

Steven Powell

SOFTWARE ENGINEER

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Skills

Languages Python

Technologies Jenkins, Docker, Ansible, OpenStack, Artifactory, Make, SQL

Certifications CCNA (expired), Security+ (expired), SAFe Practitioner (expired), SAFe DevOps Practitioner (expired)

Experience

C Spire/TEKsystems

Huntsville, AL

NETWORK TOOLS AND AUTOMATION ENGINEER

Sept. 2021 - Present

- Support Network Operation team
 - Find solutions to automate their daily needs
 - ★ Hastened troubleshooting efforts by providing dashboard for active hardware alarms/outages
 - ★ Build Python tooling for hardware management
 - ★ Identify future areas for automation improvements
 - Maintain in-house captive portal automated customer provisioning system and Python code base
 - Troubleshoot Linux issues and manage upgrade lifecycle for 3rd party vendor applications
- Maintain TASQL database
 - Automate collection of customer device and performance data using stored procedures
 - Build customer device performance reports to proactively solve hardware and software issues
- Manage central EMS collection system
 - Collect alarms from multiple systems via SNMP traps and text files
 - Correlate alarms grouping affected systems by outage and prevent redundant notifications
 - Build performance alert notifications
 - Automate performance reports

ADTRAN

Huntsville, AL

DVT ENGINEER II

Sept. 2014 - Sept. 2021

- Write and maintain Jenkins Pipeline DSL jobs for running acceptance, unit, and solution tests in docker containers
- Write, review, and debug automated acceptance tests written in Robot Framework
- Build automation tools for device upgrades, test debugging, and managing OpenStack instances
- Implemented Python libraries, unit tests, and acceptance tests using a customized container environment
- Build and maintain automation test beds
 - Plan out and install networking devices
 - Install physical and virtual tested devices
 - Install and update firmware and software as needed
 - Document management, useage and troubleshooting information
 - Work with other teams to troubleshoot issues
- Maintain Linux containers
 - Work with other teams to build OpenStack instances to meet their needs
 - Build and publish docker images for use in automated testing
- Co-op student mentor
 - Manage day-to-day activities
 - Assess technical and soft skill levels
 - Assign projects to promote growth
- Hackathon event organizer
 - Work with team and management to plan events
 - Requisition needs from other departments and setup event spaces
 - Host demo presentations, voting, and award prizes

Corr Wireless

Huntsville, AL

SWITCH TECH

Jan. 2006 - Sept. 2014

- Troubleshoot cellular network issues
- Build automated network and cellular performance reporting to resolve issues more quickly
 - Write and maintain automated PHP codebase
 - Store device and stat information in MySQL database
 - Display reports using custom PHP frontend and graphs using Cacti
- Troubleshoot network issues
- E911 administrator
 - Work with local PSAPs for new cellular turnups
 - Perform routine emergency call testing with field techs
 - Troubleshoot failures and issues
- Roaming coordination between other wireless providers
- Automate network device config backups using custom TCL scrips
- Exchange mail administrator
 - Install and maintain OS and application updates
 - Manage user email accounts

Projects

Hackathons

RASBERRY PI MONITORING DEVICE

- Reduced automation test bed monitoring device costing >\$1000 by 80%
- Built device costing <\$150 for controlling and monitoring set top boxes replacing some need for devices costing >\$1000
 - Python script accessing infrared transceiver on Raspberry Pi's GPIO to control set-top box
 - Monitored data to verify channel activity

ANSIBLE PLAYBOOK

- Wrote Ansible playbook for mass in-house device upgrades

Hydra

TEST BED RESERVATION SYSTEM

- Moved backing services from monolithic singer server deployment to indidual containers: web UI, web API, web proxy, beanstalkd, database
- Wrote Ansible playbook to spin up host instance and all service containers in OpenStack from job in Jenkins

Wi-Fi Test bed

FAIL FAST FIRMWARE TESTING

- Planned requirements and setup test beds for quick firmware testing of Wi-Fi controller and access points
- Wrote upgrade tests in Robot Framework
- Tests drove Wi-Fi controller via web UI, simulating customer workflow
- Integrated tests into Jenkins automation pipeline

Vulture

PYTHON LIBRARY

- Wrote Python log collection utility for postmortem test failure analysis
- Collected device logs, CLI command output, and automated Robot Framework test logs

Education

ITT Technical Institute

Birmingham, AL

ASSOCIATE OF SCIENCE IN COMPUTER SCIENCE

2000 - 2002

Graduated salutatorian with GPA 3.8

Community

Rocket City Gator Club

MEMBER

- Community service activities

Tour de Ville

VOLUNTEER

- Annual Boys and Girls Clubs of North Alabama fundraiser