Basic Requirements for IPv6
Customer Edge Routers

<draft-ietf-v6ops-rfc7084-bis-04>
<draft-palet-v6ops-rfc7084-bis2-00>
<draft-palet-v6ops-rfc7084-bis4-hncp-00>
<draft-palet-v6ops-rfc7084-bis-transition-00>

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Integrated support for:
- IPv6-only CE
- HNCP (automated provisioning of downstream routers)
- IPv4 in dual-stack WAN
- IPv4 in the LAN(s)
- Transition support
  - IPv4 "as a service"
  - IPv6 "as a service"

Usage scenarios

Architecture:
- Actual IPv4 end-user
- IPv6 end-user

Support of IPv4 multicast “continuity” in LANs (IPTV)
Open Issues

• L-12: The IPv6 CE router SHOULD implement a DNS proxy as described in [RFC5625]

• ?
One or several documents? (1)

- We had this discussion in Chicago (IETF98)
- The WG agreed a single one AND
  - it was adopted as a WG document by overwhelming consensus
- After 5 versions a couple of participants complain …

- Reality check:
  - Actual market situation still needs IPv4 in the LANs
  - This will be the case for at least 3-5 years
  - No way an ISP delivers IPv6-only service in the LANs
  - So, CEs need IPv4 support
    - and for that transition support
One or several documents? (2)

1. Actual document (as in RFC7084) including IPv4 transition support if IPv4 is required.

or

2. IPv6-only router document (somehow downgrade RFC7084 to RFC6204) + new IPv4 transition support document for CEs
Choices (1)

1. Minimum Requirements for IPv6-only Customer Edge Routers (draft-palet-v6ops-rfc7084-bis2-00)
   - RFC7084 – IPv4 – transition support
   - CE needed in a few years from now (very simple networks):
     - no downstream routers (HNCP)
     - Example: IoT IPv6-only networks

2. Basic Requirements for IPv6 Customer Edge Routers with HNCP (draft-palet-v6ops-rfc7084-bis4-hncp-00)
   - RFC7084 + HNCP – transition support
   - CE needed in a few years from now for end-user networks
     - IPv6-only LAN & WAN
     - Possible downstream routers (HNCP)
3. Other choices
   - For example:
     - Option 1+2 (previous slide) but differentiate both cases in the same document
     - RFC7084 – transition support

   • Then, to support transition:
     - Transition Requirements for IPv6 Customer Edge Routers (draft-palet-v6ops-rfc7084-bis-transition-00)
Poll

• Q1: One or several documents?

• Q2: If several documents
  – Option 1: RFC7084 – IPv4 – transition support
  – Option 2: RFC7084 + HNCP – transition support
  – Option 3: Option 1+2 in a single document
  – Option 4: RFC7084 – transition support
  – Option 5: ?
Next steps

• What we want to do?

• If split documents, become WG items?

• Further inputs?