Transmission of IPv6 Packets over PLC Networks

draft-ietf-6lo-plc-01

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Introduction of the draft

• Objective: To define an IPv6 adaptation layer for constrained PLC networks based on IETF standards.

• Scope: constrained PLCs, including ITU-T G.9903, IEEE 1901.1 and IEEE 1901.2

• Status
  • Started at March 7, 2017, WG adopted at Feb. 1, 2019
  • Version 00: upload as a WG document and editorial modifications based on Carsten’s comments
  • Version 01: some modification in the structure and update the Neighbor Discovery section
Modification in the version 01

• Removal of the section 4.7-Extension at the 6lo adaptation layer
  • Unique in the ITU-T G.9903 PLC
  • Inconsistency in the order of the command frame header
    • ITU-T G.9903: the last header
    • RFC8066: before the LoWPAN_IPHC dispatch header
  • Solve the inconsistency in this draft or leave the section informational or remove the section permanently?
Modification in the version 01

• Refine the Neighbor Discovery section
  • Update “RFC6775-update” into “RFC8505”
  • Address registration in two situations
    • The route-over mode
      • Link-local address SHOULD be only registered at the 6LR
      • Non link-local addresses SHOULD be registered to the registrar via NS/NA and DAR/DAC (or EDAR/EDAC) messages
      • DAD MUST NOT be utilized if the address is assigned via DHCPv6 or generated via unique link-local address
    • The mesh-under mode
      - Each device is a link-local neighbor at L3 to the 6LBR
      - Registration via NS (ARO/EARO) and NA
      - No DAR/DAC or EDAR/EDAC messages are required
Future work

• We think that the draft has covered the main aspects of the IPv6 adaptation for PLCs. Please help us verify it.
• Your feedback is always appreciated