Cloud watchKanakamahalakshmi Rekala

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**PROFESSIONAL SUMMARY:**

* Dedicated Site Reliability Engineer with 10 years of experience optimizing, maintaining, and designing resilient systems on AWS and Azure. Adept at blending the best of both platforms to ensure maximum uptime, scalability, and system reliability. Keen collaborator with development and operations teams to fortify cloud infrastructure.
* Strong experience in DevOps activities such as Continuous Integration, Continuous Deployment (CI/CD) and on the required tools.
* Created Terraform scripts for EC2 instances, Elastic Load balancers and S3 buckets. Planned, developed, and maintained Infrastructure as code using CI/CD deployments using Terraform.
* Hands on Experienced with the Linux/Unix Operating system. Involved in designing and deploying applications utilizing almost all the AWS stack (Including EC2, Route53, S3, ELB, EBS, VPC, RDS, DynamoDB, SNS, sns
* , IAM, KMS, Lambda) and focusing on high-availability, fault tolerance and auto-scaling in AWS Cloud Formation, deployment services (Ops Works and Cloud Formation) and security practices (IAM, CloudWatch, CloudTrail).
* Experience in full Software Development Life Cycle (SDLC) that includes Analyzing, Designing, Coding, Testing, implementation & Production Support as per quality standards using Waterfall, Agile methodology.
* Experience in System Administration, System Builds, Server builds, Installs, Upgrades, Patches, Migration, Troubleshooting, Security, Backup, Disaster Recovery, Performance Monitoring and Fine-tuning on UNIX, Red Hat Linux System.
* Working on various security related services in AWS like GuardDuty, SecurityHub, CloudTrail etc.
* Work on platform automation using the cloud technology (AWS) including but not limited to cloud templates, scripting (Python/Shell), DNS, Compute, Storage etc.
* Worked with **Ansible playbooks** for virtual and physical instance provisioning, configuration management, patching and software deployment.
* Designing and deploying a Kubernetes Platform installation and application deployments.
* Kubernetes Administration

**TECHNICAL SKILLS:**

*Cloud:* AWS, Azure.

*Networking:* VPC, Route53, SonicWall Firewalls, Direct Connect, Elastic Load Balancer, NAT Gateway, VPC Endpoints, TCP/IP, FTP, HTTP, HTTPS, SSH, SFTP, SMTP, DHCP, NFS, LDAP, WAF, SCP, SSL.

*SCM/ Version Control:* GIT, Gitlab, GitHub, AWS Code Commit

CI-CD Tools: Jenkins, Code Build, Code Deploy, Code Pipeline, ArgoCD(GitOps), Maven.

Cloud Tools: EC2, EC2 Autoscaling, EB, EBS, RDS, IAM, ELB, ECS/EKS, SSM Parameter Store, Secrets Manager, S3 Storage, EFS, AWS Lambda, SNS, SQS, CloudFront, AWS LightSail, VPC, NACL, AWS CloudWatch, Azure Active Directory, AWS Directory Services, AWS Elasticsearch.

Containerization: Docker, Docker Compose, Kubernetes, AWS EKS, ECS, Helm.

IAC/Automation: Terraform, Cloud Formation, Ansible

Programming Languages: JAVA, GO, JSON, YAML, Shell Scripting

Database: AWS Aurora, AWS RDS, PostgreSQL, MySQL, DynamoDB.

Monitoring Tools: AWS CloudWatch, CloudTrail, Prometheus, Grafana, OpsGeni, ELK Stack

Tools: Active Directory, SharePoint, Office 365, JIRA, Confluence, Lucid chart, MS Visio

Backup/DR: AWS Cloud Endure, Kubernetes(etcd)

**PROFESSIONAL EXPERIENCE:**

**Client: Lincoln Financial Group** **Jan 2023-Till date**

**Role: SRE Devops Engineer**

**Responsibilities:**

* Led efforts to restore service in a timely manner for critical business functions, application and infrastructure services as part of a 15 member remote team, comprised of professionals from several different countries and time zones.
* Implemented and executed major incident management processes including invocation, ownership, escalation, communication and restoration of service.
* Used ITIL best practices to support affected business units by managing, directing, coordinating and communicating across multiple technical and non-technical teams which include application, infrastructure, third party suppliers, and business units.
* Managed end-to-end delivery of multiple complex digital projects resulting in a 20% increase in customer satisfaction.
* Led implementation of solutions from establishing project requirements and goals to solution go-live.
* Managed and ran multiple delivery teams ensuring governance at top management level, conducting project meetings, and identifying successful and unsuccessful project factors and gaps.
* Worked closely with multi-disciplined teams to drive estimates, delivery plans, and retrospectives, identified and managed engagement risks, and flagged major issues early.
* Operated in a consultative role within the working team and provided hands-on management of the delivery stream.
* Built and managed a high performing team of delivery managers resulting in a 30% increase in team productivity.
* Hired and managed contract resources or agencies for specific projects or to augment team staffing.
* Developed and managed the One-Data platform using Prometheus, Grafana dashboard and Service-Now.
* Web application performance baselining, analysis, tuning, capacity planning, and demand forecasting.
* Enabled authentication in own web using Azure AD B2C
* Migrated Java bases applications thru Azure Web Apps.
* [Deployed Java Core apps to Azure App Service](https://learn.microsoft.com/en-us/aspnet/core/host-and-deploy/azure-apps/)
* Deployed dashboards in Dynatrace for both operations and various lines of business.
* Used Dynatrace to perform RCA and quickly drill down to correct error fault path and error hot spots.
* Assist with the development and implementation of DevOps SRE solutions for large-scale distributed web applications across multiple tiers and data centers.
* Experience troubleshooting problems and working with cross-functional teams for resolution.
* Good knowledge and experience in using Prometheus, Grafana, and Alert manager for logging and monitoring.
* Developed Automation Script using Shell Script and Python for the Linux platform.
* Supported patching activities and validated different docker services & servers.
* Setup datadog monitoring across different servers and AWS services.
* Monitor performance and history of infrastructure with tools such as CloudWatch, Datadog.
* Designed and developed monitoring to improve the observability and reliability of for applications using Splunk.
* Responsible in Administration of Splunk at CMS as a central logging platform for reviewing current logs, assist ADOs (Application Delivery Organizations) to setup logging hosted in AWS Cloud
* Helped to improve engineering quality, operation excellence and evolution of Splunk Observability’s web applications, web services, and APIs
* Configured Microsoft add on for Splunk to send data from Azure event hubs to Splunk
* Responsible for setting up monitoring using Splunk for capacity planning, system health, availability, and optimization of infrastructure
* Helping application teams in on-boarding Splunk and creating dashboards/alerts/reports etc
* Provide regular reports and dashboards to the engineering staff and Senior Leadership on the efficiency of core systems and SRE response/resolution times.
* Extensively involved in infrastructure as code, execution plans, resource graph and change automation using Terraform.
* Deliver 24x7 support for critical systems through the utilization of communication and alerting tools for fast response times, e.g., Jira, ITSM, and Slack.
* Detail-oriented with the ability to catch minor errors which can result in major problems.
* Designing and configuring patch management systems
* 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.
* Experience with the Azure logic apps with different triggers and worked on ISE environment in logic apps
* Familiarity with hosted application service provider environments, including remote administration of servers and devices.
* Created Logic Apps with different triggers, connectors for integrating the data from Workday to different destinations.
* Experience in integrating non - standard logs and sources into Splunk including SQL queries, scripted inputs and custom parsers.
* Extensive knowledge of a tier Splunk installation, Indexer, Intermediate, Heavy forwarder, Search heads, UFs and apps.
* Splunk Application support to onboard various applications to the Splunk Command Center.
* Configured and created Roles, Groups, Users and Group Members in the organization for various business groups and well versed with Splunk access roles.
* Design, build and manage the ELK (Elasticsearch, Logstash, and Kibana) cluster for centralized logging and search functionalities for the App.
* Scripting & automating tasks using Python for backup, monitoring, and file processing.
* Created the AWS VPC network for the Installed Instances and configured the Security Groups and Elastic IP & accordingly using CloudFormation/ Terraform with Infrastructure as code.
* Involved in designing and deploying multitude of applications utilizing almost all the AWS stack (Including EC2, Route53, S3, RDS, Dynamo DB) focusing on high-availability, fault tolerance and Auto scaling, load balancing, faster static content delivery, built all the stack using AWS CloudFormation with JSON or YAML.

**Client: T Mobile, Bellevue, WA Nov 2021 – Dec 2022**

**Role: AWS SR. Cloud Infrastructure / SRE Engineer**

**Responsibilities:**

* Designed and implemented a comprehensive monitoring and alerting system using Amazon CloudWatch, Prometheus, and Grafana.
* Optimized auto-scaling policies and configurations, resulting in a 20% cost reduction while maintaining performance.
* Automated disaster recovery strategies using AWS Lambda, Step Functions, and S3, reducing recovery time objectives (RTO) by 50%.
* Introduced infrastructure as code (IAC) practices using AWS CloudFormation and Terraform, streamlining deployments and infrastructure updates.
* Worked closely with development teams to integrate CI/CD pipelines with AWS services, including CodeBuild, CodeDeploy, and ECS.
* Architected and performed the cloud strategy of the organization of the very first cloud deployment of the product suite.
* Designed and built multi-AZ, multi-region deployment of EC2 instances, ELB health checks, Auto Scaling.
* Created secure VPCs using public and private subnets, NAT Gateway, VPC endpoints, security groups and ACLs.
* Implemented AWS Organizations to centrally manage and govern all AWS Cloud environments and used SCPs (Service Control Policies) to create targeted governance boundaries on the OUs (Organizational Units).
* Configured Jenkins pipelines using Pipeline scripts and Maven for building for on-prem deployments for dev and integration environments.
* Created parallel and sequential CI/CD stages in AWS Code Pipeline to deploy across multiple environments with manual approval.
* Created Ansible playbooks and host inventory files to perform security patching using yum and triggered from Jenkins on a schedule.
* Used YAML based Ansible playbooks to manage configuration files, mount points and services.
* Containerizing Java applications using Docker, created Docker file using approved base images and deploying them on Kubernetes cluster.
* Create and provision Kubernetes clusters on AWS using Docker and Terraform.
* Created VPC, Internet Gateway, Route Tables, Subnets, Security groups, ports, NACLs using the knowledge of Terraform and Cloud Formation for various applications and environments.
* Worked with Docker for development and testing. Installed Docker Registry for local upload and download off Docker images and ECR as well.
* Created branching and merging strategy with multiple branches and used Bitbucket for SCM
* Implemented DR strategy for on-prem servers using AWS Cloud Endure and performed failover and failback operations and dry runs.
* Used CloudWatch, CloudTrail and VPC Flow logs to retain account activity across AWS infrastructure for audit trails, governance, and compliance requirements.

ENVIRONMENT**:** VPC, ELB, EC2, ECS with Docker, S3, IAM, EBS, IAM, EFS, AWS Aurora, CloudFormation, Elastic Cache, Elastic search, CloudWatch, Route53, Security Groups, Auto Scaling, RDS, KMS, AWS Config, OpenVPN, Lucid Chart, MS Visio

**Client: Travelport, Denver, CO May 2019 – Oct 2021**

**Role: AWS DevOps/Infrastructure Engineer**

**Responsibilities:**

* Kubernetes Cluster using Kops, Kubespray on AWS and VMWare environment, configured etcdkeyvaluestore,
* Flannel for Automation: Managing srevers using chef
* automation with custom made scripts.
* Monitoring : Monitoring Critical network and server infrastructure with Enterprise Class monitoring tool Nagios.
* Storage: Deploying and Managing multiple SAN and DAS by using Dell's MD3200i & MD3200 and exposing it to the machine through NFS
* Network: Responsible for handling network issues like handling DDOS attacks in coordination with multiple DDOS mitigation Partners.
* Performing L2 & L3 level Full Life-cycle triage for all events on production servers including incident logging, troubleshooting Management of Production crisis events.
* Implementing Continuous Integration - Continuous build-test deployment process using Jenkins Devops
* Expertise on Docker Datacenter by deploying code in different datacenter.
* Worked with the Docker to package an application with all its dependencies into a standardized unit for Software Development.
* Implemented a Continuous Delivery pipeline with Docker, Jenkins and GitHub and AWS AMI'S.
* Implemented APIs allow Docker Datacenter CaaS to easily integrate into existing systems like LDAP/AD, monitoring, logging.
* Migrated few Jobs from Buildforge deployment tool to UCD by creating jenkins. Job and application in UCD.
* Automated the deployment of applications inside software containers and Configured Docker containers for
* Branching.
* Direct connections to clients with the help of worker roles. Used VM roles to schedule tasks and customize the machine on which web and worker role running.
* Installed and configured Jenkins with SonarQube and GIT by installing GIT plugins and building the artifacts using Maven.
* Developed Bash and Python scripts to automate various stages of build and release process in Jenkins.
* Defined various CI/CD workflows using Jenkins file groovy DSL scripts.
* Configured and used monitoring tools like Nagios/ Splunk for monitoring the network bandwidth and the hard drives status
* Built various containers using Docker engine and Docker Machine environments, to deploy the micro services-oriented environments for scalable applications.
* Experience in writing Docker files to build the micro-service applications.
* Developed KubernetesCluster using Kops, Kubespray on AWS and VMWare environment.
* Experience with different bug tracking tools like Jira, Remedy. Experience with documenting tool Confluence, used to document the work process and issues that arise with Jira and working with Agile methodologies and all phases of Software development life cycle (SDLC).

ENVIRONMENT: - Office 365, Git, GitHub, Azure AD, Terraform, Maven, jenkins, Docker, Kubernetes, Python, Shell Scripting, PowerShell, JFrog Artifactory, LDAP, Ansible.

**Client: SunTrust Bank, Atlanta, GA Nov 2016 - April 2019**

**Role: Azure DevOps Engineer**

**Responsibilities:**

* Written Templates for Azure Infrastructure as code using Terraform to build staging and production environments.
* Managed 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.
* Expertise in Architecting and Implementing, Azure. Service Offering. such as. Azure cloud services, Azure storage, 115, 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 restore Azure services and in Design and configure Azure Virtual Networks (VNets), subnets, Azure network settings, DHCP address blocks, DNS settings, security policies and routing.
* Integrated Azure Log Analytics with Azure VMS for. monitoring the files, store them and track metrics and Used Terraform as a tool, Managed different infrastructure resources Cloud, VMware, and Docker containers.
* Performed bulk load of JSON data from s3 bucket to snowflake.
* Used Snowflake functions to perform semi structures data parsing entirely with SQL statements.
* Configured Ansible to manage AWS workflow environments GCP and automate the build process for core AMIs used by all application deployments including Auto scaling, and Cloud formation scripts.
* Managed 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.
* Performed migration migration setup from SVN to GIT using BitBucket
* Designed Stacks using Amazon Cloud Formation and GCP templates to launch AWS Infrastructure (PaaS, laaS, Faas& Saas) resources
* Developed AWS Cloud Formation templates to create custom sized VPC, EMR, Dynamo DB, subnets, EC2
* And instances, ELB and security groups.
* Implemented Atlassian Stash along with GIT to host GIT central repositories for source code a across products, facilitate code reviews and login audits for Security Compliance.

ENVIRONMENT: Azure, Office 365, Git, GitHub, Azure AD, Terraform, Maven, Jenkins, Docker, Kubernetes, Python, Shell Scripting, PowerShell, JFrog Artifactory, LDAP, Nagios, Ansible.

**Client: McGraw-Hill, Columbus-OH Oct 2014 - Oct 2016**

**Role: SCM Build Engineer**

**Responsibilities:**

* Installation and support of various applications and Databases including Oracle, **MySQL** along with Web **Logic 10, JBOSS 4.2.x, Oracle 10g, Tomcat.**
* Designed and maintained AWS infrastructure highly available, scalable, secured, monitored and alerting network infrastructure.
* Involved in **Upgrade**of **Jenkins**& **Artifactory**Server by scheduling backups in **S3**.
* Through Knowledge of Linux internals and utilities (kernel, Memory, Swap, CPU)
* Experienced in cloud automation using **AWS cloud Formation** Templates, **Jenkins**
* **, Puppet**.
* Implemented **CloudTrail** in order to capture the events related to API calls made to **AWS** infrastructure.
* Configured **AWS Identity Access Management** (IAM) Group and users for improved login authentication.
* Launching and configuring of **Amazon EC2** (AWS) Cloud Servers using AMI's (Linux/Ubuntu) and configuring the servers for specified applications.
* Worked on AWS designing and followed Info security compliance related guidelines.
* Designing and implementing for fully automated server build management, monitoring and deployment By Using DevOps Technologies like **Puppet**.
* Involved in leading Automation Deployment Team by working with **Puppet**.
* Created puppet manifests, profiles and roles module to automate system operations.
* Developed/managed Puppet manifest for automated deployment to various servers.
* Used Puppet to automate Configuration management & Applications.
* Deployed puppet, puppet dashboard and **puppetDB** for configuration management to existing infrastructure.
* Constructed the puppet modules for continuous deployment and worked on **Jenkins** for continuous integration.
* Used React-Autocomplete for creating google maps location search on the webpage.
* Developed a front-end mobile application using React Native, Redux, Flex and JavaScript.
* Worked on Redux with React Native to handle large chunks of data for the better performance.
* Used Middleware, Redux-thunk in application to retrieve data from Back-End and to also perform RESTFUL services.
* Translate the designs from our design team into reusable interactive React native components.
* Used Axios with React Native for making AJAX Calls.
* Automated Linux production server’s setup using Puppet scripts. Used these scripts to replicate production build environments on a local dev boxes using **Vagrant** and **Virtual Box**.
* Wrote **Ansible** Playbooks with PythonSSH as the Wrapper to Manage Configurations of **Openstack** Nodes and Test Playbooks on **AWS** instances using **Python**.
* Worked on Continuous integration tools like Jenkins to build and test the applications and working on issue tracking tool like iTrack, JIRA, Confluence.
* Managed monitoring using Nagios and updated parameters with active and passive checks.
* Involved in Data Modeling (Logical and Physical Design of Databases), Normalization and building Referential Integrity Constraints.

ENVIRONMENT**:** Linux (Redhat, Solaris, Ubuntu), Windows, AWS, Puppet, PuppetDB, Chef, Ansible, Docker, WebLogics, JBoss, Oracle, MySQL, Ant, Maven, CVS, GIT, SVN, Jenkins, Docker, Itrack, Jira, kernel, Memory, Swap.

**Client: Rightpath Comp Tech, India June 2012 – April 2014**

**Role: Build and Release Engineer**

**Responsibilities:**

* Deploy and monitor scalable infrastructure on Amazon web services (AWS) & configuration management.
* Developed and executed software systems utilizing Groovy.
* Developed build and deploy scripts using Groovy, Python and UNIX for various products to be hosted on Application Servers.
* Configured & deployed Java applications on Amazon Web Services (AWS) for a multitude of applications utilizing the AWS stack, cloud formation
* Created multiple **Python, Json** and **UNIX** shell Scripts for various application level tasks.
* Experience with **OpenStack** Services such as Compute, Network, Storage, Dashboard, Image, Identity, Monitoring and Orchestration Service.
* Implemented Continuous Integration using Jenkins and GIT.
* Installed, configured and administered CI tool **Jenkins** for automated builds.
* Extensively worked on Jenkins, and GitHub for continuous integration and for End to End automation for all build and deployments.
* Analyzed and resolved conflicts related to merging of source code for Git.
* Created Docker images using a Docker file, worked on Docker container snapshots, removing images and managing Docker volumes.
* Virtualized the servers using the **Docker** for the test environments and dev-environments needs. And also, configuration automation using **Docker** containers.
* Implemented a GIT mirror for SVN repository, which enables users to use both GIT and SVN.
* Develop CI/CD system with Jenkins on Kubernetes container environment, utilizing Kubernetes and Docker for the runtime environment for the CI/CD system to build and test and deploy.
* Managed the artifacts generated by Maven and **Gradle** in the Artifactory repository.
* Designing and implementing CI (Continuous Integration) system: configuring Jenkins Servers, Jenkins nodes, TFS creating required scripts (Perl & Python), and creating/configuring VMs (Windows/Linux).
* Worked with **Terraform** for automating **VPCs, ELBs**, security groups, SQS queues, **S3** buckets, and continuing to replace the rest of our infrastructure.
* Experienced in monitoring servers using **Nagios, Splunk.**

ENVIRONMENT: GIT, SVN, Jenkins, MAVEN, ANT, Apache & Tomcat, shell & Perl scripting, Subversion, Puppet, Hudson, Nagios, Elastic Load Balancer (ELB), WebSphere, C#.NET, .NET Framework, Python, GitHub, Chef, Splunk, Octopus, AWS Route53, AWS IAM, MS Build, Elastic Beanstalk, Amazon Redshift, RDS, S3 bucket, Lambda.