

A Larger Loopback Prefix for IPv6

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- 127/8 covers many addresses, ::1/128 only covers one
- Can be useful to run multiple application instances on the same e.g. TCP port, limited to host local access e.g. during network application development
- Can be done by using different loopback addresses under 127/8 e.g. 127.0.0.1:80, 127.0.0.2:80 etc.
- Can't be done with ::1/128

- Proposal is an additional IPv6 loopback prefix of 1::/48 – easy to type and remember, and is large (supports many /64s)
- Can't use ::/48, as it would cover IPv4 Mapped IPv6 Address prefix and deprecated IPv4-Compatible IPv6 Address prefix
- Default address assigned to loopback interface is 1::1/64 - easy to type and remember (1::/48 is all still loopback addresses, /64 is to match 64 bit IID)
- Processing rules similar to IPv4's – 1::/48 src and/or dst address packets can be forwarded by routers under limited circumstances
 - “native” IPv6 loopback prefix for future uses similar to RFC4379 “Detecting Multi-Protocol Label Switched (MPLS) Data Plane Failures”

- draft-smith-v6ops-larger-ipv6-loopback-prefix-02 coming
 - Minor text updates
 - Appendix about 127/8
 - Seems to be a bit of interest in why it's so large
 - I've been researching old RFCs, IENs, and early tcp-ip mailing list archives
 - Looking to find out if network 127 first appeared in 4.1cBSD, or was it in the earlier BBN implementation of TCP/IP in 4.1aBSD (or earlier non-Unix OS)?
 - Any interest in this appendix being included?