Harrison Totty

DevOps Engineer · Software Programmer

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Summary

Current lead DevOps Engineer and systems architect for the Web Systems group at Wolfram Research. Highly experienced at implementing custom infrastructure solutions within bare-metal/on-premise environments. Thrives in seeking solutions within domains not yet encompassed by popular technologies or industry standards.

Work Experience

Wolfram Research, Inc.   *Champaign, IL*

DevOps Engineer   *Apr 2018 - Present*

- Streamlined disaster recovery of Wolfram Cloud user data with end-to-end encrypted backups via ⚙ backuputil.
- Provisioned bare-metal Kubernetes environments for Wolfram|Alpha utilizing Kubespray, Helm, Rook-Ceph, and Velero.
- Incorporated Hashicorp Vault for secrets management of Kubernetes CI/CD pipelines.
- Implemented infrastructure as code (IaC) standards for on-premises environments by leveraging ⚙ Puppet and ⚙ Cobbler.

Web Systems Administrator   *Dec 2016 - Apr 2018*

- Developed a ⚙ templating engine for Apache HTTP Server configurations.
- Provisioned and maintained on-premises environments for Wolfram Cloud.
- Collaborated custom log data analysis and reports for Wolfram Cloud in Python and Mathematica.
- Designed Salt configurations for managing internal infrastructure.
- Developed backend code for the Wolfram Cloud Platform in Java.

Web Systems Intern   *Sep 2016 - Dec 2016*

- Implemented new Wolfram kernel features in C/C++.
- Developed a containerized RPM build environment hosted in Apache Marathon/Mesos.

Tallahassee Community College   *Tallahassee, FL*

Mathematics and Technology Tutor   *May 2016 - Aug 2016*

- Provided tutoring and support to students in various mathematics and technology topics.

University of West Florida   *Pensacola, FL*

Student SSE System Administrator   *Jan 2014 - Aug 2014*

- Provided general systems administration for the faculty of the School of Science and Engineering.

ResNet Technician   *Feb 2012 - Aug 2013*

- Supported the technical needs of dorm students.

Skills

Containers & Orchestration	Docker, Helm, Bare-Metal Kubernetes (k8s & k3s)
Data Languages	CSV/TSV, INI, JSON/YAML, TOML, XML
Data Science	Jupyter Lab/Notebooks, Mathematica, matplotlib, plotly, sympy
IDEs & Text Editors	GitHub Atom, GNU Emacs, nano, Sublime Text, vi/vim, Visual Studio (Code)
Infrastructure Management	Ansible, Cobbler, Puppet, Salt, Hashicorp Vault, Velero
LAMP Components	Apache HTTP Server, HAProxy, keepalived, MySQL (Percona XtraDB Cluster), NGINX, Apache Tomcat
Markup Languages	LaTeX, Markdown, Org
Networking Fundamentals	ARP, CIDR, Mikrotik RouterOS, TCP/IP & OSI Model, Ubiquity Unify Controller, VLAN
Operating Systems	Alpine Linux, Arch Linux, Debian (Ubuntu), Gentoo, RHEL (CentOS), Void Linux, Microsoft Windows
Programming Languages	C/C++, C# .NET, Emacs Lisp, groovy, Perl, Python, Rust, Shell Languages
Software Engineering	Bitbucket, git, GitHub, GitLab, Jenkins, JIRA
Systems Administration	chronyd/ntpd, DNS (BIND/Unbound), init (SysVinit/systemd), OpenLDAP, postfix, rsyslog, SSSD, ulimits
Templating Languages	Cheetah, Embedded Ruby, Jinja, Liquid

Education

Tallahassee Community College

Associate of Science

- Graduated honors with 4.0 GPA.