# Abhishek Agarwal - Enterprise Architect TATA CONSULTANCY SERVICES

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# **Experience Summary:**

- Overall 10+ years of experience managing servers in multiple operating systems and platforms, working in physical and virtual servers, experience in public, private and hybrid clouds, hardware, infrastructure, and technical leading teams.
- 4+years of experience in PaaS with RedHat Openshift Containers Platform. Architecting, installing and configuring the platform using tools and technologies like Ansible, Terraform, Dyantrace, Bash, Git, ELK, Fluentd, MongoDB, Cassandra, Prometheus, Grafana, Jaeger.
- Implemented Microservices on RedHat **OpenShift** based on **Kubernetes**, **Etcd**, **Istio** and **Docker** to achieve Continuous Delivery.
- Implemented Confidential Azure AD Application Proxy for cloud directory in Azure AD.
- Designed and implemented Single Sign-on for SharePoint using Azure proxy server.
- Proficient with Shell, Python, YAML, Groovy scripting languages & Terraform & Vagrant
- Designed and configured Azure Virtual Networks (VNets), subnets, Azure network settings, DHCP address blocks, DNS settings, security policies and routing.
- Experience working with RedHat Enterprise Linux and open source technologies, installing and configuring different services like DNS, LDAP, DHCP, Proxy, NTP, NAT
- Experience in creating inventory, job templates and scheduling jobs using Ansible Tower.
- Implemented and managed for Devops infrastructure architecture, Terraform, Jenkins, Puppet and Ansible implementation, Responsible for CI infrastructure and CD infrastructure and process and deployment strategy. With tools like SonarQube, Nexus, Fortify, Owasp, Confluence, Junit, Nunit part of pipelines.
- Engineering and integration of message & event-driven micro-services using various patterns and technologies (RabbitMQ, Kafka, IBM MQ, Spring Integration, Spring Cloud Stream Kafka, Spring AMOP)
- Configured Elastic Load Balancing (ELB) for routing traffic between zones, and used MS DNS and Route53 with failover and latency options for high availability and fault tolerance.
- Configured Elastic Search for log collections and Prometheus, Kibana & LogStash for metric collections.
- Designed and implemented by configuring Topics in new Kafka cluster in all environment.
- Strong knowledge in backup, migration, disaster recovers, querying Oracle, Sybase, MySQL, NoSQL, Mongo DB and Cassandra.
- Experience in creating microservices patterns SAGA, Hybrid, CQRS using AXON framework.
- Experienced in administration and deployment of applications on Apache Tomcat Webserver and Application Servers such as Web Sphere, Web Logic, JBoss, IIS, etc.
- Worked on installation, configuration, maintenance and troubleshooting of Red hat Linux, Ubuntu, CentOS, and Sun Solaris and some Windows Servers.
- Expertise in implementing solutions based on Web & Mobile applications with frameworks like Angular, React, Redux Vue, Ionic, NativeScript.
- Experience working with developers and helping them to migrate applications from traditional IT to microservices using containers.
- Experience working in projects at customer sites in Peru, Chile, Colombia and Brazil.
- Team Player and self-starter possessing effective communication, motivation and organizational skills combined with attention to detail and business process improvements, hard worker with ability to meet deadlines on or ahead of schedules.

#### **EXPERTISE AREA:**

- o Technology Architecture & Integration
- o Cloud Design & Implementation
- Business Driving Technology
- o "Hands on" Storage Engineer
- o "Hands on" Unix / Windows Admin
- o Manage Customer/Vendor Relationships

- o Document standards & roadmaps
- Passion for technology
- o High Availability Solutions
- o Systems Integration
- o Security Risk Management
- Disaster Recovery

#### **TECHNOLOGY SKILL:**

- OS Platforms: RHEL, UNIX (Solaris 8,9,10), Linux 5/6, Ubuntu, AIX, Windows 2008,2012
- Container Technologies: Docker, Vagrant, EC2, AKS
- Container Orchestration: Kubernetes, OpenShift, Rancher, Mesos
- Cloud Services: AZ(ARM,AKS,API gateway) & AWS (EC2, S3, ELB, Cloud Watch, IAM)
- **Programming:** C, Java/J2EE, Xml, Python, Groovy, PowerShell, SQL, JavaScript.
- Java/J2EE Technologies: Struts, Spring, Hibernate, Spring MVC, Spring Web Flow, Spring IOC,
   Spring, Spring Security, Spring Boot, JUnit, Apache CXF, SOAP UI, GWT, Jersey
- **Web Technologies:** HTML5, CSS3, Bootstrap, JavaScript, TypeScript, JQuery, AJAX, AngularJS, XML, DOJO and JSON.
- SCM/Version Control Tools: TFS, SVN, GIT, GitHub, BitBucket
- **Build/Automation Tool:** ANT, Maven, Gradle, Npm, Webpack, Ansible, Chef,
- **Application Servers:** WebLogic, WebSphere, Tomcat, Jboss.
- Web Servers: Apache HTTP, IBM HTTP Server, Nginx
- **CI Tools:** Jenkins, GitLab, Travis CI, Drone
- **IDE tools:** IntelliJ, PyCharm, Visual Studio, Sublime, WebStrom, DataGrip, Eclipse, RAD, Spring Tool Suite (STS), Adobe Illustrator, Zeplin & Invision
- **Database Systems:** SQL Server 2008/2012, Oracle 9i/10g, PL/SQL, MS Access, DB2, Postgres, Sybase, MongoDB, Cassandra.
- Ticketing/Bug Tracking: Jira, Remedy, ServiceNow, Junit, PMD, Red Mine, and Bugzilla.
- Monitoring tools: Nagios, Dynatrace, Splunk, Elk, Fluentd, Prometheus, Grafana
- Message Queue: Rabbit MQ, Apache Kafka, IBM Mq
- **Testing Frameworks**: Junit, Nunit, TestNG, Selenium, Postman, Mockito, Insomnia, SoapUI, Protractor, TDD, BDD, Gherkin, Cucumber, Selenium.
- Tools: VisualVM, JMeter, JProfiler, Jaeger, Kiali, Lombok, Swagger, Kong, APIGEE.
- Network Protocols: SMTP, SNMP, ICMP, TCP/IP, FTP, TELNET, NIS, LDAP, UDP
- **SDLC**: Agile, Scrum, Kanban, Sprint, Waterfall.

# **Ongoing Challenges:**

- Installation of Kafka Cluster, Kafka streams and Kafka connect
- Migration of MongoDB to Cassandra DB
- CQRS Implementation using Axon Framework.
- Implementation of Istio Service Mesh.

# **Projects Handled:**

Title:	Interbank, TCS-Lima		
Team Size	80		
Duration	July 2017- Current		
Role	Enterprise Architect		
Description:	Leading Transformation digital in bank. Worked on home banking, commercial banking, mobile app.		
Responsibilities	<ul> <li>Architected and implemented the containerized orchestration solution for home banking and commercial banking on OpenShift Container Platform (OCP) 3.10</li> <li>Installation of different Openshift environments in IBM Cloud using Ansible playbooks, troubleshooting during the installation, configuration of DNS services, LDAP services.</li> <li>Design of Cloud architectures for customers looking to migrate or develop new PaaS, IaaS, or hybrid solutions utilizing MS AZ &amp; AWS.</li> <li>Used Jenkins for continuous integration and Jenkins Master Slave Architecture to run Jenkins build in remote RHEL servers. Integrated Apache Kafka for data ingestion.</li> <li>Used Kafka Producer and Consumer API to push and read the messages from the topics.</li> <li>Implemented Kafka Security Features using SSL and without Kerberos. Further with more grain-fines Security I set up Kerberos to have users and groups this will enable more advanced security features.</li> <li>Experience in installing and configuration of Ansible tower to run the ansible playbooks remotely.</li> <li>Migrated SQL Server 2008 database to Windows Azure SQL Database</li> <li>Responsible for setup of Dynatrace for application monitoring and Nagios for system monitoring.</li> <li>Architected Hybrid Mobile app &amp; Web App based of Ionic and Angular.</li> <li>Implemented a critical In house setup of Bitbucket, Jenkins, Confluence, SonarQube, Nexus, Fortify, Postgres all with Master and Slave servers &amp; connecting with LDAP for authentication.</li> <li>Proposed solution for Kubernetes networking based on Flannel, Calico, Canal, and Weave.</li> <li>Prepared IBM MQ to container ready solution using App Connect Enterprise-ACE 11 for scaling MQ with Kubernetes.</li> <li>Experience in Cloud computing, Windows Azure environment, creating the New VMs, Azure subscriptions, storage accounts, managing SSL certificates for IIS websites, administering azure assets using PowerShell</li> <li>Data warehouse migration to AWS redshift using Apache Kafka and mirror maker for</li></ul>		

	between virtual machines			
Title:	BCP(Banco de Crédito del Perú) , TCS-Lima			
Team Size:	60			
Duration	Aug 2014- June 2017			
Role:	Solution Architect			
Description:	BCP Is the biggest bank in PERU, being a part of era of digital transformation.			
Responsibilities:	<ul> <li>Part of a Team with a team of architect(s) Responsible for two major projects "One click deploy "and "Cloud first."</li> <li>Responsible for company's application systems strategy and alignment with DevOps strategy with company's business goals. Ensure that projects do not duplicate functionality or diverge from each other and business and IT strategies.</li> <li>One click deploy project- architected and migrated all digital assets from 8 monolith systems to a new K8 and OKD architecture. This reduced 40% overall cost to develop, deploy &amp; reaching almost 500 deploy per month in PROD.</li> <li>Involved in Cloud Security Infrastructure and design for client's in-house Azure Applications</li> <li>Identify leading Cloud services (IaaS, PaaS, SaaS) to provide guidance and make recommendations based on a capabilities assessment</li> <li>Designed and implemented a continuous build-test-deployment (CI/CD) system with multiple component pipelines using Jenkins to support weekly releases and out-of-cycle releases based on business needs</li> <li>Connected multiple hosts on Nagios server for analyzing system performance, defined many services like SSH, HTTPD, ping and CPU utilization for monitoring and also added team members emails to receive any alerting notifications</li> <li>Eliminated cost prohibitive and unmanageable spaghetti of point-to-point integrations, enabled application modernization and reuse of existing services by deploying corporate wide Enterprise Service Bus (ESB)</li> <li>Experience in creating alarms and notifications for EC2 instances using Cloud Watch</li> <li>Built on-premise data pipelines using Kafka and Spark streaming using the feed from API streaming Gateway REST service.</li> <li>Installation, Configuration ang Management of NFS, HTTP, FTP, SAMBA, DHCP, DNS Servers</li> <li>Worked on installing, managing the monitoring tool like ELK, Grafana, Promethus</li> <li>Hands on Coding to build REST Micro Services using Spring Cloud, Oracle, JWT, JSON, Spring Config, Spring Security, AOP, Sp</li></ul>			

tools like Hive and Impala for Ingestion				
Title:	Technical Consultant, HSBC, TCS-Mumbai			
Team Size:	15			
Duration	Jan 2014-July 2014			
Role:	Technical Consultant			
Description:	Worked with HSBC on various projects to improve performance of servers and also to implement TDD in programming			
Responsibilities:	<ul> <li>Designed extensively adopting SOA design patterns, Integration patterns, security patterns</li> <li>Deployed application onto Weblogic, Websphere, alongside with performance tuning.</li> <li>Maximized applications' efficiency, data quality, scope, operability, and flexibility.</li> <li>Proposed first ever Pipeline for end to end integration in bank using various tools of Openstack,</li> <li>Coaching and mentoring the team to implement best practices in improving the deliverables/releasable increments using TDD, Pair programming.</li> <li>Developed app integration with REST/SOAP and other APIs for Google Maps, social media logins, payment processors, and other services.</li> <li>Involved in designing and coding user interfaces using JSP, HTML5, Javascript, and CSS3.</li> </ul>			
Title:	Bank Of America, TCS-Mumbai			
Team Size:	20			
Environment:	Java, Java Script, Jenkins, Spring Boot, Spring Restful WS, Tomcat Server, Git, Nexus, RabbitMQ, Maven, Eclipse, Junit, Power Mockito, Gerrit, SonarQube, Angular, Python, Bash Scripting, Groovy			
Duration	July 2012 - Dec 2013			
Role:	Technical Lead			
Description:	Continuous Integration flow having primary responsibility on CI Applications. The overall CI architecture defined and designed with different set of small applications and frame works as Nexus Artifactory, Jenkins, SonarQube			
Responsibilities:	<ul> <li>Established Continuous Integration (CI) practices and standards in creating apis with jira, jenkins.</li> <li>Use agile development methodology for software development.</li> <li>For Development Team and Operations Team, Contributed as a Sr Developer for the CI-Engine Team.</li> <li>Integrated SonarQube with Jenkins for continuous inspection of code quality and analysis with SonarQube scanner for Maven</li> <li>Have responsible for flow integration tests and collaboration with other Applications developed on RabbitMQ, MySQL</li> <li>Developed new trading and security maintenance module using AngularJS, Restful webservice and MongoDB NoSQL</li> <li>Involved in verifying the behavior of the system under test using Mockito</li> </ul>			

_	Framework		
Title:	State Bank Of India, TCS-Mumbai		
Team Size:	10		
Duration	Aug 2010 - June 2012		
Environment:	Java, Servlets, JSP, XML, JDBC, JavaScript, Ajax calls, HTML, SQL SOAP and REST API, SVN, TFS, Apache Tomcat, IBM MQ,		
Role:	Developer		
Description:	SBI is a largest bank of India, worked on Loan origination System, Audit Underwriting System, Loan correspondent portal web applications. Loan origination System designed and developed on java/ j2ee technologies and SOAP and REST services.		
Responsibilities:	<ul> <li>Worked as a full stack developer using java/j2ee , sql server and java script for design and development of web applications.</li> <li>Contributed in Mass Loan Updates module which is a critical feature requirement from the customer.</li> <li>Involved in screen changes like adding new component and adding validation to the existing components.</li> <li>Contributed to define new services for critical feature requests using REST API implementation.</li> <li>Good experience in SDLC and different environments DEV, UAT, PROD</li> </ul>		

## **Career Profile**

Dates	Organization
19-August-2010	Tata Consultancy Services

### Qualifications

Degree and Date	Institute	Major and Specialization
Bachelor of Technology,	Cochin University of Science and Technology,	Information Technology
April 2010	University in Kochi, India	

### **Certifications:**

Microsoft Certified: Azure Solutions Architect Expert

AZ-301 Microsoft Azure Architect Design

AZ-300 Microsoft Azure Architect

Microsoft Certified: Azure Fundamentals

Lifelong Learning CertiProf

DevOps Essentials Professional Certificate - DEPC® CertiProf

Scrum Foundation Professional Certificate CertiProf

Oracle Cloud Infrastructure 2019 Cloud Operations Certified Associate

Oracle Cloud Infrastructure Developer 2020 Certified Associate

Oracle Cloud Infrastructure 2019 Certified Architect Professional

Oracle Cloud Infrastructure 2019 Certified Architect Associate
Oracle Cloud Infrastructure Foundations 2020 Certified Associate