

Employment

Student Assistant	TU Clausthal, Datacenter	Apr 2016
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- I created knowledge via building a proof of concept for deploying Virtual Tunnel End Points (VTEPs) with Ansible on Linux machines for EVPN BGP/VXLAN.
- I reduced toil from multiple hours to an automated system with automating daily email based firewall IPS/IDS alerts via the Forcepoint NGFW Python API.
- I improved system security and reliability with setting up an OpenVAS vulnerability scanner.
- I reduced MTTR from one work day to one hour with automating a Freeradius/Radsecproxy/MySQL based AAA infrastructure with Ansible.
- I increased virtual machine reliability via creating and maintaining a Proxmox VE cluster consisting of 25 machines.
- I reduced toil from multiple hours to an automated system with writing a Python client for deploying TLS certificates and private keys on a Forcepoint NGFW for TLS inspection.
- I reduced toil and increased security via implementing a Kubernetes Cluster with micro segmentation between different applications.
- Additional tasks were monitoring (NSCA, NRPE, SNMP), webserver (Nginx, Apache), network Automation (NAPALM, Ansible), storage (NFSv4 over Kerberos), log and netflow gathering (Elasticsearch, Logstash, Kibana) and Configuration Management (Ansible).

Student Assistant	TU Clausthal Inst. of Software Systems Engineering	Oct 2016 – Sep 2017
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- I build a tool chain for exporting Matlab Simulink models into the Functional Mockup Unit (FMU) format.
- I developed components for a model transformation tool suite in the project *Spectral Analysis of Software Architecture*
- I enhanced code quality with establishing the Continuous Code Quality tool Sonarqube.
- I used the following technologies for accomplishing these tasks: Java, Gradle, Matlab, SVN

Student Assistant	TU Clausthal Inst. of Mathematics	Apr 2014 – Sep 2017
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- I increased system reliability with monitoring via the Nagios fork Centreon and using the protocols NRPE, NSCA, SNMP.
- I reduced toil with building linux packages for Ubuntu and CentOS.
- I have administrated Linux and Windows machines and gave first level support.
- Furthermore I have wrote bash scripts, created a NFSv4 server with Kerberos, managed Apache webserver, CUPS printing server, a Firefox sync server for bookmarks and passwords, and a MySQL server.

Education

B.Sc. Computer Science	Technical University Clausthal	Oct 2013 – May 2019
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- Seminar paper: Amazon AWS (EC2 virtual Server and EC2 container) (German) <https://github.com/shibumi/aws-ec2-project-paper>
- Seminar paper: Openstack (internal structure and overview) (German) <https://github.com/shibumi/openstack-project-paper>
- Seminar paper: Tor (a short introduction in The Onion Routing) (German) <https://github.com/shibumi/Tor-project-paper>
- Bachelor thesis: Evaluation of a distributed monitoring system for the TU Clausthal Campus (German) <https://github.com/shibumi/bachelor-thesis>
- Bachelor defense: Evaluation of a distributed monitoring system for the TU Clausthal Campus (German) <https://github.com/shibumi/bachelor-kolloquium>

Open Source Contribution

Arch Linux

<https://archlinux.org>

January 2015

- **Security Advisories** Verifying known Common Vulnerabilities and Exposures (CVEs) in Arch Linux packages.
- **Hardening** Improving Security of Arch Linux packages and infrastructure.
- **Package Maintainer** Building source code into Arch Linux binary packages for distribution, committing patches and supporting the community.

Projects

<https://github.com/shibumi>

- **Arch Linux Boxes** Building reliable infrastructure for automated monthly Vagrant builds with Ansible and Hashicorp Packer.
- **nullday.de** My personal blog with a 100/100 TLS Rating <https://www.ssllabs.com/ssltest/analyze.html?d=nullday.de> and a 130/100 security rating according to <https://observatory.mozilla.org/analyze/nullday.de>.
- **ProcFS** Adding support for CIFS in the Prometheus Node Exporter component ProcFS.
- **nspawn.org** A hub for systemd-nspawn container images and bootable GPT machine images available on <https://nspawn.org>
- **Fighting Malware** Participation in fighting global botnets and malware: https://www.virusbulletin.com/uploads/pdf/conference_slides/2015/KalnaiHorejsi-VB2015.pdf.

Languages, Additional Technologies and Interests

- **Languages** Python, Golang, Java, C, C++, Bash, x86 Assembly, German, English
- **Additional Technologies** Terraform, Puppet, Selinux, Systemd, IPtables, Restic, Yara, Radare2, LUKS, Vagrant, Hashicorp Packer and many more.
- **Interests** Site-Reliability Engineering, Devops, Network Infrastructure, Reverse Engineering, Forensics, Penetration Testing, Red Team/Blue Team, Blackbox/Whitebox Testing, Malware, Server Hardening, Network Security.