### **Rituparna Halder**

Sr AWS Developer/Test Data Management Developer

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**CAREER SUMMARY:**

**7+** Years of Industry Experience in **Cloud/DevOps Engineering,** Build/Release Management, Linux administration and Cloud Management as Application Developer with increased responsibilities of experience in the **Life Insurance, Healthcare** and **Financial** domain using both **Waterfall** and **Agile** methodologies.

**PROFESSIONAL EXPERTIZE:**

* Firsthand experience in developing applications on **Microsoft Azure** and **Amazon Web Services.**
* Worked with **Microsoft Azure** which includes creating **PaaS builds, deployments, Storage Accounts, Queues, CDN**, Azure Service Bus and extensive experience in designing **AZURE Resource Manager (ARM)** templates.
* Experience in dealing with **Windows Azure IaaS** - Virtual Networks, Virtual Machines, Cloud Services, VPN, Application Gateways Express Route, Traffic Manager, VPN, Load Balancing, Application Gateways, Auto-Scaling, Resource Groups, Windows Azure PaaS storages like Blob (Page and Block), SQL Azure.
* Created **Azure services** such as compute virtual machines, azure storage, azure active directory, SQL Database, Azure DNS and Azure Application Insights. Created **Azure Virtual Networks, subnets**, Azure network settings and Azure cloud.
* Build out **Azure DevOps** Infrastructure using **Azure Runbooks, Azure Data Lake, Azure data factory, RPM** and DevOps.
* Extensive experience in AWS Amazon cloud service platform and its features: **EC2, VPC, SNS, Elastic Beanstalk, API Gateway, NACL, Cloud watch, Cloud trail, RDS, DynamoDB, Cloud formation AWS configuration, Load Balancing, Lambda, S3, IAM, Security Groups.**
* Used **AWS ECS** to create highly scalable, high-performance **container orchestration** service to support **Docker** containers to easily run and scale containerized applications on AWS.
* Worked in container based technologies like **Docker, Kubernetes** and **Openshift.**
* Provided security and managed user access and quota using AWS Identity and Access Management (**IAM**), including creating new Policies for user management in JSON.
* Strong experience with **Monitoring tool** such as **cloud watch**.
* Hands on experience on working with **System health and performance Monitoring Tools** like **Splunk, Cloud Watch, Elasticsearch** etc.
* Launching **Amazon EC2 Cloud Instances** using **Amazon Web Services (Linux/ Ubuntu/RHEL**) and Configuring launched instances with respect to specific applications.
* Expertise in integrating **Terraform with Ansible** to create and **Version the AWS Infrastructure**, designing, automating, implementing and sustainment of Amazon machine images (AMI) across the **AWS Cloud environment.**
* Hands-on Experience working on **Migrations from On-Premises to** **AWS Cloud**.
* Expertise in Branching, Merging, Tagging and maintaining the versions across the environments using SCM tools like **Git and GitHub.**
* Experience with Cloud automation technologies such as **Cloud Formation** and **Terraform** for building, changing, and versioning infrastructure and manage existing and cloud infrastructure as well as custom in-house solutions.
* Designed and created multiple deployment strategies using **CI/CD** pipelines using **Jenkins**.
* Expertise in Application Deployments & Environment configuration using **Ansible, Chef, Puppet.** Managed servers on the Amazon Web Services (**AWS**) platform instances using **Puppet, Chef** Configuration management.
* Experience in writing playbooks and deploying applications using Ansible.
* Used Virtualization technologies like **VMware**.
* Extensively used build utilities like **Maven, ANT** for building of **jar, war** and **ear** files.
* Created and managed **VMs (virtual server**) and involved in the maintenance of the virtual server.
* Adept at developing applications using **GoLang, Java, Python.**
* Expertise in scripting languages like **Python**, **Shell**, **Bash**, **VB Scripting**. Familiar with the Storage, Networking Concepts, and **PowerShell** commands, experience in Created automated **PowerShell** scripts for web app deployment.
* Build the artifacts and deploy the applications in **Docker Containers** in efficient way.
* Experience with container-based deployments using Docker, working with **Docker images, Docker hub and Docker registries,** installation and configuring **Kubernetes** and clustering them.
* Used **Kubernetes** to manage containerized applications using its **nodes, Config-Maps, selector, Services** and deployed application **containers as Pods.**
* Knowledge of using Routed Protocols like **FTP, POP, SFTP, SSH, HTTP, HTTPS and Direct connect**.
* Hand-ons experience working on **Google Vision Modules** and hosting it on AWS.
* Experience in working with SQL database like **MySQL, Oracle, SQL Server, Sybase, DB2, Postgres** and **NoSQL** databases like **MongoDB, DynamoDB and Cassandra**.
* Strong Domain knowledge on **Healthcare**, **Insurance** and **Financial** industry.
* Good Experience in Validation and development of **Mainframe** application using **JCL**, **DB2, REXX** and **Cobol**.
* Expertise in querying and testing **RDBMS** such as **Oracle**, **MS SQL Server using SQL**, **PL/SQL** for data integrity.
* Experience in **Test Data Management – Data Masking, Synthetic Data Generation,** E2E Data Life Cycle management.
* Proficiency in developing and executing **SQL** queries for testing of **ETL mapping**, **data transformation** and **data cleansing** specifications based on the business requirements for a **Data Warehouse**.
* Well Rounded knowledge of **creating mappings, sessions and complex workflows** for ETL process using **Informatica Power Center 9.x and Intelligent Informatica Cloud Services.**
* Implemented different **Data masking** technique like **Data profiling**, **Data Sub-setting**, **Data masking**, **Data generation**,

**Gold copy** using **IBM Optim**.

* Knowledge in areas of **Process Improvement**, **Quality Control**, **SPC Analysis**, **Defect Prevention Knowledge**

**Management** and **Business Value Additions**.

* Well-versed with all stages of Software Development Life Cycle (**SDLC**) and Software Testing Life Cycle (**STLC**) such as **Analysis, Planning, Developing, Testing and implementing** and Post-production analysis of the projects. Good at **Waterfall model**, **Agile Methodology** (**Scrum** and **Kanban**).
* Expertise in troubleshooting the problems generated while **building, deploying** and in production support.
* Used **Atlassian** tools **JIRA, Confluence** for defect management, team collaboration, source code management and continuous integration and deployment practices.
* Completed **MS** from **Montana State University, Bozeman, USA** in Computer Science in May 2018.
* Expertise in Teaching Experience and had been employed as **Teaching Assistant by Montana State University**,

**Computer Science Department** from August 2016 – May 2018. This entitled me to **full tuition waiver** and full fee coverage.

* Proven **communication, presentation** Skills and **Leadership** Qualities
* Sound **Technical knowledge**, **strong analytical** and **problem-solving ability**, excellent exposure and ability to learn any technology quickly.

**EDUCATION:**

MASTER of Science | computer science | Montana State University, Bozeman, USA |august 2016 – maY 2018

* Relevant Courses: Data Mining, Database Systems, Advanced Database, Algorithms, Empirical Software Engineering, Advanced Software Engineering, Distributed Systems.

**Bachelor of Engineering | Electronics & Communication Engineering | july 2007- June 2011**

* Relevant Courses: Operating system, Microcontroller, Microprocessor, Networks

**TECHNICAL SKILLS:**

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| **Cloud Services** | **Azure, AWS** |
| **Operating Systems** | RHEL/CentOS, Ubuntu/Fedora, MacOS, ZOS , Windows Server, Unix, Linux |
| **Build/Automation Tools** | Puppet, Chef, Ant, Maven, Jenkins, Ansible |
| **Programning Languages** | Python, Java, C, HTML, CSS, JavaScript, Angular, GoLang, COBOL, REXX, IBM Procedural Language |
| **Scripting Languages** | YAML, Shell Scripting, Bash, Python scripting, JSON, VB Scripting, Rumba Scripting |
| **Relational Databases** | MySql, Oracle, DB2, Sybase, Postgres, RDS |
| **NoSQL Databases** | MongoDB, DynamoDB, Cassandra, HBase, Neo4j, Redis |
| **Web/App Server** | Apache, Tomcat, WebSphere, Nginx, Web Logic, JBoss |
| **CI/CD Tools** | Azure DevOps, Jenkins, Hudson, Bamboo |
| **Bug Tracking Tools** | JIRA, Confluence, Rally, Remedy and IBM Clear Quest, Bugzilla, HP Quality Center. |
| **Monitoring Tools** | Splunk, Elastic Search, Grafana, CloudWatch |
| **Version Control Tools** | Subversion, GIT, Tortoise SVN, Visual SVN, BitBucket, TFS |
| **Virtualization** | VMware, Virtual Box |
| **Frameworks** | Google Vision, GoLang, Flask |

**WORK EXPERIENCE:**

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| **Travelers, Hartford, CT**  **Sr Cloud/DevOps Engineer** | Dec 2019 – Till Date |

Roles and Responsibilities:

* Used **OpenStack** and provided framework and plugins for additional network services, such as Load Balancing-as-a-Service (**LBaaS**), Firewalls-as-a-Service (**FWaaS**) and Virtual Private Networks-as-a-Service (**VPNaaS**) to be deployed and managed.
* Involved in the functional usage and deployment of applications in **WebLogic**, **WebSphere**, **IIS** and **Apache Tomcat Server**.
* Created scripts in **Python** to automate log rotation of multiple logs from web servers. Working with **Python ORM** Libraries including **Django ORM** to create Web applications.
* Manage users and groups in Solaris Linux servers to create, modify and delete users/groups and troubleshooting user related issues and also involved in Troubleshooting Linux Systems identifying Hardware, software (both OS and Application level) and networking issues
* Written **Chef Cookbooks** and **recipes** to Provision several pre-production environments consisting of Cassandra database installations and several proprietary middleware installations.
* Used **Chef** to automate workflow and ensure all changes are tested and approved with the same rigor and speed and to ensure changes are only deployed once properly approved.
* Worked on **Ansible Tower** to automate repetitive tasks, quickly deploy critical applications and proactively manage changes.
* Written **Ansible handlers** with multiple tasks to trigger multiple handlers and to decouple handlers from their names, making it easier to share handlers among **Playbooks** and **Roles.**
* Managed **Docker** networking subsystem by using **User-defined bridge networks, Host networks, Overlay networks, Macvlan networks** and third-party network plugins.
* Mentored developers in **Kubernetes** design and custom application implementation and created a mesh pod network between **Kubernetes** clusters.
* Created **Azure automated assets**, **Graphical runbooks**, **PowerShell run books** that will automate specific tasks. Expertise in deploying Azure **AD connect**, configuring **ADFS** installation using Azure AD connect.
* Deployed Cloud services (**PaaS** role instances) and **Azure IaaS** Virtual machines (**VM**s) into secure **subnets** and **VNets** and designed Network Security Groups (**NSG**s) to control inbound and outbound access to network Interfaces (**NIC**s), **subnets** and **VM**s.
* Created and configured **HTTP** Triggers in the **Azure Functions** with Application insights for monitoring and performing load testing on the applications using the **VSTS**.
* Handled migration of on-premises applications to cloud and created resources in cloud to enable this and expert in deploying of **OpenStack** on Azure platform and handling issues related to **RDP** of **Azure Infrastructure**.
* Created several **pods** and services using **Master** and **Minion** architecture of **Kubernetes** and developed microservice onboarding tools leveraging **Python** allowing for easy creation and maintenance of **build jobs** and **Kubernetes** deploy and services.
* Set up build environment integrating with **Git** and **Jira** to trigger builds using **Web Hooks** and **Slave Machines** byintegrating **Docker** container-based test infrastructure to **Jenkins** CI test flow.
* Handled continuous integration with **Jenkins** byusing various plugins like **Global Build Stats, Multiple SCMs, Parameterized Trigger** and **Configuration Slicing** to increase the productivity.
* Setup **SCM** Polling for Immediate Builds with **Maven** and **Maven Repository** (**Nexus** Artifactory) by installing **Jenkins Plugins** for **GIT** Repository.
* Implemented **Chef** recipes for automated Orchestration of **Cassandra clusters** and worked on upgrading **Cassandra** from old 2.x to 3.0 version.
* Configuring and managing an **ELK stack**, set up the elastic search **ELK** **Stack** to collect search and analyze log files from across the servers and integration of Application with monitoring tool **New** **Relic** for complete insight and proactive monitoring.
* Generated reports using **JIRA** for creating projects, assigning permissions to users and groups for the project and created mail handlers and notifications schemes for **JIRA**.

**Environment:** Azure (Web Roles, Worker Roles, SQL Azure, Azure Storage, Azure AD, Resource Groups, Office365, RBAC), OpenStack, Chef 13.x/12.x, Ansible 2.4, Docker 1.13.1/1.12.6, Kubernetes 1.8/1.7, Maven 3.5.x, Jenkins 2.10x, GIT-2.1x/2.x, Cassandra 2.x/3.0, AEM 6.2/6.0, Python 3.6, Jira 6.4, Dynatrace.

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| **Northwestern Mutual, Milwaukee, WI**  **Sr Cloud/DevOps Engineer** | Sep 2018 – Nov 2019 |

Roles and Responsibilities:

* Experience in dealing with **Windows Azure IaaS** - Virtual Networks, Virtual Machines, Cloud Services, VPN, Application Gateways Express Route, Traffic Manager, VPN, Load Balancing, Application Gateways, Auto-Scaling, Resource Groups, Windows Azure PaaS storages like Blob (Page and Block), SQL Azure.
* Created **Azure services** such as compute virtual machines, azure storage, azure active directory, SQL Database, Azure DNS and Azure Application Insights. Created Azure Virtual Networks, subnets, Azure network settings and Azure cloud.
* Build out **Azure DevOps** Infrastructure using Azure Runbooks, Azure Data Lake, Azure data factory**, RPM** and **DevOps**.
* Strong experience in Automating, Configuring and Deploying Instances on **Azure environments** and in Datacenters.
* Developed automation system using **Powershell** scripts and **JSON** templates to remediate the**Azure** **services.**
* Worked on GIT to maintain source code in **Git** and **GitHub** repositories.
* Created builds and release pipelines in **Azure Devops** and done deployments using SPN (secure endpoint connection) for implementing **CI/CD**.
* Created **Docker images** using a Docker file, Docker container snapshots, removing images and managing.
* Used **Azure Kubernetes** service to deploy a managed Kubernetes cluster in Azure and created an AKS cluster in the Azure portal, with the Azure CLI, also used template driven deployment options such as Resource Manager templates and Terraform.
* Create performance measurements to monitor resources across Azure using Azure native monitoring tools utilizing **ARM** template.
* Used **Docker** for setting Azure Container Registry with Docker and Docker-compose and actively involved in deployments on Docker using Kubernetes.
* Experience with Configuration Management/Automation tool **Ansible** and has worked on integrating Ansible **YAML** Scripts.
* Wrote the **Ansible playbooks** which are the entry point for Ansible provisioning, where the automation is defined through tasks using **YAML** format. Run Ansible Scripts to provision Dev servers.
* Used **Kubernetes** to deploy scale, load balance, scale and manage Docker containers with multiple name spaced versions.
* Involved in Migration of applications from On-Premise Servers to **Azure** Servers.
* Used **Shell** scripting to deploy artifacts that are built by **Maven**.
* Used **Maven** dependency management system to deploy snapshot and release artifacts to **Docker Hub** to share artifacts across projects and environments.
* Responsible for design and maintenance of the **GIT** Repositories, views, and the access control strategies.
* Developed and supported the Red Hat Enterprise **Linux** based infrastructure in the cloud environment.
* Used **Jarvis** for monitoring the system problems across all the servers and networking devices.
* Used the Kusto Explorer for checking the Errors.

**Environment:** Azure, Terraform, Kubernetes, Docker, Git, Ansible, Jenkins, Nexus, Jarvis, Shell Scripts, Python, Kusto Explorer, JSON, Linux.

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| **Aetna, Hartford, CT**  **Cloud/DevOps Engineer** | Jun 2014 – Aug 2016 |

Roles and Responsibilities:

* Implement multiple **CI/CD** pipelines as part of **DevOps** role for our on-premises and **cloud-based software**.
* Perform **DevOps** for **Linux** and **Windows** platforms using **Jenkins**, **Maven**, **Nexus**, **SVN**, **GitHub**, **uDeploy**, **Docker**, **anisible**, **chef**, **AWS**.
* Created and implemented custom **Nagios** monitoring and managed with **Puppet**.
* Configured **Puppet** to perform automated Deployments.
* Ensure the use **CROSS PLATFORM SYSTEM PROFILING LIBRARY** when writing **puppet** code to suit different OS platform eg, **Redhat/ CentOS, Ubuntu, Debian, Solaris OS**. Etc
* Implement **Puppet** Inheritance to extend existing class definition and use the local scope variable.
* Deployment and implementation of **Puppet**. Responsible for writing **Manifests to configure nodes**.
* Used **MAVEN** as build tools on java projects for the development of build artifacts on the source code.
* Written build scripts from scratch for new projects and for new modules within existing projects.
* Worked on performance monitoring tool **AWS cloudwatch**
* Configuration Management and source code repository management using tools like **GIT, Subversion (SVN).**
* Participated in the release cycle of the product, which involves environments like development **QA, UAT** and production.
* Installed/configured/managed **Puppet Master/Agent**. Wrote **custom modules** and **manifests**, downloaded pre-written modules from **puppet-forge. Up-gradation or migration of Puppet Community and Enterprise**.
* Classified modules by roles and Used **Puppet live management** as part of **orchestration engine**.
* Provided installation & maintenance of **Puppet infrastructure** and developed **Puppet recipe &modules** for **configuration management**.
* Built a **load-balanced, version-controlled, Hiera/r10k-enabled Puppet environment**.
* Wrote, maintained, reviewed and documented modules, manifests, **Hiera configurations** and **Git repositories** for **Puppet Enterprise** on **RHEL** and **SLES platforms**. .
* **Virtual infrastructure utilizing VMware vSphere suite 5.5** bundled with **ESX hosts, vCenter Servers**.
* Configured and deployed **Cisco UCS** computing clusters with **VMware ESXi 5.5** and vCenter 5.5.
* Worked on server consolidation program through use of **VMware ESX server** and **VMware Virtual Center**, using Virtual Center, **ESX, creating VMs**, using/building **VM templates** and customization files, and scheduling tasks.
* Upgraded **100+ ESX hosts** from **ESX 4.0 to ESX 5.0** using **VMware Update Manager tool**.
* Used **Puppet Conditional Expression** that alters logic eg. **Unless, case and if statement** etc to accommodate different OS, issues and to achieve the desired result.
* Provision using **VAGRANT and PUPPET** as configuration management tool and use it to automatically deploy applications to fresh/newly built **VM** during startup time.
* Creating multi-tier application using **Puppet services** deploy and **puppetize a milti-tier instance**.
* Implemented rapid-provisioning and life cycle management for **Red Hat Linux using Puppet**.
* Expertise in various branching methodologies, merging and tagging to facilitate defect/change management in conjunction within projects across the organization.
* Deployed Applications into non-production, **prod like,** production environments with various **Application server technologies like WebLogic and Apache Tomcat**.
* Maintain the tool eco-system that the larger **eDiscovery Platform** team relies so heavily on, such as **JIRA**, **Confluence** and **Jenkins**.
* Worked on the configuration management tool **Puppet for deploying the codes between different environments**
* Deployed **JAR, WAR & EAR** artifacts into the **WebLogic servers and Apache servers**. And Automated Build artifacts **(jar, war & ear)** using **continuous integration tools**.
* Configure the setup of every monthly release on the regular basis for product teams to perform **integration testing**.
* Worked with development team to ensure use of best practices in **source code branching, merges** and **versioning of SVN** and **GIT repositories**.
* Managed the development activities for the **multiple server instances** by enabling password less **SSH** communication between the servers.
* Managing **source code, software builds, software versioning** and detects tracking on all software maintenance tasks and projects.
* Ensured proper version control, revision labels and baseline management procedures as part of the release process. .
* Troubleshooting deployment, infrastructure and start up issues on various application servers product line.
* Planning, scheduling and documenting releases at **code freeze periods**.
* Creating alarms in **Cloud watch service** for monitoring the servers performance, **CPU Utilization, disk usage** etc.

**Environment**: AWS, S3, EBS, Elastic Load Balancer (ELB), auto scaling groups, VPC, IAM, Cloud Watch, Glacier, Jenkins, Ansible, Maven, Bash Scripts, Git, Docker, Jira and Chef in Linux environment. VERITAS Netback up 4.x/5.x/6.x, Solstice Disk Suite, OpenStack.

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| **Aetna, Hartfort, CT**  **Cloud/DevOps Engineer** | Jun 2013 – May 2014 |

Roles and Responsibilities:

* Managed multiple **AWS** accounts with multiple **VPC**'s for both production and non-prod where primary objectives included **automation**, **build out**, **integration** and **cost control**.
* Managed all cloud and on-premises environments at once under the **Chef umbrella**, including servers running the Windows, Linux, IBM AIX, and Solaris operating systems.
* Maintained automated environment using **Chef Recipes** & **Cookbooks** within **AWS** and involved in **Knife** and **Chef Bootstrap process**, converted production support scripts to **chef recipes** and **AWS** server provisioning using **chef recipes**.
* Deployed and managed many servers utilizing both **traditional** and **cloud-oriented** providers (**AWS**) with the **Chef Platform** and written **cookbooks** for various **DB** configurations to modularize & optimize project configuration.
* Created **Ansible** **Playbooks** to provision **Apache Web servers**, **Tomcat servers**, **Nginx**, **Apache Spark** and other applications.
* Used **Ansible** **Tower** to streamline the applications delivery and services to AWS in a cost-effective, Simple and Secure manner.
* Worked in all areas of **Jenkins** setting up **CI** for new branches, build automation, plugin management and securing **Jenkins** and setting up **master/slave** configurations.
* Integrated **Ansible** with **Jenkins** to provide automation, **continuous integration** through **Jenkins** and Implemented **Jenkins Workflow** and Plugins for repeatable deployments of **multi-tier** applications, **artifacts** and services to **Docker.**
* Created additional **Docker** Slave Nodes for **Jenkins** using custom **Docker Images** and pulled them to Cloud. Worked on all major components of Docker like **Docker Daemon**, **Hub**, **Images**, **Registry**, **Swarm**.
* Extensively used **Kubernetes** charts using **Helm** and created reproducible builds of the **Kubernetes** applications, managed **Kubernetes** manifest files and managed releases of **Helm** packages.
* Used **MAVEN** as a build tool for **Java** projects and written Maven **POM** files from scratch for multi-module projects for the development of build artifacts on the source code.
* Provisioned the highly available **EC2** instances using **Terraform** and **Cloud Formation** and wrote new plugins to support new functionality in **Terraform**.
* Managing the **Openshift** cluster that includes scaling up and down the AWS app nodes.
* Had very strong exposure using ansible automation in replacing the different components of **Openshift** like ECTD, MASTER, APP, INFRA, Gluster.
* Designed an **ELK** (Elastic Logstash Kibana) system to monitor and search enterprise alerts and configured **ELK** stack in conjunction with **AWS** and using Logstash to output data to **AWS S3**. Terminated SSL on to **Nginx** to remove overhead on **API** servers.
* Have done POC on **Redshift** spectrum to create external tables by using S3 files.
* Wrote **Redshift** UDFs and **Lambda** functions using **Python** for custom data transformation and ETL.
* Automated **Datadog** Dashboards with the stack through **Terraform** Scripts and assisted internal users of **Splunk** in designing and maintaining production quality dashboards.
* Developed **Perl**, **PowerShell**, **Shell** scripts, used **Maven** scripts to build the source code.
* Maintained **LVM**, **VxVM** and **UCD** file systems along with **NFS** and Configured **Kickstart** servers to install **Red Hat Linux** and **VMWare ESX** on multiple machines.
* Built and configured a virtual data center in the **AWS** cloudto support Enterprise Data Warehouse hosting including **Virtual Private Cloud (VPC), Public** and **Private Subnets, Security Groups, Route Tables** and **Elastic Load Balancer.**
* Utilized **Cloud Watch** to monitor resources such as **EC2**, **Amazon RDS DB** services, **Dynamo DB** tables, **EBS** volumes, to set alarms for notifications or automated actions, and to **monitor logs** for a better understanding and operation of the system.
* Administered security and configured user access and limits using **AWS** **Identity and Access Management** (**IAM**) by creating new profiles and policies for user management in **JSON**.
* Planned and configured network infrastructure within the **VPC** with public and private **subnets** and configured **routing tables** and internet gateway, **Security Groups** in **AWS**.

**Environment:** AWS (EC2, EBS, S3, VPC, Code Deploy, Code Commit, Elastic search, Lambda, API Gateway, Route 53 (DNS), ECS, Cloud Formation, RDS, Dynamo DB, Load Balancers, CloudWatch, SNS, SES, SQS, IAM, RedShift, Ops Works), Maven, Puppet, Ansible, Docker, Kubernetes, Openshift, OpenStack, Jenkins, GIT, Python, Datadog, Jira.

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| **Aetna, Hartford, CT**  **Cloud/DevOps Engineer** | May 2012 – May 2013 |

Roles and Responsibilities:

* Developed **build** and **deployment** processes for **Pre-production** environments.
* Used Subversion as source code repositories.
* Automated the test and features using **Shell Scripting** and **Python Scripting**.
* Constantly touchbased with development Team to resolve merging/versioning issues. Coordinated and assisted developers with establishing and applying appropriate branching, labeling/naming conventions using **GIT** source control.
* Driving and leading and resolving conflicts in a team of 10 members.
* Automated Weekly releases with **ANT**/**Maven** scripting for Compiling **Java** **Code**, **Debugging** and Placing Builds into **Maven** Repository.
* Wrote **Terraform** scripts to automate **AWS** services which include Web servers, **ELB**, **Cloud Front** distribution, **Database**, **EC2**, **database security** groups and **S3** bucket.
* Wrote automation scripts for creating resources in **OpenStack** Cloud using **Python** and **terraform** modules. Created and managed **Cinder** volumes in **OpenStack** Cloud.
* Implemented multi-tier application provisioning in the **OpenStack** cloud. Established an automated system of creating VMs in **OpenStack**& **VMWare** for **Dev**, **ISO,** **Pre**-**Prod**, & **Prod**, with minimal intervention for smooth transitions.
* Implemented a **Kubernetes** Container Orchestration solution within **OpenStack** allowing for easy management, creation & recovery of **OpenStack** assets.
* Configured **AWS Virtual Private Cloud (VPC**) and Database Subnet Group for isolation of resources within the **AmazonS MySQL DB cluster, AWS-Dynamo DB and AWS-RedShift**.
* Migrated data from on premise databases to Confidential **Redshift, RDS and S3.**
* Created **Terraform** scripts to launch the platform common services like CI/CD tool **Jenkins**, Configuration Management Tool **Chef**, Secrets management tool **Vault.**
* Used **Kubernetes** to manage containerized applications using its nodes, Config Maps, selector, Services & deployed application containers as Pods.
* Responsible for designing and deploying best **SCM** **processes** and **procedures**.
* Used Puppet to automate Configuration management and to manage **Web** **Applications**, **Configured** **Files**, **Data** **Base**, **Commands**, **Users** **Mount** **Points** and **Packages**.
* Maintained and coordinated environment configuration, controls, code integrity, and code conflict resolution.
* Configured **S3** to host static web content , versioning, lifecycle policies, backup files and archive.
* Configured an **AWS** Virtual Private Cloud (**VPC**) and Database Subnet Group for isolation of resources within the **Amazon** **RDS** **Aurora** **DB** **cluster**
* Have deployed various applications through **Docker** containers.
* Used **AGILE MVN** method to develop builds and **ANT** as a build tool.
* Worked in container based technologies like **Docker, Kubernetes and Openshift**.
* Point team player on **Openshift** for creating new Projects, Services for load balancing and adding them to Routes to be accessible from outside, troubleshooting pods through ssh and logs, modification of Buildconfigs, templates, Imagestreams, etc
* Installed, configured and administered **Jenkins** **CI** **tool** on **Linux** machines.
* Planned **AWS** **EC2** and **S3** integration. Revision of multiple availability **zone** **Amazon** **VPC** routing to internal network
* Automated the deployment of **Linux** applications inside software containers with **Docker**.
* Implemented the setup for Master slave architecture to improve the Performance of **Jenkins**.
* Used **Jenkins**, **Build** **forge** for Continuous Integration and deployment into **Tomcat** **Application** **Server**.
* Installed and Configured the **Confluence** for sharing the artifacts within the company.
* Migrated the production **MySQL** schema to the new **AWS RDS** Aurora instance
* Managed and supported **AWS** Security related issues, such **IAM** and **S3** policies for user access
* Configuration and Deployment of **SQL** **server** **2005**/**2008** Reporting services.
* Handled deployment of **JAR**, **EAR** and **WAR** files to the respective application server instances.
* Experience in migrating physical **Linux**/**MacOS** servers to cloud (**AWS**).
* Designed an **Architectural** **Diagram** for different applications before migrating into **Amazon** **cloud** for **flexible**, **cost-effective**, **reliable**, **scalable**, **high-performance** and **secured**.
* Maintaining the user accounts (**IAM**), **RDS**, **Route** **53**, **SES** and **SNS** services in **AWS** cloud.
* Worked on creation of Change requests and Service requests using **ITG**.
* Involved in Research of the project application architecture to support/resolve build, compile, and test issues/problems.
* Releasing code to testing regions or staging areas according to the schedule published.
* Participated in all Product Release and Patches.
* Used Jira as ticket tracking and work flow tool.

**Environment:** AWS Cloud (EC2, VPC, ELB, S3, RDS, Lambda, Cloud Trail and Route 53,m RedShift), AIX and MacOS, BMC Remedy, Shell, Python, Web Logic Server 11g, Active Directory, JDK1.7, XML, Anthill Pro, SVN, Jenkins, Maven, Ansible, GIT, Jira, Docker, Kubernetes, Openshift, OpenStack, SQL, J2EE, Puppet, Shell, Perl, ANT, Cruise Control, UNIX and Web Sphere.

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| **Aetna, Hartford, CT**  **Build and Release Engineer** | Jun 2011 – Apr 2012 |

Roles and Responsibilities:

* Performed all necessary day-to-day **GIT support** for different projects.
* Responsible for design and maintenance of the **GIT repositories** and **the access control Strategies.**
* Created the **branches in GIT** to implement the **parallel development process**. Used **GIT for branching** and **merging**.
* Created featured, develop, **release branches in STASH (Git)** for different application to support releases and **CI builds**.
* Setup **Jenkins server** and build jobs to provide continuous automated builds based on polling the **Git source control** system during the day and periodic scheduled builds overnight to support development needs using **Jenkins, Git, Junit, Maven and Ant.**
* Worked with Development Team Leads and testing teams to establish a build schedule, **execute the builds and troubleshoot build failures, if any.**
* Create documents on **build process and flow**, **build script maintenance**, user guide for developers for local builds and **experienced with TFS**.
* Used **Shell scripts to automate the deployment process**.
* Created and Maintained **Subversion Branching, Merging and tagging** across each production releases and perform builds using **BuildForge Continuous Integration using maven Build scripts**.
* Assist developers in integrating their code with the main stream.
* Merged conflicting code to ensure release to test environments.
* Created automated build procedures to ensure code is always ready for deployment.
* Installed, Configured **Jenkins for running Continuous Integration, Automated Deployments into different environments.**
* Designed and implemented **CI and CD** Environment with all the required checkpoints to ensure highest quality of applications to push to next environments.

**Environment:** Subversion, Hudson, Maven, WebSphere, WebLogic, Shell scripting, GIT

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| Graduate Teaching Assistant | August 2016 – May 2018 |
| **Employer – Montana State University, Computer Science Department** | |

Courses Taught: Programming with Java, Computer Vision - Robot Vision, Robotics, Software Engineering and Basics Data Structures/Algorithms.

Roles and Responsibilities:

* Assisted undergraduate students with the in-lab assignments and course projects, occasional class lectures,
* Graded exams, lab assignments and projects.
* Provided recommendations to the faculty for improvising the course material and structure to supplement student participation in the class.
* Held office hours outside class hours to groom, answer queries and resolve issues of students.

**RESEARCH PUBLICATIONS:**

* **Artificially Intelligent Home Automation System Based on Arduino as the Master Controller:** Published in The International Journal of Engineering and Science (IJES).

Link: <http://theijes.com/papers/v5-i2/Version-2/F05202041045.pdf>

* **A Secure Image Steganography Based on RSA Algorithm and Hash-LSB Technique:** Published in IOSR Journal of Computer Engineering (IOSR-JCE).

Link: <http://www.iosrjournals.org/iosr-jce/papers/Vol18-issue1/Version-4/G018143943.pdf>

* **Real Time Facial Emotion Recognition based on Image Processing and Machine Learning:** Published in International Journal of Computer applications.

Link: <http://www.ijcaonline.org/archives/volume139/number11/24533-2016908707>

**ACADEMIC PROJECTS:**

* **Analysis of Bacterial Growth in Microdroplets**: Applied Data Mining and topological data analysis to analyze growth of bacteria through drop-based microfluids.
* **Analysis of Efficiency of Data Masking Algorithm Techniques**: Applied statistical and empirical software engineering techniques to infer the efficiency, robustness and speed of execution of various masking techniques.
* **Distributed Calendar**: Deployed a calendar for scheduling appointments by implementing a distributed log and dictionary on four **EC2** instances on **AWS**.
* **Distributed Consensus**: Implemented two player game using RAFT consensus protocol. RAFT was implemented using 5 nodes in different regions across USA and deployed on **AWS**. Data was persisted on **S3**.
* **Bitcoin Mining**: Developed a basic block chain on four miners with a modified proof of stake to implement Bitcoin mining on **AWS**. Blocks were persisted on **S3** and communication between miners was established by **SQS**.
* **Survey and Implementation of Negative Database using AES Encryption**: Conducted a survey on the new research topic Negative Database, studying the various algorithms that can be used to implement Negative Database on AES Encrypted data for enhanced database security.

**ACHIEVEMENTS AND AWARDS:**

* Teaching Assistantship awarded by Montana State University 2016 – 2018, it completely waived off my tuition fees and entitled me to a monthly stipend..
* Enhanced Teaching Assistantship awarded by Montana State University 2017 – 2018, entitled me to a higher stipend.
* Awarded a Certificate of Appreciation for outstanding performance, Infosys Limited.
* Awarded the highest rating (**CRR 1+**)in performance evaluation for the year **2015**, Infosys Limited.
* Received accolades from Northwestern Mutual client for single handedly designing, developing and implementing cloud centric opTCMS-UL under stringent time-lines with zero production issues.