

Vishal Verma

Cloud Computing & Security

Experienced professional with a master's degree in Security and Cloud Computing from Aalto University, actively seeking roles in security, network, and cloud domains. Adept at rapid skill acquisition, self-motivated, and a team player, currently employed as a Platform Security Trainee at Nokia. Possessing expertise in network security, Kubernetes, container technology, and microservices architecture, with a track record of adapting to evolving challenges in dynamic environments.

TECHNICAL EXPERIENCE

Nokia - Cloud Network Solutions/Digital Automation

Espoo, Finland

Platform Security Trainee

Aug 2023-Ongoing

- Established and maintained team's Nokia Digital Automation Cloud (NDAC) Edge hardware setup.
- Performed thesis PoC in NDAC Edge Kubernetes cluster, involving port scanning and network policy implementation.
- Produced detailed documentation for system configurations to facilitate knowledge transfer.
- Performed penetrative security tests on NDAC Edge Kubernetes cluster, assessing vulnerabilities from different attack vectors.
- Developed PoC tool to assess containers with root capabilities within a multi-namespace, microservices-driven Kubernetes cluster, along with conducting threat and risk analysis.
- Collaborating with development and operation teams to design and implement pipelines for the deployment of PoC models.
- Assisted in implementing Kyverno-PSS to enforce baseline security policies. Utilizing Linux capabilities and network policies to fortify container security.

Skills: Linux, Kyverno, PSS, CNI agents, Python, Docker, Kubernetes, Microservices architecture, PKI, threat and risk analysis, OpenShift, Prometheus, Grafana network policy, security testing.

Thesis Worker

Topic: Network security policies for containers in cloud applications

Jan-Jul 2022

- Developed security tools and policy documentation templates to secure external ports in applications deployed on a minikube cluster. Utilized a zero trust declarative template to derive port information for creating precise network policies in Kubernetes, thereby ensuring authorized port access and mitigating reverse tunneling threats. Following policy creation, CNI agents were employed to enforce these policies within the Kubernetes cluster, further enhancing network transparency and resilience.

Security Intern

May-Dec 2022

- Created containerized PoC test applications and orchestrated their deployment within a Kubernetes cluster, leveraging CustomResourceDefinitions (CRD) and Operator Lifecycle Management (OLM).
- Designed a secure system with a customized Linux OS to prevent data copying. This solution guarantees confidential data transfer from operations to the Data Center, maintaining robust security throughout.

Samsung Research Institute

New Delhi, India

Software Development Engineer

Jan-Aug 2021

- Setting up IPv6 network, DekTec card for streaming models, gaming environment, and optimizing SDLC hardware testing environment during COVID-19 to eliminate the need for physical office dependencies and enhance remote work capabilities.
- Automated testing of Samsung Signage products (LFDs, Smart Monitor, Flip Series) build on Tizen OS, Samsung cloud delivery network based - Magic Info Server and Third-party app certification.

Skills: IPv6, Tizen OS, ScriptHelper, RED Editor, Java, Python, RobotFramework, Selenium, and Ranorex.

SDE Intern

Feb-Apr 2020

- Manual and Automated testing of B2B Samsung Signage Large Format Display(LFDs).

MobCoder

New Delhi, India

Network Engineer Intern

Jun-Jul 2019

- The transition of local servers to Google Cloud Platform and internal network infrastructure optimization.

Skills: GCP, MongoDB, Firewall, IPv6

Nepal Telecom

Birgunj, Nepal

Network Engineer Intern

Jun-Jul 2018

- Network Setup for leasing Telecommunication bandwidth via Optical Fiber Infrastructure.

Skills: TCP/IP, Routing, Switching, Network Security, Troubleshooting, IAM

EDUCATION

Master's in Security and Cloud Computing	GPA – 4.56/5
Aalto University, Finland	2021-2023
Courses: Network Security, Security Engineering, Cloud Software and Systems, DevOps, Microservices Architecture, Information Security, Cryptography, Multimedia Services, Machine Learning, Full Stack Development.	
Bachelor's in Information Technology	CGPA – 8.3/10
Indraprastha University, New Delhi, India	2016-2020
Relevant Courses: Electronic Devices, Data Structure, Communication Systems, Software Engineering, Compiler Design, Web Technology, Microprocessor and controllers, Advance Computer Networks, Wireless Communication, Cryptography and Network Security.	
Higher Secondary School: Laxman Public School, New Delhi, India	2014-2016
Junior Secondary School: DAV School, Nepal	2002-2014

SKILLS

Cloud and Container Security	Microservices architecture, Kubernetes, Docker, GCP, Openshift, Prometheus, Grafana Pod Security Standards, PKI, Anchore, Tenable, Kyverno
Networking	Calico, Cilium, Juniper routers
Languages and Tools	Python, Java, C++, Bash, HTML, CSS, JS, R, CI/CD, Linux, Git, Harbor, JIRA, React, MongoDB
Framework	ISO27001, NodeJs, Flask, Spring
Operation Software	Linux, Tizen, Talos, Windows, Android
Automation	Ranorex, Jmeter, Selenium, Robot-Framework
Communication	English (Fluent), Hindi, Nepali

PROJECTS

• Implementation of IPsec and end-to-end peer Wireguard VPN tunnel	2022
Skills: Vagrant, IP-Sec, Cloud Mesh API Server, Security Protocols, Python	
• Command line Automated Website deployment	2022
Skills: Git, CI/CD, Hugo, HTML	
• Setup of WebRTC Streaming Services	2022
Skills: JANUS, WebRTC, Ffmpeg, RTMP, HLS Stream, Python, Security Protocols	
• Implementation of Adaptive Bitrate Algorithm for smooth streaming	2022
Skills: JavaScript, VLC	
• Secure Application layer protocol Implementation for NFC ticketing System	2021
Skills: Cryptography, Security Protocols, NFC, Android Studio, Java	
• Bachelor Thesis Project: Stock Market Analysis and Share price prediction using ML and NLP.	2020
Skills: Python, R Studio	

COURSES AND PROFESSIONAL CERTIFICATIONS

• IELTS Certificate - British Council	2021
• AWS Fundamentals Specialization	[Coursera]
• Cisco Networking Specialization	[Coursera]
• Networking in GCP Specialization	[Coursera]
• Google IT Support Specialization	[Coursera]

ACTIVITIES

• Volunteered for Junction	2021
• Vice President – Enactus, ADGIM [ENACTUS - International Non-Profit Organization]	2016–2019
Overseeing a Team of 30, along with sponsoring companies corporate Social Responsibility (CSR) relations, college events, logistics, and operations. Deploying a UN-based Sustainable project model in underprivileged communities and teaching necessary skills to generate a reliable source of income. Fundraising events, awareness drives, and social well-being sessions.	