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Overview

- **Natural Languages** German, English
- **Programming Languages** Bash, Python, Golang, C, C++, Java, x86 Assembly
- **Interests** Site-Reliability Engineering, Devops, Open Source, Systems Security.

Employment

Work Student — **Avency, Remote** — **Apr 2020 — Now**

- Showed Ownership in maintaining an on-premise Kubernetes Cluster
- Developed a package manager for deploying static binaries in Golang for NextGen Firewalls.

Student Assistant — **TU Clausthal, Datacenter** — **Apr 2016 — Apr 2020**

- Wrote a software that helps finding unused or orphaned artifacts in the firewall and therefore reduced the manual task of searching for it.
- Built a proof of concept for deploying Virtual Tunnel End Points (VTEPs) with Ansible on Linux machines for EVPN BGP/VXLAN.
- Implemented an automated system in Python for fetching IPS firewall alerts via REST API and mailing them to responsible system administrators. This reduced the toil of writing 5–25 mails daily.
- Improved system security and reliability by setting up an OpenVAS vulnerability scanner.
- Reduced MTTR from one work day to one hour by automating a Freeradius/Radsecproxy based AAA infrastructure with Ansible.
- Showed ownership by maintaining a Proxmox VE cluster consisting of 25 physical nodes.
- Designed and implemented a command line tool in Python for deploying TLS certificates and private keys on a central firewall for inbound TLS inspection.
- Evaluated Kubernetes for increasing reliability and introducing micro segmentation via namespace segregation
- Set up a distributed monitoring system with the help of Traefik, Prometheus and Grafana for monitoring Service Level Indicators (SLIs) for different institutions within the university campus.
- Gave a talk about Freeradius and Radsecproxy deployment via Ansible on the DFN-BT (annual German research network meetup) [1]
- Achieved a relation of LDAP users and IP addresses for writing user/IP specific firewall rules via implementing a REST API as middleware between a proprietary service, Freeradius and OpenVPN.
- Additional key technologies being used: NSCA, NRPE, SNMP, Nginx, Apache, NAPALM, NFSv4 over Kerberos, Elasticsearch, Logstash, Kibana, Ansible, Python-Flask, Docker, Git.

Student Assistant — **TU Clausthal Inst. of Software Systems Engineering** — **Oct 2016 — Sep 2017**

- Built a tool chain for exporting Matlab Simulink models into the Functional Mockup Unit (FMU) format.
- Developed components for a model transformation tool suite in the project *Spectral Analsysis of Software Architecture*
- Enhanced code quality by establishing the Continuous Code Quality tool Sonarqube.
- Key technologies being used: Java, Gradle, Matlab, SVN

Student Assistant — **TU Clausthal Inst. of Mathematics** — **Apr 2014 — Sep 2017**

- Increased system reliability by monitoring via the Nagios fork Centreon.
- Build software packages for Ubuntu (deb) and CentOS (rpm).
- Has been the system administrator for Linux and Windows machines and gave first level support.
- Technologies being used: Bash, NFSv4 with Kerberos, Apache, CUPS, MySQL.

Education

M.Sc. Computer Science **Technical University Clausthal** **Oct 2018 — Apr 2021**

- **Courses**: Automation Technology, Advanced Computer Networks, Cloud Computing, High-Performance Computing, High-Performance Computing with C++, Network Security, Wireless Sensor Network…

B.Sc. Computer Science **Technical University Clausthal** **Oct 2013 — May 2019**

- **Courses**: Algorithms and Datastructures, Amazon AWS, Openstack, Business Informatics - Enterprise Information Systems, Business Informatics - Technologies and Applications, Combinatorial Optimization, Computer Architecture, Computer Networks, Databases, Digital Circuit Design, Embedded Systems Engineering, Human Computer Interaction, Linear Algebra, Logic and Verification, Mathematical Analysis, Numerical Analysis, Operating Systems and Distributed Systems, Software Engineering, Theoretical Computer Science…

Open Source Contributions

Arch Linux `https://archlinux.org` **Jan 2015 — Now**

- **Security Advisories** Verifying known Common Vulnerabilities and Exposures (CVEs) in Arch Linux packages.
- **Hardening** Improving security of Arch Linux packages and infrastructure.
- **Package Maintaner** Building source code into Arch Linux binary packages for distribution, committing patches and supporting the community.
- **Release Engineering** Vagrant, qcow2 and Docker image builds for Arch Linux.

Projects `https://github.com/shibumi`

- **Arch Linux Boxes** Building reliable infrastructure for automated monthly Vagrant and qcow2 image builds with Ansible and Hashicorp Packer. This project includes a small python script that reduces the toil of 1 hour per month to manually check for the monthly needed fresh Arch Linux ISO image. [2].
- **ryoukai** My i3 statusbar written in Go.[3]
- **ansible-hcloud-inventory** A dynamic Ansible inventory for the *Hetzner Cloud*.[4]
- **cifs-exporter** A SMB/CIFS Prometheus Exporter, that parses */proc/fs/cifs/Stats* and exposes them via an HTTP server for Prometheus.[5]
- **mnemonic** Diceware alike memorizeable password generator written in Go. [6]
- **nspawn.org** A hub for systemd-nspawn container images and bootable GPT machine images available on `https://nspawn.org`

Footnotes

[1] `https://www.dfn.de/fileadmin/3Beratung/Betriebstagungen/bt70/BT70_MobileIT_Konfiguration_FreeRADIUS_und_radsecproxy_mit_Ansible_Strauf_Rebischke.pdf`

[2] `https://github.com/archlinux/arch-boxes`

[3] `https://github.com/shibumi/ryoukai`

[4] `https://github.com/shibumi/ansible-hcloud-inventory`

[5] `https://github.com/shibumi/cifs-exporter`

[6] `https://github.com/shibumi/mnemonic`