Analysis of Candidate Solutions to Reveal the Origin IP Address in Shared Address Deployments

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Scope and Objectives

- Some IP servers need source IP address of incoming traffic for specific treatment
  - In address sharing environments (RFC 6269) the sole IPv4 address for unambiguous host identification is not sufficient
- Issue may also arise in IPv6 environments
- Draft analyzes various candidate solutions to address this requirement
  - IP option, TCP (HOST_ID) option, ID field of IP header, application layer extension
- Goal is to document recommendations *a la* RFC 6302

What Next?

- Adopt as a WG item?
  - One of the items covered by the WG charter
    - Covers issues raised by both translation (*behave*) and tunneling (*softwire*) contexts
  - Proposed work can be seen as a follow-up to RFCs 6269 and 6302 as it discusses "address space issues and basic IP layer functionality"
- Complete the document with clear recommendations
  - Recommend a solution?
    - Analysis of solution landscape needs to include performance and privacy impacts, *etc*.
  - "*IETF has documented the issues and has analyzed candidate solutions but IETF believes CGN should remain the exception and never become a rule for the sake of IPv6 deployment"*?
    - Proprietary solutions may then emerge at the risk of jeopardizing interoperability
  - "*IPv6 will solve this*"?
    - Does not mitigate service disruption to be experienced by Internet users when address sharing designs are deployed at large scale during transition period
    - Issues remain valid for NAT64 anyway