Generic UDP Encapsulation

draft-ietf-intarea-gue-06

draft-ietf-intarea-gue-extensions-05
Reviews

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Clarifications

- Applicability statement needed - will add
- Prevent middlebox filtering - really can’t
- Ref. draft-ietf-intarea-tunnels - next version
- Normative reference to GUE extensions draft - fix next version
- Lumping tunnels and encapsulation together - will clarify terminology and applicability
Issues

- Zero UDP checksum in IPv6
- Congestion control
- Too flexible and extensible
- Why proposed standard?
UDPv6 checksum

- Requirements is version 06
  - UDP checksum is enabled (recommended)
  - GUE checksum is used
  - Else, use Zero UDP checksum following applicable requirements
- Draft doesn’t show how to satisfy RFC6936
- Reqs. in section 6.2 of RFC8086 applicable
Congestion considerations

- Section misnamed in draft
- Should be same as RFC8086
- Possible difference is that GUE always carries IP protocol, GRE can carry non-IP
- Adapt section 8 of RFC8086 including TMCE
Too flexible and extensible

- Flag-fields (compared to TLVs)
  - Constrained in several ways
  - Well ordered (both in format and processing)
  - Nothing sent is just ignored
  - Efficient processing (e.g. amenable to TCAM)
  - Resistant to DOS attack
- Protocol field: IP protocol (versus EtherType)
- Transport versus tunnel encap
- Private data
Why proposed standard?

- Intended for general deployment: both in limited domains and Internets (with appropriate requirements for latter)
- Logically an update to GRE
- Substantial review, at least one implementation (Linux), in deployment
- Foo-over-UDP (where foo is any IP protocol)
Questions/comments