**Raj Gopal R**

**Email:** roxon@theappliedthought.com

**Cell: +1 754-946-4873**

**Professional Summary:**

Around 10+ years of comprehensive IT experience in Development/Operations **DevOps engineering** with in-depth knowledge of **Linux/Unix Administration** including System & Network Administration, Cloud Operations Engineering in **AWS/Azure/Google cloud platform, Open Shift**. Virtualization process, Vagrant along with the best use of Scripting languages such as **Bash, Python, and Ruby** to consolidate the workflow within organization with Agile, ITIL best practices.

**Overall Summary:**

Highly motivated and committed **DevOps Engineer** experienced in Automating, Configuring and Deploying instances on **AWS, Microsoft AZURE, Google Cloud and Open Shift** environments and Data centers.

* With the knowledge of Azure got the opportunity to work with Open Source a machine learning pipeline using **Microsoft Azure Machine Learning** to predict and prescribe.
* Worked on **Azure compute services, Azure Web apps, Azure Data Factory** & **Storage, Azure Media & Content delivery, Azure Networking, Azure Hybrid Integration, and Azure Identity** & **Access Management.**
* Extensive experience in Automation, Configuring and Deploying instances on Amazon web services **(AWS)** including **EC2, ELB, Auto Scaling, S3, Lambda, VPC, Route53, Cloud watch, Cloud trail, AMI, IAM, Security groups, SNS** and **Roles**.
* Hands on experience setting up Amazon EC2 instances, virtual private cloud **(VPC)**, and security groups. Setting up databases in **AWS** using **RDS**, storage using **S3 bucket** and configuring instance backups to **S3 bucket**.
* Experience with working, coding, debug operations, reporting and data analysis utilizing python and using python libraries to speed up development.
* Worked on **Google Cloud Services** like **Glacier, Load Balancers, RDS, SNS, SWF, and IAM** and hands on experience on Google Cloud Services provision.
* Experience in implementing **Data warehouse** solutions in **Amazon Redshift, RDS.**
* Expertise in multiple Google Cloud Services for computing: **Compute Engine** and, for storage and DB: **Cloud Storage, Cloud Bigtable, Cloud SQL**, for monitoring: Stack driver.
* Experience in using **configuration management tools** like **Chef, Puppet and Ansible**.
* Experience in writing **Chef cookbooks** in all aspects of chef concepts like **Chef Server, Chef Automate, Chef workstations, Chef Nodes, Chef Client** and various chef components like push jobs, supermarket etc.
* Hands on Experience on Configuring Cloud Compute systems using **OpenStack** on Ubuntu, collaboration using **Orchestration** with Keystone, **Kubernetes** within **OpenStack.**
* Experienced in creating jobs, **pipelines in Jenkins** with different Jenkins plugins to integrate with different services/tools.
* Experience of working with Terraform, PowerShell scripting, Active Directory & Domain Controller and maintaining Azure Security Center, Backup and Site Recovery (Operations Management Suite (OMS))
* Experience in creating **Docker containers** and **Docker consoles** for managing the application life cycle. Good knowledge on Docker components like Swarm manager for **Docker swarm clusters**, **Prometheus server** for machine-centric monitoring as well as monitoring of highly dynamic service-oriented architectures.
* Familiarity **Mesos and Kubernetes** for orchestration and management of containers across multiple server hosts.
* Worked on Open source reverse proxy **Web server nginx**, cross platform Web server **Apache HTTP**, **HAproxy** and **Citrix NetScaler** for Web Monitoring and IP Filtering using **SSL/TLS**, **Load Balancing, Web Acceleration, and Security**.
* Experience on solid understanding of monitoring, alerting and analytics of systems, platform and application performance and usage (such as **AppDynamics, Splunk**)
* Extensively used Infrastructure monitoring tools like **Nagios** for monitoring network and severs, **Splunk** for Enterprise Log Management and Application management.
* Experience in using tools like **JIRA** for consolidated workflow within various teams with ITIL best practices.

**Certifications:**

AWS Certified Solutions Architect – Associate

**Technical Skills:**

|  |  |
| --- | --- |
| **Cloud Platforms** | AWS, Azure, OpenStack, Google Cloud Platform (GCP). |
| **CI/CD tools** | Jenkins, Bamboo, Hudson. |
| **Configuration Management Tools**  | Ansible, Chef, Puppet.  |
| **Build Tools** | Maven, ANT, Gradle. |
| **Virtualization Technologies** | Windows Hyper-V, VMware ESXi, Virtual Box, vCenter, vSphere, vRealize, Power VM. |
| **Containerization Tools** | Kubernetes, Docker, OpenShift, Spinnaker. |
| **Application/Web Server** | Tomcat, Apache, Application Server, IIS, Oracle WebLogic Server 11g. |
| **Testing and ticketing tools** | SonarQube, Selenium, JIRA, ServiceNow. |
| **Monitoring and Logging Tools** | Nagios, Splunk, ELK, CloudWatch, Azure Monitor, Datadog, Prometheus, Grafana. |
| **Version Control Tools** | GIT, GitHub, GitLab, Subversion, Bitbucket, Team Foundation Server (TFS). |
| **Scripting and****Programming Languages** | Python, Bash/Shell, PowerShell, Ruby, JavaScript, JSON, C, PHP, Java/ J2EE. |
| **Operating System** | UNIX, Linux, Windows, MacOS. |
| **Database Systems** | Oracle, MySQL, MariaDB, NoSQL (MongoDB, DynamoDB, Cassandra). |
| **Networking/Protocol** | DNS, DHCP, Cisco Routers/Switches, NIS, NFS, WAN, SMTP, LAN, FTP/TFTP, TCP/IP. |

**PROFESSIONAL EXPERIENCE:**

**Client: Freddiemac, VA Jun 18 - Present**

**Role: Sr. DevOps/Cloud Engineer**

**Responsibilities:**

* Creating and maintaining containerized micro services and configuring/maintaining private container registry on Microsoft **Azure** for Hosting Images and using Windows Active Directory.
* Setup Hybrid connections between **Azure** **web Apps** and on-premise **SQL** **databases**.
* Managed servers on the **Microsoft Azure** Platform, Azure Virtual Machines instances using Ansible Configuration Management and created **Ansible Playbooks**, tasks and roles to automate system operations.
* Worked on AZURE **(IaaS)** to migrate creating AZURE VMs, storage accounts, VHDs, storage pools, migrating on premise servers to **AZURE** and creating availability sets in **AZURE** and performed hardening of the VM’s and disk encryption using the **KEK** key in **MS Azure.**
* Monitor the Azure VM’s using **Zabbix** to display the network I/O bound, Memory usage, CPU and other metrics.
* Deploy **OpenStack** environments through automated tools, **Ansible** / custom pipeline and **Terraform** for Infrastructure Automation.
* Utilized **Terraform** to define and manage **Azure** resources, automating the provisioning of virtual machines, storage accounts, and networking components for various projects
* Worked on **Terraform** Cloud for remote state management, collaboration, and execution of **Terraform** plan in team-oriented environments
* Further we also implemented **TeamCity** from **JetBrains** which we use as a continuous integration server that supports a variety of different version control systems and **build runners** and **Octopus Deploy** and **TeamCity** can work together to make automated, **continuous delivery** easy.
* Created **Python and Bash scripts** to monitor & increase efficiency of retail management application system and installs which was carried out by **Jenkins**.
* Defined dependencies and plugins in **Maven** pom.xml for various activities and integrated Maven with **GIT** to manage and deploy project related tags. Created **Maven POMs** to automate build process for the new projects and integrated them with tools like **SonarQube, Nexus**.
* Used **Ansible** as a configuration management tool to deploy consistent infrastructure code across multiple environments and wrote **playbooks using Python/YAML** script for automating the infrastructure for test and production. Used **Ansible Tower** to automate repetitive tasks, quickly deploys critical applications, and proactively manages change.
* Worked with **Docker Containers** using package management service and **Docker Swarm** to manage **Docker clusters**.
* Used **Terraform** Cloud to automate **Azure** resource setup
* Created **Azure** infrastructure with **Terraform**, including networking and **APIs**
* IaC - Implemented the automation to create service connection in **Azure** **DevOps** to the **Azure** resources using **Terraform**
* IaC - Setup landing zone (Firewalls, VNETs, Subnets), Application Gateways using **terraform**
* IaC - Imported resources in **Terraform** using **Terraform** import in order to provision previously created resources using the **Azure** portal
* Contributed significantly in enhancing the infrastructure as code written in **HCL** (Hashicorp Configuration Language) to provision the infrastructure for the QA and Production environments using Terraform.
* Implemented microservices on **Kubernetes** **Cluster** and configured operators on Kubernetes applications and all its components such as Deployments, **ConfigMaps**, **Secrets and Services**.
* Creating **manifests and classes** in **Puppet** for automation.
* Performed **Unit testing, Integration Testing** and generating of test cases for web applications using **Junit** and **Python Unit** test framework **Hudson/Jenkins** in the builds triggered by each push to **GIT**.
* Implemented, integrated and managed **Perforce** as well as instituting accurate, automated build and release methodologies for Binary compilation for **Apache HTTP/HTTPS, Tomcat, PHP and MySQL**.
* Working as **Cloud Administrator**, involved in configuration for **Web apps/Function apps, V-net integration, HCM, Application gateway, App Insights, Active directory, Azure Key Vault, Encryption and Security on AZURE using ARM** templates and PowerShell script.
* Developed a fully automated **continuous integration system using Git, Gerrit, Jenkins, MySQL** and custom tools developed in Python and Bash.
* Worked on configuring data sources for **JBOSS** with various versions of databases, configured, monitored distributed multi-platform servers using **Nagios.**

**Environment:** Microsoft Azure, Terraform, Apache, Tomcat, Python, Nagios, MySQL, PHP, Jenkins, TeamCity Maven, Docker, Ansible, JBOSS 4.22.GA, JSON, Web Logic Application Server 9.x, 10.x, Ansible, GIT, Oracle, Windows and Linux.

**Client: Nationwide Insurance Mar 17 - May 18**

**Columbus, Ohio**

**Role: Cloud/DevOps Engineer**

**Responsibilities:**

* Created **AWS Cloud Formation templates** to create custom-sized **VPC, subnets, EC2 instances, ELB, security groups**. Managed other AWS Services like **S3, Cloud Front, Cloud Watch, RDS, Kinesis, Redshift Cluster, Route53, SNS, SQS, and Cloud Trail**.
* Developed **Cloud Formation** script to automate the **EC2 instances** with **Yaml** templates.
* Worked with **Jenkins** to build and deploy java code from **GitHub** to the production servers using **Continuous Integration and Continuous Delivery (CI/CD) pipeline**.
* Creation and maintenance of fully automated **CI/CD pipelines** for code deployment using **Octopus** **Deploy.**
* Designed and managed **API** system deployment using fast http server and Amazon AWS architecture and developed frontend and backend modules using **Python on Django** using **Git**.
* Primarily used **Ruby** to write **GIT applications** and Chef Recipes and created **Chef Cookbooks** and network configurations using **Chef Server**. Wrote Cookbooks with Python, SSH as the Wrapper to Manage Configurations of **AWS Nodes** and Test Playbooks on AWS EC2 instances using Python.
* Wrote Lambda functions in python for **AWS Lambda, Kinesis and Elastic Search** which invokes python scripts to perform various transformations and analytics on large data sets in **AMAZON EMR clusters.**
* Integrated **Azure** Log Analytics with **Azure** VMs for monitoring the log files, store them and track metrics and used **Terraform** as a tool, Managed different infrastructure resources Cloud, **VMWare** and q containers.
* Designed highly available, cost effective and fault tolerant systems using multiple EC2 instances, Auto Scaling, Elastic Load Balancer and **AMIs**.
* Utilized **Terraform** and Packer to automate the creation of custom machine images and software installations post-infrastructure provisioning.
* Designed and maintained **Terraform** modules to promote code reusability and standardization across **Azure** environments Cloud worked on Application Gateways, App Services
* Worked on **Atlassian Tools (Bamboo, Bitbucket, JIRA, Confluence, etc.)** and integrated all of them to set **OAuth** Impersonation and provided Server-Side support to provide access to all Applications Teams.
* Configured **Virtual Private Cloud (VPC)** using Cloud Formation templates and deployed AWS resources.
* Used **Docker container clusters** to clone the production servers and implementing **Kubernetes container orchestration** to clone production servers.
* Configured **Kubernetes Replication Controllers** to allow multiple pods such as **Jenkins master server** in multiple minions.
* Provisioned the highly available **EC2** instances using **Terraform and Cloud Formation templates**, wrote new plugins to support new functionality in Terraform and involved in using Terraform migrate legacy and monolithic systems to Amazon Web Services.
* Worked on integrating application logs with **Splunk** and wrote several custom **Splunk queries for monitoring and alerting.**
* Designed and worked with team to implement **ELK** (Elastic search, Log stash and Kibana) Stack on AWS.
* Implemented Continuous Delivery pipeline with **GIT Hub, Jenkins, Docker and AWS AMI's (Linux),** whenever a new GIT Hub branch gets created Jenkins attempts to build a new Docker container from it, the **Docker container** has the **AMI** baked in and leverages Linux containers.
* Installed configured Managed Monitoring tools, such as **Nagios** for Resource Monitoring/Network Monitoring/log Trace Monitoring.
* 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.
* Configure, monitor and automate **Google cloud Services** as well as involved in deploying the content cloud platform using **Google compute engine, Google storage buckets.**
* Designed, wrote and maintained systems (Python) for **administering GIT, by using Jenkins** as a full cycle continuous delivery tool involving package creation, distribution and deployment on tomcat application servers via shell scripts embedded into Jenkins jobs.
* Performed daily administration of **RedHat Satellite servers** to prevent outage and plans for optimized system resource utilization.
* Involved in setting up **JIRA** as defect tracking system and configured various workflows, customizations and plugins for the JIRA **bug/issue tracker**.

**Environment:** AWS, Google Cloud Platform, OpenStack, Ansible, ANT, MAVEN, Jenkins, Bamboo, RedHat Satellite Server, Splunk, Confluence, Bitbucket, GIT, JIRA, Python, SSH, Shell Scripting, Docker, JSON, Chef, JAVA/J2EE, Kubernetes, Nagios, Red Hat Enterprise Linux, Terraform, Kibana.

**Client: JPMorgan Chase Jan 15 - Feb 17 Columbus, Ohio**

**Role: DevOps Engineer**

**Responsibilities:**

* Worked as DevOps engineer/Build and release engineer in field of release automation **for java application to achieve continuous integration (CI) and continuous delivery (CD).**
* Configuration of various plug-ins for **Jenkins** for automation of the workflow. Configuration and maintenance of Jenkins to implement the CI process and integrated the tool with **Maven** to schedule the builds.
* Utilized tools such as **GitHub Cloud, GitHub Enterprise Managed User, Terraform Cloud, Terraform Enterprise, HashiCorp Vault, Venafi,** and **Azure DevOps**
* IaC - Implemented the automation to create service connection in **Azure DevOps** to the **Azure resources** using **Terraform**
* IaC - Set up **Terraform** workspaces for every environment per application
* Analyzed Veracode scan results, triaged findings, and guided development teams in remediation
* Implemented secure coding practices and addressed vulnerabilities using automation
* Extensive experience in configuring and managing. Troubleshooting physical and virtual infrastructure in the cloud and ON premises on Windows Server, Active Directory, Networking Storage, VMware .
* Set up **AWS** S3 buckets for application backups and employed **Terraform** for provisioning **AWS** instances.
* Focused on auto-scaling for high availability of applications and EC2 instances, leveraging Cloud Watch for load monitoring in **AWS**.
* Set up **Terraform** workspaces for every environment per application and configured landing zones, Application Gateways, and **API** Management
* Implementation of **Ansible** to deploy the builds for Dev, QA, and production. Installation of **Ansible Tower** on premise and on AWS nodes and automated the **infrastructure using Ansible playbooks.**
* Responsible for the **Continuous Delivery pipeline** given to all application teams as they on-board to **Jenkins** as a part of migration team.
* Written **Chef Cookbooks** for various DB configurations to modularize and optimize product configuration, converting production support scripts to **Chef Recipes** and **AWS server** provisioning using **Chef Recipes.**
* Worked on developing **internal testing tools** which were written in **Python** and **generated Python Django Forms** to record data of online users.
* Worked with **Nexus repository** manager to **proxy, collect, and manage** the dependencies on the **collection of JARs**.
* Excellent hands on experience in installation, configuration and troubleshooting the issues and **performance tuning of WebLogic, Apache and Tomcat**.
* Experienced in Setting up **Chef Server/Workstation and Bootstrapping Nodes**. Wrote **Wrapper cookbooks, recipes and utilized community cookbooks** as well.
* Migrated the **VMWARE VMs to AWS using AWS CLI** by uploading data to **S3 and EC2**-import-image and created **a disaster recovery repo for VM’s in AWS using EBS**. Managed Services like **EC2, S3 Bucket, Route, ELB, EBS.**
* Implemented to automate the **infrastructure used azure CLI** and involved in accessing subscription using **PowerShell** and to monitor and troubleshoot azure resources I have used azure app insights.
* Worked with object-oriented **Python, Flask, SQL, httplib2, Jinja2, HTML/CSS, Bootstrap, jQuery, Linux, GIT.**
* Involved in development of Python based **Web Services** using **REST** for sending and getting data from the external interface in the **JSON format** and perform analysis using **Django, PostgreSQL**.
* Administrated **DHCP, DNS, and NFS services** in Linux. Created and maintained user's accounts, profiles, security, rights disk space and process monitoring.
* Provided technical support by troubleshooting Day-to-Day issues with various Servers on different platforms.

**Environment:** Git, Jenkins, Ansible, Chef, Ant, Red Hat 6.x/7.x, VMware ESXi, CentOS 6.x/7.x, Python, TeamCity, Ruby, Maven, Amazon Web Services (AWS), Docker, WebLogic Server, Python, Artifactory, Ubuntu, SVN, UNIX, Nagios, Shell Scripts, ServiceNow, JBoss, Tomcat.

**Client: Applied Thoughts Feb 14 – July 14 Hyderabad, India**

**Role: Build & Release Engineer**

**Responsibilities:**

* Implemented a **Continuous Integration and Continuous Delivery (CI/CD) pipeline with Jenkins and GitHub.**
* Configured and maintained **Jenkins** to implement the **CI process and integrated** the tool with **ANT and Apache Maven** to schedule the builds. Took the sole responsibility to maintain the **CI server.**
* Worked in all areas of Jenkins setting up CI for new branches, build automation, plug-in management and securing Jenkins and setting up master.
* Automated the bundling process and reduced all the manual intervention needed and merged that to the Jenkins job.
* Installed and configured configuration tool such as **Puppet to create PFS** (package, file, service) using **puppet master** in puppet nodes by using modules.
* Worked on **MAVEN** as a build tools on java projects for the development of build **artifacts** on the source code and Maintained build related scripts developed in shell for Maven builds, Created and modified build configuration files including **POM.xml.**
* Resizing volumes to meet customer requirement, dealing with **Logical Volume Manager (LVM)** performance issues.
* Worked on setting up the new repos, managing the permissions for various **GIT branches**.
* Integration of Puppet with Apache and developed load testing and monitoring suites in Python.
* Troubleshooting, Security, Backup, Disaster Recovery, Performance Monitoring on **Red Hat Linux Systems.**

**Environment:** Chef, Ruby, Puppet, IAC, TDD, Red Hat Enterprise Linux, Python, Jenkins, SVN, Nagios, ANT, MAVEN, Nginx, JAVA, J2EE, MySQL, Oracle WebLogic, LDAP, ACL, NIS, DNS, DHCP, FTP.

**Client: GlobalLogic Apr 13 - Jan 14**

**Hyderabad, India**

**Role: Linux Administrator**

**Responsibilities:**

* Installation, configuration and troubleshooting of **Red Hat 4.x, 5.x, Ubuntu 10.x** on various hardware platforms.
* Maintained multiple Oracle databases with an **Apache/Tomcat** web front end.
* Configured **Kick-start for RHEL** (4, and 5), **Jumpstart for Linux and NIM for AIX** to perform image installation through network.
* Configuring **NFS, NIS, DNS, Auto Mount & Disk Space Management on Linux Servers.**
* Configuring and maintaining network services such as **LDAP, DNS, NIS, NFS, Web, Mail, and FTP.**
* Installation, Configuration and Maintenance of **Samba, Apache Tomcat, Web Sphere servers and Linux environment.**
* Written different bash shell scripts, as per the needs for monitoring, automation of installs and configurations for different Linux environments. Worked on Shell scripts for automation of daily tasks and **created cron jobs & at jobs.**
* Supporting **Veritas NetBackup 4.5** environment by working in co-ordination with the backup team to install **NetBackup clients** and troubleshooting any issues with backups.
* Installation and configuration of **Veritas Storage Foundation Suite, Volume Manager, Cluster Servers &Veritas File systems (Vxfs).**
* Shell scripting to automate the regular tasks like removing temp files, taking backups of files, file transfers among servers.
* Collaborated with **backup team** to maintain and recover enterprise wide backup servers using **VERITAS Net Backup.**
* **Troubleshooting** the network issues and response problems using **ping, netstat, telnet utilities**.

**Environment:** Linux-RHEL 4.x, UNIX, Veritas, Shell (bash), Apache Tomcat Application Server, DNS, DHCP, LDAP, Apache Tomcat, NFS, RPM, YUM, and RAID.