

Harsh Kotak

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Professional Summary:

- Over 8 years of experience in the Telecom and Internet Service Provider industry.
- Broad experience in the fields of data center networking, compute, virtualization and containerization technologies.
- Knowledge and experience in SDN, NFV, distributed cloud, microservices and cloud native architectures.
- Proficient in CI/CD, GitOps and DevOps practices for streamlining software development.
- Well versed with network routing, switching, load balancing architectures and protocols.
- Ability to program and troubleshoot customized ansible, terraform, python and bash scripts.
- Equipped with Linux system administration experience including configuration, troubleshooting and maintenance.
- Experience working in lab and QA environments to test and validate solutions for a multi-vendor ecosystem.
- Possess good communication and analytical skills with an appetite to grasp new concepts quickly.
- Familiar with Agile/Scrum methodologies and the use of ticketing tools for task tracking and project management.

Technical Skills:

Programming Languages: Python, Bash

IP Routing: BGP, OSPF, Multicast, VRF, IPv6

Switching: VLAN, STP, LACP, MC-LAG, FHRP, VXLAN

Infrastructure as a Service: AWS, OpenStack, KVM, VMware, Ceph, SDN

Packet Acceleration: SR-IOV, DPDK, VPP, NUMA, OVS Offload, SmartNICs

Container Orchestration: Docker, Kubernetes (OpenShift, Rancher), Helm, Portworx

Software Tools: Ansible, Terraform, Git, ArgoCD, Artifactory, RH Satellite, Morpheus, Ixia, TRex, UCS Manager

Experience:

Principal Engineer I

Feb 2024 – present

Charter Communications (Spectrum)

Denver, CO, USA

- Working on the cloud virtualization architecture team within the network technology group at Charter. Responsibilities include planning, design, implementation, and optimization of virtual and containerized systems.
- Lead development of Red Hat OpenShift based Edge data center platform to host container network functions.
- Built an ArgoCD GitOps pipeline to automate the management of infrastructure and application lifecycles.
- Create design specifications, system builds, configuration guides and related documentation.
- Contribute to strategic architecture and roadmap development; provide tiered support across organizations.

Cloud Solutions Architect IV

May 2022 – Feb 2024

Collabera Technologies

Mumbai, India

- Worked on the cloud and infrastructure architecture team at Charter Advanced Engineering. Responsibilities include planning, design, implementation, and optimization of data center systems.
- Lead development of an OpenStack based Edge data center platform to host VM and container-based workloads.
- Collaborate with different video and software engineering teams to standardize solution and implementation options.

Senior Software Engineer

October 2021 – May 2022

Great Software Laboratory (GS Lab)

Pune, India

- Worked with the multi-cloud deployment services team on the IDM practice at GS Lab.
- Developed GitOps infrastructure pipeline for supporting an AI/ML Ops platform. The pipeline used terraform to create AWS EKS cluster and supporting AWS resources and then used Flux to handle continuous delivery on the Kubernetes cluster.

Network Engineer III

June 2016 – September 2021

Charter Communications (Spectrum)

Denver, CO, USA

- Worked on developing the data center network architecture and network application delivery solutions at Charter. Responsibilities include configuring lab environments and test/develop new solutions for the data center.
- Worked on development of containers as a service platform to deploy scalable Kubernetes clusters on vSphere and AWS.
- Incorporate test and build pipelines for a full stack deployment with infrastructure, Kubernetes and application charts.
- Evaluate, test, and optimize all components of NFV including NFVI, VIM and NFVO for edge and data center use cases.
- Certified use of packet acceleration technologies and SmartNICs for OpenStack and NFV cloud.
- Developed ansible playbooks to automate provisioning and management of Red Hat OpenStack clouds.
- Worked on installation, configuration, administration, and troubleshooting of OpenStack and Ceph.

- Developed test cases and performed certification testing of data center switching platforms.
- Worked on redesign, build and management of the lab consisting of 70+ racks of infrastructure from the ground up including network, compute, storage, virtualization and shared services.

Automation Engineer Intern

Comcast Cable

May 2015 – August 2015

Denver, CO, USA

- Worked within the EPS Voice Engineering department of Comcast to automate tasks and support Big Data Analytics.
- Developed stored procedures and ETL tools in Microsoft SQL Server to process CDR and other usage data from switches.

Education:

Masters in Telecommunications Engineering

University of Colorado Boulder

GPA 3.7 / 4.0

August 2014 – May 2016

Bachelors in Electronics & Telecommunication Engineering

University of Mumbai

GPA 3.6 / 4.0

August 2010 - June 2014

Certification:

- Technology Leadership certificate from Cornell University.
- Cisco Certified Network Professional (CCNP) Enterprise certification.
- Certified Kubernetes Administrator (CKA) from the Linux foundation.