

# homenet architectural principles

aka “Are we there yet?”

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# Status

- Worked since IETF88 to clear around 70 DISCUSSEs and COMMENTs from IESG evaluation
  - Largely complete
- Want to run the more notable changes and proposed text from IESG review past the WG this morning
  - Multicast (3.5.1)
  - O&M section (3.8.2)
  - Routing (3.5)
  - Default deny/allow (3.6.1)

# On multicast (3.5.1)

“[RFC4291] requires that any boundary of scope 4 or higher (i.e. admin-local or higher) be administratively configured. Thus the boundary at the homenet-ISP border must be administratively configured, though that may be triggered by an administrative function such as DHCP-PD.

Other multicast forwarding policy borders may also exist within the homenet, e.g., to/from a guest subnet, whilst the use of certain media types may also affect where specific multicast traffic is forwarded or routed.”

# O&M (3.8.2)

- Expanded O&M section
  - A couple of clarifications to be added after discussions here at IETF yesterday
  - Particularly wrt terms “self-monitoring” and “self organising”
  - Also to note what we mean more specifically by “zero configuration”
  - Layer 2 configuration is out of scope, e.g. WPA2
- Now looking for authors to start a separate new homenet O&M document
  - Really need O&M expertise here

# Routing (3.5)

- Agreed that any new routing protocol related work must go to routing area
- Other points:
  - On reuse of existing protocols
  - Supporting multiple routing protocols
  - Picking one protocol?
  - “the complete view”
  - LLNs
  - Distributing configuration information

# On reusing existing protocols

“Existing protocols will be used to meet the requirements of home networks. Where necessary, extensions will be made to those protocols. When no existing protocol is found to be suitable, a new or emerging protocol may be used. Therefore, it is important that no design or architectural decisions are made that would preclude the use of new or emerging protocols.”

# On multiple routing protocols

“Ideally, a single routing protocol solution is in use at a given time in a given homenet. If more than one routing protocol is defined for use in a homenet, then a mechanism is required to ensure that all routers in a given homenet support the same protocol before it is used, and that a particular routing solution is enabled by default.”

# Should we pick just one?

?



# On the “complete view”

“Using information distributed through the routing protocol, each node in the homenet should be able to build a graph of the topology of the whole homenet including links, nodes, connectivity, and link metrics.”

# LLNs

“Ideally, LLN or other logically separate networks should be able exchange routes such that IP traffic may be forwarded among the networks via gateway routers which interoperate with both the homenet and the LLN.”

# On configuration information

- Noted we need to be able to pass information from ISP to devices in the homenet
- Noted the we may or may not do that within the routing protocol
  - HNCP being discussed today
  - Perhaps return to this at the end of the session or take to list after the HNCP related discussion

# default allow/deny (3.6.1)

“The topic of whether future home networks as described in this document should have a 'default deny' or 'default allow' position has been discussed at length in various IETF meetings without any consensus being reached on which approach is more appropriate.

Further, the choice of which default to apply may be situational, and thus this text makes no recommendation on the default setting beyond what is written on this topic in [RFC6092].

We note in Section 3.6.3 below that the implicit firewall function of an IPv4 NAT is commonplace today, and thus future CERs targeted at home networks should continue to support the option of running in 'default deny mode', whether or not that is the default setting.”

# Publishing -13

- If we have consensus on previous points in this slide deck we will now push out -13 for final IESG approval

