Samuel Attwood

DevOps Engineer

Woodstock, MD | sam@attwood.io | (443) 756 - 4428 | samuelattwood.com

Professional Experience

DevOps Engineer 10/2021 – present
SUSE
Served as technical SME specializing in Kubernetes, Rancher, and other cloud-native technologies
- Worked with a wide variety of hardware and software partner engineers to develop joint solutions
- Developed demo deployment stacks leveraging partner IHV and ISV technologies
- Supported alliances team with variety of technical inquiries and helped to coordinate partnership efforts
- Managed Rancher partner Helm chart repository and supported partners in submission process

Software Integration Engineer 01/2020 – 10/2021
Leidos
Led effort to containerize project software and developed fault-tolerant, virtualized Kubernetes architecture for Autonomous Unmanned Surface Vessels
- Developed IaC toolkit capable of deploying hardened, HA K8s clusters leveraging pyVmomi, Ansible, and PXE
- Built highly available virtualization architecture with VMware ESXi, vCenter Server Appliance, vSAN, and Gluster
- Designed continuous build system for project software using Atlassian Bamboo, Docker, Vault, and Kubernetes
- Developed hardened, containerized deployment for program software running on Rancher RKE2

Systems and Network Administrator 01/2018 – 01/2020
University of Maryland Institute for Advanced Computer Studies
Performed full-stack operational duties supporting multiple computer science research labs
- Functioned as primary vSphere admin and virtualization SME, managing varied VMware, KVM, and RHV deployments
- Held full root access across a 1000+ system research datacenter and workstation deployment specializing in RHEL
- Wrote Bash and Python scripts, Ansible plays, and Puppet modules for automating deployments and maintenance
- Managed a team of student technicians and aided in introduction to complex topics

Undergraduate Technical Staff 09/2016 – 01/2018
University of Maryland Institute for Advanced Computer Studies
Performed tier 1 and 2 support tasks for computer science professors and graduate student researchers
- Provisioned Windows and Linux systems for infrastructure and research use
- Configured user accounts in Active Directory and LDAP/Kerberos including access control management
- Built and deployed GPU compute and machine learning software such as PyTorch and TensorFlow

Projects

Research Server Stack 12/2019 – present
- Deployed and maintained research server stack for former professor and affiliated graduate and post-doc students
- Configured public-facing DNS masters, GitLab, and JupyterHub installations
- Deployed supporting infrastructure such as FreeIPA, Gluster, and AutoFS

Independent Server Stack (Homelab) 2013 – present
- Ongoing 9+ year personal project
- Deployed hyper-converged vSphere cluster with software-defined SAN
- Deployed multiple HA multi-master Kubernetes clusters built on RHEL 8 with CRI-O runtime and Canal CNI
- Designed multi-site BGP network using IPsec and WG tunnel mesh with distributed DNS, IPv6, and BGP anycast
- Provided services such as GitLab, ActiveDirectory/LDAP, OpenVPN, and web hosting (HAProxy, Nginx, Apache)

Education

B.S. Computer Science 2014 – 2019
University of Maryland: College Park
Cybersecurity Track

Skills

Development *(Python, Go, Ruby, Java, C, Bash, Git)*,
Containerization *(Kubernetes, Rancher, Docker, CRI-O, containerd, Podman, Calico, Flannel, Multus)*,
DevOps *(AWS, GCP, cloud-init, Helm, Ansible, Puppet, CI/CD (Bamboo, Gitlab, Fleet), Traefik, Istio, Linkerd, Consul, Terraform, Vault)*,
Linux/Unix *(RHEL, SLES, Debian, Fedora, Ubuntu, BSD)*,
Networking *(BGP, OSPF, iptables/firewalld/UFW, Free Range Routing (FRR), vyOS, pfSense)*,
Storage *(ZFS, mdraid, vSAN, CEPH, Gluster, MinIO, Longhorn)*,
SysAdmin *(AD/LDAP, HAProxy/Nginx/Apache, SELinux, Splunk, Slurm, KVM/libvirt, VMware vSphere)*