The Domain Name System (DNS) is a key part of the infrastructure of the Internet. Recent discussions have centered on the removal of the shared DNS resolver and the use of a local full-service resolver instead. From the viewpoint of the cache mechanism, these discussions involve removing the shared DNS cache from the Internet. Although the removal of unnecessary parts from a total system tends to simplify the system, such a large configuration change in the system would need to be carefully analyzed before its actual deployment.

This talk presents our analysis of the effect of a shared DNS resolver based on the campus network traffic. Our findings were as follows: 1) this removal can be expected to amplify the DNS traffic by about 3.3 times, 2) the amplification ratio on the root DNS is much higher (about 10.9 times), and 3) removal of all caching systems from the Internet is likely to amplify the DNS traffic by approximately 12.1 times. Thus, the above-mentioned shared DNS resolver removal should not be considered. Our data analysis also revealed: 4) an increase in the number of clients that do not have a local DNS cache and generate repeated queries at short intervals (less than 1 min). 5) Since the amount of traffic from such clients is not small (about 95.0% of total DNS traffic), the deployment of a local cache itself is feasible.


**Summary**

**Talk Duration**

30 Minutes

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**Session Classification**: Public Workshop

**Track Classification**: Public Workshop