

PB173 - Tématický vývoj aplikací v C/C++ (Jaro 2017)



Skupina: [Aplikovaná kryptografie a bezpečné programování](#)

Petr Švenda svenda@fi.muni.cz

CRCS

Centre for Research on
Cryptography and Security

NETWORK COMMUNICATION

Sockets

- Plain sockets (Windows Sock library...)
- UDP/TCP/TLS in QT (QT += network)
 - QTcpSocket, QUdpSocket, QSslSocket
 - M. Jaros
- (QT in Visual Studio)
 - <http://portfolio.delinkx.com/files/Qt.pdf>
 - VS Add in:
http://www.bogotobogo.com/Qt/Qt5_Visual_Studio_Add_in.php
- (QT in NetBeans)
 - <https://netbeans.org/kb/72/cnd/qt-applications.html>

Networking via QT

- Presentation given by M. Jaros (2016)
- Slides:
 - <https://github.com/mijaros/QtNetworks/raw/master/presentation/presentation.pdf>
- Repository with examples
 - <https://github.com/mijaros/QtNetworks>

Assignment – basic networking

- Implement network communication between client and server
 - Login, list of users...
 - Use only simple TCP communication (no TLS yet)
- Setup test environment for integration test with network
 - Test on localhost
 - Test between multiple computers (same network)
 - Perform tests
 - Complete new user registration and login
 - Complete transmission of protected message between two users

Submissions, deadlines

- Upload application source codes as single zip file into IS Homework vault (Crypto - 6. homework (Network))
- No lecture next week (Easter)
- DEADLINE 24.4. 12:00
 - 0-10 points assigned

Schedule

- 17.4. No seminar
- 24.4. Implementation with TCP socket
- 1.5. No seminar
- 5.5. Final implementation with TLS socket (QSslSocket) => start of code review
- 8.5. No seminar
- 15.5. Presentation of review