Cooperation and self-regulation of Polish ISPs in combating online crime

Przemek Jaroszewski
NASK / CERT Polska

ZMYSŁ TELEKOMUNIKACJI
NASK

CERT POLSKA

Agenda

- CERT Polska as a national CERT
- History of abuse forum in Poland
- Cooperation in practice
- Blackholing and filtering
- Challenges

Why CERT Polska?

- NASK is the registry for .pl
- CERT Polska was founded in 1996 (as CERT NASK)
- Early cases were mostly regarding networks of other Polish ISPs
- CERT Polska became a full member of FIRST in 1997, later joining other international forums

- Until today very few Polish CERTs and ISPs are internationally active

CERT Polska as a national CERT

- international activities + information sharing
- no hierarchy
- formal mandate: agreement with Polish Internal Security Agency and CERT.GOV.PL

- Communication done via email
- Limited response, hard to convinve to cooperate
- Problem? We don’t know the people, they don’t know us
- Icebreaker over pizza and beer – it works but doesn’t scale ☺

Introducing the abuse-forum (2005)

- **Let's have one place for all to meet**
- **Who is all?**
  - Large ISPs
  - The Police
  - CSPs
  - Other CERTs (miliary, government)
  - Mid-size ISPs

- **Extensive and ongoing process**
  - Cooperation with PLNOG

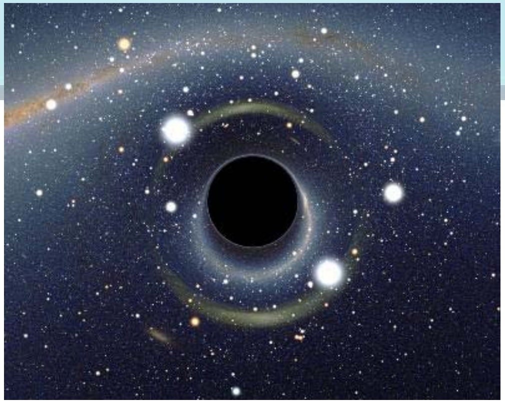
Cooperation with Law Enforcement

- helping to ask the right questions
- data retention
- working on data exchange interface

Data repository

- sharing operational information in a trusted manner
- infected hosts, phishing sites, botnets
- user certificates
- need-to-know policy

Blackholing concepts



BGP Blackholing – technology to block traffic directed to a given IP address at the level of (core) routers. BGP protocol is (ab)used to instruct routers to drop packets

DNS Blackholing – technology to prevent from accessing certain domain names implemented on DNS servers. The servers return false data, either redirecting the user or stopping him

BGP blackholing

- **peering with about a dozen ISPs, including Polish Telecom (TPNET)**
- **/32 prefixes with bogons, host under DDoS, but also botnet controllers (!)**
- **the policy:**
  - peers can inject hosts from own networks
  - NASK injects the bogons and controllers
  - anyone can choose to ignore parts of information (based on community numbers)

BGP blackholing – it took...

- **3 years**
- **a lot of trust to build**
- **legal challenges to fight**
  - censorhip?
  - limiting access to certain resources?

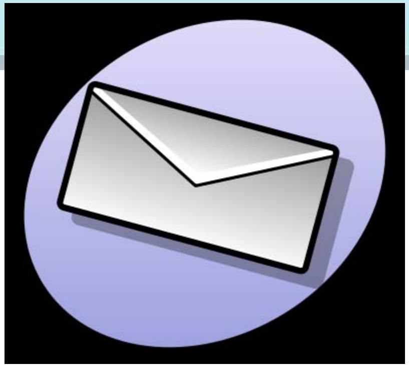
BGP blackholing – case studies

- TP decided to buy more sources of information
- gimp.org turned out to be co-hosted with an IRC server with several botnet-controlling channels
- Most of hate-mail was about one Polish soccer club fan page

BGP blackholing – summary

- it’s easy to implement (technically)
- it’s lightweight
- it’s arbitrary

Filtering port 25 tcp



- Initiated by TP, implemented on Dec 1, 2009
- Coordinated action with email providers, promoting switching to SUBMIT ports
- Very few problems encountered
- Effects
  - 99% reduction of spam from the service
  - 72% reduction of spam from TP overall

DNS blackholing

- Not implemented yet, but planned in NASK and TP in the nearest future
- Concept
  - Do it as an additional service benefiting the customers
  - Run on default nameservers
- Pros and cons
  - Less arbitrary than BGP blackholing
  - Requires more investments and communication towards users

Challenges with blackholing and filtering

- Transparency
- Legal obligations
- Legal limitations
- What should be filtered (botnet controllers, conficker domains, phishing domains, illegal content...)
  - Sources of information
  - Who takes the final decision?

I’m done, thank you!

- Questions?
- Comments?

CERT POLSKA

zgłaszanie incydentów: cert@cert.pl

strona internetowa: www.cert.pl

tel. +48 22 380 82 74

fax +48 22 380 83 99

adres pocztowy:
NASK - CERT Polska
ul. Wąwozowa 18
02-786 Warszawa
Polska

DZIĘKUJEMY ZA UWAGĘ

ZMYSŁ TELEKOMUNIKACJI

NASK

CERT POLSKA