Sashwat K

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Cloud Engineer — Backend Engineer — Confidential Computing

Profile

Results-driven systems engineer with **5+ years** of experience in **Cloud Infrastructure, DevOps Automation, and Confidential Computing**. Proven expertise in deploying scalable systems in the **IBM Cloud**, building **Terraform** modules, and implementing secure virtualization environments. Recognized multiple times for technical excellence and open source contributions.

Experience

- **IBM ISDL** — Hybrid
  Senior Engineer (Full Time) — *Jul 2022 - Present*
  - **LinuxONE Baremetal on VPC — IBM Cloud**:
    - Developed and maintained **SLES** and **RHEL** OS for **LinuxONE Baremetal on VPC (Virtual Private Cloud) for IBM Cloud**.
    - Implemented **IBM Cloud zVSI (KVM on Z)** and LPAR supported images with automation to reduce building time by **80%**.
    - Developed **automation scripts** using **Python** for maintaining LinuxONE Baremetal.
    - Enabled **SSC (Secure Service Container)** functionality for enhanced confidentiality in BareMetal infrastructure using **GoLang**.
    - Mentored interns during project onboarding, helping them understand the architecture, development practices, and internal tools to enable effective contributions early in their tenure.
  - **Hyper Protect Virtual Server (HPVS), Hyper Protect Container Runtime for RedHat Virtualization Solutions (HPCR RHVS) — Confidential Computing**:
    - Added features such as static IP assignment, contract expiration enforcement, structured log tagging through **SystemD** services, and **Bootloader** enhancements and a few more for enhancing customer experience.
    - Designed and maintained open source **Terraform provider for HPVS**, reducing manual deployment overhead for customers.
    - Added HPCR-RHVS support to IBM Cloud Infrastructure Center (ICIC) (OpenStack)
    - Automated release operations, reducing DevOps overhead by **70%**.
    - Developed open-source **Go library** and **CLI tool** developed to automate contract generation for customers.
    - Proactively resolved customer complaints, improving satisfaction and adoption.
    - Mentored new joiners in HPVS architecture and Terraform provider development, enabling them to contribute to feature implementation, debugging, and release workflows.

- **AMD Inc.** — Hybrid
  Silicon Design Engineer (Full Time) — *Feb 2022 - Jul 2022*
  - **AMD - Xilinx Integration**: Help update infrastructure to help bring synergy between AMD and Xilinx systems Revision Control System, License Servers etc.
  - **Programming**: Developed and maintained scripts for maintaining ICManage servers (users, workspaces etc), FlexLM license files, benchmarking new servers
  - **Collaboration**: Delegate with Silicon Engineering teams and IT to complete projects.

- **Xilinx Inc. (Acquired by AMD Inc.)** — Hybrid
  CAD Engineer (Full Time) — *Jul 2021 - Feb 2022*
  - **Management**: Implement policies for LSF queues and Storage.
  - **Programming**: Develop and maintain ICManage Library creation.
  - **Documentation**: Create, update and document processes using Jira and Confluence.

- **Xilinx Inc. (Acquired by AMD Inc.)** — Hybrid
  CAD Infrastructure DevOps Engineer (Contractual) — *Jun 2020 - Jul 2021*
  - **Programming**: Developed and maintained script to maintain server netgroup files of hosts in LSF clusters.
  - **Maintenance**: Maintain ICManage GDP, LSF application profiles, LSF License Scheduler and EDA tools.

Education

- **College of Engineering Trivandrum** — Thiruvananthapuram, India
  MCA; GPA: 7.0 — *Aug 2017 – Apr 2020*
- **Christ Nagar College** — Thiruvananthapuram, India
  BCA; GPA: 7.2 — *Jun 2014 – May 2017*
- **Kendriya Vidyalaya AFS Akkulam** — Thiruvananthapuram, India
  High School Computer Science — *Apr 2012 – Mar 2014*

Skills Summary

- **Languages**: Go, Python, Bash, C, Data Structures and Algorithms
- **DevOps & Tools**: Terraform, Docker, Git, Jenkins
- **Infra & Platforms**: Linux, Systemd, IBM Cloud, LPAR, zVSI, z/VM
- **Concepts**: Virtualization, Confidential Computing, Infrastructure as Code (IaC)

Projects

- **Portfolio Website**: A portfolio website anybody can use along with **Docker** and **Terraform** to generate temporary SSL certificates and host on **AWS**. Available at GitHub - sashuu69/portfolio-website.
- **Fingerprint-based Exam Authentication System**: Biometric verification system using **SecuGen** fingerprint sensor to prevent impersonation in exams. **Arduino** based handheld device for authenticating students and invigilators.
- **IoT Water Level Indicator**: Automated tank and garden watering system using moisture sensors and **NodeMCU**. Available at GitHub - sashuu69/iot-water-level-indicator.
- **ATmega328P Production-Ready Board**: Compact **Arduino** UNO-compatible board (SMD and DIP) with **Eagle Design** files. Available at GitHub - sashuu69/sph-mc-one.

Certifications

- **Go Programming (Golang): The Complete Developer's Guide, Udemy**: View Certificate
- **100 Days of Code: The Complete Python Pro Bootcamp for 2022, Udemy**: View Certificate
- **Docker Mastery: with Kubernetes +Swarm from a Docker Captain, Udemy**: View Certificate

Honors and Awards

- Significant Contributor, IBM Technical Collaboration Achievement Program (**TCAP**) 2025 - **Open source** contributions towards terraform provider for hyper protect virtual servers
- IBM Quarterly Cash Award Program (**QCAP**) Q1 2025 - For significant contributions towards Hyper Protect Virtual Servers (HPVS) and Z Virtual Server Instances (zVSI)
- IBM ISDL Team Award March 2023 - For contributions towards LinuxOne Baremetal on IBM Cloud VPC
- IBM ISDL SDS **Star Of The Month** (Oct 2022 and Jan 2024) - For contributions towards LinuxOne Baremetal for VPC and Hyper Protect Virtual Servers
- Star Performer, All India MCA Meet 2019 (NIT Trichy)

Volunteer Experience

- **Internet of Things Lab, College of Engineering Trivandrum** — Thiruvananthapuram, India
  Conducted workshops on Arduino, Raspberry Pi, BeagleBone, Python — *Oct 2018 - Apr 2020*
- **RASA Hams - Ham Radio Community** — Thiruvananthapuram, India
  Collaborated with local amateur radio enthusiasts for learning and experimentation — *Jan 2018 – Present*