**PATRICK KWADWO KYEI**

**AWS Solutions Architect & DevOps Engineer**

**PROFESSIONAL SUMMARY**

* **AWS Solutions Architect & DevOps Engineer** with nearly **11 years** of extensive experience in the **IT industry** with the ability to accomplish all aspects of **UNIX/LINUX system administration**, software configuration management (SCM) process**, Infrastructure, Build and release management, Integration, Deployment, and cloud engineering.**
* Exposed to all aspects of **software development life cycle (SDLC)** such as Analysis, Planning, Developing, Testing, and Implementing and Post-production analysis of the projects.
* Experience with cloud and platform-as-a-service (PaaS) environments, such as Amazon Web Services (**AWS**), Cloud Foundry, and MicroServices.
* Experience in using container-based Virtualized deployments using **Docker**, working with **Docker images, Docker Hub, and Docker registries,** and creating **Docker containers** from existing **Linux** servers and saving them to **Docker Hub**.
* Experienced in Cloud automation using AWS Cloud Formation templates, **Python, Ruby, Puppet (DevOps), and Vagrant.**
* Hands-on experience in 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, etc.
* Expertise in infrastructure as code using **Terraform**, execution plans, resource graphs, and change automation using **Terraform.**
* Experience with **Docker and Kubernetes orchestration.**
* Experience with **Kubernetes** during debugging, leading up to production when multiple application builds must be tested for stability.
* Experience with data processing technologies such as **Kafka/Kinesis, Spark, and Storm.**
* Expertise in scripting languages like **Shell, Bash, Python, Ruby, PERL, and PHP.**
* Experience with automation frameworks such as **Puppet and Ansible.**
* Experience in Automate using **Ansible** and **Python** the configuration, installation, and deployment setup of many systems within Cloud Services including the monitoring system.
* Experience in setting up **Puppet Master, and Puppet Agents** for managing enterprise policies and configurations.
* Expert in **Ansible** and **Ansible Tower** as a Configuration management tool, to automate repetitive tasks, quickly deploy critical applications, and proactively manage change.
* Experience in configuring, monitoring, and alerting tools according to requirements like AWS **Cloud Watch**, **Cloud Trail**, **Dynatrace**, **Nagios**, **Splunk Enterprise**, **Kibana**, and **SNMP monitoring** for VPN connections.
* Experience working on configuration management in Linux using **Puppet** thereby developing Puppet Manifests using **ruby** for provisioning applications and scripts.
* Expertise in building tools like **MAVEN** and **ANT** for the building of deployable artifacts such as war &amp; ear from source code.
* Experience in Web/Enterprise Application Deployment Technology specifically including Windows**, Linux**, **Apache, Tomcat, Web Logic, Java, MS SQL,** and **Oracle.**
* Experience working with **Jenkins** for automated build and continuous integration.
* Good experience in developing projects using **XML, XSLT, SOAP, RESTful, and SQL.**
* Experience in working with version control technologies such as **SVN or Git.**
* Experience setting up and administering both **RDBMS servers (SQL Server, Oracle, PostgreSQL, MySQL) and NoSQL (MongoDB, Cassandra) data stores.**
* Strong interpersonal, time management, project management, and conflict resolution skills and Building, maintaining, and leveraging relationships as well as expert-level verbal and written communication skills.

**EDUCATION**

* BS in Environmental Science

**TECHNICAL SKILLS**

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| **Cloud Services** | Amazon Web Services: EC2, S3, ELB, kinesis, Auto scaling, Elastic Beanstalk, Cloud Front, Cloud Formation, Elastic, RDS, DMS, VPC, Direct Connect, Route 53, Cloud watch, Cloud trail, IAM, SNS., Google Cloud |
| **Containerization Tools** | Docker, Kubernetes, ECS |
| **Version Control Tools** | SVN, GIT Hub, GIT Lab, Bit Bucket |
| **Programming Languages** | C, C#, Bash, Python, Ruby, PHP, Java Script. |
| **Application/Web Servers** | Web Logic, JBoss, Tomcat, Apache, Passenger, Nginx |
| **Build Scripting Tools** | Ant, Maven Artifactory |
| **CI/ Other Tools** | Jenkins, Team City, Bamboo, Hudson, TFS |
| **Infrastructure Tools** | VMware, KVM, Puppet Enterprise, Foreman, Apache Lib cloud, Google Cloud, AWS, Ansible |
| **Database** | MySQL, Oracle, MongoDB, SQL SERVER, Cassandra, PostgreSQL |
| **Operating Systems** | Linux (Centos/ Red Hat), Windows Family, Mac |

**PROFESSIONAL EXPERIENCE**

**Associated Bank, St Paul, MN**   **Aug 2021 – Present**

**AWS Solutions Architect & DevOps Engineer**

**Responsibilities:**

* Gathered all the stakeholder approvals, and necessary signoffs while acting as a release manager for two development teams.
* Worked in an environment of Amazon Web Services (AWS) products and gained good knowledge in Elastic Cloud Computing, Simple Storage Services, Glacier, Block Storage, Elastic Beanstalk, Amazon Lambda, Virtual Private Cloud, Load balancing, Relational Database Service, and Cloud Watch.
* Worked on AWS CLI tools, EC2, and Cloud formation to set up a DEV and Testing Environment in Amazon Cloud.
* Extensively Worked on automated configuration management and deployments using Ansible playbooks and Yaml for resource declaration. And creating roles and updating Playbooks to provision servers by using Ansible.
* Design highly available, cost-effective, and fault-tolerant systems using multiple EC2 instances, Auto Scaling, Elastic Load Balance, and AMIs.
* Implemented Jenkins as a Continuous Integration Server for Installation, Configuration, Design and Administration, and integrating tools with other systems.
* Managed different infrastructure resources, like physical machines, VMs, and Docker containers using Terraform.
* Implemented rapid-provisioning and life-cycle management for Linux using Amazon EC2, Ansible, and custom Ruby /Bash scripts.
* Worked on Manage deployments and rollbacks of applications with Kubernetes orchestration
* Worked on creating the Docker containers, Docker container images, tagging and pushing the images, and Docker consoles for managing the application life cycle.
* Deploy Docker Engines in Virtualized Platforms for containerization of multiple applications.
* Implemented a Continuous Delivery pipeline with Docker, Jenkins, and GIT. Whenever a new Git branch gets started, Jenkins automatically builds a new Docker container.
* Developed and maintained the continuous integration and deployment systems using Jenkins, ANT, Maven, Nexus, Ansible, and Ruby.
* Worked on Installing, Configuring, and managing in Ansible Centralized Server and creating the playbooks to support various middleware application servers, and involved in configuring the Ansible tower as a configuration management tool to automate repetitive tasks.
* Extensively worked on Automating the Build Infrastructure for deploying services in a Docker environment using Jenkins, SonarQube, Gradle, Groovy, Job DSL, Docker, and Splunk.
* Designed, investigated, and implemented public-facing websites on Amazon Web Services (AWS) using Jenkins Amazon Web Services (AWS) Code Deploy plugin to deploy to AWS.
* Developed an internal Docker environment for test projects as well as projects with a limited lifespan
* Created cloud formation scripts for hosting software on AWS cloud.
* Worked on Ansible Tower, which provides an easy-to-use dashboard and role-based access control, so that it's easier to allow individual teams access to Ansible for their deployments.
* Worked on writing the scripts in Perl and Shell Scripts for managing various enterprise applications.
* Worked on Installing Ansible Tower and using it to manage systems
* Developed a continuous deployment pipeline using Jenkins, and Ruby/shell scripts.
* Installed and managed Artifactory for universal repository management.
* Responsible for gradation of SonarQube using upgrade Center, Viewing the selected issues of the web interface using SonarQube.
* Installed and Configured the Apache, Nginx, Tomcat web, and application servers for Dev and Integration Test Environments.
* Worked on Kibana and Elastic search to identify the Kafka message failure scenarios. Implemented reprocessing of failure messages in Kafka using offset ID.
* Worked on build tasks using Maven, Ant, Gradle, and GNU Make files and worked with the development team to migrate Ant scripts to Maven.
* Worked on Apache and Firewalls in both development and production.
* Developed and supported the RHEL-based infrastructure in the cloud environment.
* Worked on integrating GIT into the Continuous Integration (CI) environment along with Anthill-Pro.
* Developed scripts for build, deployment, maintenance, and related tasks using Jenkins, Docker, Python, and Bash.
* Migrated the current Linux environment to AWS/RHEL Linux environment used auto scaling feature and was Involved in Remediation and patching of Unix/Linux Servers.
* Used and worked on multiple Bug tracking tools like JIRA, Remedy, and Bugzilla.
* Educated the Development teams on Jenkins, GIT, AWS, and the whole CICD Pipeline process.
* Created and maintained CI/CD environments in Scrum and Agile projects.

**Environment:** AWS (EC2, S3, RDS, EBS, Elastic Load Balancer, Auto scaling, EC2 instances, VPC, subnets, NAT, Security Groups, VMware, Jenkins, Docker, Docker containers, Kubernetes, Terraform, Ansible, Python Scripts, GIT, Team City, JIRA, MySQL database, Nginx, NetApp, Red Hat Linux Servers

**Minnesota Rubber & Plastics/****Quadion, LLC, Minneapolis, MN**  **Sep 2019 – Jul 2021**

**AWS Solutions Architect & DevOps Engineer**

**Responsibilities:**

* As a DevOps Engineer, I am responsible for designing, building, monitoring, and enhancing services and production environment.
* Developed and implemented an Agile SDLC and refinement of the Software Configuration Management (SCM) infrastructure.
* Involved in designing and deploying a multitude of applications utilizing almost all the AWS stack (Including EC2, Route53, S3, RDS, Dynamo DB, SNS, SQS, and IAM) focusing on high-availability, fault tolerance, and auto-scaling.
* Used Ansible and Ansible Tower as a configuration management tool, to automate repetitive tasks, quickly deploy critical applications, and proactively manage changes.
* Created Ansible Playbooks for various environments for release and rewritten puppet modules into the Ansible Playbooks.
* Installed and configured Ansible. Created different Playbooks. And managed Ansible inventories.
* Responsible for building infrastructure for new cloud-native applications in AWS.
* Configured IAM roles for EC2 instances and assigned them policies granting specific level access to S3 buckets.
* Designed and developed the framework to consume the web services hosted in Amazon EC2 instances.
* Designed Stacks using Amazon Cloud Formation templates to launch AWS Infrastructure and resources.
* Installed and arranged databases like MongoDB and DynamoDB.
* Wrote Ansible Playbooks with Python SSH as the Wrapper to Manage Configurations of AWS nodes and Tested Playbooks on AWS instances using Python.
* Worked extensively with AWS services like EC2, S3, VPC, ELB, Autoscaling Groups, Route 53, IAM, CloudTrail, CloudWatch, CloudFormation, CloudFront, SNS, and RDS.
* Worked on AWS Elastic Beanstalk for fast deploying of various applications developed with Java, PHP, Node.js, Python, Ruby, and Docker on familiar servers such as Apache and IIS.
* Configured AWS CLI and performed necessary actions on the AWS services using shell scripting.
* Used Jenkins pipelines to drive all MicroServices builds out to the Docker registry and then deployed to Kubernetes, Created Pods, and managed using Kubernetes
* Developed REST APIs in Python, providing backend capabilities to interface with OpenStack and other downstream APIs
* Worked in all areas of Jenkins setting up CI for new branches, build automation, plugin management securing Jenkins, and setting up master/slave configurations.
* Created, Configured, and Administered Jenkins servers with Master-slave configurations as needed.
* Integrated Defect tracking tool JIRA with Confluence and Jenkins CI server for identifying, logging, tracking, and documenting defects/issues in real-time.
* Involved in the development of a test environment on Docker containers and configuring the Docker containers using Kubernetes.
* Used Ansible to document all infrastructure into version control and used Ansible tower to deploy the projects into different environments through Octopus deploy.
* Orchestrated CI/CD processes by responding to Git triggers, human input, and dependency chains.
* Wrote Shell & Perl scripting defined through tasks using YAML format and Run Ansible Scripts depending on provision to Dev servers.
* Installed and Implemented Ansible configuration management system. Used Ansible to manage Web applications, Environments, configuration Files, Users, Mount points, and Packages
* Integrated Ansible tower with Octopus deploy to deploy code to different servers and set up Ansible tower as configuration management and deployment solution for Security Sensors.
* Installed and configured TeamCity on Linux Machines alongside updating plugging like JDK, Maven, GIT, and SonarQube.
* Used integrated development environments Visual Studio.
* Developed and implemented Software Release Management strategies for various applications according to the agile process.

**Environment:** AWS, Linux, GitHub, Open API/Swagger, Terraform, Ansible, Jenkins, TeamCity, Octopus Deploy, Unix/Linux, Windows, Docker and Kubernetes, Oracle, Windows

**American National Bank, St Paul, MN**  **Dec 2017 – Sep 2019**

**AWS Solutions Architect & DevOps Engineer**

**Responsibilities:**

* Worked with Ansible playbooks for virtual and physical instance provisioning, configuration management, patching, and software deployment.
* Implemented AWS solutions using EC2, S3, RDS, EBS, Elastic Load Balancer, and Auto scaling groups.
* Maintained Ansible playbooks using Ansible roles, and Ansible Galaxy, utilized a combination of the different modules in the Ansible playbook with YAML scripting to configure the files on remote servers.
* Used Ansible to manage systems configuration to facilitate interoperability between existing infrastructure and new infrastructure in alternate physical data centers
* Used Ansible to manage Web Applications, Config Files, Data Base, Commands, user mount Points, and Packages Used Ansible-galaxy to create roles that can be reused multiple times across the organizations and calling these reusable roles using the 'requiremnent.yml' file in roles.
* Deployed and monitored scalable infrastructure on Amazon web services (AWS)
* Automated identification of application server and database server using Ansible Scripts.
* Worked with container systems like Docker and container orchestration like Kubernetes.
* Used Kubernetes to orchestrate the deployment, scaling, and management of Docker Containers.
* Used Jenkins pipelines to drive all MicroServices builds out to the Docker registry and then deployed to Kubernetes, Created Pods, and managed using Kubernetes.
* Involved in troubleshooting of various AWS EC2 instances. Used DNS management in Route53, and Amazon S3 to backup database instances to save snapshots of data.
* Involved in the development of a test environment on Docker containers and configuring the Docker containers using Kubernetes.
* Migrated all servers from On-Premises to Kubernetes containers & wrote the scripts in Python, Perl, and Shell Scripts to monitor installed enterprise applications.
* Developed MicroServices onboarding tools leveraging Python and Jenkins allowing for easy creation and maintenance of build jobs and Kubernetes deploys and services.
* Managed GIT repository, code merging, and production deployments. Analyzed and resolved conflicts related to the merging of source code for Git.
* Created Build Jobs and Deployments in Jenkins and Implemented a CD pipeline with Docker, Jenkins, GitHub, Ansible, and AWS AMI.
* Refactored monolithic applications to MicroServices and Component-based architectures.
* Worked on deployment automation of all the MicroServices to pull images from the private Docker registry using Ansible.

**Environment: J**enkins, Artifactory, Docker, Kubernetes, Ansible, Legacy Services, SonarQube, Nagios, Containers, Micro Services, HTML, Bash, Ruby and Python, Oracle, Windows

**Travelers, St Paul, MN**  **Feb 2016 – Nov 2017**

**DevOps Engineer**

**Responsibilities:**

* Worked Configured AWS IAM and Security Group in Public and Private Subnets in Virtual Private Cloud.
* Created AWS Route53 to route traffic between different regions.
* Built out server automation with Continuous Integration-Continuous Deployment tools like Jenkins/Maven for deployment and build management system.
* Administered Puppet Enterprise to provision multi-platform virtual machine configurations across infrastructure. The infrastructure consists of multiple-platform environment servers dedicated for building, deploying as well as for development, testing, and production systems.
* Participating in configuring and monitoring distributed and multiple platform servers using Puppet. Used Puppet server and workstation to manage and configure agents.
* Managed virtual instances and disks using Puppet.
* Wrote, maintained, reviewed, and documented modules, manifests, Hiera configurations, and GIT repositories for Puppet Enterprise on RHEL and Windows platforms.
* Created a custom Puppet module skeleton to use the same structure across all Puppet modules.
* Implemented Puppet Hiera to separate data from Puppet code.
* Designed continuous delivery tools/ configuration management tools like Puppet.
* Installed, configured, and managed Puppet Master and Agent.
* Develop and enhance the automated configuration management system.
* Installed and configured configuration tools such as workstations and nodes via CLI tools to AWS nodes.
* Automated cloud deployments using Puppet, python (boto& fabric), and AWS Cloud Formation Templates.
* Designed a Configuration Management solution using Puppet.
* Leveraged AWS cloud services such as EC2, auto-scaling, and VPC to build secure, highly scalable, and flexible systems that handle expected and unexpected load bursts.
* Designed AWS Cloud Formation templates to create custom sized VPC, subnets, and NAT to ensure successful deployment of Web applications and database templates.
* Implemented automated local user provisioning instances created in the AWS cloud.
* Designed and implemented scalable, secure cloud architecture based on Amazon Web Services.
* Managed version control tool GIT to version code changes to help developers/programmers branch/merge/ revert code.
* Handled admin tasks in Linux OS such as server restart, application installation, and setting up monitor dashboards.
* Worked on user Group creation, monitoring, and maintaining a log for system status/health using Linux commands and Nagios system monitor.
* Worked on installation of Docker using toolbox & creation of custom Docker container images, tagging and pushing the images.
* Worked on creating the Docker containers and Docker consoles for managing the application life cycle.
* Performed Deployment Releases to various QA & UAT environments, ensuring processes are deployed successfully to production.

**Environment:** Puppet, Docker, JIRA, TFS, Team City, Kubernetes, AWS, Maven, Docker, GIT, Python, Remedy, Shell Scripting, GIT, UNIX, Linux

**Minnetronix Medical Inc., St Paul, MN**  **Jun 2014 – Jan 2016**

**DevOps Engineer**

**Responsibilities:**

* Responsible for gathering all the Stakeholder approvals, and necessary signoffs while acting as DevOps engineer for development teams.
* Responsible for CI/CD process implementation using Jenkins along with Python and Shell scripts to automate routine jobs.
* Implemented AWS solutions using EC2, S3, RDS, EBS, Elastic Load Balancer, Auto scaling groups, Optimized volumes and EC2 instances.
* Implemented new project builds framework using Jenkins & maven as build framework tools.
* Worked on Jenkins Continuous Integration Tools (Installed, Configured, and Administered).
* Performed various activities on the version control tool GIT like Branching, Tagging, and Release.
* Automated and deployed development environments using Ansible to various cloud providers Amazon AWS and EC2, and Jenkins testing.
* Deployed Builds for various Environments like QA, Integration, UAT and Productions Environments
* Used load-balancing tool Nginx coupled with Docker to achieve continuous delivery goals on high scalable environment.
* Worked on Atlassian Jira, both hosted and local instances for issue tracking, workflow collaboration, and tool-chain automation.
* Troubleshooted and resolved Build failures due to infrastructure issues reduced by 98% stabilizing the build process. Set up and executed process to code review system effectively.

**Environment:** Java, Jenkins, Maven, Nagios, SQL, AWS, Nagios, WebSphere, Python, Docker, GIT, JIRA, XML, Linux

**Hennepin County, Minneapolis, MN** **Jun 2012 - Jan 2014**

**Information Technology Project Manager**

**Responsibilities:**

* Sheriff Computer-Aided Dispatch (CAD) hardware and software updates and migration.
* Windows Servers upgrade projects.
* Implemented security best practices in AWS environment including multi factor authentication, access key rotation, encryption using KMS, firewalls- security groups and NACLs, bucket policies and ACLs, mitigating DDOS attacks.
* Integrate IT Services in 41 Hennepin County Libraries into Hennepin County Central IT.
* Managing Service Management Request tickets and Project Request.
* Leveraged Systems Manager (SSM) to orchestrate and manage operational tasks like EC2 instances and on-Premises servers running updates and patches at scale using RUN COMMAND and PATCH MANAGER.
* Migration of 3500 Cellular devices from Sprint to T-Mobile Infrastructure.
* Participated in architecture discussion to build confidence and ensure customer success when building new and migrating existing application, software, and services on AWS platform.
* Migrate 9000 Windows 7 users to Windows 10
* Use Project Management Best Practices to deliver projects on time.
* Engage Technical Experts in all areas of IT to solve problems and implement policies.
* Sheriff Computer-Aided Dispatch (CAD) hardware and software updates and migration.
* Worked on windows Servers upgrade projects.
* Implemented security best practices in AWS environment including multi factor authentication, access key rotation, encryption using KMS, firewalls- security groups and NACLs, bucket policies and ACLs, mitigating DDOS attacks.
* Integrated IT Services in 41 Hennepin County Libraries into Hennepin County Central IT.
* Managing Service Management Request tickets and Project Request.
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* Migrated 9000 Windows 7 users to Windows 10.
* Used Project Management Best Practices to deliver projects on time.
* Engaged Technical Experts in all areas of IT to solve problems and implement policies.

**Environment**: Microsoft Project Server, Microsoft Access, Agile & Waterfall Methodologies, ServiceNow