

# S. REED WILLIAMS

Denver, CO

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## Systems & Network Engineer | Linux | Kubernetes | Virtualization | Infrastructure as Code

Detail-oriented Systems and Network Engineer with 3+ years of experience across systems administration, DevOps, network infrastructure, and QA engineering. Demonstrates strong proficiency in Linux administration, virtualization, and Infrastructure-as-Code tooling. Experienced in managing large-scale VM fleets, deploying and maintaining distributed services across Kubernetes clusters, and operating within cable provisioning environments, including the Cisco PCP stack. Proven ability to work in Agile environments, develop automation using Python and Bash, and support systems across the full lifecycle from provisioning through incident triage. Adept at translating complex technical concepts across organizational levels and focused on building secure, efficient, and scalable systems.

- CERTIFICATIONS**
- CompTIA Security+
  - ISC2 Certified in Cybersecurity

**SKILLS**

**Platforms & OS:** Linux (RHEL, CentOS, Debian), Windows Server, macOS, Mobile (iOS/Android)  
**Programming & Scripting:** Python (automation, tooling), Bash, SQL  
**Cloud & Infrastructure:** Terraform, Bare-Metal HP & Dell Servers, AWS, GCP, Azure  
**Containers & Orchestration:** Kubernetes, Docker, Helm  
**Virtualization:** VMware vCenter, Proxmox, VirtualBox  
**CI/CD & Automation:** Ansible, Git-based workflows, GitLab CI/CD, Argo CD  
**Networking & Provisioning:** Enterprise Network Infrastructure, Cisco Prime Cable Provisioning (CNR/DHCP, RDU, DPE), CMTS integration, DNS/DHCP (IPv4/IPv6), DOCSIS  
**Observability & Diagnostics:** Splunk (log aggregation), Datadog, RabbitMQ, Kafka  
**Identity & Systems:** Linux Administration, Network Management, Database Management, Active Directory

- EXPERIENCE**
- Charter Communications/Spectrum**, Centennial, CO August 2025 to Present
- Systems Engineer***
- Operated, implemented, and helped to design a hybrid infrastructure platform across 3 separate test environments, supporting 400+ Linux systems spanning 350+ VMs using VMware vCenter and 70+ Kubernetes environments. Ensuring availability, resource efficiency, and consistent performance for a stack of 35+ OSS, proprietary, and industry standard applications and services.
  - Built and implemented Infrastructure-as-Code and configuration management workflows using Terraform and Ansible. Building extensive playbooks that standardized provisioning of VM's, eliminated configuration drift by templating configuration files for setup and update, and maintained policy-compliant deployments at scale for a multitude of different services and micro-services.
  - Owned deployment of applications and micro-services across the test environments utilizing Kubernetes, Docker, Rancher, Helm, and ArgoCD. Implementing updates, validating fixes, and troubleshooting deployment inconsistencies in close collaboration with development teams.
  - Administered large-scale network services including DNS and DHCP across IPv4 and IPv6 using Cisco Prime Network Registrar and the Cisco Prime Cable Provisioning stack, integrating with CMTS and broadband provisioning systems to support reliable IP lifecycle management.
  - Developed an internal Python tooling ecosystem to automate operational workflows, including dynamic Ansible inventory management, API integration's, and custom Datadog monitoring extensions.
  - Led a Track 1 product initiative for segmented networks in the company's MDU offering, owning implementation and validation across three environments, driving cross-functional testing, and coordinating release readiness and production hand-offs to meet the projected release date.
  - Drove modernization efforts including large-scale OS migrations from CentOS 6/7 to Rocky Linux, GitLab CI/CD pipeline development, and migrations of micro-services to ArgoCD improving maintainability, deployment velocity and team interoperability.
- Wireless Test Engineer*** June 2024 to August 2025
- Conducted regression, sanity, end-to-end and ad hoc testing for all company-supplied customer premise equipment, customer and agent facing applications, API's, and internal tools.
  - Specialized in router functionality testing and bug hunting, finding and troubleshooting a multitude of complex issues to report to various development teams, and assist triage teams.
  - Assisted in the setup of VM's for automated testing using bash scripts and Grafana dashboards supplied by an InfluxDB data source.
  - Scripted tools using Python and deployed on an Apache web server to increase test engineer efficiency. Improving personal efficiency in testing by 16%.
  - Built a platform to assist in the flashing of firmwares to recover bricked or non-operational routers.
  - Created and presented a PoC to executive leadership for a new testing platform (QMetric). Allowing for cost-saving and improving testing efficiency, consistency, and allowing for standardization across test teams.
  - Managed and tracked testing, defects, and triage processes using Jira, QMetric, and Octane.

**EXPERIENCE  
CONTINUED**

**Verisk (Xactware)**, Remote/Denver, CO

Jan 2024 to June 2024

**Software Support Analyst**

- Delivered technical support to ~40 customers daily through chat, phone, and email. Including updating endpoint systems, troubleshooting hardware, software conflicts, firewall and endpoint detection management.
- Trained users on Xactware, Inc. products, improving software proficiency by 40% and enhancing troubleshooting capabilities.
- Wrote documentation for internal and external knowledge base articles and SOP's.
- Supported the testing and roll-out of new and enhanced products, performing smoke and sanity testing.
- Troubleshoot and documented reports for defects with existing and newly-updated products.
- Successfully managed and maintained incident records per department standards, ensuring accurate documentation and resolution tracking for the Development and Analytical teams.

**Career Transition**

**Manufacturing Supervisor and Craftsman**

- Extensive prior work experience overseeing manufacturing teams, supervising up to 15 crew members daily, leading 25+ projects as a lead craftsman.
- Oversaw project management, execution, quality assurance and delivery for 8+ projects with revenue exceeding \$2 million each.
- Created operating procedures along with extensive documentation for multiple systems, projects and initiatives.
- Heavily utilized and structured workloads and workforce using LEAN certified practices while maintaining compliance with industry standards.

**EDUCATION**

**University of Denver – Cybersecurity**

March 2023 to October 2023

**PROJECTS**

**Home Lab Environment**

- Design, implement, and maintain a production-like homelab environment to develop and validate real-world systems engineering, infrastructure automation, and network architecture practices.
- Architect and operate a hybrid virtualized environment using Proxmox VE and containerized workloads via Docker and a local Kubernetes cluster spanning 4 nodes, enabling multi-service deployments across diverse Linux-based systems.
- Build and manage Infrastructure as Code (IaC) workflows using Terraform and Ansible to provision, configure, and maintain reproducible infrastructure and application stacks.
- Engineer segmented network topologies (VLANs, subnets, firewall rules) to simulate enterprise-grade environments, including secure service isolation, routing, and access control.
- Deploy and maintain self-hosted services (monitoring, logging, CI/CD, DNS, reverse proxies, and automation tools), emphasizing high availability and service resilience.
- Implement centralized logging and monitoring pipelines using industry-standard tools to track system health, performance metrics, and service reliability.
- Develop automation scripts in Python and Bash to streamline system administration, orchestration, and operational workflows.
- Manage storage solutions and backup strategies, including snapshotting, replication, and data durability validation.
- Perform system performance tuning, capacity planning, and fault testing to validate infrastructure reliability under simulated load and failure scenarios.
- Integrate secure access mechanisms including SSH key management, role-based access controls, and secrets handling across services.
- Continuously evaluate and integrate new technologies (container orchestration, service meshes, networking models) to expand platform capabilities and align with modern infrastructure trends.