**PART – C**

The performance of your DNS resolver for top 25 Websites from alexa.com. Resolving each website 10 times and computing the average time to resolve the DNS over 25 websites

The below graph plot shows the Cumulative Distribution Function (CDF) of the DNS resolution time for mydnsresolver, local DNS server, and Google’s public DNS. The response time for local DNS server and the google DNS server are almost same therefore the graph shows the plots overlapped for the two.

The huge difference in performance of mydnsresolver compared to other 2 is because of several factors. The default local resolver and the google DNS are much optimized compared to mydnsresolver which is an iterative DNS server. Also the tests have been performed using a free VPN, located in France which was very unstable. The resolution time for other country specific web sites, especially the Chinese web sites are more compared to others. The small difference between google and local DNS resolver performance is because local DNS server is nearer than google DNS server

The top 25 websites index shown on the x axis are as under:

1. www.google.com
2. www.facebook.com
3. www.youtube.com
4. www.baidu.com
5. www.yahoo.com
6. www.amazon.com
7. www.wikipedia.org
8. www.Qq.com
9. www.google.co.in
10. www.twitter.com
11. www.live.com
12. www.taobao.com
13. www.sina.com.cn
14. www.msn.com
15. www.yahoo.co.jp
16. www.linkedin.com
17. www.weibo.com
18. www.google.co.jp
19. www.vk.com
20. www.bing.com
21. www.yandex.ru
22. www.hao123.com
23. www.ebay.com
24. www.instagram.com
25. www.google.de

**PART D**

name= www.cs.stonybrook.edu, and type=”A”

DNS Request Packet:

|  |  |
| --- | --- |
| 43026 | opcode: QUERY; rd ; status: NOERROR |
| 1 | 0 |
| 0 | 0 |
| ;; www.cs.stonybrook.edu., type = A, class = IN | |
|  | |
|  | |
|  | |

DNS Response Packet:

|  |  |
| --- | --- |
| 9975 | opcode: QUERY ; qr aa rd; status: NOERROR |
| 1 | 1 |
| 2 | 2 |
| ;; www.cs.stonybrook.edu., type = A, class = IN | |
| www.cs.stonybrook.edu. 28800 IN A 130.245.27.2 | |
| cs.stonybrook.edu. 28800 IN NS dns02.cs.stonybrook.edu.  cs.stonybrook.edu. 28800 IN NS dns01.cs.stonybrook.edu. | |
| dns01.cs.stonybrook.edu. 28800 IN A 130.245.1.15  dns02.cs.stonybrook.edu. 28800 IN A 130.245.1.48 | |