Support for HNCP in IPv6 CE routers

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History

• IETF98, Chicago, draft-ietf-v6ops-rfc7084-bis was accepted as WG item
  – Included RFC7084+new transition+HNCP

• 4 versions before IETF99, Prague
  – Push back from the WG

• In Prague presented several alternative choices
Pending Decision

• Informal talk with several v6ops participants and one of the RFC7084 co-authors
  – Don’t change RFC7084

• Seeking consensus (this week) for a complementary document to RFC7084, only for the transition part (draft-palet-v6ops-rfc7084-bis-transition-01)
  – NO HNCP support
    • Automatic provisioning of more complex topology than a single router with multiple LAN interfaces may be handled by means of HNCP ([RFC7788]), which is out of the scope of this document.
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IPv6 CE Vendors Panel

• September 2017, Taichung (Taiwan), APNIC44
  – D-Link - Hans Liu (D. of Strategic Technology)
  – NEC - Masanobu Kawashima (Assist. Mgr., P. Planning)
  – Zyxel (Senior Programmer)

• Discussion included Homenet support

• https://blog.apnic.net/2017/11/09/ce-vendors-share-thoughts-ipv6-support/
Some Thoughts

• CE support IPv6, but not always DHCPv6-PD in order to correctly allow multiple /64 inside customer LANs
  – even “guest” SSID
• Some do, and allow “downstream” routers, but no dynamic routing
  – reduce risk of calls to customer support
• Is too early to implement Homenet?
• Big trend in implementing new WiFi technologies (WiFi mesh)
  – Big opportunity to introduce Homenet
• Market for this kind of router is growing (price and margin up from 70 USD to 200 USD)
• Device discovery spanning multiple routers within a Homenet still an issue
Recent List Discussion (1)

• Missing opportunity for Homenet to have a single RFC requiring Homenet for CEs
  – v6ops or homenet?

• Homenet CE behind ISP CE, unsatisfactory
Recent List Discussion (2)

• Two possible models:
  1. “My friendly ISP” model
     • ISP has info of the Homenet (including other external links)
  2. “My home, my castle” model
     • External links untrusted by HNCP, CE has no Homenet topology info
       – DHCPv6-PD used to "connect" both devices

• It is 1 a matter of price or lack of information?
• 2 is killing homenet, some believe is on the other way around
• What do WE want Homenet to be?
• Some people use the ISP CE as L2
  – And have their own router – which works also if we have 1
• Actual people is smarter that what we think …
  – Even if not, homenet will sort out automatically most of the issues
  – CE serviceable by the ISP only?
Recent List Discussion (3)

• Is not getting more common to have a “dumb” CE, such an GPON-ONT, then the router, both provided by the ISP?
  – If so, the router is the one that requires Homenet
  – If you have multiple operators, will use only 1 of them

• What about hybrid routers
  – Main link wired, even multiple wired links
  – Secondary link LTE (may be backup, may be an additional ISP)

• Is Homenet only for retail high-end routers (those of 200 USD)?

• All-connected “IoT world”, will required multihoming …
Recent List Discussion (4)

- Document a standard that supports both 1 and 2
  - So we don’t depend on the ISP model
Next steps

• Questions ?

• Inputs ?