

PREPKLOUD FIELD GUIDE SERIES

Google Cloud Digital Leader Field Guide

A business-first guide to cloud, data, AI, modernization, security, and operations on Google Cloud.

First edition · 2026 · prepkloud.com

About this guide

The Google Cloud Digital Leader certification shows that you can explain what Google Cloud's core products do and how they help an organization reach its goals. It is not a hands-on engineering exam. You will not write code or configure resources. You will be asked to match business needs to cloud capabilities and to explain the value, tradeoffs, and risks in plain language.

Exam facts, as published by Google Cloud when this guide was written: 90 minutes; 50–60 multiple-choice and multiple-select questions; registration fee USD 99 plus tax where applicable; offered in English, Japanese, Spanish, Portuguese, and French; online-proctored or at a test centre; no prerequisites; valid for three years. The current exam guide is marked as launched on 12 August 2026. Always confirm details on the [official Cloud Digital Leader page](#) and the official exam guide before you schedule.

Exam guide section	Approx. weight	Chapters
1. Digital Transformation with Google Cloud	~18%	2–3
2. Exploring Data Transformation with Google Cloud	~18%	4–6
3. Innovating with Google Cloud Artificial Intelligence	~18%	7–8
4. Modernize Infrastructure and Applications with Google Cloud	~18%	9–10

5. Trust and Security with Google Cloud	~18%	11–12
6. Scaling with Google Cloud Operations	~10%	13

Independent publication: Google Cloud and related product names are trademarks of Google LLC. PrepKloud is not affiliated with or endorsed by Google. All questions are original. They are not recalled, leaked, or copied exam items. Product names change often; where this guide uses a product name, it follows the wording of the current exam guide.

© 2026 PrepKloud. For personal study; do not resell or redistribute.

Contents

1. How the exam works and how to prepare

2. Why cloud drives digital transformation

3. Fundamental cloud concepts

4. The role of data in transformation

5. Choosing Google Cloud data products

6. Analytics, business intelligence, and streaming

7. AI and ML fundamentals for business

8. Google Cloud AI offerings

9. Moving to the cloud: migration and compute terms

10. Infrastructure, applications, and APIs

11. Cloud security fundamentals

12. Google Cloud security and trust

13. Cost control, operations, and reliability

14. Original practice questions and explanations

15. Six-week plan, cheat sheet, and glossary

How the exam works and how to prepare

Cloud Digital Leader is a foundational exam for anyone who works with cloud decisions: managers, sales and pre-sales staff, analysts, project leads, finance partners, and technical people who are new to Google Cloud. Most questions describe a business situation and ask which capability, product, or approach best fits it.

What the questions reward

- **Business outcomes over configuration.** Know *why* an organization would choose a managed service, not which button to press.
- **Right product for the use case.** Many questions list several real products; only one fits the stated need, such as global consistency, analytics at scale, or no server management.
- **Tradeoffs.** Speed versus control, customization versus effort, cost versus availability.
- **Shared responsibility.** What Google secures and what the customer must still manage.

Exam mindset

Read the business constraint first. Words such as *quickly*, *without managing servers*, *globally consistent*, *petabyte-scale analytics*, *existing SQL skills*, or *minimal upfront cost* usually decide the answer. If two answers are technically possible, choose the one that is more managed and closer to the stated goal.

Question strategy

- Multiple-select questions state how many answers to choose. Choose exactly that many.
- Eliminate options that solve a different problem, for example a transactional database offered for an analytics question.
- Be wary of absolutes such as "always" or "eliminates all risk".
- With 90 minutes for 50–60 questions you have well over a minute each. Flag and return rather than rushing.

Recall

- Can I name the six exam sections and which one carries less weight?
- Can I explain the difference between a business outcome and a technical feature?

Why cloud drives digital transformation

Digital transformation is the use of modern digital technology to create new, or change existing, business processes, culture, and customer experiences. Cloud is an enabler of it, not the goal itself. An organization that moves servers to the cloud but keeps slow, manual processes has migrated, but it has not transformed.

Key terms

Term	Plain meaning
Cloud	On-demand computing resources delivered over a network, typically paid for as you use them.
Infrastructure	The compute, storage, and networking that applications run on.
Open source	Software whose source code is published and can be used, changed, and shared under its licence.
Open standard	A publicly available specification that many vendors can implement, which supports interoperability.
Agentic AI	AI systems that can plan and take multi-step actions toward a goal using tools and data, usually under human-defined limits.

Benefits of cloud to the business

- **Scalability and elasticity:** add or remove capacity as demand changes.
- **Cost-effectiveness:** pay for what you use instead of buying for peak.
- **Agility and speed:** provision in minutes and experiment cheaply.
- **Flexibility:** choose from many services and deployment models.
- **Security:** benefit from the provider's investment in secure infrastructure.
- **Global reach and high availability:** run close to users across regions.
- **Data-driven insight:** analyse data at a scale that is hard to reach on-premises.
- **Strategic focus:** spend staff time on differentiating work instead of maintaining hardware.

Drivers, hurdles, and the risk of standing still

Organizations are pushed to transform by changing customer expectations, new competitors, the need for faster product cycles, cost pressure, and the opportunity of AI. Common hurdles include legacy systems, skills gaps, unclear ownership, cultural resistance, security and compliance concerns, and fear of lock-in. Not adopting cloud also carries risk: slower innovation, rising maintenance cost, and difficulty attracting talent.

Google Cloud differentiators named in the exam guide

The guide highlights AI leadership, a commitment to openness and interoperability, AI Hypercomputer, an AI-ready data platform, security, and Google's global network. Be ready to recognize these as reasons an organization might choose Google Cloud.

Scenario

A retailer moved its web servers to virtual machines but still releases features every six months. What is missing? Process and culture change, such as automated delivery, managed services, and data-driven decisions. The move was a migration, not yet a transformation.

Recall

- Can I distinguish open source from an open standard?
- Can I list four business benefits of cloud and one hurdle?

Fundamental cloud concepts

Cloud architectures

Model	What it means	Typical business reason
Public cloud	Resources run on a provider's shared infrastructure.	Speed, scale, and pay-as-you-go cost.
Private cloud	Cloud-style infrastructure dedicated to one organization.	Strict control or specific regulatory needs.
Hybrid cloud	On-premises or private resources combined with public cloud.	Keep some systems in place while modernizing others.
Multicloud	Using more than one public cloud provider.	Best-of-breed services, resilience, or avoiding dependence on one vendor.

Networking basics

- **IP address:** a numeric address that identifies a device on a network.
- **DNS:** the Domain Name System translates names such as example.com into IP addresses.
- **Latency:** the delay for data to travel between two points. Lower is better for interactive apps.

- **Bandwidth:** how much data can be transferred in a given time.

Google Cloud's global infrastructure

- A **region** is a specific geographic location where you can run resources.
- A **zone** is an isolated deployment area within a region. Spreading a workload across zones protects against a single-zone failure.
- **Edge locations** (points of presence) bring content and network entry closer to users, reducing latency.

Google's private global network links these locations, so traffic can travel much of its journey on Google's backbone rather than the public internet.

Service models

Model	You manage	Provider manages	Tradeoff
IaaS	Operating system, runtime, applications, data	Physical hardware, network, virtualization	Most control, most operational effort
PaaS	Applications and data	Infrastructure, OS, runtime, scaling	Faster development, less low-level control
SaaS	Your data and user access	The whole application	Fastest to adopt, least customization

Remember

Moving from IaaS to PaaS to SaaS shifts more responsibility to the provider. The customer always remains responsible for its data and for who can access it.

Recall

- What is the difference between a region and a zone?
- Which service model gives the most control?

The role of data in transformation

Data is valuable because it lets an organization generate real-time insight, identify trends, make better strategic decisions, and train AI. Data only becomes valuable when it is collected, trusted, accessible to the right people, and acted on.

Databases, warehouses, and lakes

Store	Optimized for	Example use
Database	Fast reads and writes of current records for applications (transactions).	Orders, customer profiles, inventory.
Data warehouse	Analysing large volumes of structured, historical data.	Sales trends across five years.
Data lake	Storing large amounts of raw data in many formats at low cost.	Logs, images, and files kept for later analysis or ML.

Types of data

- **First-party:** collected directly by your organization from its own customers and systems.
- **Second-party:** another organization's first-party data shared with you under agreement.

- **Third-party:** aggregated data bought from providers that did not collect it directly from your customers.
- **Structured:** fits rows and columns. **Semi-structured:** has tags or keys, such as JSON. **Unstructured:** images, audio, video, free text.

The data supply chain

Think of data moving through stages: **genesis** (created), **collection**, **processing** (cleaned and transformed), **storage**, **analysis**, and **activation** (used to take action, such as a personalized offer or an automated alert). Value is only realized at activation.

Data governance

Governance defines who owns data, who may access it, how quality is maintained, how long it is kept, and how it complies with law and policy. Without governance, data becomes untrusted, duplicated, or exposed.

Openness and interoperability

Open formats and interoperable platforms help break down **data silos**, where each team holds its own copy, and reduce **vendor lock-in**, where data becomes hard to move.

Scenario

Marketing, sales, and support each keep separate customer spreadsheets, and the numbers never match. The root problem is silos and missing governance, not a lack of storage.

Recall

- Can I tell a warehouse from a lake?
- Which stage of the data supply chain creates business value?

Choosing Google Cloud data products

Key concepts

- **Relational:** data in related tables with a fixed schema, queried with **SQL**.
- **Non-relational (NoSQL):** flexible models such as documents or wide columns, built for scale or flexible schemas.
- **Object storage:** files stored as objects with metadata, accessed by name, ideal for unstructured data.

Match the product to the need

Product	Best business fit
Cloud Storage	Object storage for unstructured data: backups, media, data lake files, archives.
Cloud SQL	Managed MySQL, PostgreSQL, or SQL Server for standard relational apps.
AlloyDB	PostgreSQL-compatible database for demanding transactional and analytical workloads.
Spanner	Relational database with strong consistency and horizontal scale, including across regions.
Bigtable	Wide-column NoSQL for very large, low-latency workloads such as time series or IoT.

Firestore	Serverless document database for web and mobile apps.
BigQuery	Serverless data warehouse for SQL analytics at very large scale.

Decision shortcut

Analytics on huge datasets: BigQuery. Files and unstructured data: Cloud Storage. Standard relational app: Cloud SQL. Global relational scale with strong consistency: Spanner. Massive low-latency key-based access: Bigtable. Mobile or web documents: Firestore.

Cloud Storage classes

Class	Access pattern
Standard	Frequently accessed ("hot") data.
Nearline	Accessed about once a month or less.
Coldline	Accessed about once a quarter or less.
Archive	Accessed less than once a year; lowest storage cost.
Autoclass	Automatically moves objects between classes based on access.

Colder classes cost less to store but more to retrieve, and some have minimum storage durations. Choose based on how often data is read, not only on price per gigabyte.

Migrating and modernizing databases

Organizations can move a database as-is to a managed equivalent (for example, a MySQL server to Cloud SQL), or modernize to a service with new capabilities (for example, to AlloyDB or Spanner). Managed databases reduce patching, backup, and scaling work.

Recall

- Which product for global, strongly consistent relational data?
- Which storage class for yearly compliance archives?

Analytics, business intelligence, and streaming

Looker and democratized data

Looker is Google Cloud's business intelligence platform. It lets people across the organization explore data, build dashboards and reports, and embed data into workflows, using consistent, governed metric definitions. "Democratizing data" means more people can answer their own questions without waiting for a specialist, while still working from the same trusted definitions.

Analysing data stored in **BigQuery** through Looker supports near real-time reports and dashboards without copying data into separate tools.

Why streaming analytics matters

Batch analytics answers "what happened yesterday". Streaming analytics answers "what is happening now". Fraud detection, live inventory, logistics tracking, and personalization all lose value if insight arrives hours late.

Modern data pipeline products

Product	Role
---------	------

Pub/Sub	Messaging service that ingests and distributes event streams between systems.
Dataflow	Managed service for batch and stream data processing pipelines.
Managed Service for Apache Spark	Runs open-source Spark workloads without managing clusters yourself (named this way in the current exam guide).

Scenario

A delivery company wants to show customers where their parcel is right now and alert operations if trucks fall behind. Events flow from vehicles into **Pub/Sub**, are processed in **Dataflow**, land in **BigQuery**, and are visualized in **Looker**.

Recall

- What does "democratize data" mean?
- Which product ingests event streams?

AI and ML fundamentals for business

Definitions

Term	Meaning
Artificial intelligence (AI)	Systems that perform tasks associated with human intelligence, such as understanding language or recognizing images.
Machine learning (ML)	A subset of AI in which systems learn patterns from data instead of following hand-written rules.
Generative AI	Models that create new content such as text, images, code, or audio.
Data analytics	Examining data to find patterns and answer questions.
Business intelligence	Tools and practices that turn data into reports and dashboards for decisions.

How agentic AI is reshaping work

The exam guide lists areas such as workforce productivity, customer support, sales experiences, product innovation, operations, and research. Agents can gather information, draft responses, and complete multi-step tasks, while people set goals, approve important actions, and remain accountable.

Problems ML solves well

- Replacing or simplifying complex rule-based systems, for example spam filtering.
- Finding insight in large structured and unstructured datasets.
- Scaling decisions, such as recommending products to millions of users.

ML is a poor fit when there is little data, when a simple rule works, or when every decision must be fully explainable by fixed logic.

Data quality

A model is only as good as its data. Know the dimensions named in the guide:

- **Completeness:** no important values missing.
- **Uniqueness:** no unwanted duplicates.
- **Timeliness:** data is current enough for the use.
- **Validity:** values follow the expected format and rules.
- **Accuracy:** values reflect reality.
- **Consistency:** the same fact matches across systems.

Explainable and responsible AI

Explainable AI helps people understand why a model produced a result. **Responsible AI** covers fairness, privacy, safety, accountability, and avoiding harmful bias. Business implications include regulatory compliance, customer trust, and reputational risk.

Recall

- Name the six data quality dimensions.
- When is ML the wrong tool?

Google Cloud AI offerings

Choosing an approach

The exam guide asks you to weigh **implementation speed**, **development effort**, **potential for business differentiation**, **technical expertise required**, and **choice and flexibility**. A useful ladder:

Option	Speed	Effort and skill	Differentiation
Pre-built AI agents and applications	Fastest	Lowest	Lower
Pre-trained APIs and foundation models	Fast	Low to moderate	Moderate
Custom models on your own data	Slower	Higher	Highest

Products named in the exam guide

- **Gemini Enterprise Agent Platform:** Google Cloud's platform for building, deploying, and managing AI agents and models. Know its general purpose and business use cases.
- **Pre-trained APIs and models:** Vision API (images), Cloud Translation API (languages), Speech-to-Text API (audio to text), Gemini models (multimodal generative AI), and the Agent Platform API.

- **Custom models:** Agent Studio and AutoML on Agent Platform let an organization create models from its own data, with AutoML reducing the ML expertise required.
- **AI Hypercomputer:** Google Cloud's integrated AI infrastructure: GPUs and TPUs, optimized software and open frameworks, and flexible consumption models for cost control.
- **BigQuery ML:** create and run ML models inside BigQuery using standard SQL, so analysts can experiment without moving data or learning a new language.

Tip

Product names in this area change often. Focus on the *category* of need (translate text, analyse images, build custom model, run ML with SQL) and the business tradeoff. The exam rewards matching the need to the right level of the ladder.

Scenario

An analytics team knows SQL, has sales data in BigQuery, and wants to forecast demand without hiring data scientists. **BigQuery ML** fits: no data movement and existing skills.

Recall

- Which option gives the most differentiation and why does it cost more?
- What are TPUs used for?

Moving to the cloud: migration and compute terms

Migration terms

Term	Meaning
Workload	An application or service and the resources it needs.
Discovery and assessment	Inventorying what exists and deciding what to do with each workload.
Retire	Switch off workloads that are no longer needed.
Retain	Keep a workload where it is for now.
Rehost (lift and shift)	Move as-is to cloud VMs. Fastest, fewest cloud benefits.
Replatform (move and improve)	Move with small changes, such as switching to a managed database.
Refactor	Change the code to use cloud-native services.
Reimagine	Redesign the solution entirely around new capabilities.

Compute terms

- **Virtual machine (VM):** a software-defined computer with its own OS.

- **Containers:** lightweight packages of an application and its dependencies that run consistently anywhere.
- **Microservices:** an application built as small independent services.
- **Serverless:** the provider manages servers and scaling; you supply code or containers and pay for use.
- **Spot VMs:** heavily discounted VMs that can be reclaimed at short notice; good for fault-tolerant batch work.
- **Kubernetes:** open-source system for orchestrating containers.
- **Autoscaling and load balancing:** automatically adjusting capacity and spreading traffic.
- **Managed services:** the provider runs operational tasks such as patching and backups.

Scenario

A company must exit its data centre in three months. The fastest path is to **rehost** most workloads, then replatform or refactor the most valuable ones afterwards.

Recall

- Rehost versus replatform: what changes?
- When are Spot VMs a bad choice?

Infrastructure, applications, and APIs

Infrastructure offerings

Product	Business value
Compute Engine	Run VMs on Google's infrastructure with full OS control; good for lift-and-shift.
Google Kubernetes Engine (GKE)	Managed Kubernetes to deploy and scale containerized apps with less operational burden.
Cloud Run	Serverless platform to run containers that scale automatically, including to zero.
Cloud Run functions	Event-driven serverless functions for small pieces of code.

More control means more operational effort. VMs give the most control; serverless gives the least operational burden.

Modern application development

Microservices, managed services, and automated delivery let teams deploy faster, scale parts independently, improve resilience, reduce cost, and run more efficiently.

Hybrid and multicloud products

The exam guide names AlloyDB Omni, BigQuery Omni, GKE Enterprise, Cloud SQL, and Looker as supporting hybrid or multicloud environments. The idea: a consistent way to run or analyse workloads across on-premises and other clouds.

APIs

An **application programming interface (API)** is a defined way for software to request data or actions from other software. Organizations can create new business opportunities by exposing public APIs to partners and developers, sometimes charging for access.

Apigee API Management helps design, secure, publish, monitor, and monetize APIs, with features such as developer portals, traffic control, and analytics.

Scenario

A bank wants fintech partners to access account data securely, with usage limits and analytics. **Apigee** fits: it manages, secures, and measures external API access.

Recall

- Which product runs containers without managing a cluster?
- What problem does Apigee solve?

Cloud security fundamentals

Threats and business impact

Threat	What it is
DDoS	Flooding a service with traffic to make it unavailable.
Ransomware	Malware that encrypts data and demands payment.
Cryptomining	Hijacking resources to mine cryptocurrency, driving up cost.
Malware and viruses	Malicious software that damages systems or steals data.
Phishing	Tricking people into revealing credentials or running malware.
Misconfiguration	Settings such as public storage that expose data by mistake; a leading cause of cloud incidents.
Unsecured third-party systems	Weak suppliers or integrations used as an entry point.
Physical damage	Fire, flood, or hardware failure.
LLM attacks	Attacks on AI models such as prompt injection or data leakage.

Cloud versus on-premises security

On-premises, the organization secures everything, from buildings to applications. In cloud, security is **shared**: the provider secures the underlying infrastructure, and the customer secures its data, identities, access, and configurations.

Core principles and terms

- **Control, compliance, confidentiality, integrity, availability** are the pillars of a cloud security model.
- **Least privilege**: give only the access needed. **Privileged access**: elevated rights that need tight control.
- **Zero trust**: never trust by network location; verify every request.
- **Security by default** and **security posture** (the overall security state).
- **Cyber resilience**: the ability to withstand and recover from attacks.
- **Data loss prevention, firewall, encryption, decryption.**

Encryption in three states

Data should be protected **at rest** (stored), **in transit** (moving across networks), and **in use** (being processed in memory, addressed by confidential computing).

Authentication, authorization, auditing

- **Authentication**: proving who you are, strengthened by multi-factor authentication or two-step verification (2SV).

- **Authorization:** what you are allowed to do, controlled in Google Cloud by IAM.
- **Auditing:** recording who did what and when.

SecOps terms

Security posture, threat intelligence (information about attackers and their methods), and threat response (detecting, investigating, and containing threats).

Recall

- Authentication versus authorization in one sentence each.
- What does encryption "in use" protect?

Google Cloud security and trust

Google Cloud describes a **defense-in-depth**, multilayered approach, from custom hardware and data centres up to AI agents.

Security offerings named in the exam guide

Offering	Business value
Google Threat Intelligence	Proactive insight into threats, drawing on Google's global visibility, Mandiant's frontline incident response, and VirusTotal's crowd-sourced detection.
Security Command Center	Discover, prioritize, and remediate risks and misconfigurations across the Google Cloud environment.
Google Security Operations	Unified platform to ingest security telemetry and speed up detection and response.
Gemini in Google Security Operations, AI Protection, Model Armor	AI-assisted security operations and protection for AI workloads and prompts.
Cloud VPC, Cloud VPN, Cloud Interconnect, firewalls	Private networking and secure connections to on-premises.
Cloud Armor	Protection for web apps and services against DDoS and web attacks.

Cloud Logging	Central collection of logs for audit and investigation.
IAM	Who can do what on which resource.
Sensitive Data Protection	Discover, classify, and de-identify sensitive data.
Confidential Computing	Protects data in use by processing it in hardware-based trusted environments.
Certificate Manager	Manage TLS certificates.
Identity-Aware Proxy	Controls application access by user identity and context instead of network location.

Securing the AI stack

Know that Google Cloud describes protection across every layer of AI: infrastructure, data, models, platform, and agents.

Secure-by-design platform

Google designs its own data centres, servers, networking, and security hardware and software, reducing reliance on third-party components.

Earning trust

Transparency reports, independent third-party audits and certifications, **digital sovereignty** options, **data residency** controls (choosing where data is stored), and compliance resources help organizations meet regulatory requirements.

Scenario

A healthcare provider needs to find patient identifiers accidentally stored in files and mask them before analysis.

Sensitive Data Protection fits.

Recall

- Which product gives a single view of cloud misconfigurations?
- Which product protects web apps from DDoS?

Cost control, operations, and reliability

CapEx to OpEx and TCO

On-premises IT is mostly **capital expenditure (CapEx)**: buying hardware up front. Cloud is mostly **operational expenditure (OpEx)**: paying as you use. **Total cost of ownership (TCO)** includes hardware, power, space, staff, licences, and downtime, not only the monthly bill.

Cloud financial governance

Decide who owns cloud costs, give teams visibility, and combine **people** (accountable owners and a FinOps culture), **process** (budgets and reviews), and **technology** (cost tools).

Resource hierarchy

Organization node → **folders** → **projects** → **resources**. Policies and access set higher up are **inherited** by everything below, which simplifies access control, security, compliance, and cost visibility.

Controlling consumption

- **Resource quota policies** cap how much can be used.

- **Budget threshold rules** send alerts at set spend levels. Budgets alert; they do not stop spending by themselves.
- **Cloud Billing reports** show where money goes.
- **Dynamic Workload Scheduler** helps obtain scarce accelerators for scheduled jobs efficiently.
- **Spot VMs** reduce cost for interruptible work.

Modern operations

Google Cloud Observability (the operations suite) includes Cloud Monitoring, Cloud Logging, Cloud Trace, Cloud Profiler, and Error Reporting, helping teams find and fix issues faster.

Reliability terms

- **Operational excellence, reliability, high availability.**
- Resilience through **redundancy, replication, scalable infrastructure**, and **backups**.
- Measure with the four golden signals: **latency, traffic, saturation, errors**.

DevOps and SRE

Term	Meaning
SLI	Service level indicator: a measurement, such as the percentage of successful requests.
SLO	Service level objective: an internal target for an SLI, such as 99.9% success.

SLA	Service level agreement: a contract with customers, usually with consequences if missed.
-----	--

Scenario

Finance wants a warning when a project's spending reaches 80% of its monthly plan. Create a **budget with a threshold alert**. If spending must be hard-capped, use quotas or automation as well.

Recall

- Draw the resource hierarchy from top to bottom.
- SLO versus SLA: which is a contract?

Practice questions and explanations

Answer each question before reading the explanation. These are original scenarios, not recalled Google Cloud questions.

Transformation and cloud concepts (1–6)

1. A company moved all servers to cloud VMs but kept manual release processes. What has it achieved?

A migration, not yet a digital transformation.

Transformation also changes processes, culture, and customer experience.

2. A business wants to keep a regulated system on-premises while building new apps in Google Cloud. Which architecture is this?

Hybrid cloud.

Hybrid combines on-premises or private resources with public cloud.

3. An app must survive the failure of a single data centre area within one geography. What should it use?

Multiple zones within a region.

Zones are isolated areas inside a region.

4. A team wants to deploy code without managing the OS or runtime. Which service model fits best?

PaaS (or serverless).

The provider manages infrastructure, OS, and runtime.

5. Which term describes a public specification that many vendors can implement?

An open standard.

Open source refers to published source code, which is different.

6. Which networking measure describes delay rather than capacity?

Latency.

Bandwidth is capacity per unit of time.

Data (7–12)

7. An analyst needs SQL queries over ten years of sales records totalling petabytes. Which product?

BigQuery.

It is a serverless warehouse for large-scale analytics.

8. A global booking system needs relational data with strong consistency across regions. Which product?

Spanner.

Cloud SQL is regional and suits standard relational apps.

9. Compliance records must be kept for seven years and are almost never read. Which storage class?

Archive.

It has the lowest storage cost for data accessed less than once a year.

10. A company buys aggregated consumer data from a provider. What type of data is this?

Third-party data.

It was not collected directly from the company's own customers.

11. Which stage of the data supply chain turns analysis into action?

Activation.

Value is realized when insight drives a decision or action.

12. Which product ingests millions of events per second from devices for downstream processing?

Pub/Sub.

Dataflow then processes the stream.

AI (13–18)

13. A company needs to translate support articles into ten languages next week. Which approach is best?

Use a pre-trained API such as Cloud Translation API.

It is fastest and needs no ML expertise.

14. Analysts who know SQL want to build a churn model on data already in BigQuery. What fits?

BigQuery ML.

It uses standard SQL and avoids moving data.

15. Customer records contain many duplicates. Which data quality dimension is affected?

Uniqueness.

Duplicates reduce uniqueness and can bias models.

16. When does a custom model make the most sense?

When the use case is core to competitive differentiation and relies on the organization's own data.

Custom models cost more effort but can create unique value.

17. Regulators ask why a loan model rejected an applicant. Which concept applies?

Explainable AI.

It helps people understand why a model produced a result.

18. What are TPUs?

Google-designed accelerators for ML workloads, part of AI Hypercomputer.

GPUs are also offered for AI workloads.

Modernization (19–23)

19. A workload is moved to cloud VMs with no code changes. Which migration approach?

Rehost (lift and shift).

Replatform adds small improvements, such as a managed database.

20. A startup wants to run a containerized web app that scales to zero when idle. Which product?

Cloud Run.

It is serverless for containers and scales automatically.

21. Which compute option is cheapest for batch jobs that can tolerate interruption?

Spot VMs.

They can be reclaimed at short notice, so avoid them for critical always-on services.

22. A retailer wants to sell access to its product catalogue to partners, with usage analytics. Which product?

Apigee API Management.

It secures, measures, and monetizes APIs.

23. Which product lets analysts query data held in another cloud without moving it?

BigQuery Omni.

It is named in the exam guide as a multicloud offering.

Security (24–27)

24. Who is responsible for granting user access to a company's data in Google Cloud?

The customer.

Google secures the infrastructure; the customer controls identities, access, and data.

25. A storage bucket was accidentally made public. What type of threat is this?

Misconfiguration.

Security Command Center can help find such issues.

26. A company wants to grant app access based on user identity and device context instead of VPN. Which product?

Identity-Aware Proxy.

It applies zero-trust access to applications.

27. What does multi-factor authentication strengthen?

Authentication.

Authorization, handled by IAM, controls what an authenticated user can do.

Operations (28–30)

28. A security policy must apply to every project in a department. Where should it be set?

On the department's folder.

Policies are inherited by projects and resources below.

29. Does a budget alert stop spending when its threshold is reached?

No. It notifies.

Use quotas or automation to enforce limits.

30. A team commits to customers that its service will be available 99.9% of each month, with credits if missed. What is this?

An SLA.

An SLO is an internal target; an SLI is the measurement.

Six-week plan, cheat sheet, and glossary

Week	Focus	Output
1	Digital transformation, cloud models, global infrastructure	A one-page explanation of IaaS, PaaS, and SaaS for a non-technical colleague.
2	Data value, types, supply chain, governance, data products	A product decision table from memory.
3	Analytics, BI, streaming; AI and ML fundamentals	One end-to-end data pipeline sketch for a business you know.
4	Google Cloud AI offerings; migration and compute	An AI approach ladder with one example for each rung.
5	Infrastructure, APIs, security fundamentals and offerings	A shared responsibility list for one workload.
6	Cost, hierarchy, operations, SRE; timed practice	Two timed practice sets; book the exam when results are consistently strong.

Google Cloud's official Cloud Digital Leader learning path is a good companion to this guide.

Decision cheat sheet

- **Analytics at scale:** BigQuery. **BI and dashboards:** Looker.

- **Files and unstructured data:** Cloud Storage. **Standard relational:** Cloud SQL.
- **Global consistent relational:** Spanner. **Massive low-latency NoSQL:** Bigtable. **App documents:** Firestore.
- **Streams:** Pub/Sub in, Dataflow processes.
- **Quick AI:** pre-trained APIs. **SQL ML:** BigQuery ML. **Differentiation:** custom models.
- **Full control:** Compute Engine. **Containers managed:** GKE. **Serverless containers:** Cloud Run.
- **APIs:** Apigee. **Web DDoS:** Cloud Armor. **Posture:** Security Command Center.
- **Hierarchy:** organization → folders → projects → resources, with inheritance.
- **Budgets alert; quotas limit.**
- **SLI measures, SLO targets, SLA contracts.**

Glossary

CapEx / OpEx

Up-front capital spending / ongoing operating spending.

Data lake

Low-cost store for raw data in many formats.

Data warehouse

Store optimized for analysing structured historical data.

IAM

Identity and Access Management: who can do what on which resource.

Lift and shift

Rehosting a workload in the cloud without changes.

Serverless

Provider manages servers and scaling; you pay for use.

TCO

Total cost of ownership, including hidden costs.

TPU

Tensor Processing Unit, Google's ML accelerator.

Zero trust

Verify every request; never trust by network location alone.

Zone / region

Isolated area within a region / geographic location.

Before test day, compare this guide with Google Cloud's official exam guide, since product names and emphasis change, and rework every question you missed. The best answer usually meets the stated business goal with the most managed, least complex option.