

Jeremy Banker

Lead Software Security Engineer

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SKILLS

Python Expert	C# Advanced
Go Beginner	Kubernetes Expert
Agile/Scrum Methodologies Advanced	Software Systems Design Advanced
Microservice Architecture Advanced	Secure Software Design Advanced

SPEAKING ENGAGEMENTS

RMISC 2023
Using Build Inspector for CI/CD Log Processing

BlackHat USA 2023
Arsenal Demonstration of Build Inspector Open Source

DefCon 31
Demolabs Demonstration of Build Inspector Open Source

CERTIFICATIONS

CKAD (July 31, 2021)
Linux Foundation

CHFI (February 01, 2020)
EC Council

CEH (March 01, 2019)
EC Council

WORK EXPERIENCE

VMware Inc. (May 01, 2018 - Present)
Lead Security Software Engineer (Staff Engineer)

Design and implement solutions for VMware IT Security group

- Lead project to identify build pipeline security needs and provide solutions for mitigation or elimination, including creation of multiple open-source tools
- Product Owner and lead developer for open-source offering designed to identify consumed dependencies and potential sources of risk in CI/CD pipelines and software builds
- Architected and implemented cloud-deployed pipeline handling collection, filtering and transport of ~12TB daily log flows into on-premise SIEM with average 99% uptime
- Designed and created internal tooling for automated discovery and identification of network systems impacted by Log4Shell vulnerability
- Championed internal adoption of InnerSource processes and policies for relevant product offerings within Security and Resiliency org
- Author and present executive-level overview as well as technical deep-dive presentations at internal developer and security conferences including BlackHat and DefCon

VMware Inc. (August 01, 2015 - April 29, 2018)
Sr. Technical Support Engineer

Tier 3 support for VMware VDI products in global customer environments.

- Authored and presented live and recorded training sessions for global support team
- Created internal and public facing training resources for previously undocumented product features
- Created modular CLI tooling to automate log analysis from customer environments, resulting in 50% reduction of time spent on manual analysis and 20% global reduction in MTTR

ZOLL Data Inc. (June 01, 2014 - July 01, 2015)
Software Engineer

Development on medical data collection application used to enhance the level of service provided by emergency organizations nationwide, and report required medical data to government entities.

- Collaborated with support, field and customer resources to resolve customer-impacting software defects in a timely manner to avoid service interruptions for emergency personnel
- Headed team to redefine source control and build processes, leading to a decrease in lost time due to build issues

Pivot3 Inc. (October 01, 2013 - May 01, 2014)
Sr. Technical Support Engineer

Support for Pivot3 converged VDI and Storage/Surveillance offerings and creating in-house tooling to enhance customer support experience

- Developed and deployed inventory tracking tool to ensure proper tracking and recovery of customer demo hardware
- Developed and deployed secure support contract lookup tool to allow external front line call center to identify expired support contracts, leading to 90% reduction in after-hours on-call engagements

PERSONAL PROJECTS

Ham Radio Digital Messaging Suite

Full-stack suite of open-source software targeted towards creating a path for fully open digital message handling

UnifiOS DNS Manager

Full-stack utility to allow for advanced control of static DNS entries on UnifiOS network devices.

Remote Solar Monitor and Control System

Low-power monitoring, analytics and control station for remote wireless link site with solar and battery power

Ham Radio Serial Control Interface

Reverse engineering and software implementation of byte-level serial control protocol for amateur radio hardware in Go

WORK EXPERIENCE

VMware Inc.

(August 09, 2010 - August 31, 2013)

Support Escalation Engineer

Provided Tier 3 support for VMware's Horizon VDI offerings, including escalation management for premiere support customers.

- Independently developed and deployed tool for global initial ticket response monitoring resulting in 80% reduction in global SLA violations
- Interfaced directly with development resources to provide code-level debugging of C++ and Java code in customer environments
- Authored and presented best-practice and reference architecture documents for presentation at VMware sponsored customer events

EDUCATION

Western Governors University

Master of Science, Cybersecurity and Information Assurance

DeVry University

Bachelor of Science, Networking and Communications Management

OPEN SOURCE PRODUCTS

Build Inspector

Extracting value from CI/CD pipeline logs

- Stateless microservice for extracting dependency and risk information from CI/CD pipeline logs
- Extracts high-value structured data from continuous monitoring of raw build logging

<https://github.com/vmware-labs/build-inspector>

UnifiOS DNS Manager

Static DNS entry management for UnifiOS networking devices

- Provides simple static DNS entry management for UnifiOS devices utilizing existing dnsmasq functionality
- Full stack application utilizing Python FastAPI back-end and Angular Clarity front-end

<https://github.com/loredous/unifios-dns-manager>

Modern Packet Message Manager

Providing a modern, open-source solution for amateur radio packet message handling and exchange

- Open-source software stack aimed at providing a fully open-source solution for amateur radio packet message handling and exchange
- Layered communications model for modular treatment of different data formats and physical media
- Cross-platform implementation of KISS and AX.25 protocols
- Presented at DefCon31 Ham Radio Village

<https://github.com/loredous/mpmm>