**Pavan Kumar**

**Cloud DevOps Engineer**

**Email: pavankumarnbk2277@gmail.com**

**Phone: 2896356426**

**Professional Summary**:

Highly Motivated **Cloud/DevOps Certified Engineer** with 4+ years of IT experience in managing server infrastructures and administration of mission critical, high availability environments. Proficient in building and deploying applications by adopting DevOps practices such as **Continuous development, Continuous Integration (CI)** and **Continuous Deployment (CD)**in runtime with various tools like Git, Jenkins, Terraform, Ansible, Chef, Docker, Kubernetes, several scripting languages, and monitoring tools.

* Cloud DevOps engineer with experience in **Cloud platforms** (Azure, AWS), **DevOps, Configuration management, Infrastructure automation, Continuous Integration and Delivery** (CI/CD). Implement effective strategies for N - Tier application development in both **Cloud and On-premises** environments. Expertise in dealing with **Unix/Linux and Windows** server administration.
* Expertise in Architecting and Implementing **Azure Service** Offering, such as **Azure cloud services, Azure storage, IIS, Azure Active Directory (AD), Azure Resource Manager (ARM), Azure Storage, Azure, Blob Storage, Azure VMs, SQL Database, Azure Functions, Azure Service Fabric, Azure Monitor, and Azure Service Bus**.
* Hands on experience on Backup and restoring **Azure services** and in Designing and configuring **Azure Virtual Networks (VNets), subnets, Azure network settings, DHCP address blocks, DNS settings, security policies and routing, Blob storage, Active directory, Cosmos DB.**
* Experience in migrating on-premises applications to **Azure** and configuring **VNETs** and **subnets** as per the project requirement. Performed **PowerShell scripting** to do **Patching, Imaging**, and **Deployments** in **Azure**.
* Good Knowledge on **Azure Site Recovery** and **Azure Backup.** Performed Installations and Configurations off Azure Backup agent and virtual machine backup, Enabled **Azure Virtual machine** backup from the **Vault** and configured the **Azure Site Recovery (ASR).**
* Extensively worked on CI/CD pipelines using **Azure DevOps (VSTS, TFS)** in both cloud and on-premises with **GIT, MS Build, Docker, Maven** along with **Jenkins** plugins.
* Experience in deploying and optimizing two tier **.NET web application** to **Azure DevOps** to focus on development by using services such as Repos to commit codes, Test Plans to trigger application and unit test, deployed artifacts to **App Service**, Azure Application Insight collects health performance and usage data of the process.
* Expertise in **Azure DevOps** and worked on **Azure Web Application**, **App Services, Azure storage, Virtual Machines, Fabric Controller, Azure Search, and Notification Hub**.
* Experienced in migrating on-premises **DevOps** platform to **Azure CI/CD** processes by utilizing **ARM templates**, **Azure DevOps, App services** such as **Repos, Test Plans, Pipelines**, Web Apps, and **Application Insights**.
* Experience in Infrastructure Development and Operations involving **AWS Cloud Services, EC2, EBS, VPC, RDS, SES, ELB, Auto scaling, CloudFront, Cloud Formation, Elastic Cache, API Gateway, Route 53, Cloud Watch, SNS.**
* Expertise in building **CI/CD** on AWS environment using **AWS Code Commit**, **Code Build**, **Code Deploy** and **Code Pipeline** and experience in using **AWS CloudFormation, API Gateway,** and **AWS Lambda** in automation and securing the infrastructure on **AWS**.
* Experience in changing over existing **AWS** infrastructure to **Serverless** architecture **(AWS Lambda, AWS Kinesis)** through the creation of a **Serverless** Architecture using **AWS Lambda**, **API gateway**, **Route 53, S3 buckets**.
* Written **Terraform** scripts to automate **AWS services** which include **ELB**, CloudFront distribution, RDS, **EC2**, database security groups, **Route 53**, VPC, Subnets, Security Groups, and **S3** Bucket and converted existing AWS infrastructure to **AWS Lambda** deployed via **Terraform** and **AWS CloudFormation**.
* Experience in managing **Kubernetes** services such as **Azure Kubernetes, AWS Elastic container service, and EKS.**
* Proficient in using **Docker Hub, Docker Engine, Docker images, Docker Weave, Docker Compose, Docker Swarm**, and **Docker Registry** and used **containerization** for applications.
* Proficient in creating **Docker images** using **Docker File**, worked on **Docker container** snapshots, removing images, and managing **Docker volumes** also implemented **Docker** automation solution for **CI/CD** model.
* Extensive experience in installing, configuring, and administrating **Jenkins CI** tool on Linux machines and used **Jenkins Pipelines** to drive all Microservices builds out to the **Docker Registry** and in deployment to **Kubernetes**, Created Pods and managed using Kubernetes.
* Involvement in developing **APIs** using **Kubernetes** to manage and specify the copies of the containers to run the actual servers in the cloud environment. **Scheduled**, **deployed** and managed **container** replicas onto a **node cluster** using **Kubernetes** and deployed **Docker** containers through **Kubernetes** to manage the **microservices** using its **Nodes, Pods, Config Maps, Selectors, Services**.
* Expertise in configuring **monitoring** and **alerting tools** according to the requirement like **Prometheus** and **Grafana**, setting up **alerts** and **deployed multiple dashboards** for individual applications in **Kubernetes**.
* Professional in **deploying** and configuring **Elasticsearch, Logstash, Kibana** (**ELK**) and AWS **Kinesis** for **log analytics** and skilled in **monitoring** servers using **Nagios**, **Splunk**, **AWS CloudWatch, Azure Monitor ELK**.
* Have Good Working Knowledge **Python, Bash/Shell, PowerShell, Ruby**, **Perl**, **PowerShell**, **JSON**, **YAML**, **Groovy**. Developed **Shell** and **Python** Scripts used to automate day to day administrative tasks and automation of the **build** and **release process**.
* Professional in RHEL, Strong technical background in **Storage, Disk Management, Logical Volume Management (LVM)** and logical partitioning. Expertise in administration of networking devices such as routers and switches and also handful experience in trouble shooting skills on client servers using networking protocols (DNS, TCP/IP, SMTP & SNMP).

**Technical Skills Summary**:

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| **Operating Systems** | Linux (Red Hat 4/5/6/7), Ubuntu 14/16/18, Windows NT 2000/2003, CentOS 6, 7, 8. |
| **Application Servers** | Oracle Web Logic (8/9/10), IBM Web Sphere (5/6/7), JBOSS, Apache Tomcat. |
| **Web Servers** | Apache Tomcat, Nginx, WebSphere, WebLogic, JBoss, Samba, SQL Server. |
| **Cloud Environments** | Microsoft Azure, Amazon Web Services (AWS), Open Stack, Oracle |
| **Automation Tools** | Jenkins, Git Lab CI, Azure DevOps. |
| **Version Control Tools** | Git, GitHub, SVN, Bitbucket, Subversion. |
| **Virtualization Platforms** | VMware, VirtualBox, Citrix, Vagrant. |
| **Networking Protocols** | DNS, DHCP, FTP/TFTP, NFS, SMTP, TCP/IP, NIS, HTTP/HTTPS, WAN, LAN, Palo Alto, Cisco Routers/Switches |
| **Containerization Tools** | Docker, Kubernetes, Docker Swarm, OpenShift |
| **Scripting** | Python, Shell Scripting, YAML. |
| **Database** | Dynamo DB, MySQL, RDBMS, NoSQL, Cassandra, PostgreSQL, Mongo DB, Oracle DB. |
| **Repository Management** | JFrog, Nexus, Artifactory |
| **Performance Monitoring& Bug Tracking Tools** | Azure Monitor, CloudWatch, Splunk, Grafana, ELK, Nagios, Jira. VMware ESXI, Vagrant, Dynatrace |
| **Storage** | Azure Storage, Azure Blob Storage, Azure Backup, Azure Storage Disks- Premium, Azure data lake storage Gen 1, AWS S3 Cloud Storage, AWS EBS, AWS Storage gateway, SAN. |

**Professional Experience:**

**Avanade, Toronto, Canada**

**Azure DevOps Engineer** **January 2020– Present**

**Responsibilities:**

* Prepared capacity and architecture plan to create the **Azure** Cloud environment to host migration of **IAAS** VMs and **PAAS** role instances for refectory applications and databases to improve the performance. Established connection from **Azure** to On-premises data center using **Azure Express Route** for Single and Multi-subscription connectivity.
* Built recommendations on how to replica a subset of on-premises machines to the **Azure Infrastructure as a Service (IAAS)** offering which will be used for disaster recovery. This evaluation included the specifics to synchronize on-premises data with SQL Server and SharePoint instances hosted in VMs.
* Worked on **Azure Site Recovery** and **Azure Backup**- Deployed Instances on **Azure** environments and migrated Data centers to Azure using **Azure Site Recovery**, collecting data from all **Azure** Resources using Log Analytics and analyzed the data to resolve issues.
* Configured **Azure Multi-Factor Authentication** (MFA) as a part of **Azure AD** Premium to securely authenticate users and worked on creating custom Azure templates for quick deployments and advanced **PowerShell** scripting. Deployed **Azure SQL DB** with Sync to standby database in another region & Fail over configuration.
* Managed and maintained **Azure** Infrastructure **Azure Web Roles**, **Worker Roles**, **VM Role, Azure SQL**, **Azure Storage**, **Azure AD Licenses**, **Virtual Machine Backup** and Recover from a Recovery Services **Vault** using **Azure PowerShell** and **Azure Portal**.
* Experienced in **Azure Role-based Access Control (RBAC)** to segregate duties within the team and grant limited amount of access to users that they need to perform their jobs.
* Written Templates for **Azure Infrastructure as code** using **Terraform** to build the environments staging and production. Integrated **Azure Log Analytics** with **Azure Virtual Machines** for monitoring the **logs**, store them and track metrics using **Terraform**, **Managed** multiple infrastructure resources like **Cloud**, **VMware**, and **Docker** containers.
* Implemented **Azure** Active Directory for single sign-on access to thousands of cloud SaaS applications like Office 365, Dropbox. Worked as cloud Engineer, involved in configuration for **Web apps/Function apps, V-net integration, HCM, Application gateway, App Insights, Active directory, Azure Key Vault, Encryption and Security on Azure.**
* Worked on creation of **ARM Template** for Azure Build and Automation. Also Deployed Azure Resource Manager **JSON Templates** from **PowerShell**.
* Worked on **Azure** suite including **Azure SQL Database, Azure Data Lake, Azure Data Factory, Azure SQL Data Warehouse, Azure Analysis Service**.
* Worked on **Site-to-site& Point-to-Site** VPNs, Virtual Networks, **Network Security Groups**, **Load balancers, Storage Accounts.** I have configured **RBAC** and **Azure Monitor** for adding security in **Azure Cloud** and **Network Security Groups** for Subnet and **NIC** level for Azure Virtual Machine.
* Expert on **Serverless services**, created and configured **HTTP** Triggers in the **Azure Functions** with application insights for **monitoring** and **performing** load testing on the applications using the **Visual Studio Team Services** (**VSTS)** also called as **Azure DevOps Services**.
* Worked with **Version Control, Build & Release** management, and deployments of the solutions to the **DEV, QA & PROD** Environments leveraging **Azure DevOps**/**VSTS** principles/process (**CI/CD**) and toolsets of **Visual Studio, AKS** (Azure Kubernetes Service), **Application Insights, Log Analytics**.
* Deployed and optimized two tier **Java, Python** web applications to **Azure DevOps CI/CD** to focus on development by using services such as **Repos** to commit codes, **Test Plans** to unit test, deploy **App Service**, **Azure Application Insight** collects health performance and usage data of the process, stored artifacts in blob storages.
* Worked on the **PowerShell Script** to automate the windows patching and created the release in **Azure DevOps** pipeline.
* Deployed windows **Kubernetes (K8s)** cluster with **Azure Container Service (ACS)**,**Azure CLI** and Utilized **Kubernetes** and **Docker** for the runtime environment of the **CI/CD** system to **build**, **test** and **Octopus Deploy**. Worked on **OpenShift** for **container orchestration** with **Kubernetes** container storage.
* Used **Ansible for** creating multiple **playbooks** for Resource creations and **SQL server, cluster server** and my SQL installations.
* Used **Ansible** to Setup/teardown of **ELK** stack (**Elasticsearch, Log stash, Kibana**) and troubleshoot the build issues with **ELK** and work towards the effective solutions.
* Managed **Kubernetes** charts using **Helm**, created reproducible builds of the **Kubernetes applications**, I also managed **Kubernetes** manifest files and Managed releases of **Helm** packages.
* Implemented Docker-maven-plugin in **Maven** pom.xml files to build Docker images for all microservices and later used Docker file to build the Docker images from the **Java** jar files.
* Designed, wrote and maintained systems using **Python scripting** for administering **GIT**, through **Jenkins** as a full cycle **continuous delivery** tool, involving package creation, distribution, and deployment onto **Tomcat application** servers via shell scripts embedded into **Jenkins** jobs.
* Maintained **Artifacts** in binary **repositories** using **JFrog** Artifactory and pushed **new Artifacts** by configuring the **Jenkins** project using **Jenkins Artifactory plugin**.
* Worked on **Jira** as defect **tracking** system and configure various workflows, customizations, and **plugins** for **Jira bug/issue tracker** integrated **Jenkins** with **Jira**, **GitHub**.
* Worked with **Nagios** for **Azure Active Directory** & **LDAP** and Data consolidation for **LDAP users**. **Monitored** system performance using **Nagios**, maintained **Nagios** servers and added new **services & servers** and also built and **managed** a highly available **monitoring infrastructure** to monitor different **application servers** like **JBoss, Apache Tomcat** and its components using **Nagios**.

**Environments**: Azure, PCF, Office 365, Terraform, Maven, Jenkins, Ansible,EC2,S3, Azure ARM, Azure AD, Kubernetes, Python, Ruby, XML, Shell Scripting, PowerShell, .Net, Nexus, JFrog Artifactory, Git, Jira, GitHub, Docker, Windows Server, Nagios, Splunk.

**Wipro, Hyderabad, India.**

**AWS DevOps Engineer Jan 2018 – Nov 2019**

**Responsibilities**:

* Created and Managed **AWS** environment with **HA** and used the features **EC2, VPC, IAM, ELB, EBS, SNS, cloud watch, S3, creating AMIs and snapshots, RDS, creating security groups**, Subnets and Storage Gateway. Migrated an On-premises VMware DC to AWS using Lift and shift methods
* Worked as a **DevOps** Engineer for a team that mainly worked closely with many proprietary tools and Open-source tools like **Jenkins, Gerrit, AWS, JIRA, Docker, Kubernetes, Chef**. Used for development and deployment of internal tools and programs.
* Monitored and maintained the **AWS S3 buckets** which contained all the packets of each build. Each packet had metadata files which were extracted to proceed with the flash testing.
* Configured and maintained the **AWS Lambda** function to trigger when there is a **Jenkins** build kicked off, which internally gets stored on **AWS S3** bucket for everybody to access. Created **Route53** to route traffic between different regions. Worked with **Security groups & Network ACLs**.
* To trigger changes made in **AWS Dynamo DB** integrated it with **Lambda**, created **Cron jobs** for initiating our daily batch data pulls, executing our continuous integration tests done under **Jenkins**& backup the **Dynamo DB** streams.
* Designed **AWS CloudFormation** templates to create custom sized **VPC**, subnets, **NAT** to ensure successful deployment of Web applications.
* Worked on implementing **Cloud Solutions** using various **AWS Services** including **EC2, VPC, S3, Glacier, EFS, AWS Kinesis, Lambda, Directory Services, Cloud Formation, Ops works, Code Pipeline, Code Build, Code Deploy, Elastic Beanstalk, RDS, Data Pipeline, DynamoDB, Redshift**.
* Worked with **Scheduling**, deploying and managing **Container** replicas onto a node cluster using **Kubernetes** and worked with building **Kubernetes** run time environment of the **CI/CD** system to build, test and deploy in our open-source platform.
* Worked on setting up **Jenkins** as a service inside the **Kubernetes** cluster to reduce the failover downtime to minutes and to automate the **Docker** containers deployment without using configuration management tool.
* Installed and used **Chef Server** enterprise on-premises, workstation and bootstrapped the nodes using Knife command. Created various **Roles & Environment**s & used **Chef Handlers** for auto kick-off requirement jobs.
* 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 **S3**. Terminated **SSL** on to **Nginx** to remove overhead on **API servers**.
* Developed **AWS Lambda** functions in **Python** to automate **AWS Cloud Watch** scheduled events between services like **AWS SNS** and **AWS SES** to deliver notifications regarding **AWS EC2** instances to the team.
* Implemented **JIRA** to track all issues pertaining to the software development lifecycle &integrated **JIRA** with repositories of **GIT** to track all code changes.
* Developed **PowerShell** scripts to automate the project creation, setting permissions for users, groups in **TFS**. Developed automation scripting in **Python** using **Chef** to deploy & manage Java, .Net applications across **Linux/Windows** servers.

**Environment:** Amazon Web Servers (AWS),EC2, OpenStack, Docker, Kubernetes, Chef, Ansible, Jenkins, Maven/ANT, GIT, Elasticsearch, Logstash and Kibana (ELK), JIRA, WebLogic, Apache Tomcat, MongoDB, Linux/RHEL, Vagrant, Active Directory, LDAP, VMWare Servers, Windows, PowerShell, Ruby, YAML, Kafka, Shell, Bash, Python, terraform.

**Education:**

* Bachelor’s in Information technology (2015 – 2019) – Gayatri Vidhya Parishad College of Engineering.