

Harsh Kotak

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Professional Summary:

- 9+ years of experience in the telecom industry, delivering data center and cloud platforms at scale.
- Broad experience in the fields of networking, compute, virtualization and containerization.
- Knowledgeable 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.
- Experienced in Linux system administration, including configuration, troubleshooting, and maintenance.
- Skilled in automation and scripting with Ansible, Terraform, Python, and Bash.
- Experienced in lab, QA, and production environments for testing, validation, and deployment of multi-vendor solutions.
- Strong analytical, problem-solving, and communication skills, with a quick ability to learn new concepts.
- Familiar with Agile/Scrum methodologies and the use of ticketing tools for task tracking and project management.

Technical Skills:

Programming Languages: Python, Bash

Networking: BGP, OSPF, VRF, VXLAN, IPv6, VLAN, STP

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

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

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

Automation & Tooling: Ansible, Puppet, Terraform, Git, ArgoCD, Vault, Artifactory, Prometheus, Grafana, Morpheus, Ixia

Experience:

Charter Communications (Spectrum)

Principal Engineer I - FTE

Cloud Solutions Architect IV – via Collabera Technologies

Denver, CO, USA

Feb 2024 – present

May 2022 – Feb 2024

- Part of the Private Cloud Engineering team within the Enterprise Infrastructure Group, responsible for planning, designing, implementing, and operating virtualized and containerized telco cloud systems.
- Led development and implementation of Red Hat OpenShift-based platforms supporting enterprise and VNF/CNF workloads across multiple distributed data centers, including edge locations.
- Developed Ansible automation for bare-metal OpenShift cluster deployment, including node provisioning, day-0/day-1 configuration, operator installation, and cluster and platform upgrades.
- Delivered KubeVirt-based virtualization, running KVM virtual machines natively on Kubernetes alongside containerized workloads for mixed legacy and cloud-native use cases.
- Led certification and validation initiatives for packet acceleration, Kubernetes CNI, load balancing, and service exposure using BGP, MetallLB, Multus, SR-IOV, Ingress and service mesh solutions.
- Designed and implemented GitOps workflows using ArgoCD, enabling declarative management of OpenShift clusters, operators, and application workloads across development, staging, and production environments.
- Built and integrated GitLab CI pipelines to automate Kubernetes workflows, covering image builds, configuration validation, security checks, and manifest promotion.
- Implemented full-stack monitoring and observability across Kubernetes, compute, network, storage, and virtualization layers to support troubleshooting, capacity planning, and reliability objectives.
- Supported Kubernetes application onboarding and operations, including deployment standards, operator lifecycle management, performance tuning, and resolution of cluster and application-level issues.
- Contributed to strategic architecture and roadmap development, while providing tiered platform support across multiple organizations.

Great Software Laboratory (GS Lab)

Senior Software Engineer - FTE

Pune, India

October 2021 – May 2022

- Worked with the multi-cloud deployment services team on the IDM practice at GS Lab.
- Developed a GitOps infrastructure pipeline to support an AI/ML Ops platform. The pipeline leveraged Terraform to provision AWS EKS cluster and supporting AWS resources, with Flux handling continuous delivery on Kubernetes.
- Collaborated with engineering teams to standardize deployment templates and optimize multi-cloud provisioning workflows, reducing environment setup time by 30%.

Charter Communications (Spectrum)

Network Engineer III - FTE

Network Engineer – via Unison Systems

Denver, CO, USA

Feb 2018 – September 2021

June 2016 – Feb 2018

- Developed data center network architectures and application delivery solutions at Charter, including lab configuration, testing, and design of high-performance, multi-tenant networks with a focus on scalability, resiliency, and automation.
- Defined and implemented network certification frameworks to validate hardware, firmware, and software interoperability across spine-leaf, overlay, and underlay domains.
- Worked on development of containers as a service platform to deploy scalable Kubernetes clusters on vSphere and AWS.
- Integrated test and build pipelines for full-stack deployment, covering infrastructure, Kubernetes, and application charts.
- Evaluated, tested, and optimized NFV components, including NFVI, VIM, and NFVO, for edge and data center use cases.
- Certified use of packet acceleration technologies and SmartNICs for OpenStack and NFV clouds.
- Developed Ansible playbooks to automate provisioning and management of Red Hat OpenStack clouds.
- Installed, configured, administered, and troubleshooted OpenStack and Ceph for production environments.
- Developed test cases and performed certification testing of data center switching platforms.
- Redesigned, built, and managed a large-scale lab environment with 100+ racks of 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 – Cornell University.
- Cisco Certified Network Professional (CCNP) Enterprise.
- Certified Kubernetes Administrator (CKA) – The Linux Foundation.