ICMP Types and Codes

The original version of this file can be found here.

Jon Postel's original paper on ICMP, RFC 792.

Other RFCs referenced in this table can be accessed by visiting the RFC Index.

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ICMP TYPE NUMBERS

The Internet Control Message Protocol (ICMP) has many messages that
are identified by a "type" field.

Type    Name                                    Reference
----    -------------------------               ---------
  0     Echo Reply                              [RFC792]
  1     Unassigned                                   [JBP]
  2     Unassigned                                   [JBP]
  3     Destination Unreachable                 [RFC792]
  4     Source Quench                           [RFC792]
  5     Redirect                                [RFC792]
  6     Alternate Host Address                       [JBP]
  7     Unassigned                                   [JBP]
  8     Echo                                    [RFC792]
  9     Router Advertisement                   [RFC1256]
 10     Router Selection                       [RFC1256]
 11     Time Exceeded                           [RFC792]
 12     Parameter Problem                       [RFC792]
 13     Timestamp                               [RFC792]
 14     Timestamp Reply                         [RFC792]
 15     Information Request                     [RFC792]
 16     Information Reply                       [RFC792]
 17     Address Mask Request                    [RFC950]
 18     Address Mask Reply                      [RFC950]
 19     Reserved (for Security)                    [Solo]
 20-29  Reserved (for Robustness Experiment)       [ZSu]
 30     Traceroute                             [RFC1393]
 31     Datagram Conversion Error              [RFC1475]
 32     Mobile Host Redirect            [David Johnson]
 33     IPv6 Where-Are-You              [Bill Simpson]
 34     IPv6 I-Am-Here                  [Bill Simpson]
 35     Mobile Registration Request     [Bill Simpson]
 36     Mobile Registration Reply       [Bill Simpson]
 37     Domain Name Request                    [Simpson]
 38     Domain Name Reply                      [Simpson]
 39     SKIP                                   [Markson]
 40     Photuris                               [Simpson]
 41-255 Reserved                                    [JBP]

Many of these ICMP types have a "code" field.  Here we list the types
again with their assigned code fields.

Type    Name                                    Reference
----    -------------------------               ---------
  0     Echo Reply                              [RFC792]
```

```
          Codes
               0  No Code

   1      Unassigned                              [JBP]

   2      Unassigned                              [JBP]

   3      Destination Unreachable                 [RFC792]

          Codes
               0  Net Unreachable
               1  Host Unreachable
               2  Protocol Unreachable
               3  Port Unreachable
               4  Fragmentation Needed and Don't Fragment was Set
               5  Source Route Failed
               6  Destination Network Unknown
               7  Destination Host Unknown
               8  Source Host Isolated
               9  Communication with Destination Network is
                  Administratively Prohibited
              10  Communication with Destination Host is
                  Administratively Prohibited
              11  Destination Network Unreachable for Type of Service
              12  Destination Host Unreachable for Type of Service
              13  Communication Administratively Prohibited    [RFC1812]
              14  Host Precedence Violation                    [RFC1812]
              15  Precedence cutoff in effect                  [RFC1812]


   4      Source Quench                           [RFC792]
          Codes
               0  No Code

   5      Redirect                                [RFC792]

          Codes
               0  Redirect Datagram for the Network (or subnet)
               1  Redirect Datagram for the Host
               2  Redirect Datagram for the Type of Service and Network
               3  Redirect Datagram for the Type of Service and Host

   6      Alternate Host Address                  [JBP]

          Codes
               0  Alternate Address for Host

   7      Unassigned                              [JBP]

   8      Echo                                    [RFC792]

          Codes
               0  No Code

   9      Router Advertisement                    [RFC1256]

          Codes
               0  No Code

  10      Router Selection                        [RFC1256]
```

```
            Codes
                0   No Code

   11       Time Exceeded                           [RFC792]

            Codes
                0   Time to Live exceeded in Transit
                1   Fragment Reassembly Time Exceeded

   12       Parameter Problem                       [RFC792]

            Codes
                0   Pointer indicates the error
                1   Missing a Required Option       [RFC1108]
                2   Bad Length


   13       Timestamp                               [RFC792]

            Codes
                0   No Code

   14       Timestamp Reply                         [RFC792]

            Codes
                0   No Code

   15       Information Request                     [RFC792]

            Codes
                0   No Code

   16       Information Reply                       [RFC792]

            Codes
                0   No Code

   17       Address Mask Request                    [RFC950]

            Codes
                0   No Code

   18       Address Mask Reply                      [RFC950]

            Codes
                0   No Code

   19       Reserved (for Security)                    [Solo]

   20-29    Reserved (for Robustness Experiment)        [ZSu]

   30       Traceroute                              [RFC1393]

   31       Datagram Conversion Error               [RFC1475]

   32       Mobile Host Redirect            [David Johnson]

   33       IPv6 Where-Are-You              [Bill Simpson]

   34       IPv6 I-Am-Here                  [Bill Simpson]
```

```
35      Mobile Registration Request      [Bill Simpson]

36      Mobile Registration Reply        [Bill Simpson]

39      SKIP                                 [Markson]

40      Photuris                             [Simpson]
```

Code

```
0       Reserved
1       unknown security parameters index
2       valid security parameters, but authentication failed
3       valid security parameters, but decryption failed
```

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