Matthew J. Bruzek

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Software engineer passionate about open source software, automation and operations of containers, virtual and physical computers. A track record of learning new technologies, quickly applying problem solving skills that contribute to the team and accelerate projects.

Languages: Ansible, Python, Java, C/C++, Bash (shell scripting)
Clouds: Amazon (AWS), Digital Ocean (DO), Google (GCP), Microsoft Azure, OpenStack, and VMware
Containers: Docker, Kubernetes, LXD/LXC, and OpenShift
Platforms: Linux, Microsoft and Apple operating systems
Processes: Agile, DevOps, automation, Scrum, security compliance, and software design

EXPERIENCE

Senior System Administrator - Jacobs - JETS II contract with NASA   2023 to Present
• Maintained High Performance Computing (HPC) resources for Johnson Space Center (JSC) at NASA
• Revolutionized the Flight Sciences Laboratory (FSL) provisioning process by combining Foreman and Ansible to load systems automatically from the network moving the lab to enterprise Linux version 8
• Worked with the security officer to develop automated process to create an operating system image with a security compliance score of 81.9% improving from the previous score of zero (0)
• Worked with the team to maintain three (3) generations of HPC clusters, SGI ICE X, HPE liquid cooled blades, and a mixture of Supermicro and HPE air cooled blade systems. Supported the DDN Lustre 4 storage system with over 7 PB of parallel storage and a Dell NFS solution for less demanding use cases

System Administrator - Rothe Development Incorporated - MESC contract with NASA   2022 to 2023
• Created and managed virtual systems for the Mission Enabling Services Contract (MESC) at NASA
• Researched and implemented smartcard multi-factor authentication (MFA) for secure shell (SSH) with Active Directory (AD) on all Linux systems
• Upgraded, maintained and fixed critical security issues with the mission enabling software including: GitLab, MediaWiki, ServiceNow and other custom NASA applications

Network Administration and Operations - Leidos - IMOC II contract with NASA   2018 to 2022
• Software design and development for the Station Support Computers (SSC) system onboard the International Space Station (ISS) for NASA
• Worked with the development team to automate the manual build process using Jenkins open source software
• Implemented OpenVPN enabling authorized partners to connect and access remote lab computers

Senior Software Engineer - Red Hat - Scale & Performance team   2017 to 2018
• Designed an automation to take a reservation of physical hardware, install and configure OpenStack to create Kernel-based Virtual Machines (KVM), then install an OpenShift (a Kubernetes product) cluster
• Used Ansible to create repeatable large scale Kubernetes clusters (3000 nodes) to test and benchmark the performance of different versions of the OpenShift product

Software Engineer - Canonical Ltd. (the company behind Ubuntu Linux) - Juju Ecosystem   2014 to 2017
• Created the Canonical Distribution of Kubernetes using operations code to deploy a production Kubernetes cluster on any public cloud
• Converting DevOps best practices to code that installs, configures, and connects software for multiple open source projects including Docker and Kubernetes
• Created training sessions to educate community and business partners on how to write DevOps code for their software projects

Staff Software Engineer - International Business Machines (IBM) - SmartCloud Entry   1997 to 2013
• Led a cross team effort to solve blocking issues to meet release criteria for a cloud management product
• Developed automation to install and configure the complex OpenStack virtualization platform to integrate with an IBM cloud product
• Implemented new features and improved performance of a Java software product that enables companies to comply with regulations in the healthcare industry
• Scrum master and team leader for an agile team of software engineers that implemented a key feature allowing customers to manage their existing VMware environments
• Created a Java PDF parser from scratch to enable the IBM Information Center to index and search PDF files
• Designed, developed and maintained a documentation search J2EE application featured on IBM's web sites
• Responsible for the search of four (4) releases of the iSeries and eServer documentation, each release was translated into 33 languages and contained over 30,000 HTML and PDF documents per language

EDUCATION

University of Minnesota, Duluth, MN
        Bachelor of Science in Computer Science 3.58/4.0 graduated with **cum laude** honors

SANS Institute, SEC401: Security Essentials
        Building the security skills to protect an organization's critical information assets and systems

ACCOMPLISHMENTS

• Board member of EMERGE, a NASA Employee Resource Group (ERG) from 2021 to 2022
• Red Hat Certified System Administrator (RHCSA) valid from 2018 to 2021 - License 170-275-812
• Co-inventor of United States Patent 7,472,115, "Contextual flyout for search results"
• Created and delivered a Linux introduction class for the Rochester Community Education Adult enrichment department and the Rochester Public Library
• Leader of the Rochester Python Meetup group assembled monthly to discuss programming techniques
• Board member of the Rochester Active Sports Club (RASC) bicycle steering committee
• Member of the Rochester makerspace creating many electronics projects with Arduino and Raspberry Pis

CONFERENCE PRESENTATIONS

• "The Evolution of the Kubernetes Model" - Config Management Camp in Ghent, Belgium 2017
        How the operations of Kubernetes clusters has changed over time
• "Rolling Out and Managing Kubernetes" - Config Management Camp in Ghent, Belgium 2016
        Deploy and manage production grade Kubernetes clusters on public clouds
• "Juju Charm Testing and Debugging" - Config Management Camp in Ghent, Belgium 2016
        Testing, troubleshooting and debugging Juju operations code
• "Use Nagios to Monitor Your Public Cloud" - Nagios World Conference in St. Paul Minnesota 2015
        Easy ways to automatically monitor deployed applications on different public clouds