**Pavan Y**

Sr. Cloud / DevOps Engineer

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**Professional Summary:**

Over **7 years** of IT Professional Experience includes, **Linux** and **System Administration** with a major focus on **DevOps**, **Cloud** technologies, **Continuous Integration/Deployment**, **Configuration Management**, **Source Code Management**, and **Virtualization** technologies which includes Troubleshooting Performance issues.

* Expertise on various **AZURE** services like **Compute (Web Roles, Worker Roles)**, **Caching**, **SQL AZURE**, **NoSQL**, **Network** services, **AZURE Active Directory**, **AZURE Websites**, **Application Insights**, **Power BI**, Internet of Things (**IoT**), Azure **Monitoring**, **Key Vault**, Visual Studio Online (**VSO**), **Storage**, **Data Factory, API Management**, **Scheduling**, Auto **Scaling**, **PowerShell** Automation and other Azure Services.
* Experience in provisioning of **IaaS**, **PaaS** Virtual Machines and Web, Worker roles on Microsoft AZURE **Classic** and Azure Resource Manager (**ARM**), Deployed Web applications on Azure using **PowerShell** Workflow.
* Experience in using Azure **AD** for integrating **SaaS** applications which provides identity and access management and enables users to **single sign-on** to applications directly or discover and launch them from a portal such as **Office 365** or the Azure AD **access panel**.
* Experience in deploying a **Dynamics NAV** database that is exported as a data-tier application (DAC) **.bacpac** file into Azure SQL using **SQL Server Manager.**
* Experience in **Architecting** and securing the **Infrastructure** on **AWS** using **EC2, S3, RDS, EBS, VPC, ELB, IAM,** **KMS**, **EMR**, **Cognito**, **API Gateway**, **CloudTrail**, **Cloud Watch**, **Amazon SQS**, **SNS, SES,**  **Config**, **AWS** **Kinesis**, **Lambda**, **Network ACLs**, **Security** **Groups**, **Route** **Tables**, **Route53**, **Elastic Beanstalk**, **Redshift** and deploying applications utilizing all these services majorly focusing on **high-availability**, **fault tolerance**, and **Autoscaling** in **AWS CloudFormation**.
* Using **Clover ETL** migrated data to **AWS Redshift** and used **AWS Beanstalk** for fast deploying, scaling and load balancing of web applications and services developed with **Java**, **PHP**, **Node.js**, **Python**, **Ruby**, and **Docker** on familiar web servers such as **Apache**, and **IIS**.
* Experience in using **CloudFormation template** for reliable provisioning of initial infrastructure (**stacks**) like **IAM** **roles** & **policies**, **S3 buckets** and **bucket** backups on **AWS**.
* Experience in managing **Docker containers** on a cluster hosted on a **serverless** infrastructure using **ECS** by distributing the application traffic in **ELB**, **Cloud Front** to distribute content to edge locations, **Cloud watch** to set alarms and notifications.
* Experience in installing and configuring **PCF** (Pivotal Cloud Foundry) environments and worked on Pivotal's **cloud native** platform, an **integrated stack** from infrastructure through application **development**, optimized for **rapidly scaling** applications to meet the demand.
* 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 Building and deploying the application code using **CLI** of **Kubernetes** like **kubectl**, **kubelet**, **kubeadm, Kubespray** and Schedule the jobs using **kube-scheduler**. Managed **K8s** charts using **Helm** and created reproducible builds of the **Kubernetes** applications.
* Experience in orchestration of **Docker Images** and **Containers** using **Kubernetes** by creating whole master and minion. Installed **artifactory-ha** on-top of **Kubernetes** for dynamic **PVC** provisioning.
* Implementing **kubernetes auth** method to authenticate with **HashiCorp Vault** using a Kubernetes Service Account **Token** then integrates Vault token into a Kubernetes **Pod**.
* Experience in managing **Ansible Tower, Playbooks** with **Ansible roles**, **group variables**, **inventory files**, copy and remove files on remote systems using **file module**.
* Extensively worked on creating **Chef Recipes**, **Chef Roles**, **Templates**, **Attributes**, **Cookbooks** and testing of **Cookbooks** using **Food Critic**, **Test Kitchen** & running recipes on nodes managed by on-premise **Chef Server.**
* Expert in an Orchestration & Migration of **CI/CD** processes using **CloudFormation**, **Terraform Templates** & Containerization of Infrastructure using **Docker**, which was set up in **Vagrant**, **AWS**, and **VPC**’s.
* Expertise in working with **Terraform** key features such as Infrastructure as a code (**IaaS**), **Execution** **plans**, **Resource** **Graphs**, **Change** **Automation** and extensively used **Auto** **scaling** launch configuration **templates** for launching amazon EC2 instances while deploying **microservices**.
* Extensively worked on **Jenkins** and **Bamboo** by installing, configuring and maintaining the purpose of **Continuous Integration** (CI) and for **End-to-End** automation for all build and deployments implementing **CI/CD** for database using **Jenkins** in **Groovy**.
* Hands-on experience using **MAVEN**, **ANT**, and **Gradle** as build tools for the building of deployable artifacts (jar, ear & war) from the source and static code analysis using **SonarQube**.
* Experienced in branching, tagging and maintaining the version across the environments using **SCM** tools like **Git**, **GitHub**, **Subversion** (SVN) and **TFS** on Linux and Windows platforms.
* Good knowledge on Installation and Configuration of **Nexus** repository manager for sharing the artifacts within the company and efficient in using **Nexus** and **Artifact Repository** managers for **Maven** builds.
* Experience in Monitoring server performance with tools like **Nagios**, **Splunk**, **Dynatrace**, **Datadog** and resolved network related issues with manual commands and Implemented centralized logging management using **ELK** (Elasticsearch, Logstash, and Kibana) within **EC2**/ **ELB** for **Elasticsearch**.
* Experience in working with **SQL** databases like **MySQL**, **Oracle** 10i/9i/8i, **SQL Server** and **NoSQL** database like **MongoDB**, **DynamoDB**.
* Expertise in Installation, Support, Configuration with different flavors of **LINUX RHEL**, **CentOS**, **Oracle Linux (OEL) 6.x/5.x**, **Debian**, and **Ubuntu**. Installed and configured **Red Hat LINUX Kickstart.**

**TECHNICAL SKILLS:**

|  |  |
| --- | --- |
| Cloud | AWS, OpenStack, Azure. |
| Configuration Management Tools | CHEF, PUPPET, ANSIBLE |
| CI/CD Tools | Jenkins, Hudson, Bamboo |
| Build Tools | ANT, MAVEN, GRADLE |
| Container Tools | Docker, Kubernetes, EKS, ECS, ECR, AKS, ACR |
| Version Control Tools | GIT, CVS, SVN, Bit Bucket, GitHub, GitLab |
| Monitoring Tools | Nagios, Splunk, ELK, Cloud watch |
| Scripting | Bash/Shell, Perl, Python, Ruby, PowerShell, Groovy, YAML, C, C++ |
| Databases | MySQL, Oracle 9i/10g/11g, DB2, NoSQL (MongoDB, DynamoDB) |
| Application Servers | WebLogic 9.x/10.x, WebSphere 6.x/7.x/8.x, JBOSS 4.1 |
| Web Servers | Apache HTTP, Nginx, Apache TOMCAT |
| Networking | DNS, DHCP, SMTP, HTTP, SNMP |
| IDE Tools | ECLIPSE IDE, NETBEANS |
| Operating Systems | Linux(RedHat), Ubuntu, Unix, Windows XP/Vista |
| Virtualization Tech | VMware vSphere ESXi 5.x/4.x, ESX /3.x, VMware Workstation, Oracle Virtual box |

**CERTIFICATIONS:**

1. **AWS Solution Architect Associate**

**Digital Badge:** <https://www.youracclaim.com/badges/37fdf57c-a9fa-4df8-8f22-35cd93d4a317>

1. **HashiCorp Certified Terraform Associate**

**Digital Badge**: <https://www.youracclaim.com/badges/62a10e91-0b18-4c82-945d-86ace076addf>

1. **Statement of Accomplishment - SQL (Online)**

**Stanford University - Lagunita**

**Professional Experience:**

**(Sr. Cloud / DevOps Engineer) Aug 2019 - present**

NMSI – Dallas, TX

* Designed AZURE Resource Manager (**ARM**) templates and custom build steps using **PowerShell**. Identified and logged defects in Azure Devops (**VSTS)** and interacted with developers to prioritize the issues and Configured **AWS IAM** and **Security Groups** in **Public** and **Private Subnets** in **VPC,** managed **IAM** accounts (with **MFA**) and **IAM** policies to meet security audit & compliance requirements.
* Deployed and configured **Elasticsearch**, **Logstash**, and **Kibana** (**ELK**) for log **analytics**, and application **monitoring** in integration with AWS **Lambda** and **CloudWatch**. Then store that logs and metrics into an **S3 bucket** using Lambda **function**.
* Integrated AWS **Dynamo DB** using AWS lambda to store the values of items and backup the **Dynamo DB streams,** implemented load balanced, highly available, fault tolerant, auto-scaling **Kubernetes** **AWS** infrastructure and **microservice** container orchestration
* Created **Azure SQL** database, performed **monitoring** and **restoring** of Azure SQL database. Performed migration of **On-premises** Microsoft SQL server to Azure SQL database.
* Involved in managing **Private Cloud** and **Hybrid cloud** configurations and practices in Windows **Azure**, **SQL Azure**, **Azure Web** and **Database** deployments. **Upgraded** and **Migrated** web applications to latest **.Net framework** versions and **Azure platforms**.
* Deployed **Azure** Cloud services (**PaaS** role instances) into secure **VNets**, **subnets** and designed Network Security Groups (**NSG**s) to control Inbound & Outbound access to Network Interfaces (**NIC**s), **VM**s & **subnets**.
* Handled migration of on-premises applications to the cloud and created resources inside cloud and expert in deploying of **OpenStack** hosted applications on Azure platform and issues related to **RDP** of **Azure Infrastructure**.
* Worked with **Terraform** Templates to automate the **Azure IaaS** virtual machines using terraform **modules** and deployed virtual machine **scale sets** in production environment.
* Configured the Kubernetes **provider** with **Terraform** which is used to interact with resources supported by Kubernetes to create several services such as **Deployments**, **services**, **ingress** **rules**, **Config Map**, **secrets** etc., in different **Namespaces**.
* Worked on Container management using **Docker** by writing **Docker files** and set up the automated build on Docker Hub and written **Docker Compose** file for **multi container** provisioning and **Makefile** file to **build**, **run**, **tag** and **publish** a docker container to **Azure Container Registry**.
* Integrated **Docker** container-based test infrastructure to **Jenkins** CI test flow and set up build environment integrating with **Git** and **Jira** to trigger builds using **Webhooks** and **Slave Machines**.
* Worked with RedHat **OpenShift** Container Platform for **Docker** and **Kubernetes**. Used **Kubernetes** to deploy **scale**, **load balance** and **manage** Docker containers with multiple **namespace** versions.
* Implementing **clusters** using **Kubernetes** and worked on creating **pods**, replication controllers, Name Spaces, deployments, Services, labels, health checks, **Ingress** resources and Controllers by writing **YAML** files. Integrated them using **weave**, **flannel**, **calico SDN networking**.
* Deployed **Kubernetes clusters** on top of Servers using **KOPS.** Managed local deployments in **Kubernetes,** creating local clusters and deploying application containers. Building/maintaining **docker container clusters** managed by **Kubernetes** and deployed Kubernetes using **helm charts**.
* Developed microservice onboarding tools leveraging **Python** and **Jenkins,** allowing for easy creation and maintenance of **build jobs**, **Kubernetes** deploy and services.
* Designed, installed and implemented the **Ansible** configuration management system and used **Ansible** to manage Webapps, used **Ansible Tower** to automate repetitive tasks, quickly deploy critical applications and proactively manages change.
* Managed Ansible **Roles** by using **tasks**, **handlers**, **vars**, **files** and **templates** in installing, configuring and deploying the webserver application.
* Wrote several **Ansible playbooks** for the automation that was defined through tasks using **YAML** format and run Ansible Scripts to provision Dev servers.
* Used **Jenkins** as Continuous Integration tools to deploy the Spring Boot **Microservices** to **Azure Cloud** and **OpenStack** using build pack.
* Worked in complete **Jenkins** plugins and administration using **Groovy Scripting**, setting up **CI** for new branches, build automation, plugin management and securing **Jenkins** and setting up **master/slave** configurations. Deployed and configured **Git** repositories with **branching**, **forks**, **tagging**, and **notifications**.
* Installed **Jenkins Plugins** for **GIT** Repository, Setup **SCM** Polling for Immediate Build with **Maven** and **Maven Repository** (**Nexus** Artifactory).
* Worked on **Power Shell** scripts to automate the **Azure Cloud system** in creation of **Resource groups**, **Web Applications**, **Azure Storage Blobs** & **Tables**, **firewall** rules.
* Troubleshooting of network issues using **DHCP**, **DIG**, **DNS**, **SNMP**, **SMTP**, **netstat**, **NFS**, **NIS**, **nslookup**, **RIP**, **OSPF**, **BGP**, **TCP/IP**, and **TCP dump**.
* Installed, configured and Administrated of all **UNIX/LINUX** servers on **Azure**, includes the design and selection of relevant hardware to support the installation/upgrades of **Ubuntu, CentOS**.
* Deployed **Splunk forwarders**, **indexers** and **search heads** to monitor, analyze and visualize the azure VM's on the Splunk dashboard that helps in increasing the cluster performance.

**Environment:** Azure (Web Roles, Worker Roles, SQL Azure, Azure Storage, Azure AD, Resource Groups, Office365, RBAC), OpenStack (Kilo/Liberty), Chef, Ansible, Docker, Kubernetes, Maven, Jenkins, GIT, Cassandra, AEM, Python, Jira, Dynatrace, Terraform.Elasticsearch, Logstash, ELK, AWS Lambda, CloudWatch, S3 bucket.

**(Cloud / DevOps Engineer): Dec 2018 - Aug 2019**

Taro Engineering – Indianapolis, IN

* Provided highly durable and available data by using **S3** data store, **versioning**, **lifecycle policies**, and create **AMI**s for mission-critical production servers for backup.
* Designed the data models to be used in data-intensive **AWS Lambda** applications. which are aimed to do complex analysis creating analytical reports for **end-to-end traceability**, **lineage**, and definition of Key Business elements from **Aurora**.
* Migrating Data from a **PostgreSQL** DB Instance to an **Aurora** PostgreSQL DB Cluster by Using an Aurora **Read Replica** by configuring **VPC** security groups to secure network access to the DB cluster.
* Wrote **Terraform** scripts to automate **AWS** services which include Web servers, **ELB**, **Cloud Front** distribution, **Database**, **EC2**, **database security** groups and **S3** bucket.
* 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**.
* Wrote **Chef Cookbook/Recipes** using **Chef Resources**, **Ruby DSL**, **Chef Handlers Report** and **Exception**, **Test Kitchen**, **ChefSpec** and **Vagrant**.
* 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.**
* 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**.
* Implemented a load balanced, highly available, fault tolerant, auto-scaling **Kubernetes** **AWS** infrastructure and **microservice** container orchestration.
* Leveraging **kops** implemented a **Kubernetes** Container Orchestration solution within **AWS** allowing for easy management, creation and recovery of **AWS assets**.
* Used **MAVEN** as a build tool on **Java** projects and written maven **POM** files from scratch for multi-modules projects for the development of build artifacts on the source code.
* Provisioned the highly available **EC2** instances using **Terraform** and **CloudFormation** and wrote plugins to support new functionality in **Terraform.**
* Provided automation, **continuous integration** through **Jenkins** and Implemented **Jenkins Workflow** and Plugins for repeatable deployments of **multi-tier** applications, **artifacts** and services to **Docker.**
* Integrated AWS **Dynamo DB** using AWS lambda to store the values of items and backup the **Dynamo DB streams** and Utilized **Cloud Watch** to monitor resources such as **EC2**, **Amazon RDS DB** services, **Dynamo DB** tables, **EBS** volumes, to set alarms for notification or automated actions, and to **monitor logs** for a better understanding and operation of the system. Integrated AWS **Dynamo DB** using AWS lambda to store the values of items and backup the **Dynamo DB streams**.
* Deployed and configured **Elasticsearch**, **Logstash**, and **Kibana** (**ELK**) for log **analytics**, **full-text search**, application **monitoring** in integration with AWS **Lambda** and **CloudWatch**. Then store that logs and metrics into an **S3 bucket** using Lambda **function**.
* 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.
* Implemented **JIRA** to track all issues pertaining to the **software development lifecycle** and Integration of **JIRA** with **Git** repository to track all code changes.
* **Environment:** AWS (EC2, EBS, S3, VPC, Code Deploy, Code Commit, Elastic search, Lambda, API Gateway, Route 53 (DNS), ECS, CloudFormation, RDS, Dynamo DB, SNS, SES, SQS, IAM, RedShift, Ops Works), Maven, Chef, Docker, Kubernetes, OpenStack (kilo/ Juno), Jenkins, GIT, Python, Datadog, Jira.

**(DevOps Engineer) July 2015 – Aug 2018**

Adept Chips - Bangalore

* Performed the automation deployments using **AWS** by creating the **IAM**s and used the code pipeline plugin to integrate **Jenkins** with **AWS** and created the **EC2** instances to provide the virtual servers.
* Written AWS CloudFormation Templates for different services like **CloudFront** Distribution, **API** Gateway, **Route 53**, **Elastic Cache**, **VPC**, **Subnet Groups**, **Security Groups**.
* Configured **AWS IAM** and **Security Groups** in **Public** and **Private Subnets** in **VPC,** managed **IAM** accounts (with **MFA**) and **IAM** policies to meet security audit & compliance requirements.
* Involved in many different concepts of **Chef** like **Roles**, **Environments**, **Data Bags**, **Knife**, and **Chef Server** Admin/Organizations. Written **Chef Recipes** to automate build/deployment process and data bags in Chef for better environmental management.
* Wrote **Chef Cookbooks** for various **DB** configurations to modularize and optimize product configuration, converting production support scripts to Chef Recipes and **AWS** server provisioning using **Chef Recipes**.
* Tested Chef Cookbook modifications on cloud instances in **AWS** and using **Test Kitchen** and **Chef Spec** and used **Ohai** to collect attributes on a node. Worked on **Chef DK** which takes of care creating **cookbooks** and **recipes**.
* Implemented a Continuous Delivery pipeline with **Docker**, **Jenkins** and **GitHub**, whenever there is a change in **GITHUB**, our Continuous Integration server automatically attempts to build a new **Docker** container from it.
* Responsible for installation & configuration of **Jenkins** to support various **Java builds** and Jenkins plugins to automate continuous builds and publishing **Docker Images** to the **Nexus Repository**.
* Used **Git** for source code version control and integrated with **Jenkins** for **CI/CD** pipeline, code quality tracking and user management with build tools **Maven** and written **Maven pom.xml** build script.
* Worked with the **OpenShift Enterprise** which allows developers to quickly develop, host and scale applications in a self-managed cloud environment.
* Worked on **NoSQL** database **MongoDB** to replica setup and sharding. Also experienced in managing replica set. Installed, Configured, and Managed **Monitoring Tools** such as **Nagios** for Resource/Network Monitoring.
* Used Python libraries such as **Paramiko**, **Pycrypto**, **XML** parser and **logging** libraries to develop **automatic** storage, **networking** deployment tool on **scale-out** environment with Linux and **Troposphere** libraries to create AWS Cloud Formation descriptions
* Developed self-service/automation tools leveraging **Python ec2-boto**, **fabric** and **Jenkins** which increased the efficiency of **DevOps** and development tasks.
* 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**.
* Installed, configured and maintained web servers like **Apache Web Server** and **WebSphere Application Server** on **Red Hat Linux.**
* **Environments:** AWS (EC2, S3, Route 53, EBS, Security Group, Auto Scaling, and RDS), GIT, Chef, Docker, Selenium, Maven, Jenkins, ANT, Python, Jira, Nagios.

**(Linux Administrator) Dec 2014 – June 2015**

Tryamsoft Solutions – Hyderabad

* Management of user accounts, files and directory permissions, and securing **UNIX** systems to match industry best practices. 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 web-server, with rsync.
* Pushed the on-premise environment into VM ware 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.
* Experienced with inter networking using TCP/IP and resolving network connectivity using tools like dig, **nslookup**, ping. 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.
* **Environments**: LINUX/UNIX, Solaris, Virtual Machines, Samba Server, NFS Server, NIS Server, TCP/IP, Oracle 10g, Kickstart, Red Hat Satellite, **VM** ware/Box.

**(Systems Engineer) Jan 2014 – Nov 2014**

Tvisha Technologies - Hyderabad

* Administered **Redhat** **Enterprise Linux 5.x/ 4.x, OEL 5.x, & Solaris 9** Servers by testing, tuning, upgrading, patching and troubleshooting both Physical and virtual server problems.
* Installed and maintained regular upgrades of Red Hat Linux Servers using **kickstart**-based network Installation and maintained a **RHEL satellite server, Apache web server** and **sftp**.
* Used Veritas File system and Veritas Volume Manager 5.0 to configure the **RAID 1** & **RAID 5** Storage System for more redundancy.
* Created Disk volumes, Volume groups and Logical volumes (**LVM**) for Linux operating systems. Installed and configured Apache Tomcat Web Server.
* Created the **LDAP** Scripts which monitors the **LDAP** connectivity and alerts the Admin Group if the connection is closed. Also administered **Active Directory** Servers.
* Configured Proxy Server (Squid), **DNS**, **FTP** and **DHCP** servers on Red Hat Enterprise Linux and maintained system securities using **IPTABLES**.
* Developed **PERL & Shell** scripts for automation of the build and release process. Developed automation scripting in **Python** to deploy some applications.
* Upgraded Red hat Linux OS on **WebSphere** and **Oracle** database servers from **V3**, **V4** to **V5**. Monitored servers, switches, ports etc. with **Nagios** monitoring tool.
* Responsible for setting up **Cronjobs** scripts on production servers and implementation of password less (**SSH**) authentication between servers.
* **Environment:** RedHat Enterprise Linux 5.x/4.x, OEL 5.x, Solaris 9, LVM, RAID, Oracle, WebSphere, MySQL, TCP/IP, DNS, NIS, NFS, ClearQuest, Apache Tomcat.