

Secure coding training

Introduction

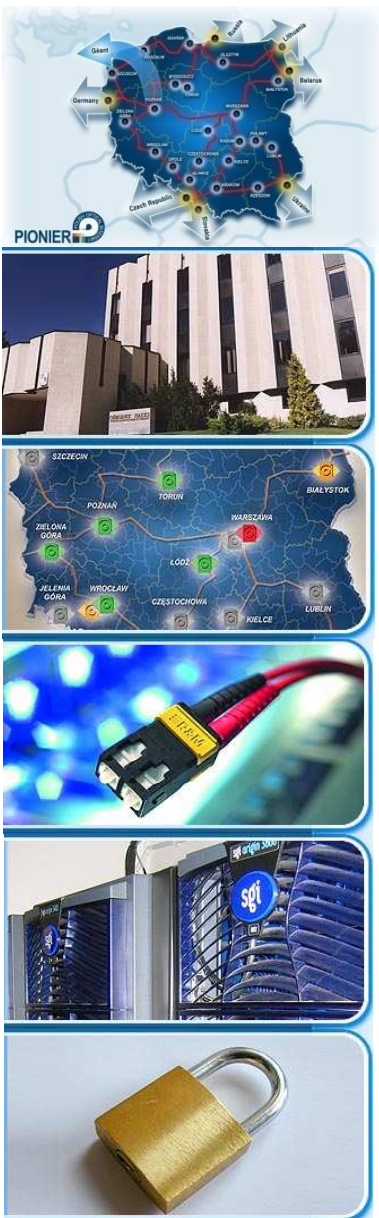
Gerard Frankowski, PSNC
Poznań, 22-23 June 2010



Agenda



- PSNC and its work
 - Poznań Supercomputing and Networking Center
 - PSNC Security Team
 - Our work in GN3
 - Our experience on coding security
- The training
 - The goal of the training
 - Our experts
 - The contents of the training
 - Useful details



- One of the largest computational (HPC) centers in Poland
- Operator of PIONIER and POZMAN networks
- Participant of R&D projects
- Systems and network security center
- R&D center for grids, new generation networks, portals
- Microsoft Innovation Center
- Since 1993, currently ca. 250 people in 5 departments

- Since 1996, currently 11 persons (9,2 FTE)
- Main tasks
 - Securing PSNC, PIONIER, POZMAN infrastructures
 - Security tasks in R&D projects
 - Preparing trainings and workshops
 - Security research
 - External services
- Research and services examples
 - Security of Web servers (Apache, MS IIS)
 - e-banking and e-commerce security reports
 - UNCCC COP 14 Conference – post-audit network tests, online security support

- SA2T4 (Multi-Domain Service Operation – Security)
 - MDS – MultiDomain Security
 - SED – Security Expertise Delivery
- JRA2T1 (Multi-Domain Resources and Services – Control Management)
- JRA2T4 ?

Our experience on secure coding (last 3 years)



- EGEE-II/EGEE III project
 - Over 20 security code reviews (C/Java/Web)
 - Security Best Practices document
 - Security coding workshop on EGEE'09 conference
- KMD (National Data Storage) project
 - 5 security code reviews (C/Web)
 - Report input and presentation on secure coding
- PL-Grid project
 - Liferay security code review (Java)
- Security reviews of Web portals hosted by PSNC
- External services

- Developers and security specialists are two different groups of people, however they can help each other
- The main goal of the training is to **raise the awareness** of the developers concerning (in)secure coding patterns
 - It should result in minimizing the number of security vulnerabilities in your code
- Our experience shows that there are many types of common mistakes made by (not all!) developers in Polish and European R&D projects

- Our welcomed guests

- Milan Potocnik (MP) from Belgrade University Computing Center – Java high level security, security in complex distributed systems

- PSNC Security Team

- Tomasz Nowak (TN) – Java/Web Services
- Gerard Frankowski (GF) – general issues, C/PHP

Our reviewers



- Paweł Berus
- Christian Gijtenbeek
- Branko Marovic
- Maurizio Molina
- Tomasz Nowocień
- Wayne Routly
- Manuel Subredu
- Peter Webster
- Thanks a lot for your help and remarks!

The contents of the training



- A „descending” approach
- Day 1:
 - Introduction
 - Securing application on a higher level
 - Applying technologies for increasing security level
 - Social event
- Day 2:
 - Best security coding practices
 - „Per vulnerability” approach
 - Security tests for the developers
 - More practical work than in Day 1
 - Survey, prizes

Agenda – Day 1



- 09:30-09:50: Welcome, introduction (GF)
- 09:50-10:20: **Secure development on all levels (GF)**
- *10:20-10:30 A short break*
- 10:30-11:30 **Securing application on a higher level (GF)**
- 11:30-12:30 **Security in complex distributed systems (MP)**
- *12:30-13:30 Lunch*
- 13:30-14:30 **Securing Web Services (TN)**
- 14:30-15:30 **Java Security from application developers perspective (MP)**
- *15:30-16:00 Coffee break*
- 16:00-? Discussion, questions, consultations
- 19:00 Social event

Agenda – Day 2



- 9:00 – 11:00 – **Best Security Coding Practices session**
- 11:00 – 11:15 – *Coffee break*
- 11:15 – 12:30 – **Best Security Coding Practices session, continued**
- 12:30 – 13:30 – *Lunch*
- 13:30 – 15:15 – **Security tests for the developers**
- 15:15 – 15:30 – Summary, a short survey, end of the training.

We will have many short slots this day. For the details, please see your hardcopy of the agenda

- Coffee breaks
 - Here
- Light lunches (12:30-13:30)
 - Room 1411 (one floor above)
 - Sandwiches, water, cola
- Social event: Sól i Pieprz restaurant
 - Starts today at 19:00, Garncarska Street 2
 - Traditional Polish food menu
 - Watching World Cup will be possible

Social event – how to find the venue

