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The IETF Homenet Working Group

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Scope

Easing the deployment of configuration
of IPv6 within SOHO networks

Scope

“How to deploy and operate a multi-homed,
multi-segment network without a CCIE”

Networks are getting more complicated

- More devices
- Multiple segments
 - Private
 - Guest (e.g. a guest WiFi SSID)
 - Utility (Smart meters)
 - Media (VoD)
 - VoIP
- Multiple L2 technologies
 - Ethernet
 - WiFi
 - Zigbee

How did we get here? (part 1)

- People started noticing problems with the DNS support in SOHO-grade CPE
- Various research projects undertaken to investigate this
 - IIS (.se), Nominet, others
- Nominet research results in ICANN SSAC report and RFC 5625
- Comcast hosts a summit (Feb '09) with CPE vendors to look at this and related brokenness
- We tried to create an IETF Working Group (“Homegate”) but failed due to disagreements with the IETF hierarchy over the scope of the work

How did we get here? (part 2)

- Jun '11 – Jari Arrko and a few others proposed a charter for a new working group focusing on the internal issues related to deployment of IPv6 in small networks
- A BoF meeting was proposed for the July '11 IETF meeting in Quebec
- We got slashdotted!
- The proposed charter was accepted and the scheduled session became a full working group meeting instead
- c.200 attendees at the meeting – standing room only!

Main Charter Items

<http://tools.ietf.org/wg/homenet/charters>

- Prefix configuration for routers
- Managing routing
- Name resolution
- Service discovery
- Network security

More details

- Prefix configuration for routers
 - Automatic partitioning of a /56 into /64s ?
 - NB: Do give your customers at least a /56! (RFC 6177)
- Managing routing
 - We need a zero maintenance IGP
 - Devices may need access to more than one upstream
 - So source IP and gateway might depend on the service

What are we considering?

- Name resolution
 - How do we find our hosts and devices, both inside the network and from outside ?
- Service discovery
 - Should work across segments (multicast?)
- Network security
 - And it has to be secure, too!

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Questions?