**Nagendra Reddy**

  

**Cloud DevOps Engineer**

**+1 847-957-7977 nreddy4455@gmail.com**

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**Professional summary**

**IT Professional with 7 years** of experience as **Cloud** **DevOps Engineer which includes Build and Release Management, Configuration Management, Containerization, Monitoring and Linux System Administrator.**

* Implemented **Agile, Scrum** and **Waterfall** methodologies throughout the process of Application Development and Deployment on cloud-based or on-premise platforms.
* Experienced in deploying and maintaining various multitude applications utilizing **Amazon Web Services (AWS)** services stack including **EC2**, **S3**, **EBS**, **ECR,** **EFS**, **EKS, CloudWatch, IAM,** **Route 53**, **VPC**, **Cloud Formation**, **Elastic Cache**, **Cloud trail**, **SNS**, **SQS** focusing on **High Availability**, **Fault-tolerance** and **Auto Scaling.**
* Proficient in developing **CloudFormation** Templates according to network specification requirement and launched various **EC2,** **RDS instances** and **VPC’s** needed according to the infrastructure in Cloud Formation Template.
* Experienced in provisioning infrastructure using **Terraform** and **CloudFormation** and automated end-to-end transit hub connectivity resource deployment in **AWS**, **Azure** and **Google Cloud Platform** Clouds.
* Expertise in managing AWS assets and architecture that include **ELB, ACM, ALB, NLB, AMI,** **VPC**, **Subnets**, **Routing Tables**, **Security Groups**, **ELB**, **EC2, Route 53** andserverlessmanagement using the **AWS Lambda**.
* Strong in building a highly scalable and available Public cloud infrastructure in **Azure using** services like App services, Azure Blob Storage, Azure SQL database, virtual machines, Fabric controller, Azure AD, Azure search, Notification hub, Application Virtual Networks, Virtual machines, Cloud services, VPN and Application Gateways.
* Experienced in designing **Azure Resource Manager (ARM)** templates and extensive experience in designing custom build steps using **PowerShell** and implemented high availability with **Azure Classic** and **Azure Resource Manager** Deployment models.
* Worked on **Google Cloud Platform (GCP)** services like **compute engine, cloud load balancing, cloud storage, cloud SQL, stack driver monitoring and cloud deployment manager, Content Delivery Network.**
* Proficient in providing consistent environment using **Kubernetes** for deployment, scaling and load balancing for applications, enabling the code development and deployment pipeline by implementing **Docker** containerization.
* Experienced in setting up **Kubernetes** for AWS production Environment using **Kubernetes Operations (Kops)** a cluster management tool to spin up a highly available production cluster.
* Hands-on experience in creating Docker containers using **Docker Files** and building **Docker images,** creating container snapshots, removing images and managing Docker Volumes and pushed those images to **Docker Hub.**
* Implemented Docker methodologies to provision slaves dynamically as needed using **Docker Swarm** and used **Docker Compose** to manage multi-container applications.
* Extensively worked on **Jenkins** to implement continuous integrations for End-to-end automation for all and deployment and stored the artifacts in **Sonatype** **Nexus.**
* Integrated **Jenkins** with various DevOps tools such as **SonarQube**, **Ansible** and used CI/CD system of Jenkins on **Kubernetes** container environment, utilizing **Kubernetes** and **Docker** for runtime environment for CI/CD to **compile**, **test**, **build** and **deploy**.
* Expertise in key areas of **Jenkins** like **Plugin management, Securing and Scaling Jenkins nodes**, integrating Code repositories, troubleshooting performance issues, Analytics, and Test Phases to achieve an end-to-end Continuous Integration and deployment (**CI/CD) pipelines**.
* Experienced in using **Ansible** and **Ansible Tower** as configuration management tool to automate repetitive tasks, quickly deploys critical applications and proactively manages changes.
* Implemented Infrastructure automation through **Ansible** for **auto provisioning**, **code deployments**, **software installation** and **configuration update** and designed AWS virtual servers using **Ansible roles** and **Ansible playbooks** ensuring deployment of web applications.
* Expertise in setting up **Chef repo**, **Chef workstations**, **chef nodes**, development of **Chef Recipes** through **knife** command-line tool to create **Chef cookbooks** to manage systems configuration.
* Used build tools such as **ANT**, **MAVEN** for the building of deployable artifacts from source code repository and used artifact repositories such as **Nexus**, **JFrog** for the **Maven** builds.
* Experienced in implementing branching, merging, managing pre and post commit, tagging and configuration of Source Code Management tools like **SVN**, **GITHUB** and **Bitbucket** on Windows and Linux platforms.
* Ability to develop scripts in **Bash/Shell, PERL, Ruby** and **Python** scripting languages and knowledge in OOPS concepts and on Java Web applications using J2EE.
* Configured AWS **Cloudwatch** to monitor AWS resources and application, including creating AWS customized scripts to monitor various applications and systems and instance metrics.
* Managed **Monitoring Tools** such as **Prometheus, Splunk, Nagios and Azure Monitor** for Resource Monitoring, Network Monitoring and Log Trace Monitoring.
* Experienced in installing **Tomcat, JBOSS, WebLogic** and **WebSphere** Application servers for deployments and configured **Nginx** reverse proxy with Apache.
* Experienced in working with **RDBMS** and NoSQL databases like **Oracle**, **SQL Server**, **DB2**, **MySQL**, **Apache Cassandra** and **Mongo DB**.
* Expertise in using **JIRA** for defect/issues logging & tracking and simultaneously documented all my work using **confluence** and also in using **Kafka** for data streams and to support messaging queues.

**Technical Skills**

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| **Cloud Platforms** | AWS, Microsoft Azure, GCP. |
| **CI/CD Automation Tools** | Jenkins, TeamCity and Azure DevOps (TFS). |
| **Source Code &Version Control Tools** | GIT, GitHub, Bitbucket, SVN. |
| **Configuration Management Tools** | Ansible, Chef, Puppet, Terraform |
| **Build Tools** | Maven, ANT |
| **Orchestration and Containerization Tools** | Kubernetes, Docker Swarm, Docker. |
| **Artifactories**  | Nexus Artifactory, JFrog. |
| **Scripting Languages** | Java, Ruby, Shell Scripting, Perl Scripting, Python, SQL. |
| **Monitoring Tools** | Nagios, Splunk, Cloud Watch, ELK. |
| **Application/Web Servers** | WebLogic Server, WebSphere, Apache Tomcat, JBoss. |
| **Databases** | ORACLE, MYSQL, MongoDB and Maria DB. |
| **Operating Systems** | Linux (Ubuntu, RedHat, CentOS) , Windows, Debian |

**Professional experience**

 **Anthem Inc., Richmond VA February 2020 to present**

 **Sr. DevOps/Cloud Engineer**

**Description:** This is a Migration team responsible for developing and automating the infrastructure on Azure/AWS cloud and my day-to-day activities include building, deploying, and monitoring web application using CI/CD and monitoring tools.

 **Responsibilities:**

* Managed migration of on-premises applications to AWS cloud and created resources in cloud to support like **VPC**s, **Security Groups, NACL** and **ELBs** and Auto-Scaling policies for scalability, availability and elasticity.
* Experienced in and deploying applications utilizing AWS stack **(Including EC2, Route53, S3, RDS, Dynamo DB, SNS, SQS, IAM**) focusing upon high-availability, fault tolerance, and auto-scaling in AWS Cloud Formation.
* Worked on developing **Python** Scripts to Automate **AWS services that include web AWS Lambda**, **ELB**, **Cloud front Distribution, database**, **EC2** and database security groups, **S3** bucket also the application configuration, this Script creates like stacks, single servers or joins web servers to stacks.
* Developed **AWS** **Cloud Formation** templates to deploy custom sized **VPC,** subnets, **NAT** to ensure successful deployment of Web applications and database templates.
* Built **Azure** V2 network infrastructure including Site to Site connection through Meraki VPN/Firewall appliance, with Point-To Site (V1 network connection to V2 Network) for migration of **Azure VM**s from classic Portal to **Azure** Portal.
* Migrated **SQL Server 2008** database to Windows **Azure** SQL Database and updating the Connection Strings based on **Azure Data Migration services** and configured the **Azure** services**.**
* Configure and maintain highly scalable and **fault tolerant** multi-tier AWS and Azure environments spanning across multiple availability zones using **Terraform**and**CloudFormation**.
* Developed **Terraform scripts** to create Staging, Development, Production and Disaster Recovery environments and integrated GitHub for storing Terraform scripts and for the CI/CD purposes.
* Configured Red Hat OpenShift Container Platform for **Docker and Kubernetes** and used **Kubernetes** to manage containerized applications using its **nodes**, **ConfigMaps**, **selector** and deployed application containers as **Pods**.
* Deployed multiple databases and applications using **Kubernetes** cluster management, some of the services are Redis, **Nginx** etc. and maintained **Kubernetes** to manage Containerized applications.
* Built and maintained containerized **Kubernetes** clusters using **Kubernetes** Orchestration process and **configured** entire master and node architecture for microservice deployments.
* Extensively worked in Scheduling, deploying, managing container replicas onto a node using Kubernetes and experienced in creating Kubernetes clusters work with **Helm** **charts** running on the same cluster resources.
* Configured and maintained container-based deployments using **Docker and developed Docker** images containing Middleware and Applications together and evaluated Kubernetesfor **Docker** container orchestration.
* Experienced in configuring **SSH, SMTP servers, Build Tools**, and **Source Control** repositories to **Jenkins** and installed multiple plugins to **Jenkins** with Proxy configuration to get auto-updates.
* Integrated **Jenkins** with various DevOps tools such as **Nexus, SonarQube** and used **CI/CD** system of Jenkins on Kubernetes container environment, utilizing Kubernetes and Docker for the runtime environment for the CI/CD system to build and test and deploy.
* Developed **CI/CD pipeline using Jenkins** for automation around Kubernetes environment and utilized Jenkins for the runtime environment to Build, Test, and Deploy microservices.
* Configured **Jenkins** to provision AWS servicesand migrated jobs from old **Jenkins’s** server to the latest and authenticated **Jenkins** to use GitHubcredentials, created a mechanism to run **Jenkins** jobs when changes are pushed intoGitHub.
* Managed server Configuration using **Ansible** and designed/Implemented **AWS** virtual servers by configuring **Ansible** roles to ensure deployment of web applications and monitored various administrative tasks on multiple servers using **Ansible**.
* Demonstrated **Ansible** along with **Ansible Tower** to be used to automate different software development processes all over the team organization as part of Continuous Deployment.
* Managed **AWS**infrastructure and automation using AWS**CLI** and **APIs** and also worked on configuring Inbound and Outbound network roles with automation **Ansible**.
* Developed build scripts using **MAVEN** and integrated it with Jenkins to migrate from one environment to other environment by making changes in the **POM.xml** file.
* Managed the **Maven** builds and stored them in **Nexus antifactory** tool and used the same to share the snapshots and releases of internal projects.
* Expertise on using Version control tools **GIT** including Branching, Merge Strategies, migrated projects from Subversion repositories to **GitHub** Enterprise repositories through Team Foundation server (**TFS**).
* Maintained **GitHub** and helped setup **GitHub**accounts for new employees and configured Jenkins to automatically pull the code from Git**-Hub** repositories using webhooks.
* Used **Nagios** forwarders to provide reliable and secure collection and delivery of data to the **Nagios** platform for indexing, storage, and analysis and also **AWS Cloudwatch** to monitor the AWS resources.
* Configured **MongoDB** database concepts such as locking, transactions, indexes, replication, schema design. Created multiple databases with sharded collections and choosing shard key based on the requirements. Expertise in managing **MongoDB** environment from availability, performance and scalability perspectives
* Expertise in developing **Shell** and **PowerShell scripts** for automation of manual tasks and for supporting the Jenkins CI/CD pipelines in setting up virtual environments.
* Experienced in using **Red Hat Linux machine**, and with installation, deployment and maintenance of middleware application servers to **RHEL** Dev and Test environments.
* Used Atlassian Tool suite includes **JIRA** for handling documentation, running automated tests, bug tracking and feature management, confluence for documentation.

**Environment:** GIT, GitHub, Jenkins, Maven, Ansible, AWS, Azure, Docker, Kubernetes, Terraform, CloudFormation, Nexus, Nagios, SonarQube, MongoDB, RHEL, JIRA.

 **Barclays Bank PLC, Whippany NJ March 2018 to January 2020**

 **Cloud DevOps Engineer**

**Description:** Barclays is a company that specializes in banking technologies. Part of Infrastructure team, I am responsible to Maintain and Handle infrastructure in Azure Cloud and Maintain Kubernetes Clusters deployed in Google Cloud Platform.

 **Responsibilities:**

* Designed and implemented **Azure** Cloud Infrastructure by creating **ARM templates** for **Azure platform** also used Terraform to deploy the infrastructure necessary to **create development**, test, **production environments**.
* Configured **Azure** Virtual Networks, subnets, DHCP address blocks, **Azure** network settings, DNS settings, security policies and routing and also deployed **Azure** IaaS virtual machines and Cloud services (PaaS role instances) into secure Virtual Networks and subnets.
* Designed migration approach to move workloads from On-Premises to **Azure** and developed new cloud-ready application solutions using **Azure Site Recovery** and **Azure backups** and collecting data from all **Azure Resources** using Log Analytics and stored in the **Azure** Storage and analyzed the data to resolve issues.
* Worked on **GCP CDN** (content delivery network) to deliver contents from **GCP** cache locations by drastically improving user experience and latency, Hybrid Environment between **Azure**/**GCP** environment.
* Create clusters in **Google Cloud** and manage the clusters using Kubernetes and deployed code to Google Cloud, created new namespaces, created Docker images and pushing them to container registry of **Google Cloud**.
* Managed Clusters using **Kubernetes** and worked on creating many pods, replication controllers, services, deployments, labels, health checks.
* Configured Kubernetes charts using **Helm**, and created reproducible builds of the Kubernetes applications, managed Kubernetes deployment and service files and managed releases of **Helm packages**.
* Used **Kubernetes** to expose the applications to various ports and created high priority implied firewall rules for both inbound and outbound as a source and destination respectively.
* Integrated **Jenkins** CI/CD with **Bitbucket** version control and implemented continuous build based on check-in for applications and created GitHub Webhooks to setup triggers for commit, push, merge and pull request events to drive all builds to **Docker registry** and then deployed to **Kubernetes**, created pods using Kubernetes.
* Virtualized the servers using **Docker** for the test and dev-environments needs and configured automation using Jenkins CI/CD Pipelines.
* Automated builds using **Azure DevOps (TFS)** to successfully deploy the files and Maintained all the versions of code using Azure DevOps repositories.
* Involved in configuring **continuous integration (CI)** from source control, setting up build definition within **Azure DevOps (TFS)** and configure **Continuous Delivery (CD)** to automate the deployment of ASP.NET MVC applications to Azure web apps.
* Automated the Daily VSTS Deployments with Azure DevOps Release Rest API using PowerShell and created PowerShell scripts to trigger **Azure DevOps** status Email and restarting terminated deployments.
* Extensively worked on **Ansible**deployments, written various **Ansible playbooks**with multiple roles, tasks with loops, templates, service management, host variables, group variables, etc.
* Configured Azure storage accounts, VNET's, Subnets, assigned the public IP, Altered the security groups, NIC's and Azure VM's for internal applications using **Ansible** playbooks.
* Implemented **multi-tier**application provisioning in an **open stack**cloud, integrating it with **Ansible,** migrating the application using **Maven**as a build tool.
* Experienced in **Database** mirroring using **SQL**server and fail over clustering on high availability **SQL server** also responsible for SQL server edition upgrades and SQL server patch management.
* Managed Version Control tool **Bitbucket** Enterprise, and Automated current build process with **Jenkins** with proposed Branching strategies to accommodate code in various testing cycles.
* Developed **Bash** and **PowerShell** scripts for automation of daily tasks and Involved in setting **up bit bucket** code repositories for this project.
* Responsible for developing and maintaining build, deployment scripts for test, Staging and Production environments using **Maven** and also configured confidential repository manager for managing the Maven artifacts.
* Worked with **Splunk** monitoring using custom monitors, maintaining and adjusting existing monitors and responding to generated requests.

**Environment:** Jenkins, ARM, Azure, Azure AD, Azure Log Analytics, GCP, Kubernetes, Terraform, Docker, Ansible Bitbucket, Traffic Manager, DNS, DHCP, VLAN, TCP/IP, NTP, Windows PowerShell, Microsoft Storage, Network Security Groups, Azure AppInsights, Azure Monitor, Splunk, Bash, Shell Scripting.

 **Infasta Soft Solutions Pvt. Ltd, India October 2015 to July 2017**

**Build & Release Engineer**

**Description:** Being a part of Support Team, I am Responsible for configuring the build and release activities on critical enterprise level web applications and responsible for maintaining and deploying builds in UAT and Production environments.

**Responsibilities:**

* Implemented ‘**serverless'** architecture using **API Gateway, AWS Lambda, and Dynamo DB** and deployed **AWS Lambda code** from AWS S3 buckets. Created Lambda Deployment, configured it to receive events from the S3 bucket and developed **VPC**’s, assigned the **IAM** roles for the management.
* Experienced in creating **AWS** **S3 buckets**, performed folder management in each bucket, Managed **Cloud trail logs**, and **objects** within each bucket.
* Experienced in setting up **GCP Firewall rules** in order to allow or deny traffic to and from the VM's instances based on specified configuration and used **GCP** cloud CDN (content delivery network) to deliver content from **GCP** cache locations drastically improving user experience and latency.
* Worked on **Google Cloud Platform** (GCP) services like **compute engine, cloud load balancing, cloud storage, cloud SQL, stack driver monitoring and cloud deployment manager.**
* Developed **Terraform** scripts to implement AWS infrastructure as a code mechanism through **Terraform** to build staging and production environments.
* Worked on developing **Jenkins** build pipeline jobs using the **groovy** script for **Node.js, .NET, and Java**-based applications hosted on AWS-lambda.
* Installed several **Jenkins**/Plug-ins for **GIT** Repository for setting up timely **SCM** Polling for Immediate Builds and Deployed Applications using custom ruby modules through **Chef** as part of the **CI/CD Process**.
* Installed and configured **Maven** for build automation of JAVA based applications and integrated Maven Plugin with Jenkins for serving the purpose of CI/CD pipeline.
* Hands-on experience in setting up **Kubernetes** (k8s) Clusters for running microservices and migrated several microservices into production with **Kubernetes** backed Infrastructure.
* Expertise in configuring **Kubernetes** for creating new Projects, Services for load balancing and adding them to Routes to be accessible from outside, Creation of Pods through new application and control the scaling of pods, troubleshooting pods through SSH and stack driver/Splunk logs.
* Experienced in working on **Docker**Hub, creating **Docker**images and handling multiple images primarily for middleware installations and domain configuration.
* Collaborated with development and Support teams to setup a Continuous Delivery environment with the use of **Docker**, continuous build and delivery tools.
* Developed **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**.
* Installed **chef** server and server-client to pick up the build from the repository and deploy in target environments and created **chef**cookbooks using recipes to automate build with development pipeline.
* Maintained and Administered **GITHUB** Source Code, updated Release reports from change management control and created Branches, Labels and performed Merges in Stash and GITHUB.
* Used Apache Tomcat as an application server for deploying the artifacts, automated the process of deployment to **Apache TOMCAT** Application Servers by developing Python Scripts.
* Create, maintain and customize complex **JIRA** project configurations including workflows, custom fields, permissions and notifications.

**Environment:** AWS, GCP, Git, Docker, Jenkins, Chef, Apache Tomcat, Python, Nagios, Shell Scripting, Linux, Unix, JIRA.

 **Avon Technologies India Pvt. Ltd, India May 2013 to September 2015**

**Linux/Unix System Administrator**

 **Responsibilities:**

* Provided high durability of the available data using data storage in the **AWS S3** bucket, versioning **S3**, lifecycle policies. Also, web hosting the data from the **S3** bucket by creating URLs.
* Utilized **AWS CLI** to automate backups of ephemeral data-stores to **S3** buckets, **EBS** and create **AMIs** for mission-critical production servers as backups and used **AWS.**
* Worked with container-based deployments using **Docker**, working with **Docker images**, **Docker Hub**, **registries** and Kubernetes. Configuring **Docker** containers and creating **Docker** files for different environments.
* Worked on Continuous Integration System i.e., **Jenkins**. Used Jenkins for official nightly build, test and managing change list. Installed Multiple Plugins for smooth build and release build pipelines.
* Configured security and system in **Jenkins** and also added multiple nodes to Jenkins and configured SSH for continuous deployments.
* Configured **Jenkins**, used as a Continuous Integration tool for Installing and configuring **Jenkins** Master and hooking up with different build slaves. Automatized Java application builds using with **Ant**.
* Experienced in setting-up **puppet master, client and wrote scripts** to deploy application packages on **Dev, QA, and production** environment.
* Worked on design and implementation of a **Puppet-based configuration management system** for all new Linux based servers hosted on the AWS cloud platform.
* Involved in the development of **Puppet** modules with Jenkins for continuous integration and continues deployment of managed products, and related services.
* Authored **ANT** scripts to automate the entire build process and participated in the migration of **ANT** projects into Maven for better build performance.
* Migrated core repository from **Subversion** to Bitbucket. Involved in migrating the entire code base from subversion to Bitbucket ensuring health of our builds isn’t affected, performed high level merges of branches, code bases.
* Performed system administration of **Linux/UNIX** servers by using Operating Systems of Solaris, Managing SUN Solaris, Compaq and Linux workstations and servers.
* Installation and administration of **RHEL 4.0/5.0, Centos 3/4/5** and **SUSE 10.x** and tuning the kernel parameters based on the application and database requirements.
* Developed automated processes that run daily to check disk usage and perform cleanup of file systems on **LINUX** environments using shell scripting.
* Monitored overall system performance, performed user management, system updates, file systems, network and disk & storage management using **NAGIOS** monitoring.
* Performed remote system administration using network protocol tools such as **SSH, HTTP, TELNET, FTP, SFTP, SMTP.**

**Environment:** AWS, S3, EBS, Docker, Jenkins, Ant, Nagios, Red Hat Linux (RHEL 4/5), UNIX, Logical Volume Manager, Red Hat Cluster Servers, CentOS, Nagios, Web Logic.