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| **Harish Karumuri** |

**Sr. DevOps/Cloud Engineer**



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**PROFESSIONAL PROFILE**

Accomplished Linux/DevOps system administrator having good knowledge on managing server infrastructures and involving administration of mission critical, high availability environments. Proven ability to create and deliver solutions tied to business growth, organizational development and systems/ network optimization. Skilled, problem identifier and troubleshooter comfortable managing systems, projects and teams in IT industry.

**SUMMARY**

* Qualified Professional with 10+ years of experience administrating, configuring, managing **Linux** distributions **(Red Hat, CentOS, Ubuntu, Solaris)** and Virtualization with **VMware ESX**  and Virtual Centre server.
* Worked on **Amazon Web Services** for deploying **EC2** instances consisting of various flavors viz., **RHEL, CentOS and Ubuntu in Linux, Windows** and **MAC**.
* **AWS** Cloud platform and its features which includes **EC2, VPC, EBS, AMI, SNS, RDS, Cloud Watch, Cloud Trail, Cloud Formation AWS Configuration, Auto scaling, Cloud Front, IAM, S3**. Experience in AWS using **EC2, AWS Dynamo DB, AWS S3, AWS VPC, and IAM** services.
* Installed and configured an automated tool **Puppet** that included installation and configuration of Puppet master, agent nodes and an admin control workstation.
* Expert in **Chef/Puppet** as Configuration management tool, to automate the repetitive tasks, quickly deploy critical applications, and enthusiastically managed the changes.
* Wrote **Ansible** Playbooks with **SSH** as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on **AWS** instances using **Python**. Run **Ansible** Scripts to provision Dev servers.
* Extensive experience in using build tools like **MAVEN,** and **ANT** for the building of deployable artifacts from source code. Build files using **Ansible** and combine them to form clean, reusable abstractions.
* Hands on installation and configuration management tools like **puppet** and **Ansible** on various servers.
* Experience in using **Chef Cookbooks** and **Chef recipes** to automate infrastructure as a code.
* Installing, configuring and administering **Jenkins** CI tool on Linux machines.
* Building scripts using **MAVEN** build tools in **Jenkins** to move from one environment to another environment.
* Worked with Terraform for automating **VPC**s, **ELB**s, security groups, **SQS** queues, **S3** buckets, and continuing to replace the rest of our infrastructure.
* Extensively worked on **Hudson** and **Jenkins** for continuous integration and for **End-to-End automation** for all build and deployments.
* Worked on the containerization tool like **Docker** and their components like **Docker engine**, **Docker Hub**, the built Images used for the testing.
* Implementing a Continuous delivery pipeline with **Docker, Jenkins and GitHub** and **AWS AMI**'s.
* Strong design and implementation skills on AWS Transit Gateway, AWS VPC Endpoint Services. Strong design and implementation skills on VPC architecture, NAT, NACL, VPC Peering, Internet Gateways, security groups etc.
* Experience in managing cloud software deployments, with a focus on continuous integration and deployment using **GitHub, Jenkins, Maven**.
* Deployed **Docker Engines** in Virtualized Platforms for containerization of multiple apps
* Created **Golden Boot Images** for Linux servers. Expert in storage allocation using **LVM.**
* Have ample experience in load balancing, Integrating and monitoring with **Nagios** and **Splunk**.
* Created and maintained the **python** deployment scripts for Tomcat web application servers.
* Involved in writing **Python, Perl** and **shell** scripts for compilation and deployment process.
* Team player with excellent interpersonal skills, self-motivated, dedicated and understanding the demands of 24/7 system maintenance and has good customer support experience.

**TECHNICAL SKILLS**

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| **Operating system** | **Linux (RedHat, Ubuntu, CentOS, Solaris), Windows** |
| **Automation and Configuration Management** | **Jenkins, Chef, Ansible, Puppet, Docker, Vagrant, Kickstart, Bamboo.** |
| **Cloud Services** | **Amazon Web Services: EC2, S3, ELB, Auto scaling, Elastic Beanstalk, Cloud Front, Cloud Formation, Elastic Filesystem, ECS, RDS, DMS, VPC, Direct Connect, Route 53, Cloud watch, Cloud trail,, IAM, SNS,** |
| **Build Tools** | **Maven, Ant** |
| **Application / Web Servers** | **Web Logic 9.x, 10.x, Apache Tomcat 5.x/7.x, JBoss 4.22, Web Sphere 6.x/7.x/8.x** |
| **Version control tools** | **GIT, Subversion (SVN), Bigbucket** |
| **Database System** | **MS SQL Server, IBM DB2, Dynamo DB, Cassandra DB, Aurora DB** |
| **Scripting** | **Perl, Python, JavaScript, Ruby, Bash shell, Power shell scripting.** |
| **Virtualization Technologies** | **VMWare, Power VM, Virtual box, V Centre, Vsphere, weblogic** |
| **Monitoring Tools** | **Nagios, Cloud Watch, Splunk, AppDynamics, PagerDuty, Dynatrace, VictorOps, DataDog** |
| **Programming Languages** | **Java, .Net, C, C++** |

**PROFESSIONAL EXPERIENCE**

**Fannie Mae Dallas, TX (July 2020 to Present)**

**Sr. DevOps /Cloud Engineer**

**Responsibilities:**

* Collaborated, Engaged with Applications teams to resolve the Cloud, DevOps and Infrastructure related issues. Provide them AWS Infra related solutions and code review.
* Extensively engaged and worked closely with Capital Market, Single Family and FinTech portfolios. Involved in the application architecture design and Migration applications from On-Prem to AWS Cloud.
* Designed Service catalog design work from commissioning till decommissioning of the resources from manually and automated process to protect the transparency of the usage of the resources.
* I have involved in creating CFT templates and creating UCD pipelines for the infrastructure provisioning system for the application usage.
* Implemented Shutdown exception for the ec2 instances and RDS Data base Instances for daily and periodically scheduled usage.
* Have implemented and Managed IAM policy engineer.
* Expertise in working with terraform key features such as Infrastructure as code, execution plans, resources provision and change automation. Used Terraform for autoscaling launch configuration templates for launching AWS EC2 Instances while deploying microservices.
* Created and maintained highly scalable and fault tolerant multi-tier AWS Environments spanning across multiple availability zones using terraform and cloud formation.
* Worked on integrating SNS SQS Mapping for multiple aws accounts to get configured to send the SNS incoming requests.
* Developed deployment pipelines on AWS for Linux machines using Jenkins and Terraform. Configured Jenkins to build CI/CD pipeline, which includes auto-triggering builds, created the Docker Container, Pushed the Docker container to the Docker Registry, and troubleshooting the build issue during the Jenkins build process.
* Implemented Jenkins pipeline job configurations and access permissions for various groups and troubleshoot issues in pipeline jobs.
* Worked and implemented on AWS EC2 patch work and involved in upgrading the softwares which are been installed in the services. Able to troubleshoot and Find ROC any network or version related issues in the AWS EC2 instances.
* Worked on implementing the security group changes to figure out what is the blocking the users for their incoming and outgoing traffic on the VPC level troubleshooting on the VPC flow logs.
* Worked on AWS Elastic load balancing for deploying applications in high availability and AWS Auto Scaling for providing high availability of applications and EC2 instances based on the load of applications.
* Implementing Continuous Delivery pipeline by creating build jobs to provide continuous automated builds polling the GitHub source control system.
* Built end to end CI/CD Pipelines in Jenkins to retrieve code, compile applications, perform tests and push build artifacts.
* Involved in designing and deploying multitude applications utilizing almost all the AWS stack (Including EC2, Route53, S3, RDS, EBS, ELB, DynamoDB, SNS, SQS, IAM) focusing on high-availability, fault tolerance, and Auto Scaling in AWS CloudFormation
* Developed strategy to migrate Dev/Test/Production from an enterprise VMware infrastructure to the IaaS Amazon Web Services Cloud environment including run book processes and procedures.
* Designed and maintained GIT Repositories, views, and the access and implemented 2FA for GitHub.
* Worked with networking teams in configuring AWS Direct Connect to establish dedicated connection to datacenters and AWS Cloud.
* Worked on S3 bucket policy design and notification configurations. Can able to design and implement on S3 IAM Policy design and Permissions for the data storage which is based on KMS encryption.
* Managed multiple AWS accounts with multiple VPC's for both production and non-prod where primary objectives included automation, build out, integration and cost control.
* Strong Experience in implementing Data warehouse solutions in AWS Redshift, worked on various projects to migrate data from on premise databases to AWS Redshift, RDS and S3 Set up Elastic Load Balancers (ELB) for different applications to ensure high availability of applications.
* Administered and maintained Subversion version control system adhering to the branching policies. Used MAVEN to automate the build process.
* Responsible to designing and deploying new ELK clusters (Elasticsearch, Logstash, Kibana, beats, Kafka, zookeeper. Configured ELK stack from scratch in micro service applications to aggregate logs and monitor using Kibana dashboards.

**Environment:** AWS (EC2, S3, VPC, IAM, EBS, RDS, Cloud Formation, J2EE, Cloud Watch, ELB, SNS, SQS), GIT, Chef, Ruby, ANT, MAVEN, Web Logic, UNIX, JIRA, Apache, Puppet, Nagios, Bash Scripting.

**South Carolina Department of Employment and Workforce (SEDEW)/Capgemini, Atlanta, GA (January 2019 to June 2020)**

**Sr. AWS Cloud Infrastructure DevOps:**

**Responsibilities:**

* + Responsible and worked as **AWS DevOps Engineer** for a team that involves Developed and implemented software release management strategies for various applications according to agile process. Designed and implemented solutions for **monitoring, scaling, performance Improvement, and Configuration management** of systems running SaaS applications.
  + **Management and Administration of AWS Services CLI, EC2, VPC, S3, Glacier, ESB, Autoscaling, Lambda, EMR, CloudWatch, SNS, SQS, AWS Financial Management, CFT, Config, Service Catalog, System Manager, ACM, Load Balancers, ECR, Route 53, CloudTrail, IAM, and Trusted Advisor services.**
  + Designed **AWS Cloud Formation** templates to create custom sized **VPC** and **NAT Gateways** to ensure successful deployment of Web applications and database templates. Planned, built, and configured network infrastructure within the **VPC with public and private subnets** and configure routing tables and internet gateway.
  + Responsible for launching **EC2 instances Windows/Linux AMI** and bootstrapping with Apache using Bash scripting, **auto-scaling,** and Load balancers **(ELB)**.
  + Extensively worked on Jenkins to implement **Continuous Integration (CI) and Continuous Deployment (CD)** processes. Developed custom **Jenkin jobs/pipelines** that contained Bash shell scripts utilizing the AWS CLI to automate infrastructure provisioning.
  + Work with **Terraform** key features such as Infrastructure as code, Execution plans, Resource Graphs, Change Automation.
  + Worked on creating infrastructure for Java and Go microservices using Terraform IAC and EKS as end compute target. ECS and ECS fargate were evaluated during the testing phase.
  + Design, development, and implementation of performant ETL pipelines using python API of Apache Spark on AWS EMR.
  + Created IAM roles for the Kubernetes cloud setup. Created Kubernetes deployment, stateful sets, Network policy etc. Created Kubernetes dashboard, Network policies. Created metrics and monitoring reports using Prometheus and Grafana dashboards.
  + Set up Secure Sockets Layer (SSL) communication for **WebLogic**Application Server. Writing various posting scripts for log rotation, log analysis.
  + Worked with network routing and security protocols and technology. Designed AWS VPCs, AWS Transit Gateways, SD-WAN solutions, and/or other vendor multi-tenant solutions.
  + Migrated WebLogic Server applications from existing version **WebLogic Server 12cR2 (12.2.1.4) to 14.1. 1**
  + Configured site to site vpn connection and Direct connect for higher rate data tranfer.
  + Involved in performance **tuning of JVM** and used Garbage collection Algorithms for better performance.
  + Involved in trouble shooting and fixing day-to-day problems of the applications in production, production-Fix and testing environments.
  + Have replaced the Java Messaging Service (JMS) calls with **AWS SQS**and used **AWS** **SDK**to connect with **Amazon SQS** for bulk email processing.
  + Setup the CloudWatch monitoring dashboards with **SNS** notification configurations on various performance metrics retrieved from various **AWS** Resources.

**Environment:** AWS (EC2, S3, VPC, IAM, EBS, RDS, Cloud Formation, Cloud Watch, ELB, SNS, SQS), GIT, LDAP, AD, Ansible, YAML, Jenkins, AppDynamics PagerDuty.

**Juniper Networks, Sunnyvale, CA (January 2018 to December 2018)**

**Sr. AWS Cloud Infrastructure Platform & DevOps Engineer:**

**Responsibilities:**

* **Responsible for multiple projects which are running of Cloud Platform.**
* Providing complete **Infrastructure support** for all the teams currently working on different Time zones. Providing long term **Cloud native based solutions** for the Development teams.
* Implementing best **AWS Cloud security Network practices** for all the applications which are cloud based. Provided configuration management expertise to all software development projects.
* Providing IaaS managing Amazon Web Services as infrastructure with **automation and configuration** management i.e. **Ansible.**
* Configured **Ansible** to manage **AWS** environments and automate the build process for core **AMIs** used by all application deployments including **Auto Scaling and Cloud Formation** Scripts.
* Completely involved in **Cost Optimization project to control over the AWS** resources and handle the applications cost according to the requirements. Creation of **Cost optimization metrics to Monitor, Optimize the total spend on cloud resources and Support the Cost-Effective resources**.
* Involved in the production release cycle, which includes phases like **Development, Quality Assurance, User Acceptance Testing and Production Environments**.
* Monitoring, collecting and tracking metrics and setting up to react automatically to change in **AWS** resources.
* Troubleshooted Production issues pertaining to **AWS Cloud Resources** and Application Infrastructure point of view.
* Worked closely with QA and testing teams for automation, testing and build and in error fixing while deployment and release phases.
* Implemented Best **AWS** solutions practice for resource control management for **EC2, S3, RDS, EBS, Elastic Load Balancer, Auto scaling groups, Optimized volumes and EC2 instances.**
* **Plan, build and configure Network Infrastructure** within the **VPC** with public and private subnets and configure routing tables and internet gateway.
* Responsible for launching **EC2 instances** Windows/ Linux AMI and bootstrapping with Apache using Bash scripting, auto-scaling and Load balancers (**ELB**).
* Defined Security Groups depending on access parameters provided. Create **IAM** user accounts and role-based policies for access to **AWS** services.
* Perform automated snapshots using CloudWatch rules and create **EBS** volumes from snapshots.
* Implement and maintain monitors, alarms, and notifications for **EC2 instances** using **CloudWatch and SNS**.
* Automated the cloud deployments using **Ansible, Python and AWS Cloud Formation Templates**.
* Monitoring the **AWS Infrastructure Response Time, Application/Service availability, Backend Transaction time, Throughput using CloudWatch and Site24x7**.
* Configured Federation services for the Applications **Single-SignO**n in AWS Cloud using AWS IAM service
* Developed and implemented Software Configuration Management strategies for various applications according to the agile process using **Git/GitHub**.
* Complete admiration work of all the **Linux and windows** servers where different applications are running in the infrastructure

**Environment:** AWS (EC2, S3, VPC, IAM, EBS, RDS, Cloud Formation, Cloud Watch, ELB, SNS, SQS), GIT, LDAP, AD, Ansible, YAML, PagerDuty.

**Providence Health & IT services, Seattle, WA (February 2016 to December 2017)**

**Sr. AWS Cloud Infrastructure DevOps SRE:(Site Reliability Engineer)**

**Responsibilities:**

* Providing complete **Infrastructure support** for all the teams currently working on all the **Providence Health Applications**.
* Involved in designing and deploying multitude applications utilizing almost all the **AWS stack (Including EC2, Route53, S3, RDS, EBS, ELB, DynamoDB, SNS, SQS, IAM) focusing on high-availability, fault tolerance, and Auto Scaling in AWS CloudFormation**
* Developed strategy to migrate Dev/Test/Production from an enterprise VMware infrastructure to the **IaaS Amazon Web Services** Cloud environment including run book processes and procedures.
* Implemented and maintained the monitoring and alerting of corporate servers/storage using AWS Cloud Watch and developed and deployed stacks using **AWS Cloud Formation templates (CFT).**
* Worked on **AWS Elastic load balancing** for deploying applications in high availability and AWS Auto Scaling for providing high availability of applications and **EC2** instances based on the load of applications.
* Implemented best **AWS security policies** for all the teams. Which will safeguard complete infrastructure from hacking and other sort of out damages.
* Implemented **jump-box model with AD configured** which will help all the developers to login into their instances safely and protect their AWS keys and sensitive data.
* Installed, configured, Maintained **DNS system using Route 53**. Worked on network side to decrease the **DNS and VPN** issues.
* Created **AWS S3 buckets**, performed folder management in each bucket, managed cloud trail logs and objects within each bucket. Maintained a **S3 security policy** to only have access to limited users to all the **AWS S3** bucket permissions.
* Boarded and migrated test and staging use cases for applications to **AWS cloud with public and private IP ranges** to increase development productivity by reducing test-run times.
* Responsible for managing build farm environment and workflow management and administration using **TeamCity** and **AWS cloud**.
* Involved in design and implementation on **SSO(Single Sign ON)** project
* Designing and implementing Continuous Integration system configuring **TeamCity servers**, **TeamCity agents** and creating required scripts and creating/configuring **VM’s Windows/Linux.** Automated deployment of builds to different environments using TeamCity.
* Created and customized **Splunk applications**, searches and dashboards as desired by IT teams and business.
* Installation of **Splunk Enterprise, Splunk forwarder, Splunk Indexer, Apps** in multiple servers (Windows and Linux) with automation.
* Completely maintained **Splunk** Cloud and installed various **Virtualization, DevOps and Security related apps** which will be a boon to the developers to work on.
* Designed **Architecture for Splunk cloud which is LDAP** connected and able to implement the security policy for the current users.
* Created, maintained Branches, labels, work spaces on **GIT**, Participated in merging of source code.
* Designed and maintained **GIT** Repositories, views, and the access and implemented **2FA for GitHub**.
* Configured **Ansible** to manage **AWS** environments and automate the build process for core **AMIs** used by all application deployments including **Auto Scaling and Cloud Formation Scripts.**
* Used **Ansible towers** to manage Web Applications, Configuration Files, Database, Commands, Users Mount Points, and Packages.
* Created **Ansible playbooks to provision EC2 instances on AWS**, copy **Nexus artifacts from Nexus repository manager to Docker containers.**
* Developed **Networking policies** for **Docker Containers**. Worked on Open source development tools like **Docker Containers and Kubernetes**. Deployed **Kubernetes cluster** in production using **Terraform** scripts and Troubleshooted networking related issue.
* Implemented **Kubernetes** to deploy scale, load balance, scale and manage **docker** containers with multiple name spaced versions.
* Executed **Kubernetes** locally with **MiniKube**, Created **local clusters** and deployable application.
* Worked on **Kubernetes** to manage containerized applications using its **nodes, Configuring Maps, selector services** and deployed application containers as **Pods**.
* Used **Helm charts** in **Kubernetes**and updated **Grafana version 4.1.0 to 5.0.1** for the latest plugins.
* Installed **AppDynamics** Application agent for monitoring **java application** running on **Docker Container** and deployed Machine Agents for monitoring **Docker containers** and its services.
* Worked on **Monitoring 24/7** production environment including actively monitoring **DataDog** metrics
* Completely involved in migration all the data and infrastructure from **AppDynamics** to **DataDog**. Closely working with all the software teams and backing them in this process.
* Designed and implemented **VictorOps** migration to **PagerDuty**. Where all the alerting systems changes and solved many of the issues that being faced in **PagerDuty.**
* Has been actively worked on On-Call and provided **24/7** service if any issues or outages are happening through all the software engineering teams.

**Environment:** AWS (EC2, S3, VPC, IAM, EBS, RDS, Cloud Formation, Cloud Watch, ELB, SNS, SQS), GIT, LDAP, AD, Ansible, YAML, TeamCity, VictorOps, Nexus, Kubernetes, Docker, Terraform, AppDynamics PagerDuty.

**LOGISTICARE SOLUTIONS, ATLANTA, GA (March 2014 to January 2016)**

**Sr. AWS Cloud Infrastructure, Build/Release and DevOps Engineer:**

**Responsibilities:**

* Build the entire company’s **Infrastructure** and played a vital role in building the **Architecture** of the project.
* Worked extensively on **AWS** resources like **EC2 Instances, AMI’s, Load Balancers, target groups, Auto Scaling Groups, Volumes, Snapshot, Key pairs, Security groups, Elastic IP’s Elastic Container Service, Elastic Bean stack, S3 repositories, elastic Cache, RDS, Dynamo DB, VPC, Cloud Front, Route 53, X-Ray, cloud watch, Cloud Trail, cloud formation, IAM, Certificate manager, Artifact, cloud search, elastic search service, SQS, SNS, SES.**
* With all my extensive experience on **AWS** had a good practical implementation on control over **AWS Billing**.
* Launched Amazon **EC2** Cloud Instances using **Amazon Web services (Red Hat)** and configured the launched instances with respect to specific applications.
* Launched, Configured and automated **Elastic Load Balancers** for **Frontend** and **Backend** Servers.
* Created **S3** buckets and managed policies using **IAM** roles for **S3 buckets** and used S3 bucket for storing data.
* Developed and maintained **Cloud Formation Template scripts(CFT’s)**, automated the provisioning of **AWS**resources (**IAM, EC2, S3, SNS, RDS, ELB and Auto Scaling**) and installed workstations.
* Managing **IAM** accounts (with MFA) and IAM policies to meet security audit & compliance requirements.
* Provisioning the **AWS EC2 servers** by assigning the **EBS volumes, auto scaling groups, load balancers, security groups in the defined VPC**.
* Developed and maintained Cloud Formation scripts automated the provisioning of **AWS** resources (**IAM, EC2, S3, SNS, RDS, ELB and Auto Scaling**) and installed workstations.
* Created and managed multiple Instances of **Apache Tomcat** and deployed several test applications in EC2 instances in **AWS** environment.
* Managing the configuration of the existing **AWS** servers by using the **Ansible**.
* Imported and managed multiple corporate applications into **GitHub**code management repo.
* Implementing Continuous Delivery pipeline by creating build jobs to provide continuous automated builds polling the **GitHub** source control system.
* Built end to end **CI/CD Pipelines** in **Jenkins** to retrieve code, compile applications, perform tests and push build **artifacts**.
* Leveraged several **Jenkins plugins** to automate tasks like code coverage, metrics, AWS EC2 plugin, and job creation. Automated web application testing with **Jenkins**.
* Installed configured, administered, troubleshooted and tuned **JBOSS Application server** on **Red Hat Enterprise Linux** machines on all the environments
* Experience in configuring session affinity, session persistence and monitoring in **JBOSS EAP 6.x/5.x and Apache Tomcat 7.x/ 6.x**.
* Configured all the required configuration variables in **Front End** and **Back End Tomcat servers**.
* Installed, configured and administered troubleshooted **Active MQ** on **REDHAT Linux servers**.
* Setting up **databases** in **AWS** using **RDS, storage** using **S3 bucket** and configuring backups to **S3 bucket**.
* Created **Ansible** roles and playbooks to configure, deploy and maintain software components for our company infrastructure.
* Created Our Line of Business which consists of 4 **Ansible** towers. We have main playbook. YAML for maintaining roles, inventory files and groups variables.
* Wrote **Ansible** playbooks to launch **AWS instances** and used **Ansible** to manage web applications, configuration files, used mount points and packages and Worked on playbooks for **Ansible** in **YAML** scripting.
* Installed, Configured and Automated **Dynatrace** as Application Performance Manager and created different dashboards to monitor all the tools which are used in the application.

**Environment:** AWS (EC2, S3, VPC, IAM, EBS, RDS, Cloud Formation, Cloud Watch, ELB, SNS, SQS), GIT, Ansible, YAML, Apache Tomcat, JBOSS, Jenkins, Dynatrace, PagerDuty.