

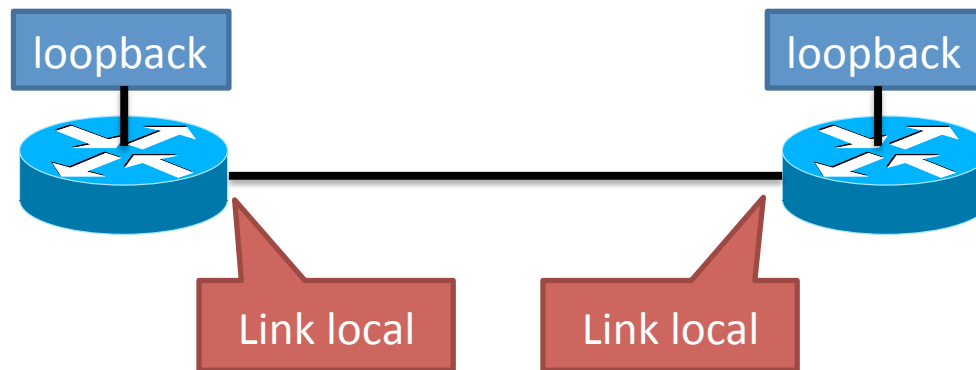
Using Only Link-Local Address in Network Core

draft-behringer-lla-only-01

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OPSEC WG

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Summary



- Discussion: No global nor ULA addresses on infrastructure links, **just link local**
- Describe pros and cons
- Goal: Help in decision process.
- Desired outcome: ~~BCP~~ **Informational**

Advantages of using link locals on infrastructure links

- Smaller routing table
 - Reduced memory consumption
 - Possibly decreased convergence time
- Reduced attack surface
 - Only need to protect loopbacks from outside
- Lower configuration complexity
 - Less errors
- Less address space required
- Simpler DNS

Caveats and Workarounds

- Interface ICMP:
 - Cannot ping specific link from remote
 - Workaround: RFC 5837 (i/f identifier in response)
- Traceroute:
 - Cannot see specific link
 - Workaround: RFC 5837 (i/f identifier in response)
- Hardware dependency:
 - LL by default EUI-64 based, changes w/ hardware
 - Workaround: Configure LL statically (ex: fe80::1)
- MPLS/RSVP-TE requires global link addresses

Feedback So Far

- “We are using such a setup for more than 6-8 years now.” - Janos Mohacsi
- “yes, it works. I've designed a network or two in this way over the years, and I'm sure I'm not the only one.” – Lorenzo Colitti
- General: Not a BCP
- “We *like* using global scoped IPv4 and IPv6 addresses everywhere, because it helps a lot with diagnostics” – Gert Doering
- “Seems brilliant when you design it less so afterwards.” - Jan H

Summary: Some like it, some don't

Changes from -00

- Goal: Informational (was: BCP)
- Some clarifications on approach
- Link to [ietf-grow-private-ip-sp-cores](#)
- Clarified that RFC5837 not much implemented
- Clarified that NMS systems may not work as before
- Clarified that MPLS/RSVP-TE requires link addresses for FRR

Summary

- Goal: Document advantages and caveats, to let operators make a good choice whether to use LL or not.
- Pros and cons are not “weighed”. Network operator must decide how important to him.
- We request this to become a WG document.