

# SAI TEJA RALLA

SR. CLOUD DEVOPS ENGINEER

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## PROFILE

A results-driven DevOps Engineer with 7+ Years of experience with a strong background in automating and streamlining software delivery processes. Skilled in implementing CI/CD pipelines, infrastructure as code, and configuration management. Experienced in working with different cloud platforms and familiar with containerization and container orchestration. Well-versed in monitoring and logging tools. A problem-solver with a strong ability to troubleshoot and debug issues. Strong understanding of security and compliance and ability to implement best practices.

## TECHNICAL SKILLS

Title	Tools Used
Cloud Environments	Microsoft Azure, Amazon Web Services
Configuration Management	Ansible, Ansible Tower, Chef, Puppet
Build Tools	ANT, Maven, Gradle
CI/CD Tools	Jenkins, Bamboo
Monitoring Tools	Splunk, Datadog, CloudWatch, Elastic Search, Log Stash, Kibana (ELK)
Container Tools	Docker, Kubernetes
Scripting/programming Languages	Python, Shell (PowerShell/Bash), YAML, JSON, Groovy, JavaScript, C
Version Control Tools	GIT, SVN. Subversion, Bit Bucket, Git Lab
Operating Systems	Windows, UNIX, RHEL, CentOS, Ubuntu, & SOLARIS
Databases	SQL Server, MYSQL, Oracle, NoSQL
Web/Application Servers	Apache Tomcat, WebLogic, Oracle Application Server
Virtualization Tools	Oracle Virtual Box, VMWare, vSphere

## CERTIFICATIONS



Certification	Certificate Link
Azure Administrator Service	<a href="#">VIEW-CERTIFICATE</a>
Azure DevOps Expert	<a href="#">VIEW-CERTIFICATE</a>
Terraform Associate	<a href="#">VIEW-CERTIFICATE</a>
Kubernetes Administrator	<a href="#">VIEW-CERTIFICATE</a>
AWS Solutions Architect	<a href="#">VIEW-CERTIFICATE</a>

## PROFESSIONAL SUMMARY

- Expert in Azure services like **Compute** (VM, Network, Storage blocks, Load balancer), **Caching**, **Azure SQL**, **NoSQL**, **Storage**, and **Network services**, **Active Directory (AD)**, **API Management**, **Scheduling**, **Azure Auto Scaling**, and **Power Shell Automation**.
- Configured **Azure Multi-Factor Authentication (MFA)** as a part of **Azure AD Premium** to securely authenticate users and worked on creating custom Azure templates for quick deployments and advanced PowerShell scripting. Deployed Azure SQL DB with GEO Replication, Azure SQL DB Sync to standby database in another region & fail over configuration.
- Expertise in maintaining **Azure Scalability** and **Azure Availability** and build VMs availability sets using the Azure portal to provide resiliency for IaaS based solution and Virtual Machine Scale Sets (VMSS) using **Azure Resource Manager (ARM)** to manage network traffic.
- Experience in migrating on-premises to **Azure site Recovery** replicating to **Azure Recovery Vault** and **Azure backups**, **Azure Fabric** and created **Domain Controller** in one of the **Virtual Machine** and added workloads to Domain Controller.
- Managed **Azure Container Registry** to store private **Docker images**, which are deployed through Azure pipelines in dev, test, and production environments. **Azure Monitor** to collect metrics and logs. Configured Monitor to track performance and maintain security, and used **Splunk** tool to collect metrics, queries.
- Strong understanding of Azure security best practices and experience implementing security measures such as **Azure Active Directory** and **Azure Security Center**.
- Strong understanding of AWS networking and security concepts, including **VPCs**, **Security Groups**, and **NACLs**, and experience in implementing these concepts for secure and compliant environments.
- Configured **AWS Multi Factor Authentication** in **IAM** to implement 2 step authentications of user's access using SAML Authentication and AWS Virtual MFA.
- Migrated existing **AWS infrastructure** to server-less architecture (**AWS Lambda**) deployed via **Terraform** and Implemented **AWS Lambda functions** to run scripts in response to **CloudWatch** events in the **Amazon Dynamo DB table** or **S3 bucket** to **HTTP** requests using **Amazon API gateway** and invoked the code using **API** calls made using **AWSSDKs**.
- Expertise in using **Terraform** key features such as **Infrastructure as a code** (IaC), Execution plans, Resource Graphs, Change Automation and wrote new plugins to support new functionality in Terraform. Experience writing **Terraform** templates to deploy infrastructure on a cloud with EC2, ELB, and SGs in JSON.
- Experience in converting existing **Terraform** modules that had version conflicts to utilize cloud formation during terraform deployments to enable more control or missing capabilities.
- Configured **Ansible** to manage **AWS environments** and automate the build process for core AMIs used by all application deployments including **Autoscaling**, and **CloudFormation** scripts.
- Experienced in using **Ansible** to manage Web Applications, Config Files, Data Base, Commands, Users Mount Points, and Packages and Used **ansible-galaxy** to create roles which can be reused multiple times across the organizations and calling these reusable roles using the 'requirement.yml' file in roles.
- Proficient in designing, implementing, and maintaining **Azure DevOps** pipelines for **continuous integration** and **continuous deployment**.
- Customized **Runbooks** in PowerShell and deployed using **CI/CD Azure DevOps to Automation Accounts**. Integrated **Application Registration service principal** as part of the Release pipelines in Azure DevOps as **service connections** for authentication to Azure and used app registrations for runbooks to deploy services with release pipelines.
- Administered **Jenkins** within the organization and Experience in creating nodes to fulfill resources. Researched and implemented code coverage and unit test plug-ins like find bugs, check style with **Maven/Jenkins**.
- Experience executing the **CI Jenkins** build job for both Android and iOS application builds. Using **GIT (Stash)** tool as the source code repositories for all projects and artifactory for all builds (ipa/apk) release repository.
- Used **Bamboo** as a harness tool or a framework to automate the process of building, testing, and deploying our application code to reduce errors, improve quality and speed up time-to-release at production grade where also incorporated **sonar scans** for code quality checks.
- Successfully implemented the end-to-end setup of **Artifactory Pro** as a secure Docker container, serving as a private Docker registry and local repository for storing built Docker images.
- Enforced best security practices to secure containerized environment using **Seccomp**, **SeLinux**, and security features such as **DevSecOps** lifecycle in **Kubernetes**.
- Worked on utilizing **Istio** to enhance security in **Azure Kubernetes Service** by enabling node-to-node encryption and intercepting all network communication between microservices.

- Played a pivot role in implementing **DevSecOps** model across the organization platform and implemented vulnerability checks such as **TFsec**, **Chekov** and Kubernetes configuration file such as **kube-bench** at different phases and experienced in **DevSecOps** strategy for security auditing continuous monitoring of the entire infrastructure.
- Hands-on experience in using **OpenShift** for container orchestration with Kubernetes, container storage, automation, to enhance container platform multi-tenancy. Experience working with the OpenShift Enterprise which allows developers to quickly develop, host and scale applications in a self-managed Kubernetes environment.
- Expertise in **Linux/UNIX** system builds, administration, Installations, Upgrades, Troubleshooting on different distributions such as **Ubuntu**, **CentOS**, **Red Hat**, **RHEL**.
- Strong understanding of Windows command line and PowerShell scripting, including system troubleshooting, performance optimization, and automation.
- In-depth understanding of the principles and best practices of **Software Configuration Management (SCM)** processes, which include compiling, packaging, deploying and Application configurations.

## PROFESSIONAL EXPERIENCE



### Sr. Azure Cloud DevOps Engineer RouteOne | Farmington Hills, MI

August 2021 - Present

- Created VMs and managed the virtual networks to connect all the servers and designed **ARM templates** for Azure platform. Also, on other hand configured Azure storage service for storing a large amount of unstructured object data such as text or binary data, that can be accessed from anywhere via **HTTP** or **HTTPS**.
- Improved data storage and retrieval performance by configuring and implementing three types of **blobs** (block blobs, page blobs, and append blobs) and files through the creation of storage accounts, setup of **Content Delivery Network (CDN)**, custom domain management, and oversight of access control and storage access key management.
- Designed and implemented **storage pool** with disk stripping for virtual machines in Azure, manage Azure infrastructure including Azure Web Roles, Worker Roles, Azure SQL, and Azure Active Directory licenses. Perform virtual machine backups and recoveries using both **Azure PowerShell** and the **Azure Portal** through a Recovery Services Vault.
- Worked with Azure monitoring tools and services, such as Azure Monitor, Azure Log Analytics, and Azure Alerts, to monitor the performance and health of Azure resources.
- Created and managed **Azure AD tenants (AAD Azure Active Directory)**, manage users and groups, and configure application integration with **Azure AD**. Integrate on-premises **Windows AD with Azure AD**, configure **multi-factor authentication (MFA)** and federated single sign-on (SSO).
- Implemented a cost-effective and highly available serverless solution using **Azure Functions**, HTTP and Blob Storage triggers, and bindings. Created custom APIs and integrated with other Azure services like Azure Logic Apps and Azure Service Bus for an efficient and scalable architecture.
- Automated Microsoft recommended **load balancing techniques** using PowerShell to reduce the workload of the DC holding the **Primary Domain Controller Emulator (PDCe) Flexible Single Master Operations (FSMO)** role and programmatically redistribute TDS connections across multiple Domain Controllers in the central Hub site, allowing for improved scalability in an already significantly large Active Directory environment.
- Implemented **Terraform Templates** automating Azure IAAS VM's with OMS monitoring agent using terraform module and deployed VM scale sets with autoscaling based on Azure Alert triggers in production environment.
- Designed and installed **Hashicorp** vault for secret management. Secrets required for running the application are retrieved from vault at a container's startup time and automatically renewed during the application's lifecycle.
- Created the **Azure Kubernetes Service** along with the whole ecosystem such as resource groups, virtual networks, storage accounts, etc., using Terraform and **Terragrunt** to reuse the same code to deploy for different environments.
- Seamlessly integrated and managed **Istio service mesh** within Azure Kubernetes clusters, enhancing observability, security, and control of containerized microservices, resulting in optimized inter-service communication, streamlined deployments, and significant improvements in overall application performance, scalability, and resilience.



- Installed, Configured, and managed **Ansible Centralized Server** and created playbooks to support various middleware application servers, and involved in configuring the Ansible tower as a configuration management tool to automate repetitive tasks.
- Developed and deployed virtual machines using **Ansible** for streamlined build and deployment automation. Successfully implemented a Java web application on Azure utilizing Azure CLI, leveraging App Service for seamless integration and enhanced application performance.
- Implemented **blue/green deployment** strategy in maintaining production ready clusters by leveraging **Docker** and **Azure Kubernetes Service (AKS)** for use, including configuration standards, implementing infrastructure with secure networking, and **CI/CD** pipelines. Used **Azure Kubernetes Service** to deploy a managed **Kubernetes** cluster in Azure.
- Designed and implemented highly scalable and reliable **CI/CD** pipelines for multiple mobile applications and **.NET API's** using **Azure DevOps**, resulting in a 30% reduction in release cycle time and a 40% improvement in deployment frequency.
- Utilized advanced knowledge of **Azure DevOps** and industry best practices to develop and maintain standardized documentation for pipeline configurations and release processes. Worked closely with QA teams to ensure that all documentation was compliant with regulatory requirements and provided timely and accurate reporting on system performance and quality.
- Implemented containerized based applications on Azure Kubernetes by using **Azure Kubernetes service (AKS)**, **Kubernetes Cluster**, which are responsible for cluster management, **Virtual Network** to deploy agent nodes, **Ingress API Gateway**, **MySQL Databases** and **Cosmo DB** for stateless storage of external data, and setup reverse **proxy Nginx** in the cluster.
- Developed and maintained **Azure Automation run books** using **Python** and **Graphical PowerShell** to automate the updating and path management of servers, resulting in a significant reduction in manual effort required to manage server configurations.
- Configured **Prometheus alerts** with **Dynatrace** integration for the **Kubernetes** cluster, enabling email notifications and webhook mechanisms to ensure timely and efficient monitoring of critical events and potential issues, enhancing overall system reliability.
- Created **docker-compose.yaml** file templates to deploy images in **docker** containers managed by **Docker Swarm**. Also created custom **docker** images and stored **docker** images in private **docker** repositories like **nexus** and **J-Frog artifactory**.
- Implemented **Nexus** within an **Azure** environment for build management and integrated **Nexus** with **Azure DevOps** for seamless build and release processes, and proficiency in utilizing **Nexus** to manage artifacts and dependencies for various projects within an **Azure** environment.
- Worked with **Azure PowerShell** to manage and automate **Azure** resources, such as creating and configuring virtual machines, storage accounts, and network interfaces.
- Designed and implemented a complex **Dynatrace** deep diagnostics solutions across multiple platforms and environments while meeting **SLA** and **SLO**. Successfully deployed **Dynatrace** to five data centers in three countries encompassing five environments, each environment having multiple collectors.



## Azure Infrastructure Engineer DTE Energy | Detroit, MI

September 2019 – July 2021

- Designed and implemented **Azure ExpressRoute** with redundancy and failover capabilities to ensure high availability and resiliency of private connections. Collaborated with cross-functional teams to troubleshoot and resolve connectivity issues, resulting in improved network performance and customer satisfaction.
- Migrated **SQL** Server databases to **SQL Azure Database** using **SQL Azure Migration Wizard** and used **Python API** to upload agent logs into **Azure blob storage**.
- Configured **Azure Encryption** for **Azure Storage** and **Virtual Machines**, as well as **Azure Key Vault** services, ensuring the highest level of data protection and security for cloud applications, resulting in enhanced compliance, reduced risk of data breaches, and increased trust among stakeholders.
- Implemented backup and monitor storage solutions in accordance with the **High Availability** and **Disaster Recovery** requirements of the enterprise Hosting environment. Also created and managed **Azure AD** tenants, and configured application integration with **Azure AD**.

- Implemented Azure services, including **PaaS** and **IaaS**, like deploying and configuring virtual machines, storage accounts (including blob storage), and SQL Azure databases. Skilled in virtualization technologies and familiar with best practices for deployment and configuration management.
- Implemented and managed **Azure Privileged Identity Management (PIM)** to enhance security by providing **just-in-time access** for critical resources, effectively reducing the organization's attack surface, and streamlining access control processes, resulting in improved security posture and compliance.
- Managed App Registration in **Azure Active Directory**, facilitating the integration of applications with Azure AD for secure identity and access management, enabling seamless **Single Sign-On (SSO)** experiences, and contributing to improved application security and end-user satisfaction.
- Implemented and managed **Azure Service Principals** to provide secure, programmatic access to Azure resources for applications and automation tools, enhancing security and streamlining access control while improving overall resource management efficiency and maintaining a robust security posture.
- Implemented build and release pipelines using Azure DevOps to deploy microservices on AKS clusters. Incorporated **DevSecOps** best practices and integrated **Aqua scan** to scan container images for vulnerabilities, resulting in an enhanced security posture of the microservices ecosystem. Proactively established and managed pipelines to ensure continuous integration and delivery of microservices in a timely and efficient manner.
- Provisioned Production environment using Terraform with **Terragrunt** as a wrapper. Widely used **Terragrunt** for deploying the changes to the specific instance and provisioning Sentinel policies with Terraform which are executed as part of provisioning pipeline.
- Automated configuration management and deployments using **Ansible playbooks** and **YAML** for resource declaration and created roles and updating playbooks to fulfill application dependencies installation on VM. Implemented **Ansible Tower** for centralized management of Ansible playbook runs, including scheduling, logging, and reporting, resulting in improved efficiency, and streamlined workflows.
- Collaborated with QA teams to develop and execute comprehensive test plans, resulting in a 50% reduction in bugs and a 70% increase in customer satisfaction. Utilized advanced knowledge of **Azure DevOps** to optimize testing and development workflows and ensure that all releases were properly tested and verified before deployment.
- Implemented and designed efficient CI/CD pipelines using Azure DevOps, GIT, Maven for cloud and on-premises environments, as well as for mobile applications. These pipelines streamlined the release process and significantly reduced release times by 50%.
- Implemented a Continuous Delivery process for building and publishing Docker Images into a private **Nexus v3** repository. Developed automated deployment pipelines utilizing Jenkins to deploy Docker Images onto Kubernetes clusters, enabling efficient and automated deployment processes. Implemented versioning and tagging strategy for Docker Images in the Nexus repository, ensuring easy tracking and management of different image versions.
- Managed **Kubernetes** charts using Helm. Created reproducible builds of the **Kubernetes** applications, templated Kubernetes manifests, provide a set of configuration parameters to customize the deployment and Managed releases of Helm packages.
- Implemented **Istio** service mesh for microservices-based application on **AKS** with secure communication using mutual TLS authentication, and policies for traffic management, load balancing, and fault tolerance. Integrated Istio with CI/CD pipeline for seamless deployment and management, resulting in improved reliability and resiliency of services with better performance and security.
- Implemented and managed highly available Azure Kubernetes clusters with **HA-Proxy** load balancing, ensuring seamless traffic distribution, fault tolerance, and optimized performance for containerized applications, leading to increased application reliability, improved scalability, and a resilient infrastructure in the face of high-demand scenarios.
- Implemented centralized logging for a Kubernetes cluster by sending all logs (container logs, application logs, event logs, activity logs, and diagnostic logs) to **Azure Event Hubs** and forwarding them to **Splunk** for monitoring.
- Successfully led the deployment of mobile applications and APIs to **Kubernetes** environments, leveraging industry best practices and troubleshooting techniques to ensure seamless and **error-free deployments**.



- Successfully designed and implemented complex YAML-based pipeline configurations for build and release processes, resulting in a 70% reduction in build failures and a 50% increase in deployment frequency.
- Monitored and tracked **SPLUNK** performance problems, administrations, and open tickets with **SPLUNK**. Maintained Splunk dashboards and associated charts, graphs, and drilldowns to enable managers, administrators, users, and analysts to maximize the utility of the Splunk platform and applications.
- Developed scripts with **Windows PowerShell** to automatically configure network settings and VM kernel ports for **ESXi** servers including multipathing policy, storage LUNs and MTU size for both the switch and the VM-kernel port, making the attachment of server profiles optional for non-clustered VM-hosts.
- Scheduled Cron jobs, Systems backup, and **Linux OS** installation by Setting up Kickstart File, Attach OS revision disk, deploy kickstart, Request IP address, register with satellite server, Install **VM Tools** and assign new network adapter **RHEL 6/7** using the **VCenter** and **NUTANIX**.



## Cloud DevOps Engineer

Service Titan | Glendale, CA

June 2018 – September 2019

- Configured VMs in availability sets using **ARM templates** to provide resiliency for **IAAS** based solution and scale sets using Azure Resource Manager to manage network traffic.
- Worked on **Azure Active Directory** and **IAM** to manage users and groups privileges also user account management (SSO/SAML) and multifactor authentication.
- Configured **Azure Traffic Manager** to build routing for user traffic Infrastructure Migrations to migrate all legacy services to a fully Virtualized Infrastructure via lift & shift.
- Utilized **Amazon Route53** to manage DNS zones for end users to internet applications. Experience with **Ansible playbooks** to automate the entire deployment process as well as the infrastructure.
- Responsible for designing and configuring Network Subnets, Routing, Association of Network ACLs to Subnets, DHCP option sets, White-listing IP addresses to specific ports in Security group and management of Peering network Connections across Virtual Private Clouds in Amazon.
- Worked on templating (AMI), creating Elastic Block Storage (EBS) snapshots to ensure backups and promote reusability. Assigned Storage classes to S3 based on Object Lifecycle to reduce storage consumption cost.
- Designed roles and groups using AWS **Identity and Access Management (IAM)**, and managed network using Security Groups, Network Access Control Lists with services provided by IAM. Document system configurations, Instances, Operating Systems.
- Written some templates for AWS infrastructure as a code using **Terraform** to build staging and production environments and automated infrastructure provisioning occasionally with **Terraform** and Packer and even automated the image build process using Packer.
- Maintained **Terraform state files** to ensure the preservation of infrastructure states and prevent conflicts. Designed and implemented highly scalable, available, and maintainable state management strategies for Terraform, allowing for efficient management and scaling of infrastructure.
- Managed **AWS CloudFormation** drift detection and rollback features, ensuring infrastructure consistency, timely identification of unauthorized changes, and automatic reversion to the desired state, resulting in a robust, secure, and compliant cloud environment with minimized risks and enhanced operational stability.
- Configured ServiceNow to integrate with AWS to Create Resource Profiles, configure governance, Populate the **Cloud Service Catalog** using blueprints & Hands-on experience with trouble shooting several issues of ServiceNow integration with Cloud Management
- Experienced in branching, tagging, and maintaining the version across environments using SCM tool **GitLab**, on Linux and windows platforms.
- Implemented CI/CD pipeline for configuration management system and application development leveraging Chef, Jenkins. Extensively worked on **Continuous Integration (CI)** and **Continuous Deployment (CD)** process by automating build on timely basis using Jenkins.
- Involved in setting up **Jenkins Master** and multiple slaves as a CI tool as part of Continuous development and Continuous Deployment (CD) process. Integrated Nexus with Jenkins to store artifacts like jar, war and ear files.
- Worked closely with the development and operations organizations to implement the necessary tools and processes to support the automation of builds, deployments, testing and infrastructure (Infrastructure as code) using **Chef**.

- Implemented **Docker Swarm** to deploy load balance, scale and manage docker containers with multiple **Namespace** versions and integrated Cluster Management with **Docker Engine** using **Docker Swarm**.
- Responsible for installation & configuration of Jenkins to support various Java builds and Jenkins plugins to automate continuous builds and publishing Docker images to the **Nexus** repository.
- Implemented **Docker-maven-plugin** in maven pom to build docker images for all microservices and later used Docker file to build the docker images from the java jar files.
- Managed **Kubernetes** deployments objects for high availability and scalability using horizontal pod scaler and resources management.
- Worked with objects and components in Kubernetes like **Istio-system**, **ingress controller**, **kube-system** and deploying pods in selected nodes without any downtime for Dev and Prod Kubernetes clusters.
- Implemented a robust monitoring framework for Kubernetes clusters by harnessing the power of **Prometheus metrics** and **Grafana** visualizations, delivering instantaneous performance insights and enabling the team to swiftly identify and resolve issues for enhanced system stability.
- Written the **Python** script for **Prometheus Alert-manager** alerts to send and run the alerts in Linux VM



## AWS Cloud Engineer HTC | Hyderabad, India

October 2016 – May 2018

- Worked on **Migration Strategy** and developed a POC migrating VMware/On-premises datacenter to AWS utilizing AWS EC2, S3, RDS, VPC and Direct Connect.
- Included security groups, network ACLs, Internet Gateways, and Elastic IPs to ensure a safe area for organization in AWS public cloud.
- Used **Simple storage services** (S3) for snapshot and Configured S3 lifecycle of Applications logs, including deleting old logs, archiving logs based on retention policy of Apps.
- Created **AWS Multi-Factor Authentication** (MA) for instance RDP/SSH logon, worked with teams to lockdown security groups.
- Created Docker images from **Centos Linux** as per requirement of the product/service and storing those Docker images to the ECR or Nexus Repository.
- Integrated **Bamboo** and **Maven** for builds for the automation of tasks for CI/CD process and performed integration of security tools with Bamboo for continuous inspection of code quality for Maven.
- Reduced the time to on-board new developers by writing a Sinatra app to automate all common new-developer tasks such as setting up their desktops, virtual machines, GIT accounts, and development environment.
- Executed **Puppet manifests** and **Ruby scripting** to automate **WebSphere** deployment and configuration, including new clustered applications, JDBC provider setup, and JAAS J2C authentication.
- Developed and deployed an advanced monitoring strategy for observing AWS load balancer health checks, incorporating data into **Grafana dashboards** for seamless real-time visualization, thereby enhancing system supervision and enabling prompt issue identification and remediation to ensure peak application performance.



## Python Developer Bank of Baroda | Hyderabad, India

February 2016 – October 2016

- Created or identified **state-of-the-art** computational mechanics algorithms that extend modeling capabilities, implemented software suitable for high-performance computers, and document their verification.
- Automated data movements using **Python scripts**. Involved in splitting, validating, and processing of files.
- Experienced in working with complicated List comprehensions, generators, lambda functions and various built-in functions like map, filter.
- Sole engineer responsible for automated test design, front end and backend feature implementation, and any other improvements to the test automation framework.
- Designed and maintained databases using Python and developed Python based API (RESTful Web Service) using **Flask**, **SQL**, **Alchemy**, and **PostgreSQL**.