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ESTONIAN MINISTRY OF DEFENCE

CYBER ATTACS

Estonia

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Content

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- Overview
- Cyber attacks against Estonia
- Lessons learned
- How to prevent and fight against the attacks

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Overview

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- What is a cyber attack?
- Object of attack
- Motives
- Who attacks?
- The scale of attacks

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Introduction

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Estonia:

Capital: Tallinn

Inhabitants: 1.4 mln

Territory: 45,226 km²

EU member since

May 1st, 2004

NATO member since

April 2nd, 2004

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Cyber attacks against Estonia

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- From April 27th to May 19th
- Most of the attacks came from outside of Estonia
- A part of a general campaign against Estonia
- No military targets => unthreatening !
- Private business under political attack

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Trigger of the Cyber Attacks

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- A Soviet war monument was removed from the centre of the capital, Tallinn, to a military cemetery
- …

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e-Est – interesting target 1(2)

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- In 2002 the Estonian Parliament approved Internet voting for local elections in October 2005 and national Parliamentary elections in 2007
- By January 2006, over 355 agencies and 50 state databases had been joined with the secure data exchange layer X-Road.
- 90% of the young people aged 12–24 are most active Internet users, however, also two thirds of the children aged 6–9 use the web, whereas 58% of the working population aged 25–49 are using the Internet.

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e-Est – interesting target 2(2)

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- In all central government agencies 100% of the needs for computer workplaces have been covered
- 62.9 main phone lines per 100 households, the digitization level of main lines are 82%
- Mobile phone penetration is approximately 90%
- 95% of banking operations are carried out electronically with the number of Internet bank clients amounting to nearly 800,000
- In 2004 about 80% of the performers of state examinations received their results via SMS
- Usage of mobile parking constitutes approximately 50% of total income gathered from parking fees

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Types of Cyber Attacks

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- Defacements e.g. www.reform.ee
- DDOS (Distributed Denial of Service) against
  - Web servers
  - Mail servers
  - Internet backbone components

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Targets

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- Banks
- Government web sites, mail servers
- DNS servers
- Backbone routers
- Media companies

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Example

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- The sites that were attacked on Saturday, April 28th at 15:00 GMT, included:
- www.mkm.ee (Ministry of Economic Affairs and Communications): unreachable
- www.peaminister.ee (Website of the prime minister): unreachable
- www.riigikogu.ee (Estonian Parliament): unreachable
- www.sisemin.gov.ee (Ministry of Internal Affairs): unreachable
- www.valitsus.ee (Estonian Government): unreachable
- www.vm.ee (Ministry of Foreign Affairs): unreachable
- www.agri.ee (Ministry of Agriculture): reachable
- www.envir.ee (Ministry of the Environment): reachable
- www.fin.ee (Ministry of Finance): reachable
- www.just.ee (Ministry of Justice): reachable
- www.kul.ee (Ministry of Culture): reachable
- www.mod.gov.ee (Ministry of Defence): reachable
- www.pol.ee (Estonian Police): reachable
- www.reform.ee (Party of the prime minister): reachable
- www.sm.ee (Ministry of Social Affairs): reachable

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Example

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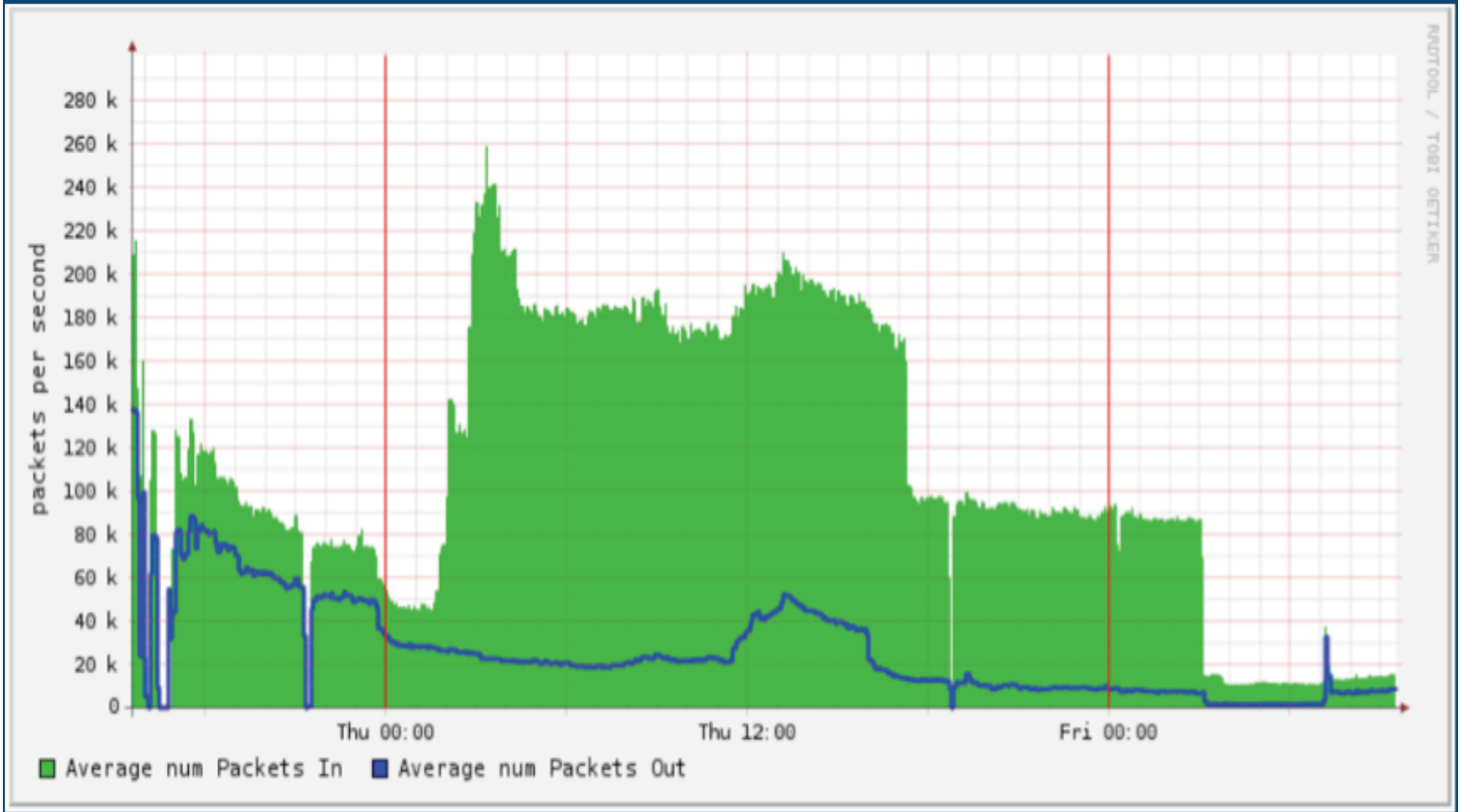

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Example

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What it was?!

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- Cyber riots
- Cyber war
- Cyber terrorism
- …
- Most of the terms are not defined?!

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Lessons Learned

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- It is dangerous
- It is hard to defend
- Appliances do not protect you
- Hierarchical model does not have adequate speed
- Government has to be partner not superior
- Well organized media relations
- Principles on place without heavy ruling

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Conclusions

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- We are very tightly related to cyber room and dependent on e-services
- Cyber attacks are very serious threat today and increasing threat in the future
- Critical Information Infrastructure Protection will be very important
- Partnership is important
- IT Security awareness is important

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Thank you!

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