Homenet Security
1. Make a list of knobs

• Between Home Routers
  – Link addressing (neighbor discovery)
  – Reachable Prefixes (routing)
  – Known Services (router itself, mDNS Proxy?)
  – …

• Through a Home Router (from one interface to another)
  – Traffic matching a configured rule (UPnP, PCP, etc)
  – Traffic matching a stateful entry
  – Service Discovery (Multicast?)
  – …
2. Apply settings (policies) to the knobs

• Between Home Routers
  – Link addressing (neighbor discovery) Enabled
  – Reachable Prefixes (routing) Global Prefixes Only
  – Known Services (router itself, mDNS Proxy?) Router only
  – … Other settings

• Through a Home Router (from one interface to another)
  – Traffic matching a configured rule (UPnP, PCP, etc) Yes
  – Traffic matching a stateful entry “Advanced FW Mode”
  – Service Discovery (Multicast?) No
  – …. Other settings
Homenet’s Goal for Policies

- Define a default set of policies for the 3 combinations of “Home”, “Guest” and “Internet”
- Policy knobs should be rich enough for other “realms” to define their own policies, static or dynamic (implying some control protocol or UI)
- For the “Internet Facing” policies, adopt RFC 6204 (including firewall)
Other Security Items..

• Recommend an auto update capability for router firmware
• Do we need to associate scope with a prefix, or is Link-Local, ULA and Global sufficient?
• ...?