



MAHESH BABU P

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PROFESSIONAL SUMMARY

Overall 5 years of experience working in the IT industry with strong foundations in **Configuration Management, Continuous Integration (CI) and Continuous Deployment (CD), Build and Release Management, System/Network Administration** on various cloud platforms like Microsoft **Azure, Amazon Web Services (AWS)** and have experience working in fast paced Agile teams. Hands-on experience in tools like **Kubernetes, Terraform, Docker, Ansible**, several scripting languages and monitoring tools.

- ❖ Expertise working on various **Azure** services like **Compute, Caching, Azure SQL, ARM (Azure resource manager), Storage, Virtual Networks, Azure Active Directory (AD), Fabric Controller, Azure Data Factory, Application Gateways, API Management, Scheduling, Azure Auto scaling, Azure Log Analytics Workspace** and **Power Shell Automation**.
- ❖ Expertise in deploying **AZURE AD Connect**, configuring using **AZURE AD Connect**. Experience in **Azure Network Security Groups, Azure Operational Insight and OMS, AZURE Premium Storage, Site Recovery, Network Virtual Appliance, Client-Side encryption** for Azure storage objects.
- ❖ Well-versed in writing parameterized **Azure ARM** templates to deploy multiple resources in **Azure** through **Az-cli** and **windows PowerShell**.
- ❖ Experience in creating **custom agent** pools and configuring agents by writing roles in **Ansible** Playbooks and integrating it with **Azure DevOps** to run the build pipeline on custom agents.
- ❖ Experience in integrating existing **GitHub** repo to **Azure Boards** in **Azure DevOps** and linking commits and PRs to work items.
- ❖ Experience on **AWS** services like **IAM, ELB, EC2, S3, VPC, Cloud Formation, Route 53, VPC peering, API Gateway, Cloud Trail, Cloud Watch, Amazon Simple Queue Service (Amazon SQS), AWS Kinesis, Lambda, NACL, Elastic Beanstalk, Redshift** and **Network Connectivity** troubleshooting.
- ❖ Expert in implementing **Terraform** modules for deployment of applications across multiple cloud platforms like **AWS, Azure**. Sound understanding about **Terraform** key features such as **Infrastructure as Code, Execution plans, Resource Graphs, Change Automation**.
- ❖ Expertise in **Terraform** for creating **VPCs, ELBs, Security groups, SQS queues, S3 buckets** in **AWS** and updated the **Terraform Scripts** based on the requirement on regular basis. Converted existing **Terraform** modules that had version conflicts to utilize cloud formation during **Terraform** deployments to enable more control or missing capabilities.
- ❖ Expertise in building **Jenkins** jobs to create **Infrastructure** by pulling **Terraform** code from **GitHub** repositories, and can work closely with teams, to ensure high quality, timely delivery of builds and releases.
- ❖ Strong experience in maintaining repositories in the **Bitbucket** for the services developed and set up automated testing and deployments using **Jenkins**.
- ❖ Expertise in creating pods, Namespaces, Services, Deployments, Daemon sets, Replica

Sets of microservices in **Kubernetes** using **YAML** manifests, **HELM** charts and integrated **Jenkins** pipelines to drive all microservices releases.

- ❖ Installed, configured, and managed full end-to-end Git Lab integration, Pipeline Management. Also, utilized GitLab runners to support application testing and fill system level point of contact to support GitLab.
- ❖ Experience in Kubernetes to manage the deployment rollouts and roll backs and created service mesh for the traffic management in the production environment.
- ❖ Experience with container-based deployments using **Docker**, working with **Docker** images, **Docker Hub**, **Docker** registries like **Docker.io**, **Quay.io** and setting up private registries.
- ❖ Expertise in using **Docker** to containerize custom web applications and deploy them onto **Digital Ocean** using **Docker Swarm** and automating the application deployment in cloud using **Vagrant**.
- ❖ Experience in creating custom images by using **Docker** compose and integrating it with **GitLab** to build and push the images to **Docker** Container Registry.
- ❖ Experience on **Ansible Playbooks, modules, roles**, and used them in Cloud (**AWS, Azure**) environments and experience with **Ansible Tower** to manage multiple nodes and manage inventory for different environments.
- ❖ Experience in implementing and maintaining the branching and build/release strategies using **SCM** tools like **SVN, GitHub, Bitbucket** and maintain build packages using **Team Foundation Server (TFS)**.
- ❖ Experience in setting up the configuration of projects to publish snapshots and release artifacts to **JFrog** and **Nexus Artifactory** to share artifacts across multiple projects and environments.
- ❖ Experience on Virtualization technologies like **VMware, Vagrant, Oracle Virtual Box, Microsoft Virtual PC** and performing System Administration **System Builds, Server builds, Installs, Upgrades, Migration, Troubleshooting, Disaster Recovery, Performance Monitoring & Fine-tuning** on **UNIX, RedHat Linux**.

TECHNICAL SKILLS

Cloud Platforms	AWS, Azure.
CI/CD Tools	Jenkins, Azure DevOps
Build Tools	Ant, Maven
Container Tools	Docker, Kubernetes
Configuration Management Tools	Ansible
Version Control Tools	GIT, SVN, Bit Bucket
Monitoring Tools	ELK, Cloud watch, Nagios, Splunk
Scripting	Bash/Shell, YAML, Powershell
Application Servers	WebLogic, WebSphere, JBOSS 4.1
Web Servers	Apache HTTP, Nginx, Apache TOMCAT
Networking	DNS, DHCP, SMTP, HTTP, SNMP
Operating Systems	Windows & Linux

EDUCATION

- ❖ **B Tech from JNTUH**

PROFESSIONAL EXPERIENCE

- ❖ **Working in Persistant as a Cloud Devops Engineer in Mar 2023 to Jul 2023**
- ❖ **Worked in Capegemini as a Cloud Engineer in Jul 2022 to Feb 2023**
- ❖ **Worked in SLS Power Corporation as a Software Engineer from Aug 2018 to Jun 2022**

Mercury Insurance, Brea, CA **Cloud DevOps Engineer**

- ❖ Designed and configured **Azure Virtual Networks (VNets)**, subnets, **Azure network settings**, **DHCP address blocks**, **DNS settings**, **security policies** and **routing**.
- ❖ Built an application environment to operate at high availability in different **Azure** regions by using **CDN**, **Azure Traffic Manager**, **App Services**, **Active Directory**, **Storage Queues**, **Cognitive Services**, **Azure Search**, **Storage Blobs**, **Redis cache**, and **SQL Database**.
- ❖ Worked on various **Azure Services** like **Compute**, **Caching**, **Azure SQL**, **ARM (Azure resource manager)**, **Storage**, **Virtual Networks**, **Azure Active Directory (AD)**, **Fabric Controller**, **Azure Data Factory**, **Application Gateways**, **API Management**, **Scheduling**, **Azure Auto scaling**, **Azure Log Analytics Workspace** and **PowerShell Automation**.
- ❖ Created and implemented **ARM templates** and deployed them using the Azure portal, also used **Azure quickstart** templates for **Cloud Infrastructured e sign** and implementation to deploy Web applications using **Azure PowerShell Workflow**.
- ❖ Implemented various **terraform** templates to provision wide range of resources in **Azure** including **Azure Kubernetes** cluster (**AKS**).
- ❖ Involved in selecting the appropriate **Azure service** based on compute, data or security requirements and leveraging **Azure SDKs** to interact with Azure services.
- ❖ Created **Azure Role-based Access Control (RBAC)** to segregate duties within our team and provide only necessary access to users.
- ❖ Created a lease pipeline in **Azure DevOps** to automate the windows patching process by implementing a **PowerShell** script.
- ❖ Deployed a managed **Kubernetes** cluster in Azure using Azure Kubernetes cluster(**AKS**) service using **Azure CLI** by creating **ARM** templates and **Terraform** modules.
- ❖ Orchestrated and **migrated CI/CD processes** using **Azure ARM**, **terraform** templates and containerized the infrastructure using **Docker** in **Azure**.
- ❖ Designed delivery pipeline for different environments like **DEV**, **QA**, **UAT** and **Production** and implemented **Azure DevOps** as a continuous integration service.
- ❖ Responsible for **user management**, **plugin management** and end-to-end automation of Build and Deployment process in **Azure DevOps**.
- ❖ Created reusable pipelines in **Azure DevOps** by passing build parameters using variable groups and integrated it with **Azure Key Vault** to fetch sensitive information like client secret and access token.
- ❖ Worked on **Docker Container snapshots**, attaching it to a running container, monitoring and troubleshooting issues with **docker containers**.
- ❖ Created **Azure pipeline jobs** for continuously building the projects. Scheduled jobs to

build upon every check in into **GitHub**. Implemented **YAML** script to do pre-and post-build operations in Azure pipeline jobs.

- ❖ Integrated **Azure policies** with **Azure Kubernetes Service (AKS)** cluster to apply enforcements and safeguards on the cluster in a centralized manner
- ❖ Involved in trouble shooting and resolving several issues like **CrashLoop Backoff** while creating **Kubernetes** Pods by analyzing logs in production environment.
- ❖ Worked on monitoring the **Kubernetes** cluster with **Sysdig**, **loggly**, **Grafana** and **New Relic** by collecting and storing the metrics of pod and disk usage onto **Azure Blob Storage**.
- ❖ Configured **Azure App Dynamics** cluster agent to monitor **AKS** pod failures and restarts, node starvation, missing dependencies such as Services, Config maps and Secrets.
- ❖ Set up **Kubernetes** Clusters for running microservices and pushed microservices into production with **Kubernetes** backed Infrastructure. Automated the deployment of Kubernetes clusters using Ansible playbooks.
- ❖ Implemented client side hooks in Git to trigger custom scripts before committing and merging into the Git repository and server-side hooks that run once the code is committed.
- ❖ Worked on Ansible Playbooks with Ansible roles and created inventory in Ansible for automating the continuous deployment. Configured the servers, deployed software, and orchestrated continuous deployments or zero downtime rolling updates.
- ❖ Implemented Ansible Tower work flow that provisions Azure VMs, applies base system configuration, and deploys an application, all by using different playbooks maintained by different teams.

City of Hope, Irwindale, CA

Role: Cloud DevOps Engineer

- ❖ Migrated on premises to Microsoft azure by building **azure disaster recovery environment**, **azure recovery vault** and **azure backups** from the scratch using power shell script.
- ❖ Experience in creating and managing Virtual Machines and Web/Worker roles on **Microsoft Azure Classic**, **Resource Manager** and **troubleshooting issues** on **Azure VMs**. Supported technologies, such as **Active Directory Federation Services**, **Azure Active Directory**, and **Power Shell**.
- ❖ Experience in designing, configuring, and deploying solutions on Microsoft Azure using (Azure Resource Manager) ARM Templates, AZURE Power Shell Module focusing on high-availability and auto-scaling.
- ❖ Configured VMs in Availability Sets using **Azure Portal** to provide resiliency and scale sets using **Azure Resource Manager** to manage network traffic.
- ❖ Designed **AWS Cloud Formation templates** to create custom sized VPC, subnets, NAT to ensure successful deployment of Web applications and database templates.
- ❖ Configured cluster operations in **AWS Kubernetes (EKS)** to deploy **micro services** with **CI/CD** system and used **Kubernetes** cluster to scale up operations of clusters, maintain the cluster services, load balancing, network policies, group **Docker** containers across different platform.
- ❖ Configured and Integrated **Docker** container orchestration framework using Kubernetes by creating pods, deployments and used Python Scripts to schedule, deploy and manage container replicas onto a node cluster using Kubernetes.
- ❖ Developed **Kubernetes** templates for various applications like **Cassandra**, **Grafana**, **Kafka** and setting up Kubernetes Clusters for running micro services and pushed micro services into production with Kubernetes backed Infrastructure. Managed **K8s** charts using Helm and created reproducible builds of the Kubernetes applications

- ❖ Experience in using **Kubernetes** for creating new Projects, Services for load balancing and adding them to Routes by accessing from outside, created **Pods** through new application and controlling, scaling, and troubleshooting pods through SSH, managed manifest files and releases of Helm charts.
- ❖ Created several pods and services using Master and Minion architecture of Kubernetes and developed micro services by on boarding tools leveraging Python to allow easy creation and maintenance of build jobs and deploy Kubernetes services.
- ❖ Used Terraform to Setup infrastructure in AWS and Azure Environments. Converted existing Terraform modules that had version conflicts to utilize cloud formation to enable more control or missing capabilities.
- ❖ Implemented **Terraform** Templates automating Azure IAAS VM's using terraform modules and deployed virtual machine scale sets in production environment.
- ❖ Implemented Jenkins pipeline jobs to create **Azure** Infrastructure from **GitHub** repositories containing **Terraform code** and created on-premises active directory authentication using automation with **ansible play books**.
- ❖ Created **terraform** templates for provisioning virtual networks, subnets, VM Scale sets, Load balancers, and **NAT** rules and used terraform graph to visualize execution plan using the graph command. Configured **BGP** routes to enable Express Route connections between on-premises data centers and **Azure** cloud.
- ❖ Used **Ansible** playbooks, modules, roles to automate repetitive tasks, quickly deploys critical applications, and proactively manage changes in different environments. Also configured **Ansible Tower** to manage multiple nodes and inventory for various environments.
- ❖ Experience in managing software **artifacts** required for development using repository managers like **Nexus** and **JFrog Artifactory** and writing **Jenkins Pipeline**. Written scripts for Continuous Integration (CI) and built workflows in **Jenkins** for uploading **Artifacts** into **Nexus Repository**.
- ❖ Extensively worked on **Jenkins** by installing, configuring, and maintaining the purpose of **CI** and **End-to- End** automation for all build and deployments implementing **CI/CD** for the database using **Jenkins**. Used **Jenkins API** to query the Jenkins server state and change configuration and automate jobs on nodes.

Spencer Health Solutions Inc, Morrisville, NC

Build & Release Engineer

- ❖ Configured **AWS** application deployment infrastructure services like **VPC, EC2, S3, RDS, IAM, EBS, Route53, SNS, SES, SQS, CloudWatch, Cloud Trail**, Security Group, Auto Scaling Group (ASG), and RDS using both Cloud Formation and **Terraform** templates.
- ❖ Experience in Configuring Auto Scaling in customized **VPC**, based on **elastic load balancer** (ELB) traffic and using **ELB** health check to **trigger** auto scaling actions and deployed Auto Scaling policies to scale up/down **EC2** instances based on **ELB** health checks and created alarms to be used in auto scaling decision making policies. Familiar with **AWS ACM** and have installed **SSL** certificates on various **Load Balancers**.
- ❖ Writing **AWS Terraform** templates for any automation requirements in **AWS** services. Implemented multiple high-performance **MongoDB** replica sets on **EC2** with robust reliability. Managed and supported **AWS** Security related issues, such as **IAM** and **S3** policies for user access.
- ❖ Automated deployments of web applications based on **Node.js, Python, Ruby, Java, PHP** using **AWSCode Pipeline, EC2, Elastic Beanstalk**, and **Jenkins** and secured by creating **IAM** roles and policies for services and users.

- ❖ Automated the implementation of **VPCs**, **ELBs**, security groups, **SQS** queues, **S3** buckets by using **Terraform** and used **Terraform** as a tool to manage different cloud infrastructure resources, i.e., VMware, and **Docker** containers.

Internal **System Engineer**

- ❖ Involved in configuration, installation, implementation, maintain and support for the **Linux servers, RHEL, Ubuntu, Solaris, Fedora.**
- ❖ Installed operating system on multiple machines using **Kick Start** and Performed server updates, patching, upgrade, and package installations using **RPM** and **YUM**. Installation of **SSH** and configuration of keys bases authentication.
- ❖ Administered Linux servers for several functions including Apache/ Tomcat server, mail server and MySQL databases in both development and production.
- ❖ Written shell scripts for automation of daily tasks and involved in development of automation scripting to deploy some applications.
- ❖ Experience in using monitoring tools such as **Nagios** for general disk space usage and conduct systems performance monitoring and tuning.
- ❖ Developed automated processes that run daily to check **disk usage** and perform cleanup of file systems on LINUX environments using **shell scripting**.
- ❖ Installing, configuring, and administering **DNS, NFS, NIS, Mail servers, FTP servers, RPM servers** on Red Hat Linux, Ubuntu, CentOS, Fedora platforms.
- ❖ Worked on server-based operating system **kernel** configurations on **RedHat, Centos7, Ubuntu, kernel** parameter tuning, troubleshooting **System, Network & Performance Issues.**
- ❖ Installed numerous **operating system (Windows, Linux, Ubuntu)**, configured **Microsoft Outlook** and maintained Exchange servers, performed **routine system management, operating system upgrades and software updates.**