Anthos

Migrate directly from VMs, Build, deploy, and optimize apps on GKE, Anthos serverless landing zones and VMs anywhere-simply, flexibly, and securely

- Build, deploy, and optimize apps on GKE and VMs anywhere—simply, flexibly, and securely
- Consistent development and operations experience for hybrid and multicloud environments
- Achieve up to 4.8x ROI within 3 years according to the [Forrester Total Economic Impact study](#)
- Accelerate your VM-based app [migration journey](#) to containers

BENEFITS

Manage applications anywhere

Anthos is a managed platform for all your application deployments, both traditional as well as cloud native. It enables you to build and manage global fleets and establish operational consistency across them.

Deliver software faster

Bring the benefits of cloud services, containers, and serverless across your deployments and improve developer productivity with easy cloud-native tooling, container migration services, and guidance from Google

Protect applications and software supply chain

Anthos integrates security into each stage of the application life cycle, from develop to build to run, and automates security and policy management for all your deployments.

Key features

Enterprise-grade container orchestration and management service
Anthos enables you to manage GKE clusters and workloads running on virtual machines across environments. You get consistent managed Kubernetes experience with simple installs as well as upgrades validated by Google. Anthos can run on your existing virtualized infrastructure and [bare metal](#) servers without a hypervisor layer. Anthos simplifies your application stack, reduces the costs associated with licensing a hypervisor, and decreases time spent learning new skills.

Automate policy and security at scale

Define, automate, and enforce policies across environments in order to meet your organization's unique security and compliance requirements. [Anthos Config Management](#) evaluates changes and rolls them out to all Kubernetes clusters so that your desired state is always reflected.

Fully managed service mesh with built-in visibility

[Anthos Service Mesh](#) unburdens operations and development teams by empowering them to manage and secure traffic between services while monitoring, troubleshooting, and improving application performance.

Modernizing your security for hybrid and multi-cloud deployments

Anthos integrates [security](#) into each stage of the application life cycle—from develop to build to run—while enabling a defense-in-depth security strategy with a comprehensive portfolio of security controls across all of these deployment models.

CI/CD Anywhere: Google Cloud, on-premises, or other clouds

Using the Anthos platform, [Cloud Build hybrid pools](#) and [Cloud Deploy,](#) both in preview, provide the advantages of cloud-native CI/CD across anywhere you can run Kubernetes, including Google Cloud, on-premises, or other public clouds.

All features

Modernizing your security for hybrid and multicloud deployments	Anthos integrates [security](#) into each stage of the application life cycle—from develop, to build, to run. Anthos enables a defense-in-depth security strategy with a comprehensive portfolio of security controls, across all of these deployment models.
Bringing the power of containers to your existing workloads	Migrate to Containers minimizes the manual effort required to move and convert existing applications into containers. Analyze your entire application portfolio with the [Fit Assessment tool](#). Migrate your current workloads to containers on secure and managed landing zones, including [Google Compute Engine](#), [Google Cloud VMware Engine](#), [Google Kubernetes](#)

	Engine (including Autopilot mode), and Cloud Run.
Accelerate adoption of day 2 operations	For day 2 operations, save on labor and costs associated with maintaining, patching, and updating VMs and physical servers by switching to modern CI/CD pipelines, image-based management, and desired-state configuration with Anthos.
Bringing serverless everywhere	Cloud Run for Anthos provides a flexible serverless development platform and allows you to deploy your workloads to Anthos clusters, all with the same consistent experience. Cloud Run for Anthos is Google's managed and fully supported Knative offering, an open source project that supports serverless workloads on Kubernetes.
Deploy containerized apps from Google Cloud Marketplace	Kubernetes applications from Google Cloud Marketplace are enterprise-ready containerized solutions with prebuilt deployment templates, featuring portability, simplified licensing, and consolidated billing.
Toil-free traffic management for your service mesh	Traffic Director is a fully managed traffic control plane for service mesh. With Traffic Director, you can easily deploy global load balancing across clusters and VM instances in multiple regions, offload health checking from service proxies, and configure sophisticated traffic control policies.
Monitor, troubleshoot, and improve application performance	Google Cloud's operations suite (formerly Stackdriver) provides visibility into the

	performance, uptime, and overall health of cloud-powered applications. Collect metrics, logs, and traces across Google Cloud and your applications. Use built-in out-of-the-box dashboards and views to monitor the platform and applications.
Eliminate the dependency on hypervisors when modernizing apps	[Anthos on bare metal](#) is a deployment option to run Anthos on physical servers, deployed on an operating system provided by you, without a hypervisor layer for better performance. Anthos on bare metal lets you extend Anthos to new scenarios such as edge locations and support for your mission critical applications.
Anthos multicloud	Anthos Multicloud API enables you to provision and manage GKE clusters running on AWS and Azure infrastructure through a centralized Google Cloud backed control plane. This means that your team can have a consistent experience to create, manage, and update GKE clusters, regardless of which public cloud you're using.
Anthos for VMs	Anthos for VM in preview, supports development teams that want to standardize on Kubernetes but have existing workloads running on virtual machines that cannot be easily containerized. Anthos for VMs lets you modernize virtual machine workloads with the power of Kubernetes. We also provide a fit assessment tool to identify which of your VMs are the best candidates to Shift or Attach.