Andreas Happe

Curriculum Vitae

Schäffergasse 20/15
1040 Vienna, Austria
+43 676 3355006
ah@coretec.at
github.com/andreashappe

Employment History

2015–Present **Engineer**, Austrian Institute of Technology.
Design, Implementation and Maintenance of privacy-preserving multi-cloud storage, user authentication and data-sharing systems. Attached to two European Union Horizon 2020 Research Projects: "PrismaCloud" and "Credentials"

2012–Present **Senior Security Engineer**, CoreTEC GmbH, Vienna.
Security-Assessments and Penetration-Tests

2009–Present **Ruby on Rails Freelancer**.
Design, Development and Maintenance of Ruby on Rails-based web applications.

2012–2015 **Software Engineering Contractor**, Austrian Institute of Technology.
Design, Implementation and Maintenance of secure multi-cloud storage systems

2006–2012 **Software Engineering Contractor**, ARC Seibersdorf Research GmbH Austrian Institute of Technology.
Design, Development and Maintenance of a Quantum Key-Distribution system.

2007–2009 **CTO**, BlackWhale GmbH.
Startup working on web-based work-flow solutions.

2001–2007 **System Administrator**, Infotech GmbH.
Linux and Microsoft Windows systems.

Technical Skills

Security Engineering
Assessment, Design and Implementation of IT-Security-Systems.
Design, Execution and Documentation of Pen-Tests.
Focus upon manual Application-Level Web Penetration-Tests.
Automated testing with Capybara, Acunetix, sqlmap.py, etc.

Software Development
Procedural, Object-Oriented and Functional Programming Paradigms.
Expert level in Ruby on Rails, Python, C, Java, Scala, Akka.io.
Unit Testing with RSpec, MiniTest, JUnit, CTest.
Acceptance Testing with Capybara and Cucumber.

References

Due to my work's sensitive nature please contact the following references for further information:

Pen-Tests	Manfred Kirisits, CEO CoreTEC IT Security GmbH mk@coretec.at, +43-676-841-786-310
Ruby on Rails	Peter Greiner, Executive Board Burgstaller-Steiner Immobilien GmbH peter.greiner@burgstaller-steiner.at, +43-650-473-4637
Java, Clouds	Thomas Lorünser, Senior Engineer and Project Coordinator for the European Union H2020 "Credential" and "PrismaCloud" Research Projects, Austrian Institute of Technology thomas.loruenser@ait.ac.at
C, Linux, Distributed Systems	Thomas Themel, Colleague during European Union's FP7 SECOQC project, now Google Inc. thomas@themel.com

Selection of Noteworthy Projects

since 2016 Member of Austrian Standards Group A77.00 on "Secure Programming"

since 2015 Prismacloud
Design, development and maintenance of the PrismaCloud privacy-preserving multi-cloud storage prototype. One of seven projects accepted for the European Union's Horizon 2020 Research Programme.

since 2015 Credential
Development of Trust Solutions for untrusted multi-cloud architectures. Another one of the seven projects accepted for the European Union's Horizon 2020 Research Programme.

since 2013 Multiple High-Profile Web-Application Breaches
Discovered security vulnerabilities in multiple high-profile web applications (Insurance and Banking industry, Governmental sector). Involved in fixing and preventing future data leaks.

2013–2015 "Immosoft"
Lead-Programmer in a Real-Estate Broker software project. An existing c#/.net application was deemed unmaintainable and its functionality is migrated to an Ruby on Rails web application. Special focus lies on maintainability and automated testing to prevent a similar fate.

2012–2015 Archistar
Design and Development of a Multi-Cloud Storage System utilizing BFT (Byzantine Fault Tolerance) and Secret-Sharing techniques.

2006–2012 SECOQC
Implementation of the first inter-company quantum key distribution network. I was deeply involved in design and implementation of the networking components (which were written using Linux, Python, C). After the presentation of the prototype during the SECOQC-Conference of 2009 responsible for maintenance and further feature-work.

Languages

German **Native language**

English **Full professional proficiency**

Formal Education

since 2014 **ongoing PhD studies**, *Software Engineering & Internet Computing*, TU Wien.

2006–2009 **DI/Master of Science**, *Software Engineering & Internet Computing*, TU Wien.

2002–2006 **Bakk. techn.**, *Software & Information Engineering*, TU Wien.

1996–2001 **Matura**, *EDV und Organisation*, HTBLVA Villach.

Masters Thesis

Title *Agile Provenance*

Supervisors S. Dustdar, L. Juszczyk, H.-L. Truong

Description Automated transparent provenance gathering and analysis within Ruby on Rails.

Publications — Cloud Storage

2016 Malicious Clients in Distributed Secret Sharing Based Storage Networks
Andreas Happe, Stephan Krenn, Thomas Loruenser
Presented at Secure Protocol Workshop 2016 in Brno, Czech Republic

2015 ARCHISTAR: Towards Secure and Robust Cloud Based Data Sharing
Thomas Loruenser, Andreas Happe, Daniel Slamanig
Presented at IEEE CloudCon 2015 in Vancouver, Canada

Publications — Quantum Key Distribution

2013 New release of an open source QKD software: design and implementation of new algorithms, modularization and integration with IPSec
Andreas Happe, Oliver Maurhart, Christoph Pacher, Thomas Loruenser, Cristina Tamas, Andreas Poppe, Momtchil Peev et al.

2012 Timing synchronization with photon pairs for quantum communications
Andreas Happe, Thomas Loruenser, Andreas Poppe, Momtchil Peev, Florian Hipp, Damian Melniczuk, Pattama Cummon, Pituk Panthong, Paramin Sangwongngam et al.

2012 Quantum Key Distribution Software maintained by AIT
Andreas Happe, Oliver Maurhart, Christoph Pacher, Thomas Loruenser, Gottfried Lechner, Cristina Tamas, Andreas Poppe, Momtchil Peev et al.

2012 QKD software architecture and system integration with classical communication infrastructure
Oliver Maurhart, Christoph Pacher, Andreas Happe, Thomas Loruenser, Cristina Tamas, Andreas Poppe, Momtchil Peev

2009 The SECOQC quantum key distribution network in Vienna
Andreas Happe, Momtchil Peev, Thomas Loruenser, Thomas Themel, Christoph Pacher, Oliver Maurhart, Andreas Poppe, Anton Zeilinger, Cristina Tamas, Edwin Querasser et al.