Mallika A

Cloud DevOps Engineer

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A highly competent with 7+ years of experience in **IT** industry having major focus on **DevOps Engineering, Cloud Engineering**, automation of **Build** and **Deployment** process, **Configuration Management** and **Cloud Administration**. My main objective at work is to set up the best **automation environment** for a fast and reliable **product deployment**.

**Professional Experience:**

* Good understanding on the principles of Software Configuration Management (**SCM**), Software Test Life Cycle (**STLC**) and **Bug life cycle** in **Agile, Scrum,** and **Waterfall** methodologies, **Cloud Management, Containerization, Deployment** and **Tool** **Engineering** in **Agile** Environment.
* Hands on experience in Amazon **Web Services** and its resources like **EC2, S3, RDS, Lambda, VPC, VPN, DynamoDB, EBS, ELB, SNS, SQS, Glacier, Auto-Scaling, IAM, Route53, RDS, Security-Groups, Cloud Front, Ops Work** and**Redshift.**
* Well experienced in Designing **high availability** applications on AWS across **Availability Zones** and Experience on **fault tolerance**, **Disaster Recovery** in AWS **Cloud Formation**.
* Experience with “**Infrastructure as a code**” using tools like **Terraform** and **AWS CloudFormation** and integrating them with Jenkins builds to achieve **end-to-end** automation.
* Worked on creating **CloudFormation** templates for **dev, test, staging** and **production.**
* Experience in using **Cloud Trail** and **Cloud Watch** to monitor server services like **logs**, **CPU, RAM** and **disk storage.**
* Wrote configuration management **chef recipes, cookbooks, roles, tasks, manifestos**. Extensively involved in Installing **Workstation, Bootstrapped Nodes** and uploaded them to **Chef Server**.
* Experience in creating **Ansible** playbooks for **deploying, integrating,** and **monitoring** the **CI** environment. Experience in combining multi-node software deployment using **Ansible**.
* Experience with **containerization** technologies like **Docker** and Good Knowledge on components like **Docker Engine, Docker-Hub, Docker-Compose, Docker Registry, Docker container snapshots** and **Docker Swarm**.
* Used **Docker** for local Application Deployment and **Vagrant** for different infrastructure setup and testing of code, installation and configuring **Kubernetes** and clustering them.
* Extensively used **Kubernetes** to deploy, load balance, scale and manage **docker** containers with **multiple name-spaced** versions.
* Hands-on experience in version control using **GIT** and **GITHUB**.
* Experience in using Build and Automation tools like **ANT** and **Maven** and authorizing POM.xml files, performing releases with **Maven** release plugin, modernization of Java projects, and managing Maven repositories.
* Extensively worked on **Jenkins** and **GITLAB** by installing, configuring, and maintaining for **Continuous Integration (CI)** and for **End-to- End** automation for all build and deployments.
* Implemented CI and CD processes using AWS **CodeCommit, CodeBuild, CodeDeploy, CodePipeline, Jenkins, Bitbucket Pipelines, Elastic Beanstalk.**
* Proficient in deploying and configuring **Elastic search, Log Stash, Kibana (ELK)** and **AWS Kinesis** for log analytics.
* Experienced in configuring Cloud platform such as **Virtual Networks Multi-site, Cross-site, VMs, Azure AD, Load Balancers, Azure SQL, Cloud Services,** etc.
* Good knowledge in **Relational** and **NoSQL** databases like **MySQL**, **SQL Server**, **Oracle**, **DynamoDB**, **MongoDB.**
* Worked with different **Bug tracking** tools like **JIRA** and **Bugzilla**.
* Experience in Task Scheduling & System backup using **Shell, Perl, Ruby, Python** and **BatchScripts.**
* Worked on installations and upgrades of **Atlassian** applications like **JIRA, Confluence, Stash/Bitbucket** and **Bamboo**.
* Good Experience in **monitoring** servers using **Nagios, Splunk**, and using **ELK**.
* Experienced in **Red Hat Enterprise Linux 4.x, 5.x, 6.x, 7.x, Debian, CentOS 4.x, 5.x, suse Linux, Oracle Enterprise Linux, Solaris 8,9,10** and **VMware vSphere ESX/ ESXi** environment. Also, involved in migrating **Linux/ Windows** servers to **cloud (AWS)** and **testing**.
* Experience in Linux/Unix System Administration, **System Builds, Server Builds, Installations, Upgrades, Patches, Migration,** and **Trouble shooting**.

**Technical Skills:**

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| --- | --- |
| Operating Systems | Sun Solaris 11/10, Red Hat Enterprise Linux 5.x/6.x/7.x, SUSE 10/11/12, UBUNTU, Windows NT/XP/2003/2008/2012. |
| Network Protocols | SMTP, SNMP, ICMP, TCP, IP, FTP, TELNET, UDP, and RIP, ISCSI, Fiber Channel. |
| Scripting Languages |  Unix Shell Scripting, Python, Perl, Python2, Jinja2  |
| Application/Web Servers  | Tomcat 6.0/7.0, Web Logic 9.0/10.0, JBoss, Web sphere 6.0/ 7.0/8.0, Apache, Nginx |
| Databases | Oracle 10g/11g/12c, MySQL, PostgreSQL. |
| Web Technology | HTML 4.0/5.0., DHTML, XML, PHP, Java Script, Servlets and JSP. |
| Build Tools/CI Tools | ANT, MAVEN, Jenkins, Teamcity. |
| Source Control Tools | Subversion (SVN), GIT, CVS, Clear Case. |
| Cloud Services | AWS, Rackspace, Terraform |
| Configuration Management Tools | Chef, Puppet, Docker, Ansible |
| Programming Languages | C, C++, Java/J2EE, SQL. |

**Work Experience:**

**U.S Bank – Charlotte, NC Feb 2020 - Present**

**Role: AWS Terraform Engineer**

As an AWS Terraform and DevOps professional, I am involved in designing and building **secure**, **highly available** and **scalable** **AWS**infrastructure using advanced **DevOps integration tools**.

* Involved in designing and deploying a multitude of applications utilizing almost all the AWS stack including **EC2, Route53, S3, RDS, Dynamo DB, SNS, SQS, LAMBDA, REDSHIFT**, focusing on high-availability, fault tolerance and **auto-scaling**in AWS cloud formation.
* Supported **AWS** cloud environment with 100+ AWS instances and configured **Elastic IP & Elastic Storage**and experience in working on implemented **Security groups**and **Network ACLs.**
* Experience in Server infrastructure development on **AWS Cloud** and **Microsoft Azure**.
* Worked on Continuous Integration **CI**/Continuous Delivery (**CD**) pipeline for **Azure** Cloud Services using **CHEF**.
* Experience in managing **Azure Storage Accounts**.
* Experience in migrating on-premises to Windows Azure using **Azure Site Recovery** and **Azure
backups.**
* Working knowledge on **Azure Fabric**, Micro services in Azure.
* Managed **Identity Access management** of **Azure** Subscriptions, **Azure AD, Azure AD Application Proxy, Azure AD Connect, Azure AD Pass** through Authentication.
* Configured **AWS** **Identity and Access Management (IAM)**Groups and Users for improved login authentication. Provided policies to groups using policy generator and set different permissions based on the requirement along with providing **Amazon Resource Name (ARN).**
* Worked on AWS **CloudWatch,** **CloudFormation,** **Cloud Trail**services and **CloudFront**to setup and manage cached content delivery. Created **Elastic load balancers (ELB)**and used **Route53**with failover and latency options for high availability and fault tolerance.
* Experience in implementing **AWS lambda**to run servers without managing them and to trigger run code by **S3**and **SNS.**
* Experience in implementing Data warehouse solutions in **AWS Redshift,** worked on various projects to migrate data from one database to **AWS Redshift, RDS, ELB, EMR, Dynamo DB and S3**.
* DevOps role converting existing AWS infrastructure to server less architecture (**AWS Lambda, kinesis**) deploying via **Terraform** and **AWS Cloud formation**.
* Automate provisioning and repetitive tasks using **Terraform**and **Python,** Docker container, Service Orchestration.
* Involved heavily in setting up the CI/CD pipeline using **Jenkins, Maven, Nexus, GitHub, Chef, Terraform** and **AWS**.
* Worked with **AWS Code Pipeline** and Creating Cloud formation **JSON** templates which is converted to **Terraform** for infrastructure as code.
* Implemented **Terraform** modules for deployment of applications across multiple cloud providers.
* Written **Chef Cookbooks**, **recipes** using **Ruby** to automate installation of Middleware Infrastructure like **Apache Tomcat, JDK**, and configuration tasks for new environments.
* Managed On-site Operating Systems, apps, packages, and services using **Chef**as well as AWS for **EC2, S3, Route53** & **ELB** with **Chef Cookbooks.**
* Automated end-to-end transit hub connectivity resource deployment in AWS via **Terraform**
* Using **Chef,** deployed and configured **ElasticSearch, LogStash and Kibana (ELK)**for log analytics, full text search, application monitoring in integration with AWS **Lambda**and **Cloud Watch**
* Extensively worked on **ansible deployments**, written various ansible**playbooks**with multiple roles, tasks with **loops**, **templates**, service management, host variables, group variables etc.
* Used **Ansible** to manage Web applications, Environments configuration Files, Users, Mount points and Packages.
* Implemented **multi-tier**application provisioning in **open stack**cloud, integrating it with **ANSIBLE,** migrating the application using **Maven**as build tool.
* Responsible for Continuous Integration and Continuous Delivery process implementation using **Jenkins**along with **Python**and **Shell**scripts to **automate** routine **jobs**.
* Deploying application using **Jenkins server**and Troubleshoot **build**and **release**job failures, resolve, work with engineers on resolution.
* Integrated **Ant**and **Maven**with **Jenkins**to run to automate the build process as a part of continuous delivery.
* Experience in working with **EC2 Container Service**plugin in **Jenkins** which automates the **Jenkins master-slave**configuration by creating temporary slaves.
* Integrating Defect tracking tool **JIRA**with **Confluence** and **Jenkins** **CI** server for identifying, logging and, tracking and documenting defects/issues in real-time.
* Coordinate and assist developers with establishing and applying appropriate **branching**, **labeling/naming** conventions using **GIT source control** and analyzed and resolved conflicts related to merging of source code for **GIT.**
* Focused on **containerization**and immutable infrastructure. **Docker** has been core to this experience, along with **Mesos,** **Marathon,** and **Kubernetes.**
* Integrated **Kubernetes**with network, storage, and security to provide comprehensive infrastructure and orchestrated container across multiple hosts.
* Created **Docker** images using a **Docker file**. Worked on Docker container **snapshots**, removing images and managing **docker volumes** and experienced with Docker container service.
* Working on variety of Unix platforms RHEL 5.x/6.x/7, which includes installation, configuring and maintenance of applications for prod/stage/dev environments.
* Installation, Configuration and Maintenance of Virtual Machines, **VMware ESXi 5.0/5.5**Host Server, **vSphere**Suite with P2P and P2V.
* Installed/configured/maintained/administrated the network servers Satellite, **DNS**, **NIS**, **NFS** , **Send mail** and application server **Apache** , **my** , **JBOSS** , **WebLogic** , **Oracle E-business** suite and **Samba** on Linux.
* Migrate IaaS, PaaS and SaaS instances between public and private clouds - **Apache,** **RDBMS**, Unix/Linux, **NAS/SAN, LAN/WAN VPN, Security, IDS, Firewalls and Encryption**.
* Involved in **SCRUM**ceremonies (stand-up, grooming, planning, demo/review and retrospective) with the teams to ensure successful project forecasting and realistic commitments.

**Environment:** AWS, Azure, Chef, Terraform, Terragrunt, Maven, Jenkins, Ruby, Shell, Jira, Python, Oracle, WebLogic Server 11g, WLST,  RedHat Linux 7.x , Apache Tomcat, Docker, Kubernetes, Virtualization, Apache HTTP server, Nginx, LDAP, JDK1.7, XML, SVN, GitHub/Bitbucket.

**Johnson & Johnson – Bridgewater, NJ March 2018 – Feb 2020**

**Role: AWS DevOps Engineer**

* Responsible for end to end deployments for projects on **AWS**. This includes scripting for **automation, scalability, build promotions** for staging to production etc.
* Involved in designing and deploying multitude applications utilizing almost all the **AWS** stack (Including **S3, RDS, EBS, Elastic Load Balancer, and Auto-scaling groups, Optimized volumes and EC2 instances)** and Using **Jenkins AWS Code Deploy** plugin to deploy to AWS**.**
* Created and managed **S3** buckets for the **CloudWatch** logging, **artifactory** repository and for the **Static** **Webhosting**. Worked with **AWS CLI** and **AWS API** to manage resources on AWS for many services such as **EC2, S3, VPC, Cloud Watch, ELB, Auto-scaling,** created python script using **AWS API** Calls to manage all resources deployed on AWS.
* Created and managed **S3 buckets** for **CloudWatch** logging, **Artifactory** repository and for the **Static Webhosting**. Generated **SSL certificates** and installed into the **Tomcat** servers for the secured **HTTPS** protocol.
* Used **BOTO** and **Fabric** for launching and deploying instances in **AWS.**
* Used **Terraform** to manage **AWS** and another cloud infrastructure. Manage servers using **configuration management** products like **Chef, Ansible.**
* Written **Lambda** functions using **python**, used **lambda** **functions** to automate **AWS** infrastructure.
* Deployed and configured **Elasticsearch, Logstash** and **Kibana (ELK)** for log analytics, full text search, application monitoring in integration with **AWS Lambda** and **CloudWatch**.
* Developed ongoing test automation using **Chef, Python** based framework Using **Ansible** to Setup/teardown of ELK stack (**ElasticSearch, Logstash, Kibana**).
* Written multiple **cookbooks** in **Chef**. Implemented **environments, roles, data bags** in **Chef** for better environment management.
* Created inventory in **Ansible** for automating the **continuous deployment** and wrote **playbooks** using **YAML** scripting. Used **Ansible** to manage Web applications, Environments, configuration Files, Users, Mount points and Packages.
* Configuring the **Docker** **containers** and creating **Docker files** for different environments.
* Used **Kubernetes** to deploy, load balance, scale and manage **docker containers** with multiple name-spaced versions.
* Managed **Kubernetes** charts using **Helm,** Developed and maintained the **continuous integration** and **deployment** systems using **Jenkins, Maven, JBoss** and **JFrog Artifactory**.
* Created reproducible builds of the **Kubernetes** applications, managed Kubernetes **manifest** files and Managed releases of **Helm** **packages**.
* Developed a **pipeline** job in **Jenkins** to provide **API** **access** to a private repo and **deploy** the artifact to **EC2** instance.
* Taking care of machines configuration with the optimized configuration management tools.
* Created **Bash**, **shell,** and **python** scripts for various Systems Administration tasks to automate repeated processes.
* Generated reports on different **bugs & tickets** using **JIRA/ Bug tracking**. Created & solved blocked or unassigned tickets.
* Architecting and deploying **Splunk Enterprise** implementations in medium to large sized customers.
* Installation and configuration of **Linux** servers using **kickstart** & support for various applications, which on Linux followed by performance **tuning**, **patching** and **maintenance.**
* Coordinated with all the teams before and after the production deployments for the smooth production releases.

**Environment**: Amazon Web Services (AWS) (EC2, Cloud Front, CloudWatch, RDS, ELB, EBS, S3, Route53, SNS, SQS, KMS, Cloud Trail, IAM, Cloud Formation, Virtual Private Cloud (VPC), LDAP, Terraform,) GIT, Jenkins, Chef, Ansible, ELK RedHat Linux, Docker, Bash, shell, Python, Kubernetes, Tomcat.

**Fidelity Investments– Raleigh, NC August 2016 - February 2018**

**Role: Cloud DevOps Engineer**

* Launched **Amazon EC2 Cloud Instances** using **Amazon Web Services** and Configuring launched instances with respect to specific applications.
* Created and maintained various DevOps related tools for the team such as provisioning scripts, deployment tools, and development and staging environments on **AWS Cloud.**
* Modified **AWS** Cloud Formation templates to create custom sized **VPC, subnets, NAT** to ensure successful deployment of Web applications and database templates.
* Building search feature based on open source tool **ElasticSearch**. Implemented system logging solution using **Elastic Search, Kibana and Logstash**.
* Worked on Continuous Integration **CI/**ContinuousDelivery **(CD) pipeline** for **AWS** Cloud Services using **CHEF**
* Application deployment and data **migration** on AWS. Design applications on AWS taking advantage of **disaster** **recovery** design guidelines.
* Used **Ansible** server and workstation to **manage** and **configure nodes.**
* Managed **Ansible Playbooks** with **Ansible roles**. Used file module in Ansible playbook to **copy** and **remove** files on remote systems.
* Managed servers on the **AWS Cloud** instances using **Chef** **Configuration Management.**
* Evaluated testing of **Chef Recipes** - Concept of **Test-Driven Development** for Infrastructure as a Code.
* Implemented **Chef Recipes** for Deployment and build on **internal Data Centre Servers**. Re-used and modified same **Chef** Recipes to create a Deployment directly into **Amazon EC2** instances.
* Extensive experience in **PowerShell** scripting to automate many services in AWS.
* Perform day-to-day operation and troubleshooting of **VMs** and **Docker swarm** in **AWS**.
* Created a **Microservice** environment on the cloud by deploying services as **docker containers**.
* Implemented **Docker -maven-plugin** and **maven pom** to build **Docker images** for all **Microservices** and later used **Docker** file to build the **Docker images** from the **java jar** files.
* Environment provisioning solutions using **Docker** and **Red Hat Satellite**
* Involved in installing and administrating **CI/CD** tools like **Jenkins** for managing weekly Build, Test and Deploy chain, **GIT** with Dev/Test/Prod Branching Model for weekly releases.
* Built **end to end CI/CD** Pipelines in **Jenkins** to retrieve code, compile applications, perform tests and push build artifacts to **Nexus.**
* Used **MAVEN** as a build tool on java projects for development of build artifacts on the source code.
* Configured and maintained **Jenkins** to implement the **CI** process and integrated the tool with **Maven** to schedule the builds.
* Created branches, performed merges in version control system **GIT, Code Commit**.
* Involved in **Jira** as defect tracking system and configure various workflows, customizations and plug-ins for **Jira bug/issue** tracker.
* Worked on developing internal testing tools which were written in **Python**. Worked on Libraries like Pandas for **data** **manipulation** and **analysis**.
* Configured Kickstart and Jumpstart servers to initiate installation of **RedHat Linux** and **Solaris** on several machines at once.
* Involved in Installing, Configuring and Upgrading of **RedHat Linux AS 4/5, Solaris 9/1 0** operating systems.

**Environment:** AWS Cloud, Web Applications, GitHub, IaaS, PaaS, Virtual Machines, Aws, Ansible, Chef, Jenkins, Puppet, Docker, Python, Power shell.

**Echo Star** **- Denver, CO** **January2016-July 2016**

**Role: Build and Release Engineer**

Worked as a Build Engineer for a team that involves different development teams and multiple simultaneous software releases for QA, UAT and Prod environments.

* Responsible for design and maintenance of the **GIT** Repositories, different branching & merging strategies, views, access control strategies and Integrated **GIT** into **Jenkins** to automate the code check-out process.
* Creating user level of access for related **GitHub** project directories to the code changes.
* Created the naming strategy for **branches** and **labels** and involved **Continuous** **Integration** system with **GIT** **version control** repository and continuously **build** as the check-in's come from the developer.
* Experience in integrating **Jenkins** with various tools like **Maven** (Build tool), **Git** (Repository), **SonarQube** (code verification), **Nexus** (Artifactory) and implementing **CI/CD** automation for creating **Jenkins** pipelines programmatically architecting **Jenkins** **Clusters**.
* Experience using **Jenkins** as a full cycle **Continuous Delivery** tool involving package creation, distribution and deployment onto **Tomcat** application servers via **Shell** scripts embedded into **Jenkins** jobs.
* Worked on build scripts using **ANT** and **MAVEN** build tools in **Jenkins** to move from one environment to other environments.
* Worked on **Chef/Ansible** as configuration management tool, to automate repetitive tasks, quickly deploys critical applications and proactively manage changes and Worked with **Agile** development team to develop **CI/CD** in the delivery of product in an open source environment using **Chef**.
* Wrote and modified various **Cookbooks** and **Recipes** for better management of the systems.
* Managed Nodes, Run lists, roles, environments, data bags, cookbooks, recipes in **Chef**.
* Built **EAR** and **WAR** files with custom configuration settings using **Maven** Tool Kit and further developed **Ansible** Playbooks to pull the **Artifacts** stored in **Nexus** to continuously deploy the archives on to **Apache Tomcat Web Server, IIS Servers and WebSphere Application Servers**
* Experience in deploying WAR, JAR, and EAR files in **WebLogic**.
* Involved in scrum ceremonies (stand-up, grooming, planning, demo/review and retrospective) with the teams to ensure successful project forecasting and realistic commitments
* Created **Chef** **Recipes** for automating the Infrastructure, deployment process. Managed **Nodes, Run lists, roles, environments, data bags, cookbooks, recipes** in **Chef.**
* Resolving merging issues during **build** and **release** by conducting meetings with developers and managers.
* Solid understanding of **Linux** **shell** and **Perl** scripting, **UNIX, Windows**, build and release engineering principles
* Assisted 24x7 on-call supports in debugging and fixing issues related to **Linux, Solaris, HP-UX** Installation/Maintenance of Hardware/Software in Production, Development & Test Environment as an integral part of the **Unix/Linux (RHEL/SUSE/SOLARIS/HP-UX/AIX)** Support team.

**Environment**: Linux, RHEL, GIT, Chef, Puppet, Bash Scripting, Python, Maven, Jenkins, JBoss Application Servers, Windows, WebSphere Application Server, Python, Splunk, Linux

**Microland – Bangalore, India June 2013 –May 2015**

**Role: Linux Administrator**

* Performed installation, configuration, and administration of system network components (Windows Server, **Active Directory, VPN connectivity, DHCP, SMTP, LAN/WAN, NAT, IPsec VPN, FTP, POP, IMAP, NIC's, WIC's**).
* Plan, design, deploy, and Windows clients as well as servers through Microsoft Deployment Management.
* Troubleshooting Linux network, security related issues, capturing packets using tools such as IP tables, firewall, TCP wrapper and **NMAP**.
* Worked on network connectivity, SAN storage, creating LVM and taking TSM backup.
* Ensured correct installation, configuration for Active Directory systems, includes policy implementation, DHCP and **DNS**.
* Install, maintain, and upgrade Drupal and Word press on **LAMP stack** and Configured LAMP Stack on Unix/Linux servers.
* Managing File systems and Disk management using Solstice Disk suite.
* Install, upgrade, and manage packages via RPM and YUM package management.
* Knowledge on **LAMP, LDAP, LVM, VVM, Kickstart, Agile environments**
* Worked in User admin groups, maintained account and monitored system performance using Splunk.
* Responsibility for security and documenting the configuration of the system.
* Troubleshooting any reported problems and System performance tuning **FTP, DHCP, DNS telnet.**
* Developed automated processes that run daily to check disk usage and perform cleanup of file systems on Linux environments using shell scripting and **CRON**.

**Environments:** Oracle on Red hat Linux, Samba, Squid, RedHat Linux AS 4/5, Solaris 9/10, Linux Enterprise Desktop, SUSE Linux Enterprise Server, RedHat and Solaris, LDAP.

**– Areas of Expertise –**

Testing & Troubleshooting | Project Management | System Administration | Linux Administration | Strategic Planning | Effective Communication | Data Backup & Recovery | Scripting & Automating.

**Education: -**

Bachelor’s Degree: Vignan’s University.

Master’s Degree: Texas A&M University- Kingsville