Jerarquia de Datos DNS

El protocolo DNS utiliza un sistema jerárquico para crear una base de datos que proporcione la resolución de nombres. La jerarquía es similar a un árbol invertido con la raíz en la parte superior y las ramas por debajo (consulte la ilustración). DNS utiliza nombres de domino para formar la jerarquía.

La estructura de denominación se divide en zonas pequeñas y manejables. Cada servidor DNS mantiene un archivo de base de datos específico y sólo es responsable de administrar las asignaciones de nombre a IP para esa pequeña porción de toda la estructura DNS. Cuando un servidor DNS recibe una solicitud para una traducción de nombre que no se encuentra dentro de esa zona DNS, el servidor DNS reenvía la solicitud a otro servidor DNS dentro de la zona adecuada para su traducción.

Primero tenemos que poner un servidor predeterminado donde la respuesta si sea autoritativa.

DNS UTILIZADO

						distribuido	
A	198.41.0.5	2001:503:ba3e::2:30	AS26415	ns.internic.net	Verisign	(anycast) 4/0	BIND

Ar


```
Servidor:  a.root-servers.net
Address:  198.41.0.5

ar      nameserver = a.dns.ar
ar      nameserver = ar.cctld.authdns.ripe.net
ar      nameserver = e.dns.ar
ar      nameserver = c.dns.ar
ar      nameserver = b.dns.ar
ar      nameserver = d.dns.ar
ar      nameserver = f.dns.ar
a.dns.ar            internet address = 200.108.145.50
a.dns.ar            AAAA IPv6 address = 2801:140::10
ar.cctld.authdns.ripe.net       internet address = 193.0.9.59
ar.cctld.authdns.ripe.net       AAAA IPv6 address = 2001:67c:e0::59
e.dns.ar            internet address = 170.238.66.50
e.dns.ar            AAAA IPv6 address = 2801:140:eeee::50
c.dns.ar            internet address = 200.108.148.50
c.dns.ar            AAAA IPv6 address = 2801:140:10::10
b.dns.ar            internet address = 200.108.147.50
b.dns.ar            AAAA IPv6 address = 2801:140:11::50
d.dns.ar            internet address = 192.140.126.50
d.dns.ar            AAAA IPv6 address = 2801:140:dddd::50
f.dns.ar            internet address = 130.59.31.20
f.dns.ar            AAAA IPv6 address = 2001:620:0:ff::20
>
```

edu.


```
> edu.
Servidor:  a.root-servers.net
Address:  198.41.0.5

edu     nameserver = b.edu-servers.net
edu     nameserver = f.edu-servers.net
edu     nameserver = i.edu-servers.net
edu     nameserver = a.edu-servers.net
edu     nameserver = g.edu-servers.net
edu     nameserver = j.edu-servers.net
edu     nameserver = k.edu-servers.net
edu     nameserver = m.edu-servers.net
edu     nameserver = l.edu-servers.net
edu     nameserver = h.edu-servers.net
edu     nameserver = c.edu-servers.net
edu     nameserver = e.edu-servers.net
edu     nameserver = d.edu-servers.net
b.edu-servers.net       internet address = 192.33.14.30
b.edu-servers.net       AAAA IPv6 address = 2001:503:231d::2:30
f.edu-servers.net       internet address = 192.35.51.30
f.edu-servers.net       AAAA IPv6 address = 2001:503:d414::30
i.edu-servers.net       internet address = 192.43.172.30
i.edu-servers.net       AAAA IPv6 address = 2001:503:39c1::30
a.edu-servers.net       internet address = 192.5.6.30
a.edu-servers.net       AAAA IPv6 address = 2001:503:a83e::2:30
g.edu-servers.net       internet address = 192.42.93.30
g.edu-servers.net       AAAA IPv6 address = 2001:503:eea3::30
j.edu-servers.net       internet address = 192.48.79.30
j.edu-servers.net       AAAA IPv6 address = 2001:502:7094::30
k.edu-servers.net       internet address = 192.52.178.30
k.edu-servers.net       AAAA IPv6 address = 2001:503:d2d::30
m.edu-servers.net       internet address = 192.55.83.30
m.edu-servers.net       AAAA IPv6 address = 2001:501:b1f9::30
l.edu-servers.net       internet address = 192.41.162.30
l.edu-servers.net       AAAA IPv6 address = 2001:500:d937::30
h.edu-servers.net       internet address = 192.54.112.30
h.edu-servers.net       AAAA IPv6 address = 2001:502:8cc::30
c.edu-servers.net       internet address = 192.26.92.30
c.edu-servers.net       AAAA IPv6 address = 2001:503:83eb::30
e.edu-servers.net       internet address = 192.12.94.30
e.edu-servers.net       AAAA IPv6 address = 2001:502:1ca1::30
d.edu-servers.net       internet address = 192.31.80.30
d.edu-servers.net       AAAA IPv6 address = 2001:500:856e::30
>
```

Edu.ar

```
> edu.ar
Servidor:  a.root-servers.net
Address:   198.41.0.5

ar          nameserver = a.dns.ar
ar          nameserver = ar.cctld.authdns.ripe.net
ar          nameserver = e.dns.ar
ar          nameserver = c.dns.ar
ar          nameserver = b.dns.ar
ar          nameserver = d.dns.ar
ar          nameserver = f.dns.ar
a.dns.ar              internet address - 200.108.145.50
a.dns.ar              AAAA IPv6 address = 2801:140::10
ar.cctld.authdns.ripe.net         internet address = 193.0.9.59
ar.cctld.authdns.ripe.net         AAAA IPv6 address = 2001:67c:e0::59
e.dns.ar              internet address = 170.238.66.50
e.dns.ar              AAAA IPv6 address - 2801:140:eeee::50
c.dns.ar              internet address = 200.108.148.50
c.dns.ar              AAAA IPv6 address = 2801:140:10::10
b.dns.ar              internet address = 200.108.147.50
b.dns.ar              AAAA IPv6 address = 2801:140:11::50
d.dns.ar              internet address = 192.140.126.50
d.dns.ar              AAAA IPv6 address = 2801:140:dddd::50
f.dns.ar              internet address = 130.59.31.20
f.dns.ar              AAAA IPv6 address = 2001:620:0:ff::20
> _
```

Resultado : Con el mismo dns si decidimos cambiar de servidor la respuesta es no autoritativa.