

Will Foster

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Dublin, Ireland
Eligible for VISA-free opportunities in EU and US
RHCE #100-000-041
Netapp NCDA #7N78NZFCKEB1QBT8

Accomplished DevOps / IT architect specializing in rapid, scalable solutions delivery for real-world demand.

DevOps / SRE / Automation	Linux / UNIX / CI and CD / Ansible	Partner and Vendor Management
Systems / Network Architecture	Distinguished DevOps Speaker	Technical and Peer Leadership

Professional Experience

Red Hat, Inc.

2022 to present

Senior Principal Software Engineer and DevOps Team Lead

Performance and Scale Engineering

Key Responsibilities

- DevOps lead for Performance and Scale Engineering and QUADS project tech lead.
- Heavy focus on software architecture, development and open source project leadership.
- DevOps, SRE, building/automating/managing large-scale bare metal performance and scale R&D proving grounds
- Continuously building and improving systems/network infrastructure and datacenter automation using Linux and Open Source software.

Red Hat, Inc.

2015 to 2022

Principal Systems Engineer and DevOps Team Lead

Performance and Scale Engineering

Key Responsibilities

- DevOps/SRE lead for Red Hat Performance and Scale Engineering in the Products and Technologies organization.
- Lead DevOps and development strategy and direct priority for all architecture, infrastructure, automation and CI/CD.
- Build, automate and maintain large-scale infrastructure and CI/CD automation used in vetting and battle-hardening Red Hat products and other upstream partner/OSS projects at scale.
- Author and contribute to Open Source tooling, performance/scale and automation projects like Browbeat, QUADS and Badfish <https://quads.dev>
- Tooling, configuration management, CI/CD architecture, management/automation of network and bare-metal infrastructure
- Lead project work and improvement initiatives, manage and prioritize incident response and day-to-day issues in R&D
- Technical lead for two Open Source projects: QUADS and Badfish

Selected Accomplishments

- Complete lifecycle automation of all systems/network infrastructure and documentation of a large-scale R&D datacenter to further Performance and Scale testing for rapid demand and increased efficiency and delivery potential
- Architect, manage and grow 2,000+ bare-metal systems R&D datacenter with extremely high rate of change using “shared lab” concepts or “AirBNB for bare-metal” approach to automated time-sharing with 100+ ongoing multi-tenant isolated workloads.
- Co-Author, core contributor and technical lead of QUADS - a Python3-based infrastructure asset scheduler which automates delivery and reclamation of high-performance systems/networks to development teams - <https://quads.dev/about-quads>

- Consolidation of disparate infrastructure and Engineering asset silos into a “shared lab” concept utilizing QUADS for lifecycle management and reservations for immense cost-savings and agility.
- Design, architecture and deployment of a full CI/CD pipeline using Jenkins, Gerrit, Docker pipelines and Github
- Author and maintainer of several popular Open Source Ansible playbooks such as Elasticsearch (ELK) stacks and Nagios monitoring system.
- Inventorship of (5) U.S. patents based on QUADS, Badfish and other technologies

Red Hat, Inc.

2013 to 2015

Senior Systems Engineer

OpenStack Engineering – DevOps/Deployment Team

Key Responsibilities

- Architect and deploy new internal and external large-scale OpenStack solutions for Red Hat and upstream communities
- Design and contribute to new R&D software and deployment tooling to ease OpenStack installation and management
- Develop and maintain tooling and orchestration technologies to empower rapid development and server provisioning
- Drive large-scale performance and scalability testing in real-world environments.
- Manage internal and external development and production datacenter environments and assets
- Manage strategic relationships with alliance partners and vendors
- Maintain consistent, transparent support channels for external OpenStack customers and users by engaging the upstream Open Source community and speaking at conferences and associated events, sharing experiences
- Assist Red Hat OpenStack customers with their implementations and deployments as needed

Selected Accomplishments

- Designed and deployed a greenfield 9-rack (scaling to 42+ rack) scale-out lab used for continuous integration, R&D and scalability and performance testing of all OpenStack components and associated technologies in 2months.
- Implementation of turn-key automation driving spin up/down of lab assets based on a published, modifiable schedule to support development driven by Puppet, Foreman and associated Python and Shell tooling.
- Design and Implementation of an isolated, external public CI environment powering development of OpenStack components for upstream core development.
- OpenStack Active Technical Contributor (ATC) with 28+ code commits to various OpenStack internals and projects
- Implementation of turn-key automation driving spin up/down of lab assets based on a published, modifiable schedule to support development driven by Puppet, Foreman and associated Python and Shell tooling.
- Design and Implementation of an isolated, external public CI environment powering development of OpenStack components for upstream core development.
- OpenStack Active Technical Contributor (ATC) with 28+ code commits to various OpenStack internals and projects

Red Hat, Inc.

2010 to 2013

Infrastructure Storage Lead

Global Strategy, Architecture, and Administration of Red Hat IT Data Solutions

Senior Systems Administrator (SOC: Production Operations)

Linux Systems and Infrastructure for IT, core Red Hat business and external company presence

Key Responsibilities

- Lead enterprise storage strategy, projects and day-to-day operations
- Deliver world-class storage services for the business and community across a 2.24PB heterogeneous environment
- Provide robust data solutions for IT, Finance, Engineering, Global Support, Middleware, and the Fedora Project
- Global storage architecture and strategy, implement ongoing best practice and design empowering explosive growth and scale within the company
- Ensure optimal balance in enterprise storage service delivery, spanning day-to-day operations to large-scale projects
- Manage strategic relationships with storage partners and vendors
- Develop and drive transparency, standards, and training initiatives across a global team
- Strategy, planning and execution of an annual \$4-5Million USD storage budget
- Technical advisor and resource for the Fedora Project infrastructure team
- Contributing extended member of the Enterprise Architecture team
- Senior Linux administration of (2200+) mission-critical, 24x7 production servers and core services in a global team

Selected Accomplishments

- Inherited a sprawling, heterogeneous storage environment with frequent downtime and service outages and transformed it into a world-class service with 100% uptime, multiple layers of resiliency and meticulously documented standards, operations and policies
- Architected and deployed a global storage virtualization strategy, scale-out cloud storage and multi-tenant hosted services.
- Pioneered multi-discipline service ownership and subject matter training paths to provide greater sense of ownership and career progression for colleagues throughout a global team
- Pioneered adoption of multi-tenant storage virtualization to yield over \$4Million USD in savings over a year
- Multi-year partner endeavor with Netapp to include LDAP feature enhancements necessary provide full administration compatibility with Red Hat Directory Server and OpenLDAP into Ontap 8.1
- Global consolidation of the varied company Netapp NAS environments across the world into a unified platform for savings in cost, power, licensing and administration sprawl
- Established platform standards for SAN, NAS and iSCSI to reduce administration overhead and provide greater performance
- Ongoing enhancements in revision control and automation of NAS/SAN storage administration using git and puppet
- Embarked upon several very successful, extended training assignments in EMEA (Fosterfests) to train team members
- Architecture and roll-out of a global iSCSI storage strategy for RHEV virtualization and high-transaction production workloads
- On behalf of Sales and Global Customer Support, conducted a technical presentation on SAN/multipath best practices inside Red Hat IT for Cisco Inc.

Red Hat, Inc.

2007 to 2010

Systems Administrator (IT Production Operations, 'prodops')

Linux Systems, Application and Infrastructure for IT, core Red Hat Business and External Company Presence

Key Responsibilities

- Linux administration of (800+) mission-critical, 24x7 production servers and core services in a global team
- Deploy code releases for various application groups, build and maintain RPM packages for specialized applications
- Administration and support of various application layers from RHEL core services to the Tomcat, Jboss, Java and Perl stacks
- Netapp, IBM XIV and Cisco SAN storage administration, backup and recovery, and datacenter operations
- Development and maintenance of cfengine and puppet modules for automation and ease of systems administration

Selected Accomplishments

- Design and implementation of MySQL master-to-master environments to replace Oracle ESB technologies, drive MySQL m2m clusters as the standard for transactional database architectures
- Integral contributor in a full-scale migration of production services to a new datacenter in parallel with a complete rewrite of configuration management code from cfengine to puppet against an aggressive deadline with minimal downtime
- Achieved subject matter expert and promotion to service owner for all enterprise storage platforms: Netapp, XIV, and SAN fabric across an 800TB storage environment
- Re-architected Red Hat customer FTP stack to allow for both passive/active FTP to allow for more flexibility in disparate external firewall architectures
- Built out an internet-2 Fedora project mirror for Tier0 mirrors, expediting delivery of Fedora content to the rest of the world
- Multiple engagements with high-profile Red Hat customer accounts on behalf of GSS or Sales, in some cases building parallel stacks to accommodate external customer environments with restrictive corporate networks to get SEV1 data back for analysis
- Host/MC the Red Hat "Halloween" festivities, frequent contributor to the internal company quarterly video "The Show" and company culture with videos and comedy skits, often-times co-produced with Marketing and Brand

Teleflex Medical

2002 to 2003

Helpdesk Manager (Weck Surgical Closure Division)

IT Systems Support for Corporate and Engineering Staff

Key Responsibilities

- Desktop support for 500+ Engineering, IT, Sales, and Finance users, mobility and remote support for Sales
- SUN Solaris and Microsoft Windows 2000 server administration, Active Directory user administration
- Support for IT infrastructure powering an on-site engineering and medical device production facility

Selected Accomplishments

- Replaced an aging, out of support Windows NT4 Alpha Backup Domain Controllers with Samba, running on FreeBSD
- Migrated an aging, out of support Digital Alpha development Server running Windows NT4 / IIS to Red Hat 7.3 and Apache

GE Capital Mortgage

2001 to 2002

Systems Administrator

Systems Administration and Datacenter Operations

Key Responsibilities

- Datacenter operations and systems management of Microsoft Windows NT, Citrix and SUN Solaris servers and backups
- Caught a Microsoft Exchange server on fire due faulty/exposed DLT tape drive wiring, it recovered quickly.
- Dell Poweredge and Compaq Proliant hardware support and maintenance, provisioning and rack/stack.

Industry and Education

Red Hat Certified Engineer

Red Hat, Inc. | 100-000-041

Netapp Certified Data Administrator

Netapp, Inc. | 7N78NZFCKEB1QBT8

Appalachian State University

Technical Writing, Information Systems
Appalachian Linux User Group

The Citadel (*The Military College of South Carolina*)

BA: English, Minor: Spanish
Cadet Officer, Summerall Guards

Awards, Volunteering, Lectures, Published Works and Inventions

Inventor: Managing and archiving system and application log files (2010)

Patent #10,318,477 - [United States Patent Trade Office](#)

Inventor: Dynamic preparation of a new network environment, and subsequent monitoring thereof (2017)

Patent #US20200272527A1 [Google Patents](#)

Inventor: Integrated resource scheduler, configurator, and visualizer (2017)

Patent #US10452519B2 [Google Patents](#)

Inventor: Power distribution unit interface system (2018)

Patent #US10452519B2 [Google Patents](#)

Inventor: Managing Boot Device Orders for Computing Devices (2020)

Patent #US20210389957A1 [Google Patents](#)

Red Hat CEO Award for Exceptional Service (2012)

Awarded annually to one associate for working in a way that improves trust, transparency, collaboration, and respect in our Red Hat climate.

Speaking and Lectures: Please see <https://hobo.house/speaking>

Author: Practical Ansible Solutions (2019, Packt Publishing)

<https://www.packtpub.com/networking-and-servers/practical-ansible-solutions-video>

Volunteer: The Fedora Project (Linux Distribution, 2009 to 2013)

Enterprise Storage Architect

Volunteer: Trystack.org (2013 to 2018, OpenStack Foundation Public Cloud)

Core Engineer / Architect

Spoken Languages: English (*Native*), Italian (*A2*), Spanish (*A1*)

Programming/Scripting Languages: Shell (*Advanced*), Python (*Advanced*), Ansible (*Expert*)