Neel Shah

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Skills

Golang, C/C++, Java, Python, Linux, Kubernetes, PostgreSQL, Distributed Systems, Operating Systems, Networking, Secret Management, Identity

Experience

VMware

Member of Technical Staff   *June 2017 – Present*

VMware Tanzu Mission Control

- Designed and built a distributed secure secret store to manage all sensitive material within TMC
- Worked with other teams to ensure credentials and sensitive material are handled safely
- Defined first iteration of the front-facing customer on-boarding experience
- Developed a solution and process for our product team to send correspondence to customers

VMware Cloud PKS

- Designed and built a multi-tenanted certificate authority, MutentCA, as a part of Lightwave
- Led cross-team efforts to make all services use OAuth 2.0 Bearer and HoK tokens for AuthN

Lightwave

- Worked on an RFC compliant DNS server, certificate authority and Kerberos KDC

Talks and Community Involvement

- KubeCon EU 2018: "Bringing Kerberos to Microservices with SPIRE"
- VMware Blog Post: "Going to eXtremes: Securing Cloud-Native Workloads with X.509 Certificates"

MTS Intern   *June 2016 – Aug 2016*

Worked on the DNS server in an open source project, Lightwave, by making its query parser RFC compliant and implementing dynamic DNS updates using GSS-TSIG and Kerberos.

The George Washington University

Research Assistant   *Jan 2014 – Dec 2017*

- OpenNetVM: Designed and implemented the core NFV platform using novel ideas to boost software network performance and provide a rule-based system to control traffic flow and NFV chaining.
- ScaaS: Scalable Cloud Security via Asynchronous Virtual Machine Introspection: scanning as a service framework for cloud platforms which couples virtual machine checkpointing and memory introspection to detect and mitigate threats in real-time.

Systems Administrator   *Dec 2014 – Jun 2017*

Built and managed the server cluster for the Cloud Systems Lab at GWU. Used industry standard tools such as openLDAP, openVPN, Puppet, VMware vSphere, and pfSense to manage identity, access, and resources.

Booz Allen Hamilton

Security Engineer Intern   *May 2015 – May 2016*

Worked with the internal security team to increase network visibility, protect data, maintain network integrity, and mitigate threats.

Publications

- "OpenNetVM: A platform for high performance network service chains", Proceedings of the 2016 workshop on Hot topics in Middleboxes and Network Function Virtualization, ACM, Aug 2016
- "OpenNetVM: Flexible, high performance NFV", 2016 IEEE NetSoft Conference and Workshops (NetSoft), Jun 2016
- "Scalable Cloud Security via Asynchronous Virtual Machine Introspection", 8th USENIX Workshop on Hot Topics in Cloud Computing (HotCloud 16), 2016
- "CRIMES: Using Evidence to Secure the Cloud", Middleware '18: Proceedings of the 19th International Middleware Conference, Nov 2018

Education

- The George Washington University, Bachelor of Science Computer Science   Class of 2017