LOBSTER

Large-Scale Monitoring of Broadband Internet Infrastructure

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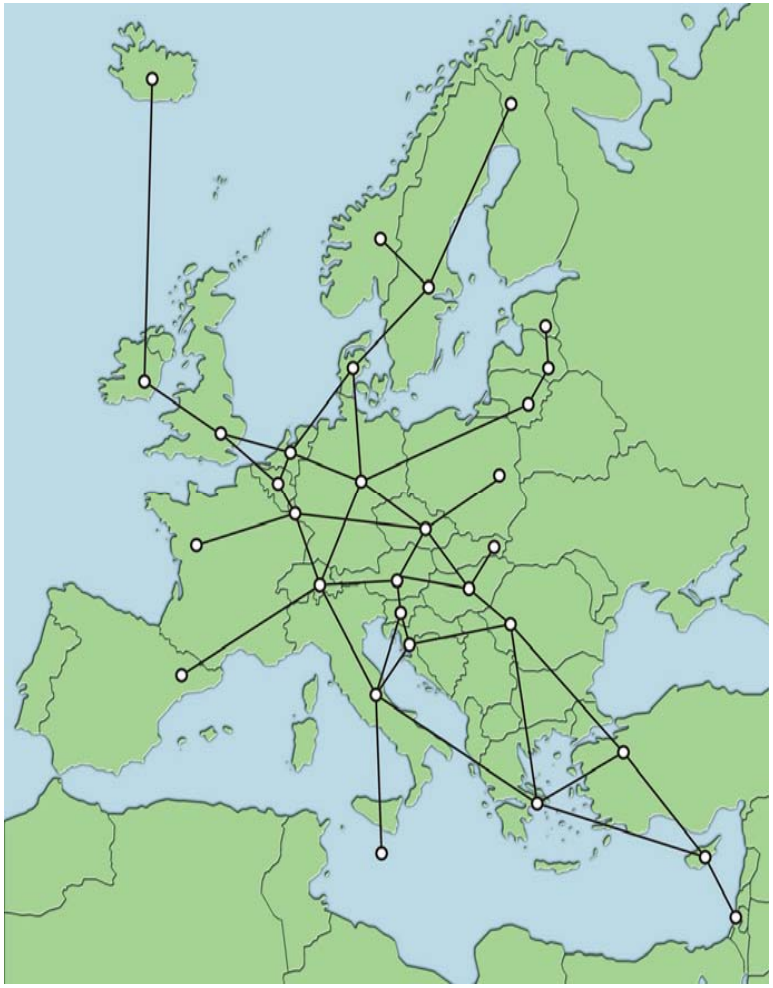
FORTH

Broadband Europe

8-10 December, Brugge

LOBSTER overview

- Specific Support Action project
  - Started 1 October 2004
  - Finished 31 December 2006
- 9 partners
  - ALCATEL, CESNET, ENDACE, FORTH, FORTHNET, VRIJE, TERENA, TNO, UNINETT
- Main goal:
  - To develop an advanced European infrastructure for passive network traffic monitoring.



Motivation

- Improve our understanding of the traffic on the Internet
  - Which applications generate the most traffic?
- QoS
  - Packet loss, packet reordering, one way delays, ...
- Security
  - “Friendly fire”
  - Viruses and worms

Well known worms

- Summer 2001: CODE RED worm
  - Infected 350,000 computers in 24 hours
- January 2003: Sapphire/Slammer worm
  - Infected 75,000 computers in 30 minutes
- March 2004: Witty worm
  - Infected 20,000 computers in 60 minutes

Technical challenges

- Network speed
  - Passive monitoring on slow networks is easy
  - Passive monitoring on high speed networks is HARD
  - 10GB/s
    - 1250MB/s
    - Worst case: ~24Mpps
    - Normal network: 1-1.5Mpps
- Need specialized hardware:
  - SCAMPI adapter, DAG cards etc.

Technical challenges(2)

- Distributed access to monitoring probes
  - DMAPI
- Admission control
  - Keynote
- Anonymization
  - In hardware and/or software
  - SiSaL: Scripting Sanitization Language

Timeline

- Early 2005
  - Questionare
  - Requirements
- 2005
  - Design
  - Development of basic components
- Late 2005
  - First deployment phase
- 2006
  - Development of applications
  - Second deployment phase

More information

- http://www.ist-lobster.org
  - Not yet operational
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