**MANI KAJJAYAM +1 (832)-304-1988**

**DevOps/Cloud Engineer** [**mani639@outlook.com**](mailto:mani639@outlook.com)

IT professional with around seven years of experience in Cloud/DevOps Engineer, Build/Release Management and Linux administration with major focus in the areas of Cloud Service Providers, Data Center Migration, Containerization Technologies, Configuration Management, CI/CD Pipeline and Virtualization technologies.

**Professional Summary:**

* Experience working with **Microsoft** **Azure** **IaaS** such as **Virtual Networks**, **Virtual Machines**, **Cloud Services**, **Resource Groups**, **Express Route**, **VPN**, **Load Balancing**, **Application Gateways**, **Auto-Scaling**, **Traffic Manager** and Azure **PaaS** Solutions such as Azure **Web Apps**, **Web Roles**, **Worker Roles**, **SQL Azure** and **Azure Storage**.
* Strong Experience in **Azure IoT** and Azure **PaaS** components like **IoT Hub**, **Event Hub**, **Stream Analytics**, **Service Fabric**, **Document DB**, **App services**, **Service bus**, **Distributed cache** and **Azure Functions**.
* Extensive experience in Azure compute services, Web apps, Azure Data Factory, Azure Media, Content delivery, Networking, Hybrid Integration, Azure Identity Management, SQL Database. Experience on various **Azure services** like Compute (Web Roles, Worker Roles), **Azure Websites**, Caching, **SQL Azure, NoSQL, Storage, Network services, Azure Active Directory, API Management**, Scheduling, Auto Scaling, and Power Shell Automation.
* Expertise in **DevOps** in **Azure platform** which includes technologies and platform like **UNIX/Linux, Java, Jenkins, Maven, GitHub, Chef, Ansible, Subversion, Ant, VMware, Puppet, SVN, GitHub, Vagrant, CVS, Tomcat, JBoss** etc.
* Designed User Defined Routes with custom route tables for specific cases to **force tunnelin**g to the Internet via on-premise network and control use of virtual appliances in the customer’s **Azure Environment.**
* Expertise in building the Infrastructure on AWS using various services including **EC2, VPC, RDS, S3, Cloud Front, Route 53, Cloud Watch, Cloud Trial, Cloud Formation, Lambda, Redshift, OpsWorks, Directory Services, Alexa, Cognito.**
* Expertise with security identity tools like **IAM, Certificate manager, Key Management Systems (KMS), creating security groups, AWS shield** for DDoS protection.
* Managed security groups on AWS, focusing on high-availability, fault tolerance, and auto-scaling using **Terraform templates**, Along with Continuous Integration and Continuous Deployment with **AWS Lambda** and **AWS Code Pipeline.**
* Expertise in using cloud migration tools like **Snowball**, **direct connect** for migrating data from on-premises datacenters to AWS Cloud and implemented **Terraform** modules for deployment of various applications across multiple cloud providers and managing infrastructure.
* Strong knowledge on **Google Cloud Platform** (GCP) **Compute Engine, Kubernetes Engine, App Engine, Cloud Functions, Datastore, Bigtable** and **Cloud storage services**. Hands on experience in cloning an **OpenStack** mini Cluster in **GCP Compute service**.
* Experience in designing **Terraform** for Infrastructure as Code and deploying it in cloud deployment manager to spin up resources like cloud virtual networks, **Compute Engines** in public and private subnets along with **AutoScaler**in **Google Cloud Platform**.
* Implemented Micro-services using **Pivotal Cloud Foundry (PCF)** platform build upon **Spring Boot Services** and created workflows on **TeamCity** for setting up automated pipelines for **CI/CD** with **PCF.**
* Expertise in working with **Ansible** playbooks for virtual and physical instance provisioning, configuration management, patching and software deployment on cloud environments and managing Ansible **Playbooks** with **modules**.
* Created custom playbooks written in **YAML** language, encrypted the data using **Ansible Vault** and maintained role-based access control by using **Ansible Tower**.
* Expertise in integrating **Terraform with Ansible**, **Packer** to create and **Version the AWS Infrastructure**, designing, automating, implementing and sustainment of Amazon machine images (AMI) across the **AWS Cloud environment.**
* Proficient in **Kubernetes** to manage containerized applications using its **nodes**, **Config Maps**, **selector**, Services and deployed application containers as **Pods**. Experience in installing and maintaining **Kubernetes on-prem cloud servers**, **configure master** and **slave nodes** to establish the cluster.
* Used **Kubernetes** to automate the deployment, scaling and operations of application containers across clusters of hosts. Focused on containerization and immutable infrastructure by using docker community edition along with **Kubernetes** for automation.
* Extensively used **Kubernetes** charts using **Helm** and created reproducible builds of the **Kubernetes** applications, managed **Kubernetes** manifest files and managed releases of **Helm** package Experience in **Installing and configuring Kubernetes for Orchestration of Docker Images** and Cluster Container management on AWS using **Kubernetes Operations** (KOPS).
* Experience in writing **Jenkins** Pipeline Groovy Scripts for Continuous Integration and build workflows and used **Jenkins** for uploading Artifacts into **Nexus** Repository and Automated various day-to-day administration task by developing **Bash, Ruby, JSON, Perl, PowerShell,** and **Python** Scripts.
* Experienced in working on **puppet** and **chef**, Data bags implementation, Coding standards, Cookbook documents, testing docs, chef Infra, bootstrapping nodes, creating, and uploading **Chef** Recipes, **Chef** Node convergence in **Chef** SCM.
* Experience working on several Docker components such as **Docker Engine**, Machine, **Creating Docker Images, Compose, Docker Hub** and handle multiple images primarily for middleware installations and domain configuration.
* Expertise in delivering Agile projects from end to end Continuous Integration/Continuous Delivery (CI/CD) pipeline by integration of tools like **Jenkins**, **Chef** and **AWS** for VM provisioning.
* Experience **with Linux Administration, Cloud Infrastructure management, Software Configuration Management** in various environments like **QA, DEV, TEST, PROD, UAT** for various releases with designed strategies.
* Expertise in implementation and maintenance of **Apache Tomcat, Httpd, SMTP, DHCP, NFS, NIS, NIS+, LDAP, DNS, SAMBA, SQUID, Postfix, Send mail, FTP**, Remote Access, Security Management **Security trouble shooting skills**. Deep understanding of Layer 7 protocols like **HTTP, DHCP, DNS** and **SSL/TLS**.

**Technical Skills:**

|  |  |
| --- | --- |
| Cloud platforms | AWS, Azure, OpenStack, GCP, PCF |
| Configuration Management | Chef, Ansible, Puppet |
| CI/CD Tools, Build Tools | Jen Jenkins, Bamboo, Terraform, Cloud Formation, Maven. |
| Version control tools | GIT, Bit Bucket, TFS. GitLab |
| Scripting | Bash/Shell, Ruby, Python, Perl, PHP, PowerShell, JSON, YAML, HTML |
| Databases | My SQL, Dynamo DB, Mongo DB, Cassandra, AWS RDS |
| Application Servers | Apache, Tomcat, Web Sphere, Web Logic |
| Virtualization Technologies | VMware, Windows Hyper-V, Xen, Virtual Box, Power VM, Oracle |
| Monitoring Tools | Nagios, Splunk, CloudWatch, ELK, App Dynamics, New Relic |
| Operating Systems | Red Hat, Linux, Ubuntu, Debian, CentOS, Windows. |
| Networking | TCP/IP, DNS, NFS, ICMP, SMTP, DHCP, UDP, LAN, FTP |
| Container Tools | Docker, Kubernetes |

**Mercedes-Benz, Atlanta, GA September 2019 - Present**

**Sr Cloud/DevOps Engineer**

* 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**.
* Experience in creating **ARM templates** for **Azure platform** and in migrating on premise to **Windows Azure** using **Azure Site Recovery** and **Azure backups**.
* Created **Azure automated assets**, **Graphical runbooks**, PowerShell run books that will automate specific tasks. Deployed **Azure AD connect**, configured **ADFS installation** using Azure AD connect.
* Worked on **ADFS, Security, Domain Service, SSO, AD Connect, two-factor authentication, Azure monitoring, Azure Operational Insights**, datacenter and infrastructure migrations consolidation.
* Configured **Azure Virtual Networks**, subnets, **DHCP** address blocks, **Azure network settings**, **DNS** settings, security policies and routing. Also, deployed **Azure IaaS virtual** machines and **Cloud services (PaaS role instances)** into secure **Virtual Networks** and subnets.
* Built a prototype **Azure Data Lake** application that accesses third party data services via webservices that dynamically scales, automatically adding/removing cloud-based compute, storage and network resources based upon changing workloads.
* Deployed Cloud services (**PaaS role instances**) and **Azure IaaS Virtual machines** (VMs) into secure subnets and **VNets** and designed **Network Security Groups** (NSGs) to control inbound and outbound access to **network Interfaces** (NICs), subnets and VMs.
* Wrote Automation scripts to automate the provisioning of Azure resources like **Virtual Machines**, **Virtual Networks**, **Traffic Manager**, **Storage**, **Service Bus** and **Scheduler** make calls to **scripts** that provision or configure the servers on the instances.
* Designed GCP Cloud Formation templates to create custom sized **VPC**, subnets, **NAT** to ensure successful deployment of Web applications and database templates. Created **ETL** scripts that extracted data from **Mix panel** (MP) using **MP’s API** scripted in **Google Cloud Shell** and converted to **Google BigQuery** tables for the **Data Analytics team.**
* Point team player on **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**.
* Provided the permissions and required access to all the **pub/subtopics** and **sinks** to push/write the data to **Stack driver** and Setup **Alerting** and **monitoring** using **Stack driver** in **GCP**.
* Building/Maintaining **Docker** container clusters managed by **Kubernetes** **Linux**, **Bash**, **GIT**, **Docker**, on **GCP** and Utilized **Kubernetes** and **docker** for the runtime environment of the **CI**/**CD** system to build, test deploy.
* Worked on **Ansible** to configure the servers, deploy software, and orchestrate continuous deployments for zero downtime rolling updates.
* 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.**
* Worked on **Ansible Tower** to automate repetitive tasks, managing complex network deployments by adding control and proactively manage changes and delegation to **Ansible** powered environments.
* Implemented Continuous Delivery (CD) framework using **Jenkins, Maven, Docker, Bitbucket, Nexus** in Linux environment for 70+ micro services in each environmental setup.
* Implemented **Jenkins** and built pipelines to drive all microservice builds out to the Docker registry and then deployed to Kubernetes. Mentored developers in **Kubernetes design** and custom application implementation and created a mesh pod network between **Kubernetes clusters**.
* Created and troubleshooted **Ansible scripts and Kubernetes YAML** files to deploy **SCM/CI/CD** applications automatically and Idempotently to reduce time costs.
* 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** by integrating **Docker container-based test infrastructure** to Jenkins **CI test flow.**
* Handled continuous integration with Jenkins by using 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. Developed build and deployment scripts using **MAVEN** as build tools in **Jenkins** to move from one environment to other environments
* Maintained multiple **cookbooks** in **Chef** by converting production support scripts to **Chef recipes** to automate the configuration, management of servers, **Orchestration** of **Cassandra clusters** and worked on up-grading Cassandra from old 2.x to 3.0 version.
* 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.
* Used **Selenium** for continuous inspection of code quality and to perform automatic reviews of code to detect bugs. Automated **Nagios** alerts and email notifications using **Python script** and executed them through **Chef**.
* Configured and managed 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.
* Worked with **Terraform** for **Infrastructure as code**, execute designs, **Resource Graphs**, change **Automation**, converted existing Terraform modules that had version conflicts to utilize cloud formation during terraform deployments, integrate various Terraform templates to create infrastructure for various applications.
* Involved in **CI/CD** pipeline development for bunch of similar .net core applications using GitLab-ci and .net core docker builders, deploy through terraform and **GitLab-ci** pipeline, **Blue-Green deployment.**
* Skillful in code deployment, **Orchestration** and **Scheduling** using tools such as **k8s, Docker Swarm, Apache Tomact Mesos, CoreOS Fleet, Cloud Foundry’s Diego, CloudFormation**, and automation validation using **Test Kitchen, Chef, Ansible** and **Terraform.**
* Created **docker images** from the **Docker file** and running docker container from images and pushing the docker images to the **JFrog** Artifactory. Worked on **Docker** container snapshots, removing images and managing **Docker** volumes and for branching **purpose.**
* Managed 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.

**Environment and Tools**: Microsoft Windows AZURE, Azure AD, Azure SQL, Azure Network, Web Applications, Kubernetes, Virtual Machines, PCF, Ansible, Chef, Jenkins, Docker, Python, Power shell, MongoDB, Microsoft Azure Storage.

**American Airlines, Fort Worth , TX January 2019 – August 2019**

**Cloud/DevOps engineer**

* Involved in complete cycle on migrating physical Linux/Windows machines to cloud (AWS) and configured Apache Tomcat webserver in the Linux **AWS Cloud** environment.
* Worked on AWS **Auto Scaling** in **VPC** for providing high availability of applications and horizontal scaling of EC2 instances based on a load of applications by using AWS Cloud Watch.
* Implemented **Terraform modules for deployment** of various applications across multiple Cloud providers and managing infrastructure and provisioned the highly available **EC2 Instances** using Terraform and Cloud Formation and wrote new python scripts to support new **functionality in Terraform.**
* Created functions in **Lambda** that does data manipulation of incoming events and stored results in Amazon S3 and setup **triggers** to inform via email through **SNS.**
* Setup **CloudTrail** to record **API calls** and CloudWatch for monitoring **CPU, memory, disk** space and store logs and setup alerts for thresholds using Simple Notification Service (SNS).
* Configured AWS **IAM** and Security Group in Public and Private Subnets in VPC and Created **Workspaces** for different users also used **Workspaces** for Active Directory, Health checks etc. Responsible for building and configuring a **virtual Data Centre in AWS** cloud to support Enterprise Data warehouse hosting.
* Worked with Terraform key features such as **Infrastructure as code, Execution plans, Resource Graphs, Change Automation.** Provisioning servers/instances using infrastructure as code such as **Terraform**. Code is stored in a private repository and constantly updated
* Written templates for **AWS** infrastructure as a code using **Terraform, CloudFormation** to build staging and production environments and converting existing AWS infrastructure to **Serverless architecture** (AWS **Lambda**, **Kinesis**) deployed via **Terraform** and **AWS Cloud Formation.**
* Automated AWS infrastructure through infrastructure as code by writing various **Terraform modules**, scripts by creating AWS **IAM users, groups, roles, policies, custom policies, AWS Glue, Crawlers, Redshift clusters, snapshots of clusters, EC2, S3 buckets**.
* Installed **Docker Registry** for local upload and download of Docker images and from Docker Hub and created Docker files to automate the process of capturing and using the images. Defined a **multi-container application** in a single file, span the application up in a single command using **Docker Compose.**
* Implemented cluster services using **Docker** and **Kubernetes** to manage local deployments in Kubernetes by building a self-hosted Kubernetes cluster using **Terraform** and Ansible and deploying application containers
* Used Jenkins and pipelines to drive all micro services builds out to the Docker registry and then deployed to **Kubernetes**, created **Pods** and managed using Kubernetes.
* Built **Elastic search, Log stash and Kibana (ELK)** for centralized logging and then store logs and metrics into S3 bucket using Lambda function. Maintained and **Troubleshoot** any build issue with **ELK** (**Elastic Search, Log stash, Kibana**).
* Used **Puppet** to deploy ELK for automating continuous deployment (CD) and configured **Slave Nodes and deployment failure reporting**.Worked on puppet/chef configuration management of several hundreds of servers across **multiple platforms** like **AWS cloud, VMWare and physical servers**.
* Rolled out **Chef** to all servers and used chef node database to drive host configuration monitoring. Deployed and configured **Chef Server** and **Chef Solo** including bootstrapping of Chef Client nodes for provisioning.
* Written **wrapper scripts** to automate the deployment of **cookbooks** on nodes and running the chef client on them in a **Chef-Solo environment**. Involved in Configuration **Management migrations** from Ansible to Chef and deployed applications in **AWS OpsWork stacks**.
* Deployed Jenkins servers for deploying application version builds to **dev, staging and prod** across VPC subnets groups using **VPC peering**. Built end to end **CI/CD Pipelines** in **Jenkins** to retrieve code, compile applications, perform tests and push build artifacts to **Bit Bucket**.
* Proficient in building deployable **Artifacts** (**War, Jar, Ear, Zip, Tar**) from source code and maintained by using **Maven** (Pom.xml) and worked with **Groovy Scripts** to Automate Configuration in **Jenkins.**
* Configured **GIT** with Jenkins and schedule jobs using **Poll SCM** option**. Developed scripts** to pull and push data from Bit Bucket. Coordinated developers with establishing and applying appropriate branching, labelling/naming conventions using **GIT** source control.
* Wrote **Python scripts** using the **Boto3** library to automatically spin up the instances in AWS EC2 and OpsWorks stacks and integrated with **Auto scaling with configured AMI’s**.
* Used **Jenkins** for uploading Artifacts into **Nexus** Repository and Automated various day-to-day administration task by developing **Bash, Ruby, JSON, Perl, PowerShell,** and **Python** Scripts.

**Environment & Tools**: AWS EC2, S3, VPC, Route 53, CloudFormation, Puppet, Docker, Kubernetes, Chef Terraform, Maven, ANT, Jenkins, GIT, SVN, JIRA, Nagios, Splunk, RHEL, CentOS, Shell scripting, Python Scripting and Perl scripting.

**Real page pvt ltd , Richardson, TX May 2016- November 2018**

**Build and Release Engineer:**

* Wrote scripts using **ANT** and **MAVEN** tools and automated the build and deploy process using **Jenkins** to move from one environment to other environments. Also edited the existing ANT/MAVEN files in case of errors.
* Implemented **Jenkins pipeline** stage which synchronize releases stored in **Artifactory with Puppet yum repo.**
* Responsible for **automated CI, Scheduled Builds/Emergency Builds and Release** using **ANT scripts** for an Enterprise application (J2EE) using Jenkins.
* Setting up continuous integration and formal builds using **Bamboo** with **Artifactory repository.**
* Wrote **Puppet models** for installing and managing java versions and took the sole responsibility to maintain the **CI Bamboo server**.
* Involved in creating Bamboo pipeline jobs for Puppet release process for module deployment, using the **Agile methodology** for puppet development.
* Installed and administered repository to deploy the artifacts generated by ANT and to store the dependent jars, which were used during the build.
* Manage and optimize the **Continuous Integration** using **Jenkins, Bamboo** and troubleshoot the deployment build issues using the trigged logs.
* Developed automation **scripting in Python** (core) using **Puppet** to deploy and manage **Java** applications across Linux servers.
* Used **ANT** as a build tool in java projects for the development of build artifacts on the source code. Involved in editing the existing ANT files in case of errors or changes in the project requirements.
* Managed **user authentication** and **authorization** for the users in both **Subversion** and **Perforce**. Created branches performed merges in version control systems **SVN** and Perforce.
* Worked with different tools for monitoring the health checkups using **Nagios, Searching and Reporting with Splunk.**
* Installed, upgraded and configured Linux Servers using **Kickstart** as well as manual installations and the recovery of a root password.
* Integrated ant with **Shell scripts** created in **Bash** to automate the deployments for the Java-based applications.

**Environment and Tools**: RedHat Enterprise Linux, Bamboo, Subversion, Perforce, Nagios, ANT, Python, Puppet, CentOS, Ubuntu, Kickstart, VMware, TCP/IP, NIS, NFS, DNS, SNMP, VSFTP and DHCP.

**HDFC Bank , Vijayawada, INDIA January 2014 – April 2016**

**Linux Administrator**

* As a Linux/Unix system maintained the various servers and Production Support of various applications in **Red Hat Enterprise Linux,** and **Windows** environment.
* Wrote **shell scripts** for automation of daily tasks and created jobs as per performance of the client’s network statistics(/var/log/messages).
* Built backup scripts to store **VM images** on local machine and mirrored the images on to webserver, with **rsync**.
* Pushed the **on-premise environment** into **Virtual MWare client 3.5** for the deployment usage. Compiling code to move into test environments via automated processes.
* Experience in **Installation, Configuration, Upgrade, Patches, and performance** tuning on UNIX and system software & hardware Monitoring of web servers and other services using **Nagios** monitoring tool.
* Configured **kickstart** server and updating/applying patches to the servers using **Red Hat Satellite server.**
* Maintained **Samba** File Server for user **authentication, syslog domain and file sharing.**
* Involved in designing **Firewall rules** for new servers to enable communication with applications, **Oracle 10g servers**.
* Performed the role of Linux system Admin in doing System builds, installs, upgrades, patching, migration, troubleshooting servers, Backup, **Disaster recovery, Performance Monitoring.**
* Configured **RAID 0, RAID 1** and **RAID** 5 for **Data Redundancy** using **Veritas Volume Manager**. **Solaris Volume Manager** has been used for **LINUX** and **Windows** Platform.
* Creation and management of users and groups accounts, passwords, profiles, security (**ACL, Disk Quota, and PAM**), permissions, disk space usage and processes.
* Deployment and configuration of application Server **Tomcat** deploying **JAVA** and **Web** Applications.
* Implementation of file transfer systems using **FTP, NFS, and SSH (SCP)**. Implementing various security tools like **SETUID, SETGID and STICKY BIT** on file system for providing secure access.
* Manage systems routine backup with the help of **Rsync, Bacula, sbackup, Backupninja** scheduling jobs such as disabling and enabling **cron** jobs, enabling system logging, network logging of servers for maintenance, performance tuning, and testing.

**Environment and Tools**: LINUX/UNIX, Solaris, Virtual Machines, Samba Server, NFS Server, NIS Server, TCP/IP, Oracle 10g, Kickstart, Red Hat Satellite, Virtual Mware/Box Linux RHEL 4/5/6, Solaris 8/9/10, SUSE Linux 10/11, LVM, LDAP, Splunk, Nagios, APACHE TOMCAT SERVER, Java