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Professional Objective

Linux system administration, DevOps (Docker, Ansible), supporting continuous integration (Jenkins, GitLab CI/CD), build and release management incl. the deployment process and repository management (JFrog Artifactory).

Developing reports using JasperReports.

Script development on UNIX (incl. Linux, AIX, Apple macOS and Solaris), Cygwin and BusyBox in Shell (bash, ksh, ash), Perl, Python, and Ruby.

Querying details from XML data using XPath and XQuery.

Developing XML specifications using RELAX NG.

Skills

Languages: German (as a native speaker), English, French.

Shells: bash, Korn shell (ksh), Almquist Shell (ash), Bourne shell (sh), zsh, C-shell (csh).

Interpreted Programming Languages: Perl, Python, Ruby, Tcl/Tk+expect, awk, snobol/spitbol, various LISP-s including xlist.

Continuous Integration: GitLab CI/CD, Jenkins, Atlassian Bamboo, CruiseControl.

Repository Management: JFrog Artifactory.

File Transfer Software: rsync, wget, curl,

Various other UNIX utilities (Shell Scripting Utilities): sed, seq,

Processing Virtualisation (VMs): Oracle VirtualBox, VMware.

Unix-like Operating Systems: macOS, Linux(SuSE, Redhat, CentOS, Debian, Ubuntu), SysV R4, Solaris, BSD, SunOS, Cygwin.

Other Operating Systems: Microsoft Windows..., VMS, BS2000.

Relational Databases: MySQL, Oracle, PostgreSQL, Sybase, Informix, GeminiRDBMS.

Reporting Software / Business Intelligence: JasperReports, iReport, JasperReports Server.

Software Testing: "Selenium" (acquired at DigitalPerformance.de (2010-10), supplemented by own read-up), "Expect" (the Tcl extension).

Compiled Programming Languages: C, Ada, Modula-2, Pascal.

Assembly Languages: Intel 8080, Motorola 68k, IBM 370.

Compiler Construction Kits: LEX, YACC, regular expressions, DIANA, IDL, Attribute Grammar Systems.

Batch Control Software: Jenkins, AutoSys, crontab.

Configuration Management incl. Source Code Control Software: git, Subversion, CVS, RCS.

Build Management / Make Tools: make, rake(make à la Ruby), Ant.

Text Publishing Using Markup Languages (Typesetting): DocBook, texinfo, troff (mm, man, me, ms).

Text Publishing Using WYSIWIG (Word Processors): Open Office, Microsoft Word, FrameMaker, Interleaf.

Spreadsheet Software: Microsoft Excel, Lotus-123.

Markup_Languages / {XML,SGML}: Ant, xmlresume, DocBook,

CASE -- computer-aided software engineering: methodologies, graphical design and specification tools, documentation tools, code generation tools.

CASE: methods for specification, design: automaton and finite state machine, class and inheritance, composition, entity-relationship model.

CASE: design and specification tools: Teamwork (SA/RT), SADT.

Employment History

January 1999–Present

Aleph Soft GmbH (Berlin, Germany)

managing partner

operating systems: UNIX (Linux (SuSE)), macOS, Microsoft Windows; various ongoing inhouse projects

Achievements:

- utility: *creating electronic invoices in XML à la ZUGFeRD* (together with PDF invoices) from the CRM database (using XPath and XQuery)

- utility *extracting table formed data from HTML files* (web/HTML scraping (ETL)) (e.g. the German tax office's tax accounts reports): details get extracted using XPath expressions (XMLStarlet).
- utility: *extracting table formed data from PDF files* (PDF scraping (ETL))
- telephone call logging: *AVM FRITZ!Box port 1012 and Google Contacts XML*: telephony events and address book look-up in Ruby on SuSE Linux

September 2020–Present

atene KOM GmbH (Berlin, Germany)

DevOps Engineer

DevOps sysadmin for Linux servers and desktop PCs (Ubuntu)

Projects:

- Linux, Debian, Ubuntu, LVM, vSphere
- BorgBackup
- Ansible, GitLab CI/CD, Python
- LDAP, Docker
- password manager software: Zoho Vault, Bitwarden, KeePassXC
- JetBrains' YouTrack
- XWiki, DokuWiki

Achievements:

- Python script and GitLab CI/CD: converting the Ansible hosts inventory (YAML) to the XWiki markup language, and uploading it to the company wiki
- using BorgBackup for Ubuntu desktop systems
- script skeleton and user guide: retrieving account credentials through the Bitwarden commandline utility in order to replace hardwiring the credentials in scripts
- wiki user guides on various topics of Linux system administration: SSH, Git, ...

June 2019–June 2020

Volkswagen / communardo (Wolfsburg, Germany)

JFrog Artifactory and Atlassian Supporter and Administrator

JFrog Artifactory; Atlassian: JIRA, Confluence, Bamboo, SonarQube, Bitbucket, Crowd, HipChat. Windows 10, Outlook, Skype, Cygwin, git, the Java universe

Projects:

- working on JIRA trouble tickets
- JFrog Artifactory: user management, consultation, ...
- Atlassian Bamboo: dedicating agents, ...
- Atlassian SonarQube: user management, ...

November 2018–April 2019

(European railways business) (Mannheim, Germany)

Senior Software Engineer

JFrog Artifactory, APT repository technology (aptly). Debian Linux, Windows, Cygwin, git. Continuous Integration, Jenkins. DokuWiki

Projects:

- evaluating repository technologies as deployment targets within a Jenkins build environment for Debian package as artifacts to be deployed: APT repositories (aptly), JFrog Artifactory
- running JFrog Artifactory as Docker container
- maintaining documentation within a DokuWiki

August 2017–September 2018

European Energy Exchange (Leipzig, Germany)

Senior Software Engineer

Oracle DB, Perl, Bash, Debian Linux, Windows, Cygwin, git

Projects:

- Debian packaging: creating Debian packages for a couple of corporate projects
- Debian packaging: backporting a couple of Perl modules (as Debian packages) from Sid to Jessie
- Tomcat 7 to 8.5 migration
- JSP maintenance
- LDAP: processing LDIF

June 2017–July 2017

Searchmetrics (Berlin, Germany)

Senior Software Engineer

replacing their crawler software **n3-audit-crawler**

Projects:

- reverse engineering their legacy software implemented in Perl

Achievements:

- summaries
- documentation

January 2017–March 2017

Commerz Finanz (Munich, Germany)

Senior Software Engineer

Sofico Miles, JasperReports, Oracle

Projects:

- Sofico Miles comes with a rather complex data model called **Galaxy** and a legion of sample reports (JasperReports ".jasper" files) to be used as a starting point for customisations. Dedicated JasperReports reports with their SQL queries needed to get derived and completed.

Achievements:

- Reverse-engineering the SQL queries from the sample reports supplied with Sofico Miles in order to provide expansible SQL queries for the local use. Developing **PL/SQL** scripts around the SQL queries using Oracle's **SQL Developer**.
- Designing documents layouts following the business department's sketches and texts using JasperReports' iReport, analysing the parts that groups of documents have in common; creating JasperReports **JRXML** using Perl for use within iReport.
- Analysing the business department's data as roughly described in their texts, and correlating these data and database SQL view fields with the help of domain experts (i.e. Sofico Miles).
- Extending the SQL queries (and the PL/SQL scripts) reverse-engineered from the Sofico Miles sample reports by the fields as needed by the business department.
- Completing the JasperReports documents.
- The Perl and shell script code (**ash**) got developed on Windows within a **BusyBoxW32** environment as a minimalistic Unix-like environment, also using Strawberry Perl.

August 2016–December 2016

TDK EPCOS (Munich, Germany)

Senior Software Engineer

Web development in Perl + JavaScript + Bootstrap + HTML + CSS + PostgreSQL under openSUSE Linux

Projects:

- Adding various functionality to the website.

September 2015–July 2016

Dräger Safety (Lübeck, Germany)

Senior Software Engineer / Jenkins etc supporter

work environment: Windows 7, Cygwin

using Jenkins (Continuous Integration) as job control environment, amongst others also for Build Management

scripting in Python, Perl, Bash, ".bat"

XML technology: XPath through Python, XPath through XMLStarlet, XQuery

using Atlassian's JIRA and Atlassian's Confluence

Projects:

- Jenkins slaves within VMware machines
- "TESSY" (the unit testing framework) "in the batch" resp. within a Jenkins job
- "Coverity" static analysis framework within Jenkins jobs
- developing reusable tools to be used in the Jenkins environments

Achievements:

- utility *compact listing of JIRA issues* (ETL): a bash script retrieves (using curl resp. wget) "issues" from the JIRA server as XML, details get extracted using XPath expressions (XMLStarlet), the result gets displayed as brief textual descriptions.
- utility *listing a Jenkins server's jobs and folders recursively*: a bash script retrieves (using curl resp. wget) a Jenkins server's "jobs" and "folders" recursively as XML, details get extracted using XPath expressions (XMLStarlet, XQuery), the result gets displayed conveniently as URLs.
- utility *exporting all build steps of a Jenkins job* (ETL): a bash script retrieves (using curl resp. wget) a single "job" from a Jenkins server as XML, details get extracted using XPath expressions (XMLStarlet, XQuery), the individual build steps get stored in separate files for further editing resp. historical versioning.
- utility (time-series graphical plot of the memory map of the IAR compilation system) (ETL): a python script reads the ".map" file and creates XML from it that will be read by the Jenkins server's plot plugin to draw curves from the time-series.

October 2012–June 2015

(A Major Player in the Logistics and Supply Chain) (Hamburg, Germany)

Senior Software Engineer / global technical EDI chief supporter

the main task: trouble shooting lots of irregular occasions and involved Korn shell and Perl scripts

perl, Shell (Korn Shell), Makefile, EDISTAR, Request Tracker AKA "RT", CVS, AIX

perl: TAP (the Test Anything Protocol), Test::More

Unicode, UTF-8, UTF-16

NAS administration

Achievements:

- utility *compact listing of RT issues* (ETL): a shell script retrieves (using curl resp. wget) "issues" from the RT server as HTML, details get extracted using a Perl helper script, the result gets displayed as brief textual descriptions.

April 2012–July 2012

(a medium-sized business in the e-commerce sector) (Berlin, Germany)

Senior Software Engineer

Jaspersoft's report generation software suite (iReport, JasperReports (BI)); PostgreSQL, SQL.

developing software using Perl on Linux.

using Subversion for version and release management.

February 2012–March 2012

Aleph Soft GmbH (Berlin, Germany)

Senior Software Engineer

web/HTML scraping (ETL)

Projects:

- *account statement Postbank.de* (web/HTML scraping (ETL)): web-server communication through libcurl in Perl on SuSE Linux
- *account statement Berliner-Sparkasse.de* (web/HTML scraping (ETL)): web-server communication through libcurl in Perl on SuSE Linux

November 2011–December 2011

Deutsche Bank Suisse (Geneva, Switzerland)

Senior Software Engineer

scripting file transfers

Projects:

- scripting several SFTP file transfers using the Korn shell on AIX, respecting rather dedicated reliability.

October 2011–October 2011

MySailingGuide (Berlin, Germany)

Senior Software Engineer

web/HTML scraping (ETL)

Projects:

- *web/HTML scraping: collecting data from a sailing / yachting related web-site:* web-server communication through libcurl in Perl on SuSE Linux

August 2011–September 2011

Loyalty Partner (Munich, Bavaria, Germany)

Senior Software Engineer

configuration, build, and deployment management: using the Python scripting language, Maven, Oracle WebLogic Server

Projects:

- development of deployment management software.

June 2011–July 2011

groupon (Berlin, Berlin, Germany)

Senior Software Engineer

Jaspersoft's report generation software suite (iReport, JasperReports (BI)); PostgreSQL, SQL.

using Subversion for version and release management; methodology: Agile / Scrum.

Projects:

- creating and maintaining JasperReports reports wrapping postgresSQL queries for their Business Intelligence team.

November 2010–May 2011

Real Garant (Zurich Group) (Neuhausen auf den Fildern, Baden-Württemberg, Germany)

Senior Software Engineer

developing software using Perl and Java on Linux, PDF forms; Jaspersoft's report generation software suite (iReport, JasperReports (BI)).

Projects:

- the customer replaced hundreds of PDF forms with JasperReports documents. I designed a dedicated and rather dense XML format as a step in between those two. I implemented software in Perl to extract details from those PDF documents into that XML, and also software to create JasperReports' XML (JRXML) from that intermediate XML data structure.
- the Java code is good for dealing with the JasperReports' files, JRXML etc and creating PDF from it.

November 2009–May 2010

Hamburger Sparkasse (Hamburg, Germany)

Senior Software Engineer and trouble-shooting

developing software using the Python scripting language and also Java, using Oracle 10, all on Microsoft Windows; trouble-shooting.

using Subversion for version and release manangement methodology: Agile / Scrum.

Projects:

- the customer upgraded to "Opics Plus", Misys.com's OTC derivate trading platform. interfacing software had to be reverse-engineered from Perl in rewritten in Python. For the new code in Python there was als unit test code in Python to be developed.
- making use of Jaspersoft's report generation software suite (iReport, JasperReports (BI)); that included extending code written in Java.

May 2008–August 2009

Krauss-Maffei Wegmann (Kassel+Munich, Germany)

Senior Software Engineer

developing real-time software in Ada (Aonix's ObjectAda) on Linux and Microsoft Windows, targeted towards an embedded system, communicating there using CANopen over a fieldbus.

creating Ada code from my CANopen XML using Perl, shell, and Ruby Makefiles AKA Rakefiles.

Projects:

- the project needed new data messages in the CANopen area (a field-bus communication protocol); the legacy CANopen Ada *marshaling* code looked difficult to maintain and enhance, and it seemed worthwhile generating that code from an XML-ish specification, incorporating the CANopen data objects and messages and also details on bit record layouts; the XML-ish specification itself got defined by myself, the XML with the project details got filled out (for a couple of projects), code generators got implemented in Perl.
- communication with several devices through these CANopen messages got implemented.

March 2008–April 2008

Rheinmetall Defence Electronics (Bremen, Germany)

Senior Software Engineer

developing software in Ada (GNU Ada AKA GNAT) and C on Debian Linux.

Ada, shell, and Ruby Makefiles AKA Rakefiles.

Projects:

- talking to a NovAtel OEMV GPS receiver through RS232 in C the POSIX way; providing Ada bindings to this interface; using GNU Ada (GNAT) under Debian Linux.
- setting up a proprietary RS422 interface with Linux device driver sources provided by the vendor (FarSync.co.uk); talking to an *Initial Measurement Unit* through that RS422 interface in C; providing Ada bindings to this RS422 interface.

August 2007–December 2007

ImmobilienScout (Berlin, Germany)

Senior Software Engineer and trouble-shooter in "Build&Release&Deploy"

maintaining resp. developing Ruby, Perl, Ant, ... scripts; tagging releases in Subversion; managing hot fixes; dealing with ticket / bug tracking systems; enhancing the documentation in the wiki; operating systems: UNIX (Linux (Redhat resp. CentOS)), Microsoft Windows; continuous integration (CruiseControl), processing virtualisation (VMware).

Ruby, Perl, shell, and Ruby Makefiles AKA Rakefiles.

July 2006–September 2006

HP (Böblingen, Germany)

Senior Software Engineer

software development: UNIX, SGML, shell, Perl, C, DSSSL (SGML style sheets), processing virtualisation (VMware)

April 2006–June 2006

orange.NL (wanadoo) (Amsterdam, The Netherlands)

Senior Software Engineer, OSS staff

Perl, shell, enhancing the documentation in the wiki, OSS: production monitoring using "Big Brother", operating systems: Solaris

April 2002–July 2007

Allianz Asset Management, InvestmentDataServices (Munich, Bavaria, Germany)

Senior Software Engineer, OSS (incl. trouble-shooting) staff

Perl, DBI, shell scripts (bash, zsh), Oracle, PostgreSQL, UNIX (Solaris); training staff. trouble-shooting.

Projects:

- design (FSM oriented), implementation and operation (OSS) of a retrieval +extraction+transformation+loading+post_process+exporting system (ETL) -- (x_spooling, files.pl)
- JHwis -- Web (Interface) Scripting (using libcurl and Perl): robust scripted traversal of web pages and filling out of form fields in order to download files.

Achievements:

- interfacing with the big market data vendors (Bloomberg, S&P, Citigroup, Deutsche Börse, Wertpapiermitteilungen, ...) (ETL)

December 1998–June 2001

Commerzbank Frankfurt, Investment Banking, Risk Management (Frankfurt am Main, Germany)

Senior Software Engineer, OSS (incl. trouble-shooting) staff

OSS: Panorama Collateral (collateral management), RiskWatch and more Risk Management systems; add-ons in shell (bash), Perl, CGI, UNIX (Solaris). trouble-shooting.

January 1998–December 1998

Derwent Information (Thomson Information) (London, United Kingdom)

Senior Software Engineer

data conversion in Perl; shell (bash); web GUI in Perl/CGI; UNIX (Solaris); Y2K work.

developed IMAP utilities using the Python scripting language.

July 1997–December 1997

Salomon Brothers (CitiGroup) (London, United Kingdom)

Senior Software Engineer, OSS staff

Projects:

- Perl, shell (ksh, bash), database extractions in Perl/DBI aimed at Sybase and Oracle; design-oriented reverse engineering, creating an ER-model; operating systems: UNIX (Solaris)
- automated scanning of ASCII report files; operating systems: UNIX (Solaris)

March 1997–July 1997

Zurich Insurance (BAT Group); the risk management department (Zürich, Switzerland)

Senior Software Engineer and trouble-shooting

RiskWatch: OSS, customer add-ons in Perl, shell (bash), automating their data retrieval; operating systems: UNIX (Solaris)

August 1996–February 1997

Agfa-Gevaert (Antwerpen, Belgium)

Senior Software Engineer, configuration manager

Projects:

- design-oriented reverse engineering, maintenance, development, training, controlling a proprietary RCS-based multi-platform source code control system (implementation details: UNIX (Solaris), Microsoft Windows, Mac OS pre-9; C, shell (Bourne, Korn, C), Perl, Tcl/Tk, GUI builder "SpecTcl")
- maintaining and refining Makefiles of different flavours
- evaluating Microsoft's Visual SourceSafe

May 1996–August 1996

GLI (Munich, Bavaria, Germany)

Senior Software Engineer

GUI implementation in Tcl/Tk for an EDI / EDIFACT system; supplying extensions to the Tcl system, actually in C++; shell (bash); setting up a source code control system based on RCS; training staff on that; operating systems: UNIX (Solaris).

February 1996–April 1996

Peek Traffic (Manchester, United Kingdom)

Senior Software Engineer

implementing test suites in Tcl and "expect"; training staff in Tcl/Tk, "expect", UNIX, shell, GNU emacs; operating systems: UNIX.

December 1995–January 1996

Deutsche Telekom, R&D (Berlin, Germany)

a mixed software role

NNTP server, Apache -- software porting, set up, and training

April 1995–September 1995

EADS / DASA Space Division (ERNO) (Bremen, Germany)

Senior Software Engineer

Ada, C, Oracle, xview GUI library.

Projects:

- Columbus Ground System
- Mission Database Access

February 1995–March 1995

Technomedia GmbH (Berlin, Germany)

HTML programmer

HTML

Projects:

- converting texts from the **frontpage** magazine to HTML

1994–1994

Sietec Systemtechnik; Project Compact Archive (Berlin, Germany)

software engineer

customization, scripting in awk and Perl, maintaining software in C++ and shell (bash, ksh)

1992–1993

Sietec Systemtechnik; Project IN-DBPT (Berlin, Germany)

software engineer

Projects:

- implementing an automated testing system in Pascal and Perl

1989–1992

Sietec Systemtechnik; Project OSCAR - software for CT and MR medical systems (Berlin, Germany)

software engineer

using the Teamwork CASE system (following the OOA/OOD methods of Yourdon/DeMarco and Ward-Mellor); developing a code generation system, emitting code for state transition machines described in Teamwork to drive a GUI implemented using the xview library; extracting inline documentation from C sources to provide manuals in Framemaker.

October 1988–1989

Sietec Systemtechnik; Kleinod's Ada Competence Center (Berlin, Germany)

consultant

Ada lectures, compiler evaluation, ...

March 1988–September 1988

Sietec Systemtechnik; the Gemini RDBMS (Berlin, Germany)

software engineer

Ada, C, shell (ksh, sh, msh), awk: implementation of the Gemini (later BiiN) Relational DBMS in Ada on OSIRIS.

1987–February 1988

PCS (Kienzle, Mannesmann), Jürgen Gulbin's office (Karlsruhe, Germany)

junior programmer

Projects:

- programming some C stuff like a software packaging facility (shells: ksh, msh)
- a ditroff previewer on X-windows

1987–1987

Fraunhofer Gesellschaft, Röhrich's institute (Karlsruhe, Germany)

research help

Projects:

- porting the RCS to a non-BSD UNIX (C, Make, shell)

1987–1987

Fraunhofer Gesellschaft / GMD, the Modula-2 group (Karlsruhe, Germany)

research help

Projects:

- porting a chess program from Ada to Modula-2 (Ada, Modula-2, Make, shell)
- building and installing the Stroustrup C++ compiler on a non-SysV UNIX
- learning C++
- serving as C++ development environment consultant

1985–1986

Siemens, E85G, Project Gemini (Nuremberg, Germany)

junior programmer

Projects:

- coding test suites for the Gemini (later BiiN) Ada compiler (Make, shell)

1983–1985

Fraunhofer Gesellschaft / GMD, the Karlsruhe Ada Compiler group (Karlsruhe, Germany)

research help

runtime systems, code generators; work done in C, Ada, compiler construction tools, and assembly language (also: shell); under UNIX, BS2000, VMS, bare 68000 based micro processor environment.

1982–1983

University of Karlsruhe, Faculty of Computer Science, Prof. Goos's chair ("compiler construction and programming languages"), the Karlsruhe Ada Compiler group (Karlsruhe, Germany)

research help

bits and pieces of the Karlsruhe Adacompiler targeted at the Siemens BS2000, the Motorola 68000, and the Vax (also: shell).

Projects:

- coding test suites for the Karlsruhe Ada compiler (compiler, Ada, also: shell)

1981–1982

University of Karlsruhe, Faculty of Computer Science, Prof. Wettstein's chair ("operating systems") (Karlsruhe, Germany)

research help

Projects:

- implementing a disk driver in C for Wettstein's operating system (also: Make, shell)

1980–1981

University of Karlsruhe, data center (Karlsruhe, Germany)

research help

programming languages (Fortran, Algol) consulting hours;

Projects:

- numerical library in Fortran

Education

Diploma in Computer Science (aka Informatik), February 1988. Thesis on Operating System Design in Ada

University of Karlsruhe (TH)

Subjects: compiler construction and programming languages (Prof. Goos) (), information systems, data base systems (Prof. Lockemann) (), operating systems (Prof. Wettstein) ().

- Operating System Design in Ada (Diploma Thesis (Diplomarbeit))
- a runtime system for Ada running on a bare machine with a MC68000 CPU
- a runtime system for Ada running on a UNIX with a MC68000 CPU underneath
- Generating MC68000 Code for Ada (Small Thesis (Studienarbeit) on a code generator for the Karlsruhe Ada Compiler)

Abitur (A-levels), 1978

Gymnasium Laupheim

Professional Memberships

Association for Computing Machinery

1983–Present

German Chapter of the ACM

1983–Present

Miscellany

August / September 2011: studying Pragmatic Programmers' "Agile in a Flash: Speed-Learning Agile Software Development"

September 2011 : studying o'Reilly's "Mastering Git"

September 2011: studying o'Reilly's "Big Data Glossary / A Guide to the New Generation of Data Tools" (NoSQL Databases (MongoDB, CouchDB, Cassandra, Redis, BigTable, HBase, ...), MapReduce (Hadoop, ...), Storage (S3, HDFS), Servers (EC2, Google App Engine, Elastic Beanstalk, Heroku), Processing (R, Yahoo! Pipes, Solr/Lucene, ...), NLP = Natural Language Processing, Machine Learning, Visualization, Acquisition, Serialization)

July 2011: *Jaspersoft v4.1 Technical Training* JasperReports, Jaspersoft ETL resp. Talend ... ETL

Publications

- Jochen Hayek, Michael Thätner, Hans-Stephan Jansohn, Rudolf Landwehr. "Generating MC68000 Code for Ada". *Symposium on Small Systems -- Proceedings of the 1983 ACM SIGSMALL Symposium on Personal and Small Computers*. ACM New York NY, USA. 1983. 81 - 87. ISBN: 0-89791-123-7

Hobbies

- my son João Gabriel David
- Sports. Fitness, long distance running, cycling

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