נושאים מתקדמים ברשתות תקשורת

Project Proposal - Out of bailiwick server

Ron Aharoni, Steven Karas, Phillip Kaplan

Zheng Wang's paper "The Availability and Security Implications of Glue in the Domain Name System" explores (as the title would suggest) how glue records are used and what the potential effects on DNS are in the real world. Our goal is to collect real-world statistics on the prevalence of glue records and specifically non-trusted glue records in order to give an idea of the scale and real-world implications of the issues presented in the paper.

In order to collect the data necessary to answer these questions we will make use of the top one million domains as indexed by "The Majestic Million". We will collect DNS records for all of the domains and examine the results. We intend to use a resolver hosted on AWS to collect the raw data. We will use python to extract, process, and analyze the relevant data.

We will report various statistics, including but not limited to the number of unique nameservers, the number of glue records, the number of non-trusted glue records, and plots showing the CDF of each metric by varying dimensions.