



Secure access to e-infrastructure in context of NREN security management practices

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Welcome!

Where are we from?

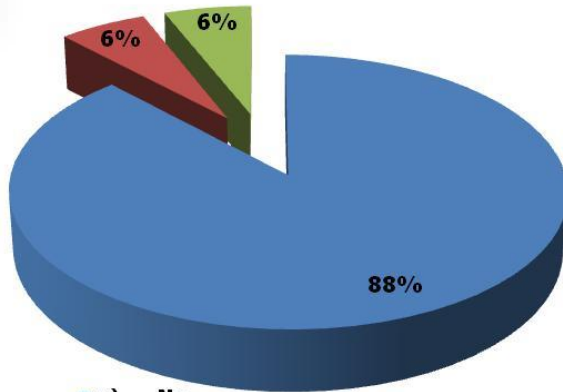
- Operator of PIONIER (Polish NREN) and POZMAN networks
- European and Polish R&D Projects
- R&D together with science, industry, finance, administration, government, ...
- Main areas of interest
 - New generation networks (NGN)
 - New data processing architectures
 - Internet of Things services
 - Security of systems and networks



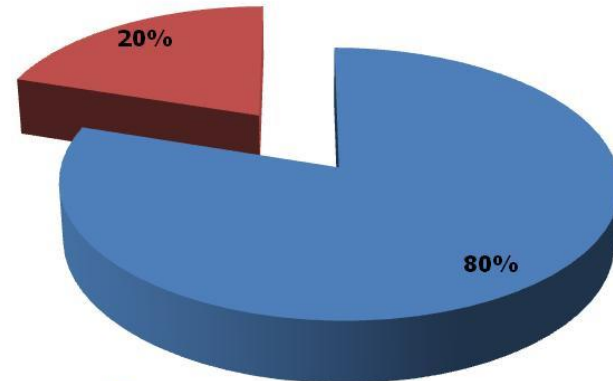
Security management in R&D HPC Centers (1)

Based on surveys for PRACE (2013, European HPC Centers) and PL-Grid+ (2014, Polish HPC centers) projects

Has your organization undergone a formal (non-technical) security audit?



- a) No
- b) yes, only once/on demand
- c) yes, periodically

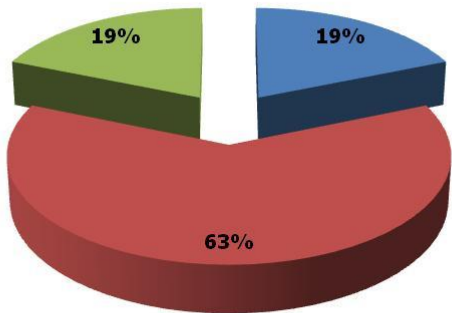


- a) No
- b) yes, only once/on demand
- c) yes, periodically

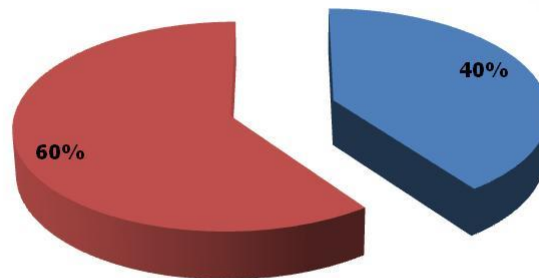
Security management in R&D HPC Centers (2)

Based on surveys for PRACE (2013, European HPC Centers) and PL-Grid+ (2014, Polish HPC centers) projects

Have you got an Information Security Policy?



- a) No
- b) yes – the policy exists, but is not based on a known standard (e.g. internal procedures)
- c) yes – the policy exists and is based on a known standard/norm



- a) No
- b) yes – the policy exists, but is not based on a known standard (e.g. internal procedures)
- c) yes – the policy exists and is based on a known standard/norm

Current status of cybersecurity management in PSNC

- In 2015 new PSNC headquarters was opened
 - Polish Optical Internet Research Center (CBPIO)
- ISMS being completed and adjusted to the current conditions
- SOC assumptions are being built



Main structures related with cybersecurity

- PSNC Cybersecurity Department
- PIONIER CERT
- Network Operations Center (NOC)
- IBCh PAS Information Security Team



PSNC Cybersecurity Department

What we do about cybersecurity in PSNC?

- Since 1996 (formerly PSNC Security Team)
- Currently 10 security specialists
- Main areas of activity:
 - Securing PSNC, PIONIER, POZMAN infrastructures
 - Security tasks in R&D projects
 - Knowledge transfer
 - Vulnerability and security research
 - External services
- More: <http://security.psnk.pl/en>



PIONIER CERT



22 PIONIER Consortium Members

- Constituency: PIONIER network
- Established in 2001 as POL-34 CERT
- Renamed in 2004 to PIONIER CERT
- TF-CSIRT Trusted Introducer status: listed
- More: <https://cert.pionier.gov.pl>

AS13293, AS8501 POL-34/155 National Network
AS8286 Academic Metropolitan Area Network, Szczecin
AS8267, AS8323 CYFRONET AGH, Academic Computer Centre Cracow
AS12324, AS12346 LUBMAN, Lublin
AS8256 Metropolitan Area Network LODMAN
AS8865 Metropolitan Area Network, Bialystok
AS12423 Nicholas Copernicus University, Torun
AS15798 OLMAN Metropolitan Area Network
AS15373 Politechnika Czestochowska
AS9112, AS8364 Poznan Supercomputing And Networking Center, POZMAN
AS5550, AS12831 TASK, PL-GDANSK
AS9103, AS13065 Technical University of Zielona Gora
AS8326, AS12618 University of Technology and Agriculture in Bydgoszcz
AS8970, AS15851 WASK - Wroclawska Akademicka Siec Komputerowa

Network Operations Center

- 24/7/365 mode
- Main areas of activity:
 - Monitoring of national network PIONIER
 - Monitoring of international connectivity
 - Monitoring of metropolitan network POZMAN
 - Monitoring of network and computing of PSNC
 - Continuous support for network issues
- More: <http://noc.pcss.pl/eng/>



IBCh PAS Information Security Team

PSNC is affiliated by IBCh PAS

- Instantiated in 2015
- Groups IBCh PAS and PSNC management representatives plus selected employees
 - E.g. PSNC Cybersecurity Dept. members
- The main goal is to assure the conformance of ISMS with the relevant law regulations
- Regular work and meetings (ca. every one or two months)

The most important national law regulations

- Polish Act on the Protection of Personal Data
 - E.g. the position of Information Security Administrator (Tomasz Nowocień)
 - Introducing and controlling technical procedures as parts of Security Policy
 - Controlling personal data sets
 - Trainings for all employees concerning data protection
- Telecommunication Law (PSNC is an ISP)
 - E.g. Data retention procedures
- Law on Protection of Classified Information
- Other regulations concerning cooperation with LEAs

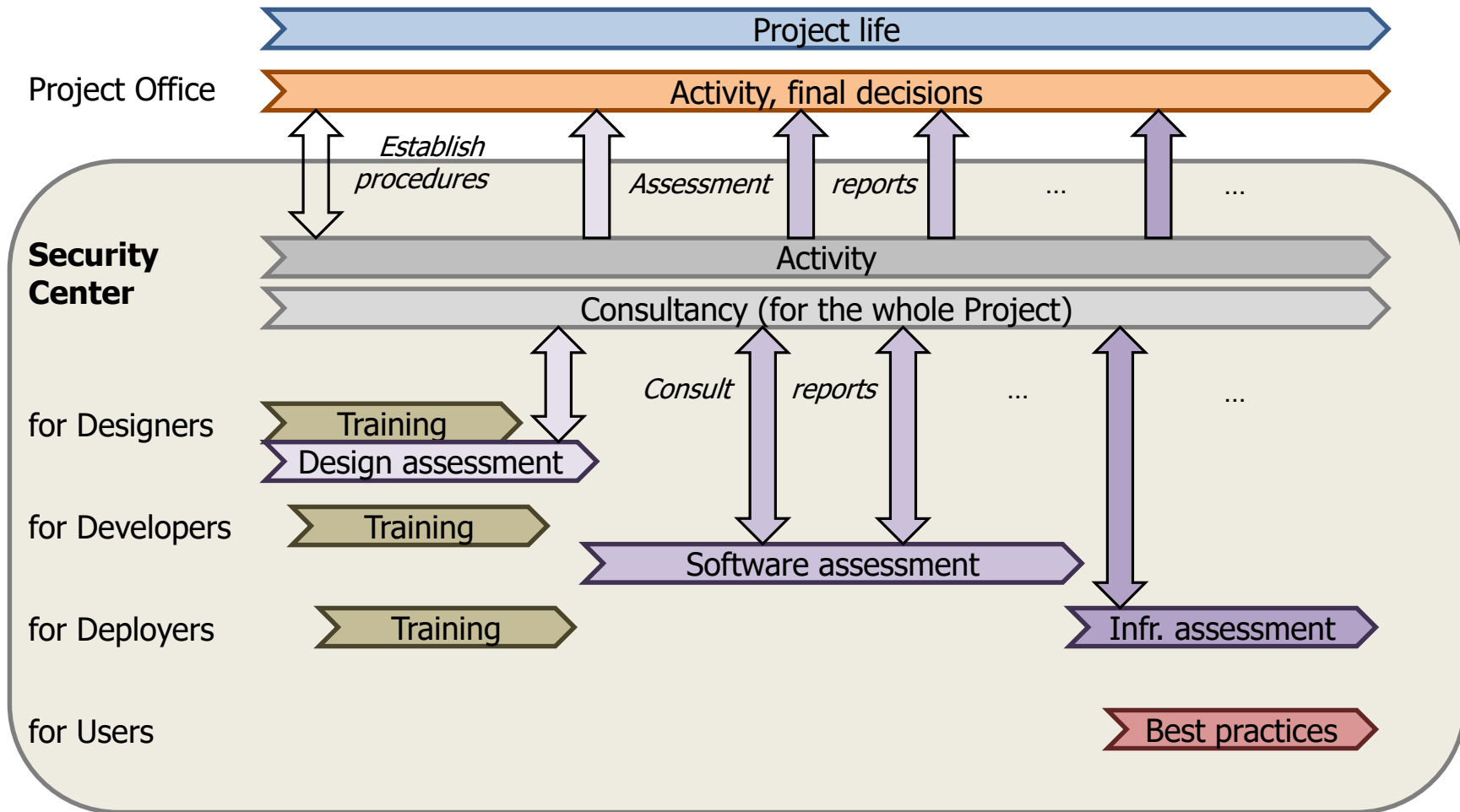


Technical security measures

- Internal technical procedures, e.g.
 - Network and system access
 - Firewall policy change management
 - Initial and regular security assessments
- Technical security trainings for developers and administrators
- Cybersecurity embedded into the life cycle of developed products



Embedding security in project development life cycle



Future plans

- Completing all elements of ISMS
- Building a regular SOC (basing on NOC/Cybersecurity Dept./Helpdesk resources) for internal and external purposes
 - Research
 - Education
 - Public administration
- Certification(s)
 - Selected ISO standards
 - Facility Security Clearance



Questions?

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