# Google Cloud

## DEVELOPER'S CHEAT SHEET

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Feedback? 🐦 @gregsramblings

## COMPUTE

| | |
|---|---|
| Cloud Run | Serverless for containerized applications |
| Cloud Functions | Event-driven serverless functions |
| Compute Engine | VMs, GPUs, TPUs, Disks |
| Kubernetes Engine (GKE) | Managed Kubernetes/containers |
| App Engine | Managed app platform |
| Bare Metal Solution | Hardware for specialized workloads |
| Preemptible VMs | Short-lived compute instances |
| Shielded VMs | Hardened VMs |
| Sole-tenant nodes | Dedicated physical servers |

## STORAGE

| | |
|---|---|
| Cloud Filestore | Managed NFS server |
| Cloud Storage | Multi-class multi-region object storage |
| Persistent Disk | Block storage for VMs |
| Local SSD | VM locally attached SSDs |

## DATABASE

| | |
|---|---|
| Cloud Bigtable | Petabyte-scale, low-latency, non-relational |
| Cloud Firestore | Serverless NoSQL document DB |
| Cloud Memorystore | Managed Redis and Memcached |
| Cloud Spanner | Horizontally scalable relational DB |
| Cloud SQL | Managed MySQL,PostgreSQL,SQL Server |

## DATA AND ANALYTICS

| | |
|---|---|
| BigQuery | Data warehouse/analytics |
| BigQuery BI Engine | In-memory analytics engine |
| BigQuery ML | BigQuery model training/serving |
| Cloud Composer | Managed workflow orchestration service |
| Cloud Data Fusion | Graphically manage data pipelines |
| Cloud Dataflow | Stream/batch data processing |
| Cloud Dataprep | Visual data wrangling |
| Cloud Dataproc | Managed Spark and Hadoop |
| Cloud Pub/Sub | Global real-time messaging |
| Data Catalog | Metadata management service |
| Data Studio | Collaborative data exploration/dashboarding |
| Looker | Enterprise BI and Analytics |

## HYBRID AND MULTI-CLOUD

| | |
|---|---|
| Anthos | Enterprise hybrid/multi-cloud platform |
| Anthos GKE | Hybrid/on-prem Kubernetes Engine |
| Anthos Config Management | Policy and security automation |
| Anthos Service Mesh | Managed service mesh (Istio) |
| Cloud Run for Anthos | Serverless development for Anthos |
| GCP Marketplace for Anthos | Pre-configured containerized apps |
| Migrate for Anthos | Migrate VMs to Kubernetes Engine |
| Operations | Monitoring, logging, troubleshooting |
| Cloud Build | Continuous integration/delivery platform |
| Traffic Director | Service mesh traffic management |
| Apigee API Management | API management, development, security |

## AI/ML

| | |
|---|---|
| AI Hub | Hosted AI component sharing |
| AI Platform Data Labeling | Data labeling by humans |
| AI Platform Deep Learning VMs | Preconfigured VMs for deep learning |
| AI Platform Deep Learning Containers | Preconfigured containers for deep learning |
| AI Platform Notebooks | Managed JupyterLab notebook instances |
| AI Platform Pipelines | Hosted ML workflows |
| AI Platform Predictions | Autoscaled model serving |
| AI Platform Training | Distributed AI training |
| AI Platform | Managed platform for ML |
| AutoML Natural Language | Custom text models |
| AutoML Tables | Custom structured data models |
| AutoML Translation | Custom domain-specific translation |
| AutoML Video Intelligence | Custom video annotation models |
| AutoML Vision | Custom image models |
| Cloud Natural Language API | Text parsing and analysis |
| Cloud Speech-To-Text API | Convert audio to text |
| Cloud Talent Solutions API | Job search with ML |
| Cloud Text-To-Speech API | Convert text to audio |
| Cloud TPU | Hardware acceleration for ML |
| Cloud Translation API | Language detection and translation |
| Cloud Video Intelligence API | Scene-level video annotation |
| Cloud Vision API | Image recognition and classification |
| Contact Center AI | AI in your contact center |
| Dialogflow | Create conversational interfaces |
| Document AI | Analyze, classify, search documents |
| Explainable AI | Understand ML model predictions |
| Recommendations AI | Create custom recommendations |
| Vision Product Search | Visual search for products |

## NETWORKING

| | |
|---|---|
| Carrier Peering | Peer through a carrier |
| Direct Peering | Peer with GCP |
| Dedicated Interconnect | Dedicated private network connection |
| Partner Interconnect | Connect on-prem network to VPC |
| Cloud Armor | DDoS protection and WAF |
| Cloud CDN | Content delivery network |
| Cloud DNS | Programmable DNS serving |
| Cloud Load Balancing | Multi-region load distribution/balancing |
| Cloud NAT | Network address translation service |
| Cloud Router | VPC/on-prem network route exchange (BGP) |
| Cloud VPN (HA) | VPN (Virtual private network connection) |
| Network Service Tiers | Price vs performance tiering |
| Network Telemetry | Network telemetry service |
| Traffic Director | Service mesh traffic management |
| Google Cloud Service Mesh | Service-aware network management |
| Virtual Private Cloud | Software defined networking |
| VPC Service Controls | Security perimeters for API-based services |
| Network Intelligence Center | Network monitoring and topology |

## GAMING

| | |
|---|---|
| Google Cloud Game Servers | Orchestrate Agones clusters |

## INTERNET OF THINGS (IOT)

| | |
|---|---|
| Cloud IoT Core | Manage devices, ingest data |

## IDENTITY AND SECURITY

| | |
|---|---|
| Access Transparency | Audit cloud provider access |
| Binary Authorization | Kubernetes deploy-time security |
| Cloud Audit Logs | Audit trails for GCP |
| Cloud Data Loss Prevention API | Classify and redact sensitive data |
| Cloud HSM | Hardware security module service |
| Cloud EKM | External keys you control |
| Cloud IAM | Resource access control |
| Cloud Identity | Manage users, devices & apps |
| Cloud Identity-Aware Proxy | Identity-based app access |
| Cloud KMS | Hosted key management service |
| Cloud Resource Manager | Cloud project metadata management |
| Cloud Security Command Center | Security management & data risk platform |
| Cloud Security Scanner | App engine security scanner |
| Context-aware Access | End-user attribute-based access control |
| Event Threat Detection | Scans for suspicious activity |
| Managed Service for Microsoft Active Directory | Managed Microsoft Active Directory |
| Secret Manager | Store and manage secrets |
| Security Key Enforcement | Two-step key verification |
| Shielded VMs | Hardened VMs |

## IDENTITY AND SECURITY (CONT.)

| | |
|---|---|
| Titan Security Key | Two-factor authentication (2FA) device |
| VPC Service Controls | VPC data constraints |

## MANAGEMENT TOOLS

| | |
|---|---|
| Cloud APIs | APIs for cloud services |
| Cloud Billing API | Programmatically manage GCP billing |
| Cloud Billing | Billing and cost management tools |
| Cloud Console | Web-based management console |
| Cloud Deployment Manager | Templated infrastructure deployment |
| Cloud Mobile App | iOS/Android GCP manager app |
| Private Catalog | Internal Solutions Catalog |
| Cloud Debugger | Live production debugging |
| Error Reporting | App error reporting |
| Cloud Logging | Centralized logging |
| Cloud Monitoring | Infrastructure and application monitoring |
| Cloud Profiler | CPU and heap profiling |
| Cloud Trace | App performance insights |
| Transparent SLIs | Monitor GCP services |

## DEVELOPER TOOLS

| | |
|---|---|
| Cloud Build | Continuous integration/delivery platform |
| Cloud Code for IntelliJ | IntelliJ GCP tools |
| Cloud Code for VS Code | VS Code GCP tools |
| Cloud Code | Cloud native IDE extensions |
| Cloud Scheduler | Managed cron job service |
| Cloud SDK | CLI for GCP |
| Cloud Shell | Browser-based terminal/CLI |
| Cloud Source Repositories | Hosted private git repos |
| Cloud Tasks | Asynchronous task execution |
| Cloud Tools for Eclipse | Eclipse GCP tools |
| Cloud Tools for Visual Studio | Visual Studio GCP tools |
| Container Analysis | Automated security scanning |
| Container Registry | Private container registry/storage |
| Artifact Registry | Universal package manager |
| Gradle App Engine Plugin | Gradle App Engine plugin |
| Maven App Engine Plugin | Maven App Engine plugin |

## MIGRATION TO GCP

| | |
|---|---|
| BigQuery Data Transfer Service | Bulk import analytics data |
| Cloud Data Transfer | Data migration tools/CLI |
| Google Transfer Appliance | Rentable data transport box |
| Migrate for Anthos | Migrate VMs to GKE containers |
| Migrate for Compute Engine | Compute Engine migration tools |
| Migrate from Amazon Redshift | Migrate from Redshift to BigQuery |
| Migrate from Teradata | Migrate from Teradata to BigQuery |
| Storage Transfer Service | Online/on-premises data transfer |
| VM Migration | VM migration tools |
| Cloud Foundation Toolkit | Infrastructure as Code templates |

## API PLATFORM AND ECOSYSTEMS

| | |
|---|---|
| API Analytics | API metrics |
| API Monetization | Monetize APIs |
| Apigee API Platform | Develop, secure, monitor APIs |
| Apigee Hybrid | Manage hybrid/multi-cloud API environments |
| Apigee Sense | API protection from attacks |
| Cloud Endpoints | Cloud API gateway |
| Cloud Healthcare API | Healthcare system GCP interoperability |
| Developer Portal | API management portal |
| GCP Marketplace | Partner & open source marketplace |

## GOOGLE MAPS PLATFORM

| | |
|---|---|
| Directions API | Get directions between locations |
| Distance Matrix API | Multi-origin/destination travel times |
| Geocoding API | Convert address to/from coordinates |
| Geolocation API | Derive location without GPS |
| Maps Embed API | Display iframe embedded maps |
| Maps JavaScript API | Dynamic web maps |
| Maps SDK for Android | Maps for Android apps |
| Maps SDK for iOS | Maps for iOS apps |
| Maps Static API | Display static map images |
| Maps SDK for Unity | Unity SDK for games |
| Maps URLs | URL scheme for maps |
| Places API | Rest-based Places features |

## GOOGLE MAPS PLATFORM (CONT.)

| | |
|---|---|
| Places Library, Maps JS API | Places features for web |
| Places SDK for Android | Places features for Android |
| Places SDK for iOS | Places feature for iOS |
| Roads API | Convert coordinates to roads |
| Street View Static API | Static street view images |
| Street View Service | Street view for JavaScript |
| Time Zone API | Convert coordinates to timezone |

## G SUITE PLATFORM

| | |
|---|---|
| Admin SDK | Manage G Suite resources |
| AMP for Email | Dynamic interactive email |
| Apps Script | Extend and automate everything |
| Calendar API | Create and manage calendars |
| Classroom API | Provision and manage classrooms |
| Cloud Search | Unified search for enterprise |
| Docs API | Create and edit documents |
| Drive Activity API | Retrieve Google Drive activity |
| Drive API | Read and write files |
| Drive Picker | Drive file selection widget |
| Email Markup | Interactive email using schema.org |
| G Suite Add-ons | Extend G Suite apps |
| G Suite Marketplace | Storefront for integrated applications |
| Gmail API | Enhance Gmail |
| Hangouts Chat Bots | Conversational bots in chat |
| People API | Manage user's Contacts |
| Sheets API | Read and write spreadsheets |
| Slides API | Create and edit presentations |
| Task API | Search, read & update Tasks |
| Vault API | Manage your organization's eDiscovery |

## MOBILE (FIREBASE)

| | |
|---|---|
| Cloud Firestore | Document store and sync |
| Cloud Functions for Firebase | Event-driven serverless applications |
| Cloud Storage for Firebase | Object storage and serving |
| Crashlytics | Crash reporting and analytics |
| Firebase A/B Testing | Create A/B test experiments |
| Firebase App Distribution | Trusted tester early access |
| Firebase Authentication | Drop-in authentication |
| Firebase Cloud Messaging | Send device notifications |
| Firebase Dynamic Links | Link to app content |
| Firebase Extensions | Pre-packaged development solutions |
| Firebase Hosting | Web hosting with CDN/SSL |
| Firebase In-App Messaging | Send in-app contextual messages |
| Firebase Performance Monitoring | App/web performance monitoring |
| Firebase Predictions | Predict user targeting |
| Firebase Realtime Database | Real-time data synchronization |
| Firebase Remote Config | Remotely configure installed apps |
| Firebase Test Lab | Mobile testing device farm |
| Google Analytics for Firebase | Mobile app analytics |
| ML Kit for Firebase | ML APIs for mobile |

## ADDITIONAL RESOURCES

| | |
|---|---|
| Google Cloud Home Page | cloud.google.com |
| Google Cloud Blog | cloud.google.com/blog |
| Google Cloud Open Source | opensource.google/projects/list/cloud |
| GCP Medium Publication | medium.com/google-cloud |
| Apigee Blog | apigee.com/about/blog |
| Firebase Blog | firebase.googleblog.com |
| G Suite Developers Blog | gsuite-developers.googleblog.com |
| G Suite GitHub | github.com/gsuitedevs |
| G Suite Twitter | twitter.com/gsuitedevs |
| Google Cloud Certifications | cloud.google.com/certification |
| Google Cloud System Status | status.cloud.google.com |
| Google Cloud Training | cloud.google.com/training |
| Google Developers Blog | developers.googleblog.com |
| Google Maps Platform Blog | mapsplatform.googleblog.com |
| Google Open Source Blog | opensource.googleblog.com |
| Google Security Blog | security.googleblog.com |
| Kaggle Home Page | www.kaggle.com |
| Kubernetes Blog | kubernetes.io/blog |
| Regions and Network Map | cloud.google.com/about/locations |