Representations of various DNS resource record (RR) types.

Modules

logging signal struct sys

Classes

RR
- RR_A
- RR_AAAA
- RR_CNAME
- RR_NS
- RR_SOA

class **RR**

Representation common to all DNS resource records.

Member variables:

_dn -- a DomainName *object* (see class gz01.inetlib.DomainName)
about which this RR stores information.

_ttl -- an integer time-to-live, 16-bits long.

type -- The DNS type of this resource record; one of { RR.TYPE
(DNS A record), RR.TYPE_NS (DNS NS record), RR.TYPE_CNAME (DNS C
AME
record), RR.TYPE_SOA (DNS start-of-authority record), RR.TYPE_PT
(DNS PTR record), RR.TYPE_MX (DNS mail exchange record),
RR.TYPE_AAAA (DNS IPv6 address record).

_class - the DNS class type of this resource record. Always
RR.CLASS_IN for Internet in this implementation (other classes d
exist in general).

Methods defined here:

__init__(self, dn, ttl, rdlength)
Initialize a RR from a user-supplied DomainName, ttl, and
rdlength. Note that this RR class only handles RRs of clas
IN
(Internet).

dn -- a DomainName *object* (see class gz01.inetlib.DomainN
e)
that this RR represents.

ttl -- a 16-bit integer time-to-live, measured in units of
  seconds.

rdlength -- an integer length of the data field in the RR.
his
            is used to compute this RR's length, which is
            subsequently used by subclasses derived from RR

__len__(self)
Return the length of this RR.

__str__(self)
Return a string rep.

pack(self)
Pack this RR into a packed-binary string rep and return tha
string.

Static methods defined here:

fromData(data, offset=0)
Given user-supplied packed binary data and an optional offs
Unpack that data, returns a two-tuple containing a
new RR-derived object and the (compact) length of that obje
.

Data and other attributes defined here:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

class **RR_A**(RR)

Representation of a DNS RR of type A (address).

Member variables:

```
_addr -- the Internet address (a packed four-byte quantity
         constructed using socket.inet_aton) that this A record
         points to.
```

Methods defined here:

__init__(self, dn, ttl, addr)
```
    Initialize a RR_A based on a user-supplied parameters.

    dn -- a DomainName object
    ttl -- a 16-bit integer time to live, measured in units of
      seconds.
    addr -- an internet address (a packed four-byte quantity
            constructed using socket.inet_aton).
```

__repr__(self)
```
    Return a diagnostic string rep.
```

__str__(self)
```
    Return a pretty-printable string rep.
```

pack(self)
```
    Return a packed-binary rep.
```

Methods inherited from RR:

__len__(self)
```
    Return the length of this RR.
```

Static methods inherited from RR:

fromData(data, offset=0)
```
    Given user-supplied packed binary data and an optional offs
    into that data, returns a two-tuple containing a
    new RR-derived object and the (compact) length of that obje
    .
```

Data and other attributes inherited from RR:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

class **RR_AAAA**(RR)

```
An IPv6 RR.
```

Methods defined here:

__init__(self, dn, ttl, addr)

__str__(self)

pack(self)

```
Reutrn a packed-binary rep.
```


Methods inherited from RR:

__len__(self)

```
Return the length of this RR.
```


Static methods inherited from RR:

fromData(data, offset=0)

```
Given user-supplied packed binary data and an optional offs
into that data, returns a two-tuple containing a
new RR-derived object and the (compact) length of that obje
.
```

Data and other attributes inherited from RR:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

class **RR_CNAME**(RR)

```
    Representation of a DNS RR of type CNAME.

    Member variables:
    _cname -- the DomainName that this CNAME record points to.
```

Methods defined here:

__init__(self, dn, ttl, cname)

```
        Initialize a RR_CNAME based on a user-supplied parameters.

        dn -- a DomainName object
        ttl -- a 16-bit integer time to live, measured in units of
          seconds.
        cname -- the DomainName target of the CNAME entry.
```


__repr__(self)

```
        Return an informative string rep.
```


__str__(self)

```
        Return a pretty-printable string rep.
```


pack(self)

```
        Return a packed-binary rep.
```

Methods inherited from RR:

__len__(self)

```
        Return the length of this RR.
```

Static methods inherited from RR:

fromData(data, offset=0)

```
        Given user-supplied packed binary data and an optional offs
        into that data, returns a two-tuple containing a
        new RR-derived object and the (compact) length of that obje
        .
```

Data and other attributes inherited from RR:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

class **RR_NS**(RR)

```
    Representation of a DNS RR of type NS (name server).

    Member variables:

    nsdn -- the DomainName of the DNS name server that this RR_NS
    record points to.
```


Methods defined here:

__init__(self, dn, ttl, nsdn)

```
    Initialize a RR_NS based on a user supplied parameters.

    dn -- a DomainName object referring to the domain name for
    ich
      this NS record is about.
    ttl -- time to live
    nsdn -- the DomainName of the name server that serves dn
```

__repr__(self)

```
    Return a diagnostic rep.
```

__str__(self)

```
    Return a pretty-printable string rep.
```

pack(self)

```
    Return a packed-binary rep.
```

Methods inherited from RR:

__len__(self)

```
    Return the length of this RR.
```

Static methods inherited from RR:

fromData(data, offset=0)
    Given user-supplied packed binary data and an optional offs
    into that data, returns a two-tuple containing a
    new RR-derived object and the (compact) length of that obje
    .

Data and other attributes inherited from RR:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

class **RR_SOA**(RR)
    A start-of-authority (SOA) RR.

Methods defined here:

__copy__(self)

__init__(self, dn, ttl, mname, rname, serial, refresh, retry, expire, minimum)

__repr__(self)

__str__(self)

pack(self)

Methods inherited from RR:

__len__(self)
    Return the length of this RR.

Static methods inherited from RR:

fromData(data, offset=0)
```
    Given user-supplied packed binary data and an optional offs
    into that data, returns a two-tuple containing a
    new RR-derived object and the (compact) length of that obje
    .
```

Data and other attributes inherited from RR:

CLASS_IN = 1

TYPE_A = 1

TYPE_AAAA = 28

TYPE_CNAME = 5

TYPE_MX = 15

TYPE_NS = 2

TYPE_PTR = 12

TYPE_SOA = 6

TYPE_UNKNOWN = -1

Functions

inet_aton(...)
```
    inet_aton(string) -> packed 32-bit IP representation

    Convert an IP address in string format (123.45.67.89) to the
    32-bit packed
    binary format used in low-level network functions.
```

inet_ntoa(...)
```
    inet_ntoa(packed_ip) -> ip_address_string

    Convert an IP address from 32-bit packed binary format to str
    ing format
```

inet_ntop(...)
```
    inet_ntop(af, packed_ip) -> string formatted IP address

    Convert a packed IP address of the given family to string for
    mat.
```

Data

AF_INET6 = 30
DEBUG1 = 9
DEBUG2 = 8
FILTER = '..... !"#$%&\'()*+,-./.....'
ch = <logging.StreamHandler instance>
chformatter = <logging.Formatter instance>
fh = <logging.handlers.RotatingFileHandler instance>
fhformatter = <logging.Formatter instance>
logfile = './ncsdns.log'
logger = <logging.RootLogger instance>
x = 255