# Abishek Rai

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Gender Male E-Mail contact.abishekraj@gmail.com

Technical Solution Architect with 13 year of IT experience . I work with SRE / DevOps team to deliver and Automate operation of Container platform on Redhat Openshift platform. As part of MCMS container team, I help application team in running application in various container platform. I have demonstrated skills like identifying goals, suggesting alternatives, evaluating trade-offs and presenting best possible options to technical as well non- technical management to resolve problems. Personal interest in learning about evolving Opensource tools in CNCF landscape. Proved my skills in current assignment by implementing GitOps for Openshift Platform. I am Certified Kubernetes Administrator(CKA) and AWS Certified Solution Architect professional & Design Thinking practitioner .

#### **APERCU**

- I am contributing as a Solution Architect with MCMS (Multi Cloud Managed Service ) in the Container Platform Team .I have worked with the Offering team to develop and improve MCMS Offering and help the SRE to deliver a managed Container platform . I prepare Architectural Document such as Functional Requirement and Non functional Requirement and Architectural Decisions .
- Automated Infrastructure provisioning For ADOBE SAS Offering on IBM financial Cloud in VPC gen2 cloud.
- Automate platform management by implementing GitOPS paradigm with ArgoCD to manage state of Openshift cluster .
- Worked on new service offering and published Architectural Documentation (Functional requirements, Operation Model, RACI, NFR, Architectural Decisions) for MCMS.
- ☑ Performed POC for multiple tooling like FluxCD, Open Policy Agent ,StackRox , kubebench etc.
- Planning Availability of container platform with determination of SLI and SLO. Implementing monitoring and dashboard with Prometheus , Datadog , sysdig.
- Design and implemented various infrastructure Solution /platform Solution (Openshift /IKS) and implemented DevOps pipeline tool chains.
- Exposure to concept of observability with analytic on log metadata, metric monitoring & tracing in distributed application .Proficient problem Identification and resolution skill by observing Infrastructure-metrics and Log analysis. Worked on integration of Splunk and Openshift with cluster logging operator
- $oxdit{oxdit}$  Implemented integration with ServiceNow and Openshift with Custom glue code in GO .
- Understanding of Micro-service architecture, Distributed application, Container, Edge component, Multi-AZ application hosting ,Reverse proxy ,Elastic Search, SSL/TLS Security implementation, TCP/IP, DNS ,Apache Tomcat ,Clustering of App. Server, API management , Infrastructure health metering.
- ☑ Done multiple POC implementation for Pre-sales Demo.
- Helmed Open source adoption with tools like FLUX , ArgoCD, Hashicorp Vault , OPA Gatekeeper ,cilium ,Istio . Worked on OS UNIX (AIX), Linux (red hat).
- Exposure to Software Design Pattern for Distributed Application on Cloud, Site Reliability Engineering
- Understanding of The Twelve-Factor App for Designing Scalable and highly flexible Application.

IT SKILL SET		
IAC	Terraform , Cloudformation, Ansible, Packer	
Container Orchestrator	Openshift , kubernetes ,IKS , IBM-ROKS	
Source Code Management	SVN, Bitbucket, GIT, Github ,GitLAB	
Devops tool	Maven , Docker, Skopeo , NPM ,Jenkins . Make , Jfrog Artifactory , Sonar Cube , Flux, Argo CD , github action, Nexus, Quay ,AquaSec, jfrog XRAY,kustomize, Helm.	

Cloud	IBM Cloud VPC gen2 ,CMS (Private cloud based on softlayer) ,AWS
Monitoring/ log management	Prometheus (open metrics), EFK Stack , Grafana, DataDog
Queue	Mqueue,
Cert / Secret mgmt	OpenSSL ,Cert Manager , Vault . Venafi

## **Project Experience / Professional Experience**

Project	IBM MCMS - Container Platform
Client	Multiple (Shared Model for Delivery)
Role	Automation Architect - Openshift /IKS
Platform	Openshift ROKS, IKS (IBM kubernetes Service)
Team Size	42
Duration	Apr'19 to Date
Organization	IBM India (p) Ltd.

## **Key Responsibilities:**

- ☑ Designed custom Solution for Platform Management based on GITOps
- Designed reference CI- CD pipeline for Devops adoption .Help team to implement various best practice in their GIT-flow.
- ☑ Support the Sales team in the technical response of the RFP .
- ☐ Customize platform to help Development team to achieve performance and functional goal.
- ☑ Designed platform architecture for Higher Resiliency.
- ☑ Automation for tool chain provisioning for Devops in Customer's Cloud Account.
- ☑ Enable Self service DevOps pipeline for Application Developer by publishing Shared library for Jenkins Automation.
- Enable Sysdig/Datdog Integration to monitor Cluster workload in IBM IKS and ROKS.
- ☑ Done workshop with client to Demo the Automation of Platform configuration GITOps.
- ☑ Architectural Documentation for Collating NFR and Functional Requirement of Automation .
- ☑ Created HLD /LLD based on TSD (team solution Design ) IBM Internal ref.
- Implemented monitoring with Prometheus. Splunk Integration with Fluentd to ship application logs.
- Adopted agile methodology with sprint planning in Automation exercise for platform team.

Project	ADOBE AEM hosted IBM Cloud as Service
Client	IBM cloud (CHQ team)
Role	Automation Architect - Openshift
Platform	Openshift ROKS, Terraform Automation
Team Size	2
Duration	Sep'20 to Date
Organization	IBM India (p) Ltd.

- ☑ Written IAC code for SAS hosting of Adobe AEM on Openshift ROKS
- ☑ Implemented S3 Back-end for State Management for Terraform State file handling.
- ☑ Created Module to Provision Multi-AZ ROKS cluster with separate Worker Nodes Pool to handle Authoring Pod and Publishing Application .
- ☑ Created Single IAC Setup perform Active -Active Multi Region cluster to Load-balance workload traffic.
- Enable BOYK for Data encryption and transit gateway between Multi-region Clusters to enable **Secured replication of PORTWORX Storage to achieve HA across region failure.**

Project	Match2020-Account & customer Domain
Client	ABN-AMRO Bank ,Amsterdam NL (Financial Domain)
Role	SME Middleware Devops Migration
Middleware	Websphere Application Server,
Team Size	10
Duration	Jul'16 to till date
Organization	IBM India (p) Ltd.

# **Key Responsibilities:**

$\checkmark$	Provisioning	Of Platform for	lava /Docker	container application	running ON CI	٩S.
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- ☑ Managing CD /CI Pipeline for Automated Deployment and Integration .
- Deployment automation of j2ee Application such as Web Services, application on IBM WAS middleware With CD tool "Urban code deploy". Automation of CI pipeline with Jenkins build.
- Writing XML \YAML\JSON of Application Environment to be deployed as infra as code. On customer private cloud of Bank.
- ☑ Troubleshooting of UCD environments to provide infra provisioning as requested by developer .
- ☑ Jenkins pipeline management for automated build and compliance check.
- ☑ Identification of SLO and SLI for Application Availability requirement.
- ☑ Certificate Management of Application to Host Web Service and front end Web application.
- Patching of Middleware, planning and roll-out and cut-over in Migration activity.
- ☑ Managing Code base of Python's Automated Compliance check (Health check) with Script for VM
- ☑ No Blame post-mortem of Incident to identify root cause by following 5 Why assessments.
- ☑ Integration of Service-now and Urban code to trigger REST API call to urban code process.
- ☑ Configured log Monitoring with SPLUNK .Tivoli monitoring for Application health and response time.
- ✓ Incident management with ITIL compliance. CIRAT handling
- Mentored junior Associates.

Project	Middleware Support Group for OWENS &Minor
Client	Owens & Minor Inc., Richmond ,US ( Supply Chain ,Retail )
Role	Devops Engineer for Build, release & performance
Middleware	Websphere Application ServerND v8.5 ,IBM Portal Serverv8.1, MQ7 ,IIS,IBM-IHS,Tivoli,BEA-Weblogic 8, Oracle Weblogic 13c
Team Size	5
Duration	Oct'12 to till date
Organization	Dell International Services

#### **Key Responsibilities:**

- Provisioning of WAS environment for Production Application Server and Portal Server Environment, along with development support environment such as UAT,QA and Staging Environments. Provisioning IBM Portal Server for Customer facing high volume Site. Supporting Inventory management, Ordering and pricing for Customer product.
- ☑ Incident management /Problem management closure with ITIL compliance.
- Migrated Servers to Dell Cloud based Hosting. Maintaining Licensing Compliance for IBM Software.
- SSL Implementation and Certificate Management (maintaining different key stores and creating certificate Request).
- Patching and Installation of Websphere Portal Server, WebSphere Application Servers and MQueue with latest patches and APAR.
- ☑ Managing Configuration, Build and Release of Application to production and non-production Environments.
- ☑ Integrating BMC Monitoring tool and defining trap for early determination of an event of failure before Customer Escalation. Implementation of various tools (QUPASA, IBM health Center).
- ☑ Tuning Parameter for JVM, Thread pools, Connection Pool Management and Unix/Windows OS Parameter tuning.
- ☑ Thread Dump Analysis through comparing different dump in Analyzer.
- ☑ Heap Dump Analysis on Heap dump analyzer for potential leak Suspects Object.
- ☑ Log Management automation .Debugging through trace Diagnostics.
- ☑ Status Report Sharing for Project management requirements.
- ☑ Plugin and Routing consideration for Production traffic.
- ☑ IIS pool management and Plugin integration.
- Performing BCP Activity to Sun Guard Site remotely.

Project	Performance and Availability Support
Client	Ministry of Company Affairs
Role	Module lead of team responsible for Build, release & performance And Availability of MCA21 Site.
Middleware	Websphere App. Server ND v6.1 ,MQ6,TOMCAT,IBM-HIS,Tivoli
Team Size	4
Duration	Jun'08 to Oct'12
Organization	TCS Noida

#### **Key Responsibilities:**

- Provisioning of WAS environment for Production Application Server as well as development support environment such as UAT and Staging Environments.
- Determination of point of failure in Production and provide resolution ensuring minimum disruption of Services to stakeholder .Providing RCA for incident in Production.PMR resolution with IBM support.
- SSL Implementation and Certificate Management (maintaining different key stores and creating certificate Request).

- ✓ Patching and Installation of Websphere Application Servers and MQueue with latest patches and APAR
- Managing Configuration, Build and Release of Application with jython scripts.
- Providing Monitoring infrastructure for early determination of an event of failure before Customer Escalation. Implementation of various tools (Zabbix ,jweaver based application profiling with glassbox.
- ☑ Tuning Parameter for JVM, Thread pools, Connection Pool Management and AIX OS Parameter tuning.
- ☑ Thread Dump Analysis through comparing different dump in Analyzer.
- Heap Dump Analysis on Heap dump analyzer for potential leak Suspects Object.
- ☑ Log Management automation .Debugging through trace Diagnostics.
- ☑ Load Generation for Performance testing of environment with tool such as Grinder and Fastest.
- ☑ Properly assess the technical issues, risks and concerns and escalate them to project leader.
- ☑ Plugin and Routing consideration for Production traffic.
- ☑ Classloading issue faced in production.
- Configuring Monitoring infrastructure of error code in logs and network availability using tool such as fping,netstat,nslookup etc.
- ☑ Http access log/error log analysis.
- ☑ Regular status reporting to Higher Management.
- Performing Quarterly Backup of Production through Backup Utility and keeping sync of DR Site for BCP in case of disaster.
- ☑ Done Capacity planning for different infrastructure environment .Server sizing with workload data for Aix P-Series Server.
- ☑ Development experience in core java.
- ☑ Undertaken Major Upgrade Activities for product IBM Websphere(IBM Websphere v6.0 to Websphere v6.1 migration)

#### **ACADEMIC CREDENTIALS**

Examination	Year	CGPA / %age	Institution
B.TECH (Electronics & tele.)	2004-08	8.14	KIIT University ,Bhubaneswar
I.Sc (Bihar Interm. Council)	2003	66.40%	B.N College ,Patna, Bihar
10TH (C.B.S.E)	2001	79.60%	D.A.V Public School ,Khagaul ,Patna

#### **CERTIFICATIONS**

Title	Acquired By
Certified Kubernetes Administrator by CNCF	Sep 2019
AWS Certified Solutions Architect - Professional	July 2021
Design thinking Practitioner	Feb 2019
000-806 IBM WebSphere Application Server ND V6.1, advance Administration	Feb' 2011
Red Hat Linux System Administration Certification Course conducted by Redhat India	Jun ' 2007











#### **Achievements**

- Awarded Mangers choice award for successful completion cloud migration project.
- Awarded Dell Champion award for FY year 14-15 for handling Upgrade activity.
- Awarded 'Customer Delight Award' from recommendation from Client.
- Received multiple 'On the Spot Award' at solving production Support issues in Project.
- My team won 'Best team Award' for WAS Environment Upgrade and achieving highest Successful filing throughput figures in the year 2010-11.
- Received Client Appreciation for successful peak filing with no unplanned Downtime in 2010-11.
- Optimized Environment to reduce Hardware resource requirement by 30 %.
- Have CSI improvement from customer feedback with special mentioning of the team's good performance.

#### **Personal Details**

Language	English ,Hindi
Nationality	India
Address	K-306,Homes 121 ,Plot No - GH1 ,Sector 121, Noida . 201301

I hereby declare that the information provided is true to the best of my knowledge and belief.

Date: 10<sup>th</sup> of Aug. 2021 Abishek Raj

Place: Noida Mail:: contact.abishekraj@gmail.com