# VENKATA PINNAMARAJU

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## Azure Cloud Architect & DevOps Engineer

### EXECUTIVE SNAPSHOT

- An innovative professional with 14+ years of IT experience, including over 7years' focus on **Azure Cloud Architectures, Designs and DevOps Engineering**
- Skilled in working on **Cloud platforms, DevOps, Configuration Management, Infrastructure automation, Continuous Integration, and Delivery (CI/CD)**
- **Design and Implementation**:
  - Skilled at designing and implementing highly scalable and resilient solutions in the Azure Cloud, leveraging a diverse array of Azure services and cutting-edge technologies.
  - Skilled in **Configuration Management, Change/Release/Build Management, Support, and Maintenance under Unix/Linux Platforms (REDHAT and CENTOS).**
  - Demonstrated expertise in architecting and deploying **Azure IaaS and PaaS services, encompassing Azure Virtual Machines, Virtual Networks (VNET), Network Services, Azure DevOps, Azure App Service, Logic App, Function App, SQL, Cosmos DB, Storage solutions, Azure Active Directory, Monitoring tools, Auto scaling mechanisms, Power Shell Automation, Azure Update Management and Automation, DNS, and VPN configurations**.
  - Leveraged the power of Power Shell scripting to streamline patching, imaging, and deployments within the Azure environment, ensuring efficient operations and rapid deployment cycles.
- **Azure Administration**:
  - Demonstrated a wealth of experience in **Azure IaaS, skilfully navigating Virtual Machines (VMs), VM Scale Sets, Load Balancers, Traffic Managers, Virtual Networks, SQL deployments, Resource Groups, and Cloud Services.**
  - Proficiency in **Azure Backup implementation**, **Azure Policies enforcement, Azure Key Vault integration,** and effective resource tagging, enabling streamlined administration and enhanced security.
- **Azure Migrate Services**:
  - Led the migration of on-premises applications to Azure, ensuring a seamless transition to the cloud environment.
  - Configured **Virtual Networks (VNETs)** and subnets in alignment with project requirements, establishing a secure and scalable infrastructure.
  - Developed **Power Shell and Python scripting** to automate crucial processes such as patching, imaging, and deployments within the Azure environment. These scripts streamlined operations, improved efficiency, and reduced manual effort.
  - Utilized **Azure migrate services**, including **Azure Site Recovery (ASR)** and **Azure backups**, to facilitate the migration of on-premises resources to Azure. This involved ensuring data integrity, replication, and backup strategies, allowing for reliable and efficient resource migration
- **Containerization and Azure Services Offering**:
  - Insightful understanding of implementing Azure services to perfection, including **Azure Cloud Services, Azure Storage solutions**, **Azure Active Directory (AD)** integration, **Azure Blob Storage**, Azure Virtual Machines (VMs), SQL Databases, Azure Functions, Azure App Service, Azure Monitor, Data Factory, Data Bricks and Azure Service Bus, **Databases like Azure SQL, Cosmos DB, ARM Templates, Azure DevOps, Azure Storages like Data lake, Blob storage, File share, Azure Active Directory, Azure B2B and B2C, Azure Key Vault, Azure Security & Monitoring Solutions, Service Bus, Azure App Insights, Azure Monitor, Azure Sentinel, etc.**
  - Leveraged the capabilities of **Azure Resource Manager (ARM) templates** to orchestrate smooth deployments, updates, and comprehensive resource management in Azure.

- Employed **Azure Site Recovery (ASR**) and Azure Backups to ensure seamless migration and robust backup strategies for on-premises resources transitioning to Azure.
- Experienced in defining the structure of **Helm charts**, establishing a repository strategy, and identifying integration points with other **Azure services.** This includes ensuring proper networking, security, and scaling configurations to support Helm deployments.
- Skilled in integrating **Helm with Azure DevOps** to establish end-to-end **continuous integration and continuous deployment (CI/CD) pipelines** enabling streamlined deployment of applications and efficient management of environment-specific configurations.
- Utilized my expertise in writing Docker files, build and push Docker images to **Azure Container Registry (ACR)** repositories. Additionally, possess experience of deploying **Helm charts on Azure Kubernetes Service (AKS) clusters**, ensuring smooth deployment and management of containerized applications.
- Designed the overall **architecture of ISTIO service mesh deployments** entailing installing service mesh components in Kubernetes clusters, including control plane components such as the service mesh control plane and data plane proxies.
- Implemented security features provided by the service mesh, such as **mutual TLS (mTLS) authentication**, access control policies, and encryption of data in transit.
- Expertise in leveraging **Azure API Management (APIM) and APIGEE** platforms to securely host APIs. By utilizing these **robust API management solutions**, ensured that APIs are protected, authenticated, and accessible to authorized users, promoting secure and seamless integration with various systems.
- Evaluate and implement the need for **service endpoints** and **private endpoints** based on security and performance considerations.

- **Automation and Scripting**:
  - Involved in the development of Shell and Power Shell scripts, empowering automated execution of administrative tasks and streamlining the build and release processes.
  - Demonstrated a comprehensive understanding of scripting languages, including **Bash/Shell, Power Shell, JSON, YAML** ensuring the creation of powerful and versatile automation solutions.
- **Monitoring and Alerting**:
  - Configured and fine-tuned advanced monitoring and alerting tools like **Prometheus** and **Grafana**, enabling proactive monitoring, performance optimization, and efficient management of Azure resources.
  - Implement **ELK (Elasticsearch, Logstash, Kibana)**, and **Splunk** for log collection, aggregation, and analysis. Configure Logstash or Splunk forwarders to collect logs from Azure resources and applications. Create queries, filters, and visualizations in **Kibana** or **Splunk log analysis** and troubleshooting.
  - Integrate **Prometheus, Grafana, ELK,** or **Splunk** with CI/CD pipelines to enable continuous monitoring and log analysis throughout the software development lifecycle. Collect and visualize metrics and logs during the build, test, and deployment stages.
  - Created and deployed multiple customized dashboards within **Kubernetes** environments, fostering comprehensive visibility and real-time insights into individual application performance.
  - Collect logs, metrics using **Azure Monitor** &**Application Insight** for performance monitoring and troubleshooting.
- **CI/CD and DevOps**:
  - Displayed proficiency in the implementation and fine-tuning of CI/CD tools such as **Bamboo, Azure DevOps, Bitbucket, and Sonar code** scan validations, facilitating streamlined software development, testing, and deployment cycles.
  - Successfully orchestrated the deployment of micro services and application upgrades utilizing **Azure Kubernetes Service (AKS), Container Registry, Cosmos DB, Grafana, Jenkins, Azure Pipelines** harnessing the power of containerization and efficient workload management.
- **Configuration Management**:

- Implementation with advanced configuration management tools like **Ansible, Azure Update Management with Azure Automate** enabling efficient management, orchestration, and automation of Azure resources, ensuring consistency and scalability.
- Utilize Azure services like **Azure Policy, Azure Blueprints, Azure Resource Graph, and Azure Monitor** to enforce governance controls, track resource inventory, monitor compliance, and gain insights into resource usage, cost, and security. Conduct training sessions and workshops to educate teams on Azure governance and cost optimization best practices.

## TECHNICAL SKILLS

**PAAS:** Azure App Service, Azure Functions, Web Jobs, Azure Batch, Azure App Logic, Azure Container Services, Azure Kubernetes Services, etc
**IAAS:** Virtual Machines, Virtual Machine scale set, Azure Bastion Host, Jump Server, Virtual Network Peering, Virtual Private Network, Express Route, Availability Sets, Availability Zones, Virtual Networks, Regions, Traffic Manager, Application Security, Front Door, Load Balancer, Network Security Group, Application Security Groups, Service Bus, Service and Private Endpoints, etc.
Azure Storage Account, Blob, Containers, Queue, Table. Access Keys, Shared Access Signatures.
**Identity:** Azure Active Directory, Managed Identity, System Principal, AD B2C, OAuth, RBAC, Azure Access Policies
**Methodology:** Waterfall, Agile Methodology
**Security:** Azure Key Vault, Azure Firewall, Azure Security Centre, Azure DDOS Protection, Azure Health Service, Azure Network Monitor, Azure Sentinel, etc.
**Infrastructure As Code (IAC):** ARM Template, BICEP, Terraform, Blueprints
**Application/Web Servers:** Apache Tomcat, NGINX, IIS, JBoss4.1, WebSphere, Web Logic
**Configuration Management Tool**: Ansible, Puppet, Chef, Salt Lake, PowerShell DSC
**Containerization Tool:** Docker, Kubernetes, AKS, ACI, ACS
**Database:** Azure SQL Managed Instance, Azure SQL, Azure Data Lake, Cosmos DB, etc**.**
**DevOps:** GitHub, Jenkins, Azure DevOps, YAML, CICD Pipelines, Blue Green Deployment, Canary Deployment, Deployment slots, SonarQube, ESlint, Cobertura, dotCover, coverage.py
**Programming Languages:** Python, PowerShell, Bash/Shell, JavaScript, Perl, .Net, Java.
**IDE:** Visual Studio Code, Visual Studio
**Logging and Monitoring:** Azure Monitor, App Insights, Azure log analytics, and 3rd party like Nagios, Splunk, ELK, Data Dog, Dynatrace, Prometheus, Grafana, App Dynamics
**Operating System:** Windows, Linux
**Tools:** JIRA, Azure Boards

## PROFESSIONAL EXPERIENCE

**Sr. Azure Architect & DevOps Engineer** **Jan' 23 -Present**
**UBS, London**

### Responsibilities

- Designed and implemented Azure solutions across various cloud models, including Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).
- Led and executed multiple application and database migrations to the cloud, ensuring smooth transition and optimized performance.
- Integrated on-premises, hybrid cloud, and on-demand workloads with the Azure public cloud, ensuring seamless functionality.
- Designed and Provisioned Azure resources like **Azure Machines**, **Web Apps, Function App, SQL Databases, Azure Kubernetes, Azure Container instances, Azure Container Registry** using **ARM Templates, BICEP** and **Terraform** using **Azure DevOps CICD pipelines**.

- Utilized **Azure App Service& Service Bus** instances to build a reliable and scalable microservices architecture.
- Integrated various Azure technologies, such as **Azure Cosmos DB, Azure App Insights, Azure Blob Storage, Azure API Management, and Azure Functions,** to create a modern web application with micro services.
- Worked with **Micro services architecture** for continuous delivery environments, utilizing Azure and Docker
- Implemented high availability through **Azure Classic and Azure Resource Manager** deployment models.
- Deployed .NET Core micro services in **Azure App Service instances,** managing application lifecycle, versioning, and rolling upgrades within the Azure App Service cluster.
- Configured **Azure App Insights** for application monitoring, logging, and diagnostics, utilizing it to identify performance bottlenecks, track exceptions, and analyze application telemetry data.
- Configured **Azure DevOps pipelines** to build, package, and publish **Helm charts** to repositories, ensuring streamlined deployment processes.
- Implemented validation, linting, and testing of Helm charts as part of the continuous integration (CI) process.
- Designed and implemented scalable and globally distributed databases for micro services using **Azure Cosmos DB**, defining data models and implementing efficient data access patterns.
- Installed **ISTIO service mesh components** within Kubernetes clusters to enable traffic management, security, and observability.
- Implemented solutions in **Azure App Service** that could handle high traffic loads and dynamically scale based on demand.
- Setup observability and monitoring tools within the service mesh, such as **Prometheus and Grafana**, for comprehensive insights into service behavior and performance.
- Implemented security measures for micro services, including authentication, authorization, and data protection, leveraging **Azure Active Directory** for identity and access management.
- Implemented automated testing and code quality checks to ensure the reliability and maintainability of the solution.
- Build service endpoints and private endpoints for securing and optimizing communication between Azure services and virtual networks.
- Integrated Docker container orchestration framework using **Kubernetes**, creating and managing pods, Config Maps, deployments, and other related resources. Automated **Kubernetes cluster management** using **Ansible playbooks.**
- Investigated and resolved issues related to .NET Core micro services, Angular websites, and the Azure infrastructure, implementing appropriate fixes and optimizations for smooth operation.
- Utilized Azure Kubernetes Service, Application Insights, and Log Analytics for effective monitoring and performance analysis.
- Implemented **Azure Site Recovery and Azure Backup,** deploying instances and migrating data centers to Azure using Azure Site Recovery for reliable disaster recovery and data protection.
- Deployed Kubernetes clusters on cloud and on-premises environments, leveraging YAML files to configure services, pods, deployments, auto-scaling, load balancers, and health checks.
- Established Azure ExpressRoute connections for single and multi-subscription connectivity between Azure and on-premises data centers, ensuring secure and reliable communication.
- Developed Azure Logic Apps to meet specific business requirements and implemented custom connectors.
- Built serverless Azure Functions triggered by HTTP requests and events, utilizing Python, Power Shell, and C#.
- Designed and developed RESTful APIs and micro services using Python frameworks like Flask or FastAPI. Secured and exposed APIs using A**zure API Management** and **APIGEE** for authentication, rate limiting, and monitoring purposes.

- Proficiently utilized **JIRA as a Project Management Tool** and defect tracking system, configuring workflows, customizations, and plug-ins.
- Integrated Jenkins with **JIRA, GitHub, and MAVEN** for streamlined software development processes.
- Collaborated with cross-functional teams, including developers, architects, and stakeholders, to ensure effective communication and knowledge sharing.

**Azure Cloud Architect & DevOps Engineer** **Aug' 22 – Jan' 23**
**MoneyBox, London**

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**Responsibilities**

- Utilized Azure **DevOps/VSTS principles** and processes for version control, build, release management, and deployments.
- Designed and built highly scalable and available **Azure solutions** for on-premises applications and databases across multiple projects, ensuring robust performance and reliability.
- Provisioned servers/instances and other resources using infrastructure-as-code principles with **Terraform**, **BICEP** through Azure CICD pipelines
- Developed capacity and architecture plans for Multiple systems, applications and databases etc.
- ting **IAAS VMs and PAAS** role instances to the Azure Cloud environment, resulting in improved performance and resource utilization.
- Leveraged Python scripting and **Azure SDKs** to automate the provisioning and configuration of Azure resources, streamlining the deployment process.
- Utilized ARM Templates for infrastructure-as-code deployments.
- Implemented **Jenkins** Workflow and Plugins to enable repeatable deployments of multi-tier applications, artifacts, and services to Docker containers, enhancing scalability and maintainability.
- Employed Maven for building Java-based web applications and integrated it with Nexus repository for artifact management, facilitating efficient code management and version control.
- Configured Azure **Multi-Factor Authentication (MFA)** for secure user authentication and developed custom Azure templates for rapid deployments. Successfully deployed **Azure SQL DB** with Sync and failover configurations.
- Leveraged toolsets such as Visual Studio, AKS (Azure Kubernetes Service), Application Insights, and Log Analytics.
- Orchestrated Docker containers with **Kubernetes**, managing pods, deployments, auto-scaling, and load balancing, enhancing containerized application deployment and scalability.
- Implemented Azure Role-based Access Control (RBAC) to establish team-based access management and segregation of duties, ensuring secure and controlled access to Azure resources.
- Developed **Azure Infrastructure as Code templates using Terraform**, integrating Azure Log Analytics for effective monitoring and metrics tracking and Created Terraform templates for provisioning **virtual networks, subnets, VM Scale sets, load balancers, and NAT rules.**
- Configured Azure Active Directory for single sign-on access to cloud SaaS applications, implementing various Azure components such as Web apps/Function apps, **V-net integration, HCM, Application Gateway, App Insights, Active Directory, Azure Key Vault, Encryption, and Security**.
- Utilized **Azure DevOps/VSTS** for version control, build and release management, and deployments across development, QA, and production environments, ensuring streamlined and reliable software delivery.
- Used terraform graph to visualize execution plans and ensure smooth deployments.
- Implemented and optimized **.Net, Java, and Python web applications** in **Azure DevOps CI/CD pipelines**, utilizing Repos for code commit, Test Plans for unit testing, App Service for deployment, and Azure Application Insight for performance monitoring and usage data collection.
- Built monitoring and alerting systems using **ELK (Elasticsearch, Logstash, Kibana),** configuring log collection from Azure resources, applications, and systems.

- Created YAML files for various services like pods, deployments, auto-scaling, load balancers, labels, and health checks.
- Automated Windows patching using **Power Shell scripts** and created release pipelines in Azure DevOps, ensuring timely and secure updates for system maintenance.
- Designed and implemented an **Azure DevOps Pipeline** to efficiently manage resources across multiple Azure subscriptions, ensuring seamless deployments and continuous integration.
- Demonstrated expertise in serverless services, configuring **HTTP Triggers** in Azure Functions and integrating application insights for effective monitoring and load testing using Azure DevOps Services.
- Worked on Azure Automate for cloud-based process automation, update management, and configuration management, improving operational efficiency.
- **Configured BGP routes** to establish Express Route connections between on-premises data centers and Azure cloud, ensuring secure and reliable connectivity.
- Managed code in a private repository, ensuring constant updates and version control.
- Configured BGP routes to establish Express Route connections between on-premises data centers and Azure cloud.
- Wrote **Playbooks using YAML** scripting to automate **Ansible** servers.
- Developed **GIT hooks** for local repositories, code commit, code push functionality, and GitHub integration. Ensured efficient repository management and code collaboration.

**Azure Cloud Administrator & DevOps Engineer** **Feb'19 – Jul' 22**
**RHB Bank, Infinite Computer Solutions, Malaysia**

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**Responsibilities**

- Utilized ARM templates (JSON) to create Azure services while ensuring the existing infrastructure remains unchanged.
- Worked on Installation of **VMware ESX** and creating **Virtual Machines** from scratch and from templates and assisted in troubleshooting applications for Load balancing.
- Managing systems routine backup, scheduling jobs like disabling and enabling **Cron jobs**, enabling system logging, network logging of servers for maintenance, performance tuning, testing.
- Implemented Azure services including **Azure Active Directory (AD), Azure storage, Azure cloud services, IIS, Azure Resource Manager (ARM), Azure Blob Storage, Azure VM, SQL Database, Azure Functions, Azure App Service, and Azure Service Bus**.
- Utilize automation tools such as **Terraform**, **Ansible**, etc.
- Implemented CI/CD pipelines with Azure **DevOps**, **Power Shell** scripting, and automation techniques.
- Designed and automated Azure Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) capabilities, such as virtual machines, container services, virtual networks, and cloud services.
- Utilized **Azure Resource Manager (ARM)** for deploying, updating, and deleting multiple Azure resources, and performed on-premises resource migration to Azure using Azure site recovery (ASR) and Azure backups.
- Utilized Azure DevOps services (Azure Repos, Azure Boards, and Azure Test Plans) for code development, collaboration, and application deployment.
- Developed and maintained various Azure DevOps-related tools, including deployment tools, staged virtual environments, and provisioning scripts.
- Used Terraform and Packer to create custom machine images and Ansible for software dependency installation in the provisioned infrastructure.
- Developed and maintained Continuous Integration (CI) pipelines in Azure DevOps, allowing safe code deployment
- Utilized version control tools such as **GIT** and **Bitbucket**, demonstrating comprehensive knowledge of source control concepts.

- Developed build and deploy scripts using **MAVEN** and **Jenkins** for multiple applications across environments.
- Leveraged **Azure Monitoring tools like Azure Log Analytics, Azure Network Watcher,** and **Azure Service Health** for diagnosing and minimizing service degradation.
- Configured monitoring tools like Azure monitoring and Dynatrace to set up desired alerts and prevent disruptions.
- Created **ARM templates** using **Power Shell** for deploying Azure resources and implemented continuous integration using **VSTS** (Azure DevOps).
- Deployed **Azure IaaS virtual machines** (VMs) and Cloud services (PaaS role instances) into secure VNets and subnets using **Power Shell**.

**Azure DevOps Engineer** **Jan' 17 – Feb' 19**
**Capgemini Services, Malaysia**

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**Responsibilities**

- Implemented the **Azure Cloud Adoption Framework**, ensured effective adoption and migration to Azure
- Prepared Azure support teams for legacy and modernized application and service deployments
- Maintained cloud infrastructure and implemented CI/CD pipelines for continuous integration and delivery and integrated **Ansible** with **Jenkins**, leveraging **YAML** scripting for automation and continuous integration
- Implemented CI/CD pipelines with **DevOps, Power Shell scripting, and automation** for consistent and periodic deployments
- Configured Azure Express Route to establish private connections between Azure data centers and on-premises infrastructure
- Migrated services from on-premises to **Azure using Azure Portal and Power Shell scripts, managing Azure Security groups and linking them to VMs and subnets.**
- Worked with tools such as **Azure Data Migration Service, Azure Database Migration Service, Azure Data** Factory, or third-party solutions to ensure secure and seamless data migration with minimal downtime
- Worked with various Azure services such as **Compute, Caching, SQL Azure, NoSQL, Storage and Network Services, Azure Active Directory, Azure Monitoring, Scheduling, Auto scaling, Azure Identity & Access Management, Data Factory, Power Shell Automation, and others**.
- Deployed Azure Virtual Networks and **Azure Application Gateway**, establishing communication with on-premises networks via Azure VPN Gateways.
- Enabled seamless integration and collaboration between Azure applications and external systems through the utilization of **Azure integration services and APIs.**
- Utilized **Azure CLI, Azure Active Directory, Azure Virtual Network, Azure Storage,** and **Azure Database** for deployment
- Administration like configuring availability sets, **virtual machine scale set (VMSS)** with **load balancers, Virtual networks, network security group (NSG).**
- Developed **MAVEN, Jenkins, and Nexus scripts** to facilitate the smooth build and deployment of Java-based web applications.
- Configured and managed **Ansible** for web application management, environment configuration, and server orchestration.
- Utilized **JIRA Agile** for project management and **Scrum/Kanban boards** for agile development.

**Change/Release Management** **Mar' 15 – Dec' 16**
**IT SVIT, India**

### Responsibilities

- Experience within an organization to take charge of change management initiatives and guiding their implementation
- To design and execute strategies to facilitate employee adoption of workplace changes, such as overseeing the smooth transition to a new project
- Worked with Agile and Scrum methodologies to accomplish project milestones and meet demanding timelines.
- Determined quality assurance benchmarks and outlined testing and acceptance strategies.
- Provided advice to change management team on correct procedures and responses.
- Collaborated with staff to formulate budgets and improve department revenue.
- Developed team communications and information for meetings.
- Developed excellent working knowledge of industry trends and improvements in processes.
- Created plans and communicated deadlines to complete projects on time.
- Provided update to weekly meeting stakeholders and updating on the progress and issues.

**Software Consultant** **May' 09 – Feb' 15**
**Tech Mahindra, India**

### Responsibilities

- Involved in the planning, monitoring and control of the testing activities and tasks.
- Involved in testing Digital banking transactions
- Collaboration with the other stakeholders, devise the test objectives, organizational test policies, test strategies and test plans.
- Involved in estimating the testing to be done and negotiate with management to acquire the necessary resources.
- To lead, guide and monitor the analysis, design, Implementation and execution of test cases, test procedures and test suites.
- Ensure the test environment is put into place before test execution and managed during test execution.
- Schedule the tests for execution and then monitor, measure, control and report on the test progress, the product quality status and the test results, adapting the test plan and compensating as needed to adjust to evolving conditions.
- During test execution and as project winds down, write summary reports on test status.

## ACADEMIC CREDENTIALS

- Bachelor in Engineering in Computer Science from Anna University, India

## CERTIFICATIONS

- Azure Cloud Fundamentals
- Azure Administration
- Azure Devops Experts