Marcus Holtz

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**Systems Engineer in Linux, virtualization, networking, containers, automation, and development.**

# Resume Info

This resume has been created in a [**dockerfile**](https://github.com/MarcusHoltz/resume-generator/blob/main/dockerfile) built by a [**makefile**](https://github.com/MarcusHoltz/resume-generator/blob/main/makefile) and deployed using [**Github Actions’ CI/CD**](https://github.com/MarcusHoltz/resume-generator/blob/main/.github/workflows/docker-image.yml). The document is published everyday, with a timestamp at the last page denoting it’s publishing date.

* + Download this document: <https://github.com/MarcusHoltz/resume-generator/>

# Skills

## Linux System Administration

* • Maintain a reliable and secure hybrid cloud environment for development and serving resources using tools such as SSH/tunneling, SSL, UDP hole punching, VPN, and single sign-on identity management.
* • Monitor and log: performance monitoring, network bandwidth usage, memory allocation, hard drive status, and application uptime using Glances, Netdata, Prometheus, Grafana, ELK stack, & Diskover.
* • Cross-platform systems administration experience: Ability to install, configure, maintain, and document a variety of production-level Unix based systems: Debian, CentOS, Ubuntu, FreeBSD.

## Virtualization

* • System virtualization platforms: Docker, QEMU, KVM - with virt-io’s 9p filesystem to increase io speed.
* • Created system templates for cloning, backing up, and restoring servers across multiple platforms and formats: CentOS, Ubuntu, FreeBSD, Debian in vmdk, vdi, vhdx, qcow2, & raw filetypes.

## Containers

* • Create, build, deploy containers using LXC and containerd using: docker, dockerfile, docker compose, docker networking, docker hub, github, github actions, proxmox.
* • Experience with distributed storage technologies like NFS, Ceph, S3 as well as dynamic resource management frameworks: Kubernetes, Docker Swarm.

## Servers

* • Deployment and management of headless, bare metal servers in off site datacenter using the model:
* Debian image > Proxmox baremetal > isolated containers > pfsense routing > haproxy > public internet
* • Configured and deployed ssl certificate management with reverse proxy, added SecurityOnion as an IDS within virtualized infrastructure with additional SPAN port to duplicate internal traffic.

## Disaster Recovery

* • Built, configured, tested, and deployed Proxmox high availability ZFS solution featuring: Incremental 15min snapshotting for disaster recovery using [PBS2, cv4pve and Sanoid](https://github.com/MarcusHoltz/proxmox-automatic-backups).
* • Developed and maintain system backup infrastructure including individual machine images, datastores, and off-site backups.

## DevOps

* • Knowledge of cloud infrastructure (AWS, Azure, GCP, Oracle) & orchestration (Chef, Puppet, Ansible, SaltStack, Terraform, Helm, OpenStack).
* • Experience with the core AWS services, including ALB, ELB, EC2, RDS, and S3.
* • A proactive approach to spotting problems, areas for improvement, and performance bottlenecks.

## Networking (virtual and physical)

* • Documentation: Details with visuals of network infrastructure, system architecture, process, and policies.
* • Virtual Routing: Administered networking in virtualized environments, including virtualized edge routing with pfSense.
* • Technologies used: Linux, OpenVSwitch, SPAN port for SecurityOnion, VLAN segregation, DNS, BIND, VPNs, DNSoverTLS,
* • Installation of virtual network infrastructure using: VMware ESXi, Proxmox, Hyper-V, and Xen.

## Domain Administration

* • Active Directory, SCCM, Domain Trust, Domain Controller, FSMO roles, Active Director Replication, Group Policy, OpenLDAP, RADIUS
* • Identity Management and Single sign-on (SSO) (Kerberos, OAuth2, and OpenID Connect; Keycloak)

## Data Analytics

* • Created actionable reports weekly/monthly to customers and team members. Keeping them informed of how their efforts were going, what they should expect, allowing us to make data-driven decisions – all with visuals and detailed explinations.
* • Keep metrics of every varriety, to allow cross-referencal contrasts.
* • Love to set up A/B tests to see analytics and insights in action

## Project Ownership

* • I love to solve problems: Often taking the broad look to spot issues and inefficiencies from a mile away, backing them with suggested solutions, and personally implementing them.
* • Personal pride in my work to ensure that every customer has a great experience with what I build.
* • Work with many kinds of clients, in a wide variety of fields.

## Research

* • Able to find a solution through vendor documentation, question and answer websites, and related forums.
* • Excelent at researching client’s brands, industries, and markets to very quickly come up with a plan to fit their needs.
* • Experience architecting system layouts.

## Web Development

* • Designed and built custom website layout/user interfaces and custom backend software to meet project deadline/requirements.
* • Integrated data from various back-end services and databases:
  + election data, employee database, interactive event map
* • Fixed broken installs, hacked sites, busted databases, and never-been-updated themes/plugins.

# Technical Projects

## Homelab

[My homelab](https://docs.google.com/spreadsheets/d/e/2PACX-1vSi5v2k_D79Qt8x_NAfr766UzHH1ddsXiPcn0Epben6a6TGPmGV-ywPLrpR4mmk575Pt3c4XSK-3EI2/pubhtml?gid=1093046237&single=true) features [VLAN network segregation](https://docs.google.com/spreadsheets/d/1wGjdCJFOPo7gF1jrSo6Y9S_uc8N1rTyLKcYWGcmCcBk/edit?usp=sharing), 6 VMs, ~100 containers, and multi-tier snapshoting.

# Presentations

## Browser Privacy

**The goal of this talk is to put you in control.** Understand what data is collected by the tools you use and decide if you want to share it. Then use methods provided here to opt-in or opt-out.

* \* BLUG (Boulder Linux Users Group) - [11/10/22](https://www.meetup.com/boulder-linux-users-group-blug/events/pqbkrqydcpbnb/)
* \* SFS (Software Freedom School) - [9/3/22](https://www.meetup.com/sofreeus/events/287663325/)
  + - * [Link to Slides](https://nextcloud.sofree.us/index.php/s/L4cP2rzXZQgBisp) | [Link to Video](https://nextcloud.sofree.us/index.php/s/6ntcY6iyDSnyLBZ)

## Opensource Firmware on Routers

**What can Opensource do for home consumer routers?** OpenWRT supports more than 1,500 devices most capable of the line enterprise features: Bandwith Monitoring, Guest Portal, Cloudbased IPS.

* \* SFS (Software Freedom School) - [4/1/23](https://www.meetup.com/sofreeus/events/292349413/)
  + - * [Link to Slides](https://www.holtzweb.com/openwrt-presentation.html) | [Link to Markdown](https://nextcloud.sofree.us/index.php/s/WWkasZJR8sT9RXj)

## Mastodon

**Self-Hosted, Open Source, Federated, Decentralized… social media?** Mastodon is software for running different, connected social networking services with microblogging features.

* + \* SFS (Software Freedom School) - [12/3/22](https://www.meetup.com/sofreeus/events/289682203/)
    - * [Link to Slides](https://nextcloud.sofree.us/index.php/s/rzi7Jr6DmATHyoE) | [Link to Video](https://nextcloud.sofree.us/index.php/s/eEkBPKgTw4aQRDH)

# Industry Experience

## Leadership Activies

**Software Freedom School, Littleton, CO** - **2022 - Present**

* • Software Freedom School board member since March 2023
* • Maintain open tickets for [SysOps board](https://gitlab.com/sofreeus/sfs-sysops/-/boards)
* • Presented at monthly community meetings
* • Team Member in weekly Linux study group

## IT and Web Consultation / Freelancing

**Holtzweb, Denver, CO** - **2019 - Present**

* • Established clients’ cloud based hosting environments, virtualization, and operations infrastructure.
* • Strategized SEO/SEM campaigns across web presence including blogs, email newsletters, ads & promotions resulting in a 40% increase in face to face traffic and web traffic.

## Web Development

**Highline Ideas, 1187, Mayer Networks, Carbondale, IL** - **2013 - 2017**

* • Created and designed custom website layout/user interfaces
* • Integrated data from various back-end services and databases
  + election data, employee database, interactive event map
* • Worked directly with clients to facilitate business and marking needs
* • Executed tests, analyzed data to identify trends and insights using analytics tools and 3rd party optimization tools
* • Ensured all site development follows web standards and ADA compliance for accessibility.
* • Executed SEO-based initiatives, including website analytics and optimization.
* • Fixed broken installs, hacked sites, busted databases, and never-been-updated themes/plugins.
* • Repaired, updated, and redesigned new & existing sites.
* • Designed custom website layout/user interfaces and custom backends to meet project deadline/requirements.

# Education and Training

**2011** - *BS in Finance* Southern Illinois University

*Linux Foundation Certified System Administrator (LFCS): expected July 24th*

# Tools

## Software Used

Linux, bash scripting, Python, HTML, CSS, JavaScript, MySQL, Apache, Nginx, HAProxy, Traefik, Samba, Windows Server, Active Directory, GIT, VMWare vSphere, ESXi, libvert, QEMU, KVM, Xen, Hyper-V, Nagios, Docker, Vagrant, Ansible, Jenkins, Puppet, Chef, SaltStack, Helm, Kubernetes, Terraform, AWS, GCP, Oracle Cloud, Microsoft Azure, Private Cloud Hosting, Red Hat Linux (RHEL), CentOS, Debian, Ubuntu, OpenSUSE, Android, Adobe Photoshop

### Web Development Tools

* • CMS: WordPress, Drupal, DNN, Joomla
* • SEO: Google Analytics, Piwik, MOZ, SEMRush, Megalytic
* • Design: Adobe Creative Cloud: After Effects, Illustrator, Photoshop
* • Webserver: Apache, Nginx
* • Database: MySQL,Postgres, MariaDB, Redis, MongoDB
* • CSS Boilerplate: Bootstrap, Foundation, Tailwind
* • Cloud: Azure, AWS, DigitalOcean, Cloudflare