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Description automatically generatedA close up of a logo

Description automatically generated**Harish Kumar Allam**

**Sr.DevOps/Kubernetes S Engineer**

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**PROFESSIONAL SUMMARY:**

* Dependable and Performance-driven DevOps Engineer with over 8 years of professional experience in software engineering with more than 5 years in Linux System Administration, DevOps and Site Reliability Engineering
* Expertise in AWS Resources like EC2, S3 Bucket, EBS, VPC, ELB, AMI, SNS, RDS, IAM, Route 53, Auto scaling, Cloud Formation, Cloud Watch, Security Groups.
* Experience in optimizing volumes, EC2 instances and created multiple VPC instances and created alarms and notifications for EC2 instances using Cloud Watch.
* Experience setting up the scripts for creation of new snapshots and deletion of old snapshots in S3 using S3 CLI tools.
* Experience working with Amazon IAM console to create custom users and groups.
* Experience implementing and maintained the monitoring and alerting of corporate servers/storage using AWS Cloud
* Experience setting up and maintaining auto-scaling AWS stacks (preferred using Terraform and scripting)
* Experience in working on source control management tools like GIT (GitHub), Subversion (SVN) and creating GIT repositories with specified branching strategies(concepts like Branches, Merges and Tags).
* Expertise in terraform for building, changing and versioning infrastructure
* Strong understanding of infrastructure automation tools (Terraform, Cloud Formation Templates)
* Knowledge and Experiences on Cloud technologies including Infrastructure as a Service, Platform as a Service, and Software as a Service provider (IaaS, PaaS, and SaaS)
* Expertise in using build tool MAVEN for the building of deployable artifacts such as war from source code.
* Expertise in implementation and maintenance of Apache HTTP, SMTP, DNS, TCP/IP, Security Management & Security trouble shooting skills.
* Experience designing and creating multiple deployment strategies using CI/CD Pipelines using Jenkins.
* Configured and administered Jenkins for automated builds Responsible for installing Jenkins master and slave nodes.
* Experience of using DSL Groovy Scripts which helps to create Jenkins Jobs similar to DEV environment in PROD during deployment.
* Perform import and export ETL jobs across various ETL project and servers.
* Experience on OpenShift Platform in managing Kubernetes deployments using ansible.
* Experience creating Projects and Repositories in Bitbucket to host source code developed by Development Team as well as configuration files and Scripts maintained by Configuration Management Team
* Experience on Chef Inspec for validating the Kubernetes cluster deployments on OpenShift and GKE platform.
* Experience creating Branches and Tags in BitBucket Repositories according to the strategies used by Release Management specified for different releases.
* Expertise in automating builds and deployment process using Python and Bash Shell scripts.
* Ability in development and execution of XML, Shell Scripts.
* Experience constructing a RESTful API to manage infrastructure services using Python.
* Experience in Designing, Installing and Implementing Ansible configuration management system and in writing playbooks for Ansible and deploying applications.
* Experienced with Docker container service. Creating Docker files, Docker Images & Containers.
* Experience with container-based deployments using Docker, working with Docker images, Docker hub and Docker registries, installation and configuring Kubernetes and clustering them.
* Experience setting up Docker Swarm and Kubernetes cluster for Docker Container Management
* Hands-on experience on Ansible and Ansible Tower as Configuration management tool, to automate repetitive tasks, quickly deploys critical applications, and proactively manages change.
* Experience Deploying Microservices in Docker Containers using the Docker Images pushed to Docker Trusted Repository built by using Dockerfile
* Provided 24X7 support on the production servers on a rotation basis and was involved in creating documentation.

**CERTIFICATIONS:**

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Level | ID | Valid Through |
| CKA(Kubernetes) | Intermediate | LF-sgnhfsg1lq | Sep 2023 |
| AWS Developer | Associate | GE6LVZ62G2141VG4 | April 2023 |

**TECHNICAL SKILLS:**

|  |  |
| --- | --- |
| **Technologies** | **Tools** |
| **Operating Systems** | UNIX, Linux, RHEL |
| **App & Web Server packages** | Oracle Web Logic, JBoss, WebSphere, Apache Tomcat, IIS |
| **Databases** | SQL Server, MYSQL, Oracle |
| **Programming Languages** | Java, C#, Python, |
| **Scripting Languages** | Shell, **Bash,** Groovy, **Python** |
| **SCM Tools** | SVN, GIT &BitBucket |
| **Build Tools** | Maven, Gradle |
| **CI-CD Tools** | Jenkins/Cloud Bee |
| **Infrastructure Tool** | Terraform, Cloud Formation |
| **Binary Management Tools** | Nexus & Artifactory |
| **Change / Incident Mgmt Tool** | Remedy / Service Now, Pagerduty |
| **SOA/Web services** | SOAP, REST, Micro Services Architecture |
| **Configuration Management Tools** | Ansible |
| **Container Technology** | Docker Enterprise, Kubernetes |
| **Cloud Computing** | AWS, GCP (done some personal projects) |
| **Logging & Monitoring Tools** | ELK, CloudWatch and Datadog |

**WORK EXPERIENCES: `**

**Client: Apple Inc. CA May 2022 – Present**

**Role: DevOps Engineer/supporting SRE**

**Responsibilities:**

* Collaborate closely with development teams to provide dedicated production release supporting during new feature implementations. Understand feature requirements, gather feedback and ensure smooth deployment and adoption of new features.
* Manage and oversee AWS infrastructure, utilizing hands-on-experience and python scripting skills to streamline operations.
* Align infrastructure changes with business needs and leverage python analytics to optimize resource allocation.
* Deploy and manage deployment pipelines, ensure the efficient flow of work and optimal resource utilization. Work closely with cross-functional teams to align pipeline activities with business priorities.
* Streamline deployment pipelines and process through the creation and execution of python and bash scripts.
* Diligently monitor and debug error logs throughout deployment phases, utilizing advanced tools such as Splunk and Grafana to ensure seamless performance.
* Establish and maintain robust CICD pipelines, employing tools like **Rio pipelines**, Terraform, Artifactory and GIT to ensure smooth application deployments.
* Provision, maintain and deploy Kubernetes clusters, preferably with AWS EKS and handle critical PRD deployments and upgrades.
* Utilize Infrastructure as Code (IAC) tools like Terraform to provision and manage various AWS services, including EC2, EBS,S3,IAM and VPC.
* Also used multiple monitoring tools like CloudWatch, Datadog and for server health checks Grafana( for revenue monitors Tableau) Hubble graphs etc.

**Client: Northwell Health – NY July 2019 – April 2022**

**Role: DevOps Engineer (AWS)**.

**Responsibilities:**

* Complete creation and maintenance of AWS accounts including infrastructure using cloud formation, terraform scripts and ansible playbooks for role/policy creation by running in Jenkins.
* Ec2, Autoscaling groups, IAM Roles and respective policies and including them in the Active directory and controlling the complete user access, S3, Lambda, NAT Gateways, Stepfunctions, cloudwatch alarms, SNS, SQS, RDS(postgresql), ROUTE 53 record sets, Security groups, VPC, Subnets, NACL, Routing tables.
* Designed terraform scripts to create customized VPC, subnets and all other required resources by maintaining the state in s3 using terragrunt.
* Implemented a production ready, load balanced, highly available, fault tolerant Kubernetes infrastructure with rancher, kops, EKS.
* Also monitoring as code using terraform is been introduced and successfully rolled out to production.
* Datadog is extensively used for monitoring and alerting for the entire architecture including rancher, kubernetes objects like containers/pods/deamonsets/deployments, replicasets, aws infrastructure and on-prem servers actively involved in meter data collection.
* Work with X-Ray integration on an AWS Lambda function.
* Experience on runtimes with a corresponding X-Ray SDK, Lambda also runs the X-Ray daemon.
* Perform independently with little direct supervision in administration of ETL.
* Extensively worked in Orchestration of kubernetes cluster using rancher 2.0 and troubleshooting the network overlays including monitoring using Prometheus and Grafana.
* Working with app-dev teams in building docker images using Jenkins pipeline and actively integrated CI/CD along with Octopus deployment tool.
* Datadog is extensively used for monitoring and alerting for the entire architecture including rancher, kubernetes objects like containers/pods/deamonsets/deployments, replicasets, aws infrastructure and on-prem servers actively involved in meter data collection.
* AWS CLI is widely used for developing the Make files for stack creation/deletion and update process for CFT/Stacks.

**Client: Pearson, Durham, NC Mar 2016 – Jul 2018**

**Role: SRE /DevOps Engineer**

**Responsibilities:**

* Experience in Software Integration, Configuration, building, automating, managing and releasing code from one environment to another environment and deploying to servers.
* Groups in Public and Private Subnets in VPC and other services in the AWS.
* Experience in migrating build.xml into pom.xml to build the applications using Apache MAVEN.
* Engineered Splunk to build, configure and maintain heterogeneous environments and maintained log analysis generated by various systems including security products.
* Extensively worked on Jenkins CI/CD pipeline jobs for end-to-end automation to build, test and deliver artifacts and Troubleshoot the build issue during the Jenkins build process.
* Utilized AWS CLI to automate backups of ephemeral data-stores to S3 buckets, EBS and create nightly AMIs for mission critical production servers as backups.
* Used Ansible for configuration management of hosted Instances within AWS. Configuring and Networking of Virtual Private Cloud (VPC).
* Creating AWS resources with Terraform and integrated with CI / CD process.
* Wrote scripts in terraform when required and Parser files of complexity when required
* Orchestrated and migrated CI/CD processes using terraform templates and Containerized the infrastructure using Docker to setup in AWS Amazon VPCs.
* Focused on containerization and immutable infrastructure. Docker has been core to this experience, along with Kubernetes.
* Created kubernetes YAML file for the deployment in Kubernetes Cluster
* Setup Kubernetes cluster with Kubernetes Master that has API server, Kube-Scheduler, and Kube Controller.
* Setup Kubernetes Kubelets that talks to the API server in Kube Master
* Created Pods, Deployments, Services and Replication Controller in Kubernetes
* Used Spinaker for Kubernetes Continuous Deployment and Rolling Updates
* Developed container support for cloud environments and Docker. Deployed the applications in Docker containers and managed the containers in enterprise level.
* Created Docker images using a Docker file, worked on Docker container snapshots, removing images and managing Docker volumes.
* Provisioned load balancer, auto-scaling group and launch configuration for microservices using Ansible
* Performed Continuous Delivery in a Microservices infrastructure with Amazon cloud, Docker and Kubernetes.
* Built and maintaining Docker infrastructure for Service oriented architecture (SOA) applications.
* Worked on Continuous integration tools like Jenkins to build and test the applications and working on issue tracking tool like iTrack, JIRA, Confluence.
* Wrote Ansible playbooks from scratch in YAML. Installing, setting up & Troubleshooting Ansible, created and automated platform environment setup.Continuous Delivery Pipeline. Deployed micro services, including provisioning AWS environments using Ansible Playbooks.
* Leveraging several Jenkin plugins to automate tasks like code coverage, metrics, AWS-EC2 plugin, and job creation.
* Build servers using AWS, importing volumes, launching EC2, RDS, creating security groups, auto-scaling, load balancers (ELBs) in the defined virtual private connection.
* Defined AWS Security Groups which acted as virtual firewalls that controlled the traffic allowed to reach one or more AWS EC2 instances.
* Experienced in setting up Jenkins pipeline jobs for build configurations using groovy.
* Designed terraform templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
* Created Terraform modules to create instances in AWS & automated process of creation of resources is AWS using terraform.
* Creation of High Availability of service to achieve Continuous Delivery goal on high scalable environment, used Docker coupled with load-balancing tool Nginx
* Designed AWS CloudFormation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications.
* Experience working on DockerHub, creating Docker images and handling multiple images primarily for middleware installations and domain configurations( used docker container )
* Used Elastic search as an open source search engine with a REST API and Kibana has been used for Web UI Queries.Constructed a RESTful API to manage infrastructure services using Python.

**Client: Nokia Bell Labs, Murray Hill, NJ Nov 2014 to Feb 2016**

**Role: Linux System Engineer**

**Responsibilities:**

* Performed multiplatform volume management using SVM, LVM, ZFS, NAS, and VERITAS volume manager.
* Performed regular function checks on all RHEL 5.5 Linux Servers in both environments (Production/Non-Production and/or Production/Development) especially on Apache servers
* Red Hat Linux server administrator, including security patching, kernel tuning, RAID disk array Mgmt, software packaging and installation using RPMs
* Troubleshoot build, install, configuration, performance, monitoring and other process issues of the servers and the selected application environments.
* Integrated Maven with Perforce to manage and deploy project related tags.
* Installed and administered Tomcat repository to deploy the artifacts generated by Maven and to store the dependent jars which are used during the build.
* Worked on variety of Linux platforms (Ubuntu, Red hat) which includes installation, configuring and maintenance of applications on this environment.
* Implemented cloud services AWS and Implemented Bash and Python scripting.
* Worked on GIT (Git Hub) repositories as Distributed Version Control System.
* Installed and configured GIT to implement branching strategy which is suitable for agile development also provided continuous support and maintenance of software builds.
* Managed the Maven Repository using Nexus tool and used the same to share the snapshots and releases of internal projects.
* Setting up continuous integration and formal builds using Jenkins with Maven and Tomcat repository.
* Performed setup of clustered environment with WebLogic Application Server.
* Used Shell script to configure the WebLogic application server in all the environments

Monitored System Activities like CPU, Memory, Disk and Swap space usage to avoid any performance issues.

* Created and modified application related objects, created Profiles, users, roles and maintained system security.
* Responsible for writing/modifying scripts using SH, KSH, and bash for day-to-day administration.

**Educational Qualifications:**

**Masters: Computer information systems and IT**

University of Central Missouri, Missouri, USA (2018- 2019).

**Under Graduation: B-Tech Mechanical Engineering.**

Lovely Professional University, Punjab, INDIA. (2011-2015).