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ANTHOS PoV

Modern Application Platform for your Business

July 2020

THE EMERGENCE OF ANTHOS

Every enterprise will need a multi-cloud solution to power their digital transformation

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ENTERPRISES LEVERAGE AN AVERAGE OF

5 CLOUDS

94%

OF ENTERPRISES USE CLOUD IN 2019

84%

OF ENTERPRISES HAVE A MULTI-CLOUD STRATEGY

76%

OF CUSTOMERS SAYING MULTI-CLOUD MANAGEMENT IS KEY CHALLENGE

(Source: Flexera/RightScale)

MULTI-CLOUD IS TAKING HOLD WITH **SAAS, PAAS, AND IAAS** ACROSS THE ENTIRE PUBLIC AND PRIVATE LANDSCAPE

MULTI-CLOUD AND HYBRID ARE THE FUTURE

(Source: 451 Research)

With Digital Transformation, our clients can…

MODERNIZE LEGACY IT | REDUCE COST | INCREASE AGILITY | INNOVATE AT SPEED

ANTHOS IS THE PLATFORM OF CHOICE

Customers leverage Anthos to modernize applications and enhance scalability

Migrating to Anthos transforms enterprises with existing on-prem investments from VM or isolated Kubernetes cluster-based workloads to node auto-scaling, auto-provisioning, Google managed Kubernetes clusters. Anthos clusters running on-premises can can be thought of as an extension of the public cloud.

MODERNIZE IN PLACE

Anthos Config Management uses the GitOps style to manage cluster resources. With cluster selector, multiple clusters can be managed by a single git repo with different branches.

AUTOMATE POLICY AND SECURITY AT SCALE

Anthos provides consistency in two ways, the Control Plane (CP) and Anthos Config Management (ACM). The CP provides a consistent interface for the delivery team to manage applications running in complex environments. ACM listens for config changes and will automatically sync them with specified resources.

CONSISTENCY

ANTHOS FINANCIAL IMPACT OVER TIME

Multi-Cloud Containerization Savings

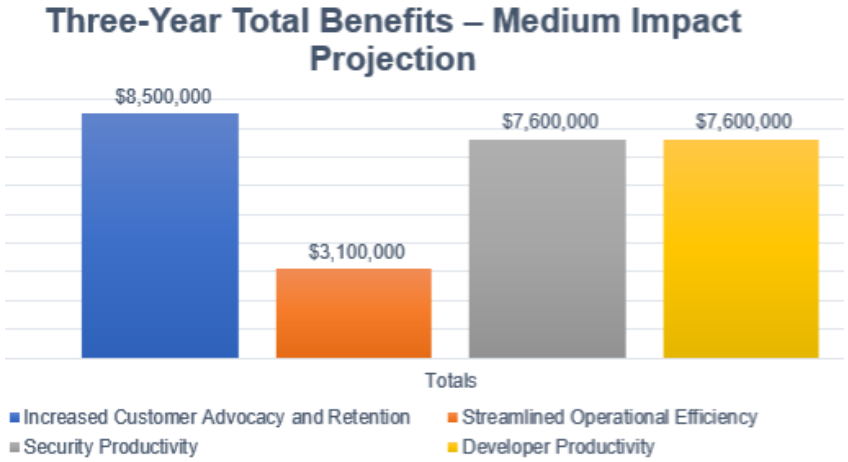
Based on an organization profile of a large, global company with an annual revenue of $5 billion and has 15,000 employees.

- **This organization deploys Anthos with:**
- 100 vCPUs in Year 1
- 500 vCPUs in Year 2
- 1000 vCPUs in Year 3

- **Quantified Benefits:**
- Faster application development, testing and deployment
- Consistent, unified security policy creation and governance
- Streamlined and automated platform operations
- Accelerated development velocity and improved app dependability enhances customer experience, increasing customer advocacy and retention

$26.8M

Total Benefits of Anthos over 3 years (medium impact)



$7.3M

Total Costs of Anthos over 3 years including: (medium impact)

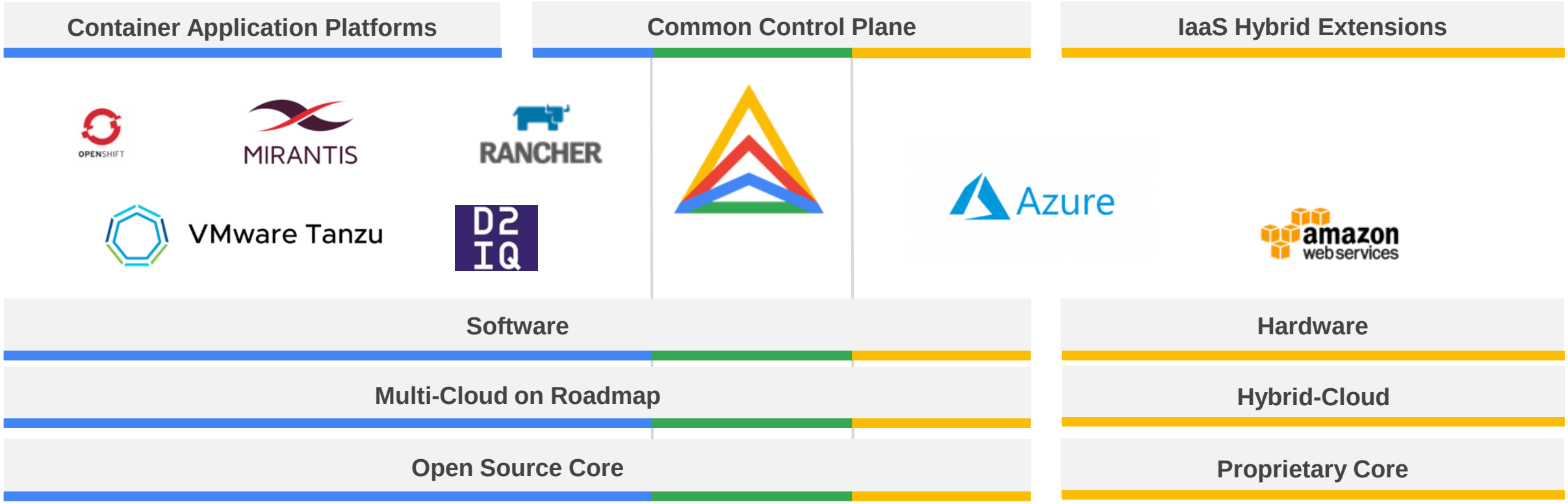
- Compute cost of running Kubernetes clusters
- Implementation and ongoing labor - which include implementation professional services, Anthos training, and ongoing platform support.
- Ongoing license and support. Including subscription-based licensing and enterprise support contract costs for Anthos.

STATISTICAL REFERENCES CAN BE FOUND IN THE SOURCES CITED SECTION (FORRESTER, 2019)

THE MULTI-CLOUD LANDSCAPE

Anthos Best In Class

Anthos offers the most fully featured modernization and container management platform among the offerings in the market.



ANTHOS DIFFERENTIATORS

Anthos and the Landscape

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FEATURE	MULTI-CLOUD SUPPORT	MULTI-CLUSTER/ UNIFIED MANAGEMENT	CENTRALIZED POLICY MANAGEMENT	SERVICE MESH	SERVERLESS	SOFTWARE BASED
Google Anthos	●	●	● Config Management	● Anthos Service Mesh	● Cloud Run for Anthos	●
Red Hat OpenShift Container Platform - RHACM	●	● Azure	● RHACM (in-preview)	● Istio	● Knative	●
VMware Tanzu	● Tanzu, PKS	● Tanzu	● Tanzu Mission Control	● Tanzu Service Mesh	● Pivotal Function Service add-on	●
AWS Outposts	● Currently on-premise only	● AWS console, multi-cluster not available	● RBAC	● AppMesh	● Lambda is currently on the roadmap	●
Azure Arc *	●	● Feature is currently in preview	● Azure Policy and Azure DevOps	●	● Azure Functions is currently on the roadmap	●
Rancher	●	●	●	●	●	●

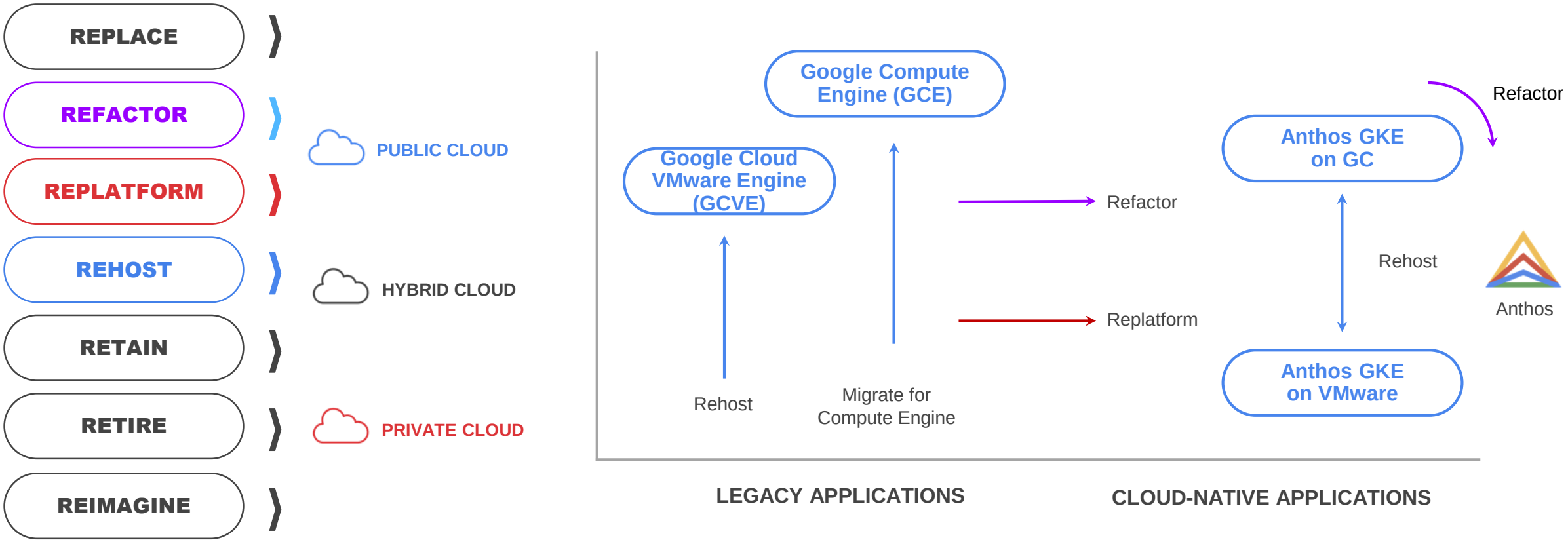
** As of the publication date was created Arc was in-preview*

KEY ● Has Capabilities ● Some Capabilities ● No Capabilities

WORKLOAD DISPOSITION

The Anthos Modernization Journey

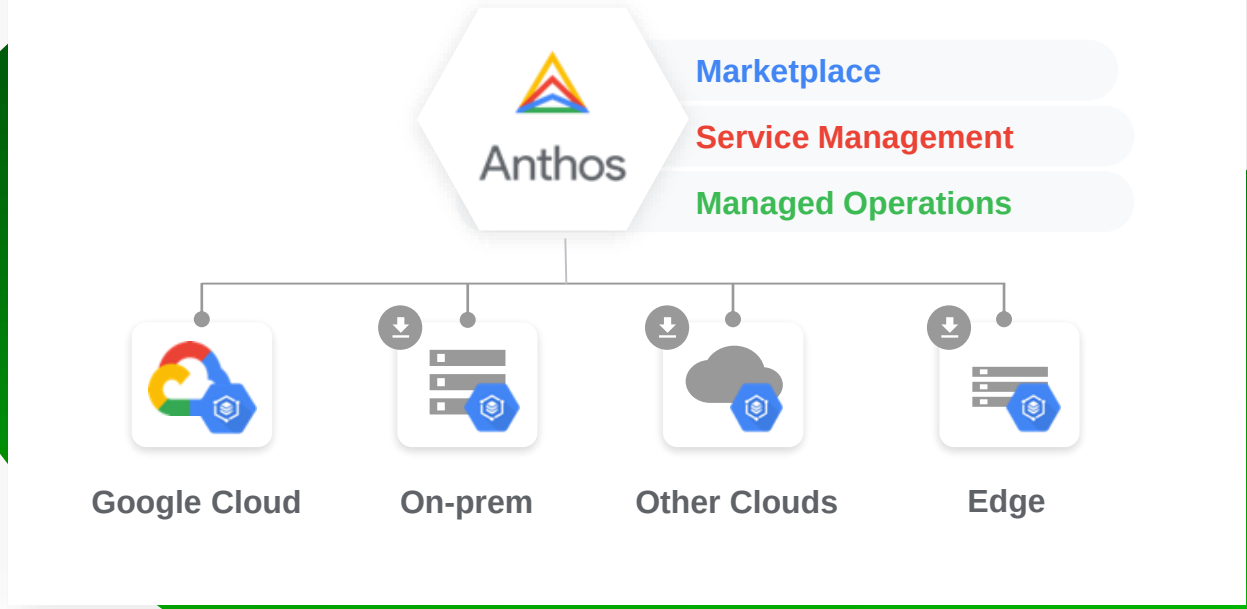
The future of applications, and the infrastructure that they run on is created with containerized microservices, managed through a declarative system with a single control experience that uses a service mesh to spans all application locations. The overall guidance in modernizing applications is start small and work up to your most mission critical, revenue driving applications. The lessons learned through modernizing lower priority applications will help reduce of modernizing the more critical applications.



ACCELERATE WORKLOADS WITH ANTHOS

Containerize & Manage Applications Anywhere

- Manage applications globally
- Obtain true open flexibility and portability for applications
- Deploy apps to meet regulatory or compliance requirements
- Begin applying modern application deployment techniques in the comfort of your datacenter
- Start cloud journey while still benefiting from legacy infrastructure Opex/depreciation



RESULTS... UP TO:

4.8x return on investment (ROI)

55% increase in platform operations efficiency

75% increase in app migration and modernization

96% improvement in productivity for security tasks

38% reduced non-coding activities for developers

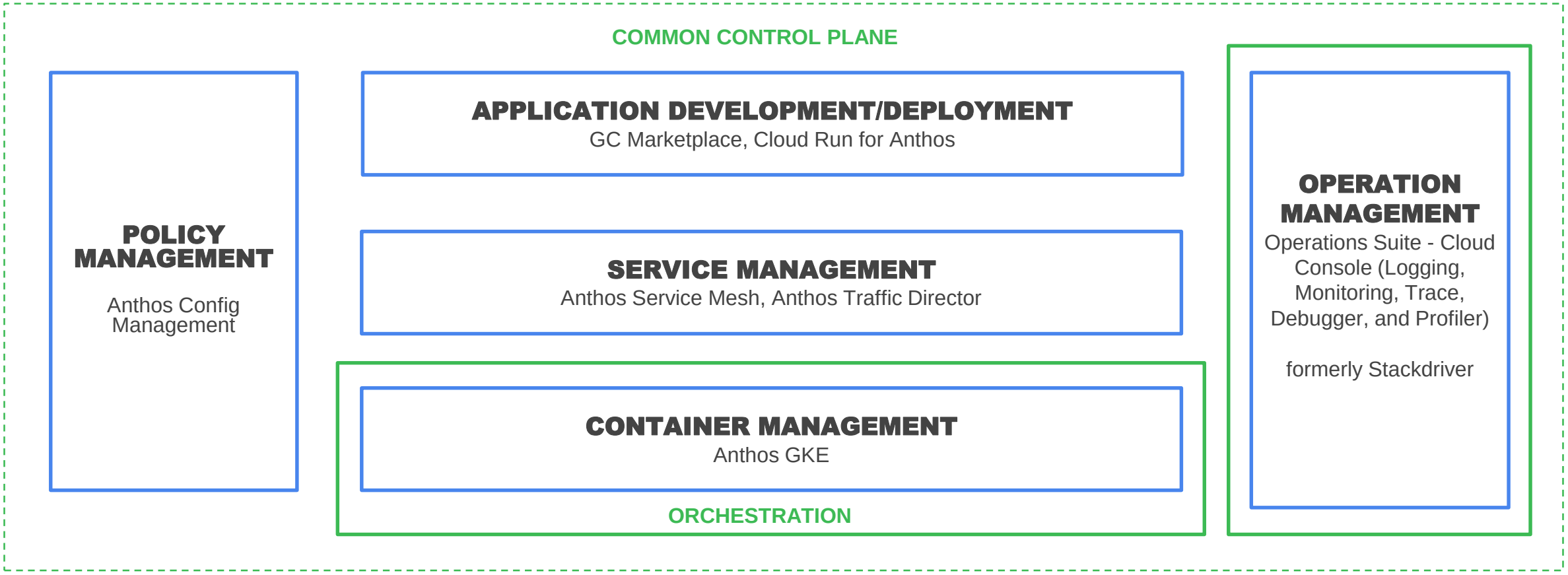
STATISTICAL REFERENCES CAN BE FOUND IN THE SOURCES CITED SECTION (FORRESTER, 2019)

WHAT IS ANTHOS?

THE SOLUTION IS AN INTEGRATED ECOSYSTEM

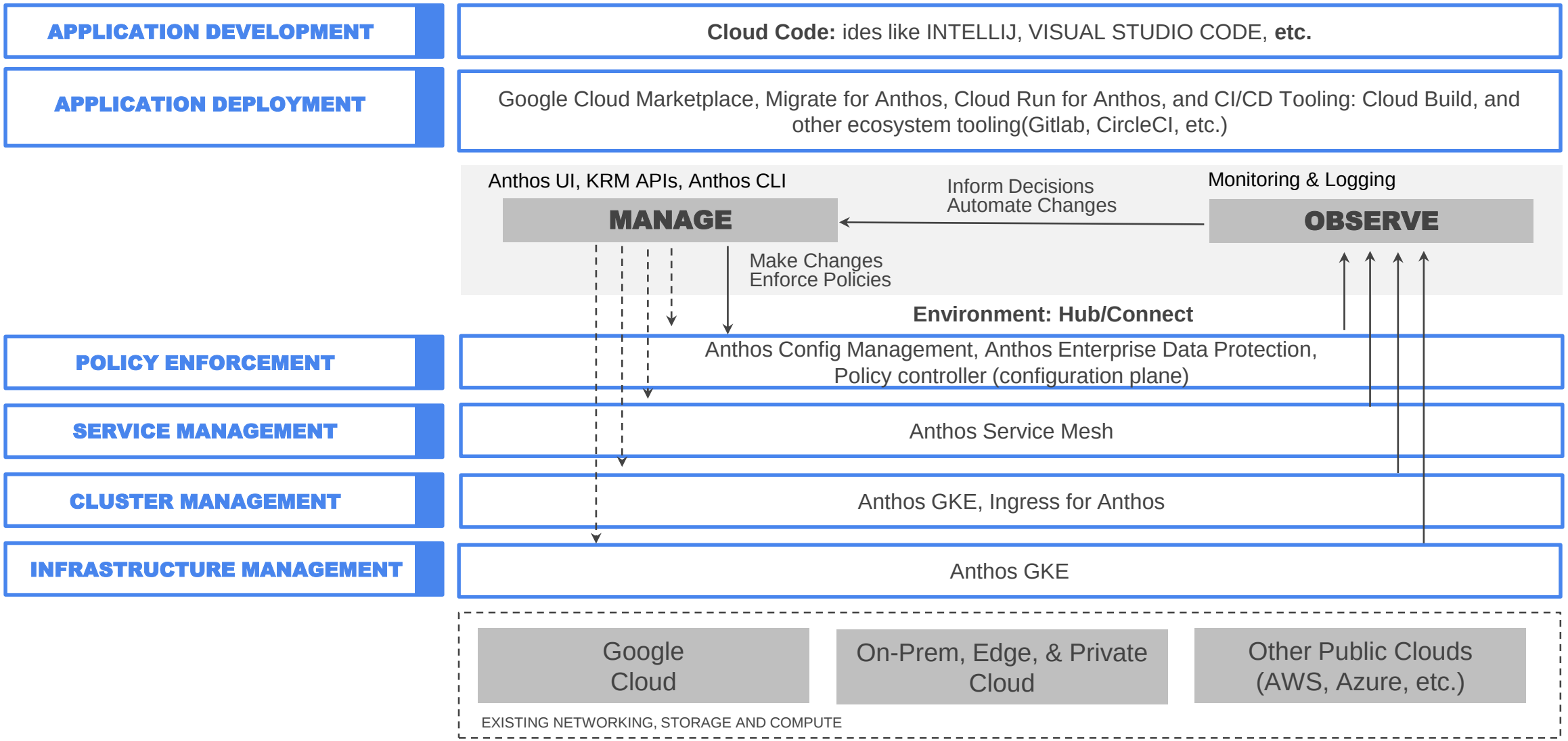
Modernize And Manage Across Your Landscape To Achieve Cloud Benefits

Anthos is a 100% software-based solution, as well as a Common Control Plane (CCP) that provides a consistent development and operations experience across hybrid, poly-cloud environments and on-premise workloads. The CCP integrated toolset reduces modernization cycle time by providing core capabilities needed to develop secure, reliable, containerized applications.



ANTHOS TYPICAL ENTERPRISE INTERACTION

Services Controlled Through Common Control Plane



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ANTHOS SERVICE MESH

SERVICE MESH CONCEPT

A service mesh is a dedicated infrastructure layer that enables you manage many of the complexities of a cloud native architecture. It provides the functionality to connect, monitor and secure services and service-to-service communication.

The mesh is a layer of sidecar proxies that run alongside each microservice instance and its centrally controlled by a control plane. It also allows us to decouple microservice security logic from the application service code.

APPLICATIONS

Orchestration, business logic, network calls

SERVICE MESH

Load Balancing, fine-grained, virtual service based routing, resiliency, metrics integrated with cloud monitoring, security, observability by prometheus, grafana, rate limiting, traffic shadowing, and fault injection

PaaS/CaaS

Load Balancing, container scheduling and management, resource quotas and limits

IaaS

Network, storage, elasticity, auto scaling

Connect: Service Mesh enables microservices to discover and talk to each other. It enables intelligent routing to control the flow of traffic and API calls between services/endpoints. These also enable advanced deployment strategies such as blue/green, canaries or rolling upgrades, and more.

Secure: Service Mesh allows you secure communication between microservices. It can enforce policies to allow or deny communication. E.g. you can configure a policy to deny access to production services from a client service running in development environment.

Monitor: Service Mesh enables observability of your distributed microservices system. Service Mesh often integrates out-of-the-box with monitoring and tracing tools (such as Prometheus and Jaeger in the case of Kubernetes) to allow you to discover and visualize dependencies between services, traffic flow, API latencies, and tracing.

ANTHOS SERVICE MESH COMPONENTS

Integrating Service Based Architectures using Istio

CONTROL PLANE

The control plane is responsible for managing and distributing the policies and configuration to the proxies, telemetry and certificates.

PROXIES (”SIDECARS”)

Proxies transparently manage the traffic for individual application components and execute the mesh logic as configured. Responsible for East-West Traffic and TLS encryption

INGRESS

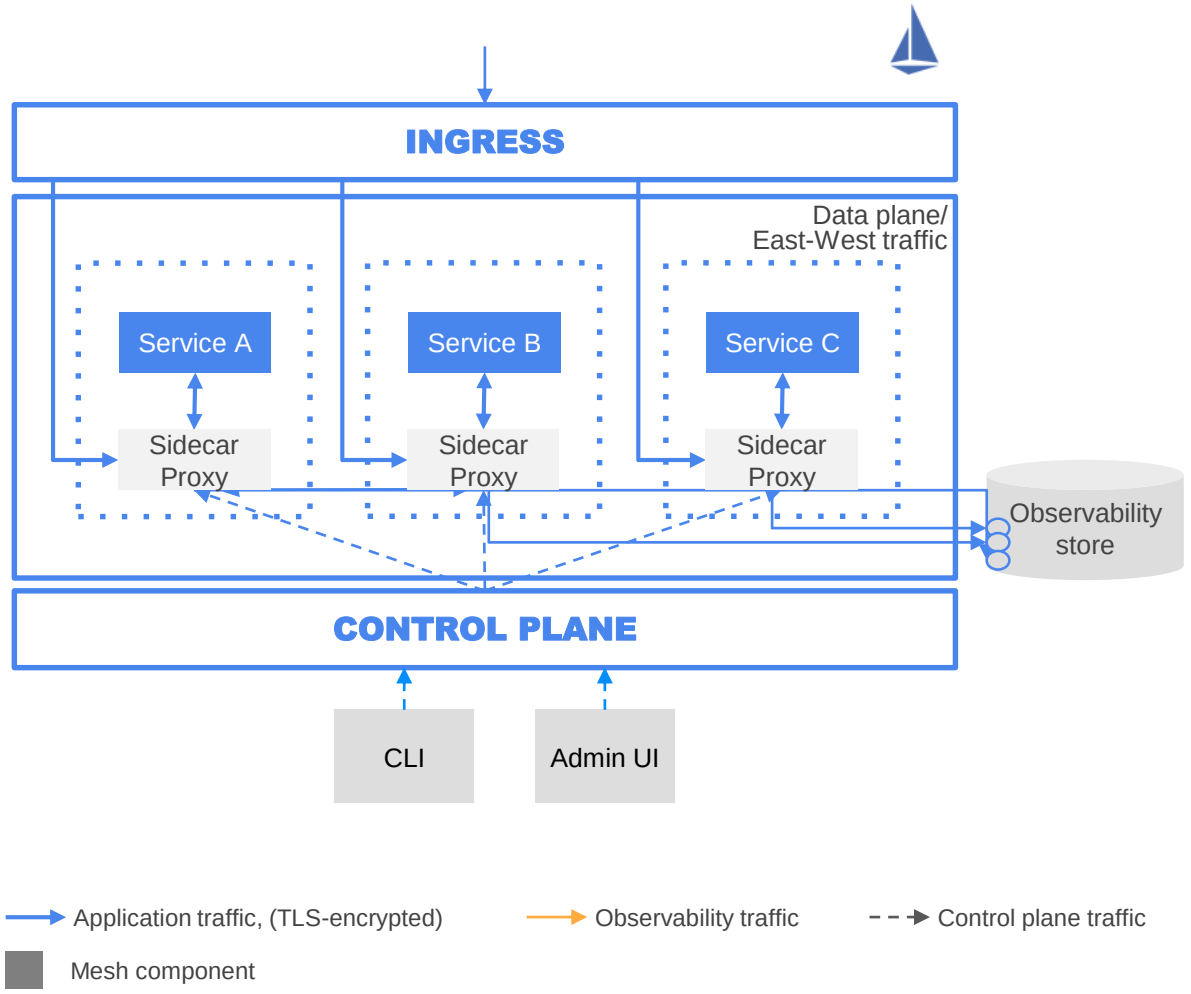
Responsible for traffic inbound towards the mesh (North-South) and layer 4-7 filtering

MESH CONTROL CLIENT

CLI, API or user interface that can be used to manage the mesh’s policies and configuration.

OBSERVABILITY STORE

Aggregates and stores observability data (metrics, traces) from the mesh. May be part of the mesh, or a separate component.



ANTHOS SERVICE MESH

Common Service Mesh Features

The main pillars of a Service Mesh are to facilitate DISCOVERY, OBSERVABILITY, RESILIENCE, CONFIGURABILITY, and SECURITY of the network. Instead of building these into every part of your application, the Service Mesh centrally takes care of these for each application that is connected to the mesh. Istio is the technology that underpins Anthos Service Mesh.

ROUTING AND DISCOVERY

- Dynamic traffic routing
- Fault injection
- Traffic shifting
- Mirroring

OBSERVABILITY

- Request tagging and tracing
- Performance bottleneck identification
- Visualization of network dependencies

RESILIENCE

- Circuit breakers
- Retry
- Rate limits
- White/blacklisting

CONFIGURABILITY

- Dynamic updates to network topology
- Configurable network policies

SECURITY

- Automatic and transparent traffic encryption
- Authentication and authorization
- Token validation

ANTHOS TRAFFIC DIRECTOR

Fully Managed Traffic Control Plane for Anthos Service Mesh

“With Traffic Director, you can deploy global load balancing across clusters and virtual machine (VM) instances in multiple regions, offload health checking from service proxies, and configure sophisticated traffic control policies.”

- Dami Oti, Ecosystem & Client Services Sr. Manager - Accenture

Traffic Director can be used by both containers and VMs using xDS APIs.

- Demand-driven autoscaling and pay as you go pricing creates a more responsive application.
- Capabilities of the advanced request routing features like traffic splitting and mirroring, URL rewrites and redirects, and fault injection.
- Ability to increase resilience and reach deploy services in multiple regions, while only using a single service IP.

ANTHOS TRAFFIC DIRECTOR

Fault Injection

Anthos Traffic Director Offers many advanced features including Fault Injection.

- This feature allows you to test the resiliency of your services by simulating service failures, such as aborted requests and delays.

Example: Fault injection: inserting aborts

```
apiVersion: networking.istio.io/v1alpha3
kind: VirtualService
metadata:
  name: ratings
spec:
  hosts:
  - ratings
  http:
  - fault:
      abort:
        percent: 10
        httpStatus: 400
    route:
    - destination:
        host: ratings
        subset: v1
```

*** The above example returns an HTTP 400 error code for 10% of the requests to the ratings service "v1**

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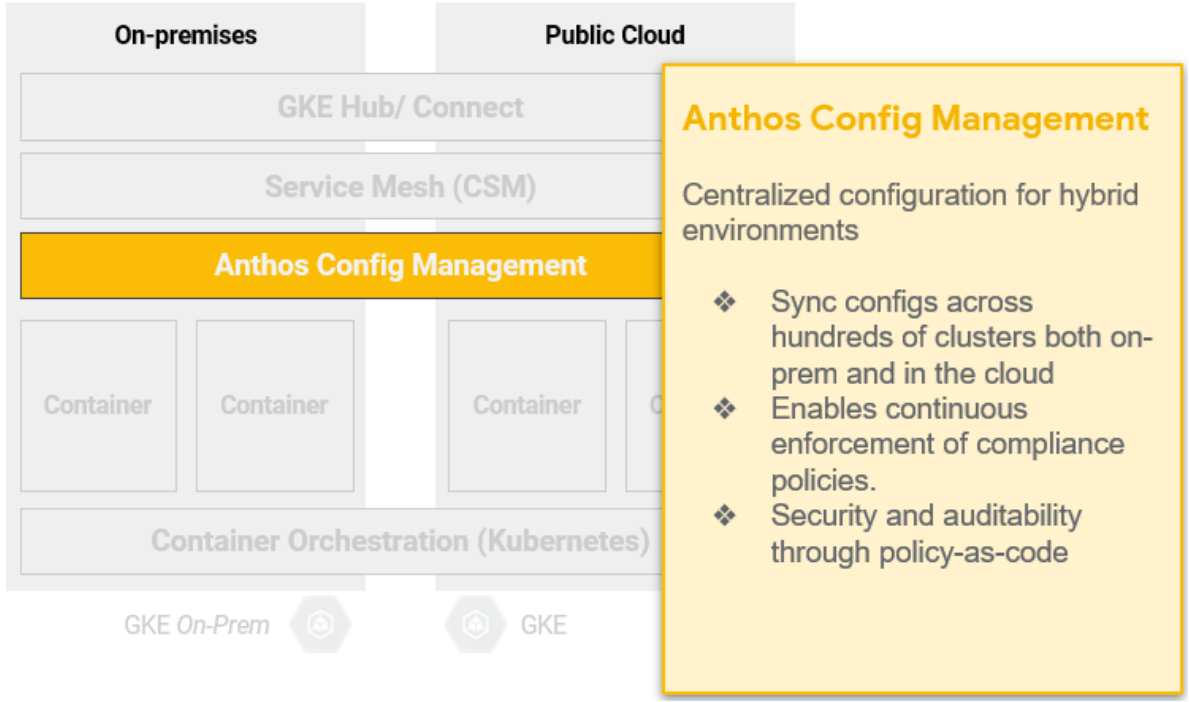
ANTHOS CONFIG MANAGEMENT

ANTHOS CONFIG MANAGEMENT FUNCTIONALITY

How Does It Work?

Anthos Config Management allows Operations, Developers, and Security Engineers to benefit from the unified interface for multi-cluster management spanning on-premise to cloud environments.

- Security and Operations Engineers able to centrally apply common policies & configurations capable of scaling across Anthos GKE clusters.
- Anthos was built using modern practices in all services that are managed using Git version control
- Anthos Config Management is continuously polling for configuration changes and automatically updates across resources

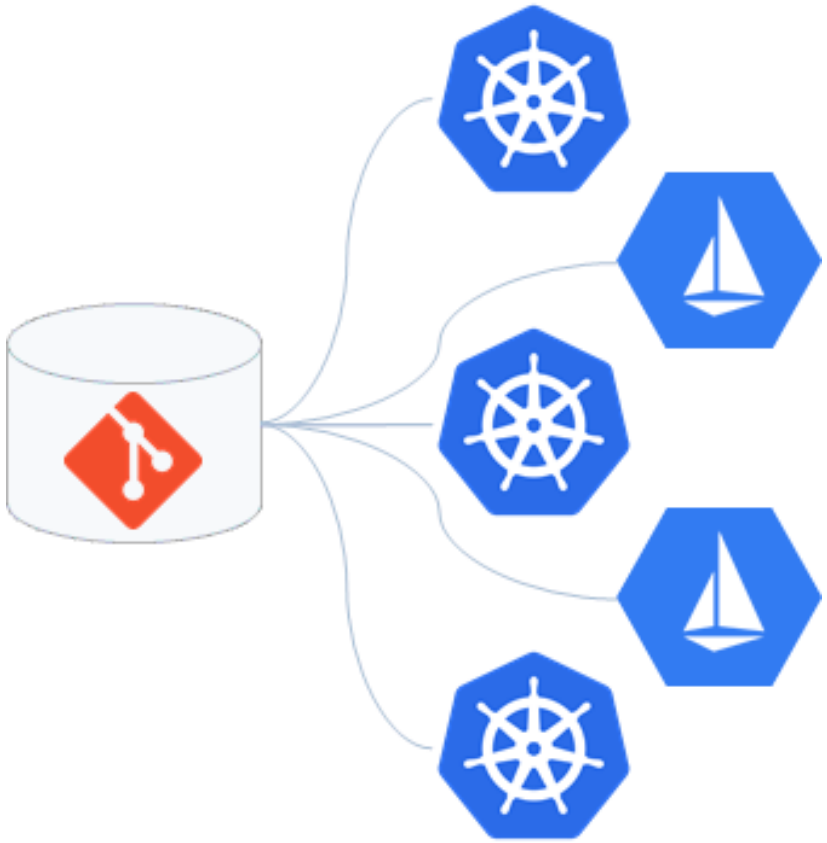


ANTHOS CONFIG MANAGEMENT

What Makes It Unique

Some of the other features Anthos Config Management offers is the:

- Ability to define and enforce custom rules the native Kubernetes objects.
- Anthos Config Management provides the ability to inspect and reject any changes that don't comply with the security policies your defined.
- Anthos Config Management automates the installation of namespaces and DaemonSet logging on all nodes.
- Single Source of Truth – Its hierarchical, so policies are inherited, with namespaces at the leaf modes.



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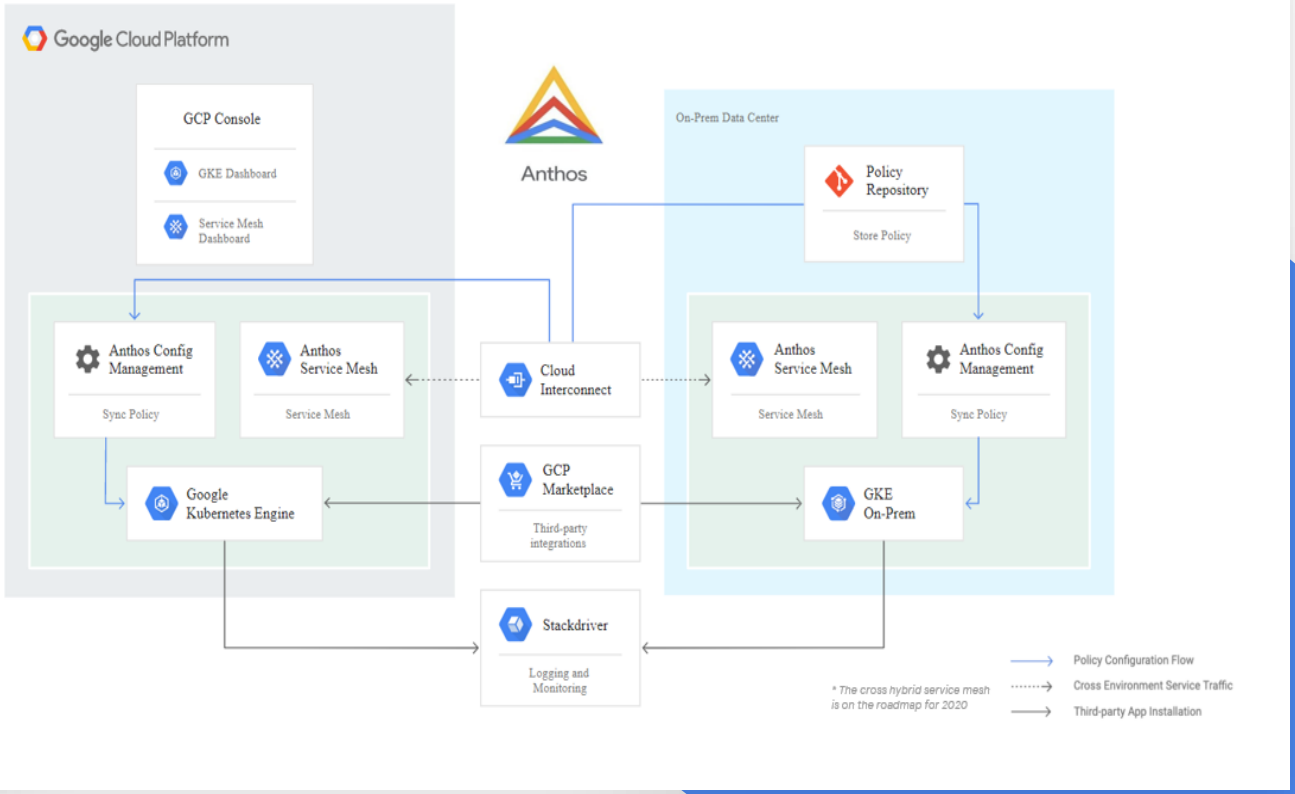
ANTHOS GKE

ANTHOS GKE

Common Orchestration Layer

Anthos GKE is an enterprise-grade container orchestration and management service for running Kubernetes clusters anywhere, in both cloud and on-premises environments. With Anthos GKE, you can:

- Experience Google Kubernetes Engine (GKE) with secured, managed, and simple installs as well as upgrades validated by Google. With this, you can run a wide variety of containerized applications including stateful and stateless, AI and ML, Linux, and Windows.
- Leverage industry-first features like four-way auto-scaling and no-stress management. You can also use integrated developer tools and get multi-cluster support from Google's Site Reliability Engineers.
- View and manage your clusters across on-premises (bare metal or VM), hybrid, and multi-cloud environments in a single pane of glass.



ANTHOS GKE

Container Management Benefits

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TURN-KEY

Turn-key, production-grade, conformant Kubernetes with best-practice configuration

CONTAINER SERVICE ACCESS

Access to container services on GC such as Cloud Build, Container Registry, Audit Logging, and more

START QUICKLY

Get Started Quickly: Use the Cloud Console to easily create a cluster and view your workloads

EASILY UPGRADED

Easy upgrade path to the latest Kubernetes releases that have been validated and tested by Google

ANTHOS INTEGRATION

Integration with Anthos Service Mesh, Anthos Config Management, Cloud Run, marketplace solutions

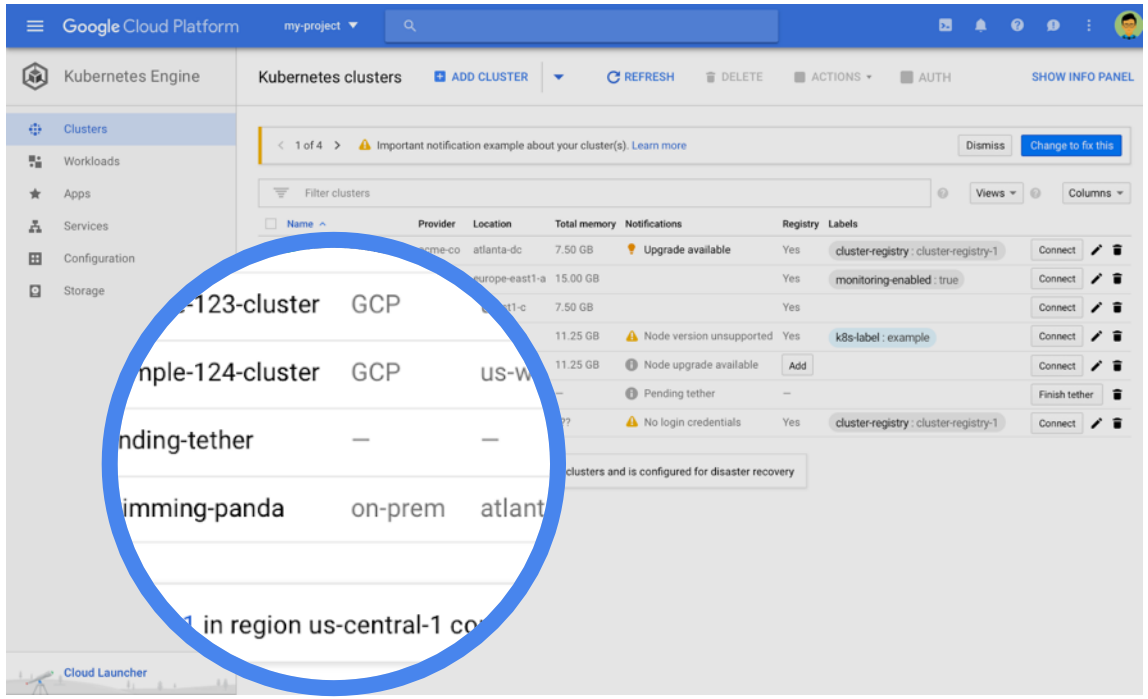
RELIABLE AND AVAILABLE

Reliable and Available: GKE automatically repairs, upgrades, and scales your cluster with a high-availability control plane.

ANTHOS GKE

Single pane of glass across google cloud and on-premises

- Manage on-prem containers and orchestrate them just like GKE in the cloud
- Achieve consistent operating model with access to Google Cloud services across hybrid environments
- Centralized access to a single pane of glass for multiple Kubernetes clusters (cloud or on-prem)



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CLOUD RUN FOR ANTHOS

CLOUD RUN FOR ANTHOS

How Does it Work?

Cloud Run is a fully managed compute platform that automatically scales your stateless containers and is built on Knative.
Cloud Run abstracts away all infrastructure management, so teams can focus on building great applications.

MIGRATION FROM K8S DEPLOYMENTS

- No up-front configuration of deployment, service, and HorizontalPodAutoscaler

AUTOSCALING

- Rapid request-based autoscaling,
- Concurrency controls
- Scale-to-zero.

NETWORKING

- Built-in load balancing capabilities
- Policies for traffic splitting between multiple versions of an application.

RELEASES AND ROLLOUTS

- Revisions are immutable
- Canary deployments by splitting traffic

MONITORING

- Metrics automatically collected and sent to GC monitoring and operations tools

CLOUD RUN FOR ANTHOS

Bringing serverless to containers

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Cloud Run for Anthos provides a flexible serverless development platform on Google Kubernetes Engine (GKE).

Cloud Run is built from Knative, letting you choose to run your containers either fully managed with Cloud Run, in your Google Kubernetes Engine cluster, or in workloads on-premises with Cloud Run for Anthos.

Google Managed, in GCP

Cloud Run on Anthos

All Google

Cloud Run

Google Managed, On-Premises

Cloud Run for Anthos deployed on vSphere

All OSS

Knative and Kubernetes

Anthos

CLOUD RUN FOR ANTHOS VS GC HOSTING OPTIONS

Comparison of Google Cloud various hosting options and Cloud Run on Anthos use-case

FEATURE	COMPUTE ENGINE	KUBERNETES ENGINE (GKE)	CLOUD RUN FOR ANTHOS	CLOUD RUN (FULLY MANAGED)	APP ENGINE FLEXIBLE	APP ENGINE STANDARD	CLOUD FUNCTION
Deployment format	VM Image	Cluster	Container	Container	App or Container	App	Function
Custom URLs	🟢	🟢	🟢	🟢	🟢	🟢	🔴
Scale-to-Zero	🔴	🔴	🟡	🟢	🔴	🟢	🟢
Persistent Disks	🟢	🟢	🔴	🔴	🔴	🔴	🔴
Websockets	🟢	🟢	🟡	🔴	🟢	🔴	🔴
Run any language	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Request timeout	None	None	15 minutes	15 minutes	60 minutes	1 minute	9 minutes
Background processes	🟢	🟢	🔴	🔴	🟢	🟡	🔴
TPU/GPU access	🟢	🟢	🟡	🔴	🔴	🔴	🔴
VPC connectivity	🟢	🟢	🟢	🟢	🟢	🟢	🟢

KEY: 🟢 Has Capabilities 🟡 Some Capabilities 🔴 No Capabilities

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OPERATIONS SUITE

FORMERLY STACKDRIVER

OPERATIONS SUITE

Visibility Across Environments

Operations Suite replaces the functionality of Stackdriver. Internal and external apps, platforms, and services running in the cloud and on-prem can be tracked and aggregated. Built-in observability can be used to troubleshoot and improve your apps.

CLOUD LOGGING

- Overhaul of Logs Viewer
- Improved UI
- Ability to customize log retention – up to 10 years
- Logs Router supports customer managed encryption keys (CMEK)

CLOUD MONITORING

- UI Redesign
- Metrics retention for up to 24 months
- Metric Writing at a granularity of up to 10 seconds

DASHBOARD API

- Allows users to develop a dashboard once and share it multiple times in other workspaces
- Improved metrics recommendations
- Ability to route alerts to separate systems with Pub/Sub Support

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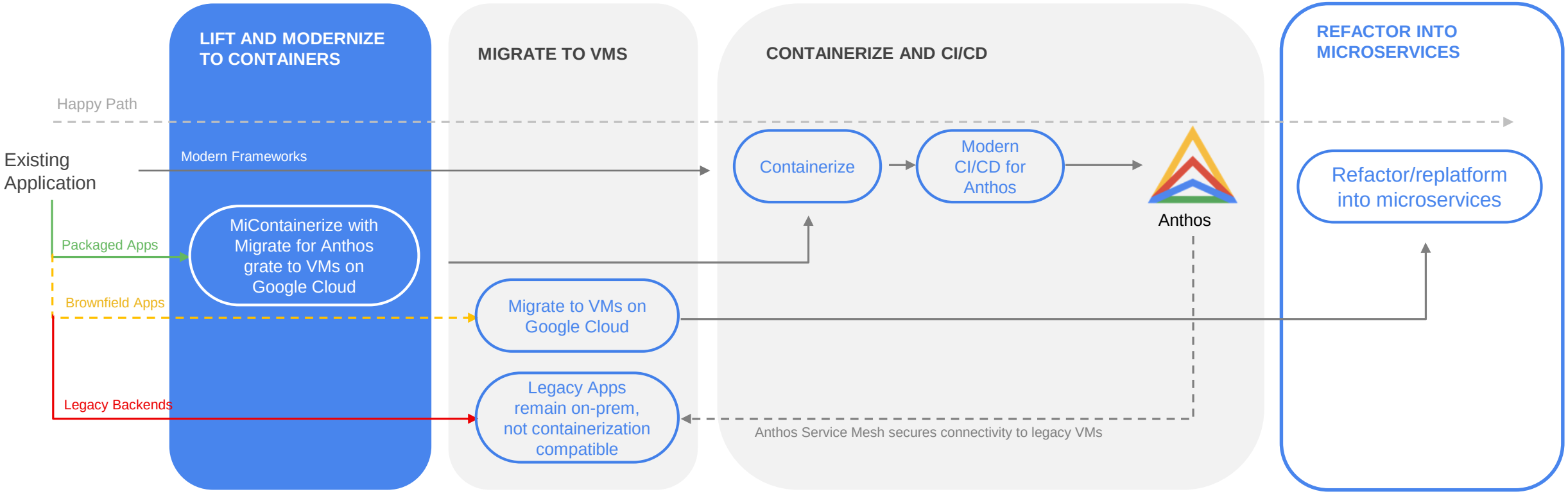
MIGRATION WITH GOOGLE

THE MODERNIZATION JOURNEY

Benefits to Modernizing Your Application

Modernizing legacy application has many benefits. Implementing a modern CI/CD deployment process enhances applications ability to reduce time to market. When applications are modernized teams can expect to spend less time managing the applications and an increase in uptime and availability.



MAKE MODERNIZATION A REALITY

Modernize existing applications with GKE

Automatically migrate and modernize brownfield application workloads running in VMs (VMware, AWS, Azure, or GCE) directly into containers in GKE.

- Automate CI/CD artifact creation
- Modernizes day 2 maintenance, policy & ops management
- Built-in testing

Low friction path for existing workloads to GKE

- Improve security and manageability without code change

Accelerated migration, integration into modern infrastructure

- Significant reduction in cost, time, labor, complexity compared with upgrading manually, as is current norm.
- Low touch migration to GKE, w/ minimal downtime
- Migrate without deep knowledge of apps moved

Modernization paths to additional cloud services

- Enable multiple options: image extraction/generalization, monolith breakdown, persistent data migration to 2nd hop managed storage/databases

ANTHOS SETUP & MIGRATION

Enable your organization to deploy, run and manage applications with Anthos for a consistent development and operations experience across any environment (on-premise, hybrid, multi-cloud).

ARCHITECTURE & STRATEGY

Define the long-term overall goal for Anthos and Kubernetes. Establish the principles, patterns, capabilities, components and products that are desirables to have, to support the execution and operation of containerized applications at scale.

MIGRATION

Accelerate the Journey to Cloud through the centralization of applications to isolate applications from underlying infrastructure, lower the infrastructure lock-in risk and enhance DevOps processes for legacy applications.

SECURITY

Help clients address specific industry security requirements such as PCI and HIPAA, and ensure that container platforms integrate with existing security-conscious environment, such as Financial Services.

Focus on delivering services
Though automation

Modernize
On-premise

Migrate to Cloud
& modernize

Consistent
experience

WORKLOAD MIGRATION

Realize The Power Of Google Cloud By Moving Your Applications To The Cloud

CHALLENGES:

- Data center, hardware and software end of life
- Cloud migration mandates
- Outdated services/legacy hosting environments
- Economic and competitive pressure
- Other application challenges

BENEFITS:

- 10x+ faster migration with Google tools and automation
- Save up to 60% with sustained-use discounts, price differences, and right sizing recommendations
- Improve application performance
- Simplify management and operations
- Enable innovation with new cloud services

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HOW CAN ACCENTURE HELP?

COMBINING THE BEST OF GOOGLE HUMAN-CENTRIC DESIGN AND INNOVATION WITH ACCENTURE INTELLIGENCE TO BUILD A BETTER WORLD

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Google Cloud

Pioneers innovation | Industry leading technology | "10x" growth mindset

GOOGLE DESIGN PRINCIPLE:
If you aren't aligned with a human need, you're just going to build a very powerful system to address a very small—or perhaps nonexistent—problem.

AGBG

accenture

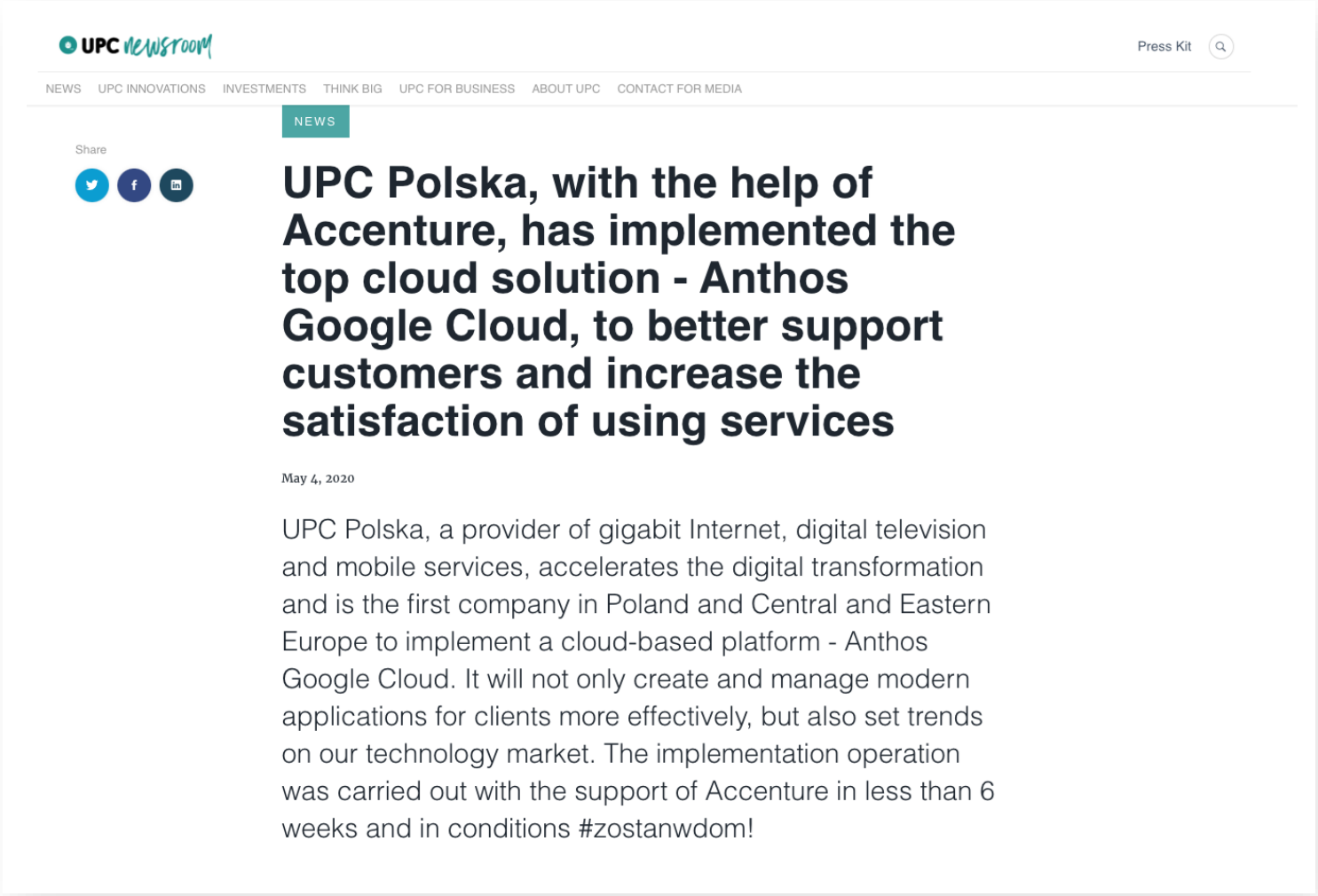
Deep industry knowledge | Proven commitment to "the NEW" | Market-renowned delivery

ACCENTURE MISSION:
Making the world a better place to work and live.

HOT OFF THE PRESSES

“The Anthos Google Cloud platform for UPC has been implemented by Accenture Polska in cooperation with Google Cloud. Despite the difficult conditions caused by the COVID-19 pandemic, the project was implemented in a record time of 6 weeks.”

Magdalena Dziewguć, director of Google Cloud business development in Central and Eastern Europe



UPC newsroom

Press Kit

NEWS UPC INNOVATIONS INVESTMENTS THINK BIG UPC FOR BUSINESS ABOUT UPC CONTACT FOR MEDIA

NEWS

Share

UPC Polska, with the help of Accenture, has implemented the top cloud solution - Anthos Google Cloud, to better support customers and increase the satisfaction of using services

May 4, 2020

UPC Polska, a provider of gigabit Internet, digital television and mobile services, accelerates the digital transformation and is the first company in Poland and Central and Eastern Europe to implement a cloud-based platform - Anthos Google Cloud. It will not only create and manage modern applications for clients more effectively, but also set trends on our technology market. The implementation operation was carried out with the support of Accenture in less than 6 weeks and in conditions #zostanwdom!

ACCENTURE CAPABILITIES

Google Cloud Expertise

Global: 420 *
NA (US & Canada): 100 *

Global: 340 *
NA (US & Canada): 75 *

Global: 270 *
NA (US & Canada): 55 *

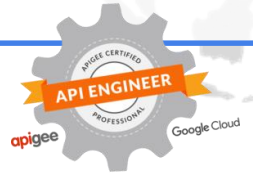
Global: 50 *
NA (US & Canada): 15 *

Global: 20 *
NA (US & Canada): 10 *

Global: 15 *
NA (US & Canada): 5 *

Global: 15 *
NA (US & Canada): 10 *

Global: 40 *
NA (US & Canada): 5 *



Anthos Fellows: 2 *
Accenture is the only SI with 2 – out of a total of 20 globally

Accenture has resources available worldwide to serve as trusted advisors and partners in your application/multi-cloud modernization efforts

GC Certifications:
Global: 1170 *
NA (US & Canada): 275 *

Anthos Tiger Team: A dedicated elite team of 70 * resources that has been assembled to lead Anthos projects and harvest lessons learned

**** As of June 2020***

HYBRID, MULTI-CLOUD POWERED BY ANTHOS

Organizations need a comprehensive approach to successfully implement a Hybrid, Multi-Cloud strategy

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1

Hybrid, Multi-Cloud Architecture & Strategy

Design, implement and scale Kubernetes across a variety of technologies and infrastructures

Conduct Assessment

2

Common Operating Model

Applying our learnings from defining and operating other C4E, the Container Operating Model will address the critical capabilities needed to efficiently and effectively operate a Container ecosystem in terms of Governance, People, Process and Technology

Create a Container Center of Excellence

3

Anthos GKE DevSecOps

Accenture's Kubernetes security reference architecture includes the industry leading practices. This approach is designed to address the security threats of the entire infrastructure running diverse and complex application stacks.

Expand the Security Capabilities

4

Cloud Migration Factory

Centralized team working in concert with project teams to develop solution approach, convert and migrate existing applications into containers on Anthos GKE and Google Kubernetes Engine – apps/ workloads from VMs or physical servers running on-premises, in Compute Engine, or in other clouds.

Industrialized Approach to Migration

ACCENTURE SOLUTIONS BUILT ON GOOGLE

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EXPLORE:

INDUSTRY SOLUTIONS AND INNOVATION

Powered by AI/ML

RETAIL AND CPG | LIFESCIENCES | TELCOS | BANKING & INSURANCE | PUBLIC SERVICE | MANUFACTURING

GROW:

IMPROVE BUSINESS OUTCOMES

INNOVATE – TRANSFORM – DISRUPT

Human-centric Solutions

INTIENT
Enable insights and collaboration across the life sciences enterprise

Applied Customer Engagement (ACE+)
Transform the Customer Service Experience with Advanced AI

SAP on GCP
Migrate SAP to Google Cloud and drive SAP transformation

Digital Marketing
Enabling the best breed of digital marketing programs at scale

BUILD:

ESTABLISH YOUR FOUNDATION

MIGRATE – MODERNIZE – ORGANIZE

Enterprise Cloud Services
Migrate workloads and infrastructure to Google Cloud

Next Gen App Dev
Modernize applications with Cloud Native APIs, API management, Microservices, and Containers

Data Modernization
Organize enterprise data for agile consumption and analytics

Workforce Productivity
Enable Next-level collaboration and intelligent productivity for your workforce

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ACCENTURE GOOGLE CLOUD BUSINESS GROUP

CASE STUDIES

SECURE ANTHOS DEPLOYMENT

European Telco Provider

CLIENT OVERVIEW

UPC Poland is the largest of Liberty Global's operations in Central and Eastern Europe in terms of revenue, and leading connectivity and entertainment provider on the Polish telco market.

CLIENT'S BUSINESS NEED

UPC Poland needed a more flexible, agile and scalable platform to improve time to market for new products and services and host applications accessed by all their 1.5M customers. A hybrid cloud environment would allow them to develop applications using cloud native tools that can be deployed on premise, or the cloud, increasing the efficiency and productivity of IT teams, developers and administrators.

HOW ACCENTURE HELPED

We worked with UPC and Google Cloud, to design and build a highly scalable platform with Anthos as a key component to provide a multi-cluster containerization solution able to run in a hybrid cloud environment.

- Supported UPC in transformation to a cloud-native organisation by building capabilities & knowledge in Containers, Kubernetes, Anthos and DevOps
- Designed and built GC Cloud Foundations for UPC
- Deployed GKE On-Prem to UPC with clusters to run new applications developed with cloud-native approach
- Enabled UPC to deploy containerized applications to Google Cloud Platform and on premise using Anthos.

"The Anthos Google Cloud platform for UPC has been implemented by Accenture Polska in cooperation with Google Cloud. Despite the difficult conditions caused by the COVID-19 pandemic, the project was implemented in a record time of 6 weeks."

Magdalena Dziewguć, director of Google Cloud business development in Central and Eastern Europe

HIGH PERFORMANCE DELIVERED

Improved application deployment time from days to seconds

GitOps enabled Anthos configuration to be deployed alongside applications as IaC

Worked closely with Google Anthos Product Team on product improvements

Anthos Config Management used to manage multiple clusters and applications

SECURE CLOUD TRANSFORMATION

National Health Insurance Company

CLIENT OVERVIEW

Major health insurance provider with over 17 million members across the country. Benefits packages offered include medical, dental and vision plans. Partnerships also include many state Medicaid programs.

CLIENT'S BUSINESS NEED

Client was seeking to transform their application services and improve security by fully utilizing available cloud offerings. In the process, they wanted to leverage the latest developments in technology, including docker with Kubernetes on Google Kubernetes Engine for container orchestration, Istio service mesh, Twistlock for container security scanning, Vault for secrets management, and infrastructure as code with Terraform for fully automated CI/CD. This required a new architecture framework for software platform, development pipelines as well as container security.

HOW ACCENTURE HELPED

- Architected hardened container security platform for a multi-cloud environment by leveraging Twistlock container scanning
- Implemented Istio service mesh to encrypt data traffic between microservices in Kubernetes
- Aided in migrating applications to Google Kubernetes Engine workloads
- Automated deployments with Infrastructure as Code using Terraform
- Reorganized environments and pipelines to streamline developer workflows and testing

HIGH PERFORMANCE DELIVERED

Agile DevOps to accelerate development and delivery	'Application Factory' for faster app migration to cloud	Fully automated CI/CD in a multi cloud environment	End to End data encryption for application services

LINK TO PUBLIC CREDENTIAL ›

SECURE CLOUD TRANSFORMATION

Healthcare Services Client

CLIENT OVERVIEW

Multinational health care services company, specializing in B2B ordering eCommerce with approx. $45 Billion eCommerce revenue per year.

CLIENT'S BUSINESS NEED

Enabling CI/CD with a legacy technology stack.
IBM WEBSPHERE PORTAL
IBM WEBSPHERE COMMERCE
IBM WEBSPHERE APPLICATION SERVER
CA SITEMINDER
CUSTOM JAVA Applications
IBM DB2 DATABASES
IBM WEBSPHERE EXTREME SCALE CACHE
RHEL OS

HOW ACCENTURE HELPED

- Architected transformation to a cloud enabled CI/CD platform
- Implemented Istio
- Implemented K8s, GKE?
- Google container registry
- Helm
- Google Stackdriver
- Google cloud storage
- Spinnaker, vault

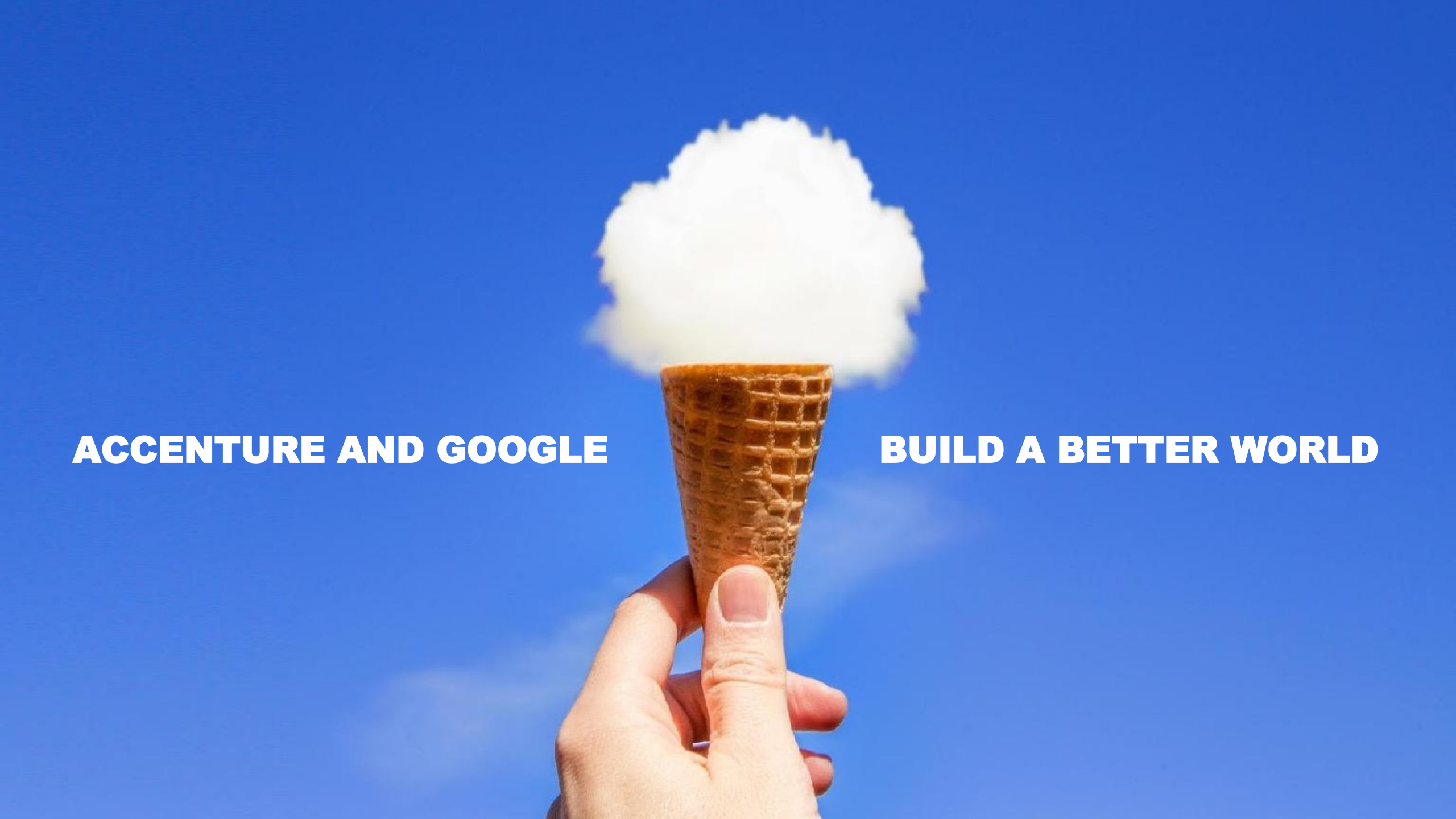
HIGH PERFORMANCE DELIVERED

Disaster recovery down to 4 hours from 24+

Reduced production deployment times from 8+ hours to <1 hour

Fully automated CI/CD pipeline

Monthly release cycle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BUILD A BETTER WORLD

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11X

GOOGLE PARTNER AWARD WINNER 2011-2019

#1

IN GOOGLE AI SERVICES

2019 INDUSTRY SOLUTIONS PARTNER OF THE YEAR

9

GOOGLE SPECIALIZATIONS

*Data Analytics, Marketing Analytics, App Dev, Machine Learning, Infrastructure, and Workforce Transformation

~5,000
Google Cloud professionals trained

1,000+
Apigee practitioners globally

1400+
Google Cloud certified practitioners

3,000+
Data Scientists

3M+
Users migrated to G Suite

50+
Locations delivering Cloud and Innovation services

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RESOURCES

Collections

Email

AGBG Professional Community

External Website

SOURCES CITED

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