vírtusa

Engineering First

Foundation accelerator for Google Cloud

Business context: The post-COVID world has introduced a new paradigm in productivity and efficiency. Manually building the Google Cloud foundation and provisioning resources can be labor-intensive and costly. Provisioning and managing Google Cloud infrastructure through Infrastructure as Code (IaC) is the optimal solution.

However, organizations face challenges in developing these skills. Additionally, writing IaC code can be complex and time-consuming. The high demand for IaC skills in the market can unintentionally increase both time and costs.

In the modern era, businesses want rapid modernization on cloud with faster time to market

Longer provisioning times with manual approach

Customers are looking to migrate to cloud, but are looking for faster migration times to reduce migration costs.

Scarcity of IaC skills in the market

IaC is the way to quickly build and provision Google cloud infrastructure, but these skills are hard to get in the market.

Maintaining consistent configuration of infrastructure is key

Complex environments require maintaining configuratioin managemtn of infrastructure state to avoid configuration drifts due to manual means.

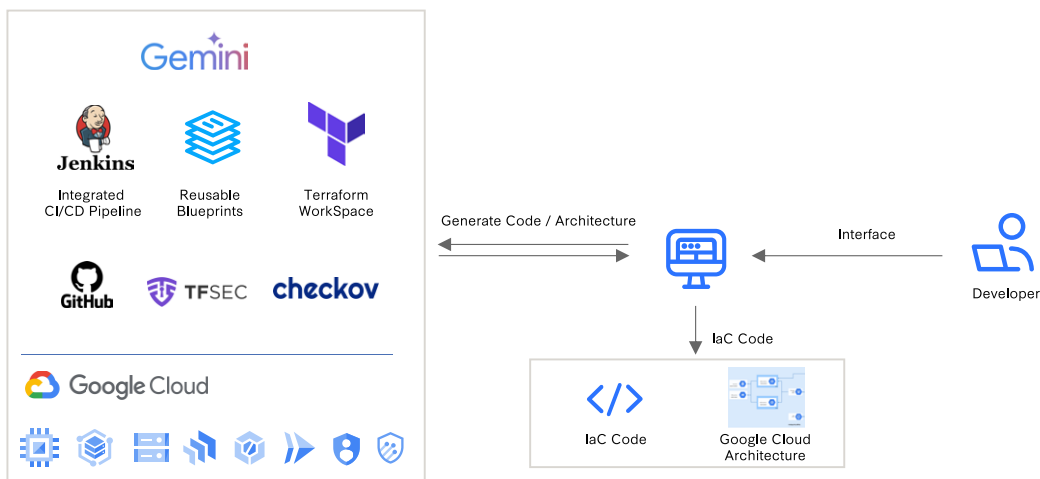# Virtusa's foundation accelerator for Google Cloud

Virtusa built rapid foundation automation and provisioning accelerator to help it's Google Cloud clients speed up their time to market, achieve efficiency and consistent productivity.

How does it work?

Following picture illustrates functioning of Google Cloud Foundation Accelerator. It is a UI based accelerator offering rich user experience helping the engineers to get started quickly.

Instead of "coding', engineers just need to draw the architecture. Once done, the Google Cloud Foundation Accelerator generates HCL (Hashicorp Configuration Language) which can be easily modified for further customization to rapidly deploy the landing zone.

Products used

Google Cloud

compute_engine

google_kubernetes_engine

cloud_storage

cloud_run

cloud_build

cloud_armor

identity_and_access_management

Third party

Terraform

Jenkins
Integrated
CI/CD Pipeline

checkov

GitHub

TFSEC

Benefits

Virtusa's Foundation Accelerator, powered by Google Cloud infra, is designed to increase operational efficiency and faster time to market with the following key benefits.

Speed and reduced complexity with consistency

Virtusa's Foundation Accelerator rapidly generates Terraform code to provision Google Cloud infrastructure. By generating Terraform code from the architecture and vice versa, it simplifies provisioning even complex infrastructure with consistent configuration management.

Improve technical efficiency by 80%

The Foundation Accelerator reduces human intervention by up to 80%, eliminating the need to acquire and train resources on Terraform/ Ansible coding.

Reduce costs by 30%

These benefits automatically result in reduced costs due to decreased manpower requirements, reduced configuration maintenance, and faster provisioning.

Case in point

For a leading pet food and services company, Virtusa facilitated a secure and efficient GCP Foundation integrated with Single Sign-On (SSO). This included configuring organization-level policies, provisioning a shared VPC host project with custom networks and subnets, provisioning Cloud NAT within the shared VPC host, defining Google Cloud Operations projects and IAM roles, establishing folder and project hierarchies, enabling APIs across projects (both generic and specific), and several other foundation-related tasks. Leveraging the Google Cloud Foundation Accelerator reduced the setup time by 80%.

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