Technical Quarterly Report –Apr 2021 - Jun 2021

BASIC PROGRAMMATIC DATA

Performer: University of Twente
Project: 628.001.031(NWO)
Mapping Domain DNS DDoS Vulnerabilities to Improve Protection and Prevention
Period of Performance (base): December 1, 2018 – November 30, 2022

PROJECT PROGRESS

Progress Against Planned Objectives:
Paper "Characterization of Anycast Adoption in the DNS Authoritative Infrastructure" accepted at TMA2021.
Monthly conference calls between UT and CAIDA are taking place to discuss the project progress.

Technical Accomplishments this Period:

1. We performed a new anycast census (Apr 2021) using Manycast2.
2. We published the data in open access on: https://github.com/ut-dacs/Anycast-Census
3. Designed and implemented a reactive measurement platform for DNS measurement.
4. Deliverable: Design the MADDVIPR framework

Improvements to Prototypes this Period: none
Significant Changes to Technical Approach to Date: none
Deliverables: Design the MADDVIPR framework
Technology Transition and Transfer this Period: none
Publications this Period:

- Characterization of Anycast Adoption in the DNS Authoritative Infrastructure (TMA2021) – Accepted
- Hosting Industry Centralization and Consolidation (IMC 2021) - Submitted

Meetings and Presentations this Period: DUST 2021 Workshop: DNSAttackStream
Issues or Concerns: none

PROJECT PLANS

Planned Activities for Year 3:

- Using the data provided by OpenINTEL and combining it with other sources UT will identify the impact of DDoS attacks against DNS.
- UT and CAIDA will design and implement MADDVIPR Framework.

Specific Objectives for Next Period:
UT and CAIDA will work on implementing the MADDVIPR Framework.
UT and CAIDA will start reactive measurements on nameservers under attack.