# Hands-on 4: DNS

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1. 18.26.0.122
2. CNAME means go ask this server about the DNS records for the given domain.
3. 1627 seconds from the time the info was retrieved. So for the query run at Thu Mar 29 00:16:00 2012 then 1627 seconds is today at 00:43:07.

If you rerun the query, you notice that the number of seconds decreases.

1. ai is 128.52.32.80

ai. Is 209.59.119.34

1. The domain parameter appears to set the context for which the search is performed in. I believe that the . at the end of ai. makes the computer treat it as a fully qualified domain name, which causes it to look up the domain name directly, instead of appending the domain search context.
2. dig @a.root-servers.net lirone.csail.mit.edu +norecurs
3. dig . ns

> a.root-servers.net. 247505 IN A 198.41.0.4

dig @a.root-servers.net lirone.csail.mit.edu +norecurs

> a.edu-servers.net. 172800 IN A 192.5.6.30

dig @a.edu-servers.net lirone.csail.mit.edu +norecurs

> strawb.mit.edu. 172800 IN A 18.71.0.151

dig @strawb.mit.edu lirone.csail.mit.edu +norecurs

> AUTH-NS0.csail.mit.edu. 5336 IN A 128.30.2.123

dig @AUTH-NS0.csail.mit.edu lirone.csail.mit.edu +norecurs

> CNAME lirone.lcs.mit.edu.

dig @AUTH-NS0.csail.mit.edu lirone.lcs.mit.edu +norecurs

> lirone.lcs.mit.edu. 1800 IN A 18.26.1.36

1. dig www.dmoz.org +norecurs

The default server did not have the answer; instead it knew the servers for the org domain and it pointed me there. I knew because it did not give me an answer directly.

>org. 44498 IN NS d0.org.afilias-nst.org.

The answer was returned in 0 seconds.

1. dig www.dmoz.org

The site’s IP address was returned in 415 milliseconds.

1. dig www.dmoz.org +norecurs

The CNAME record is now returned, but not the site’s IP address for some reason, in 0 milliseconds. The cache has served its purpose.