

Title: Broadband Home Gateway [HomeGate] BoF

Proposed IETF Area: Transport

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Proposed Charter:

Access to broadband Internet services use networking technology of one form or another within the home, small office/home office (SOHO) or small to medium business (SMB) as the demarcation between the local network and the Internet. These technologies almost always involve a single entity - which is not purely a router - called a "home gateway". This entity connects a local user or users to various LAN services, providing some basic level of security. The majority of Internet users employ home gateways for this purpose.

However, many serious, long-term problems face users of home gateways today. At the root of many of these problems is the fact that device manufacturers, and/or the organizations that specify requirements for such devices, are not certain which IETF standards and best current practices should be supported, and when/why that support is needed. As a result of this, millions of devices are being deployed every year, which do not work with important IETF protocols, standards, and best practices that are central to the future of the Internet.

One of the problems in this area appears to be that home gateway vendors are unclear which RFCs are important, or current, and why they are important and in what context they matter. Thus, the primary objective of the group is document a baseline of requirements derived from "core" RFCs which must be supported. A secondary objective is to list desired-but-optional, or "advanced", requirements from the same RFCs as well as other, non-core RFCs. The context and reasoning behind each document which is included should be summarized as well, in order to improve comprehension of why a given document has been included. These things will help improve compatibilities with and capabilities for use of the Internet *of today*. This will include a focus in areas such as DNS proxy behavior, congestion mechanisms support, and security.

A secondary problem is compatibility with and capability for the use of the Internet *of tomorrow*. New security needs related to DNS are motivating a move to DNSSEC. However, many if not most home gateways cannot handle DNSSEC, which is expected to be a major problem that could significantly impede the deployment of DNSSEC globally. Support for IPv6 is also lacking to a great degree and there is no clear understanding of how such devices should support IPv6.

This working group will not develop new Internet protocols, but may create different requirements in the context of home gateways. If the Working Group believes that new protocols are needed, it will refer the problem to the IESG for further work in existing or new Working Groups.

Proposed Deliverables and Priorities:

The Working Group would work to improve the network experience that a user of a home gateway gets when using the Internet. This means specifying the requirements from different RFCs should be supported in home gateways. This will touch on standards such as:

- IPv6
- DNSSEC RFCs and BCPs
- ECN
- RED (or other queue management)
- DNS Proxy BCPs
- Security-Related BCPs
- Other TBD

The group will create a BCP-level document for home gateways that only support IPv4, and a second BCP-level document for home gateways that only support both IPv4 and IPv6.

Jason Livingood 10/26/09 11:08 AM

Comment: Is this overly limiting?

The group shall prioritize work as follows:

1. IPv4-related topics
2. IPv6-related topics
3. DNS-related topics (DNSSEC, DNS Proxies, etc.)
4. ECN-related topics (congestion and queue management)
5. Security-related topics

Contributors: ISPs and home gateway developers / vendors

Who Uses the Work: Home gateway developers / vendors, ISPs