Andreas Gruhler

Senior System Engineer

Profile

Open source enthusiast and sportsman. Engineer at Adfinis in Zurich, Switzerland.

Professional experience

present
↑
Dec 2018

Senior System Engineer

Adfinis AG, Zurich

- Project manager and tech lead of small teams (3 to 4 people) for multiple projects at the customer site
- Technology owner for HashiCorp Vault: Product documentation, best practices, security issues, roadmap & service development, coordination & communication with vendor and Adfinis teams
- Operations, incident management, on-call and technical support
- Pre-sales (offers & estimations) and solution architecture support
- Automation and secrets management projects (e.g., GitLab, Vault): Requirements engineering, architecture & design, self-service, client integrations in various environments (hybrid cloud, on-prem, AWS, Azure, Google, etc.), platforms (VM, Kubernetes, OpenShift) and industries with DevOps methodology (e.g., GitOps and CI/CD)
- Build and introduce MaxScale and MariaDB database architecture on RHEL at Swiss telco
- Architecture & design, development and operations of a computing platform for a Swiss school (Nextcloud, Collabora Online, ProxySQL, MariaDB, Galera)
- Maintenance and support for customer SLA systems and services
- Contributions (code, support) to various upstream open source projects
- Public talks at various meetups & conferences, customer presentations, demos, blog posts

Aug 2018
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Apr 2018

IT Project Management Internship

Mobilize Financial Services (formerly, "RCI-Finance"), Zurich

- IT project management support
- Preparation and documentation of project meetings and workshops
- Create status reports, test plans and templates
- Support integration testing and roll-out of new business tool

Contact

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Certifications

- AWS Certified Solutions Architect – Associate
- CKA: Certified Kubernetes Administrator
- HashiCorp Certified: Vault Operations Professional
- HashiCorp Certified: Terraform Associate
- Credly Badges

Languages

German	Fluent

English	Intermediate

French	Basic

Jan 2018
↑
May 2017

Software Developer

qiio (formerly, Smart Home Technology GmbH), Zurich

- Software development with focus on IoT on Microsoft Azure
- JavaScript (Sails.js) and C# programming with Azure and .NET framework
- Development of an Azure microservice for cost analysis
- Visualizations with Power BI

Jun 2016
↑
Mar 2016

Internship in Financial Services / Advisory IT Risk and Assurance

EY, Zurich

- Contribute to project of Fraud Investigation & Dispute Services (FIDS)
- Evaluation and review of emails and documents according to legal criteria
- Adminstrative tasks and support of counselor and team

Jun 2015
↑
Jun 2013

IT-Support

Accelerom AG, Zurich

- Maintenance of server infrastructure (data server, VPN, Samba shares, web server, backup server, data synchronization, marketing software, networks, firewall, windows user accounts and workstations, email, intranet)
- Ensure smooth operations of live analysis and management tool (incident management)
- Hardware support and installation
- Software engineering for MarketConnex-Software with Java (Groovy/Grails) and JavaScript

Sep 2014
↑
Jun 2014

Software Engineering Internship

Fachhochschule Nordwestschweiz (FHNW), Brugg

- Software Engineering Internship under supervision of Prof. Dr. Manfred Vogel at Fachhochschule Nordwestschweiz (FHNW), Institute for Data Science (formerly, "4D-Technologies")
- SCRUM-based software development with Java (Groovy/Grails) and JavaScript for KTI project "CAFAIO: Crossmedial Analytics Framework with Artificial Intelligence and Optimization"
- Extend the existing MarketConnex-Software with a collaboration platform to discuss customer touchpoints

Education

Mar 2023
↑
Dec 2022

Aspirant Swiss Snowsports Association (SSSA)

Swiss Ski School Savognin

2018
↑
2015

Master in Information Systems

University of Zurich (UZH)

- Master thesis: A Reputation and Reward Scheme for a Cooperative, Multi-domain DDoS Defense
- Explore design, implementation and evaluation of a blockchain-based reputation and reward scheme to incentivize participants and penalize malicious peers in a cooperative defense
- Master project: Blockchain in Automotive Industry
- Elicit requirements for a novel digital car dossier, resulting in a prototype with Hyperledger Fabric

Dec 2016
↑
Aug 2016

Exchange Semester
Nanyang Technological University (NTU), Singapore

- Algorithms & Theory of Computing
- Informational Biology

2015
↑
2012

Bachelor in Information Systems
University of Zurich (UZH)

- Bachelor thesis: Investigation of Resource Reallocation Capabilities of KVM and OpenStack
- Review concepts and evaluate tools to reallocate memory, CPU cycles, disk I/O and network bandwidth on the hypervisor layer
- Document existing resource reallocation capabilities of the Kernel-based Virtual Machine (KVM) hypervisor module
- Explore mechanisms to facilitate similar tasks on the orchestration layer with an experimental OpenStack Compute (nova) extension

2012
↑
2011

Military Service
Swiss Army

Serve in the "FU Ber Kp 104-2" as signaller

2011
↑
2007

High school
Seelandgymnasium Biel

Study focus "Physics and Mathematics"

Research experience

Nov 2018
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Sep 2018

Research Assistant Communication Systems Group (CSG)
University of Zurich (UZH)

Research in the area of blockchain, distributed ledgers and reputation systems

Teaching experience

Mar 2023
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Dec 2022

Aspirant Swiss Snowsports Association (SSSA)
Swiss Ski School Savognin

- Organize and realize skiing lessons for beginners and advanced skiers
- Teaching and guidance for private and group classes of 4 to 6 adults or up to 12 kids on the mountain
- Hold lessons in German, English and French
- Support with demonstrations, shows and other touristic activities

Nov 2018
↑
Sep 2018

Teaching Assistant Communication Systems Group (CSG)
University of Zurich (UZH)

- Teaching assistant for the Communications Systems Lab under guidance of Bruno Bastos Rodrigues and Prof. Dr. Burkhard Stiller at the CSG
- Develop and conduct Communication systems (ComSys) lab sessions with students

Publications

Gruhler, Andreas, Bruno Rodrigues, and Burkhard Stiller. "A Reputation Scheme for a Blockchain-based Network Cooperative Defense."

2019 IFIP/IEEE Symposium on Integrated Network and Service Management (IM). IEEE, 2019.

Co-authored blog posts

Nov 2023 — **Secret zero with ACME**
Link

Jun 2023 — **HashiDays Munich 2023**
Link

Dec 2022 — **HashiCorp Vault on Exoscale Scalable Kubernetes Service (SKS)**
Link

Jul 2021 — **How to Manage Secret Keys with HashiCorp Vault**
Link

Mar 2021 — **Database Clustering with Galera Cluster and Galera Manager**
Link

Jul 2019 — **HashiConf Europe 2019**
Link

Public speaking

Jun 2024 — **PostgreSQL in the snow**
PGDay 2024 lightning talk

- Schedule
- Slides (p. 38)
- Code
- Demo
- It was demonstrated how the scoring process for freestyle events (e.g., slopestlye ski/snowboard) can be improved with a live-updating leaderboard. The leaderboard makes use PostgreSQL publications to continuously refresh the current ranking. The Supabase platform enables rapid prototyping.

Dec 2022 ●

Build, run and manage with Zero Trust on a Swiss Cloud

Zürich HashiCorp User Group (HUG)

- Meetup
- Presentation
- Demo code
- Vault Deployment on Exoscale Scalable Kubernetes Service (SKS)
- Deploy Vault on Exoscale SKS with ArgoCD. In this short rundown we will provision a Kubernetes cluster on Exoscale (SKS), install ArgoCD and use that to spin up HashiCorp Vault Enterprise. At the end of this session, you will also be able to leverage the best practices around the "App of Apps" approach for your projects, which we already use at Adfinis to manage the lifecycle of mulitple apps across clusters and customers.

Jun 2019 ●

Traceable, fast and open - Ansible learnings from the capital city

Ansible Meetup Bern

- Meetup
- A stack of open source components is being built for the public administration. The Red Hat stack could demonstrate its strengths in many ways. A main advantage is Ansible for day 1 and day 2 operations. Some processes could be optimized to save precious time and tax money.