

# JAN ENGELHARDT

GÖTTINGEN, GERMANY

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updated versions may be found at <https://inai.de/about/>

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## Professional Activities

NETitwork GmbH 2015/05–2020/12

*Co-founder & Shareholder, Lead Software Engineer*

- Since 2016/04, I hold the lead developer role of Kopano Core, which is a C++ MAPI groupware server as an alternative to Microsoft Exchange. The product is released by Kopano B.V.
- Prior to 2016/04, co-developed its predecessor, the Zarafa Collaboration Platform, a groupware server released by Zarafa B.V.
- Co-maintenance of the Linux appliance for SalesTV GmbH.

NETitwork Security Solutions GbR 2011/03–2015/05

*Lead Software Engineer, Senior Linux Consultant*

- Created a field-specific office application for BEV Eissport for tracking Germany's professional and amateur league ice hockey matches and results, implemented in C++ with wxWidgets, and used MinGW to cross-compile to Windows.
- Assisted in the assembly of the SUSE/Linux-based “RTS OS” appliance, which would turn servers with storage into an inexpensive iSCSI-capable alternative to dedicated storage hardware such as NetApp's. The product was released by RisingTide Systems Inc. (2013)
- Backported selected iSCSI features from contemporary Linux to Seagate's “NAS Pro” product series's kernel so it could pass VMware VAAI certification. (2015)
- Co-developed the Zarafa Collaboration Platform since 2013.

Mathematical Institute, University of Göttingen 2010–2012

*Systems Integration Engineer*

- Performed general maintenance duties on the Linux & openSolaris servers (base services like e-mail, DNS, etc.) and in-house cluster infrastructure. Handled support requests from employees concerning new workstation installations and peripheral device setups.
- Packaged field-relevant mathematics software as RPM for ease of cluster-wide deployment.

SalesTV GmbH 2009/02–2011/02

*Lead Software Engineer*

- Developed a SUSE/Linux-based appliance for Point Of Sale kiosks and Digital Video Signage systems. Authored signage system client and server software for transfer and display of video clips. Co-authored a PHP web interface where customers (e.g. store chain owners) could upload their clips and configure how and when the individual in-store devices would show them.

Leet Datasystem AS 2012–2013

*Network Integrator, Web editor*

- Administration of web server instances hosting PHP applications such as Joomla and phpBB in small scale.

ApexHosting Ltd. UK 2012–2014

*Network Security Officer*

- Administration of the core router firewall on the basis of Netfilter/iptables and fail2ban; development of customer-defined application-level rate limits. Assessment of the hoster's web servers for active rootkits and time-stealing injected PHP scripts.

- Topalis AG 2010  
*Systems Integration Engineer*
- Assisted in the setup of active-active DRBD storage with ocfs2 serving as a base for an active-active MySQL databases, with Pacemaker/Corosync as a cluster manager layer, which altogether would replace a Microsoft SQL server setup.
- Google Inc., New York City, USA 2008  
*Software Engineering Intern (Site Reliability Engineering group)*
- Analyzed the different then-available virtualization technologies (User Mode Linux, VMware, VirtualBox, KVM, Qemu, to name a few) as to their offerings in security and isolation, runtime requirements, and performance characteristics. Wrote C++ programs that would launch the hypervisor, and an arbitrary untrusted program of choice to run within that, on the in-house “Borg” supercluster. The findings may have contributed to what today is Google Compute Engine.
- CC Computer Consultants GmbH 2007  
*Software Engineer*
- Co-developed the SUSE/Linux-based “TelCube” VoIP appliance including Asterisk telephony server, and a custom PHP-based web interface for setup/administration.
- Gesellschaft für Wissenschaftliche Datenverarbeitung mbH Göttingen 2006  
*Software Engineer*
- Co-developed the Knoppix/Linux-based “Instant-Grid” Linux appliance where computers in a LAN would autonomously discover each other and form a computing cluster.
- Max Planck Institute for Solar System Research, Germany 2005/12  
*Software Developer*
- Enhanced an in-house Fortran software that analyzes Mars surface data by cluster capabilities using the Message Passing Interface API.
- Gesellschaft für Wissenschaftliche Datenverarbeitung mbH Göttingen 2003/10  
*Software Engineering Intern*
- Developed an application that extracts and visualizes sensor data from mainboard BMCs of the in-house PE2650 computing cluster, ca. 100 nodes.

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## Voluntary involvements

- 2000/08–2007/12: Performed general maintenance duties – software management, user administration – on the Linux servers (about 1200 users) at the local colleges.
- 2012–: Member of the non-profit NGO Kompetenzkreis Internet e. V.: Consultation services and promotion of free (libre) software in the educational sector.
- 2013–: Geo surveying and data acquisition for OpenStreetMap.
- 2013–: Election Judge for the Göttingen city administration.

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## Education

- 2019: Course on Korean Language at Kim Hyong Jik Univeristy, Korea.
- 2010–2011: Courses on multiple languages at Göttingen University.
- 2006–2009: Tertiary Education at Göttingen University, in the fields of Applied Computer Science combined with Geographic Information Science and Cartography.
- until 2006: Secondary Education at Otto-Hahn-Gymnasium Göttingen, majoring in Computer Science, Geography, and Chemistry.
- 2005: Summer course on Digital Image Manipulation at XLAB Göttingen.

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## Feats

- Languages: German C2, English C2, Japanese B1, Norwegian B1, Swedish B1, Korean A2.1, French B1.
- Lifetime accumulated abroad experience: 41 weeks UK, 12w USA, 8w Japan, 6½w Korea.
- Hardware experiences: 386 to the modern x86\_64, Sun/Oracle SPARC, IBM z12, RackMac PowerPC.
- Programming languages: Assembler, C, C++17, Perl5, PHP, Unix Shell.
- Software development tooling: automake, Open Build Service, Git, mingw64, wxWidgets.
- Kernel programming experience on Linux (wrote parts of Netfilter/iptables); Solaris, FreeBSD, OpenBSD, NetBSD (custom project „ttypd“).
- Experience in the field of storage with: glusterfs, drbd, ocfs2; in geography: ArcGIS, JOSM.
- Notable free software involvement: openSUSE submissions reviewer (2013–2019) & maintainer for roundabout 450 pieces of individual software.