

Google Distributed Cloud air-gapped racks

At a glance

Google Distributed Cloud (GDC) air-gapped delivers a fully managed cloud experience for organizations that require complete isolation to meet stringent sovereignty and regulatory requirements.

The solution does not require connectivity to Google Cloud (public cloud) or the public internet to manage the infrastructure, services, APIs, or tooling, and is built to remain disconnected in perpetuity.





Benefits



Empower developers with familiar open-source technologies like Grafana, Prometheus, and PostgreSQL.



Leverage Google's industry-leading AI models on-prem.



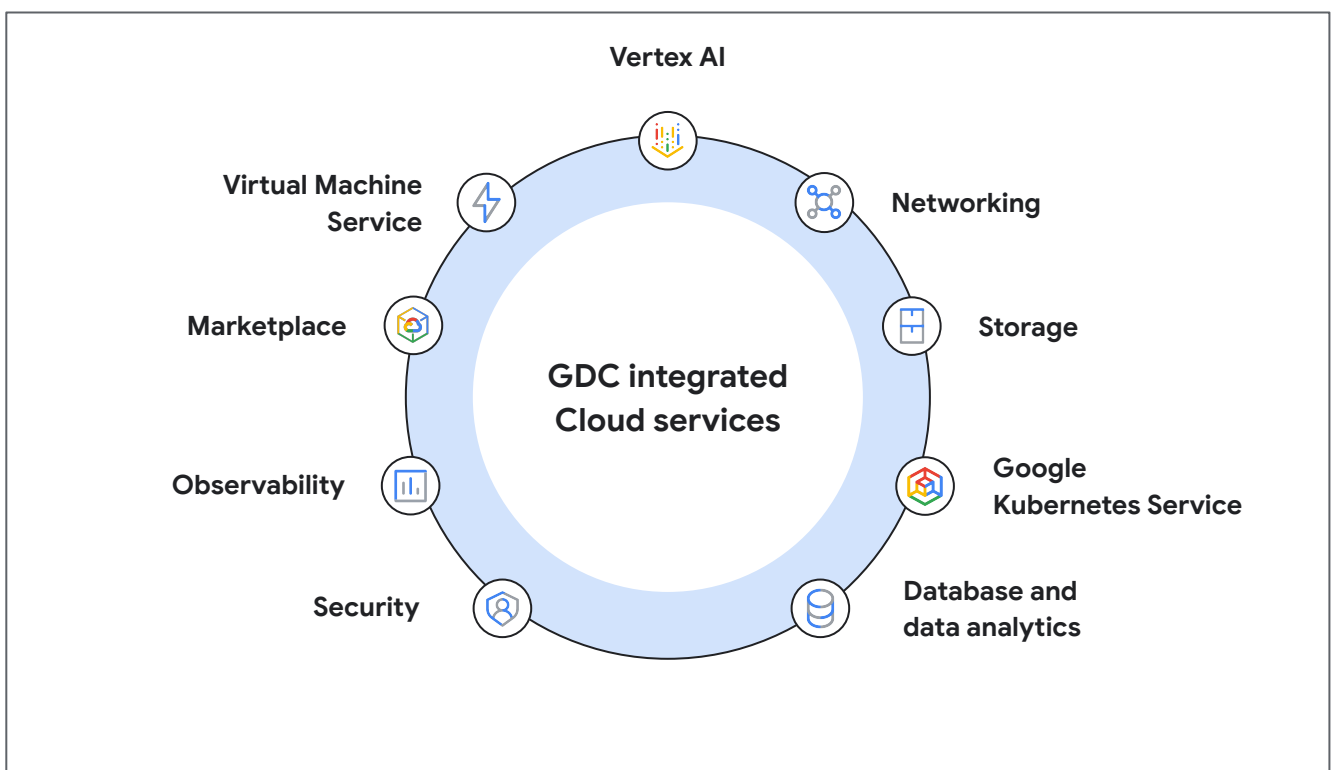
Modernize on-prem workloads with managed services.



Build gen AI-enabled applications with an optimized stack: GPUs, vector database, data services.



Improve developer experience and velocity by adopting cloud-native technologies and processes.





AI/ML

Vertex AI Workbench

Vertex AI pre-trained APIs

- Translation
- OCR (Optical Character Recognition)
- STT (Speech-To-Text)

Containerized model, LLM serving
on-prem on GKE

- Workload optimized containers and VMs
- Multi-instance GPU partitioning



Observability

Logging

Monitoring with alerts and notifications

Audit Logging



Databases and data services

PostgreSQL

AlloyDB Omni

Oracle BYOL



Developer tools

Managed Harbor Service

Container Vulnerability Scanning Service

UI/CLI/API surfaces for services

Apigee API management (customer-managed)



Security

Identity and Access Management (IAM)

Key Management (KMS)

Managed Intrusion Detection & Prevention
Service (IDPS)

Infra Public Key Infrastructure (PKI)



GDC air-gapped Marketplace

(ISV software, all BYOL)

Elastic Cloud on Kubernetes

MongoDB Enterprise Advanced

PANW Prisma Cloud Compute Edition

Starburst Enterprise

HashiCorp Vault

Apache Kafka on Confluent Platform

Redis software for Kubernetes

...and more to come



Service category: **AI/ML**

Services	Key features	System requirements
Translation	API to translate text in 105 languages, while maintaining format and layout for documents. Key features include: • Real-time and batch processing and simple integration with REST, gRPC • Auto-detection of input languages • Custom glossary • PDF (original and scanned), DOC, DOCX, PPT, PPTX, XLS, and XLSX files supported	Dedicated GPU node in service cluster (A100 or Hx00)
OCR (Optical Character Recognition)	API to automatically detect and extract text from images in many languages (46 supported, 24 experimental), and 9 handwriting scripts. Features include: • Real-time and batch processing • PDF, TIFF, JPG, and PNG files supported	
STT (Speech-To-Text)	API to transcribe audio files into text across 13 languages from telephone calls, news reports, and other long form audio: • FLAC, LINEAR16, MULAW, and OGG_OPUS audio encodings supported	
Vertex AI Workbench	Managed Jupyter notebooks for end-to-end AI/ML model development including data engineering, with backup & restore	Dedicated GPU node required in user cluster



Service category: Database service

Services	Key features
Managed Database Service	Fully managed relational database service that automates toilsome tasks such as provisioning, patching, backups, and monitoring, with support for three engines AlloyDB Omni • AlloyDB AI with pgvector extension • Single Zone HA/DR, Automated backups • PostgreSQL 15 Compatibility • Columnar Engine / Auto Vacuum enhancements PostgreSQL • PostgreSQL Compatibility 13, 14, 15 • Single Zone HA/DR, Automated backups Oracle BYOL • Oracle 19 • Automated backups



Service category: Security

Services	Key features	System requirements
Managed Intrusion Detection & Prevention Service (IDPS)	Managed Intrusion Detection & Prevention Service monitors network traffic using various detection techniques to identify threats to customer workloads: • Advanced threat detection • DoS protection • Vulnerability protection	

Identity & Access Management (IAM)	Enables secure authentication and authorization providing the capabilities to manage access control with the principles of least privilege. Its key features are: • BYO Identity Provider with OIDC/SAML federation • Active Directory Federation Service (ADFS) support for operators • Role Based Access Control (RBAC) based on PoLP	
Key Management Service	Offers robust key protection using Hardware Security Modules (HSMs). Empowers customers to implement strong encryption practices and streamline key management: • Data at rest protection with CMEK • FIPS-approved algorithms and FIPS-validated modules	Thales Ciphertrust k570 cluster (3)
Infra PKI Services	Centralized PKI system for managing digital certificates for authentication, encryption, and non-repudiation: • Centralized Management • Trust Distribution • Certificate Options for Customer to install on external facing services: ◦ BYO-Cert ◦ BYO-Cert with ACME ◦ BYO Sub CA as a root	



Service category: **Observability**

Services	Key features
Logging	Observability monitors applications and infrastructure on GDC. It also provides tools for operational and audit log collection, and search. Key capabilities include: • Metric and log collection, query API, and streaming integration to external SIEM • Metric and log alerts (email, SMS, etc.) and visualization via Grafana dashboards • Configurable retention periods for metrics and logs
Monitoring	
Audit Logging	



Service category: **Developer tools**

Services	Key features
Managed Harbor Service (MHS)	Managed Harbor Service (MHS) provides a secure and well-integrated registry service to store and manage container images, making it easy for users to run modern container-based applications: • Streamlined provisioning and management • SSO experience • Role based access control • Backup & restore
Container Vulnerability Scanning Service	Container Vulnerability Scanning Service provides vulnerability scanning and assessment for container images stored in MHS: • Periodic signature updates in air-gapped environments • Block vulnerable images from pulling

