

When a DNS resolver looks up a record in the DNS and the domain name does not exist a "NXDOMAIN" response is returned to the resolver. The resolver then adds a search suffix, such as "something.co.uk" to the record and resubmits the query. For some systems, if this lookup is unsuccessful then it will add ".co.uk" and ".uk" to the record and check these too. This is because some DNS client resolver libraries support DNS search as described in RFC 1123, section 6.1.4.2.

If, for example, 'com.co.uk' were to be registered, the DNS servers hosting that domain name will receive queries for domain names in the .com gTLD - for example:

- User types in www.example-does-not-exist.com
- DNS resolver looks up www.example-does-not-exist.com
- DNS resolver receives NXDOMAIN response because domain name does not exist
- DNS resolver has search suffix set as search.co.uk (this means the client automatically tags this onto the end of the non existent domain and tries the look up again)
- DNS resolver looks up www.example-does-not-exist.com.something.co.uk
- DNS resolver receives NXDOMAIN response because domain name does not exist
- The Client then drops the third level from the domain name so that the original look up for a domain name in the .com gTLD now results in a look up in the .uk ccTLD and is now at the third level
- Client looks up www.example-does-not-exist.com.co.uk
- The holder of com.co.uk receives the query.

There are three possible side effects of this for the holder of 'com.co.uk':

1. They would potentially receive large amounts of nameserver traffic.
2. They would be able to analyse this traffic to provide a list of .com domain names that are not registered but have traffic on them.
3. They could use a 'wildcard record' to redirect all such look ups to their own site. (SSAC reports [SAC015](#) and [SAC041](#) address the technical issues with services such as this.)

The following table shows estimated daily traffic on our nameservers. The estimates are based on hourly 10 minute samples in a single day (10 Sep 2009). This highlights the potential levels of traffic that could hit a registration such as com.co.uk.

The estimated daily traffic (per day) is shown where an estimate can be made. For other domains, including in the me.uk sld, traffic is less than 100 in the sample taken and extrapolating up is unreliable.

Only cctlds listed in <http://www.iana.org/domains/root/db/> are listed. Domains with low levels of traffic in co.uk, e.g. ae are not listed as the samples may not be representative.

Total traffic on the nameservers for 10 Sep 2009 is estimated in the same way as 1,470,000,000 co.uk, 89,000,000 org.uk, 44,000,000 net.uk lookups

Domain Look ups in co.uk Look ups in org.uk Look ups in net.uk

com	1,700,000	120,000	60,000
net	1,200,000	30,000	60,000
org	900,000	45,000	3,500
arpa	170,000		
int	-	-	-
gov	13,000	-	-
mil	-	-	-
sch	100,000	3,000	-
police	7,000	-	-
nhs	43,000	-	-
mod	5,000	-	-
plc	-	-	-
ltd	13,000	-	-
uk	300,000	54,000	20,000
ac	40,000	-	-
co	100,000	3,000	30,000
me	5,000	-	-
ad	6,000	-	-
ar	90,000	-	40,000
au	15,000	-	-
be	6,000	-	-
bg	7,000	-	-
br	560,000	6,000	180,000
cc	40,000	7,000	-

cl	8,000	-	-
cn	80,000	-	13,000
cz	11,000	-	-
de	40,000	-	-
do	20,000	-	-
eg	30,000	-	-
es	20,000	-	-
fr	7,000	-	-
hu	6,000	-	-
id	35,000	-	12,000
il	7,000	-	-
in	200,000	-	-
jp	8,000	-	-
li	25,000	-	-
mx	55,000	-	25,000
no	6,000	-	-
pe	20,000	-	8,000
pl	25,000	-	-
ro	20,000	-	8,000
ru	70,000	-	20,000
sa	50,000	-	13,000
se	40,000	-	-
tr	160,000	-	48,000
tw	33,000	-	-
ua	14,000	-	-

vn	17,600	-	-
za	8000	-	-