**Thirupathi **

**Cloud/ Devops Engineer/ SRE**

**PROFESSIONAL SUMMARY**

Overall, 10 years of experience in Automating, configuring, and deploying instances on cloud environments like **AWS, Azure.** Experience in popular DevOps tools such as **Jenkins, CI/CD Pipeline**, **Maven, Ant, Git, GitHub, Ansible, Docker, Kubernetes and Terraform**.

* Experience on AWS platform and its dimensions of scalability including **EC2, S3, Route53, ELB, EBS, ECS, ECR, VPC, AMI, SNS, RDS, IAM**, **Auto Scaling, CloudFront**, **CloudWatch, CloudTrail, CloudFormation, OPSWork, Security Groups.**
* Experienced in designing **roles** and **groups** for users and resources using **AWS** **Identity Access Management** (IAM). Managed multiple **AWS** accounts with multiple VPC's for both production and nonproduction where primary objectives included **automation, build out, integration** and **cost control**.
* 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.
* Designed and deployed a highly available and fault tolerant infrastructure on **AWS** using **terraform** modules, these module's install a web application in the public subnet and database in the private subnet which can communicate using the local route table in the **VPC**.
* Experience in Implementing a 'server less' architecture using **API Gateway, Lambda, and DynamoDB** and deployed AWS Lambda code from Amazon **S3 buckets**. Created a Lambda Deployment function, and configured it to receive events from your S3 bucket
* Designed the data models to be used in data intensive **AWS Lambda** applications which are aimed to do complex analysis creating analytical reports for end-to-end traceability, lineage, definition of Key Business elements from **Aurora**.
* Experience in writing **terraform modules** for automation the Creation of **VPC-VPN** from data center to Prod environment and Cross account VPC Peering
* Utilized **AWS Cloud watch** to monitor environment for operational & performance metrics during load testing.
* Experience in **migrating** infrastructure and application from **on** **premise** to **Azure** and from Cloud to Cloud such as AWS to Microsoft Azure.
* Extensive experience in **Windows** **Azure** (IaaS) migrating like creating Azure **VMs**, **storage accounts, CosmosDB, VHDs, storage pools**, migrating on premise servers to Azure and creating availability sets in Azure.
* Experience in dealing with **Windows Azure IaaS** - Virtual Networks, Subnets, Load balancers, Virtual Machines, Cloud Services, Resource Groups, Express Route, VPN, Load Balancing, Application Gateways, Auto-Scaling, and Traffic Manager.
* Serve as the primary SME on Azure services including **SaaS, PaaS** and **IaaS** while contributing to architecture decisions for our ongoing migration efforts. and providing Support, Guidance, and Implementation in respect to Azure Provisioning and Application Deployment Automation for **IAAS** and **PAAS**.
* Experience in different migration services likeAWSServer Migration Service (SMS) to migrate on premises workloads to AWS in easier and faster way using Rehost“lift and shift” methodology and AWSDatabase Migration Service (DMS), AWSSnowball to transfer large amounts of data and Amazon S3 Transfer Acceleration.
* Built and maintained Infra DevOps team's **CICD pipeline** using technologies such as **Git, Maven, Jenkins, Nexus, SonarQube, PostgreSQL, Ansible, Docker, Kubernetes**.
* Wrote **Ansible** Playbooks with **Python SSH** as the Wrapper to Manage Configurations of **AWS nodes** and Tested Playbooks on **AWS instances** using Python. Run Ansible Scripts to Provide Dev Servers.
* Experienced in Setting up Auto Scaling of the instance group using **GCP CLI** and GCP cloud environments for **DEV/QA** environments and Provided proof of concept (POC) on designing server less architecture using **Cloud Dataflow**, **Cloud Data prep** and **Google Cloud Functions**.
* Setup Alerting and monitoring using stack driver in **GCP**, evaluating performance of **GCP instances**, CPU, Memory Usage and setting up health checks, **GCS** and **VPC**.
* Expertise in Branching, Merging, Tagging and maintaining the version across the environments using SCM tools like (**GIT)** and Subversion (**SVN**) on Linux platforms.
* Extensive experience using **Maven**, **ANT** and **Gradle** as a build tool for the building of deployable artifacts (**war**&**ear**) from source code.
* Good experience in configuring **Jenkins** to build **CI/CD pipeline** which includes to trigger auto builds, auto promote builds from one environment to another, code analysis, auto version etc. for various projects.
* Hands-on experience in Configuration management with **Ansible**, writing cookbooks and playbooks to install **Apache** server, **JBoss, WordPress** for the same.
* Experience in writing **Ansible** playbooks, password-less SSH connection to nodes, running a shorter task in asynchronous mode, polling the tasks, add/remove cron jobs, running playbooks with ansible-playbook.
* Handled several **Docker** components like Docker Engine, Hub, Machine, Compose and Docker Registry and experience with **Docker** container service and Dockerized applications by creating Docker images from **Docker** file and running them to create the Docker containers and Docker consoles for managing the application life cycle.
* Basic knowledge in installing **Kubernetes,** initiating the **Kubernetes** cluster, installing pod network, setting up the dashboard, exploring the dashboard and joining the node to the cluster.
* Sound knowledge with cloud (AWS and Azure) native caching technologies in comparison with **Redis**.
* Experience in **Redis** end-to -end Administration and development including infrastructure.
* Skilled in monitoring servers using Nagios, Splunk, Sumo Logic for Network **Monitoring**, Resource **Monitoring** and Log Trace **Monitoring**.
* Integrated **Jenkins** shows traces of **SonarQube** runner execution and displayed results in the sonar dashboard.
* Extensive involvement in **LINUX/Unix system Administration, System Builds, Server Builds, Installations, Upgrades, Patches, Migration, Troubleshooting on RHEL.**
* Good understanding of the principles and best practices of **Software Configuration Management (SCM) in Agile, scrum, and Waterfall methodologies.**

## **TECHNICAL SKILLS:**

* Operating Systems : Ubuntu, Unix, RedHat Linux 5/6/7, CentOS 5/6/7, Windows.
* Programming & Scripting Languages : JSON, SQL, Shell Scripting, Python, YAML, HTML
* Cloud Services : Amazon Web Services (AWS), Azure.
* Version & Build Tools : Github, Bitbucket, Maven, Ant.
* CICD Tool : Jenkins, Ansible.
* Artifact Repository & Code Quality : Nexus, SonarQube.
* Configuration Management Tools : Ansible.
* Deployment/ Orchestration Tools : Docker, Kubernetes.
* Ticketing Tool : ServiceNow, Jira
* Production Support : Apache, Nginx, Tomcat.
* Programming Languages : Python, Java
* General Skills : Good Communication and presentation skills, team player.

## **WORK EXPERIENCE:**

**Lead Devops Engineer / Site Reliability Engineer**

**Credit Suisse, Raleigh, NC June 2021 – Present**

**Responsibilities:**

* Working as a **DevOps Engineer** for a team that involves three different development teams and multiple simultaneous software releases.
* Migrating and maintaining build and test environments into the **Cloud Infrastructure**.
* Configure, monitor, and automate **Amazon Web Services** as well as involved in deploying the content cloud platform on **Amazon Web Services** using **EC2, S3** and **EBS**.
* Configured an **AWS Virtual Private Cloud (VPC)** and **Database Subnet Group** for isolation of resources within the **Amazon RDS Aurora DB** **cluster** and created notifications and alarms for **EC2** instances using **Cloud Watch.**
* Written **Templates** for **AWS infrastructure** as a code using **Terraform** to build staging and production environments.
* Configured **Identity Access Management (IAM)** Group and users for improved login authentication.
* Worked on creating server-less Micro services by integrating **AWS Lambda, S3/Cloud watch/API Gateway**.
* Used **AWS lambda** to run servers without managing them and to trigger to run code by **S3 and SNS.**
* Configured and created **Elastic Beanstalk (EB**) to deploy and manage various applications.
* Implemented **Terraform** modules for deployment of applications across multiple cloud providers.
* Automated **Redis** platform maintenance activities using Ansible**.**
* **E**xperience with non-relational or relational databases such as **MongoDB, Postgres, Redis, Cassandra and time series database**
* Had an extensive role in On-Prem Mid-tier application migrations to the **cloud-lift and shift** to AWS infrastructure
* Responsible for Continuous Integration (CI) and Continuous Delivery (CD) process implementation-using Jenkins along with Python and **Shell scripts** to automate routine jobs.
* Connected **continuous integration** systems with the **GIT** version control repository and continually built as the **check-ins** came from the developer and Managed **Maven** project dependencies by creating parent-child relationships between projects.
* Collaborated with development & support teams to service a continuous delivery environment with the use of build platform tool **DOCKER**
* Proven track record of conducting thorough root cause analyses using tools like post-mortems and blameless retrospectives, resulting in actionable recommendations to enhance system reliability and prevent future incidents.
* Evaluated **Kubernetes** for **Docker** container orchestration and worked in using **Dockers** Swarm and deployed **spring boot** applications.
* In a microservices-based architecture, you may have experienced an incident where one service's performance degradation caused a cascading effect on the entire application. Your role might have involved identifying the root cause, implementing circuit breakers, and improving service resilience to prevent similar incidents.
* Working in a serverless environment, you could have encountered an incident related to function timeouts or cold starts impacting critical functions. Your response might include optimizing function configurations, implementing retries, and adjusting resource allocation to enhance application reliability.
* Involved with **Docker and Kubernetes** on multiple cloud providers, from helping developers build and containerize their application (CI/CD) to deploying either on public or private cloud.
* Development of automation of **Kubernetes clusters with Ansible, writing playbooks.**
* Kubernetes architecture: node, **kubelet manages pods**, their containers, images, volumes, network etc. kube-proxy is a simple network proxy and load balancer responsible for reflecting services on the nodes.
* Created, managed, and performed container-based deployments using **Docker images** containing middleware **(Apache Tomcat)** and Applications together and evaluated **Kubernetes** for **Docker container orchestration**.
* Managed **Docker orchestration** and **Docker containerization** using **Kubernetes** to orchestrate the deployment, scaling, and management of **Docker Containers**.
* Implemented incident mitigation strategies, such as automated monitoring and alerting, chaos engineering, and disaster recovery planning, to proactively reduce the likelihood and impact of incidents.
* Linux container orchestration with **Docker, Kubernetes, CoreOS, etcd**, and more

**Cloud / Devops Engineer**

**Hollister Co, Chicago, IL June 2019 – June 2021**

**Responsibilities:**

* Worked on **Azure PaaS** Solutions like **Azure Web Apps, Web Roles, Worker Roles, SQLAzure** and Azure Storage. And managing Azure Storage Accounts and Creating **ARM templates** for Azure Platform.
* Worked on Migrating servers, databases, Docker, and applications from on premise to Azure.
* Working on **Microsoft Azure** in creating cloud environment and managing the application servers across Microsoft managed global data cent.
* Designed and configured **AZURE Virtual Networks, subnets, network settings, DHCP address blocks, DNS settings,** and **Security policies and routing.**
* Configured storage account, a vault, and a virtual network in **Azure**, enabled replication for individual VM, and monitored automated mechanisms within **Azure site recovery** (ASR) during the migration of AWS based services on Azure.
* Setup **Azure Devops** for VMs applications migrating from on-prem. **Azure** Boards and Enterprise Git integration. YAML files for automation and CI/CD.**ARM templates** for managing the VMs, Key Vaults, Storage accounts.
* Configured DSC configurations to deploy Web Servers to Azure VMs. Configured **Azure Automation DSC** configuration management to assign permissions through **RBAC**, assign nodes to proper automation accounts and DSC configurations, to get alerted on any changes made to nodes and their configuration.
* Built an on demand dedicated server hosting platform using **Docker, Golang** and **Redis**.
* Developed Terraform plugins using **Golang** to manage infrastructure which improved the usability of our storefront service.
* Worked on Configuration management using **git, ansible playbooks, shell, and python scripts.**
* Installed and configured Jenkins tools on Linux and windows platforms, manage slaves and installing Jenkins plug-ins.
* Management and design of integrated build pipelines using continuous integration and continuous development workflows such as **Jira, Git, Jenkins, and Maven**.
* Integration of Automated Build with Deployment **Pipeline.**
* Build, manage, and continuously improve the build infrastructure for global software development engineering teams including implementation of build scripts, CI infrastructure and deployment tools.
* Expertise in automation using **Ansible and Terraform**, build management using Jenkins, deploying the applications on various environments.
* Have written **Terraform** templates that can spin up infrastructure for multi-tier application and provisioned boot strapped software on Cloud with terraform
* Worked on **Docker** container snapshots, attaching to a running container, removing images, managing volumes, linking containers, and managing containers.
* Implemented Configuration Management, Change Management policies and procedures.

**AWS / DevOps Engineer**

**Starbucks – Seattle, WA Jan 2018 – May 2019**

**Responsibilities**:

* Responsible for implementing **AWS** solutions and setting up the cloud infrastructure with different services, like **EC2, S3, VPC, ELB, AMI, EBS, RDS, Auto Scaling, Route53, Subnets, NACL's, CloudFront, Cloud Formation, Cloud Watch Cloud Trail, SQS** and **SNS**.
* Implemented Cloud **Infrastructure as a Service (IaaS)** Automation across **AWS** Public Cloud using **Terraform** to Provision Infrastructure across **AWS Workloads.**
* Worked at optimizing volumes and **EC2** instances and created multiple **VPC** instances and experience in creating alarms and notifications for **EC2** instances using **Cloud Watch.**
* Implementing **Cloud Automation** Solutions using AWS: Experience with Automation/Orchestration (**Terraform, Cloud Formation**, etc) would be helpful.
* Designed **AWS CloudFormation** templates using JSON to create customized VPC Subnets, NAT to ensure successful deployment of Web applications and databases and created cross-account **IAM roles** to give access to users.
* Monitor **CloudTrail** logs to Audit EC2, EMR, S3 and other AWS resources.
* Used **Google stack driver** for monitoring the logs of both **Google Kubernetes** **Engine** (**GKE)** and **GCP** instances and configured alerts from Stack driver.
* Used **GCP** cloud content delivery network (CDN) to deliver the content from **GCP** cache locations to improve the user experience and latency. Migrating the Legacy application into GCP platform and managing the GCP services
* Written templates for **GCP** infrastructure as a code using **Terraform** to build staging and production environments and automated infrastructure provisioning with **Terraform** and **Packer** by automating the image build process.
* Set up auto scaling of the instance group for DEV/QA environments using **GCP CLI** (Command line tools) and **GCP** cloud environments and provided proof of concept (POC) on creating serverless architecture with **GCP**.
* Experience in writing server-side code for **Google Cloud Platform** (GCP) based applications, creating robust high-volume production applications and developing prototypes quickly.
* Configured **GCP** Firewall rules to allow or deny traffic to and from the **VM's** instances based on specified configuration and used **GCP** content delivery network to deliver content from **GCP** cache locations.
* Implemented **Kubernetes (k8s)**clusters for running **microservices** and pushedmicroservices into **GCP** **Cloud** with **Kubernetes** backedInfrastructure and automation of **Kubernetes**clusters via playbooks in **Ansible**.
* Added Nodes to the existing OpenShift Cluster either **Master** or **Infra** or **Worker** node by using the **Scaleup Manifest** file.
* Maintaining a Risk Management program to mitigate and manage risk.
* Experience in administration and maintenance of Source Code Management (**SCM)** systems such as **GIT** created tags and branches fixed merge issues and administration software repositories.
* Maintained build related scripts developed in the **shell** for **Maven** builds. Created and modified build configuration files including **POM.xml** and Responsible for Debugging and Placing Builds into **Maven Repository**.
* Strong Knowledge/experience in creating **JenkinsCI** pipelines. Experience in **Jenkins** to automate most of the build related tasks. Expertise in staging and creating **CI/CD** pipelines and Merge changes through **SDLC** pipeline **Jenkins** and GO for Continuous Integration.
* Automated the tasks with **Ansible Playbooks** by using **YAML** functions and migrating the servers with the required configuration changes and testing and deploying the machines using **Ansible Commands.**
* Created **Kubernetes cluster** with objects like **Pods, Deployments, Services** and **Config-Maps**

**DevOps Engineer Mar 2017 – Dec 2017**

**Mi9 Retail – Miami, FL**

**Responsibilities:**

* Implemented AWS solutions using EC2, S3, RDS, EBS, and **Elastic Load Balancer**, Auto scaling groups and optimized volumes, EC2 instances.
* Monitoring and alerting of production and corporate servers such as EC2 and storage such as S3 buckets using AWS **Cloud Watch.**
* Setting up scalability for application servers using command line interface for Setting up and administering DNS system in AWS using **Route53.**
* Installed and configured **Jenkins** master and slave nodes, installed plug-in, configured security, created a master and slaves for implementation of multiple parallel builds. Used Jenkins, Build forge for Continuous Integration and deployment into Tomcat Application Server.
* Administered and Engineered Jenkins for managing weekly Build, Test and Deploy chain as a **CI/CD process,** SVN/GIT with Dev/Test/Prod Branching Model for weekly releases.
* Expertise in using builds tools like MAVEN and ANT for the building of deployable artifacts such as war & ear from source code.
* Installed, configured and maintained web servers like **HTTP Web Server**, Apache Web Server and WebSphere Application Server on RedHat Linux.
* **Integrated Splunk** with Active directory and LDAP authentication.
* Maintain and troubleshooting of High available critical applications running on Apache and MySQL/PostgreSQL database.
* Highly skilled at supporting web and application servers (**Apache, Nginx, NodeJS, JBoss, Tomcat**) and Hands-on experience with installing and managing MySQL and Amazon web servers (AWS).
* **Wrote shell scripts** using languages like Bash, Python, and Perl to automate day to day admin jobs. Wrote UNIX shell scripts for automated installations, to extract logs using Bash, and Python.
* Schedule **CronTab jobs** and use bash shell scripts to assist in automating various system administrators’ tasks.
* Writing **Bash scripts** for at, anacron and cron job entries, this included in maintaining various **log files.**
* Followed agile principles and used **JIRA and Remedy** for maintenance and Bug development tasks.
* Good experience in working with a team together to deliver best outputs in given time frames.

**Site & Reliability Engineer May 2014 – July 2015**

**BroadRidge Financial Solutions, Hyderabad**

**Responsibilities:**

* Setup CI/CD environment with **Puppet, Jenkins, Maven, Nexus** for different properties to automate application deployments for Linux platforms.
* Created and updated Puppet manifests and modules, files, and packages stored in the GIT. Used M-collective for Parallel jobs execution & monitored Puppet Dashboard.
* Created **Jenkins** workflows using Groovy script to automate the entire **build and deployment** process. And Build Jenkins jobs and stores the build artifacts in Nexus and **Udeploy** by using pre configured scripts.
* Performed **SVN** to **GIT/Bitbucket** migration and managed branching strategies using **GIT workflow**. Managed **User access control, Triggers, workflows, hooks, security,** and **repository control** in **Bitbucket.**
* Created the **ANT** scripts and extension of existing ANT scripts for deployment of applications to **Jenkins**.
* Used **Maven** and streamlined entire build system, optimized builds scripts, managed **build,** and **release infrastructure.**
* Developed Python scripts to automate applications migration and monitor application health during migration.
* Created and wrote **shell scripts (Bash), Ruby, Python** and **PowerShell** for setting up baselines, branching, merging, and automation processes across the environments using **SCM** tools like **GIT, Subversion (SVN), Stash** and **TFS on Linux** and **Windows platforms.**
* Automated Deployment of Java based applications into **Tomcat, WebLogic servers using Puppet** and **Jenkins**.
* Worked on project to migrate Supply chain dataset from **MS SQL/Oracle to PostgreSQL** on AWS using Data Migration Service.
* Responsible for the administration, installation, configuration, troubleshooting and support of **MySQL** in **Linux/AIX** and **Windows platforms**. Provided technical support and training for more than 300 users in the organization.

**Linux Administer March 2012 - April 2014**

**Spark Software Solutions, Hyderabad, India**

**Responsibilities:**

* Installing, configuring, upgrading and supporting Red Hat Enterprise Linux servers in an enterprise Data Center environment.
* Responsible for creating and managing user accounts, security, rights, disk space and process monitoring in Solaris, CentOS, Redhat, Ubuntu Linux.
* Worked as an administrator in various aspects of Linux (Red Hat) server administration including installing and maintaining the operating system software, performance monitoring, problem analysis and resolution and production support.
* Monitored server and application performance and tuned I/O, memory and Installation of SSH and configuring of keys based authentication.
* Created users, manage user Administered, maintained RedHat 3.0, 4.0, 5.0, 6.0 AS, ES, Troubleshooting Hardware, Operating System Application & Network problems and performance issues; Deployed latest patches for, Linux and Application servers, Performed Red Hat Linux Kernel Tuning.
* Worked in implementing and configuring network services such as HTTP, DHCP, and TFTP.
* Install and configure DHCP, DNS (BIND, MS), web (Apache, IIS), mail (SMTP, IMAP, POP3), and file servers on Linux servers.
* Strong understanding in writing the automation of processes using the shell script with bash
* Production support of Apache, Apache HTTPD, JBoss, Tomcat and Oracle Web logic 10.3 application servers including installation, configuration, and management and troubleshooting. Strong experience in VM environments like XEN, KVM, Oracle Virtual Box and VMWare 5.0.
* Updated data in inventory management package for Software and Hardware products.

**EDUCATION:**

**Master of science (M.S) in Information Systems from New England College, NH USA.**