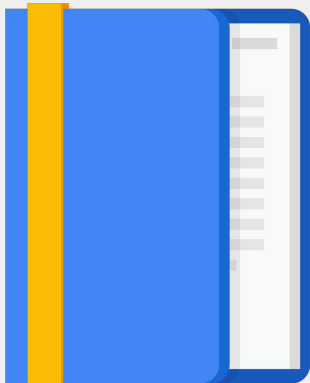# Google Cloud

Architecting Hybrid Infrastructure with Anthos

Google Cloud

Architecting Hybrid Infrastructure with Anthos
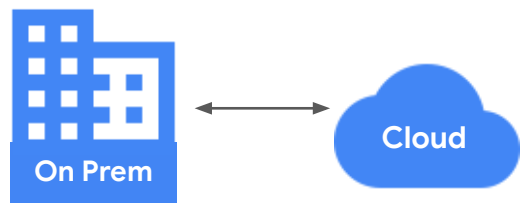
Anthos Overview

Agenda

- **Hybrid Cloud Overview**
- Modern Solutions
- Anthos Technology Stack

Google Cloud

Hybrid Cloud Overview

- Companies would like to adopt the cloud in their own pace, alongside their on premise.

- The hybrid environment empowers companies to pick and choose the best of both worlds, and create bespoke infrastructure

Hybrid environment wishlist

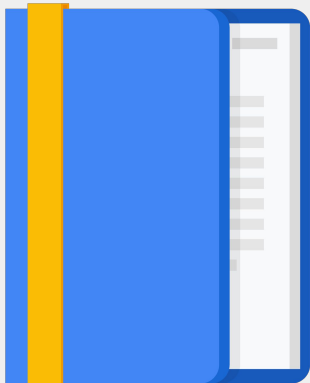|			
Write once, deploy in any cloud	**Accelerate developer velocity**	**Consistency across environments**	**Interoperability with legacy workloads**
Increased observability and SLO	**Decoupling across critical components**	**Increased workload mobility**	**Avoid vendor lock in**

Agenda

- Hybrid Cloud Overview
- **Modern Solutions**
- Anthos Technology Stack

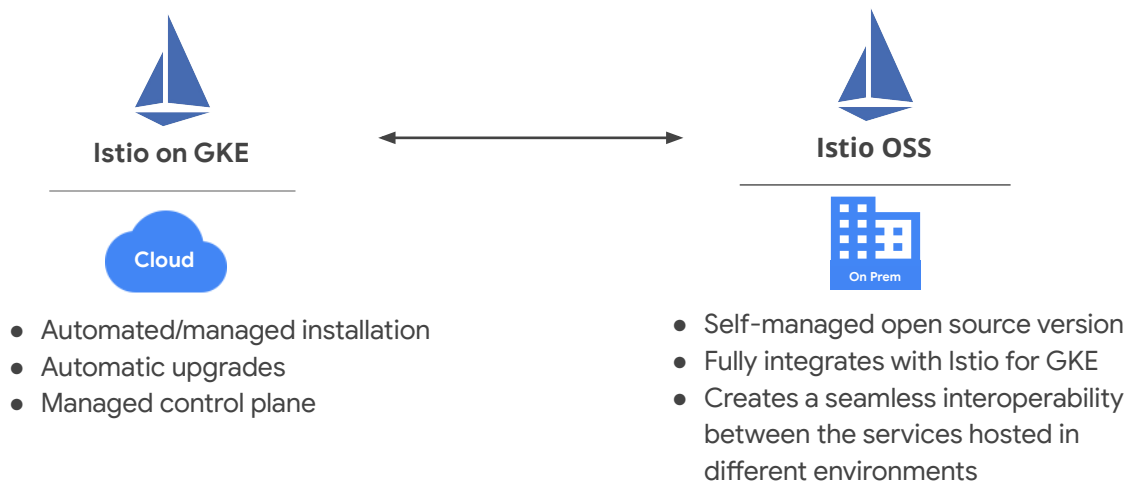Google Cloud

Compute

Google Kubernetes Engine

- Managed, production-ready environment for deploying containerized applications
- Operate Seamlessly with High Availability and SLA
- Runs Certified Kubernetes ensuring portability across clouds and on-premises.
- Auto node repair, auto upgrade, auto scaling
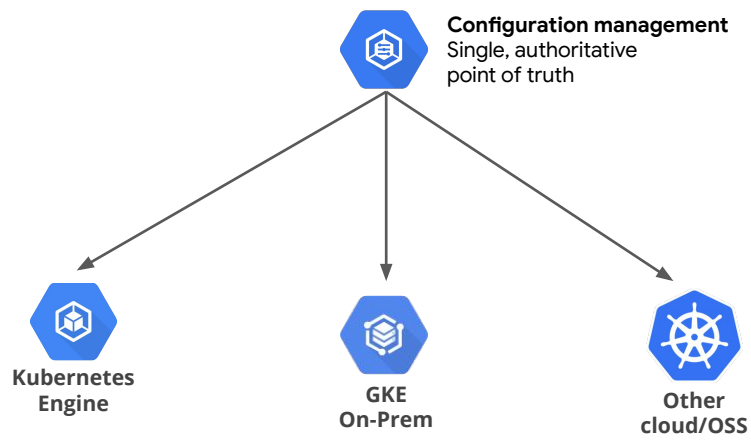- Regional clusters for high availability with multiple masters, node storage replication across 3 zones

GKE On-Prem

- Turn-key, production-grade, conformant Kubernetes with best-practice configuration
- Easy upgrade path to the latest Kubernetes releases that have been validated and tested by Google
- Access to Container services on GCP such as Cloud Build, Container Registry, Audit Logging, and more.
- Integration with Istio, Knative, Marketplace Solutions
- Consistent Kubernetes versions and experience across environments

Service Management

Istio on GKE

Cloud

- Automated/managed installation
- Automatic upgrades
- Managed control plane

Istio OSS

On Prem

- Self-managed open source version
- Fully integrates with Istio for GKE
- Creates a seamless interoperability between the services hosted in different environments

Multicluster Management
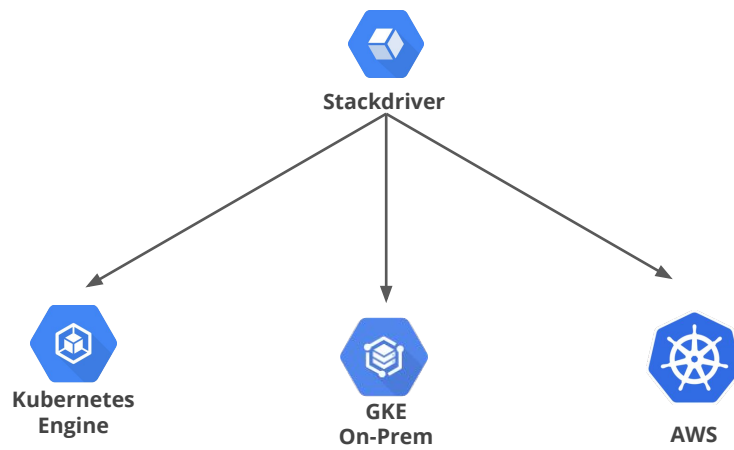
Configuration management
Single, authoritative
point of truth

Kubernetes Engine

GKE On-Prem

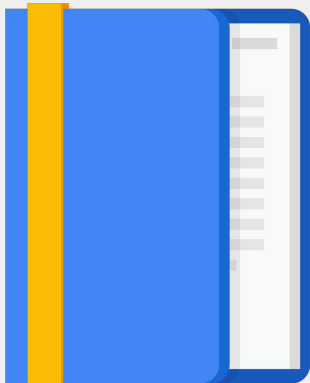**Other cloud/OSS**

Observability

Agenda

- Hybrid Cloud Overview
- Modern Solutions
- **Anthos Technology Stack**

Google Cloud

Anthos

Anthos is a modern application management platform that provides a unified model for computing, networking, and even service management across clouds and data centers.

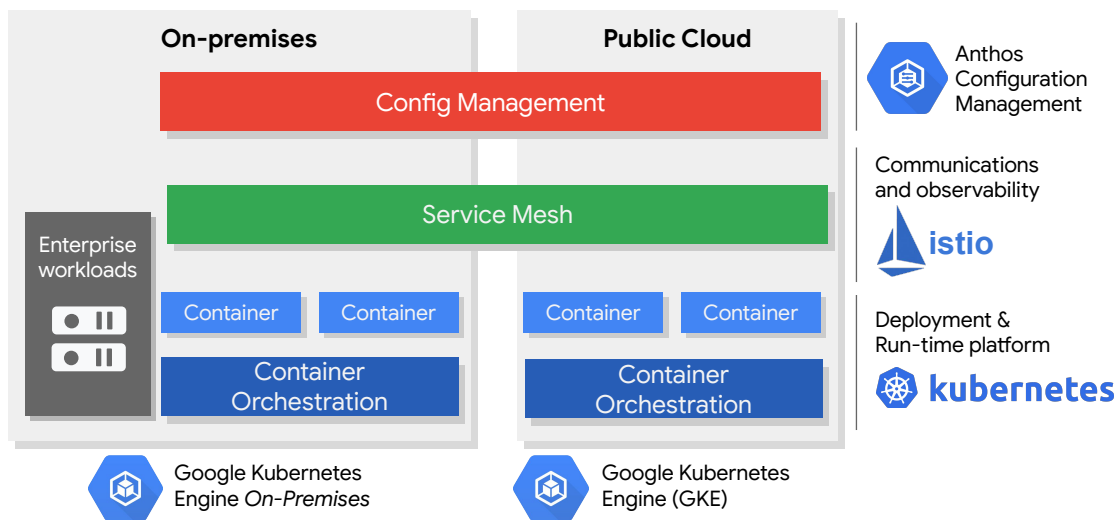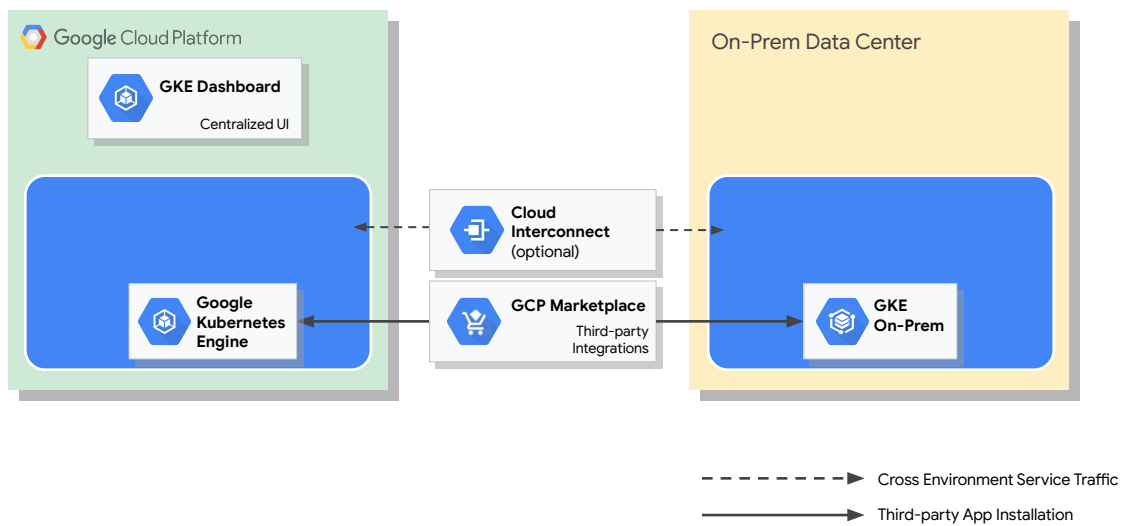| Kubernetes Engine | GKE On-Prem | Anthos Config Management | Istio | Migrate for Anthos | Marketplace |

The technology stack is built on consistent set of APIs based on open-source technologies which empowers developers and operators with a single methodology that applies to on premise, GCP and other cloud providers
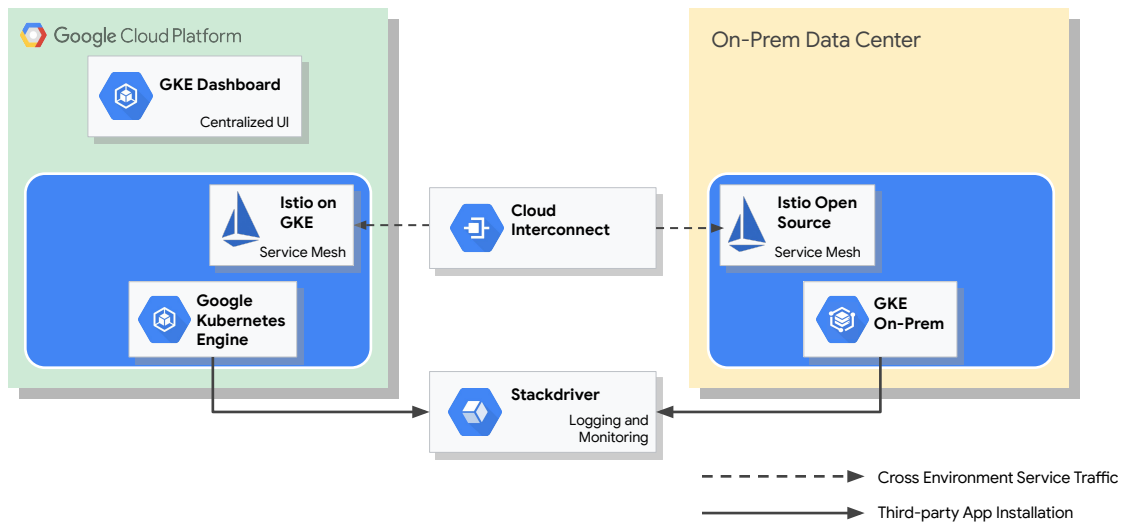
Anthos Benefits

- A technology stack that runs in data centers, next to enterprise workloads companies currently run on premise

- A single application model that empowers developers and operators to adopt modern methodologies and promotes agility and productivity.

- A central control plane based on a service centric view, powered by automation and security at scale

Anthos in more detail

Google Cloud Platform

GKE Dashboard
Centralized UI

Google Kubernetes Engine

On-Prem Data Center

GKE On-Prem

Cloud Interconnect (optional)

GCP Marketplace
Third-party Integrations

- - - - ▶ Cross Environment Service Traffic

───────▶ Third-party App Installation

Anthos in more detail

Google Cloud Platform

GKE Dashboard
Centralized UI

Istio on GKE
Service Mesh

Google Kubernetes Engine

On-Prem Data Center

Istio Open Source
Service Mesh

GKE On-Prem

Cloud Interconnect

Stackdriver
Logging and Monitoring

- - - ▶ Cross Environment Service Traffic

──────▶ Third-party App Installation