



Hunter Matthews

Senior Unix System Administrator

CONTACT

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AWARDS & CERTIFICATIONS

- 2022 GREAT Award for Innovations in Risk Mitigation from NIH
- Certificate of Achievement & Appreciation (2022) for outstanding service and support.
- Red Hat Certified Administrator (02/2020)
- Public Trust II

TECHNICAL EXPERTISE

Computer Languages

- Python
- Shell – bash/zsh/fish
- SQL
- Go

Development Tools

- VSCode
- git & github
- env-modules
- brew
- fork

Operating Systems

- Red Hat/Rocky Linux
- MacOS
- Ubuntu
- FreeBSD

(continued...)

STRENGTHS

I bring a variety of strengths in system administration to the table. The most notable are a robust background in multiple styles of Unix system administration; extensive experience in automation programming; as well as a proven track record of both customer service and customer satisfaction. I have worked to bridge the gap between what researchers have done in the past and taking advantage of the benefits of AWS/GPC/Cloud infrastructure. I possess a holistic view of digital systems as well as the organizational process that leads to identifying opportunities for improvement and avoiding side-effect issues in designs.

WORK EXPERIENCE

National Institutes of Health (NIH), Rockville, Maryland GDIT Contractor

The primary agency of the United States government responsible for biomedical & public health research. It is the largest biomedical agency in the world.

Senior Scientific Systems Administrator 04/2023 – Present
Scientific Systems Administrator 04/2017 – 04/2023

- Advocated and developed a new Saltstack deployment to replace aging CFEngine.
- Developed and extended Python programs to aid Saltstack and ClamAV rollout.
- Initiated Zabbix deployment including writing custom Python program to synchronize hosts against inventory system.
- Deployed Packer template builds for VMware and AWS.
- Designed, sought approval, documented, deployed and maintained enterprise inventor system for all data center IT assets using Device42.
- Developed and maintained the first Terraform builds from scratch for already deployed resources.
- Implemented 2FA sudo authentication.
- In progress deployment of Vault across IT department.

Expression Analysis, Durham, North Carolina

A specialty clinical research organization (CRO) offering genomic and genetic testing for academic, government, Biotech & pharmaceutical research.

HPC Systems Administrator 10/2016 – 02/2017

- Participated in all areas of an Amazon Web Services (AWS) prototype buildout, with specific concentration on automation with Terraform and lifecycle of data from S3 to Glacier.
- Primary architect for build out of in-house datacenter that concentrated on new systems and services that accelerated and improved its uses as a locus of software development and testing.
- Worked on multiple service automation projects which were centered around Python programming.
- Performed audits of SSH host key deployment and re-deployed affected keys.
- Prototyped deployments of Consul, Jenkins and FreeIPA.

(continued...)

TECH. EXPERTISE *(continued)*

Virtualization

- AWS
- VMware
- KVM

Automation

- Saltstack
- Terraform
- Packer
- Stow

Server Software

- VMware (pyvmomi)
- Apache
- Nginx
- Samba
- PostgreSQL
- Bacula
- OpenLDAP
- Postfix
- MySQL
- GPFS
- Vault
- Zabbix

Deployment

- Packer
- Red Hat Kickstart
- Stow
- env-modules

Hardware

- Dell Poweredge & Powervault lines
- SuperMicro compute & storage

Documentation

- Sharepoint
- Mediawiki
- Markdown (Hugo)

Packaging/Updating

- yum/DNF
- RPM
- FPM
- RHN

Inventory

- Device 42

WORK EXPERIENCE *(continued)*

Facebook, Menlo Park, California

Online social media platform & social network service company with approximately 3.07 billion monthly users.

Systems Administrator

07/2015 – 06/2016

- Developed Python automation for VM deployment to new remote sites.
- Wrote HHVM/Python API bridge between production and corporate IPAM (IP address management systems) in use by multiple teams.
- Established Python/Flask automation for user self-service VM creation.
- Maintained Jenkins server for the team, including Packer OS image builds and Python tests.

Amazon, Seattle, Washington

Online retailer that sells a wide range of products and offers services like cloud computing and digital streaming.

Systems Reliability Engineer

06/2014 – 06/2015

- Worked with a dedicated team that automated new public region rollouts of the product worldwide.
- Developed Python software and specifications for proprietary storage hardware including SCSI layouts and system status using open kernel information from sysfs.
- Created Python automation to take large storage servers out of active rotation, pushed them through the maintenance cycle for updates, and returned them to active service without losing user data or causing outages/performance issues in active regions.

PREVIOUS WORK EXPERIENCE

Senior HPC Systems Administrator

01/2011 – 05/2014

HPC Systems Administrator

10/2008 – 01/2011

Argonne National Lab, Argonne Illinois

Senior Systems Administrator

06/1999 – 10/2008

Systems Administrator

Duke University, Durham, North Carolina

Systems Administrator

11/1997 – 06/1999

Wang Global Services, Cary North Carolina

PUBLICATIONS

Author of one solo publication (computing) and co-author of four publications in the field of biological science. Publications are available upon request.