Tobias **Schneider**

DevOps/Site-Reliability Engineer

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`In the ever-evolving landscape of software development, change is not just an option; it is the essential mandate for progress and innovation.`

Skills

Kubernetes & Container Orchestration
- ■■■ Deployment: Helm
- ■■■ Management: Rancher, OpenShift
- ■■■ Observability: Prometheus, Grafana, Loki
- ■■□ GitOps: ArgoCD
- ■■□ Tools: ExternalDNS, Cert-Manager, MetalLB, Istio
- ■■□ Kubernetes API: Go, C#

Cloud provider
- ■■□ OpenStack: Nova, Neutron, Keystone, Horizon
- ■■□ AWS: EC2, VPC, EKS, S3
- ■■□ Azure: AKS
- ■■□ Hetzner Cloud
- ■□□ GCP
- ■□□ Civo
- ■■□ OpenNebula

Programming languages
- ■■■ Go
- ■■■ TypeScript/JavaScript
- ■■□ Python
- ■■□ C#
- ■■□ Java
- ■□□ C++/C

Web Development
- ■■■ Nginx, Traefik
- ■■■ HUGO
- ■■□ Tailwindcss
- ■■□ HTML
- ■□□ Angular2+
- ■□□ Vue.js
- ■□□ SASS/CSS

Scripting & Automation
- ■■■ Ansible
- ■■□ Terraform
- ■■□ Bash

CI/CD
- ■■■ GitLab CI/CD
- ■■□ DroneCI
- ■■□ Github Actions
- ■■□ Jenkins

IT-Infrastructure
- ■■■ Linux (Debian, Arch, RHEL)
- ■■■ Proxmox
- ■■■ Mikrotik RouterOS
- ■■□ VMWare ESXi/vCenter
- ■■□ vyOS
- ■■□ OPNSense
- ■■□ pFsense
- ■■□ Windows Server 2016+

Authroization & Authentication
- ■■■ LDAP/Active Directory
- ■■■ Keycloak
- ■■■ PKI-Infrastructure
- ■■□ OAuth2, OIDC
- ■□□ SAML

Networking
- ■■■ Firewall
- ■■■ IPSec/L2TP
- ■■■ OSPF
- ■■■ VXLAN
- ■■■ IPv6
- ■■□ BGP
- ■■□ Wireguard
- ■□□ IDS

Agile Tools
- ■■□ Jira, Confluence
- ■■□ YouTrack
- ■■□ Draw.io
- ■□□ OpenProject

Miscellaneous
- ■■■ Fusion 360
- ■■□ Altium Designer
- ■■□ KiCad

Projects/Contracts

Fresenius AG
Graz (Remote), Austria

Site-Reliability Engineer
July 2021 - Jan. 2023

- **Platform and Infrastructure Management**
  - Ensured 24/7 platform operation
  - Upgraded servers to accommodate increased needs
  - Verified backup integrity and security
  - Upgraded 300 Raspberry Pis in the field
- **Data Management and Analysis**
  - Created a data archive system for analysis
  - Maintained distributed code on edge devices
  - Debugged and improved the codebase

divVoice GmbH
Aachen (Remote), Germany

DevOps Engineer / Software Architect
Jan. 2021 - May. 2021

- **Backend Architecture Design and Microservices Development**
  - Designed a scalable backend architecture with a focus on Event-Driven Architecture utilizing NATS.
  - Developed microservices in Go to enhance system efficiency and modularity
- **Development Infrastructure Setup**
  - Established on-premise development infrastructure, including GitLab CI/CD pipelines and ArgoCD for GitOps
- **Developer Empowerment**
  - Created essential developer tools:
    * NATS-compatible Event-Driven library
    * Compile-time Dependency-Injection for Go
    * Protobuf message definitions
- **Infrastructure Management**
  - Engineered a Hybrid-Cluster Management Platform using Rancher for resource optimization
- **Knowledge Transfer**
  - Provided mentorship to developers, fostering microservices development skills and promoting agile development practices

Loglite GmbH
Wolnzach, Germany

Systemadministrator
March. 2017 - Jan. 2021

- **Infrastructure Maintenance and Migration**
  - Successfully maintained and orchestrated the migration of existing infrastructure
    * Migrated from VMWare ESXi to Proxmox, optimizing resource management and virtualization
    * Transitioned from Cisco IOS to Mikrotik RouterOS, enhancing network performance and management
- **Email Infrastructure Enhancement**
  - Improved email infrastructure by replacing the SPAM filter with Proxmox Mailgateway, enhancing email security and filtering capabilities
- **Microsoft Exchange Upgrade**
  - Executed a seamless migration from Microsoft Exchange 2013 to 2016, ensuring minimal disruption and improved email system performance
- **Security and Organizational Enhancement**
  - Enhanced the security of the Active Directory system and introduced a revised organizational structure, strengthening data access controls and optimizing resource allocation
- **VPN Implementation**
  - Successfully implemented Site-to-Site and VPN access solutions, ensuring secure and reliable remote network connectivity for the organization

Professional Experience

emgenics GmbH
Regensburg, Germany

DEVOPS ENGINEER/SOFTWARE DEVELOPER
July 2021 - Aug. 2023

- **IT Infrastructure Creation and Management**
  - Established and maintained the IT infrastructure, including:
    * Set up a hypervisor cluster using Proxmox
    * Designed network architecture with Site-to-Site connections and dynamic routing
    * Implemented a multi-tenant isolated architecture on-premise
- **Development of Edge Yocto Devices and Cloud Management**
  - Served as a Software Architect and DevOps Engineer for edge Yocto devices:
    * Configured a Hybrid-Cloud infrastructure with Rancher
    * Created a development architecture with GitLab CI/CD, a build server for Yocto, and development/staging environments
    * Designed fundamental embedded software modules, including libraries for NATS, MQTT, and containerd, along with Dependency-Injection in Go and Protobuf message definitions
    * Developed backend architecture, implementing services in C#, MQTT and S3 libraries, and integrating Certificate generation with the Kubernetes API
    * Established CI/CD pipelines for C++, C#, Go, and Yocto codebases
    * Provided training to developers in service-oriented architecture development
- **Platform for Ordering Machining Parts**
  - Assumed the role of Project Manager and Fullstack Developer for the platform:
    * Maintained and evolved the architecture, migrating from a monolithic to a service-oriented architecture
    * Developed backend services using NestJS
    * Managed sprints, engaged with stakeholders, and coordinated milestones
    * Gathered and integrated stakeholder requirements into project planning, conducting planning meetings
    * Set up staging and production environments to ensure smooth operations

DioVision Systems GmbH
Regensburg, Germany

WORKING STUDENT/DEVOPS AND SITE-RELIABILITY ENGINEER/SOFTWARE DEVELOPER
Sep. 2018 - July 2021

- **High-Performance Visual Inspection System for Pharmacy Companies (DevOps Engineer)**
  - Designed a highly scalable backend architecture for a visual inspection system, including:
    * Utilizing event-driven architecture with Kafka
    * Designing a monolith with service-oriented services for loose coupling
    * Developing the backend in plain TypeScript with MySQL, Kafka, and S3 integration
  - Established and maintained the development platform, incorporating GitLab for code versioning and implementing CI/CD pipelines for the backend
  - Set up tools to simplify development, such as automatic schema import into Kafka Schema Registry and Ansible scripts for edge device updates
  - Developed software modules for edge devices, including migrating existing Python 2 code to Python 3 and creating an automatic certificate signing and revocation software
  - Created a custom Alpine Linux for Raspberry Pi 3, including a Bash script to build the custom Alpine Linux with necessary software modules and handling booting via TFTP and U-Boot
  - Set up a highly scalable on-premise hybrid-cloud management platform using Rancher, maintaining four different locations, and integrating it into GitLab
- **Web Organigram Software for Pharmacy Company (Full-Stack Developer)**
  - Developed a web-based organigram software for a pharmacy company
  - Designed an algorithm to print organigrams, involving extracting organigram data from MySQL and generating custom PowerPoint presentations using JavaScript
  - Set up deployment using Docker
- **IT Infrastructure Creation and Management**
  - Established a hypervisor cluster using Proxmox
  - Designed network architecture with Site-to-Site connections, dynamic routing, and VPN access for employees
  - Deployed a Big-Data infrastructure for a machine-learning labeling pipeline

Schneider IT-Solutions
Beilngries, Germany

CEO
since March 2017

- **IT Infrastructure Support for Local Businesses**
  - Provided essential IT infrastructure support to local businesses.
- **Key Projects (Detailed in Contracts)**
  - Managed significant projects detailed in the contracts section.

Bertrandt GmbH
Regensburg, Germany

Internship/Working student

Sep. 2017 - Aug. 2018

- **Traffic Sign Recognition with Deep Learning (Machine-Learning Intern)**
  - Undertook an internship role as a Machine-Learning Engineer
  - Designed and implemented a neural network for traffic sign recognition
    - ⋆ Utilized Python with the Keras framework for model development
    - ⋆ Executed the neural network on an Nvidia Jetson TX2 board, showcasing proficiency in both machine learning and hardware integration
- **Collecting and saving LIDAR/GPS-Data using an electronically driven bus**
  - Role as a working student
  - Setup backend architecture in Azure to collect data
    - ⋆ ROS Framework to transmit data to Azure
    - ⋆ Remote management of an embedded computer in the bus

Prosis GmbH
Gaimersheim, Germany

Working student

Sep. 2016 - Oct. 2016

- **Anti-virus Infrastructure Implementation**
  - Worked as a working student
  - Conducted research and successfully deployed an anti-virus infrastructure for the company

LAS³ - Laboratory for Safe and Secure Systems, OTH Regensburg
Regensburg, Germany

Working student

Apr. 2016 - Aug. 2017

- **Project Infrastructure Maintenance (Working Student)**
  - Held a role as a working student
  - Responsible for the upkeep of Linux servers and the deployment of Docker containers within the project

AUDI AG
Ingolstadt, Germany

Electronics Technician and Industrial Plant Maintenance Worker

Sep. 2010 - Sep. 2015

- **Maintenance of Production Plants (Industrial Plant Maintenance Worker)**
  - Served as an Industrial Plant Maintenance Worker
  - Ensured 24/7 operation of production plants through meticulous maintenance efforts
  - Specialized in optimizing Siemens S7 PLC to minimize cycle time on the motor assembly line
- **Distributed Analyzing Platform Implementation (System Administrator)**
  - Operated as a System Administrator
  - Developed and implemented a distributed analyzing platform, including:
    - ⋆ Managed RDP-enabled Windows VMs for effective operations
    - ⋆ Established a software stack with Siemens SIMATIC S7 for streamlined data analysis
    - ⋆ Orchestrated software updates efficiently using OPSI

Education

Ostbayrische Technische Hochschule Regensburg
Regensburg, Germany

B.S. Computer Science

Oct. 2015 - July 2019

- **Thesis**: Developing a big scale-able big-data processing platform for sensor and image data

Ostbayrische Technische Hochschule Regensburg
Regensburg, Germany

Part-Time M.S. Computer Science

Oct. 2019 - Exp. February 2024

- **Thesis**: Evaluate different seismic sensor technologies to locate and differentiate persons in a room