

# **EENet of HITSA and the BalticGrid CA**

Hardi Teder and Piiu Pilt  
EENet

29th EUGridPMA meeting @ Bucharest  
September 10th, 2013

# Overview

- About HITSA
- About EENet
- BalticGrid CA developments

# About me\*

- Related with Grids and HPC since 2003
  - at EENet since 2003
  - Grid projects:
    - BalticGrid I-II, EGEE/EGI, Nordic Grid Neighbourhood
  - Computing and storage resources
  - X509 certificates and PKI
  - AAI and Federations
- Director of EENet (since 15.04.2013)
  - also managing Distributed computing department at EENet
- EGI council, TERENA GA, NREN PC, GN3plus assembly
- Baltic Grid CA manager
  - EUGridPMA, IGTF, CAOPS-WG
  - EGI security policy group/SCI
- TERENA
  - TCS and REFEDS

\* “me” is Hardi

# Information Technology Foundation for Education

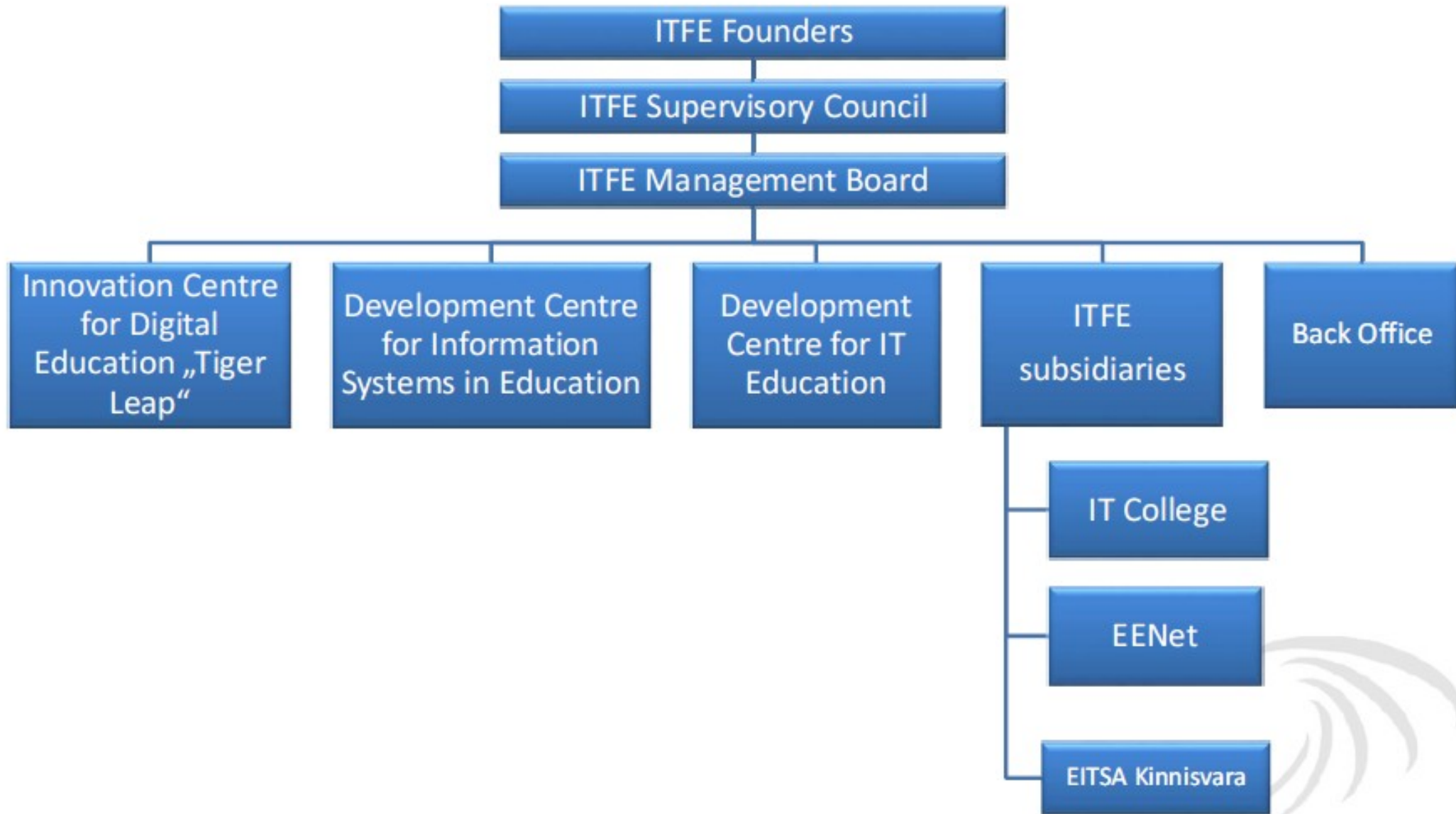
- Founders:
  - Estonian Republic
  - Tartu University
  - Tallinn University of Technology
  - Eesti Telekom
  - Association of Estonian Information Technology and Telecommunications Companies
- Non-profit organization
- Vision:
  - IT education of digital era, digital era in IT education
- Mission:
  - To be a reliable partner for governmental and educational institutions and industry in providing competitive ICT education meeting tomorrow's requirements, and a leader in developing and implementing of digital era principles in learning process.

# HISTORY

- Information Technology Foundation for Education started May 2, 2013, after a merger of:
  - Estonian Information Technology Foundation
  - Estonian Education and Research Network – EENet
  - Tiger Leap Foundation
- Number of employees: 95
- Annual budget 2013: 12,7 MEUR
  - EITF: 8,8 MEUR
  - EENet: 1,8 MEUR
  - TLF: 2,1 MEUR
- Offices in Tallinn and Tartu



# HITSA structure 2013





# Innovation Centre for Digital Education „Tiger Leap“

- Established by a merger of:
  - The Estonian e-Learning Development Centre (part of former EITF)
  - Tiger Leap Foundation
- 3 consortiums/programs:
  - “Tiger Leap in School”
  - „e-vocational school“
  - „e-university“
- Main activities:
  - Staff training and support
  - E-learning content development
  - Quality management
  - Learning services



Tiger Leap Foundation

# Development Centre for Information Systems in Education

- Established by a merger of certain activities of:
  - Estonian Information Technology Foundation
  - Tiger Leap Foundation
  - EENet
  - Estonian Ministry of Education and Research
- Main activities:
  - **SAIS – Admission Information System**
    - 5 universities, 13 institutions of professional higher education, 5 vocational schools
  - **ÕIS – Study Information System**
  - Educational portals, repositories
  - E-learning content management systems
  - Basic IT solutions for schools





# Development Centre for IT Education

- **Established by a merger of certain activities of:**
  - Estonian Information Technology Foundation
  - Tiger Leap Foundation
- **Main activities:**
  - **Tiger University Program**
    - 1 MEUR in 2013
    - Funded by Estonian Government
  - **ICT Program**
    - 1,2 MEUR in 2013
    - Funded: 85% European Regional Development Fund, 10% Government, 5% partner
  - **IT Academy**
    - 2,8 MEUR in 2013 (Government plus Skype sponsorship)
  - **Infrastructure support programs for schools**
  - **ProgeTiger**



# IT Academy – *Study IT in .ee*

- IT Academy – „*Study IT in Estonia*“

- Is not a new university;
- Is a cooperation program between government, universities and industry;
- Official launch: September 2012;

- Main objectives:

- To improve the international competitiveness of ICT studies;
- To fulfil the needs of ICT industry for quality graduates;
- To support the growth of Estonian economy



# Estonian IT College – brief facts

- Birthday: May 17<sup>th</sup>, 2000
- Status: Private, non-profit
- Applied, the first degree level studies (Bologna-type)
- Three curricula in Information Technology
- Commercial (Cisco, Microsoft, Oracle, Sun) and open source software study programs
- CISCO, Telecommunication, Robotics, Mobile and Multimedia labs
- ~850 students
- 13 full time lecturers, ~40 visiting lecturers from universities, enterprises and state structures





# Estonian Education and Research Network – EENet

- Established in August 1993 as a governmental non-profit organization.
- From 1997 until April 2013 EENet operated as a state agency administered by the Estonian Ministry of Education and Research.
- On April 12, 2013 EENet merged with EITF
  - 4 departments
  - ~1100 service contracts
  - 21 employees
  - Located in Tartu



Eesti Hariduse ja Teaduse Andmesidevõrk

# Network

- Backbone network and connectivity services:
  - 10 Gbps fiber-rings in Estonia
  - 5 Gbps international connection (GÉANT)
  - 7. FP projects GN3 ja GN3plus



# Estonian scientific computing infrastructure (ETAIS)

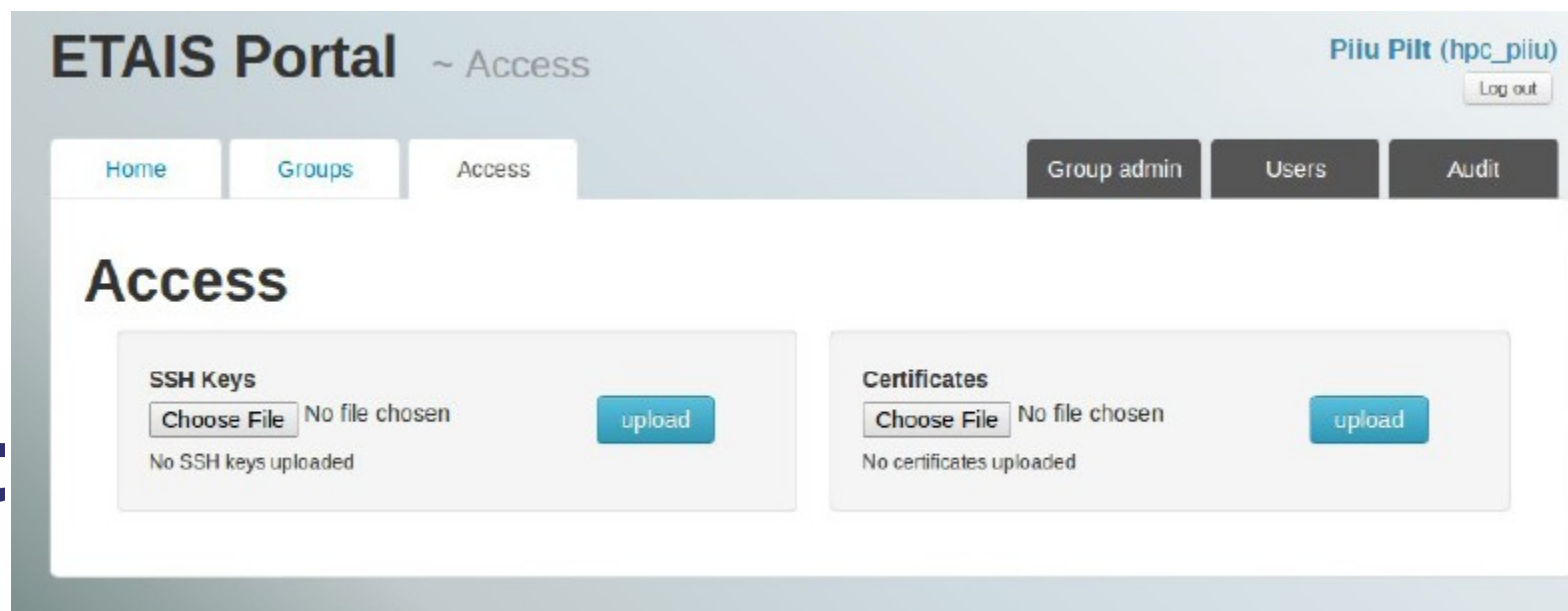
- Providing computing and storage resources for Estonian scientific community
- Four HPC centers
  - University of Tartu
  - National Institute of Chemical Physics and Biophysics (KBFI)
  - Tallinn University of Technology
  - EENet
- EENet provides central services and represents the national grid infrastructure in EGI
- SSH access and EGI compatible Grid middleware ARC





# AAI

- Estonian AAI federation (TAAT)
  - Hub and Spoke federation
- Authentication for ETAIS
  - Access to portal via TAAT
  - SSH access with keys
  - Grid access with certificates



# Baltic Grid CA

- Baltic Grid CA gives certificates to end entities which are located in Estonia, Latvia or Lithuania and have interest in grid computing.
- Accredited: November 2005
  - replaced Estonian Grid CA (accredited 2004)
- Run by EENet and funded by „Estonian Scientific Computing Infrastructure project“ for now
  - Location: Tartu, Estonia
- Operated by:
  - Hardi Teder
  - Piiu Pilt
  - Tõnu Raitviir

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# Baltic Grid CA statistics

Sept 10th, 2013

- 146 valid
  - 112 user, 33 host, 1 service
  - 5 revoked (during last year)
  - 45 LT, 3 LV, 97 EE
- 2230 issued certificates
  - 1521 user, 690 host, 19 service
  - 110 revoked
- 1 SHA2 user cert issued

Sept 11th, 2012

- 295 valid
  - 189 user, 104 host, 2 service
  - 6 revoked (during a year)
  - 105 LT, 11 LV, 178 EE
- 2079 issued certificates
  - 1403 user, 657 host, 19 service
  - 105 revoked

# TERENA Certificate Service

- EENet have joined with TCS
  - Since September 2012
  - Server and user certificates (with eScience)
  - Djangora for host certificates
  - Confusa for user certificates is planned
    - Federated AAI – TAAT (<http://taat.ee>)
- Statistics (2012)
  - 38 host certificates
  - 5 eScience host certificates

# Future Plans

- Piiu Pilt will be the new Baltic Grid CA manager
  - She is doing the CA operations
  - Need to update CP/CPS document
- Piiu is also responsible:
  - Estonian AAI federation (TAAT)
  - Estonian scientific computing infrastructure central services developments





# Future Plans 2

- Termination of Baltic Grid CA
  - Baltic Grid CA root cert is valid until: **21.09.2015 10:19:33**
  - Estonia and Lithuania have joined with TCS
  - Latvia has CA for Latvian Grid

# Thank you!

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