# Sampurna B

Sr. Cloud/ DevOps Engineer

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# PROFESSIONAL SUMMARY

Professional with 7+ years of IT experience in cloud platforms like Microsoft Azure, Amazon Web Services (AWS), OpenStack, under the Unix/Linux/Windows and Configuration Management tools like Ansible, Chef and Continuous Integration/Continuous Delivery (CI/CD), Linux and System Administration platforms with strong knowledge on the principles and best practices of Software Development Life Cycle (SDLC) in Agile, Scrum, and Waterfall methodologies.

- Proficient in Administrating Azure IaaS/PaaS services like compute Azure Virtual Machines, Web and Worker roles, VNET, Network services, Azure DevOps, SQL Databases, Storages, Azure Active Directory, Monitoring, Autoscaling, PowerShell Automation, Azure Search, DNS, VPN.
- **\*** Extensive experience in **migrating** on-premises applications to **Azure** and configured **VNETs** and **Subnets** as per the project requirement and performed **PowerShell** scripting to do **Patching**, **Imaging**, and **Deployments** in **Azure**.
- Hands on experience in writing Azure Resource Manager (ARM) to deploy, update and delete multiple resources in Azure and Migrating the On-Premises resources to Azure with Azure Site Recovery (ASR) and Azure Backups.
- **\*** Experience in Azure IaaS Virtual machines, VM Scale Sets, Load Balancer, Traffic Manager, Virtual Networks, SQL, Resource Groups and Cloud Services.
- Extensive involvement in Azure Backup, Azure Policies, Azure Key Vault, Salt Stack and Tagging.
- **Experience in Azure Platform Development, Deployment Concepts.**, hosted **Cloud Services**, platform services and close interface with **Windows Azure Multi-Factor Authentications**.
- ❖ Functioned as a **Key player/Coach** in the implementation of **DevSecOps** model across the organization and implemented security/vulnerability scans at multiple phases.
- **Experienced** in **DevSecOps** strategy for **Security Auditing**, continuous monitoring of the entire infrastructure which facilitates enhanced compliance and eliminates security breaches and vulnerabilities.
- ❖ Expertise in **Private Cloud** and **Hybrid cloud** configurations, patterns, and practices in **Windows Azure**, **SQL Azure**, in **Azure Web** and database deployments.
- Administered scalable, secure cloud architecture based on **Amazon Web Services**. Leveraged **AWS** cloud services such as **EC2**, **Auto-Scaling**, **and VPC** (Virtual Private Cloud) to build secure, highly scalable, and flexible systems that handled expected and unexpected load bursts and can quickly evolve during development iterations.
- Experience in AWS Administration Services like EC2, S3, EBS, VPC, ELB, RDS, SNS, SQS, Route 53, Lambda, Dynamo DB, Auto Scaling, Security Groups, AWS IAM Services in Users, Groups, Policies, Roles, AWS Access Keys and MFA and implemented multiple high-performance MongoDB replica sets on EC2 with robust reliability.
- Robust expertise in creating resources in Azure and AWS using **Terraform Modules**, and automated infrastructure management and experienced with Terraform key features such as **Infrastructure as Code**, **Execution Plans**, **Resource Graphs**, **Change Automation** and extensively used **Auto Scaling** for launching cloud instances while deploying **Microservices** and used **Terraform** to map more complex dependencies and identify network issue.

- ❖ Hands on experience in working with **Docker** and **Kubernetes** on multiple cloud providers, from helping developers build and containerize their application (CI/CD) to deploying either on public or private cloud.
- ❖ Proficient in **Kubernetes** to manage the **Deployment Rollouts**, **Rollbacks** and created service mesh for the traffic management in the production environment. Created **Pod**, **Deployment**, **Namespace**, **and Replication Controller YAML** definition files to schedule, deploy and manage containers nodes in different env **Dev/Staging/Prod Clusters** in **Kubernetes**.
- Experience in working on several **Docker** components like **Docker Engine**, **Hub Machine**, creating **Docker images**, compose **Docker Registry** and handling multiple images primarily for middleware installations and domain configurations.
- ❖ Experience in working with **EC2 Container Service Plugin** in **JENKINS** which automates the **Jenkins** master-slave configuration by creating temporary slaves.
- Experienced in creating and configuring **Jenkins** jobs, build and delivery pipelines for automating several operations like provisioning of resources and building executable files from raw code.
- ❖ Expertise in **Ansible** to deploy **ELK** for automating continuous deployment (CD) and configured **Nodes** and deployment failure reporting in **Open Stack Enterprise Environment**. Upgraded Entire ELK Cluster to newer releases.
- Experienced in using MAVEN and ANT as a Build Tool for the building of deployable Artifacts (Jar, war & ear) from source code.
- In-depth knowledge of computer applications and scripting with Shell, Python, PowerShell, Bash and Groovy.
- Experience in deploying of applications on **Apache Webserver**, **Nginx**, and Application Servers such as **Tomcat**, **JBoss**.
- Experience in Installing Firmware Upgrades, kernel patches, systems configuration, performance tuning on Unix/Linux systems.
- **Experience** in System Administration working on **Red Hat Linux**, **Ubuntu**, **Solaris**, **Unix**, **CentOS**, **Fedora**, **OEL**, **Windows** environments, **VMware VSphere**.

### **Technical Skills:**

Cloud Platforms	Microsoft Azure, Amazon Web Services, OpenStack
Infrastructure Provisioning Tools	Terraform, Azure Resource Manager, Cloud Formation
Configuration Management Tools	Ansible, Chef, Puppet
CI /CD Tools	Jenkins, Bamboo, Azure Pipelines, Gitlab Pipelines
Build Tools	Maven, ANT, Gradle
<b>Containerization Tools</b>	Docker, Kubernetes, Mesos, OpenShift
Source Code Management	GIT, GitHub, Gitlab, Bitbucket, Azure Repos.
Logging & Monitoring Tools	Nagios, Splunk, ELK, Data Dog, Dynatrace, Prometheus, Grafana, New Relic
	Azure Service Health, Azure Network Monitor.
Scripting & Programming Languages	Python, PowerShell, Bash/Shell, JavaScript, Perl, ASP .Net VBScript, Ruby, C, PHP, Java/ J2EE.
Databases	Data Lake, Data Bricks, Cosmos DB Oracle 10g/11g/12c, DB2, MySQL, MongoDB, DynamoDB, Cassandra
Application/Web Servers	Apache Tomcat, NGINX, IIS, JBoss4.1, WebSphere, Web Logic 9.x/10.x, Gerrit
Operating Systems	UNIX, Linux, Windows, Solaris

Virtualization Platforms	Oracle VirtualBox, VMware Workstation, Vagrant, VMware vSphere ESXi 5.x/4.X, ESX /3.x, Hyper-V
Bug Tracking Tools	JIRA, Bugzilla, Remedy, HP Quality Center, IBM Clear Quest, Mingle, VersionOne.

#### **Certifications:**

Azure Administrator Associate (AZ 104):	Certification link
Designing and Implementing Microsoft DevOps Solutions (AZ 400):	Certification Link
Microsoft certified: DevOps Engineer Expert	Certification Link

# **EXPERIENCE:**

Client: Yardi Systems, Cary, USA Role: Sr. Azure DevOps Engineer Jan 2020 - Present

- Designing and implementing **Azure Solutions** across a range of cloud models like **SaaS**, **PaaS**, **IaaS**, and integrated onpremises, on-demand workloads with the Azure public cloud.
- Built an application environment to operate at high availability in different Azure regions by using CDN, Azure Traffic Manager, App Services-Web Apps, Active Directory, Storage Queues, Cognitive Services, Azure Search, Storage Blobs, Redis cache, and SQL Database.
- Worked on Microservices for Continuous Delivery environment using Azure, Docker. Involved in setting up a Microservice architecture for application development and implemented high availability with Azure Classic and Azure Resource Manager deployment models.
- Extensively worked on Building and Installing Servers, creating multiple resources like in Azure through Azure Resource Manager Templates (ARM) or Azure Portal and provisioned them using Terraform Templates. Also worked on Virtual Networks, Azure Custom Security, Endpoint Security and Firewall.
- ❖ Worked in setting up **Azure Virtual Appliances (VMs)** to meet security requirements as software-based appliance functions(firewall).
- Converted **DevOps** methodologies in to **DevSecOps** model by introducing **Security/Vulnerability** scans at different phases of DevOps like clear text password scan, **Sonar** scans for code quality check, **Aqua** scans for checking containers, **Tenable** scans for VM's during the build and packaging phase of application and on the other hand responsible for **implementing Pre Provisioning Scans** and **Post Provisioning Scans** for **IaC** by adopting tools like terraform enterprise (**sentinel**) for **Azure** cloud resource validations.
- ❖ Brought security standards in data management by applying KMS encryption strategy to Encrypt the data at rest and implemented SSL Encryption layer to encrypt the data during transport and plotted workflow for DevSecOps operating model.
- ❖ Introduced **DevSecOps** specific policies and procedures that enabled organizations to keep up with the pace of application development in a DevOps environment. Worked on **OWASP Web/API** security vulnerabilities and compensating controls (CSRF, XSS, SQLI, etc.).
- As part of that I have used **Hashicorp Vault** to protect secrets used by our application teams such as database connection strings, passwords that run jobs, and meta-data about the environment around the application.
- Worked on fetching environment variables stored in **Hashicorp Vault** to our production code and I have used it get passwords required for various authentication processes.
- Led the operation of migrating the usage of existing **DevOps** tools to **Azure DevOps**. Configured **Azure DevOps Portal** and created **Repos** for Source Code Management, configured **Azure Pipelines** for build operations, configured **Artifacts** in Azure DevOps for storing Artifacts, and configured **Boards** for daily scheduling, ticketing, and updating tasks.

- Managed Azure Active Directory (AAD) to create Users, Groups, Service Principal Names and created multiple Custom Roles. Used AAD for Single Sign on, Authentication, Authorizations and Azure Role-Based Access Control (RBAC).
- ❖ Worked on **Azure AD connect** to sync on-premises **AD user data**, groups, and organizations to Azure AD and troubleshoot Azure services sync with on-premises **AD** and resync using the **Azure** tools.
- ❖ Worked on **Azure Monitoring** tools like **Azure Log Analytics**, **Azure Network watcher**, **Azure Service Health** to diagnose issues and minimize service degradation.
- Worked extensively on Image Creation by using configuration tools like Ansible and used Packer tool for Packerization using JSON templates.
- Used Shared Image Gallery to store the created images and built Azure pipelines in Azure DevOps to implement all these services in Azure.
- Experience in **Migrating** the existing **v1** (**Classic**) Azure infrastructure into **v2** (**ARM**), scripting and templating the whole end to end process as much as possible so that it is customizable for each area being migrated.
- Configured VM's availability sets using AZURE portal to provide resiliency for IaaS based solution and scale sets using Azure Resource Manager to manage network traffic.
- ❖ Implemented various resources in **Azure** using Azure portal, PowerShell on **Azure Resources Manager** deployment models. Experienced in deploying infrastructure as code applications using **ARM Templates** ([SON).
- Conducted Proof of Concept Programs for evaluating and implementing new technologies and tools such as Azure Kubernetes Service and Terraform.
- Configured Azure Kubernetes Service RBAC strategy to restrict Kubernetes API to application teams in Production Environments.
- Worked on Terraform templates also 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. Configured BGP routes to enable ExpressRoute Connections between on-premises data centers and Azure cloud.
- ❖ Implemented **Terraform** using concepts like **Create before Destroy** which made sure to destroy the existing object and then create a new replacement object with the new configured arguments.
- Designed and implemented framework using **Python** and generating **Terraform** templates to create **Network Security Groups** in **Azure**. Worked on deploying a web application in **Azure** cloud where in automated the configurations using **Terraform**.
- ❖ Used **Azure Kubernetes Service** as an **Opensource** platform provided by **Azure** for **Automating Deployment, Scaling** and **Operations** of applications containers across **Clusters** of hosts, providing **Container Centric Infrastructure**.
- ❖ Implemented a production ready, **load balanced**, highly available, **Fault Tolerant**, auto scaling **Kubernetes Infrastructure** and **Microservice Container Orchestration**. Created **Private Cloud** using **Kubernetes** that supports **DEV**, **TEST**, and **PROD** environments. Expertise on several cloud services and **Docker** management tools.
- Deployed **Kubernetes Clusters On Cloud/On-Premises Environments** with **Master/Minion** architecture and wrote many **YAML** files to create many services like pods, deployments, auto scaling, load balancers, labels, health checks etc.
- ❖ Configured and Integrated **Docker** container orchestration framework using Kubernetes by creating pods, deployments and used **Python Scripts** to schedule, deploy and manage container replicas onto a node cluster using Kubernetes.
- ❖ Configured **Ansible** control machine and wrote **Ansible** playbooks with **Ansible** roles. Used file module in **Ansible** playbook to copy and remove files on **Azure VM's**.
- Developed build and deploy scripts using **MAVEN** and initiated them using **Jenkins** to move from one environment to other environments. Used **Maven** to build java-based web applications and integrated it with Nexus repository.
- Coordinated and assisted developers with establishing and applying appropriate branching, labelling/naming conventions using **GIT** source control.

Client: Fidelity Investments, Raleigh, USA Role: Sr. Cloud/ DevOps Engineer

**Duration: May 2018 - Dec 2019** 

- Configured and deployed Azure Automation Scripts for a multitude of applications utilizing the Azure stack for Compute, Web and Mobile, Blobs, Resource Groups, Azure Data Lake, HDInsight Clusters, Azure Data Factory, Azure SQL, Cloud Services, and ARM Services and utilities focusing on Automation.
- Administering Active Directory and User & Group administration. Allotting disk quotas, administering Disks with Basic & Dynamic volumes. And backup and restoring data from tape. Backup and Restore of entire Partition and Hard disks with disk image by using different software's. Provisioned Azure resources like SQL Database, Web App, Storage Account, Redis Cache, Virtual Machine, and HDInsight using Azure Resource Manager (ARM).
- Performed provisioning of IAAS, PAAS Virtual Machines and Web, Worker roles on Microsoft AZURE Classic and Azure Resource Manager. Deployed Web applications on Azure using PowerShell Workflow.
- Extensive experience in Windows Azure (laaS) migrating like creating Azure VMs, storage accounts and storage pools, migrating on premise servers to Azure and creating availability sets.
- Hands on Experience in designing and implementing Service Oriented Architecture underlined with Ingress and Egress using Azure Data Lake Store & Azure Data Factory by adding blobs to lakes for analytic results and so pull data from Azure data lake to the Blobs.
- Configure continuous integration from source control, setting up build definition within Visual Studio Team Services (VSTS) and configure continuous delivery to automate the deployment of ASP.NET MVC applications to Azure web apps.
- Created, Configured and managed a cluster of VMs that are preconfigured to run containerized applications using Azure Container services and also Designed and integrated **pivotal cloud foundry** on **Microsoft Azure**. Deployed PCF using CF push and urban code deploy.
- Worked on integrating Ansible Tower with cloud environment, provided role-based access control, setup job monitoring, email notifications, Scheduled jobs, multi-playbook workflow to chain playbooks.
- Worked with creating Chef Knife, Recipes and Cookbooks to maintain chef servers, its roles and cloud resources and deploying a server using wrapper cookbook and managing them using berkshelf. Enforcing Test Driven Development (TDD) approach for writing Chef Cookbook using Test-kitchen, Vagrant, FoodCritic and ChefSpec.
- Created Docker images using a Docker file worked on Docker container snapshots, managed Docker volume and implemented Docker automation solution for Continuous Integration / Continuous Delivery model
- Used Kubernetes to manage containerized applications using its nodes, Config Maps, selector services and deployed application containers as Pods and Created Clusters using Kubernetes and worked on creating many pods, replication controllers, services, deployments, labels, health checks and ingress by writing YAML files
- Worked on setting-up continuous deployment pipelines using Jenkins across multiple Kubernetes clusters to stress the clusters with new infrastructure tools for Kubernetes in development environments. Automated these pipelines through Jenkins using pipeline script.
- Performed in writing Selenium WebDriver automation scripts in JAVA using Maven, Cucumber, and TestNG Automation Testing for Web Applications and maintained build related scripts developed in shell for Maven builds.
- Used GIT as source code management tool, created local repo, cloned the repo and performed add, commit, push, stash, branching, created tags operations. Defined branching, labeling and merge strategies for all applications in GIT.
- Developed Python scripts to automate the Build and deployment process for deploying the web services and created Bash, shell and python scripts for various Systems Administration tasks to automate repeated processes.
- ❖ Work on **ELK** for server monitoring, also used **Net Scalar** and monitoring tools like **Nagios** for **Load Balancing** and Controlling Flow of Traffic.
- Identifying opportunities to improve infrastructure that effectively and efficiently utilizes Office 365 and the Microsoft Azure Windows server 2008/2012/R2, Microsoft SQL Server, Microsoft Visual Studio, Windows PowerShell, Cloud infrastructure.
- ❖ Installed and configured **Oracle Web Logic**, **JBoss** in **Redhat Enterprise 6.x**, **5.x**, **CentOS 5.x** and Ubuntu environments and supported **Apache**, **Tomcat** and generated SSL keys to renew SSL certificates on webservers.

Client: Verizon, Raleigh, USA Role: AWS Cloud Administrator Duration: Feb 2017- April 2018

## **Roles & Responsibilities:**

- **\*** Worked as **AWS Cloud Engineer** for a team that involves three different development teams and multiple simultaneous software releases.
- Created multiple scripts for system administration and AWS using languages such as BASH and Python and created Lambda functions to upload code and to check changes in S3, DynamoDB table.
- Created S3 buckets in the AWS environment to store files, sometime which are required to serve static content for a web application. Configured S3 Buckets with various life cycle policies to archive the infrequently accessed data to storage classes based on requirement.
- Create the AWS VPC network for the Installed Instances and configured the Security Groups and Elastic IPs accordingly. Used GZIP with AWS CloudFront to forward compressed files to destination node/instances for better and faster performance.
- **Section** Established **Chef** Best practices approaches to system deployment with tools with vagrant and managing **Chef Cookbook** as a unit of software deployment and independently version controlled.
- ❖ Developed **Chef Cookbooks, Recipes, Resources and Run lists**, managing the **Chef Client Nodes**, and upload the cookbooks to **Chef-Server** from Workstation.
- ❖ Implemented **Chef** recipes for deployment on build on internal Data Centre Servers. Also re-used and modified same Chef Recipes to create a **Deployment** directly into **Amazon EC2** instances.
- Set up Jenkins server and build jobs to provide continuous automated builds based on polling the Git source control system during the day and periodic scheduled builds overnight to support development needs using Jenkins, Gradle, Git, and Maven.
- Collaborated in the automation of AWS infrastructure via terraforming and Jenkins software and services configuration via chef cookbooks.
- Achieved continuous deployment using IBM uDeploy. Integrated uDeploy with nexus and Jenkins to achieve CD.
- ❖ Involved in editing the existing **ANT/Maven** files in case of errors or changes in the project requirements and integrated **Maven** with **Subversion** to manage and deploy project related tags.
- ❖ Implemented **Maven** builds to automate **JAR** and **WAR**. Used Agile methodology to develop a build and **Maven** as a build tool.
- Defined branching, labeling, and merge strategies for all applications in **Git.**
- Responsible for orchestrating **CI/CD** processes by responding to **Git** triggers, human input, and dependency chains and environment setup.
- Installation of monitoring tools such as Nagios, Splunk, Introscope and on boarding application onto portal and interfacing it other applications.
- Configuration and administration of DNS, Web, Mail, DHCP and FTP Servers. Managed users and groups on a large scale in NIS and LDAP environments.

Client: CGI, Raleigh, USA Role: Site Reliability Engineer **Duration: Feb 2016 - Jan 2017** 

## **Roles & Responsibilities:**

Expertise in **Build** and **Release** management using **GIT**, **Maven**, **Jenkins** administration. Created looper pipelines from the **GitHub** source code for creating Docker images.

- ❖ Used **Jenkins** as a **Continuous integration** tool to create new jobs, managing required plugins, configuring the jobs selecting required **Source code management** tool, **build trigger**, build system, and post build actions, notifying the build reports.
- Set up **Jenkins server** and build jobs to provide **Continuous Automated builds** based on polling the **Git** source control system during the day and periodically scheduled builds overnight to support development needs using Jenkins, Git, and Maven.
- Created utilities to monitor continuous delivery process (job failure rate, disk usage), coded changes in Git & job failures in Jenkins.
- Created reference implementations of Ant and Artifactory dependency system, and a Jenkins continuous build system.
- Installed and configured Nexus to publish artifacts for better versioning.
- Automated the **Build** Process using **Jenkins** and handled complete Build and Release process including code, documentation and supporting testing team along with the server Administration.
- ❖ Integrated **Jenkins** with **AWS** and Open Stack to automatically launch instances. Also, built, and managed Private clouds with **Open Stack**.
- Created and managed a **Docker** deployment pipeline for custom application images in the cloud using **Jenkins**.
- ❖ Implemented Continuous Delivery (CD) framework using **Jenkins**, **Maven**, **Docker**, **Bitbucket**, **Nexus** in Linux environment for **Micro services** in each environmental setup.
- Developed build scripts using Ant as the build tool for the creation of (WAR files) build artifacts.
- Used ANT to perform daily and weekly Software Builds.
- Performance tuning and management for **Linux** server and working with the application/database team to resolve issues.

Client Siri IT Innovations Pvt. Ltd, Hyderabad, India Role: Linux System Administrator

### **Roles & Responsibilities:**

- Migration of Red hat **Linux** servers from 4.x version and working with the application team to resolve the issues post migration.
- Monitoring CPU, memory, iSCSI disks, disk controllers, physical disk, **HW** and **SW RAID**, multipath, file systems, network using the tool **NAGIOS**.
- Configured Red-hat Linux 3.x & Solaris 8, 9 for production, staging and test environments and worked with backup team for the Legato backup & Restore, Legato client Installation in the Red hat Linux server.
- Developed scripts to be executed as checks by Nagios for execution in both Windows and Linux environments.
- Creating the file systems using **Red Hat volume manager** and performing the health check on regular basis for all **Linux** servers.
- Worked on UNIX, Red hat Linux ES3.0, Linux Desktop, SUSE Linux Enterprise Server 9.0, and AIX 5.2/5.1/4.3 and Ubuntu.
- ❖ Installed and configured **Kickstart**, **DHCP**, **DNS** (BIND, MS), **web** (Apache, IIS), **mail** (SMTP, IMAP, POP3), and file servers on Linux servers.
- ❖ Customized patching and maintenance of **Linux** servers on regular schedule.
- ❖ Wrote **UNIX** shell scripts to fetch, parse, and load data from external sources and used multithreading to improve performance in generating the reports in **Java**.

Client: Experian, Hyderabad, India Role: ASP .NET Developer **Duration: Jan 2015 - Aug 2015** 

**Duration: Sept 2015- Jan 2016** 

## **Roles & Responsibilities:**

Created new web services using <b>ASP.Net</b> with <b>C#</b> . Supported and modified the exiting web services as per user requirements.  Extensively worked on development, deployment and supporting the external <b>Web Services Wrapper</b> component to expose the <b>DOE</b> internal Web Services to real world.  Developed .NET library project using C# and provides middle layer components with HTTP Module and will be distributed to all DIIT developers via <b>MSI package</b> with full blown <b>MSDN style</b> help document using NDOC 1.3.  Managed the implementation of new enhancements including creation of custom objects, workflows, email alerts and templates and campaigns.