

# **Networks Lab – Winter Semester 2015-16**

## **Assignment 2 – DNS – Modification**

Q1) The total no of messages communicated would depend on the cache.  
If the requested hostname's record is already present in the cache, the total no of messages communicated would be 11. Else, it would be 2.

If not present in cache :

1. client – local dns : 3 msgs
2. local - root : 2 msgs
3. local – tld : 3 msgs
4. local – auth : 3 msgs

If present in cache :

1. client – local dns : 2 msgs

Q3) The total no of messages communicated would depend on the cache.  
If the requested hostname's record is already present in the cache, the total no of messages communicated would be 11. Else, it would be 9.

If not present in cache :

1. client – local dns : 3 msgs
2. local - root : 2 msgs
3. local – tld : 3 msgs
4. local – auth : 3 msgs

If present in cache :

1. client – local dns : 3 msgs
2. local – tld : 3 msgs
3. local – auth : 3 msgs

Q3)

Case 1: (original)

If not present in cache :

1. client – local dns : 3 msgs
2. local - root : 2 msgs
3. local – tld : 3 msgs
4. local – auth : 3 msgs

If present in cache :

1. client – local dns : 2 msgs

Case 2: (modified)

If not present in cache :

1. client – local dns : 3 msgs
2. local - root : 2 msgs
3. local – tld : 3 msgs
4. local – auth : 3 msgs

If present in cache :

1. client – local dns : 3 msgs
2. local – tld : 3 msgs
3. local – auth : 3 msgs

Yes, caching reduces the number messages sent and received. If the ip address of the dns server for requested hostname is already present in the cache, the intermediate servers between the local dns server and the cached data's server can be bypassed. So the communications between the intermediate servers and the dns server stored in the cache are now not reequired.