

Terraform for Governance and Infrastructure Scalability

As corporations strive to strengthen infrastructure governance, they face the challenge of regulating enterprise-scale infrastructure. SNP overcomes the challenge through the SNP module accelerator, which effectively leverages governance concepts and deploys them to meet your business demands.

In our 4-week engagement, we will collaborate with you to identify resources for a proof of concept. We then provide a IaC code base and orchestration framework to support your Governance requirements.

An Infrastructure Governance Platform lays the groundwork for applying standard Terraform modules to the appropriate Azure subscription/management group.

Engagement Deliverables:

- Azure Infrastructure deployed in a dev/test environment
- Terraform Modules for each Azure resource
- Documentation

Next steps

- Production deployment
- Extend to more Azure resources

- Secure and resilient infrastructure
- Cost effectiveness
- Change management

With an Infrastructure Governance Platform, you can enable capabilities...

- **Consistency:** Maintain similar infrastructure configurations across multiple environments
- **Version Control:** to track, review and approve infrastructure code changes
- **Scalable and Reusable** azure infrastructure built as code with modular approach
- **Governance Policies as Code:** Defining Governance policies as code to govern what and where should the resources be deployed
- **Continuous Development and Deployment:** to deploy the entire infrastructure in a single click
- **Rollback and Disaster Recovery:** make recovery from disasters much easier by utilizing the IaC framework

Tech Stack:

Your engagement will include resources in Azure, such as:

- **Terraform:** To Provision and manage infrastructure resources in a declarative and programmatic manner.
- **Azure Repos:** To develop and store the terraform modules and version control the changes.
- **Azure Pipelines:** To deploy the terraform modules into azure subscription.
- **Key Vault and Storage Account:** To store the infrastructure state in blob container and to store.
- **App Registration:** To connect Azure DevOps Project and Azure subscription.

Our 4-step approach will cover:

- Azure Landing Zone Design/Assess
- Module Planning and development
- Continuous Integration and Continuous Delivery
- Documentation, Knowledge Transfer and Day-2 support

Step 1: Azure Landing Zone and Infrastructure Assessment

SNP will work with SMEs from the customer team to understand the Azure infrastructure requirements that are to be deployed to host the respective applications and future state expectations concerning subscription management, infrastructure hosting, and security best practices.

- Assess and Learn about code base deployments for landing zone components
- Assess and Learn about code base deployments for other Azure resources or services that are not part of the landing zone design
- Identify the landing zone components or Azure services that need to be converted as code-base deployments
- Identify the Azure resources or services that are not part of the landing zone design which need to be converted as code-base deployments

Step 2: Security, Governance and Identity – Kubernetes Clusters

- Module Planning
 - List out the azure resources which are to be deployed from the approved Landing Zone design
 - Develop User Stories and Tasks based on the listed resources for individual module development
- Module Development
 - Create repositories for each identified resource under the Azure DevOps organization
 - Create a branching strategy for code development and promotion
 - Develop the scalable and repeatable terraform code for each of the identified resources as an individual resource module
 - Smoke test the committed module code to a Dev/Test Subscription

Note: Customer helps in providing the relevant access to the SNP's team on Azure DevOps and Azure Subscriptions

Step 3: Continuous Integration and Continuous Delivery

- Design the Continuous Integration process
 - Identify a branch trigger for the build pipeline to get triggered automatically
 - Identify the variables to be used for the infrastructure build process and store them in Key Vault
 - Design a build pipeline to generate the build artifact from the respective terraform flow process
- Design Continuous Deployment process
 - Configure the release pipeline to trigger based on the respective build pipeline
 - Design the release pipeline to consume the respective build artifact and proceed for next step in terraform flow process
 - Configure approvals for release pipeline before deploying into respective subscription
 - Post-deployment checks to be completed for final validation and testing

Step 4: Documentation, Knowledge Transfer and Day-2 support

Create document for module development and usage

- Create README.md document on for each terraform module involving
 - Terraform version to be used
 - What inputs need to be passed while consuming the module
 - List out the variables to be passed along with its type

Create document for As-built process involving:

- Branching strategy to be followed
- Step-by-step process involving how
 - Branching strategy to be followed for module development
 - How Code needed to be committed, reviewed and merged
 - Pipeline variables creation and consumption
 - Build and Release process of infrastructure deployment

Knowledge Transfer and Day-2 Support

- Hand-over the entire documentations for review
- 2 KT sessions to showcase End-to-End development and deployments process
- Leverage SNP's Managed DevOps Services for Day-2 support

Deliverables:

- Landing Zone Design/Assessment Report
- Module Design and Usage document
- As-Built process document

About SNP Technologies Inc.

SNP's consulting services help businesses of all sizes transform with innovative, cloud-based solutions that harness the power of Microsoft Azure.

We combine elements from our [ISO certifications and Microsoft specializations](#) as well as the most efficient and innovative technology tools and platforms to help our clients become more agile, more customer focused and more operationally efficient.

 **Data & AI Azure**

Specialist
 Data Warehouse Migration
 Kubernetes on Azure
 Analytics
 Infra and Database Migration
 Migrate Enterprise Apps to Azure

 **Digital & App Innovation Azure**

Specialist
 Kubernetes on Microsoft Azure
 Modernization of Web Apps
 DevOps with GitHub
 Migrate Enterprise Apps to Azure

Member of
Microsoft Intelligent Security Association





**ISO 22301:2019:
 Business Continuity Management System**

 **Infrastructure Azure**

Specialist
 Azure VMware Solution
 Networking Services
 Infra and Database Migration
 Azure Virtual Desktop

 **Security**

Specialist
 Cloud Security
 Threat Protection



**ISO 20000-1:2018:
 Service Management System**



**ISO 27001:2013:
 Information Security Management System**

MICROSOFT PARTNER AWARDS:

 **2023 PARTNER OF THE YEAR FINALIST**
 Security

 **2021 MSUS PARTNER OF THE YEAR WINNER**
 Business Excellence in Solution Assessments

 **2019 MSUS PARTNER OF THE YEAR WINNER**
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 Open-Source Applications & Infrastructure on Azure

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 Solution Innovation on Microsoft Azure Award

Let's move forward together with confidence. We're here to help at every step.

Email us: SNP's CEO Prakash Parikh: prakash@snp.com