



Basic Networking with Qt

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Qt WORLD SUMMIT 2015



About myself

- Markus Goetz
- Worked for Nokia on Qt
- Co-Founder of Woboq in Berlin
- <http://woboq.com>

Goal of this presentation

- Familiarize you with Qt's network stack
- Create a small chat application with you

Qt Network Stack

- TCP - QTcpSocket, QTcpServer
- UDP - QUdpSocket
- DNS - QHostInfo, QDnsLookup
- SSL/TLS - QSslSocket, QSsl*
- HTTP - QNetworkAccessManager, QNetworkReply

- QtWebSockets
- Network Bearer Management - QNetworkConfiguration*
- Bluetooth/NFC - QtConnectivity
- IPC - QLocalSocket, QLocalServer, QtDBus

Considerations

- Uses Qt event loop
- Asynchronous vs. synchronous API
- IPv4 vs. IPv6

Let's code

- Chat application
- No central server (P2P)
- Auto discovery of nodes in LAN
- C++ and QML/JavaScript

Let's code

Auto Discovery

Receiving Chat Messages

Sending Chat Messages

Let's code

Auto Discovery

- UDP Broadcast
- Works on LAN

Receiving Chat Messages

Sending Chat Messages

Let's code

Auto Discovery

Receiving Chat Messages

- Implement a HTTP server
- TCP server socket
- Handler object for each connection

Sending Chat Messages

Let's code

Auto Discovery

Receiving Chat Messages

Sending Chat Messages

- HTTP POST
- JSON
- Do it in QML

Conclusion

- Knowledge about Qt's network classes
- Basic usage of the network classes

Q & A

- Thank you!
- Any questions?
- Code of this presentation:
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