

# Logan Mancuso

<https://loganmancuso.github.io>

**Title:** IaC DevSecOps & Network Engineer

**Location:** Columbia, South Carolina

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## Experience Summary

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With 5 years of experience in cloud architecture, networking, and DevSecOps, Logan has found a passion for automation both personally and professionally. As a Networking engineer, he has extensive experience with IPv6, DNS, WAF, and routing on AWS, Azure, GCP and on-prem. Creating stateful infrastructure that is rapidly deployable, and configurable to suite the needs of the applications it serves. By leveraging CI/CD tools such as Azure DevOps, and GitLab Actions, he has delivered scalable, secure, and robust solutions to meet business demands. The growing demand for scalable applications puts a greater emphasis on automation within the application development lifecycle.

## Key Skills

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- **Functional:** Team building, technical architect, live troubleshooting, and client communication skills.
- **Technical:**
  - o Infrastructure: Terraform, Packer, Kubernetes, Docker Swarm, Ansible, Podman, Cloud-Init
  - o Networking: Ipv6, NextGenFirewall, Stateful-Firewall, Wireshark/PCAP, Boarder Gateway, DNS.
  - o Scripting: Bash (POSIX Compliant Shells), PowerShell, AWS cli, Azure cli
  - o Cloud: AWS, Azure, GCP, MuleSoft, VSphere, Linode, Proxmox
  - o Programming: Python, Java, C/C++, Dot Net 3.5, 4.6 and 6
  - o Database: Microsoft SQL, Postgres, Oracle, MySQL, MariaDB
  - o Microsoft: [Windows Subsystem for Linux](#) (v1/v2), Visual Studio, React, Entity Framework
  - o AI and Machine Learning: [OpenCV](#), [TensorFlow](#), [OpenMPI](#), [Caffe](#), [SLURM](#)

## Certifications

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- Microsoft Azure: 900, 104, 304
- Amazon Web Services: Certified Cloud Practitioner
- Google Cloud Platform: Apigee Certified Security and API Developer

## Higher Education

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- University of South Carolina – Columbia – BS Computer Science 2019
  - o Concentration: Discrete Structures and Graph Theory
  - o Minor in Mathematics - Concentration: Combinatorics and Number Theory

## Projects

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*Company: Kopis USA*

*June 2022 – Current*

<b>Type of Industry</b>	AWS Cloud
<b>Project Description:</b>	Automation and deployment using Terraform.
<b>Role/Title:</b>	Infrastructure Engineer
<b>Project Duration:</b>	June 2022 - Present
<b>Responsibilities:</b>	<ul style="list-style-type: none"><li>• Creation of Terraform automations to deploy VPC, Security Groups and network infrastructure across 5 regions.</li><li>• Deploy DualStack networking, implementing ipv6 routing to accommodate cost adjustments from AWS limited ipv4 address space</li><li>• Implement Windows System Update Service (WSUS) to control and provision windows updates for audit and security compliance.</li><li>• Multi region and cross account terraform deployment of AWS Managed AD to construct a centralized forested domain to admin 7 different accounts across 5 regions.</li></ul>
<b>Operating Systems:</b>	Amazon Linux 2, Windows server 2019,2022
<b>Software / Languages:</b>	Terraform, Python, BASH, PowerShell, PCAP/Wireshark
<b>Special Tools:</b>	Terraform (with remote states in S3), GitLab CI/CD

**Type of Industry** Azure Government Cloud

**Project Description:** Multi-Biometric Identification Software (MBIS) Proprietary software developed by Idemia for identification and classification of soft and hard biomarkers.

**Role/Title:** Lead DevOps Engineer (lead a team of 3 engineers deploying across 50 states)

**Project Duration:** 6 Months

**Responsibilities:**

- Deployment of Ansible Scripts to install custom RPM packages to deployed RHEL servers.
- Create and edit Ansible scripts to continue development of the pipeline.

**Operating Systems:** RHEL, CentOS 8 - Kernel 4.18

**Software / Languages:** Ansible, BASH Scripting

**Special Tools:** Ansible, Azure DevOps

**Type of Industry** On-Premise (air-gaped secure environment)

**Project Description:** Idemia Driver 360

**Role/Title:** Lead DevOps Engineer, Systems Administrator, Lead Tier 3 Support (lead a team of 4 engineers to deploy out to Oklahoma environments)

**Project Duration:** 2 years 6 Months

**Responsibilities:**

- Develop Pipeline and entire CI/CD process for promotion of Back-Office code to Production Systems
- Manage MoveIT, Pentaho, and External Interface connectivity to subsidiary systems
- Deployment of all code and validation of deployment process
- Lead deployment of new environments and maintain the infrastructure of existing environments.
- Lead for security and auditing of the systems in production. Control over all user accounts and maintenance and updates to systems.

**Operating Systems:** Windows Server 2016 (Release 1607 10.0.14393.5066)

**Software / Languages:** .NET 4.6.2, PowerShell, JavaScript, Microsoft SQL

**Special Tools:** [Octopus](#), Jenkins, [MoveIT](#), [Pentaho](#), [MSCRM](#), ZScaler, [F5](#), IIS. SCCM, SCOM, LDAP, [Dynatrace](#), Microsoft DNS, DFS FileShare, MS Cert Store.

<b>Project</b>	Military Image Resource Collection (MIRC)
<b>Description:</b>	
<b>Role/Title:</b>	Systems Administrator, Research Assistant
<b>Project</b>	6 Months
<b>Duration:</b>	
<b>Responsibilities:</b>	<ul style="list-style-type: none"><li>• Systems administrator for 250+ Node CentOS HPC (High Performance Cluster)<ul style="list-style-type: none"><li>o Hyperion (Speed)</li><li>o GPU Cluster (GPU Acceleration)</li><li>o BigMem (RAM Node)</li><li>o Thoth (Nonvolatile Storage Node)</li></ul></li><li>• Developed a CNN for high performance image processing<ul style="list-style-type: none"><li>o Facial recognition, detection, and matching</li><li>o Object detection, and identification</li></ul></li></ul>
<b>Operating Systems:</b>	Linux: CentOS Server - v7.1.0 – Kernel: 3.10.0-957
<b>Software / Languages:</b>	Python v2.7, Python v3.7, BASH
<b>Special Tools:</b>	Caffe, SLURM, TensorFlow, OpenMPI, Anaconda

## Personality and Interests

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My personal projects typically consist of solving an automation problem. We are often faced with small repetitive tasks that could otherwise be handed off to a machine. Most recently I am implementing and contributing to the development of a Proxmox [provider](#) for Terraform. This project consists of creating a cloud-init image using Packer. This image is bootstrapped using the latest deployment of docker swarm and other related packages. From which Terraform deploys the cluster of vms, delegating one as the manager node and two or more additional worker nodes. Implementing tagging, custom applications can then be deployed to the swarm and allowed to scale as demand grows.

Some of the applications I am hosting are [NextCloud](#), for managing my file synchronization, [HomeAssistant](#) for centralized home automation. Nginx Proxy Manager to maintain and publish my SSL certificates and encrypt the traffic within my network. I also use Portainer as my orchestration engine with a plan to shift to Rancher once I have ported my applications from docker swarm to Kubernetes.