PANDIYAN MUTHURAMAN

Contact No. : +91-9600963436
Email-id   : maestropandy@gmail.com

Professional Summary

5+ years of experience as a Cloud Engineer, Operation and System Administration Engineer supporting Cloud Infrastructure Openstack, AWS. DevOps with strong background on configuration management, CI/CD, infra automation, databases, Orchestrating container platform with Kubernetes. Design and Implement end-to-end IAAS. Strong Exposure to handle large scale cloud setup.

Employment History

Employer: Reliance Jio Infocomm, Bangalore

Project Name: JKAAS   (Sep 2018- Present)
Description: Deliver Kubernetes as a service like K8s Cluster, Logging, Monitoring, Gitlab, CI/CD, Backup Kubernetes cluster
Environment: Kubernetes - Container Orchestration Platform

Responsibilities:

- Designing and Deploying scalable, HA Kubernetes cluster on Openstack, Baremetal and AWS Platform using Terraform, Ansible
- Deployed Kubernetes cluster setup of Multi-Master, Load Balancer, Ingress, Ceph Storage with SSO Implemented.
- Delivered end-to-end service on Kubernetes including Monitoring with Prometheus, Logging with ELK/Loki and Multi-tenancy with helm.
- Delivered dedicated Gitlab as a service to each project users separated by Namespace to deploy application from CI/CD pipelines on Kubernetes setup
- Delivered Kubernetes Cluster, PV backup and restore solutions using heptio Velero software.
- Implemented, Integrated Storage solution with Openstack cinder and ceph with rook

Project Name: JAWS Engineering   (Oct 2017 -Aug 2018)
Description: Deliver DevOps as a service like Backup, Monitoring, Database, IAM, DNS and Billing as a service
Environment: Openstack Cloud platform

Responsibilities:

- Delivered Database as a service for MongoDB, MariaDB, MSSQL database using heat template
- Delivered DNS as a service for users to create A/CNAME records backed by powerdns in backend running on Kubernetes
- Delivered Backup as a service using BackupNinja, Xtrabackup, Innobackupex tools to backup database MySQL, PostgreSQL, Cassandra

- Delivered Monitoring as a service using Monasca openstack components for tenant level monitoring in Kubernetes setup & Docker swarm
- Delivered Billing as a service using Monasca metrics and generated bill for resource usage

Project Name: JAWS Operation

Environment: Openstack Cloud Platform   (Feb 2016- Sep 2017)
Description: Deploy and Manage Openstack Control Plane using Mirantis Drivetrain & Fuel with Multi-site environment holding 400+ Nodes setup

Responsibilities:

- Deploy & Manage large openstack cloud platforms and their dependencies in HA mode
- Deploy and verifying Physical nodes, APT node & Salt setup for deploying drivetrain.
- Add custom commissioning scripts in saltstack to increase service performance
- Deploy Stacklight LMA components for capacity planning, operational health and monitoring

- Integrated Jenkins Job configuration history with slack channel to capture actions.
- Verifying and Validating a new salt formula by running invalid YAML, Salt state.
- Managing compute, gateway nodes like adding, reprovision and remove.
- Managing NGINX, HAProxy, Apache, RabbitMQ and Gallera Certificates.
- Performed Ironic baremetal provisioning by preparing special images, configure and enrolling baremetal into Ironic, and add required compute flavors.
- Restrict VM Image policy to allow specific roles to perform actions.
- Preparing light weight customised images and upload into glance
- Performed Ceph operations like add, remove Monitor, OSD, RADOS Gateway Node.
- Performed Ceph backup and restore during maintenance window.
- Troubleshooting openstack services like Nova, Glance, Keystone and Cinder
- Performed Monitoring, Metering, and collected resource usage using ceilometer.
- Monitor, Maintenance of failure compute and storage nodes
- Performed live migration of VM's across compute nodes during maintenance and failure.
- Doing BA/VA of cloud infrastructure for Security and hardening of cloud images.
- Implementing continuous Integration Jenkins tools to build and release cloud Images.
- Giving Technical support to customers for their application hosted on Cloud with 24/7 hours.

Project Name: Switch N walk, Jio Money, IOT, Easy Clinic, Jio Network   (Feb 2015- Jan 2016)
Description: Building private cloud infrastructure for on boarding JIO OTT applications infrastructure like media, non-media, IOT, health services.
Environment: Openstack Cloud platform

Responsibilities:

- Building Projects with networks, subnets, routers, ports along with defined security groups
- Provisioned Instances, volumes, mapped security groups, associated floating IP's, load balancer, Virtual IP for failover cluster setup as per project design.
- Prepare Heat Template Projects Environments to replicate in Pre-PROD, PROD setup.
- Migrated Projects setup and applications across tenants and cloud with backup

- Closely Work with Mirantis to resolve control plane issues
- Performed Continuous delivery using docker, git, jenkins for application deployment
- Automated infra provisioning patch updates, package installation on instances using Ansible
- Automated Integrating Instances with security components like HPOM, PIM, VPN
- Automated daily routines in shell, PowerShell & shell scripts.
- Prepared unattended.xml file to automate prerequisites for windows instances
- Generating resource utilities for projects weekly basis based on ceilometer reports
- Building & troubleshooting windows servers failover cluster setup
- Scheduled backup of databases at regular intervals and maintained high availability.
- Performed Active directory management with failover cluster setup and applied group policies.
- Integrating system logs with HPOM, ZABBIX for monitoring and alerts
- Maintaining Instances with BA/VA complaint for cloud security and doing hardening
- 24/7 technical support to application owners and follows tickets

Project Name: Jio- Health Hub   (Jan 2014 – Jan 2015)
Description: Professional Health services for all state governments. Jiohealthhub for consumer health application targeting to acquire 100 million clients.
Environment: AWS Cloud Platform

Responsibilities:

- Managing **EC2**, **EBS**, **ELB**, **IAM**, **AMI**, **VPC** and **S3** bucket services, security groups.
- Deployed and configured web, Integration, cache servers and database for the services.
- Automated Continuous Integration and Continuous deployment with docker
- Managing Git and Jenkins configurations for users and team.
- Performed S3 migration from one Singapore to Mumbai region.
- Maintaining and fixing VA/BA complaint of servers to ensure its security
- Monitored the daily application functionality and parameter checks with Dev Team input.
- Installation and configuration of ZABBIX to monitor complete infrastructure and application.

Technical Skills:
- **Automation Tools:** GITlab, Jenkins, Maven, Ansible, Saltstack, Docker, Kubernetes, Terraform.
- **Database:** MySQL, MongoDB, SQL Server, MariaDB
- **Application/Web Servers:** Apache Tomcat
- **Scripting:** Bash Shell, Python
- **Virtualization Technologies:** Hyper-V, KVM, QEMU, Virtual Box
- **Cloud Environments:** Openstack, AWS
- **Operating System:** Linux (Redhat, Centos), Windows Desktop and server editions 2008/2008-R2/2012/2012-R2, Ubuntu 14.04, 16.04, 18.04.
- **Storage:** GlusterFS, NFS, CephFS

Achievements
- Presented Paper "Monasca and 25,000+ Instances in Production - User Story" at **Openstack Summit 2019, Denver**
- Presented Paper "Monasca- Monitoring as a service" at **Opensource India 2018, Bangalore**
- Presented Paper "Ceph Performance Tuning" at **Openstack Summit 2016 at Barcelona**

Educational Qualification
- **B.E Electronics and communication (87.5 %)** at Anna University, Chennai, Tamilnadu, India
- **HSC (86 %)** at Alagappa Matriculation Higher Secondary School, Karaikudi Tamilnadu, India
- **SSLC (87%)** at Alagappa Matriculation Higher Secondary School, Karaikudi Tamilnadu, India

Trainings & Certifications
- Completed **Openstack Bootcamp I** Training (**OS 100**) by Mirantis
- Completed **Certified Openstack Administrator**
- Certified of **Cloud Security Knowledge** (CCSK) by HP
- **ITIL** Certifications by HP