Mapping
 - Use IPv4 address to represent IPv6 server's address
 - Maintain IPv4<->IPv6 mapping
- Translation
 - IPv4<->IPv6 packets translation
 - Need the mapping information to perform translation

Different Approaches of DNS/Mapping Handling

- Translation box performs DNS Handling/Address Mapping
 - Send both A/AAAA DNS queries
 - When only AAAA records returns, creating mapping
- DNS46 performs DNS Handling/Address Mapping
 - DNS46 Server send both A/AAAA DNS queries
 - DNS46 create the IPv4<->IPv6 mapping
 - Need to synchronize with translation box
- Host performs DNS Handling/Address Mapping
 - Need to synchronize with translation box

Work item in Behave?

- Behave re-charter to cover the scenario of IPv4 network to IPv6 Internet?