

# Steven Powell

SOFTWARE ENGINEER

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## Skills

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**Languages** Python

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

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

## Experience

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### C Spire/TEKsystems

*Huntsville, AL*

NETWORK TOOLS AND AUTOMATION ENGINEER

*Sept 2021 - Present*

- Support Network Operation team
  - Find solutions to automate their daily needs
    - ★ Use existing EMS web page to display alarms indicating active generators/power outages
    - ★ Build python library to run CLI commands across multiple devices
    - ★ Investigate new workflows for potential automation solutions
  - Maintain in-house captivel portal automated customer provisioning system and Python code base
  - Maintain 3rd party vendor applications: Adtran AOE, Nokia AMS, Calix CMS, Finepoint Mountainview
    - ★ Troubleshoot application failures
    - ★ Interface with vendor for multiple teams questions and issues
    - ★ Upgrade application
- 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 notificaitons
  - 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

SWITCH TECH

Huntsville, AL

Jan 2006 - Sept 2014

- Troubleshoot Cell network issues
- Build automated network and Cell 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 for NOC, headquarters, and sales offices
- E911 administration
  - Work with local PSAPs for new Cell turnups
  - Perform recurring 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

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### Hackathons

- Built device costing <\$150 to control and monitor 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
- Wrote Ansible playbook for mass in-house device upgrades

### Hydra

- Moved services from single physical server to individual docker 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

- Built out test bed containing Wi-Fi controller, APs, and networking infrastructure
- Wrote Robot Framework upgrade tests
- Tests drove Wi-Fi controller via web UI, simulating customer workflow
- Integrated tests into Jenkins automation pipeline

### Vulture

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

## Education

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### ITT Technical Institute

ASSOCIATE OF SCIENCE IN COMPUTER SCIENCE

Birmingham, AL

2000 - 2002

Graduated salutatorian with GPA 3.8

## Community

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### Rocket City Gator Club

MEMBER

- Community service activities

### Tour de Ville

VOLUNTEER

- Annual Boys and Girls Clubs of North Alabama fundraiser