

# Happy Eyeballs v2

RFC 6555 bis

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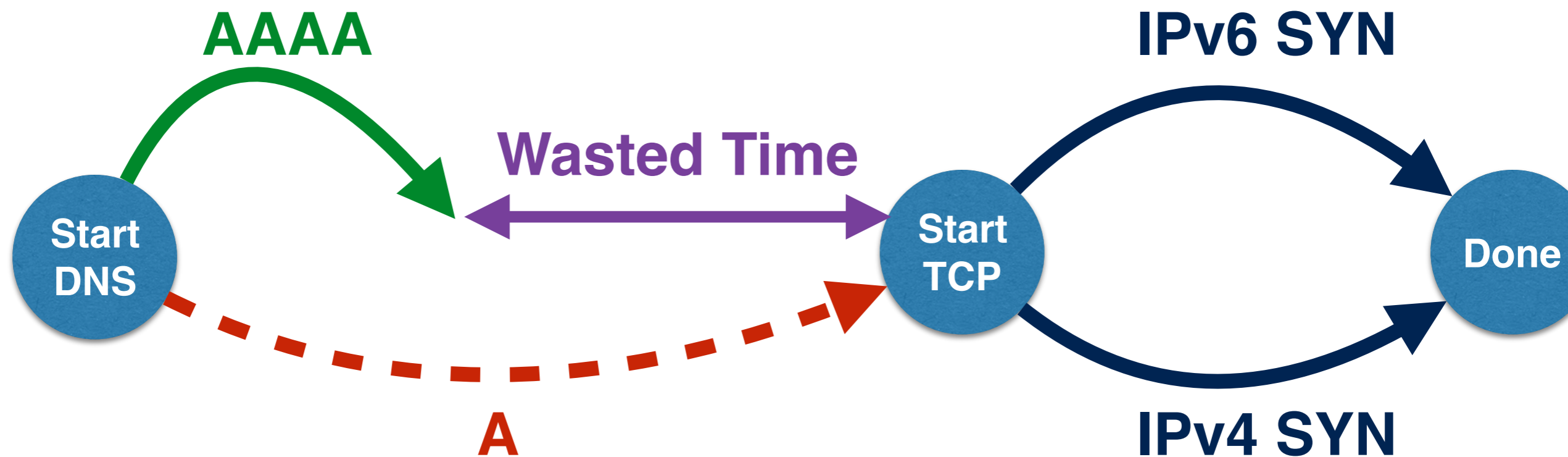
IETF 99  
v6ops  
July 2017  
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[draft-ietf-v6ops-rfc6555bis](#)

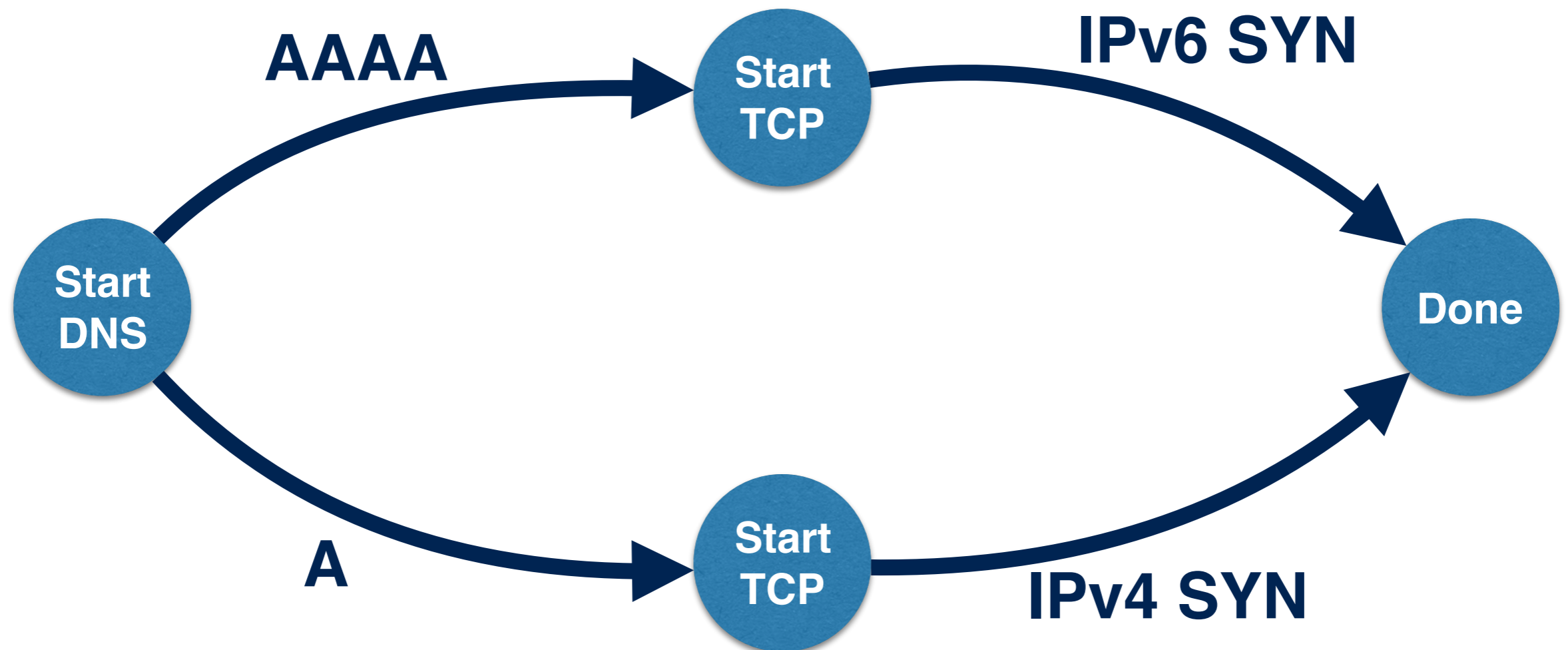
# Agenda

- Recap from IETF 98: differences from RFC 6555
- New Section: NAT64 + DNS64
- New Section: Limitations
- Next Steps

# Hostname Resolution getaddrinfo()



# Hostname Resolution Asynchronous



# Hostname Resolution

- AAAA received first → start IPv6 SYN
  - A records added to list when received
- A received first → start 50ms timer
  - AAAA received before then → start IPv6 SYN
  - timer fires → start IPv4 SYN

# Sorting Addresses

- Destination Address Selection — RFC 6724
- Rule 8.5 — leverage historical data
  - RTT
  - Used addresses
- Move first address of second family back up

# Connection Attempts

- Walk entire list of addresses
- Start next attempt after  $\mu_{RTT} + 4\sigma_{RTT}$

# NAT64 + DNS64

- IPv4 literals
  - Synthesize IPv6 address (RFC 7050, 6052)
- Host Names with Broken AAAA Records
  - Wait 2s, query A record, synthesize
- VPN
  - Query A from VPN DNS and synthesize



# Limitations

- PMTUD
- Application Layer
- Operational Issues

# Next Steps

- Addressed comments
- Implementation in production
- Working Group Last Call ?