AMT
draft-ietf-mboned-auto-multicast

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AMT Draft Specification History

- History outline
  - First WG draft: 10 years ago
  - Last WG Last-Call in 2008
  - Version 11 posted 2011-07-11

- Another revision will be required.

Draft 11 Changes

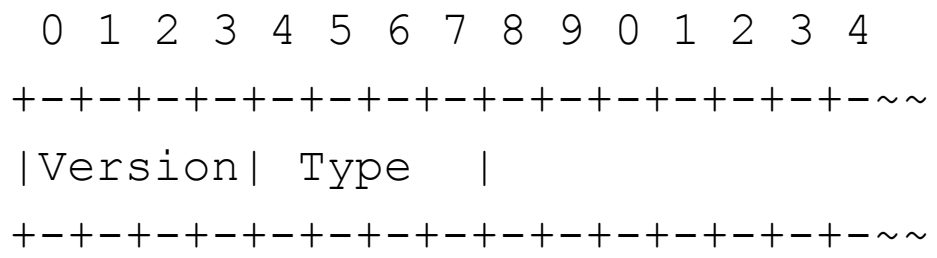
- Re-titled “Automatic Multicast Tunneling”
- Removed support for multicast sourcing
- Added optional gateway source address field to membership query message.
- Require use of the same port for all request and update messages sent during a “session”.
- Indicate that a gateway should repeat discovery process before starting a new “session” (when anycast addressing is used).
- Allow zero checksum for IPv6 data packets.

Draft 11 Changes Continued

- Clearly indicate that no state allocation should occur during discovery.
- Added to Security Considerations section.
- Minor edits to accommodate changes described above.

Next Revision

- Add a version field to the messages:



  - Identify current version using zero (0).
- Add requirement that gateway send complete state report following address change (or for every request?).
- Address easily resolved outstanding issues.

Smaller Protocol Design Issues

- How does a relay determine which protocol to use in the membership query message?
- Can a gateway send IGMP & MLD reports in the same “session”?
- What retransmission/timeout behavior should be required if a gateway does not receive a response to a request?

Larger Protocol Design Issues

- Does not account for update message loss, reordering or rejection.
- Allows DoS attacks on gateways though update/teardown message spoofing/forgery.
- Allows potential delivery of duplicate data message streams as a result of gateway address changes (even if temporary).
- Requires the transmission of a request message to report a new data destination address. Unsolicited update messages from a new address are ignored.
- Does not allow for the gathering of per-gateway statistics on a relay in the presence of gateway address changes.

Next Steps

- Resolve outstanding issues that can be addressed within the current protocol design.
- Publish new draft that includes necessary changes.
- Determine whether there is interest in solving larger issues, by either making changes to existing protocol design, or pursuing development of an alternative solution.