**GAUTHAMI THYAGRAJAN**

**Senior DevOps Engineer** || **email: gauthami.thyagrajan@gmail.com** || **Phone: +1 612-512-4078**

**Experience:** 10 Years

**Roles:** Senior DevOps Engineer, Module Lead, Project Engineer

Senior DevOps engineer skilled in DevOps technology such as AWS, Azure, **Terraform**, **Kubernetes, Docker, Jenkins, Artifactory, Chef, Ansible, Git-hub, Unix and Linux Administration** and **Agile**.

* Exposed to all aspects of **software development life cycle** such as Analysis, Planning, Developing, Testing and Implementing and Post-production analysis of the projects and Software Development Life Cycle methodologies including **Agile**.
* Experience in Administration and Maintenance of source control management systems such as **Git, Subversion SVN, GitHub and Bitbucket**. Created tags and Branches, fix the merge issues and administered Software Repositories.
* Strong experience in using build management tools like **Gradle**, **Ant** and **Maven** for the building of deployable artifacts from source code and used artifacts repository managers like **Nexus**, **JFrog** for Maven builds.
* Exposure in writing **Groovy** and **Ruby scripts** for automation of build and infrastructure automation. Configured Git with Jenkins and schedule jobs using POLL SCM.
* Hands on experience in using **Jenkins** as continuous integration tool to create new jobs, managing required plugins,
* Automated processes with custom built **SHELL, Python, BASH** and **PERL** scripts to automate the deployments.
* Experience with **container**-based deployments using Docker, working with Docker images, Docker HUB and **Docker registries**. Worked on setting up the automated build on Docker HUB.
* Worked on creating Docker Slave Nodes for Jenkins using custom **Docker Images** and pulled them to ECR.
* Created Clusters using **Kubernetes** and worked on creating many **pods**, replication controllers, replica sets, services, deployments, labels, health checks and ingress by writing **YAML** files.
* Used Kubernetes to manage containerized applications using its nodes, Config Maps, selector, Services and deployed application containers as Pods.
* Experience on writing **playbooks** to automate application deployments and **Ansible** YAML scripts to configure the remote servers.
* Strong experience in setting up the entire **Chef** Infrastructure and setting up the Chef Workstation, Chef Repo as well as **Chef Nodes** from the scratch. Used existing cookbooks from Chef Market place and customizing the recipes with respect to each VM.
* Used **Terraform** for automating VPC's, ELB's, Security Groups, SQS queues, S3 buckets and continuing to replace the rest of our infrastructure also Solved Gateway time issue on ELB and moved all the logs to S3 Bucket by using Terraform.
* Good knowledge on other Cloud based services like **AWS, GCS, Microsoft Azure**.
* Proficient in using all Amazon web services like EC2, ECS, EFS, IAM, S3, ELB, API Gateway, RDS, Route 53, Cloud Watch, Cloud Formation, Redshift and Setting up databases in AWS using RDS, storage using S3 bucket and configuring instance backups to S3 bucket.
* Defined **AWS Security Groups** which acted as virtual firewalls that controlled the traffic allowed to reach one or more AWS EC2 instances.
* Experience in writing Slack APIs to keep the team updated with Latest events and logs and Implemented new **RESTful APIs** using Spring MCVC framework.

**EDUCATION:**

* NTTF Diploma in Computers science, 2010
* Bachelor’s in computer science, Annamalai University, India, Sep 2012.

**TECHNICAL SKILLS**

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| **Configuration Management** | Puppet, Chef ,Ansible , Terraform |
| **Source Control/Versioning** | CVS, Tortoise SVN, Clear case, GIT, Perforce and PVCS |
| **CI Tools** | Jenkins ,Bamboo, Hudson |
| **Cloud Technologies** | **Amazon AWS**, **Azure** , OpenStack, **OpenShift**, **Docker** & Vagrant, **Kubernetes. Cluster tools Apache Mesos.** |
| **Build Tools** | Jenkins, Maven, Nexus, Ant, Logstash, Crontab, Sonarqube, Cruise Control |
| **SCM Tools** | Subversion, Bit Bucket, GIT. |
| **Web Servers** | Web logic, WebSphere, Apache Tomcat, JBOSS, Nginx, HAProxy |
| **Methodologies** | Agile, Scrum, Kanban, ITIL and Waterfall |
| **Databases** | ElasticSearch, Oracle 11g, MySQL, Postgres SQL, MongoDB |
| **Security Tools** | Wireshark, TCP Wrappers, openssh, nmap, dig, traceroute, netstat |
| **Cloud Technologies** | AWS, Azure, OpenShift, VMware, Open Nebula Kubernetes Docker |
| **Monitoring Tools** | Nagios, ELK, Zabbix, Prometheus & Grafana |
| **API Gateway** | KONG |
| **AI Service** | RASA X (chatbot) |

**Optum Technologies, Eden Prairie, MN**

**Sr DevOps Engineer. July 2019 to Till Date**

**Responsibilities**

* Built **Docker** **images** for multiple micro services.
* Designed Continuous Integration and Continuous Delivery (CICD) pipeline for mobile application development. Developed **Jenkins** jobs to support multi-branch build, deployment and testing.
* Defined dependencies and Plug-ins in **Maven** pom.xml for various activities and integrated Maven with **GIT** to manage and deploy project related tags.
* Maintained and administered GIT source code repository, **GitHub**.
* Troubleshoot issues like slow performance using **AppDynamics** for applications deployed on different application servers.
* Re-designed and built the entire build & release system, utilizing Docker and Jenkins.
* Re-designed Pipeline for end-to-end CI&CD, Which includes Build, Unit Testing, Code Quality, code analysis , building docker image, Pushing repo, tagging docker image , deploy to OpenShift environment.
* Built monitoring setup to monitor Application and System Metrics using promotes and Grafana.
* Setup **Rasa X** as chatbot service for Over payment system to get the information’s about Incidents.
* Setup **KONG** API Gateway and configured multiple API route via gateway to secure and manage the application.
* Installed, Configured and Managed monitoring tools such as **Splunk**, *New Relic* for Resource Monitoring/Network Monitoring/Log Trace Monitoring.
* Set up Kubernetes (k8s) Clusters for running microservices and pushed microservices into production with Kubernetes backed Infrastructure.
* Involved in setup Production environment and application deployments.

**Environment:** OpenShift, Kubernetes, Jenkins, Groovy Script, shell Script, GitHub, Nexus 2.6.x, Rally, Git, App Dynamic, MS SQL, Prometheus, Grafana, Unix, Kubernetes 3.9, Docker suite, Maven 3.3, Java/Java SE 8.

**Happiest Minds**

**DevOps Module Lead Jan 2014 to June 2019**

**Client: Healthgrades Colorado & Wisconsin**

**Responsibilities**

* Set up **Kubernetes (k8s) Clusters on** AWS for running microservices and pushed microservices into production On AWS backed Infrastructure.
* Written docker files with parameterized data.
* Responsible for creating documentation of the **Terraform** infrastructure in Confluence and used **Terraform** to manage **AWS** and managed PODs**.**
* Creating alarms in **CloudWatch** service for monitoring the server’s performance, CPU Utilization, disk usage etc.
* Used AWS lambda to run servers without managing them and to trigger to run code by S3 and SNS.
* Defined **AWS Security Groups** which acted as virtual firewalls that controlled the traffic allowed to reach one or more AWS ECS cluster instances.
* Implemented DevOps structure with complete monitoring (Prometheus & Grafana).

**Client: INTEL (IOT Northgate Canyon)**

**Responsibilities**

* Bring up a Complete Environment for CVAS Platform, with multiple micro service deployed on Amazon Cloud.
* To secure the environment I configured VPC, Subnets, Route table, Load balancer, Route 53 services etc.. on Amazon.
* Written a Shell script to Automate MySQL & Mongo DB Backup and dump to S3 Buckets.
* Implemented Configuration Management tool called Ansible to manage the configurations and auto deploy the Micro services on the specific Instances.
* Written couple of Ansible playbooks for
  + Apache2
  + Mongo DB
  + MySQL
  + tomcat7
  + Kafka, mqtt & NgC Micro services.
* Handling the complete AWS security checks by using BigFix.
* Configuring Continuous integration using Jenkins for all micro services.

**Client: Ascend Learning (Atlassian Consultant)**

**Responsibilities**

* Replicated JIRA from one Environment to another with data and similar configurations on standalone servers.
* Migrating AD users with JIRA, Confluence & HipChat on Production environment.
* Role based user creation in Jira based on active directory group.
* Implemented internal Authentication with LDAP.
* Upgraded JIRA to latest version, including all plugins and application configurations (Confluence, Bamboo, SVN & HipChat).

**DevOps Framework**

**Client: Internal**

**Responsibilities**

* Developing an IP for Happiest minds called “DevOps Framework”.
* Working on multiple tools (AWS, Azure, Chef, Puppet, CI & CD) to setup an IP.
* Written shell script to setup Chef Server and integrate nodes.
* Written Cookbooks for CI (Jenkins).
* Worked on Jenkins for CI and CD of application.
* Worked on Cassandra NoSQL clustering.
* Brought up Mesos Sphere integrated with Kafka & Zookeeper with cluster mode.

**Environment:** AWS**, Azure**, Helm, Azure SQL DB, Terraform, Kubernetes, Docker 1.6.x, Jenkins, Splunk, New Relic, Python, Shell, YAML, Git, Ansible 2.0, Puppet, Chef .

**Relevance Labs**

**Sr Project Engineer Jan 2014 to Nov 2014**

**Responsibilities**

* Part of DevOps Team for a Multi-Billion Education & Publishing Company.
* Contributing to the data center to Amazon AWS Cloud Migration and Chef Automation. Leading Application Monitoring and End User Experience Management activities.
* Creating cookbook for Jenkins installation and creating multiple continuous build and deployment pipeline jobs.
* Experience with Knife EC2 plugin to create, bootstrap and manage EC2 instances.
* Defining Chef Environments, Roles and Run-list.
* Creating Chef Encrypted Data Bags, storing environment based Data Bag Items.
* Experience with Test Kitchen-Vagrant as an integration tool for developing and testing infrastructure code and software on isolated target platforms.
* Knowledge of Server Spec tests for Unit Testing and Test Driven Development.
* Using BitBucket and Git as Distributed Version Control system and Artifactory as a resource repository.
* Installing and configuring Chef Server.
* Working on administration of AWS Architecture across multiple regions.
* Launching and configuring EC2, assigning Elastic IP and Elastic Load Balancer.
* Creating AWS CloudFormation templates to provision AWS infrastructure.
* Converting existing infrastructure into AWS CloudFormation Templates easing he way we provision infrastructure.
* Knowledge of AWS VPC configuration and setup.
* Actively contributed to AWS architecture optimization based on Application Usage and System Utilization.
* Implemented Open Source monitoring framework using Graphite, AWS CloudWatch and CollectD to monitor our architecture, identifying trends and analysis of the same.
* Implemented Nagios Monitoring framework across multiple AWS regions.
* Installing and configuring various plugins for custom metrics monitoring e.g. httpd, disk space, CPU load, Host Availability.
* Configuring various agents into Nagios using NRPE protocol.
* Ensuring timely deployments and administration for applications hosted in various environments like QA, Staging and Production.
* Implementation of new applications to be hosted on Amazon AWS.
* Done a POC in implementing OpenStack Private Cloud

**Environment**: AWS, Red Hat Enterprise Linux, WebLogic, CentOS, Java, Python, CloudWatch, JIRA, Puppet 3.x, Shell Scripts, Jenkins, Ansible 1.9, Docker 1.1.x, Kubernetes 1.3, Terraform, Chef.

**Wipro Technologies ,Bangalore ,IN**

**Project Engineer Sep 2011 to Dec 2013**

**Client** : Internal

**Responsibilities**

* Providing automation platform for continuous build & release management and application deployment. This PoC has three objectives:
* Built Open Shift cloud setup on Server on Data center.
* Create a development/testing environment from configuration definition through Puppet agent. For each VM the agent automates the software configuration management which is stored in repository.
* On-board new projects from Config template on to tool server like Jenkins and SVN. This involves creating a new Jenkins job with the SVN parameters automatically through puppet agent. Additionally, new environments are created on Puppet server for the on-boarded project.
* Invoke the puppet manifests from a webapp using Puppet CLIs
* Implemented Build and Release Management module with Subversion, Jenkins and Puppet
* Automated Jenkins installation & configuration and on-boarding new projects into Jenkins
* Provided technical help to the team members
* I have developed Puppet scripts which automates the installation and configuration of Jenkins
* I have developed Shell script which automates the on-boarding of new project into Jenkins

**Client: Info bionic**

**Responsibilities**

* Designed AWS Architecture to host Health care application with Highly Available and highly scalable.
* Provides High Available for MoMe Service (heart of the product).
* Worked on PowerShell Scripting to automate the Database Backup with retention policy and deploying the IIS Web application.
* Configured Nagios monitoring tool for Info-Bionic Server.
* Worked on Open VPN and SVN.
* Configured a Microsoft Office 365 Mail server for the Application.
* Configured and setup Microsoft SQL Replication setup for high available data.
* Provided a High Availability for the Cloud Environment for all Info Bionic Server.

**Environment**: AWS, Red Hat Enterprise Linux, WebLogic, CentOS, Java, Python, CloudWatch, JIRA, Puppet 3.x, Shell Scripts, Jenkins, Ansible 1.9, Docker 1.1.x, Kubernetes 1.3, Terraform.

**Client: McGraw-Hill Education**

**Responsibilities**

* Configured Oracle WebLogic Server in clustered environment as application server with Apache as webserver.
* Configured local Dynamic Domain Name System within AWS environment in high availability mode.
* Worked with Rest Web Services using shell scripting to configure network services.
* Configured NAT, NTP server within AWS.
* Configured IDS Snort and Snorby for application security on cloud.
* Configured Centralized Logging service (Syslog) for the Eztest Online Application

**Environment**: AWS, Red Hat Enterprise Linux, WebLogic, CentOS, Java, Python, CloudWatch, JIRA, Puppet 3.x, Shell Scripts, Jenkins.