Computacenter

PROJECT FACTORY

Google Cloud

THE CHALLENGE

As Google Cloud adoption increases and enterprises continue to deploy workloads, business lines and individual project teams start onboarding workloads into GCP. These deployments are often not managed centrally and lack defined policies and controls which inevitably lead to a constant struggle with the overall governance and management of cloud infrastructure.

An organisation may wish to provision new projects, virtual machines, storage or VPC's as workloads are rolled out. However, if business lines and individual cloud development teams do not use a similar request and provisioning approach, organisations can be left with separate and non compliant image builds, security controls, network components, software agents, naming standards and labels (to name just a few) leading to a sprawl of non-standard components.

This lack of centralised request management and provisioning, accompanied with the increasing consumption of cloud resource, results in impaired operational visibility and decision making, elevating the risk to service availability, security compliance and cost control. To address these issues a consistent process is needed for provisioning resources into GCP that is easily available for stakeholders to consume, securely controlled via access and authentication and ensures common standards are applied across the GCP organisation.

OUR APPROACH

At Computacenter we take a 'Project Factory' approach, where GCP resources are provisioned in an consistent and repeatable manner by eliminating manual processes and providing a centralised request management process. This resource provisioning is backed via Infrastructure-as-Code and facilitates pipeline driven deployment and testing via CI/CD. By using a standardised and centralised method of infrastructure provisioning we can align the creation of all GCP resources to organisational policies, processes, and guardrails.

We provide organisations with the means to implement a project factory solution as an integral part of a GCP foundational platform. Leveraging our experience in a number of customer deployments we have developed our custom IaC(Terraform based) modules inline with Google's best practices. These scripts can either be integrated with customers existing automation tools or use catalog based solutions or use API integration to provide a GCP consumer with a self-service based request process via a portal or ticketing based system.

Such an approach ensures that all GCP resources are always built the same way, to the same standards and with the same security controls, no matter who is consuming them. This simplifies operational management, support, change management and managing security incidents.

We understand and appreciate that customers may differ by tools and processes. Therefore, our skilled, accredited and experienced consultants work consultatively with customers to implement a project factory solution and fully document the processes, tools and methodologies deployed.

CREATE A PROJECT FACTORY

The Project Factory is a key tenet of our Foundations (Landing Zone service). Our Cloud Operations review and Cloud DevOps service both include the project factory as a key area of investigation with suitably proposed remediation activities if this is perceived to be an issue with any current GCP implementation.


Foundations (Landing Zone) Service


Cloud Operations Review Service


Cloud DevOps Service


Bespoke Consultancy

We have automated pipeline based request and deployment services for a wide range of GCP services across an organisation such as business line onboarding, project creation, user management and infrastructure provisioning (virtual machines, storage buckets, BiqQuery datasets etc). These services our underpinned by our custom modules and can solve a variety of request based use cases ranging from manual based deployment by a cloud engineering team to a self-service portal driving a fully automated deployment pipeline. We will assist and work with our customers in developing and implementing a secure, and integrated project factory solution to meet their individual use cases

GCP Project Factory

GCP Resource Provisioning

- Create, modify, & delete resources using the automated services
- Resources provisioned via pipeline driven Terraform
- All changes version controlled
- ***USE CASE***
- Business line wishes to create a new GCP Folder and Project structure to host new workloads
- Manual request is made to centralised Cloud Operations team to invoke relevant services

Self-Service via GCP Private Catalog

- Self Service provisioning using the GCP native Private Catalog solution
- Catalog invokes the centralised automation services
- Access to each service is controlled for security
- ***USE CASE***
- Project wishes to create new shared VPC within a folder to host new project
- Project consumer access service via GCP Portal
- Service is chosen and resources automatically provisioned

Self Service via API Driven Integration

- Integration with 3rd party tooling such as JIRA or ServiceNow
- Invokes centralised automation services
- Can be manual or fully automated
- ***USE CASE***
- Project wishes to create a new VM within a project
- Project consumer access ServiceNow based catalog and chooses service
- Service is chosen and resources automatically provisioned via API integration

* It should be noted that each of the use cases above are examples and can be interchangeable as required