BRENDAN K. OCONNELL

Software Engineer

CONTACT INFO

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bkoconnell.github.io

EDUCATION

B.S. Computer Science

Southern New Hampshire University

2018 - 2021

SKILLS

Platforms

Linux (Ubuntu, RHEL)
Windows
Docker / Kubernetes

Programming / Languages

Python (excellent)
SQL (proficient)
Bash (familiar)
C++ (familiar)
Go (familiar)

Tools / Frameworks

Git, JIRA, Confluence, VS Code,
GitLab, Ansible, Helm, k3s,
MongoDB, MySQL, Istio, Kiali,
Prometheus, Calico, Anaconda,
NumPy, PyTest, venv

Security Clearance: SECRET

SUMMARY

Ambitious software engineer with a passion for Python programming.
Highly regarded as a self-motivated team player with exceptional attention to detail and assertive communication skills.

PROFESSIONAL EXPERIENCE

Software Engineer II

BAE Systems ❖ Nov 2021 – Present

- DevOps engineer employing a mix of methodologies (agile, kanban, etc.) with JIRA & Confluence as project management and status tracking tools. GitLab is used for code repositories, peer reviews, and the CI/CD pipeline. Deliverables run on RHEL 8 using k3s for container orchestration.
- Daily duties include operating in the Kubernetes environment to verify and validate the performance and behavior of our deliverables. Additional tasks include creation and revision of Helm charts, values, and template files.
- Generated Dockerfiles to containerize several apps, with a focus on image-size optimization. This included using volumes to separate data from the image, utilizing the Dive tool to minimize layers, and using multistage builds.
- Configured GitLab YAML files to manage CI/CD pipelines for several code repositories. Also created Python and BASH scripts for various pipeline jobs such as lint verification checks.
- Implemented Istio ingress & egress gateways with virtual routings and service entries, and incorporated Istio sidecar envoys with a strict mTLS peer-authentication policy for all pods inside the Istio mesh. Also modified Ansible playbooks and defined the roles and tasks required to automate the provisioning, configuration, and deployment of the Istio implementation.
- Designed, developed, and documented object-oriented Python programs, including "bundler" tools that parse input files, format data fields per spec, store the data as component objects, and bundle the components together. Used Python's struct library, ctype bitfields, and the bytes dunder method to serialize bundled component objects then write the serialized data to binary output files for embedded software systems to use. Also customized the string dunder method to stringify bundles to an XML format for human-readable output to assist with debugging. Used PyTest for unit testing.