Representation of the DNS protocol header

Modules

struct

Classes

Header

class **Header**

Representation of the DNS protocol header.

Member variables:

_id -- the 16-bit DNS query identifier.

_opcode -- the 4-bit DNS query opcode, one of { Header.OPCODE_QUERY, Header.OPCODE_IQUERY, Header.OPCODE_STATU }.

_rcode -- the 4-bit DNS response code, one of { Header.RCODE_NOE Header.RCODE_FORMATERR, Header.RCODE_SERVFAIL, Header.RCODE_NAMEERR, Header.RCODE_NIMPL }.

_qdcount -- number of question entries indicated in the Header

_ancount -- number of answer entries indicated in the Header

_nscount -- number of authoritative entries indicated in the Hea

_arcount -- number of additional entries indicated in the Header

_qr -- A one bit field that specifies whether this message is a query (0), or a response (1).

_aa -- Authoritative Answer - this bit is valid in responses, an specifies that the responding name server is an authority for the domain name in question section.

_tc -- TrunCation - specifies that this message was truncated du to length greater than that permitted on the transmission channel.

_rd -- Recursion Desired - this bit may be set in a query and is copied into the response. If RD is set, it directs the na server to pursue the query recursively. Recursive query support is optional.

_ra -- Recursion Available - this be is set or cleared in a response, and denotes whether recursive query support is available in the name server.

Methods defined here:

__init__(self, id, opcode, rcode, qdcount=0, ancount=0, nscount=0, arcount=0, qr=False, aa=F
tc=False, rd=False, ra=False)

```
    Initialize the Header from supplied arguments.

    id -- the 16-bit DNS query identifier of the query

    opcode -- the 4-bit DNS query opcode, one of {
      Header.OPCODE_QUERY, Header.OPCODE_IQUERY, Header.OPCODE_
    TUS
      }.

    rcode -- the 4-bit DNS response code, one of { Heade
    r.RCODE_NOERR,
      Header.RCODE_FORMATERR, Header.RCODE_SERVFAIL,
      Header.RCODE_NAMEERR, Header.RCODE_NIMPL }.

    Keyword arguments:
    qdcount -- number of question entries indicated in the Head
    ancount -- number of answer entries indicated in the Header
    nscount -- number of authoritative entries indicated in the
    Header
    arcount -- number of additional entries indicated in the He
    r
    qr -- A one bit field that specifies whether this message i
          query (0), or a response (1).
    aa -- Authoritative Answer - this bit is valid in responses
    nd
          specifies that the responding name server is an autho
    y
          for the domain name in question section.
    tc -- TrunCation - specifies that this message was truncate
    ue
          to length greater than that permitted on the transmis
    n
          channel.
    rd -- Recursion Desired - this bit may be set in a query an
    s
          copied into the response.  If RD is set, it directs t
    name
          server to pursue the query recursively.  Recursive qu
          support is optional.
    ra -- Recursion Available - this be is set or cleared in a
          response, and denotes whether recursive query support
          available in the name server.
```

__len__(self)

```
    Return the length of the Header's binary string representat
    .
```

__str__(self)

```
    Return a human-readable string representation of the Header
```

pack(self)
    Return a packed binary string representation of the Header.

Static methods defined here:

fromData(headerdata, offset=0)
    Return a new Header object from the supplied binary data.

Data and other attributes defined here:

OFFSET_AA = 10

OFFSET_OPCODE = 11

OFFSET_QR = 15

OFFSET_RA = 7

OFFSET_RCODE = 0

OFFSET_RD = 8

OFFSET_TC = 9

OFFSET_Z = 6

OPCODE_IQUERY = 1

OPCODE_QUERY = 0

OPCODE_STATUS = 2

QUERY = 0

RCODE_FORMATERR = 1

RCODE_NAMEERR = 3

RCODE_NIMPL = 4

RCODE_NOERR = 0

RCODE_SRVFAIL = 2

RESPONSE = 1