**HARSHITH. T**

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**PROFESSIONAL SUMMARY:**

7+ years of overall experience in IT industry having abilities working withCloud, DevOps and Build and Release Managementinvolving extensive work towards maintaining Cloud infrastructure in AWS and Azure and also expertise with Continuous Integration, Continuous Delivery, Continuous Deployment, Configuration Management, Automation, Containerization, Monitoring and Linux System Administration.

* Experienced in designing, configuring and managing cloud infrastructures utilizing **Amazon Web Services** **(AWS)** including **EC2, S3, RedShift, CloudFront, RDS, DynamoDB, VPC, Route53, CloudFormation, Elasticsearch, Elastic Container Service, Identity Access Management (IAM), Elastic Beanstalk**.
* Experience working on Multiple **AWS** instances, set the **Security Groups, Elastic Load Balancer, Auto Scaling** to design cost effective, fault tolerant and highly available systems and created alarms and trigger points in **CloudWatch** based on thresholds and monitored the server's performance.
* Experienced in using **AWS Lambda** for Serverless computing and also use in triggering changes in actions by users and invoking the Lambda functions linked to other AWS Services.
* Experience in deploying Cluster on **AWS** cloud developed **YAML scripts** to create many services **auto-scaling groups**, Elastic Load Balancers, Labels, **health checks**, Namespaces, Config Map, etc. Used triggers and configured **AWS** messaging services like **SNS,** **SQS, SES**, Pinpoint and acquainted with database services like **Amazon Aurora, RDS, DynamoDB** and **Redshift**.
* Extensively involved in Build Management, Version Control, Release Management and Deployments of the Solutions to the DEV, QA, Staging and Production Environment leveraging Azure DevOps principles/process **(CI/CD)** and toolsets of **VSTS, Visual Studio, AKS** (**Azure Kubernetes**), Application Insights, **Log Analytics.**
* Experience in designing, configuring and deploying with Microsoft **Azure** for a multitude of applications utilizing the **Azure** stackwhich includes **Compute, Web & Mobile, Blobs, Resource Groups**, **Azure SQL, Cloud Services, and ARM, Resource Manager, Azure VM, Azure Data Factory** focusing on high-availability, fault tolerance, and auto-scaling and Storage.
* Experienced working with **OpenStack** private cloud and its components like **nova, swift, cinder, glance, neutron, keystone, horizon** dashboard and **Ceilometer**.
* Experience on Infrastructure-as-a-code using **Terraform** by operating cloud infrastructure through Terraform scripts and **Terraform modules**. Experience in writing **Terraform scripts** that can spin up infrastructure for multi -tier application and provisioned **Boot-strapped** software on cloud with **terraform.**
* Proficient with **Vagrant**, **Docker**, **Kubernetes** based cluster container and virtualization deployments to create shelf environments for dev teams, containerization/Virtualization of environment delivery for releases using virtualization tools like **VMware**, **VirtualBox** and **OpenStack** cloud.
* Worked on installing of **Docker** using **Docker toolbox**, creation of custom Dockercontainer images, tagging and pushing the images, removing images, and managing Dockervolumes and setting up Docker Host in CentOS and Ubuntu.
* Well versed in container orchestration using **Kubernetes**. Experienced in **Kubernetes** deployment of microservices, replication controllers, Helm charts, Scheduler, clusters.
* Experience Installing and configuring **Kubernetes** UI for better visualization of the Cluster Managements, Nodes and Pods in the environments.
* Expertise on working with Ansible playbooks for virtual and physical instance provisioning, configuration management, patching and software deployment on cloud environments and managing **Ansible Playbooks** with modules, working with **Ansible Tower, Ansible Vault** and **Ansible Galaxy.** Experience in installing and configuring the **Ansible management node** to deploy the configuration to the end user nodes.
* Experienced in Writing **Chef Recipes** to automate the build/deployment process and do an overall process improvement to any manual processes.
* Experience in managing software artifacts required for development using repository managers like **Nexus and JFrog Artifactory** and writing Jenkins Pipeline **Groovy Scripts** for **Continuous Integration (CI)**and built workflows also used Jenkins for uploading Artifacts into Nexus Repository.
* Experience in **CI (Continuous Integration) and CD (Continuous Delivery)** methodologies using **Jenkins** for End-to-End automation for all build and deployments of Java or J2EE applications.
* Strong experience utilizing **Jenkins** for enterprise scale infrastructure configuration and application deployments & checking out the code from **GIT** and use **Ant/Maven** to build JAR, WAR, TAR and EAR artifacts.
* Skilled on **Python, Bash/Shell, PowerShell, Ruby, Perl, JSON, YAML, Groovy. Developed Shell and Python Scripts** used to automate day to day administrative tasks and automation of the build and release process.
* Experience in using **Splunk** for log analyzing and improving the performance of servers. Monitor performance of server as per daily activities using **Nagios** monitoring tools.
* Experience in setting up and managing **ELK** (**Elastic Search, Log Stash & Kibana**) Stack to collect, search and analyze logfiles across servers, log monitoring and created geo-mapping visualizations using **Kibana** in integration with **AWS CloudWatch** and **Lambda**.
* Worked with **JIRA**, **Confluence, Rally and ServiceNow** for defect management, team collaboration, source code management and continuous integration and deployment practices.
* Experience in working on version control systems like **Subversion** and **GIT** and used Source code management client tools like **Visual** **SVN**, **Tortoise** **SVN**, **GIT** **Bash**, **GitHub**, **GIT** **GUI** and other command line applications etc.
* Worked in various environments like **QA, DEV, TEST, PROD, UAT** for various releases with designed strategies.
* Worked on web servers such as **APACHE HTTP** server, **NGINX**, **Apache TOMCAT**. Worked on application servers such as **Oracle** **WebLogic 9.x/10.x**, **IBM WebSphere 6.x/7.x/8.x**, **JBOSS 4.1**.
* Proficient in tracing complex build problems, release issues and environment issues in a multi-component environment.

**TECHNICAL SKILLS:**

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| **CLOUD ENVIRONMENTS** | Amazon Web Services (AWS), Microsoft Azure, OpenStack |
| **CONFIGURATION MANAGEMENT TOOLS** | Ansible, Terraform, Chef, Puppet |
| **CONTAINERIZATION TOOLS** | Docker, Kubernetes, OpenShift |
| **OPERATING SYSTEMS** | Red Hat Linux 7/6/5/4, Ubuntu 16/14/13/12, Debian, Fedora, CentOS, Windows 10/8/7/Vista/XP, Solaris 11/10/9/8, Mac OS. |
| **CI AND BUILD TOOLS** | Jenkins, Bamboo, Maven, Ant, Gradle. |
| **WEB SERVERS** | Apache HTTP 2.x ,3.x, Nginx, IIS, Apache Tomcat |
| **DATABASE** | DynamoDB, MongoDB, MySQL, MS SQL SERVER 2008/12 |
| **SCRIPTING LANGUAGES** | Python, Ruby, Bash shell, Power shell |
| **NETWORKING/PROTOCOL** | DNS, DHCP, WAN, TCP/IP, NIS, NFS, SMTP, LAN, FTP |
| **VERSION CONTROL TOOLS** | GIT, Bitbucket, SVN |
| **MONITORING TOOLS** | Nagios, DynaTrace, Splunk, ELK, New Relic |
| **REPOSITORIES** | JFrog Artifactory, Nexus |
| **VIRTUALIZATION** | VMWare ESX/ESXi, Windows Hyper-V, Virtual box , Vagrant |

**CERTIFICATIONS:**

* Certified AWS Developer Associate

**PROFESSIONAL EXPERIENCE:**

**DXC Technology, Princeton, NJ October 2019 – Till Date**

**Sr. Cloud DevOps Engineer**

**Responsibilities:**

* Performedmigration of applicationsfrom a managed hosting environment to **AWS** including service design, network layout, data migration, automation, monitoring, deployments and cutover, documentation, overall plan, cost analysis, and timeline.
* Created **AWS** cloud formation templates to create custom-sized **VPC**, **subnets**, **EC2** instances, **ELB**, security groups. Worked on tagging standard for proper identification and ownership of **EC2** instances and other **AWS** Services like **Cloud** **Front**, **cloud** **watch**, **RDS**, **S3**, **Route53**, **SNS**, **SQS**, **Cloud** **Trail**.
* Worked on migration services like AWS **Server Migration Service (SMS)** to migrate on-premises workloads to AWS in easier and faster way using Rehost & lift and shift& methodology and AWS **Database Migration Service (DMS)**, AWS **Snowball** to transfer large amounts of data.
* Configured **AWS Data Migration service** to move **SQL Server** database to **Redshift cluster**. Used **HashiCorp Packer** to create and manage the **AWS AMI's** and Vault to manage **AWS secret keys**.
* 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**.
* Used **AWS Elastic Beanstalk** for deploying and scaling web applications and services developed with Java, Node.js, Python and Ruby on familiar servers like Apache, Nginx, Tomcat.
* Implemented Blue/Green Deployments with **AWS Code Deploy** where new version of application is tested in deployment other than in-place deployment and then traffic is diverted into the latest deployment.
* Automate **AWS infrastructure** through infrastructure as code by writing various **Terraform** modules, scripts by creating AWS **IAM** users, **groups**, **roles**, **policies**, custom policies, **AWS Glue**, **Crawlers**, **Redshift clusters**, **snapshots** of clusters, **EC2**, **S3** buckets.
* Written **python** scripts by using **boto3**, to create **S3** buckets in **AWS** and created **EC2** instances and wrote shell scripts to automate the process of adding **ssh-keys**, generating passwords in **python**.
* Wrote **PowerShell** scripts for the userdata to install the software in order to be run on the instances when launched.
* Worked on **Ansible** to configure the servers, deploy software, and orchestrate continuous deployments for zero downtime rolling updates.
* Created **Ansible Playbooks** to provision Apache Web servers, Tomcat servers, **Nginx** and other applications. Used file module in Ansible playbook to copy and remove files on remote systems.
* Initiated several Docker components like **Docker Engine, Hub, Machine, Compose and Docker Registry** and experience with Docker container service and Docker 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.
* Deployed **Kubernetes** clusters on top of Amazon EC2 instances using KOPS and managed local deployments in **Kubernetes** creating local clusters and deploying application containers and building/maintaining docker container clusters managed by **Kubernetes** and deployed Kubernetes using **helm charts**.
* Gained good hands on experience in using and **SVN** as a version control tool working on commit and checkout the code using **Tortoise SVN**.
* Implemented CI and CD for application using Jenkins as CI tool for integrating different tools like **Maven**, **Junit**, and **Nexus Artifactory** and used Ansible as configuration management tool for continuous deployment into testing, staging and Production Environment.
* 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.
* Worked on writing **Jenkins build pipeline** with **Maven**, **scripted Groovy** based **DSL (Domain Specific Language)** and integrated **MAVEN** build scripts for continuous build and Integration.
* Built Scripts using **ANT** and **MAVEN** build tools in Jenkins to move from one environment to another environment.

**Environment:**

* AWS (EC2, S3, AMI, Route53, RDS, SNS, SQS, IAM, Autoscaling, SNS, SQS, CloudWatch, Elastic Block Storage, CloudFormation), PowerShell, SVN, Jenkins, Groovy, Docker, Kubernetes, Jira.

**Fifth Third Bank, Cincinnati, OH June 2018 - September 2019**

**Sr. Cloud DevOps Engineer**

**Responsibilities:**

* Implemented Azure **IaaS** and **PaaS** and wrote **ARM templates** using **JSON** for Configuring **Virtual Networks, Gateway Subnets,** Setup **DNS** at the Virtual Network level, User Defined Routes (**UDRs**), altered the **security groups**, **NIC**’s and Azure VM's for internal applications.
* Configured and deployed Azure Automation Scripts for a multiple application utilizing the **Azure stack** (Including **Compute, Web & Mobile, Blobs, ADF, Resource Groups, Azure Data Lake, HDInsight Clusters, Azure Data Factory, Azure SQL, Cloud Services, and ARM**), Services and Utilities focusing on Automation.
* Created **Azure automated assets**, **Graphical runbooks**, **PowerShell run books** that will automate specific tasks. Expertise in deploying Azure **AD connect**, configuring **ADFS** installation using Azure AD connect.
* Configured and deployed **Azure Automation Scripts** for a multitude of applications utilizing the Azure stack for Compute, Web and Mobile, Blobs, Resource Groups, **Azure Data Lake**, HDInsight Clusters, **Azure Data Factory**, **Azure SQL**, Cloud Services, and **ARM** Services and utilities focusing on Automation.
* Developed **Terraform Templates** to automate **Azure IAAS** virtual machines using terraform modules and deployed virtual machine scale sets in production environment.
* Used **Terraform** to reliably version and create infrastructure on **Azure**. Created resources, using **Azure Terraform modules**, and automated infrastructure management.
* Handled migration of on-premises applications to the cloud and created resources inside cloud and expert in deploying of **OpenStack** hosted applications on Azure platform and issues related to **RDP** of **Azure Infrastructure**.
* Involved in **OpenStack** environments to create and manage users using **Keystone** and **VM management** using **OpenStack**, volume management using **Cinder**, network and port management using **Neutron**.
* Managed different infrastructure resources, like physical machines, VMs and even **Docker** containers using **Terraform**.
* Virtualized the servers using the **Docker** for the test environments and dev-environments needs. And also, configuration automation using **Docker** **containers.**
* Used **Kubernetes** to manage containerized applications using its nodes, helmcharts, ConfigMaps, selector, Services and deployed application containers as Pods.
* Deployed Application Containers into Pods in **Kubernetes** Node Clusters and also managed **Kubernetes** with KubeCtl and also Manage from **Kubernetes** UI.
* Installed **Ansible** Server and **Ansible** Clients to pick up the build from **Jenkins** repository and deploy in target environments.
* Used **Ansible** Configuration management to deploy packages with the required build artifacts from **Artifactory** and facilitate a stable and scalable build and deploy infrastructure.
* Automated infrastructure activities like Continuous Deployment, setting up and configuring Tomcat servers, managing the configuration changes and Stack monitoring using **Ansible playbooks** based on **YAML**.
* Experienced in writing **Bash** and **Python** scripts, included to supplement automation provided by **Ansible** and **terraform**.
* Used **Jenkins** for **CI/CD** pipelines to automate most of the build related tasks using Poll SCM. Set up **Jenkins** server and build jobs to provide continuous automated builds based on polling the **Git** source control system during the day and periodic scheduled builds overnight to support development needs using **Jenkins**, **Git** and **JUnit**.
* Worked on **GIT** version control systems, by setting up the repositories for **Jenkins** build jobs, polled Version Control Systems in a sequential manner using **Cron Jobs**.
* Used **Nagios** for application and hardware resource monitoring. Writing new plugins in **Nagios** to monitor resources.
* Written automation scripts in **Shell** for configuring logging, monitoring agents on system and application level.
* Worked on Managing/Tracking the defects status by using **JIRA** tool and Planning & resolving the issues as per **SLA**.

**Environment:**

* Azure (Azure VM, Blob Storage, Active Directory Federation Services, Azure AD, Azure SQL, ARM Templates, AD Connect), OpenStack, Docker, Kubernetes, Jenkins, Nagios, Junit, JFrog Artifactory, Terraform, Maven, Ansible, Agile, Bash, Shell, Python.

**Mokxa Technologies, Columbia, MD May 2017 - May 2018**

**Sr. Cloud DevOps Engineer**

**Responsibilities:**

* Involved in designing and deploying multitude applications utilizing **AWS** stack (Including **EC2, S3,** **AMI, Route53, RDS, SNS, SQS, IAM**) focusing on high-availability, fault tolerance, and **Auto-Scaling**.
* Configured **Virtual Private Cloud** (VPC) with both public and private **subnets**, **NAT** instances, and **Elastic Load Balancers**. Implemented **VPC** peering to ensure communication between instances in separate VPCs.
* Used **IAM** to create new accounts, roles and groups and engaged in enabling lambda functions for dynamic creation of Roles and also the policies.
* Created **AWS RDS** instances to serve data through servers for responding to requests. Created snapshots and images to store launch configurations of the **AWS EC2** instances.
* Utilized highly available **AWS** Environment to launch the applications in different regions and implemented CloudFront with **AWS Lambda** to reduce latency. Also developed micro service with **AWS Lambda** and **S3** using Java to improvise the performance of the application.
* Created **SNS for EC2 servers** to get notifications if it is shutdown, terminated or start. Also used **SQS queues** for getting messages from another team.
* Used **Terraform** and did **Infrastructure as a code** and modifying **terraform scripts** as and when configuration changes happens. Automated deployment of web app to AWS using **Terraform**.
* Worked on creating clusters using **Kubernetes** and worked on initializing pods, replication controllers, deployments, labels, health checks and ingress by writing **YAML** files & also wrote Helm Charts for deploying microservices into **Kubernetes** clusters.
* Created pods and services using Master and Minion architecture of **Kubernetes** and developed microservice on boarding tools, leveraging Python allowing for creation and maintenance build jobs and **Kubernetes** deploy services.
* Extensively used **Kubernetes** charts using Helm and created reproducible builds of the **Kubernetes** applications, managed **Kubernetes** manifest files and managed releases of Helm packages.
* Written **python scripts** to containerize using **Docker** and orchestrate it using **Kubernetes**. Configured the services using modern DevOps tools like **Ansible**.
* Automated application deployment in the cloud using **Docker** technology using **Elastic Container Service** scheduler. Created and managed a **Docker** deployment pipeline for custom application images in the cloud using **Jenkins**.
* Implemented **Ansible** to deploy the builds for Dev, QA and production. Automation of infrastructure by creating **Ansible Playbooks** in **YAML**.
* Extensively worked with **Jenkins** to know various things like build status, count of builds, GIT commit version used by **Jenkins** builds etc. using **Groovy Script**.
* Setup **Jenkins** tool to integrate the JAVA project and maintained **Jenkins** with continuous integration and deployment.
* Designed an **ELK** system to monitor and search enterprise alerts and Installed, configured and maintained the ELK Stack for Log management within VMs for Elastic Search. Monitored performance of the applications and analyzed log information.
* Configured Elasticsearch, Logstash and Kibana (**ELK**) for log analytics, full text search, application monitoring in integration with AWS Lambda and CloudWatch.
* Worked on **JIRA** to troubleshoot environment related issues, provide fixes and incident tickets and track them to closure.

**Environment:**

* AWS (EC2, S3, AMI, Route53, RDS, SNS, SQS, IAM, Autoscaling, Lambda, API Gateway, SNS, SQS, CloudWatch, Elastic Block Storage), Shell, Python, GIT, Jenkins, Groovy, ELK, Ansible, Chef, Docker, Kubernetes, OpenShift, Terraform, Jira.

**ARRIS, Horsham, PA September 2016 - April 2017**

**DevOps Engineer**

**Responsibilities:**

* Implement systems that are highly available, scalable, and self-healing on the **AWS** platform.
* Setup and build **AWS** infrastructure various resources, **VPC EC2, S3, IAM, EBS, Security Group, Auto Scaling, and RDS** in Cloud Formation JSON templates.
* Connected user requests to infrastructure running in **AWS** such as **Amazon EC2** instances, Elastic Load Balancing load balancers, or **Amazon S3** buckets and outside AWS using **Amazon Route 53**.
* Implemented **Chef** Recipes for Deployment on build on internal Data Center Servers. Also re-used and modified same **Chef** Recipes to create a Deployment directly into Amazon EC2 instances.  Also Installed Workstation, Bootstrapped Nodes, wrote Recipes, and Cookbooks and uploaded them to Chef-server and managed **AWS** for EC2, S3 & ELB with **Chef** Cookbooks.
* Written wrapper scripts to automate deployment of **Chef** cookbooks on nodes and running the **Chef** client on them in **Chef** environment.
* Worked with **Jenkins** under the CI/CD pipeline providing continuous improvement to Agile software development teams. Configured **Jenkins** and integrated it with **Chef** to schedule jobs on all the bootstrapped nodes and created pipelines to complete automation from commit to deployment.
* Used **Jenkins** to create various build and deployment scenario such as jobs to build from various branches, deploy tasks to development server or QA server or Staging/Production server.
* Created and maintained the **Shell and Python** deployment scripts for web application servers.
* Work with the tools such **Git, JIRA** to store and share the application code, issue tracking and code reviews respectively.
* Work with application development and operation teams using a variety of automated testing and build, and deploy tools (**MAVEN, Nexus)** to resolve issues with transition to new DevOps solution
* Experienced in authoring **Pom.xml files**, performing releases with the **Maven** release plugin, Maven for Java projects and managing **Maven** repositories and Analyzed the **Maven** build projects for conversion and converting to Maven build automation projects.
* Used **Maven** as build tools on Java projects for the development of build artifacts on the source code.
* Monitoring **Splunk** dashboards, Splunk Alerts and configure scheduled alerts based on the internal customer requirement. Prepared, arranged and tested Splunk search strings and operational strings.
* Used Hashicorp **Vault** and encrypted and decrypted data without storing it and Implemented Table Level Logical replication in PostgreSQL.

**Environment:**

* AWS (EC2, S3, IAM, EBS, Security Groups, Auto Scaling, RDS, Cloud Formation, Route 53, Elastic Load Balancer, VPC), OpenStack, Shell Scripting, Python, Chef, Jenkins, Splunk, JIRA, Maven, Chef, GIT, Vault.

**Semantic Space Technologies, Hyderabad, India April 2014 - July 2016**

**Build and Release Engineer**

**Responsibilities:**

* 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.
* Created, tested and deployed an end-to-end CI/CD pipeline for various applications using **Jenkins** as the main Integration server for Dev, QA, Staging and Prod environments.
* Managed Dependency Management within the teams by installing and configuring **Nexus Repository Manager.** Also managed artifacts in **Nexus** repository.
* Creating Local, Virtual Repositories in **Artifactory** for the project and release builds, repository management in **ANT** to share snapshots and releases of internal projects using **JFrog Artifactory**.
* Worked on leveraging digital CI/CD platform **Jenkins** incorporating automated build processes, unit testing framework, end-to-end mock testing, code quality checking, and artifact management using **Nexus**.
* Create configuration pipeline using **Jenkins**, **vault** to maintain application configuration independent of application releases.
* Setup **Jenkins** server and built jobs to provide continuous automated builds based on polling the **GIT** and integrated **GIT** with Jenkins to automate the code check out process with the help of Jenkins DSL Plugin.
* Created repositories, branches, tags in **GIT**, assisted the developers to fix merging issues.
* Responsible for developing and maintaining build, deployment scripts for test, Staging and Production environments using **ANT.**
* Developed build pipelines to produce **Linux** Server master images on a schedule as well as track configuration changes.
* Experience integrating **Junit**, **SonarQube** code analysis and testing during the build.
* Creating of Release Plan, collection, analysis and presentation of Release Project Metrics on weekly basis.

**Environment**:

* Jenkins, Nexus, JFrog Artifactory, ANT, Git, Jira, Linux, Junit, SonarQube, WebLogic, Apache, Shell Scripts.

**Global Logic, Hyderabad, India April 2013 - March 2014**

**Linux Systems Administrator**

**Responsibilities:**

* Performed standard System administration tasks, such as troubleshooting and problem resolution, patching, installing packages using rpm and yum, drivers, software and hardware upgrades.
* Worked on Cron jobs, Systems backup and OS installation using Jumpstart and Kickstart for **RedHat Enterprise Linux** environments.
* Wrote and enhanced existing scripts in **Bash**, **Shell** and **Python** which are used for data center migration and performance improvements on operating systems and developed wrapper scripts in **Bash shell** to automate execution of multiple **Python** scripts.
* Developed automated processes that run daily to check disk usage and perform clean-up of file systems on **Linux** environments using **shell**, Bash scripting(ksh), **Python**.
* Worked on building, testing and deployment of **Java** Applications on to Test Servers and Production Servers.
* Responsible for maintaining and configuring NFS, DNS, DHCP and iSCSI servers.

**Environment:**

* Red Hat Enterprise Linux, Bash, Shell, Python, Networking (TCP, DNS, Wireshark, NIS, NFS, DHCP, Firewalls)