

ICMP Acceptable Use Policy Update

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ICMP

- Internet nodes use ICMP to exchange control information
- Little definition of acceptable use beyond that
- Little development between inception and 2007

Making ICMP Extensible

- **Extended ICMP to Support Multi-Part Messages [RFC4884] 2007**
- **ICMP Extensions for Multiprotocol Label Switching [RFC 4950] 2007**
- **Extending ICMP for Interface and Next-Hop Identification [RFC 5837] 2010**
- **PROBE: A Utility for Probing Interfaces [RFC 8335] 2018**

An Acceptable Use Policy

- **An Acceptable Use Policy for New ICMP Types and Codes [RFC 7279] 2014**
 - A good start
 - Please don't use ICMP as a routing protocol
 - Couldn't anticipate future use cases

The ICMP Explosion

- draft-ietf-intarea-rfc8335bis
- draft-ietf-intarea-extended-icmp-nodeid
- draft-ietf-6man-icmpv6-reflection
- draft-ietf-6man-icmpv6-ioam-conf-state
- draft-bonica-intarea-icmp-exten-hdr-len
- draft-jags-intarea-icmp-ext-underlay-info
- draft-pignataro-icmp-enviro-info
- draft-xu-intarea-challenge-icmpv4
- draft-varhal-6man-icmp-srv6-vpn
- draft-mitchell-intarea-rfc5837bis
- draft-many-intarea-icmp-mp
- draft-yl-savnet-icmp-extension
- draft-xbm-intarea-icmp-query
- draft-liu-6man-icmp-verification
- draft-ali-6man-srv6-vpn-icmp-error-handling
- draft-xu-intarea-challenge-icmpv6
- draft-xu-intarea-vulnerabilities-forged-icmp

Logical Conclusion

- Draft-xbm-int-area-icmp-query
- Generic query and query response messages
 - Both contain an ICMP Extension Structure
- Need to exchange a new piece of information?
- Define a new ICMP Extension Object !

Operational Consideration

- ICMP is appropriate for the transport of some information
- But is it appropriate for the transport of all information?
 - Network layer information only?
 - Only some network layer information?
- Just because you can, doesn't mean that you should....

Operational and Security Considerations

- Reliability & Rate Limiting
- Amplification attacks
 - Request message must be as long as response
- Authentication
 - ICMP messages are easily spoofed
- Access control
 - Keep private information private

A Proposal

- A small group reviews the drafts on Slide 5 and abstracts both acceptable and unacceptable uses of ICMP
 - With rationale
- Publishes a replacement for RFC 7279
 - With rationale
- Publishes a review of each draft in light of acceptable use
- Volunteers?