Rapid Growth in Top Level Domains in the Domain Name System

SEM5720 - Assignment 1

ALEXANDER D BROWN (ADB9)

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1   Introduction

Domain names map a humanly memorable host name to a less memorable machine IP address used to route traffic to that host. Domain Name System (DNS) is a distributed database made up of name servers and provides a mapping from domain name to IP address and vice versa.

The lookup process is recursive by nature as the name servers are laid out in a tree structure, starting from an unnamed root, each layer of the tree represents each part of the domain name.
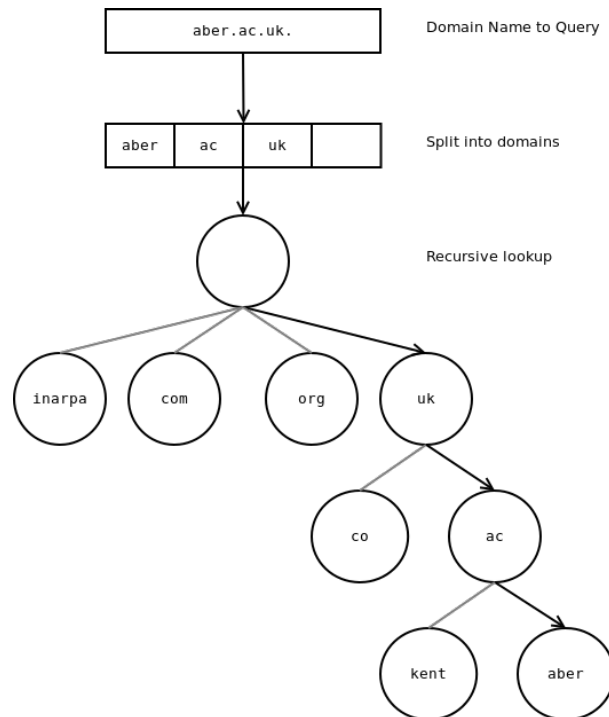
Figure 1: Example DNS Lookup on `aber.ac.uk.`

References

[1] O. Gudmundsson. DNSSEC and IPv6 A6 aware server/resolver message size requirements. RFC 3226, RFC Editor, December 2001.

[2] Bill Manning. Infrastructure challenges to DNS scaling. *The Internet Protocol Journal*, 14(4):9–14, December 2011.