

## Employment

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<b>Student Assistant</b>	<b>TU Clausthal, Datacenter</b>	<b>Apr 2016</b>
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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).

<b>Student Assistant</b>	<b>TU Clausthal Inst. of Software Systems Engineering</b>	<b>Oct 2016 – Sep 2017</b>
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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

<b>Student Assistant</b>	<b>TU Clausthal Inst. of Mathematics</b>	<b>Apr 2014 – Sep 2017</b>
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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

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<b>B.Sc. Computer Science</b>	<b>Technical University Clausthal</b>	<b>Oct 2013 – May 2019</b>
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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>

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**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](https://www.virusbulletin.com/uploads/pdf/conference_slides/2015/KalnaiHorejsi-VB2015.pdf).

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**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.