

# MICHAEL CAMPFIELD

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## OVERVIEW

A senior systems architect and engineer with 20+ years of experience in Linux infrastructure, automation, and standards-based design. Proven success in modernizing legacy systems, implementing robust configuration management solutions, and integrating new technologies across government, research, and enterprise environments. Combines deep technical expertise with advanced analytical and systems design capabilities, supported by dual graduate degrees in computer science and information science.

## Relevant Skills and Certifications

- Over 20 years of experience with Linux server and workstation administration of Red Hat Enterprise Linux (RHEL), Rocky, CentOS, Ubuntu/Debian, and Amazon Linux.
- Extensive experience implementing configuration management using Puppet and Ansible.
- Containerization utilizing OpenShift/Kubernetes, Helm, Docker, and Singularity.
- Operation and promotion of DevSecOps tools including GitLab, Rundeck, and Jenkins.
- High-performance computing (HPC), modular software management, and batch scheduling systems.
- Infrastructure as Code solutions primarily utilizing Terraform.
- On-premise and cloud virtualization including Azure, VMware, AWS, and the HashiCorp suite.
- System and application security hardening and continual compliance validation against federal, state, and internal security standards (e.g., DISA STIG and CIS).
- High availability, high throughput, and load-balanced resource orchestration.
- Programming in Python and Bash scripting with additional experience in C-family languages.
- Standard Linux services including Apache HTTP, PostgreSQL/MariaDB, OpenLDAP, and NFS.
- Research and project design, proposal and grant development, and academic organization management.
- AWS Certified Cloud Practitioner including deployment experience.
- Microsoft Certified: Azure Fundamentals including deployment experience.
- DevOps Institute: DevOps Foundation Certification.
- ITIL v4 Foundation Certified.
- Proficient in LaTeX and BibTeX for technical writing and documentation.
- Held a U.S. Department of Energy (DOE) Level L security clearance (no longer active).

## Recent Experience

- **Office of Scientific and Technical Information, Department of Energy (DOE)** Oak Ridge, TN  
*Linux Systems Administrator/DevSecOps Specialist* Sep. 2023 – Present
  - Administration of Red Hat Enterprise Linux 8 (RHEL) and OpenShift/Kubernetes platforms.
  - Led project for DevSecOps automation and CI/CD pipeline infrastructure, directing application transitions, and integrating security controls and hardening.
  - Replaced ad-hoc configuration management with a scalable, standardized Ansible automation framework, reducing deployment time and improving system consistency.
  - Primary architect and process designer for CentOS-to-RHEL migration project.

- **Office of Advanced Molecular Detection, Center for Disease Control and Prevention (CDC)** Atlanta, GA  
*Sr. System Administrator* Jun. 2021 – Sep. 2023

  - Senior administrator and architect for mission-critical activities in the HPC environment covering multiple high-visibility projects, including COVID-19 research and response.
  - Systems administration of RHEL, CentOS, Rocky Linux 9 - 7, along with Ubuntu-based containers.
  - SME and primary administrator for automation, HPC, CI/CD, and batch scheduling.
  - SME for configuration management, authentication infrastructures, and data management strategies.
  - Developed and deployed the environment's first configuration management solution using Puppet.
  - Integrated Docker, Singularity, virtual environments (conda), modular software technologies for scientific workflows and software development.
  - Served as trainer and course author for Linux, HPC, and researcher support workshops.
- **Managed Services, Science Applications International Corporation (SAIC)** Oak Ridge, TN  
*Principal System Administrator* Feb. 2019 – May 2021

  - Team lead and primary Linux architect and administrator for customer-facing and internal projects across on-premise data centers, cloud-native, and hybrid environments.
  - Systems administration of RHEL, CentOS 8 and 7, and Amazon Linux.
  - Design and development of Puppet and Ansible-based internal and independent customer solutions.
  - Systems management via Red Hat Satellite and Ansible Tower.
  - Automated system creation and deployment across cloud, VMware, and physical systems.
  - Programming in Python, Bash, and Ruby.
- **Research and Development Group, Oak Ridge National Laboratory** Oak Ridge, TN  
*Neutron Sciences Directorate System Administrator* Jun. 2017 – Feb. 2019

  - Embedded team member serving Neutron Sciences Directorate's multi-facility research operations providing administration for 24x7 data acquisition systems, core infrastructure, analysis software, multi-petabyte storage systems, and researcher support.
  - Systems administration of CentOS and Ubuntu/Debian-based Linux distributions.
  - Development of Puppet-based cross-organizational configuration management environment.
  - Deployment, troubleshooting, and user assistance for computational clusters.
  - Substantial documentation addition and updating for systems, processes, and project management targeting administration group, internal users, and visiting researchers.
- **National Center for Computational Sciences (NCCS), Oak Ridge National Laboratory** Oak Ridge, TN  
*High-Performance Computing System Administrator* Apr. 2015 – Jun. 2017

  - Member of HPC Operations group supporting the DOE's Oak Ridge Leadership Computing Facility (OLCF) hosting multiple petaflop-class supercomputers.
  - Development and support of infrastructure systems supporting a large-scale research environment.
  - Configuration management for Red Hat Enterprise Linux and CentOS versions 7 - 5 using Puppet.
  - Configuration and management of VMware virtualization environment and NetApp storage.
  - Design and testing of new hardware and software systems for integration into team, group, and center-wide initial deployments and for enhancement of existing services.

- **University of Tennessee National Institute for Computational Sciences (NICS)** Oak Ridge, TN  
*Senior Linux System Administrator/HPC System Programmer* Oct. 2011 – Apr. 2015
  - Deputy manager for the Extreme Science and Engineering Discovery Environment (XSEDE) Systems Operations group with responsibilities including staff organization, project management, service deployment, quarterly report authoring, and key performance indicator evaluation.
  - Infrastructure team leader with technical supervision responsibilities over team projects and goals.
  - System administrator on mid-size Linux clusters used for transition applications to supercomputer-level parallelism.

## **Education**

- **Indiana University-Purdue University Indianapolis (IUPUI)** Indianapolis, IN  
*Master of Library and Information Science (MLIS), Academic Librarianship Specialization* Dec. 2023
  - Education and skills applicable across corporate, research, government, and higher education.
  - Knowledge, data, and information acquisition, organization, and management.
  - Information management policy development and evaluation.
  - Research and project design, grant proposal development, and publication authoring.
  - Research and experiment design and information sciences support.
  - Scholarly communication, instruction methodologies, and full lifecycle research support.
- **University of Tennessee, Knoxville** Knoxville, TN  
*Master and Bachelor of Science in computer science* 2002 and 1999
  - Experience with data mining, artificial intelligence, graph theory, and image processing.
  - Software implementation methodologies, programming, and algorithm analysis practices.
  - Member of Computer Science department's Labstaff group responsible for systems administration of departmental servers, storage, and research clusters.

## **Open Source and Recent Presentations**

- "mimeograph" A high-level configuration and templating environment for HashiCorp Vagrant, enabling reproducible dev environments, <https://www.github.com/campfield/mimeograph>
- "tanagra" A LaTeX/BibTeX-based document build system for academic and technical documentation, <https://www.github.com/campfield/tanagra>
- "Stormy Skies Ahead: Batten down the hatches with on-prem." Oct. 2022
- "Techronomicon: Keeping documentation that won't drive you mad." Feb. 2021