Christopher Willis

Boston, MA | (603) 459-4855 | willisc@me.com | github.com/willisc7

Education

Boston University, Boston, MA — January 2019

- M.S. Computer Science with a Concentration in Computer Networks

Wentworth Institute of Technology, Boston, MA — August 2013

- B.S. Computer Networking and Information Technology
- Graduated Summa Cum Laude

Experience

MITRE Corporation

Network and Platform Technical Lead — September 2013 - Present

Kessel Run Platform Engineer

I contributed to automation that deployed the Kessel Run Platform to both Amazon Web Services (AWS) GovCloud and a VMware vSphere private cloud. I was required to quickly develop an understanding of several large Git repositories used by the automation. I collaborated with a geographically dispersed team to test my changes and merge them into the repository. In order to add features to the project, I had to create and modify Bash, Python, and Terraform scripts that interacted with technologies such as: Concourse, CredHub, BOSH, Pivotal Operations Manager (OpsMan), and Pivotal Application Service (PAS). Changes often involved working with JSON output from the OpsMan or PAS API and modifying it to change pipeline configuration YAML files.

Network and Platform Technical Lead

I lead a team of two engineers that performed rapid experiments for the Kessel Run F-35 application team (e.g., we quickly deployed an access point at Nellis Air Force Base to allow F-35 maintainers to log their maintenance directly from the flight line). This required interpreting desired outcomes expressed by Air Force leadership into well-defined technical tasks for the engineers to execute. This also involved working closely with the Project Manager of an F-35 application team to run backlog prioritization and cleaning meetings.

Development of Air Operation Center (AOC) Platform Automation

In collaboration with Red Hat engineers, I created and tested an automated offline OpenShift installer that used Bash and Ansible. The project was later open sourced in the Red Hat Git repository as ODIE (https://github.com/RedHatOfficial/odie). Additionally, I worked with Lockheed Martin and Leidos engineers to containerize legacy Air Force applications in Docker and manage them using Kubernetes and OpenShift.

Performance and Functionality Technical Reports

Using iPerf, IXIA, and Spirent devices, I ran SSL throughput, TCP connection rate, and TCP concurrent connections performance tests against the following network devices: F5 Big-IP, NSX Distributed Firewall, Palo Alto VM-1000-HV, Palo Alto VM-100, virtual CheckPoint Security Gateway, and McAfee Virtual Firewall. Additionally, I used Air Force applications, Iozone, and Iometer to collect maximum I/O per second (IOPS) and throughput performance metrics for Nutanix, VxRail, and SimpliVity Hyper-converged Infrastructure (HCI) appliances. These performance and functionality metrics were used to generate technical reports that influenced system requirements for an Air Force private cloud.