

**Birendra Shrestha**

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**Professional Summary:**

* 7+ Years of Proficient Experience in Technologies Like Ubuntu / RedHat / CentOS Servers,Amazon AWS, Azure DevOps, Shell Scripting, worked as Cloud/DevOps Engineer, Linux Administrator and Middleware Engineer providing solutionsto the complex issues utilizing most of the resources such as Virtualization, Integration and configuration Management tools, Configuring, Monitoring. Adopting DevOps Culture to automate the entire Software Development Life cycle and Implemented Continuous Integration, Delivery/Deployment pipelines.
* Being a part of AWS DevOps Engineer used all the AWS associated compute services like EC2, Auto Scaling, Kubernetes, VMware and storage services like S3, EBS, AWS Storage, Elastic File Systems and DataBase services like DynamoDB(No SQL),RDS(MySQL, Oracle, SQL Servers) and Content Delivering tools like VPC, Route 53, Load Balancing, Cloud Front.
* Expertise in creating complex and custom IAM policies, Roles, and user management for delegated users within AWS and experience in developing AWS cloud formation templates to create custom sized VPC, Subnets, EC2 instances, ELB and security groups.
* Extensive knowledge in migrating applications from internal data center to AWS.
* Experienced with both framework and cloud formation to automate AWS environment creation.
* Experience in working with Linux including Red Hat, CentOS, Ubuntu, Debian, configuration and administration of Red Hat Virtual machines in VMware Environment.
* Expertise in implementing the Configuration Management Tools like Chef, Puppet and Ansible.
* Created various plays / playbooks for automating various repetitive tasks, quickly deploy critical applications, Environment configuration Files with the help of various Ansible modules. Written Ansible Playbooks using YAML for Maintaining Roles, Inventory Files and Groups Variables.
* Experience in Azure DevOps, created both build and release pipelines
* Deployed servers using Puppet, and Puppet DB for configuration management to existing infrastructure and Implemented Puppet 3.8 manifests and Modules to deploy the builds for Dev, QA and production.
* Experience in Installing Chef Server Enterprise On-premise/workstation/bootstrapped the nodes using knife and developed Chef Cookbooks, Recipes, Roles and Data Bags to automate the services related to deployment.
* Utilized Kubernetes as a platform to provide a platform for automating the deployments, scaling and operation of application containers across a cluster of hosts. Worked closely with development teams and test engineers for EC2 size optimization and Docker build Containers. Used Kubernetes during debugging. Leading up to production when multiple application build must be tested for stability.
* Setting up CI/CD pipeline using continuous integration tools Jenkins and automated the entire AWS EC2, VPC, S3, SNS, RedShift, EMR based infrastructure using Terraform, Chef, Python, Shell, Bash scripts and Managing security groups on AWS and custom monitoring using CloudWatch.
* Worked with Terraform to create stacks in AWS updated the Terraform scripts based on the requirement on regular basis.
* Expertise on Source code control tools like SVN, Bit bucket (Git) and good knowledge on Branching and merging code lines in the GIT.Also used web hooks for integrating with continuous Integration tools Jenkins, Bamboo and ANT, MAVEN for generating builds. Designed quality profiles and certain standards set by installing Quality Gates in SONARQUBE.
* Expertise's in using build tools like MAVEN for the building of deployable artifacts such as war & ear from source code.
* As a build and release engineer used Microservice to build a large application.
* Understanding with the standards and great practices in Software Configuration Management (SCM) in Agile-SCRUM and Waterfall methodologies and Implemented Change Management Process for tracking different clients and setup tracking using JIRA/ ServiceNow.

**Education**: **University of Arlington Texas, Bachelor’s in Informtion Science.**

**Certifications** : **AWS** **Certified Solution Architect Associate**

**Technical Skills:**

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| **Operating Systems** | RHEL/CentOS 5.x/6.x/7, Linux-Ubuntu, Windows 7/8/XP/10, AWS-Linux CLI |
| **Networking** | VPC, Route-53, LDAP, DNS, SSH |
| **Databases** | MySQL, Cassandra, PostgreSQL, SQL Server |
| **Backup/Monitoring Tools** | S3 (Simple Storage Service), Cloud watch, Splunk, Nagios |
| **Source Control** | GIT, SVN |
| **Configuration Management** | Ansible, Puppet, Chef |
| **Virtualization/ Containerization Technologies** | AWS ECS, Docker Container services, Pivotal Cloud Foundry |
| **Cluster Management** | Kubernetes, Docker  |
| **Languages** | Shell scripting, Bash |
| **Build and Deploy Tools** | ANT, Maven, Jenkins, Bamboo, TeamCity, TFS, MS Build |
| **Infrastructure** | AWS, Azure |
| **Software Methodologies** | Agile-SCRUM, Waterfall |
| **Project Management/ Bug tracking Tools** | JIRA, Confluence |

**Professional Experience:**

**Phone2Action, Arlington, VA Mar 2020– Present
AWS Cloud DevOps Engineer**

**Responsibilities:**

* Performed general administration duties including permissions, upgrades, and patches on cloud systems (Azure, AWS).
* Implemented Azure Resource Groups, Resource Tags, AAD groups, and Role based access.
* Designed and implemented cloud network architecture using Azure virtual networks, VPN, and express route to establish connectivity between on premise and cloud.
* Develop PowerShell scripts and ARM templates to automate the provisioning and deployment process.
* Designed and deployed applications utilizing AZURE stack (Including Azure VM's, Blob Storage, SQL Database, Data Factory, Virtual Network, Traffic Manager, Load Balancer, AKS, Key Vault, Log Analytics) to achieve high-availability fault tolerance, and auto scaling in Azure Resource Manager.
* Worked on Azure VPN-Point to Site, Virtual networks, Azure Custom security, endpoint security and firewall.
* Created Clusters in Azure Kubernetes Service (AKS) to deploy a managed Kubernetes cluster in Azure.
* Involved in managing the pipeline using Spinnaker.
* Used AWS ECR with Spinnaker and Kubernetes.
* Implemented Ansible to automate cloud provisioning, configuration management, and application deployments.
* Implemented CI/CD Pipeline for DevOps environment. It bridges the gap between development and operations teams by automating the building, testing, and deployment of applications using Git, Docker, Jenkins, and Ansible.
* Built effective monitoring, logging, and auditing of production systems to ensure compliancy with mandated policies.
* Guided and supported application teams with onboarding, troubleshoot and resolve implementation issues like Troubleshoot and identify performance, connectivity and other issues for the applications hosted in Azure platform.
* Build API's in Ansible for operational work to install software so that end users can call API's from Ansible Tower and can easily install whatever software they want.
* Writing Docker files for Docker images. Spin up Docker containers for environments.
* Created Clusters using Kubernetes and worked on creating many pods, replication controllers, services, deployments, labels, health checks and ingress by writing YAML files.
* Maintained the user accounts (IAM), RDS, Route 53, VPC, RDB, Dynamo DB, SES, SQS and SNS services in AWS cloud.
* Utilized AWS Cloud Watch to monitor the performance environment instances for operational and performance metrics during load testing.
* Worked on AWS EC2, EBS, Trusted Advisor, S3, Cloud Watch, Cloud Front, IAM, Security Groups, Auto-Scaling.
* Set-up AWS infrastructure (using terraform and Ansible) required to run the application as per client's standards (In HA, DR with Load balancing and DNS routing).

**Environment**: Azure, AWS, AKS, Ansible, Docker, Git, Jenkins, PowerShell, Python, Kubernetes, Docker Compose, Docker Swarm, Ansible Tower, and Splunk.

**Mercy Health,St Louis**, **MO Mar 2018– Feb 2020
Cloud DevOps Engineer**

**Responsibilities:**

* Migration to Amazon Web Services & cloud technologies from their current datacenter and virtual environments.
* Designed and implemented AWS cloud-based instances for use on their current and upcoming projects.
* Worked with Amazon Web Services (AWS), EC2 Storage Managements integration and utilization within the infrastructure and applications.
* Infrastructure deployment, administration, troubleshooting and configuration of virtual and cloud instances on AWS and VMware platforms.
* Implemented AWS solutions using S3, RDS, EBS, Elastic Load Balancer, and Auto scaling groups.
* Responsible for Design of different Release Environments for new projects and monitoring.
* Implementing a Continuous Delivery framework using Jenkins, Chef, and Maven & Nexus in Linux environment.
* Creating, Utilizing, Managing Policies in S3 buckets on AWS. .
* Working on transferring SQLite data generated to S3 bucket using Python scripts.
* Working on Data Lakes in AWS using the SQLite data transferred to the S3 bucket.
* Using Cloud Formation tools like AWS Glue worked on Big Data related Data Lakes on Amazon Web Services.
* Created IAM roles to work on Data Lakes and added database to run it on demand.
* Wrote templates to build the infrastructure for the Vue.js application. NPM (Node Package Manager) dependencies were installed and used to run the application.
* Created a resource group which includes storage accounts, containers, functions, and SQL databases.
* Created CI/CD Pipelines in AZURE DevOps environments by providing their dependencies and tasks.
* Created azure key-vault to store all the credentials for SQL databases and API keys.
* Worked with automation tools which are pre-installed in the azure DevOps portal to build the packages. The automation tools like NPM and MAVEN with build.xml and pom.xml scripting languages depending on the packages like java or java script.
* Automated configuration management and deployments using Ansible playbooks and Yaml for resource declaration. And creating roles and updating Playbooks to provision servers by using Ansible.
* Worked on monitoring servers using Nagios, Splunk using logging tools like ELK.
* Coordinate/assist developers with establishing and applying appropriate branching, labeling/naming conventions.
* Created Resource groups, App Services and Storage accounts manually on the Azure portal and later converted them to code, for the automation and easy migration keeping the future in mind.
* Created different stages, Published the Artifacts, Copied the files and Archived the files.
* Similarly, when the Master branch of GitHub is updated, it directly triggers staging, where you can verify all the developments before it moves to production.
* Created different pipelines, one for the cloud deployment, other for the backend data& one for Data flow.
* Wrote ARM templatesand PowerShell Scripts, to automate the pipelines as a code.
* Performed Integrated delivery using Jenkins. Done Branching, Tagging, Release Activities on Version Control Tools GitHub.
* Worked in an Agile methodology model, using Jira as the project management tool.
* Wrote the Bash Scripts for cloning the GitHub and setting up the project to work on the visual studio 2019.
* Worked onVisual studio 2019,and built the project using MS Build for the continuous integration.
* Worked on the Code Quality using SonarQube.Installed SonarQube plugin in Jenkins and integrated with project.Integrating SonarQube in the CI pipeline for code coverage reports.
* Used Jenkins and pipelines to drive all micro services builds out to the Docker registry and then deployed to Kubernetes

**Environment:** AWS, Kubernetes, Docker, Terraform, Ansible, Docker, RHEL 5/6/7, CloudWatch, EBS, Directory Services, Route53, RDS.

**RGA(ReInsurance Group of America), Weldon spring, M0 Nov 2016– Feb 2018
Cloud DevOps Engineer**

**Responsibilities:**

* Hands-on experience with Amazon Web services (AWS) and implemented solutions using EC2, S3, and RDS in cloud formation Json templates, EBS, Elastic Load Balancer, Auto Scaling Groups, Auto scaling Launch Configuration and Auto scaling Lifecycle Hooks.
* Creating,Utilizing,Managing Policies and Glacier storage in S3 buckets on AWS.
* Written Terraform modules for automating the creation of VPC’s and launching AWS EC2 Instances. Modules are
* Worked on launch configuration templates for launching EC2 instances using auto scaling groups.
* Worked on AWS Cloud Watch,Cloud Formation,Cloud Trail Services and cloud front to setup and manage the cached content delivery.
* Created Cloud Formation templates and deployed AWS resources by using it.
* Involved in integration of DevSecOps pipeline components to include, using a code repository, an artifact repository, security assessment platform, and an orchestrated integration and delivery platform to enable automated application building, testing, securing and deployment.
* Responsible for design and integrate of capabilities to establish a DevSecOps pipeline, utilizing lab and cloud resources to design, build, test and evaluate functional components and technologies
* Worked with GITHUB to store the code and integrated it to Ansible to deploy the playbooks.Deployed micro services, including provisioning AWS environments using Ansible Playbooks.
* Using Ansible Tower, which provides easy to use visual dashboard, role-based access control, job scheduling, integrated notifications and graphical inventory management that allows use of Ansible for their deployment.
* Worked on AWS Cloud Watch, Cloud Formation, Cloud Trail Services and cloud front to setup and manage the cached content delivery.asy for the individual teams.
* Creating from scratch a new continuous integration stack based on Docker and Jenkins, allowing transition from dev stations to test servers easily and seamlessly.
* Created Docker images using a Dockerfile, worked on Docker container snapshots, removing images and managing Docker volumes.Created Docker compose file-using YAML for deploying MEAN stack (MongoDB, Express, AngularJS, Node JS) applications onto Docker containers before deploying them into production environment.Using Docker container clusters to clone the production servers and implementing cabernets orchestration for clone's production servers.
* Managed Microservices using Docker to quickly spin up into production environment and auto-scaling them and orchestration using Amazon EC2 container service (ECS) and deploy it to an Amazon EC2 instance using launch configuration templates.
* Experienced in deployment of applications on Apache Web Server, Nix and application servers such as Tomcat, JBoss.
* Deployed Kubernetes clusters on top of Amazon EC2 Instances using KOPS and Managed local deployments in Kubernetes, creating local cluster and deploying application containers and building/maintaining Docker container clusters managed by Kubernetes and deployed Kubernetes using HELM Charts.
* Used Elasticsearch, Logstash and Kibana (ELK stack) for centralized logging and analytics in the continuous delivery pipeline to store logs and metrics into S3 bucket using lambda function.
* Built a new CI pipeline, Testing and deployment automation with Docker, Jenkins and Ansible. Integrating Sonarqube in the CI pipeline for code coverage reports and sonar metrics. Integrating Sonarqube in the CI pipeline to analyze code quality and obtain combined code coverage reports after performing static and dynamic analysis.
* Jenkins for integrating Maven to generate builds, conduct unit tests with Junit Plugin,Regression tests,with Selenium,AppDynamics & ELK Stack for monitoring.
* Installing and configuring LAMP (Apache/ Tomcat/ MySQL/ php) using, Reverse-proxy servers (Nginx).
* Created and maintained various DevOps related tools for the team such as provisioning scripts, deployment tools and staged virtual environments using Docker and Vagrant.
* Schedule and perform process audits and recommend process improvements. Continuously work towards optimization of process and workflow to improve turnaround and resolution time.

**Environment:** AWS, Ansible, Terraform, Docker, Kubernetes, Jenkins, Maven, PostgreSQL, RHEL 5.x, 6.x, 7, Oracle/DB2

**Progressive Leasing, Draper, UT Mar 2015– Oct 2016
AWS Cloud DevOps Engineer**

**Responsibilities:**

* Involved in designing and deploying large number of applications utilizing most of the AWS stack includes not limited to EC2, Route53, S3, RDS, DynamoDB, SNS, SQS and IAM focusing on high-availability, fault tolerance, and auto-scaling in AWS cloud formation.
* Developed Templates for AWS infrastructure as a code using Terraform to build staging and production environments.
* Worked on 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 CloudFront, CloudWatch, OpsWorks, RDS, ELB, EBS, S3, glacier, Route53, SNS, SQS, KMS, CloudTrail, IAM.
* Worked on migrating and managing multiple applications from on premise to cloud using AWS services like S3, Glacier, EC2, RDS, CloudFormation and VPC.
* Designed AWS Cloud Formation templates to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates
* Build out server automation with Continuous Integration - Continuous Deployment tools like Jenkins/Maven for deployment and build management system
* Provided highly durable and available data by using S3 data store, versioning, lifecycle policies, and create AMIs for mission critical production servers for backup.
* Installed and configured various web application servers like Apache Tomcat web server, JBoss for deploying the artifacts and deployed applications on AWS by using Elastic Beanstalk.
* Managed AWS EC2 instances utilizing Auto Scaling, and Elastic Load Balancing for our QA and UAT environments as well as infrastructure servers for GIT and Chef.
* Experience in automating the java applications using serenity tool. And also working knowledge on cucumber
* Experienced in build and deployment of Java applications on to different environments such as QA, UAT and Production.
* Performed Integrated delivery (CI and CD process) Using Jenkins, Nexus, Yum. Branching, Tagging, Release Activities on Version Control Tools: SVN, GitHub.Application Deployments & Environment configuration using Chef, Ansible. Written Ansible Playbooks to configure, install software and other packages on to the application.
* Maintain Chef servers and management application that can use ServiceNow (CI) data to bring computers into a desired state by managing files, services, or packages installed on physical or virtual machines.
* Deployed the java application into web application servers like Apache Tomcat. Involved in the installation and configuration of Nix as a web server.
* Experienced in deployment of applications on Apache Web server, Nix and Application Servers such as Tomcat, JBoss.
* Implemented comprehensive cloud monitoring and incident management solution using Cloud kick, Data dog.
* Hands on experience in using tools like Docker for orchestrating, linking and deploying the services related to the containers.
* Automated the cloud Deployments using Ansible and AWS Cloud Formation Templates from scratch as effort of migration.
* Worked with various scripting languages like Bash&Python. Wrote Python scripts for pushing data from MongoDB to MySQL Database.
* Experience in end to end knowledge of the project, starts with Unix process and do business logic and again calls shell script in NOHUP mode, which in turn calls PL/SQL program to complete the business requirements etc.
* Understanding & usage of tools like Bamboo, JIRA, Nexus. Working with JIRA tool to track all the defects and changes released to all environments.

**Environment:** AWS, Cloud Formation Templates, RDS, CloudWatch, Ansible, Git, Tomcat, Apache, Jenkins, RHEL, Linux, Python, Ruby Chef, JIRA, Maven, Art factory, RHEL 6.5, 6.8, Oracle, Windows Server 2008, Confluence, Agile

**CDW, SaltLakeCity, UT Jul 2014– Feb 2015
Linux Systems Engineer**

**Responsibilities:**

* Administered, maintained Red Hat, operating system, applications & network problems, and performance issues.
* Worked as part of a team to keep Linux OS systems maintained and optimized through daily patching, upgrading, and tuning when system maintenance was required.
* Configuration of NIS, DNS, NFS, SAMBA, SENDMAIL, LDAP, TCP/IP, Send Mail, FTP, Remote access Apache Services on Linux & Unix Environment.
* Responsible for configuring and connection to SSH through SSH clients like Putty Remotely copying files using SFTP, FTP, SCP, WinSCP, and FileZilla.
* Diagnosed and resolved problems associated with DNS, DHCP, VPN, NFS, and Apache.
* Troubleshooting user SSH and user authentication. Configuring OpenSSL.
* KickStart servers based off RHEL 6.x / 7.x in production, development and testing environments.
* Deployed the artifacts stored in the Nexus to the Apache Tomcat Server.
* Writing shell/Bash scripts for Automated Back- ups and Cron Jobs.
* Maintained Virtual servers in VMware environment.
* Participate in installing and configuring UNIX/LINUX based Oracle 10g products.
* Responsible for resolving network issues using network tools like ping, TCP traceroute and TCP dump. ManageD security of servers.

**Environment :** Linux OS,Unix,