

HEv3 Configurable Values and How to Tune Them?

HAPPY WG

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Gautam Akiwate
Tommy Pauly

IETF 124
Montreal

**The choice of values
represents a tradeoff**

Open Questions

How do we know we picked the right values?

- What are we trading off in HIPv3?
- How do we reason about tradeoffs? For example, is the following tradeoff ok?
 - “Reducing Resolution Delay Timer from 50ms to 40ms reduces IPv6 connections by 1%”.

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 - “Reducing Resolution Delay Timer from 50ms to 40ms reduces use of SVCB records by 1%”.

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- Should we make our preferences explicit?

From RFC Draft

“Implementors should feel welcome to use different values without changing this specification. Since **IPv6** issues are expected to be less common, the delays SHOULD be **increased** with time as client software is updated.”

Configurable Values

- Resolution Delay — 50ms
- Connection Attempt Delay — 250ms
 - Minimum — 100ms
 - Maximum — 2 seconds
- Last Resort Local Synthesis Delay — 2 seconds
- Preferred Family Address Count - 1

Resolution Delay

- Time to wait for a AAAA record after receiving an A record
- Recommended — 50ms

Connection Attempt Delay

- Time to wait between connection attempts in the absence of RTT data
- Recommended — 250ms
 - Minimum — 100ms
 - Maximum — 2 seconds

Last Resort Local Synthesis Delay

- Time to wait after starting the last IPv6 attempt before sending the A query
- Recommended — 2 seconds

Preferred Family Address Count

- Number of addresses belonging to the preferred address family that should be attempted before attempting the next address family
- Recommended — 1