whois ORG-SN292-RIPE

- org-name: **Stichting NBIP** – https://www.nbip.nl/en/

- Independent non-profit foundation

- Sector initiative started in 2002

- Services for Internet Providers

  - Lawful Interception

  - Clean Networks Platform – www.cleannetworks.net

  - DDoS Scrubbing Center – NaWas

    - Mitigation

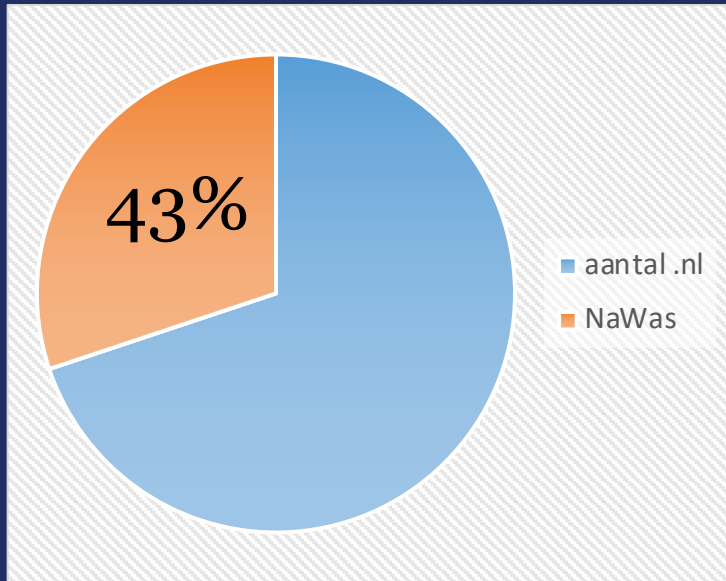   - Reporting

    - Research and cooperation

NBIP nationale beheersorganisatie internet providers

20 jaar!

whois ORG-SN292-RIPE

- 6,5 M .nl domains protected by NaWas (2020)

- Aprox 1,6 M websites

43%

- aantal .nl
- NaWas

- In 2013 request for anti DDoS solution

- Started POC 2nd ½ 2013

- NaWas operational in 2014

- NaWas connected to LINX in 2019

- NaWas connected to all major IX 2025

- 130 members in EU, 12 in UK

NBIP nationale beheersorganisatie internet providers
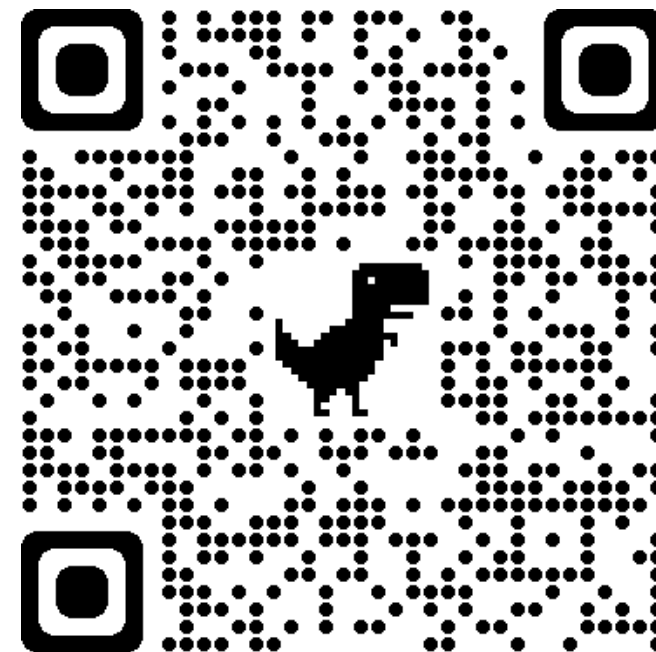
20 jaar!

Take away

- Industry leaders on DDoS
- Rapid change in attack landscape
- More L7 focused type attacks (high RPS)
- DDoS is serious part of war

DDoS Reporting

NBIP
nationale
beheersorganisatie
internet
providers
20 jaar!

- ## Every quarter
  - nbip.nl/ddos-report

DDoS attack figures from the third quarter 2023

Number of attacks:
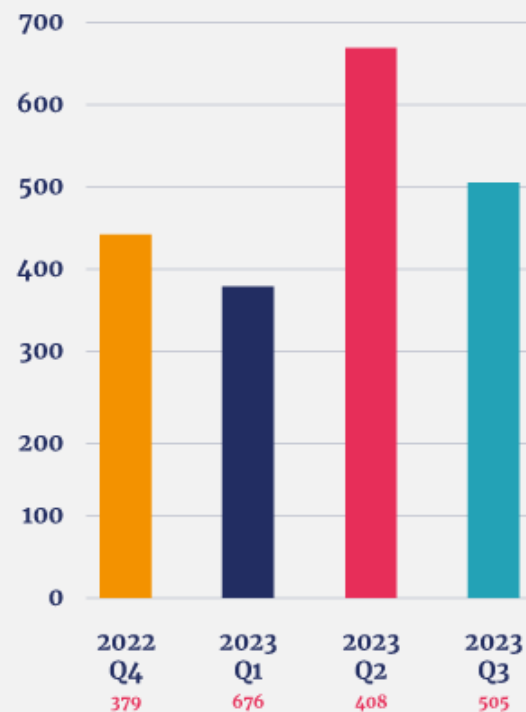
505

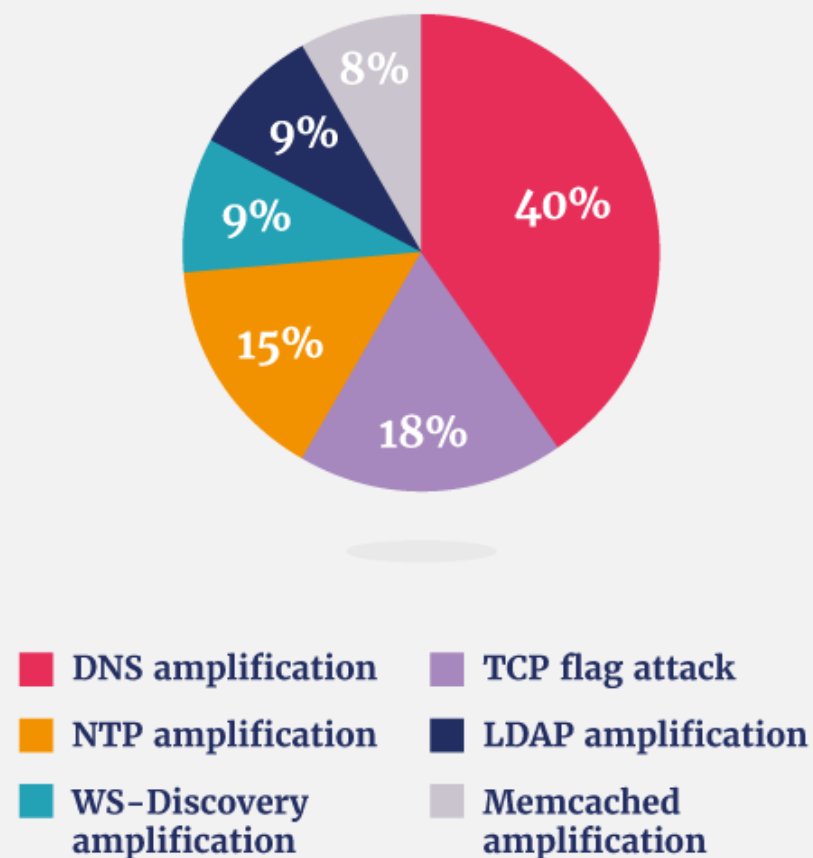**Average number of attacks per day:**

5.5

Maximum attack size:

213 Gbps

DDoS attack figures from the **third quarter 2023**

Number of attacks:

	2022 Q4	2023 Q1	2023 Q2	2023 Q3
	379	676	408	505

Prolonged attacks >4 hours

2023 (second quarter)
36

2023 (third quarter)
39

Pie chart:
- 40% DNS amplification
- 18% TCP flag attack
- 15% NTP amplification
- 9% WS-Discovery amplification
- 9% LDAP amplification
- 8% Memcached amplification

Legend:
- DNS amplification
- TCP flag attack
- NTP amplification
- LDAP amplification
- WS-Discovery amplification
- Memcached amplification

Trends DDoS attack figures from the third quarter 2023

Increase in new attack types, such as Rapid Reset Attack

Significantly more small-scale attacks (1-10 Gbps) than in Q2

Noticeable rise in attacks with a high PPS (parts per second in millions)

Anti-DDoS-Coalitie

- Cooperation on knowledge sharing about DDoS attacks (2018)
  - Universities, IX's, ISP's, banks, goverment, law inforcement
  - National Cyber Security Centre (NCSC) facilitator

No More DDoS Anti-DDoS-Coalitie — Blog · News · Presentations · FAQ

News

New version of the DDoS Clearing House core components
30 September 2020
SIDN Labs and SURF have released a new version of the DDoS Clearing House in a Box, a system that enables network operators to automatically

DDoS coalition is working together during the current DDoS attacks
4 September 2020
The website reflects coalition's joint efforts over the past two years In recent weeks, dozens of companies in The Netherlands and Europe have been targeted

Read More »

NaWas
Scrubbing Center

NaWas, how does it work

- **North: Internet**
  - Several Tier-1 Transit
  - Public peering on Internet Exchanges
  - Amsterdam as one of major hubs in Europe

- **West – East: 3-stage scrubbing**
  - Multiple vendors
  - Fail-over on multiple sites
  - Prefiltering with NaWas filters (migrating to FlowSpec)

- **South: Clean Traffic**
  - private connections
  - Only reachable through NaWas
  - PoP's via AMS-IX, NL-IX, Dcspine, Linx, Mix, Top-IX, Namex, Netix
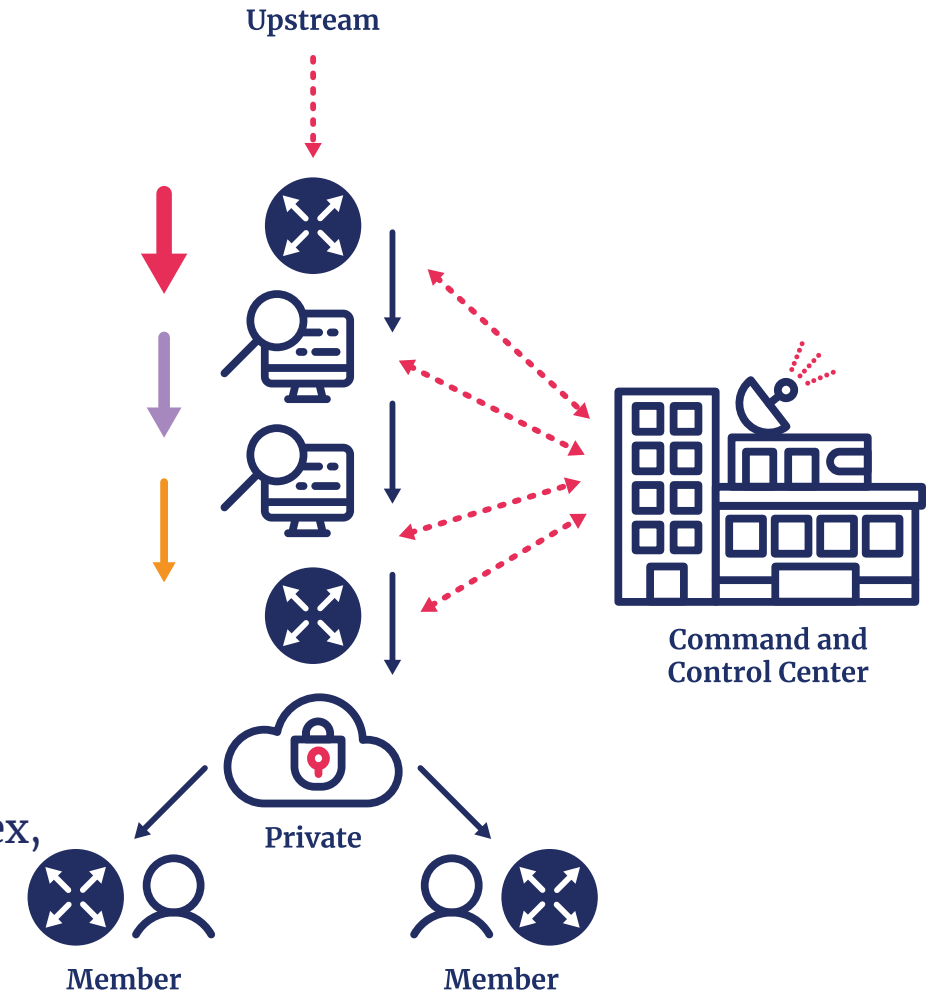
Upstream

Command and Control Center

Private

Member   Member

Future plans

R&D NaWas

- DDoS Detectie as a Service (DaaS)

- Web Application Firewall (WAF-dp)

- DDoS Pattern Recognition - generate filter rules (Dissector)

- Distributed presence in Europe

- Modernize the membership

NBIP nationale beheersorganisatie internet providers

20 jaar!

Together
Smarter and Stronger

https://www.nbip.nl/nawas/

f.dupker@connect.nbip.nl
s.kuhn@connect.nbip.nl