Curriculum vitae

Personal data

Name: Manoj K.

Technical Knowledge and Skills

CI/CD, Python, Linux, Kubernetes, Terraform, Docker, AWS, Microsoft Azure, Google Cloud Platform

A dynamic professional with 9+ years of IT experience comprising DevOps Methodologies and implementations along with Systems Administration and Software Configuration Management (SCM). Encompassing experience includes Source Code Management, Build/Release Management, Implementations using CI/CD Pipelines, Virtualizations using VMware and Cloud Computing with Microsoft Azure, Amazon Web Services, and on Google Cloud Platform.

Education

Fullerton, United States
Master of Engineering in Software Engineering, California State University

Work experience

September 2020 - Present

Western Union, United States, Texas, Dallas
Azure DevOps Engineer

Stack:

- DevOps Portal,
- Automation,
- Azure Spring Cloud,
- AKS,
- Virtual Machines,
- Terraform,

- CI/CD,
- Terraform,
- Docker,
- Kubernetes,
- Monitoring,
- Ansible,
- Python,
- Agile.

Responsibilities:

- Worked as an Azure DevOps Engineer, involved in configuring virtual machines, storage accounts, resource groups, IPs and creating availability sets for the hybrid environment.
- Created Virtual Machines via the pipeline using Terraform and handled remote login to Virtual Machines to troubleshoot, monitor and deploy applications. Managed different infrastructure resources, like physical machines, VMs and Docker containers using Terraform.
- Handled CI/CD operations to automate the infrastructure using Azure Pipelines and traditionally on Jenkins
- Worked with Visual Studio Code to perform all the code change/update activities and code push to the working directory. Code reviews are handled by myself and my team members.
- Designed and implemented Kubernetes applications and migrated the Microservice Based applications from Virtual Machines to Docker containers and managed the clustered containers using Kubernetes.
- Worked on setting up a provisioning template out of ARM/ and Terraform for provisioning a new environment on Azure.
- Worked with NuGet build Artifact Feeds and mutated them on to the pipeline flow. Created custom templates to minimize the time efforts in order to rebuild the regular tasks.
- Worked on PowerShell and Azure Cloud Shell to perform usual automation and setup log monitoring-Log Analytics Workshop (collection).
- Worked on Azure Spring Cloud Service to deploy Spring Boot applications without having to use Kubernetes (this part would be handled by Azure themselves) and worked on setting up a custom

domain and private DNS for organization.
- Worked on SSL and TLS certificates for the organization's custom domain and handled deployments via Azure Pipelines.
- Loaded the secrets on to Azure Key Vault and placed it in a secured VNet with very specific Firewall rules.
- Worked on Networking part of Azure DevOps in setting up Express Routes and App Gateway.
- Handled scrum ceremonies, followed bi-weekly-based sprints (SDLC-Agile) and accomplished the work/tasks in time.

November 2019 - February 2020

AgFirst Farm Credit Bank, United States, South Carolina
DevOps Developer

Stack:

- Team Foundation Server 2018,
- Azure DevOps Server,
- Azure DevOps Portal,
- Agile,
- Microsoft SQL Server Management Studio,
- SonarQube,
- Visual Studio 2017, 2015,
- SQL Server Manager 2016,
- VMware vRealize,
- Windows PowerShell,
- Windows PowerShell ISE,
- Docker,
- Terraform,
- Kubernetes,
- NuGet packages,
- MS Build,
- Agent Pools,
- Variable Groups.

Responsibilities:

- Working as a developer, was majorly involved in enhancing the CICD Pipeline and performing build and release operations on Team Foundation Server 2018, along with implementing Azure AD and multifactor authentications and AD synchronizations.
- Created NuGet Packages for the applications, which are to be consumed at the deployment/release stage

of the application using MS Build. Configured and deployed Azure Web App for .NET web applications and carried the continuous code check using SonarQube.

- Worked on the Infrastructure automation IaC using Terraform. Built Pipelines and automated web applications.
- Created PowerShell custom tasks that are exclusive to the organization storing them on the repo, used by providing the path of source control (stored generally on the develop/features branch of the repository) specified in the build definitions.
- Maintained the CI/CD architecture using Azure DevOps/VSTS, created Azure Automation Assets, Graphical Run books, PowerShell Run books that will automate specific tasks, deployed Azure AD Connect, configuring the Active Directory Federation Services authentication flow, ADFS installation using Azure AD Connect.
- Created SQL Queries on Microsoft SQL Server Management Studio to test and match the data scripts that have been executed via RedGate. Handled SQL Server authentication errors, worked closely with DBAs, and involved them in all our CICD implementations.
- Handled the Ansible Tower errors occurred while deploying- by updating the Playbook with missing credentials and resolving certificate authentication errors.
- Created custom extensions based on the Organization's Standard and installed them on Azure DevOps Server for quality Build and Release operations.
- Responsible for CI and CD process implementation using Jenkins along with custom scripts to automate repetitive tasks.
- Managed team and cross-functional projects that involve cloud infrastructure. Used Azure DevOps CI/CD of Source Control Docker Linux/Windows, Docker CLI, Docker-Compose.
- Worked on launching and Debugging Docker container, Installing/setup Docker host in the environment used Docker-compose file while deploying Docker container to start, and start containers.

- Used Kubernetes to orchestrate the deployment, scaling and management of Docker Containers. Managed the containers using Kubernetes. Created, added and modified the user access and their permissions in Jenkins.
- Designed a unified and shared platform for software development teams to facilitate CI/CD on Kubernetes platform and Implemented a production ready, load balanced, highly available fault tolerant Kubernetes infrastructure.
- Performed environment-specific deployments for the organization's primary application by enhancing the web.config files for stage-specific [UAT] deployments via CICD and resolved the encryption errors during the process.
- Gave Stakeholder demos on the CICD Templates, Data Script migrations and Documented wiki on the Azure DevOps Portal, with steps to create, usage along with the pros and cons of the CICD Stage Templates.

August 2017 - October 2019

Kaiser Permanente, United States, California, Pasadena
DevOps Engineer

Stack:

- GIT,
- SQL,
- TSQL,
- Docker,
- Kubernetes,
- AWS,
- Microsoft Azure,
- Terraform,
- Ansible,
- Splunk,
- Cassandra 2.1,
- Visual Studio Team Services,
- HashiCorp Vault,
- PowerShell,
- Python,
- Rackspace.

Responsibilities:

- Working as Cloud Administrator on Microsoft Azure,

involved in configuring virtual machines, storage accounts, and resource groups. Remote login to Virtual Machines to troubleshoot, monitor, and deploy applications.

- Setting up the automation environment for Application team if necessary, and help them through the process of build and release automation. Used MAVEN as build tools on Java projects for the development of build artifacts on the source code.
- Created Virtual Machines via the pipeline using Terraform and handled remote login to Virtual Machines to troubleshoot, monitor and deploy applications.
- Worked with Atlassian tools like Bamboo & Jira. Designed and Developed Bamboo Build deployments on Docker containers and wrote Docker images for Bamboo & Nexus.
- Used OpsCenter to monitor prod, dev, test, and fst Cassandra clusters and Set Cassandra backups using snapshot backups. Used Sqoop to import the data on to Cassandra tables from different relational databases like Oracle, MySQL.
- Worked in designing data models in Cassandra and working with Cassandra Query Language (CQL).
- Designed and implemented Virtual Networks with the network security groups and deployed those using HashiCorp Terraform and CloudFormation.
- Scaled the applications, created high availability by spreading incoming requests across various VMs, deployment of Virtual Machines and Instances (the Cloud Services) into a secured VNets using the Azure Load Balancers and the Subnets.
- Implemented API Management modules for public-facing subscription-based authentication and also created SQL and TSQL scripts as part of bug fixes to provide immediate solutions for some of the issues also created PowerShell script for backup and restore operations for API Management.
- Created and maintained Continuous Integration (CI) using tools over multiple environments to facilitate an agile development process, which is automated and repeatable, enabling teams to safely deploy code many times a day while ensuring Kubernetes Services are supported.
- Integrated Kubernetes with HashiCorp Vault to inject

configurations at runtime for each service using init, config sidecars and persistent volume sharing between app and config containers.
- Maintained the CI/CD architecture using Azure DevOps, created Azure Automation Assets, Graphical Run books, PowerShell Run books that will automate specific tasks, deployed Azure AD Connect, configuring the Active Directory Federation Services authentication flow, ADFS installation using Azure AD Connect.
- Integrated Docker container orchestration framework using Kubernetes by creating pods, configure Maps, and deployments.

May 2015 - July 2017

TD Bank, United States, Vermont, Burlington
AWS/ DevOps Engineer

Stack:

- AWS,
- S3 Bucket,
- IAM,
- MFA,
- Docker,
- Kubernetes,
- Ansible,
- Ansible Python Script,
- VMware,
- CloudWatch.

Responsibilities:

- Worked in the AWS environment, involved in utilizing Compute Services (EC2, ELB), Storage Services (S3, Glacier, Block Storage, Lifecycle Management policies), CloudFormation (JSON Templates), Elastic Beanstalk, Lambda, VPC, RDS, Trusted Advisor and CloudWatch.
- Implemented serverless architecture using AWS Lambda with Amazon S3 and Amazon DynamoDB. Also, migrated 300+ servers from on-premise to AWS Cloud.
- Automated backups of ephemeral-data-stores to S3 bucket and EBS. Created S3 buckets in the AWS environment to store files, sometimes which are

required to serve static content for a web application.
- Used security groups, network ACLs, internet gateways, and route tables to ensure a secure zone for the organization in AWS Public Cloud.
- Experience in AWS Ansible Python script to generate inventory and push the deployment to flexible configurations of several servers using Ansible.
- Created AWS Cloud Formation templates on creating IAM roles and total architect deployment end to end.
- Implemented Microservices on RedHat OpenShift based on Kubernetes, and Docker to achieve Continuous Delivery.
- Worked on RedHat OpenShift to improve application security by putting admin consoles on different Docker containers accessible only from unusual port numbers.
- Deployed new running containers, worked on the setup of the Docker registry, and published all the Docker images to that Container registry by using docker, Openshift.
- Wrote Automated shell scripts to ensure Openshift - Environment is monitored end to end so that we can monitor in Bank's internal script based Monitoring tool.
- Used RESTful Web services for transferring data between applications, Implemented the application using Spring Framework, which is based on MVC design pattern. Used JSP, Servlets, and HTML5 to create web interfaces and developed Java Beans and used custom tag libraries for embedding dynamic into JSP pages.

May 2014 - April 2015

Kohl’s, United States, Wisconsin, Menomonee falls
DevOps Engineer

Stack:
- GIT,
- ANT,
- Maven,
- Puppet,
- Jenkins,
- Apache Tomcat,
- WebSphere,

- JIRA,
- AWS.

Responsibilities:

- Assisted in migrating existing data centers into the AWS instances, responsible for day to day build & deployments in pre-production and production environments.
- Got introduced to IaaS, PaaS, SaaS culture, and worked on AWS platforms, worked on AWS provisioning and managed AWS services like EC2, Elastic Load-balancers(ELB), Elastic Container Service(ECS), S3, Elastic Beanstalk, Cloud Front, Elastic File system, RDS, Dynamo DB, DMS, VPC, Direct Connect, Route53, Cloud Watch, Cloud Trail, Cloud Formation, IAM, EMR, Elastic Search.
- Launched Amazon EC2 Cloud Instances using Amazon Web Services (Linux/ Ubuntu) and Configured launched instances to specific applications.
- Defined AWS Security Groups, which acted as virtual firewalls that controlled the traffic allowed to reach one or more AWS EC2 instances.
- Created S3 buckets and managed policies for S3 buckets and used S3 bucket and Glacier for storage and backup on AWS.
- Worked with npm commands and using package.json for managing dependencies and dev-dependencies of Node.js applications.
- Created scripts in Python to automate log rotation of multiple logs from web servers. Worked on Bootstrapping instances using Chef and integrating with auto-scaling.
- Developed Cloud Formation scripts to automate EC2 instances. Created Cloud Formation templates and deployed AWS resources using it.
- Created CloudWatch alerts for instances & used them for auto-scaling launch configurations.
- Setup and build AWS infrastructure various resources, VPC EC2, S3, IAM, EBS, Security Group, Auto-Scaling, and RDS in Cloud Formation JSON templates.
- Maintained the user accounts (IAM), RDS, Route 53, VPC, RDB, Dynamo DB, SES, SQS, and SNS services in the AWS cloud.

July 2013 -
May 2014

Tech Wave, India, Hyderabad
Build and Release Engineer

Stack:

- VMware,
- Linux,
- Windows,
- JSON,
- shell,
- CloudWatch,
- Python,
- Tomcat Server,
- Centos,
- Ubuntu,
- Ansible,
- Chef,
- JFrog,
- S3 Bucket,
- Glacier, AWS.

Responsibilities:

- Worked on reporting and analysis using SQL Server Reporting Services (SSRS) and SQL Server Integration Services (SSIS) for migrating data with the .NET environment.
- Worked on Multiple AWS instances, set the security groups, Elastic Load Balancer and AMIs, Auto scaling to design cost-effective, fault-tolerant and highly available systems.
- Used Node.js frameworks like Express and Restify to mock a Restful API.
- Developed Perl and shell scripts for automation of the build and release process, developed Custom Scripts to monitor repositories, Server storage.
- Build and Developed scripts using Maven and ANT as build tools in Jenkins to move from one environment to another environments.
- Designed Puppet Modules to manage configurations and automate installation process.
- Integration of Puppet with Apache Tomcat and developed load testing and monitoring suites in Python.
- Build artifacts (WAR's and EAR's) are deployed to the WebSphere app server by integrating and maintained configuration files for each application for build

purpose.

- Extensively used JIRA for issue tracking and project management and for tracking bug.
- Integrated Bitbucket with JIRA for transition JIRA issues from within Bitbucket Server and monitored the JIRA issues in Bitbucket Server.