Redes de Computadoras: Capa de Aplicación

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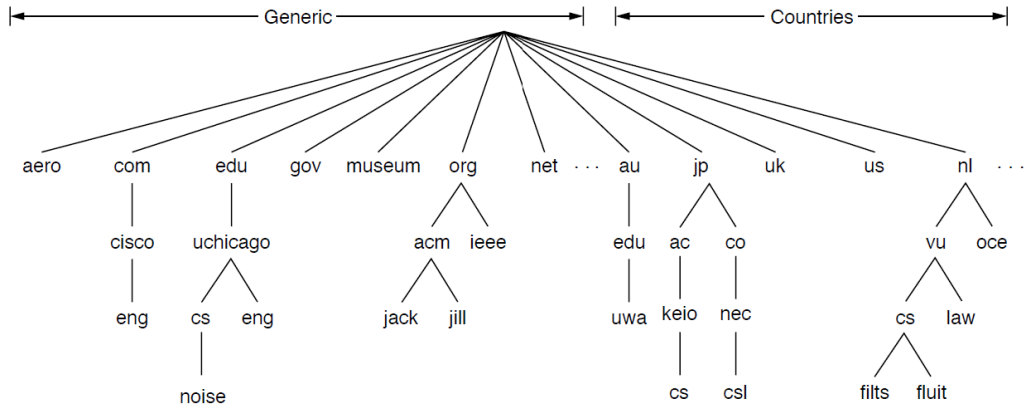
Problemática

- 189.55.16.7

- 8000::123:4567:89AB:CDEF

- No tener que distribuir listas con los cambios

- permitir escalar, mas de un host bajo la misma dirección

Protocolo DNS

- Sistema distribuido

- Estructura arbórea

- Dns raíces, autoritativos y no autoritativos

- permitir escalar, mas de un host bajo la misma dirección

- Puerto 53, UDP

Estructura DNS

Algunos sufijos DNS

Domain	Intended use	Start date	Restricted?
com	Commercial	1985	No
edu	Educational institutions	1985	Yes
gov	Government	1985	Yes
int	International organizations	1988	Yes
mil	Military	1985	Yes
net	Network providers	1985	No
org	Non-profit organizations	1985	No
aero	Air transport	2001	Yes
biz	Businesses	2001	No
coop	Cooperatives	2001	Yes
info	Informational	2002	No
museum	Museums	2002	Yes
name	People	2002	No
pro	Professionals	2002	Yes
cat	Catalan	2005	Yes
jobs	Employment	2005	Yes
mobi	Mobile devices	2005	Yes
tel	Contact details	2005	Yes
travel	Travel industry	2005	Yes
xxx	Sex industry	2010	No

Proceso registro DNS

Register domains

Registrar

VERISIGN Registry

ICANN
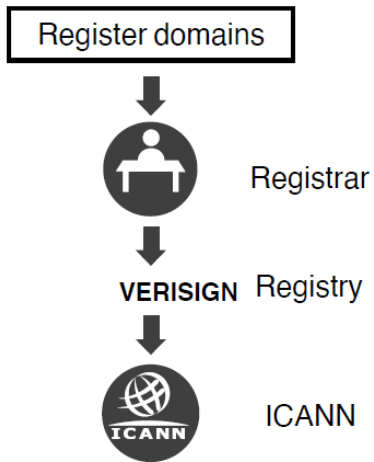
Records DNS

Type	Meaning	Value
SOA	Start of authority	Parameters for this zone
A	IPv4 address of a host	32-Bit integer
AAAA	IPv6 address of a host	128-Bit integer
MX	Mail exchange	Priority, domain willing to accept email
NS	Name server	Name of a server for this domain
CNAME	Canonical name	Domain name
PTR	Pointer	Alias for an IP address
SPF	Sender policy framework	Text encoding of mail sending policy
SRV	Service	Host that provides it
TXT	Text	Descriptive ASCII text

Zona DNS

```
; Authoritative data for cs.vu.nl
cs.vu.nl.        86400   IN   SOA     star boss (9527,7200,7200,241920,86400)
cs.vu.nl.        86400   IN   MX      1 zephyr
cs.vu.nl.        86400   IN   MX      2 top
cs.vu.nl.        86400   IN   NS      star

star             86400   IN   A       130.37.56.205
zephyr           86400   IN   A       130.37.20.10
top              86400   IN   A       130.37.20.11
www              86400   IN   CNAME   star.cs.vu.nl
ftp              86400   IN   CNAME   zephyr.cs.vu.nl

flits            86400   IN   A       130.37.16.112
flits            86400   IN   A       192.31.231.165
flits            86400   IN   MX      1 flits
flits            86400   IN   MX      2 zephyr
flits            86400   IN   MX      3 top

rowboat                  IN   A       130.37.56.201
                         IN   MX      1 rowboat
                         IN   MX      2 zephyr

little-sister            IN   A       130.37.62.23

laserjet                 IN   A       192.31.231.216
```

Consultas DNS

Root name server
(a.root-servers.net)

Edu name server
(a.edu-servers.net)

uchicago
name server

uchicago cs
name server

1: noise.cs.uchicago.edu

10: 128.135.24.19

filts.cs.vu.nl
Originator

Local
(cs.vu.nl)
resolver

2: query
3: edu
4: query
5: uchicago.edu
6: query
7: cs.uchicago.edu
8: query
9: 128.135.24.19