

# Compare AWS and Azure services to Google Cloud

Last updated: February 16, 2022

This table lists [generally available](#) (/products#general-availability) Google Cloud services and maps them to similar offerings in Amazon Web Services (AWS) and Microsoft Azure. You can filter the table with keywords, such as a service type, capability, or product name. We welcome your to help us keep this information up to date!

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Filter by entering a product name or characteristic.

Service category ▼	Service type	Google Cloud product	Google Cloud product description	AWS offering	Azure offering
App Modernization	CI/CD	<a href="https://cloud.google.com/build">Cloud Build</a> (https://cloud.google.com/build)	Build, test, and deploy on Google Cloud serverless CI/CD platform	AWS CodeBuild, AWS CodeDeploy, AWS CodePipeline	Azure DevOps, Github Enterprise
App Modernization	Execution Control	<a href="https://cloud.google.com/tasks">Cloud Tasks</a> (https://cloud.google.com/tasks)	Control and observe asynchronous service requests between independent applications using this zonal, execution-control service.	Amazon Simple Queue Service (SQS), Amazon Simple Notification Service (SNS)	Azure Service Bus, Azure Storage Queues
App Modernization	Multi-cloud	<a href="https://cloud.google.com/anthos">Anthos</a> (https://cloud.google.com/anthos)	Anthos is a managed application platform that extends Google Cloud services and engineering practices to your environments so you can modernize applications faster and establish operational consistency across them.	Amazon EKS Anywhere, Amazon ECS Anywhere	Azure Arc
App modernization	Multi-cloud	<a href="https://cloud.google.com/anthos/clusters/">Anthos Clusters</a> (https://cloud.google.com/anthos/clusters/)	Extend GKE to work in multiple environments, including attached clusters, AWS, Azure, bare metal, and VMWare.	Amazon EKS Anywhere	
App modernization	Multi-cloud	<a href="https://cloud.google.com/anthos/config-management">Anthos Config Management</a> (https://cloud.google.com/anthos/config-management)	Automate policy and security at scale for your hybrid and multi-cloud Kubernetes deployments.	Chef Automate AWS OpsWorks	Azure App Configuration
App modernization	Multi-cloud	<a href="https://cloud.google.com/config-connector/docs/overview">Config Connector</a> (https://cloud.google.com/config-connector/docs/overview)	Manage Google Cloud resources through Kubernetes.	AWS Controllers for Kubernetes	Azure Service Operator
App modernization	Multi-cloud	<a href="https://cloud.google.com/container-optimized-os/docs">Container-Optimized OS</a> (https://cloud.google.com/container-optimized-os/docs)	Efficiently and securely run Docker containers on Compute Engine VMs.	AWS Bottlerocket	Azure Container Instances
App modernization	Multi-cloud	<a href="https://cloud.google.com/hybrid-connectivity">Hybrid Connectivity</a> (https://cloud.google.com/hybrid-connectivity)	Connect your infrastructure to Google Cloud on your terms, from anywhere.	AWS Direct Connect	Hybrid Connections
App modernization	Multi-cloud serverless	<a href="https://cloud.google.com/anthos/run">Cloud Run for Anthos</a> (https://cloud.google.com/anthos/run)	Flexible serverless development for multicloud environments.		

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App modernization	Service mesh	<a href="https://cloud.google.com/anthos/service-mesh">Anthos Service Mesh</a> (https://cloud.google.com/anthos/service-mesh)	Simplify, manage, and secure complex microservices architectures with this fully managed service.	AWS App Mesh	Azure Service Fabric
App modernization	Service mesh	<a href="https://cloud.google.com/network-connectivity/docs/router">Cloud Router</a> (https://cloud.google.com/network-connectivity/docs/router)	Dynamically exchange routes between your Virtual Private Cloud (VPC) and on-premises networks by using Border Gateway Protocol (BGP).	Amazon VPC	Azure VPN Gateway
App modernization	Service mesh	<a href="https://cloud.google.com/istio/docs/istio-on-gke/overview">Istio on Google Kubernetes Engine</a> (https://cloud.google.com/istio/docs/istio-on-gke/overview)	Quickly create GKE clusters with all the components you need to create and run an Istio service mesh in a single step.	Istio on Amazon EKS	Istio in Azure Kubernetes Service
App modernization	Service mesh	<a href="https://cloud.google.com/traffic-director">Traffic Director</a> (https://cloud.google.com/traffic-director)	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.	AWS App Mesh	Azure Service Fabric Mesh
Artificial Intelligence & Machine Learning (AI/ML)	Cloud cost optimization	<a href="https://cloud.google.com/recommender">Recommender</a> (https://cloud.google.com/recommender)	Optimize your Google Cloud usage with proactive, easily actionable recommendations.	AWS Cost Optimization	Azure Advisor
Artificial Intelligence & Machine Learning (AI/ML)	Conversational interface	<a href="https://cloud.google.com/dialogflow">Dialogflow</a> (https://cloud.google.com/dialogflow)	Lifelike conversational AI with state-of-the-art virtual agents.	Amazon Lex	Azure Conversational AI
Artificial Intelligence & Machine Learning (AI/ML)	Document Understanding	<a href="https://cloud.google.com/document-ai">Document AI</a> (https://cloud.google.com/document-ai)	Automate data capture at scale to reduce document processing costs.	Amazon Textract	Azure Form Recognizer
Artificial Intelligence & Machine Learning (AI/ML)	ML for structured data	<a href="https://cloud.google.com/automl-tables">Vertex AI AutoML tabular models</a> (https://cloud.google.com/automl-tables)	Automatically build and deploy state-of-the-art machine learning models on structured data.	Amazon SageMaker	AutoML in Azure ML Studio
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/deep-learning-vm">Deep Learning VM Images</a> (https://cloud.google.com/deep-learning-vm)	Preconfigured VMs for deep learning applications.	Amazon SageMaker, Amazon EC2 P3	Azure Data Science Virtual Machines
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/tensorflow-enterprise">TensorFlow Enterprise</a> (https://cloud.google.com/tensorflow-enterprise)	Reliability and performance for AI applications with enterprise-grade support and managed services.	Tensorflow on AWS	Azure Databricks
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/vertex-ai">Vertex AI</a> (https://cloud.google.com/vertex-ai)	Train your machine learning models at scale, to host your trained model in the cloud, and to use your model to make predictions about new data.	Amazon SageMaker	Azure AI Platform

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Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/vertex-ai/docs/start/automl-model-types">Vertex AI AutoML models</a> (https://cloud.google.com/vertex-ai/docs/start/automl-model-types)	Train high-quality custom machine learning models with minimal effort and machine learning expertise.	Amazon SageMaker Autopilot	Azure Cognitive Services
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/vertex-ai/docs/training/custom-training">Vertex AI custom training</a> (https://cloud.google.com/vertex-ai/docs/training/custom-training)	Host your machine learning models and train them with the power and flexibility of TensorFlow, scikit-learn, XGBoost, and custom containers.	Amazon SageMaker	Azure Machine Learning
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/vertex-ai/docs/predictions/getting-predictions">Vertex AI custom-trained models</a> (https://cloud.google.com/vertex-ai/docs/predictions/getting-predictions)	Host your trained models so that you can send them prediction requests with the power and flexibility of TensorFlow, scikit-learn, and XGBoost.	Amazon SageMaker	Azure AI Platform
Artificial Intelligence & Machine Learning (AI/ML)	ML platform	<a href="https://cloud.google.com/vertex-ai-workbench">Vertex AI Workbench</a> (https://cloud.google.com/vertex-ai-workbench)	Create instances running JupyterLab that come pre-installed with the latest data science and machine learning frameworks in a single click.	Amazon SageMaker	Azure Notebooks
Artificial Intelligence & Machine Learning (AI/ML)	Natural language processing	<a href="https://cloud.google.com/natural-language">Natural Language AI</a> (https://cloud.google.com/natural-language)	Derive insights from unstructured text using Google machine learning.	Amazon Comprehend	Azure Text Analytics
Artificial Intelligence & Machine Learning (AI/ML)	Personalization	<a href="https://cloud.google.com/recommendations">Recommendations AI</a> (https://cloud.google.com/recommendations)	Deliver highly personalized product recommendations at scale.	Amazon Personalize	Azure Personalizer
Artificial Intelligence & Machine Learning (AI/ML)	Speech Recognition	<a href="https://cloud.google.com/speech-to-text">Speech-to-Text</a> (https://cloud.google.com/speech-to-text)	Accurately convert speech into text using an API powered by Google's AI technologies.	Amazon Transcribe	Azure Speech to Text
Artificial Intelligence & Machine Learning (AI/ML)	Speech Synthesis	<a href="https://cloud.google.com/text-to-speech">Text-to-Speech</a> (https://cloud.google.com/text-to-speech)	Convert text into natural-sounding speech using an API powered by Google's AI technologies.	Amazon Polly	Azure Text to Speech
Artificial Intelligence & Machine Learning (AI/ML)	Translation	<a href="https://cloud.google.com/translate">Translation AI</a> (https://cloud.google.com/translate)	Dynamically translate between languages using Google machine learning.	Amazon Translate	Azure Translator
Artificial Intelligence & Machine Learning (AI/ML)	Video intelligence	<a href="https://cloud.google.com/video-intelligence/docs">Video Intelligence API</a> (https://cloud.google.com/video-intelligence/docs)	Quickly categorize video content using thousands of predefined labels and creating additional custom labels to suit your specific needs.	Amazon Rekognition Video	Azure Video Indexer
Artificial Intelligence & Machine Learning (AI/ML)	Image Recognition	<a href="https://cloud.google.com/vision">Vision AI</a> (https://cloud.google.com/vision)	Derive insights from your images in the cloud or at the edge, or use pre-trained Vision API models to detect emotion, understand text, and more.	Amazon Rekognition Image	Azure Computer Vision

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Compute	Core compute	<a href="https://cloud.google.com/gpu">Cloud GPUs</a> (https://cloud.google.com/gpu)	Train and run machine learning models faster than before.	Amazon Elastic GPU Compute Cloud Optimized (EC2) P3	VMs
Compute	Core compute	<a href="https://cloud.google.com/tpu">Cloud TPU</a> (https://cloud.google.com/tpu)	Train and run machine learning models faster than ever before.	AWS UltraClusters	Azure Virtual Machines
Compute	Core compute	<a href="https://cloud.google.com/compute">Compute Engine</a> (https://cloud.google.com/compute)	Accelerate your digital transformation with high-performance VMs.	Amazon Elastic Compute Cloud Machines (EC2)	Azure Virtual Machines
Compute	Core compute	<a href="https://cloud.google.com/compute/docs/autoscaler">Compute Engine Autoscaler</a> (https://cloud.google.com/compute/docs/autoscaler)	Automatically add or delete VM instances from a managed instance group (MIG) based on increases or decreases in load.	AWS Autoscaling	Azure Autoscale, Azure Virtual Machine Scale Sets
Compute	Core compute	<a href="https://cloud.google.com/compute/docs/oslogin">OS Login</a> (https://cloud.google.com/compute/docs/oslogin)	Manage SSH access to your instances using IAM without having to create and manage individual SSH keys.	Amazon EC2 Instance Connect	
Compute	Core compute	<a href="https://cloud.google.com/persistent-disk">Persistent Disk</a> (https://cloud.google.com/persistent-disk)	Reliable, high-performance block storage for VM instances.	Amazon Elastic Block Store (EBS)	Azure Managed Disks
Compute	Core compute	<a href="https://cloud.google.com/compute/docs/ssh-in-browser">SSH from the browser</a> (https://cloud.google.com/compute/docs/ssh-in-browser)	Connect to a Compute Engine virtual machine (VM) instance using SSH with the Google Cloud console in your web browser.	AWS EC2 Instance Connect	Azure Bastion
Compute	Dedicated VMs	<a href="https://cloud.google.com/compute/docs/nodes/sole-tenant-nodes">Sole-tenant nodes</a> (https://cloud.google.com/compute/docs/nodes/sole-tenant-nodes)	Host your VMs on hardware dedicated only to your project.	Amazon EC2 Dedicated Host	Azure Dedicated Host
Compute	FaaS	<a href="https://cloud.google.com/functions">Cloud Functions</a> (https://cloud.google.com/functions)	Run your code with zero server management with this scalable, pay-as-you-go functions-as-a-service (FaaS) offering.	AWS Lambda	Azure Functions Serverless Compute
Compute	Infrastructure modernization	<a href="https://cloud.google.com/solutions/sap/docs/overview-of-sap-on-google-cloud">SAP on Google Cloud</a> (https://cloud.google.com/solutions/sap/docs/overview-of-sap-on-google-cloud)	Run SAP on Google Cloud.	SAP on AWS	SAP on Azure
Compute	PaaS	<a href="https://cloud.google.com/appengine">App Engine</a> (https://cloud.google.com/appengine)	Build highly scalable applications on a fully managed serverless platform.	AWS Elastic Beanstalk	Azure App Service
Compute	VMware connectivity	<a href="https://cloud.google.com/vmware-engine">VMware Engine</a> (https://cloud.google.com/vmware-engine)	Migrate and run your VMware workloads on Google Cloud.	VMware Cloud on AWS	Azure VMware Solution
Containers	CaaS	<a href="https://cloud.google.com/kubernetes-engine">Google Kubernetes Engine</a> (https://cloud.google.com/kubernetes-engine)	Secured and managed Kubernetes service with four-way autoscaling and multi-cluster support.	Amazon Elastic Kubernetes Service (EKS), Amazon Elastic Container Service (ECS)	Azure Kubernetes Service (AKS)
Containers	Container registry	<a href="https://cloud.google.com/artifact-registry">Artifact Registry</a> (https://cloud.google.com/artifact-registry)	Store, manage, and secure your container images.	Amazon Elastic Container Registry (ECR)	Azure Container Registry

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Containers	Container Security	<a href="https://cloud.google.com/binary-authorization">Binary Authorization</a> (https://cloud.google.com/binary-authorization)	Require images to be signed by trusted authorities during the development process and then enforce signature validation when deploying.		
Containers	Containers without infrastructure	<a href="https://cloud.google.com/run">Cloud Run</a> (https://cloud.google.com/run)	Develop and deploy highly scalable containerized applications on a fully managed serverless platform.	AWS Fargate, AWS Lambda, AWS App Runner	Azure Container Instances
Containers	Gaming	<a href="https://cloud.google.com/game-servers">Game Servers</a> (https://cloud.google.com/game-servers)	Deliver seamless multiplayer gaming experiences with simpler multicloud management.	Amazon GameLift	Azure for Gaming
Data analytics	Business intelligence	<a href="https://cloud.google.com/looker">Looker</a> (https://cloud.google.com/looker)	Explore, share, and visualize your company's data so that you can make better business decisions.	Amazon QuickSight	Microsoft Power BI
Data analytics	Data discovery and metadata management	<a href="https://cloud.google.com/data-catalog">Data Catalog</a> (https://cloud.google.com/data-catalog)	Discover, understand, and manage data at scale with a powerful search UI with seamless integration to BigQuery, Pub/Sub, Cloud Storage, secured via IAM and Cloud Data Loss Prevention.	AWS Glue Data Catalog	Azure Purview, Azure Data Explorer
Data analytics	Data Integration / ETL	<a href="https://cloud.google.com/data-fusion">Cloud Data Fusion</a> (https://cloud.google.com/data-fusion)	Activate fully managed, cloud-native data integration at scale.	Amazon AppFlow, Amazon Data Pipeline, AWS Glue	Azure Data Factory
Data analytics	Data warehouse	<a href="https://cloud.google.com/bigquery">BigQuery</a> (https://cloud.google.com/bigquery)	Serverless, highly scalable, and cost-effective multicloud data warehouse designed for business agility.	Amazon Athena, Amazon Redshift	Azure Synapse Analytics
Data analytics	Data wrangling	<a href="https://cloud.google.com/dataprep">Dataprep by Trifacta</a> (https://cloud.google.com/dataprep)	An intelligent cloud data service to visually explore, clean, and prepare data for analysis and machine learning.	Amazon SageMaker Data Wrangler	Azure Data Factory
Data analytics	Messaging	<a href="https://cloud.google.com/pubsub">Pub/Sub</a> (https://cloud.google.com/pubsub)	Messaging and ingestion for event-driven systems and streaming analytics.	Amazon Simple Notification Service (SNS), Amazon Simple Queueing Service (SQS)	Azure Service Bus Messaging
Data analytics	Messaging	<a href="https://cloud.google.com/pubsub/lite/docs">Pub/Sub Lite</a> (https://cloud.google.com/pubsub/lite/docs)	Send and receive messages between independent applications using this zonal, real-time messaging service.	Amazon Simple Notification Service, Amazon Simple Queueing Service	Azure Service Bus Messaging
Data analytics	Open source processing	<a href="https://cloud.google.com/dataproc">Dataproc</a> (https://cloud.google.com/dataproc)	Deploy open-source data and analytics processing services (Apache Hadoop, Apache Spark, etc.) with improved efficiency and security.	Amazon Elastic MapReduce (EMR), AWS Batch, AWS Glue	Azure Data Lake Analytics, HDInsight

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Data analytics	Query service	<a href="https://cloud.google.com/bigquery">BigQuery</a> (https://cloud.google.com/bigquery)	Analyze petabytes of data at scale using ANSI SQL and gain 26%–34% lower three-year total cost of ownership (TCO) than competing cloud data warehouses.	Amazon Redshift Spectrum	Azure Synapse Analytics
Data analytics	Stream data ingest	<a href="https://cloud.google.com/pubsub">Pub/Sub</a> (https://cloud.google.com/pubsub)	Create scalable messaging and ingestion for event-driven systems and streaming analytics.	Amazon Kinesis	Azure Event Hubs
Data analytics	Stream data processing	<a href="https://cloud.google.com/dataflow">Dataflow</a> (https://cloud.google.com/dataflow)	Unify stream and batch data processing that's serverless, fast, and cost-effective.	Amazon Kinesis	Azure Stream Analytics
Data analytics	Workflow orchestration	<a href="https://cloud.google.com/composer">Cloud Composer</a> (https://cloud.google.com/composer)	Author, schedule, and monitor pipelines that span across hybrid and multi-cloud environments using this fully managed workflow orchestration service built on Apache Airflow.	Amazon Data Pipeline, AWS Glue, Managed Workflows for Apache Airflow	Azure Data Factory
Database	Document data storage	<a href="https://cloud.google.com/firestore">Firestore</a> (https://cloud.google.com/firestore)	Easily develop rich applications using a fully managed, scalable, and serverless document database.	Amazon DocumentDB, AWS DynamoDB, AWS AppSync	Azure Cosmos DB
Database	In-memory data store	<a href="https://cloud.google.com/memorystore">Memorystore</a> (https://cloud.google.com/memorystore)	Reduce latency with scalable, secure, and highly available in-memory service for Redis and Memcached.	Amazon ElastiCache	Azure Cache
Database	NoSQL: Indexed	<a href="https://cloud.google.com/datastore">Datastore</a> (https://cloud.google.com/datastore)	A highly scalable NoSQL database for your web and mobile applications.	Amazon DynamoDB	Azure Cosmos DB
Database	NoSQL: Key-value	<a href="https://cloud.google.com/bigtable">Cloud Bigtable</a> (https://cloud.google.com/bigtable)	Run large analytical and operational workloads using this fully managed, scalable NoSQL database service.	Amazon DynamoDB	Azure Cosmos DB
Database	RDBMS	<a href="https://cloud.google.com/spanner">Cloud Spanner</a> (https://cloud.google.com/spanner)	Manage relational data with massive scale, strong consistency worldwide, and up to 99.999% availability.	Amazon Aurora	Azure SQL Database
Database	RDBMS	<a href="https://cloud.google.com/sql">Cloud SQL</a> (https://cloud.google.com/sql)	Manage relational data for MySQL, PostgreSQL, and SQL Server for workloads under 64 TB.	Amazon Relational Database Service (RDS), Amazon Aurora	Azure Database for MySQL and Azure Database for PostgreSQL
Database	Relational	<a href="https://cloud.google.com/bare-metal">Bare Metal Solution</a> (https://cloud.google.com/bare-metal)	Lift and shift Oracle workloads to Google Cloud.	Amazon RDS for Oracle	Azure Oracle Database Enterprise Edition
Developer tools	Client libraries	<a href="https://cloud.google.com/sdk">Cloud SDK</a> (https://cloud.google.com/sdk)	Tools and libraries for interacting with Google Cloud products and services.	AWS SDKs	Azure SDKs



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Developer tools	Cloud development IDE plugin	<a href="https://cloud.google.com/code">Cloud Code for IntelliJ</a> (https://cloud.google.com/code)	Write, debug, and deploy your cloud-based applications for IntelliJ, VS Code, or any browser.	AWS Toolkit for IntelliJ	Azure Toolkit for IntelliJ
Developer tools	Cloud development IDE plugin	<a href="https://cloud.google.com/code">Cloud Code for VS Code</a> (https://cloud.google.com/code)	Write, debug, and deploy your cloud-based applications for IntelliJ, VS Code, or any browser.	AWS Toolkit for Visual Studio Code	Azure Tools for Visual Studio Code
Developer tools	Cloud-based IDE	<a href="https://cloud.google.com/shell">Cloud Shell</a> (https://cloud.google.com/shell)	Manage your infrastructure and develop your applications from any browser.	AWS CloudShell	Azure Cloud Shell
Developer tools	Command-line interface (CLI)	<a href="https://cloud.google.com/sdk">Cloud SDK</a> (https://cloud.google.com/sdk)	Tools and libraries for interacting with Google Cloud products and services.	AWS CLI	Azure CLI
Developer tools	Error handling	<a href="https://cloud.google.com/error-reporting">Error Reporting</a> (https://cloud.google.com/error-reporting)	Real-time exception monitoring and alerting for your applications.		
Developer tools	Job scheduling	<a href="https://cloud.google.com/scheduler">Cloud Scheduler</a> (https://cloud.google.com/scheduler)	Fully managed cron job service.	Amazon CloudWatch	Azure Scheduler
Developer tools	No-code	<a href="https://cloud.google.com/appsheets">AppSheet</a> (https://cloud.google.com/appsheets)	Enable anyone to build business applications and automated workflows, without coding.	AppSheet, Amazon Honeycode	Microsoft Power Platform
Developer tools	Parallel task execution	<a href="https://cloud.google.com/tasks">Cloud Tasks</a> (https://cloud.google.com/tasks)	Control and observe asynchronous service requests between independent applications using this zonal, execution-control service.	Amazon Simple Queue Service (SQS), Amazon Simple Notification Service (SNS)	Azure Service Bus, Azure Storage Queues
Developer tools	PowerShell	<a href="https://cloud.google.com/powershell">Cloud Tools for PowerShell</a> (https://cloud.google.com/powershell)	Full cloud control from Windows PowerShell.	AWS Tools for PowerShell	Azure Tools for PowerShell
Enterprise	Abuse prevention	<a href="https://cloud.google.com/recaptcha-enterprise">reCAPTCHA Enterprise</a> (https://cloud.google.com/recaptcha-enterprise)	Help protect your website from fraudulent activity, spam, and abuse without creating friction.	AWS WAF, CAPTCHA, AWS Fraud	Microsoft Dynamics Fraud
Enterprise	Marketplace	<a href="https://cloud.google.com/marketplace">Marketplace</a> (https://cloud.google.com/marketplace)	Scale procurement for your enterprise via online discovery, purchasing, and fulfillment of enterprise-grade cloud solutions.	AWS Marketplace	Azure Marketplace
Enterprise	ML workflows	<a href="https://cloud.google.com/tensorflow-enterprise">Tensorflow Enterprise</a> (https://cloud.google.com/tensorflow-enterprise)	Scale resources across CPUs, GPUs, and record-setting Cloud TPUs.	Tensorflow on AWS	Azure DataBricks
Enterprise	Solutions catalog	<a href="https://cloud.google.com/private-catalog">Private Catalog</a> (https://cloud.google.com/private-catalog)	Control internal enterprise solutions and make them easily discoverable.	AWS Service Catalog	Azure Custom Images, Azure API Management
Government services	Regulated services	<a href="https://cloud.google.com/assured-workloads">Assured Workloads</a> (https://cloud.google.com/assured-workloads)	Run more secure and compliant workloads on Google Cloud.	AWS GovCloud	Azure Government

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Internet of things (IoT)	IoT platform	<a href="https://cloud.google.com/iot">Cloud IoT</a> (https://cloud.google.com/iot)	Unlock insights from your global device network with an intelligent IoT platform whose scalable, fully managed integration lets you connect, store, and analyze data at the edge and in the cloud.	AWS IoT Core	Azure IoT Hub
Management tools	API management	<a href="https://cloud.google.com/api-gateway">API Gateway</a> (https://cloud.google.com/api-gateway)	Develop, deploy, secure, and manage APIs with a fully managed gateway.	Amazon API Gateway	Azure API Management
Management tools	API management	<a href="https://cloud.google.com/apigee">Apigee API Management</a> (https://cloud.google.com/apigee)	Design, secure, analyze, and scale APIs anywhere with visibility and control.	Amazon API Gateway	Azure API Management
Management tools	Cost management	<a href="https://cloud.google.com/cost-management">Cost Management</a> (https://cloud.google.com/cost-management)	Tools for monitoring, controlling, and optimizing your Google Cloud costs.	AWS Budgets	Azure Cost Management
Management tools	Deployment	<a href="https://cloud.google.com/deployment-manager">Cloud Deployment Manager</a> (https://cloud.google.com/deployment-manager)	Create and manage cloud resources with simple templates.	AWS CloudFormation	Azure Deployment Manager
Media	Encoding	<a href="https://cloud.google.com/transcoder/docs">Transcoder API</a> (https://cloud.google.com/transcoder/docs)	Convert video files and package them for optimized delivery to web, mobile, and connected TVs.	AWS Media Converter	Azure Media Services
Media	Streaming	<a href="https://cloud.google.com/video-intelligence/docs/streaming/live-streaming">Video Intelligence Streaming API</a> (https://cloud.google.com/video-intelligence/docs/streaming/live-streaming)	Stream videos with standard live streaming protocols like RTSP, RTMP, and HLS.	Live Streaming on AWS	Azure Media Services
Media	AI	<a href="https://cloud.google.com/video-intelligence/">Video AI</a> (https://cloud.google.com/video-intelligence/)	Enable powerful content discovery and engaging video experiences.	Amazon Rekognition Video	Azure Video Analyzer for Media
Migration	Container migration	<a href="https://cloud.google.com/migrate/anthos">Migrate for Anthos</a> (https://cloud.google.com/migrate/anthos)	Intelligently extract, migrate, and modernize applications to run natively on containers in GKE and Anthos clusters.	AWS App2Container	Azure Migrate
Migration	Server migration	<a href="https://cloud.google.com/migrate/compute-engine">Migrate for Compute Engine</a> (https://cloud.google.com/migrate/compute-engine)	Migrate VM instances to Google Cloud from AWS, Azure, or VMWare VSphere.	AWS Server Migration Service	Azure Migrate
Migration	SQL database migration	<a href="https://cloud.google.com/database-migration">Database Migration Service</a> (https://cloud.google.com/database-migration)	Migrate databases to Cloud SQL from on-premises, Compute Engine, and other clouds.	AWS Database Migration Service	Azure Database Migration Service
Migration	Storage migration	<a href="https://cloud.google.com/storage-transfer-service">Storage Transfer Service</a> (https://cloud.google.com/storage-transfer-service)	Complete large-scale online data transfers from online and on-premises sources to Cloud Storage.	AWS Storage Gateway	Azure Migrate
Migration	Storage migration	<a href="https://cloud.google.com/transfer-appliance/">Transfer Appliance</a> (https://cloud.google.com/transfer-appliance/)	Securely migrate large volumes of data (from hundreds of terabytes up to one petabyte) to Google Cloud without disrupting business operations.	AWS Snowball	Azure Data Box
Networking	CDN	<a href="https://cloud.google.com/cdn">Cloud CDN</a> (https://cloud.google.com/cdn)	Serve web and video content globally, efficiently, and reliably.	Amazon CloudFront	Azure Content Delivery Network



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Networking	Connectivity Management	<a href="https://cloud.google.com/network-connectivity-center">Network Connectivity Center</a> (https://cloud.google.com/network-connectivity-center)	Reimagine how you deploy, manage, and scale your networks on Google Cloud and beyond.	Amazon Transit Gateway, Amazon CloudWAN	Azure Virtual WAN
Networking	Domains and DNS	<a href="https://cloud.google.com/dns">Cloud DNS</a> (https://cloud.google.com/dns)	Publish your zones and records in DNS without the burden of managing your own DNS servers and software.	Amazon Route 53	Azure DNS
Networking	Domains and DNS	<a href="https://cloud.google.com/domains/docs/overview">Cloud Domains</a> (https://cloud.google.com/domains/docs/overview)	Register and configure a domain in Google Cloud.	Amazon Route 53	Azure App Service
Networking	Load balancer	<a href="https://cloud.google.com/load-balancing">Cloud Load Balancing</a> (https://cloud.google.com/load-balancing)	Efficiently distribute network traffic across Compute Engine VMs.	AWS Elastic Load Balancing	Azure Load Balancing
Networking	Network monitoring	<a href="https://cloud.google.com/network-intelligence-center">Network Intelligence Center</a> (https://cloud.google.com/network-intelligence-center)	Centralize your network monitoring functions to verify network configurations, optimize network performance, increase network security, and reduce troubleshooting time.	AWS CloudWatch	Azure Network Watcher
Networking	Network security	<a href="https://cloud.google.com/network-connectivity/docs/vpn/concepts/overview">Cloud VPN</a> (https://cloud.google.com/network-connectivity/docs/vpn/concepts/overview)	Connect your peer network to your Virtual Private Cloud (VPC) network through an IPsec VPN connection.	AWS Virtual Private Network (VPN)	Azure Virtual Private Network (VPN)
Networking	Premium networking	<a href="https://cloud.google.com/network-tiers">Network Service Tiers</a> (https://cloud.google.com/network-tiers)	Optimize your network for performance or cost.		
Networking	Service mesh	<a href="https://cloud.google.com/traffic-director">Traffic Director</a> (https://cloud.google.com/traffic-director)	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.	AWS App Mesh	Azure Service Fabric Mesh
Networking	Services	<a href="https://cloud.google.com/service-directory">Service Directory</a> (https://cloud.google.com/service-directory)	Publish, discover, and connect services from a single directory.	AWS Cloud Map	Consul on Azure
Networking	Virtual networks	<a href="https://cloud.google.com/nat/docs/overview">Cloud NAT</a> (https://cloud.google.com/nat/docs/overview)	Send and receive packets using Google Cloud private GKE clusters or Compute Engine VM instances with no external IP address.	Amazon VPC NAT instances	Azure NAT
Networking	Virtual networks	<a href="https://cloud.google.com/vpc">Virtual Private Cloud (VPC)</a> (https://cloud.google.com/vpc)	Provide managed networking functionality for your cloud-based services running on Compute Engine VM instances, Google Kubernetes Engine, App Engine flexible environment instances, and other Google Cloud products built on Compute Engine VMs.	Amazon Virtual Private Cloud (VPC)	Azure Virtual Network
Networking	Web application firewall	<a href="https://cloud.google.com/armor">Google Cloud Armor</a> (https://cloud.google.com/armor)	Help protect your applications and websites against denial of service and web attacks.	AWS WAF	Azure WAF
Operations	Audit logging	<a href="https://cloud.google.com/audit-logs">Cloud Audit Logs</a> (https://cloud.google.com/audit-logs)	Log all user activity on Google Cloud.	AWS CloudTrail	Azure Audit Logs

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Operations	Debugging	<a href="https://cloud.google.com/debugger">Cloud Debugger</a> (https://cloud.google.com/debugger)	Investigate your code's behavior in production.	AWS X-Ray	Azure Monitor Application Insights Snapshot Debugger
Operations	Logging	<a href="https://cloud.google.com/logging">Cloud Logging</a> (https://cloud.google.com/logging)	Manage logging and analysis in real time at scale.	Amazon CloudWatch Logs	Azure Monitor Logs
Operations	Monitoring	<a href="https://cloud.google.com/monitoring">Cloud Monitoring</a> (https://cloud.google.com/monitoring)	Monitor the performance, availability, and health of your applications and infrastructure.	Amazon CloudWatch	Azure Monitor
Operations	Performance tracing	<a href="https://cloud.google.com/trace">Cloud Trace</a> (https://cloud.google.com/trace)	Find performance bottlenecks in production.	AWS X-Ray	Azure Monitor Application Insights Distributed Tracing
Operations	Profiling	<a href="https://cloud.google.com/profiler">Cloud Profiler</a> (https://cloud.google.com/profiler)	Understand resource consumption in your code and see the ways the code is actually called.	Amazon CodeGuru Profiler	Azure Monitor Application Insights Profiler
Security & identity	Certificate management	<a href="https://cloud.google.com/certificate-authority-service">Certificate Authority Service</a> (https://cloud.google.com/certificate-authority-service)	Simplify the deployment and management of private certificate authorities without managing infrastructure.	AWS Certificate Manager	Azure Active Directory Certificate Authority
Security & identity	CIAM	<a href="https://cloud.google.com/identity-platform">Identity Platform</a> (https://cloud.google.com/identity-platform)	Add identity and access management functionality to your applications, help protect user accounts, and scale with confidence using this customer identity and access management (CIAM) platform.	Amazon Cognito	Azure Active Directory B2C
Security & identity	Cloud provider access management	<a href="https://cloud.google.com/access-transparency">Access Transparency and Access Approval</a> (https://cloud.google.com/access-transparency)	Help expand visibility and control over your cloud provider with admin access logs and approval controls.		
Security & identity	Container security	<a href="https://cloud.google.com/artifact-registry">Artifact Registry</a> (https://cloud.google.com/artifact-registry)	Deploy only trusted containers on GKE.	Amazon Elastic Container Registry (ECR)	Azure Container Registry
Security & identity	Container security	<a href="https://cloud.google.com/container-analysis/">Container Analysis</a> (https://cloud.google.com/container-analysis/)	Perform vulnerability scans on container images in Artifact Registry and Container Registry, and monitor vulnerability information to keep it up to date.	Amazon ECR Image Scanning	Azure Defender for container registries
Security & identity	Container security	<a href="https://cloud.google.com/containers/security">Container Security</a> (https://cloud.google.com/containers/security)	Secure your container environment on Google Cloud, GKE, or Anthos.	Security in Amazon Elastic Container Service (ECS)	Container Security in Azure Security Center
Security & identity	Data loss prevention (DLP)	<a href="https://cloud.google.com/dlp">Cloud Data Loss Prevention</a> (https://cloud.google.com/dlp)	Discover, classify, and help protect your most sensitive cloud data.	Amazon Macie	Azure Information Protection
Security & identity	Encryption	<a href="https://cloud.google.com/confidential-computing">Confidential Computing</a> (https://cloud.google.com/confidential-computing)	Encrypt data in-use with Confidential Computing and Confidential GKE Nodes.	AWS Nitro Enclaves	Azure Confidential Computing

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Security & identity	Exfiltration prevention	<a href="https://cloud.google.com/vpc-service-controls">VPC Service Controls</a> (https://cloud.google.com/vpc-service-controls)	Isolate resources of multi-tenant Google Cloud services to help mitigate data exfiltration risks.		
Security & identity	Hardware security module (HSM)	<a href="https://cloud.google.com/kms/docs/hsm">Cloud HSM</a> (https://cloud.google.com/kms/docs/hsm)	Host encryption keys and perform cryptographic operations in a cluster of FIPS 140-2 Level 3 certified hardware security modules (HSMs).	AWS CloudHSM	Azure Dedicated HSM
Security & identity	IAM	<a href="https://cloud.google.com/identity/">Cloud Identity</a> (https://cloud.google.com/identity/)	Centrally manage users and groups, federate identities between Google and other identity providers, such as Active Directory and Azure Active Directory.	AWS Identity Services	Azure Active Directory
Security & identity	IAM	<a href="https://cloud.google.com/iam">Identity and Access Management</a> (https://cloud.google.com/iam)	Provide fine-grained access control and visibility for centrally managing resources.	Amazon Identity and Access Management	Azure Identity Management
Security & identity	IAM	<a href="https://cloud.google.com/iap">Identity-Aware Proxy (IAP)</a> (https://cloud.google.com/iap)	Use identity and context to guard access to your applications and VMs.	AWS Systems Manager	Azure Bastion
Security & identity	IAM	<a href="https://cloud.google.com/managed-microsoft-ad">Managed Service for Microsoft Active Directory</a> (https://cloud.google.com/managed-microsoft-ad)	Use a highly available, hardened service running actual Microsoft Active Directory (AD).	AWS Managed Microsoft AD	Azure Active Directory
Security & identity	Resource monitoring	<a href="https://cloud.google.com/asset-inventory">Cloud Asset Inventory</a> (https://cloud.google.com/asset-inventory)	View, monitor, and analyze all your Google Cloud and Anthos assets across projects and services using this metadata inventory service.	AWS Config	Azure Security Control
Security & identity	Resource monitoring	<a href="https://cloud.google.com/resource-manager">Resource Manager</a> (https://cloud.google.com/resource-manager)	Hierarchically manage resources by project, folder, and organization.	AWS OpsWorks	Azure Resource Manager
Security & identity	Secret management	<a href="https://cloud.google.com/secret-manager">Secret Manager</a> (https://cloud.google.com/secret-manager)	Store API keys, passwords, certificates, and other sensitive data.	AWS Secrets Manager	Azure Key Vault
Security & identity	Security administration	<a href="https://cloud.google.com/security-key-management">Cloud Key Management Service</a> (https://cloud.google.com/security-key-management)	Manage encryption keys on Google Cloud.	AWS Key Management Service (KMS)	Azure Key Vault
Security & identity	Security and risk management	<a href="https://cloud.google.com/security-command-center">Security Command Center</a> (https://cloud.google.com/security-command-center)	Security and risk management platform for Google Cloud.	Amazon Guard Duty, AWS Security Hub	Azure Security Center, Azure Defender
Security & identity	Zero trust	<a href="https://cloud.google.com/beyondcorp-enterprise">BeyondCorp Enterprise</a> (https://cloud.google.com/beyondcorp-enterprise)	Enable secure access to critical applications and services, with integrated threat and data protection.		Azure AD Conditional Access
Serverless	Build	<a href="https://firebase.google.com/docs/storage">Cloud Storage for Firebase</a> (https://firebase.google.com/docs/storage)	Store and serve user-generated content from Firebase apps, such as photos or videos, including bandwidth-friendly transactions and automated ML, synced automatically in real time.	AWS Simple Storage Service (S3)	Azure Blob Storage

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Serverless	Build	<a href="https://firebase.google.com/docs/auth">Firebase Auth</a> (https://firebase.google.com/docs/auth)	Sign in users to your Firebase app, either by using Firebase UI as a complete drop-in authentication solution, or by using the Firebase Authentication SDK to manually integrate one or several sign-in methods into your app.	Amazon Cognito	Azure Active Directory (AD)
Serverless	Build	<a href="https://firebase.google.com/docs/hosting">Firebase Hosting</a> (https://firebase.google.com/docs/hosting)	Provides fast and secure hosting for your Firebase web app, static and dynamic content, and microservices, including a generous free tier.	AWS Simple Storage Service (S3)	GitHub Pages, Static Web Apps
Serverless	Build	<a href="https://firebase.google.com/docs/database">Firebase Realtime Database</a> (https://firebase.google.com/docs/database)	Store and sync data from your Firebase application with our NoSQL cloud database. Data is synced across all clients in real time, and remains available when your application goes offline.	AWS DynamoDB + AppSync	Azure Cosmos DB
Serverless	Engage	<a href="https://firebase.google.com/products/ab-testing">Firebase A/B Testing</a> (https://firebase.google.com/products/ab-testing)	Deploy A/B experiments to test how a change to your application's UI, features, or engagement campaigns affects key metrics (like revenue) before you implement the change widely.	Amazon Pinpoint	Azure Playfab
Serverless	Engage	<a href="https://firebase.google.com/products/cloud-messaging">Firebase Cloud Messaging</a> (https://firebase.google.com/products/cloud-messaging)	Send and receive notifications across platforms with this reliable and battery-efficient connection between your server and devices, including iOS, Android, and the web.	Amazon Device Messaging (ADM), Amazon Hubs Simple Notification Service (SNS)	Azure Notification
Serverless	Engage	<a href="https://firebase.google.com/products/dynamic-links">Firebase Dynamic Links</a> (https://firebase.google.com/products/dynamic-links)	Provide users with deep-link smart URLs that bypass the application installation process, allowing you to send first-time or returning users to any location within your iOS or Android app.		
Serverless	Engage	<a href="https://firebase.google.com/products/in-app-messaging">Firebase In-App Messaging</a> (https://firebase.google.com/products/in-app-messaging)	Engage active users of your Firebase application by sending them targeted, contextual messages to complete key actions, such as beating a game level, buying an item, or subscribing to content.	Amazon Device Messaging (ADM), Amazon Hubs Simple Notification Service (SNS)	Azure Notification

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Serverless	Engage	<a href="https://firebase.google.com/products/remote-config">Firebase Remote Config</a> (https://firebase.google.com/products/remote-config)	Change the behavior and appearance of your Firebase application on the fly from the Firebase console, and then track performance in Firebase Analytics. Customize by audience segment, release new content, and A/B test to validate improvements, all without waiting for App Store approval.		Azure App Configuration
Serverless	Engage	<a href="https://firebase.google.com/docs/analytics/">Google Analytics</a> (https://firebase.google.com/docs/analytics/)	Make informed decisions regarding application marketing and performance optimizations by understanding user behavior. This free analytics solution provides unlimited reporting for up to 500 distinct events that you can define using the Firebase SDK and integrate into the Google ecosystem (BigQuery, Data Studio, Play, AdMob, Ads, and Firebase).		
Serverless	Event handling	<a href="https://cloud.google.com/eventarc/docs">Eventarc</a> (https://cloud.google.com/eventarc/docs)	Asynchronously deliver events from Google services, SaaS, and your own apps using loosely coupled services that react to state changes.	AWS EventBridge	Azure Event Grid
Serverless	Kubernetes platform	<a href="https://cloud.google.com/knative">Knative</a> (https://cloud.google.com/knative)	Build, deploy, and manage modern serverless workloads on a Kubernetes-based platform.	AWS Fargate	Azure Kubernetes Service
Serverless	Mobile FaaS	<a href="https://firebase.google.com/products/functions">Firebase Cloud Functions</a> (https://firebase.google.com/products/functions)	Run your mobile backend code without managing servers.	AWS Lambda	Azure Functions Serverless Compute
Serverless	Monetization	<a href="https://firebase.google.com/docs/admob">AdMob and Firebase</a> (https://firebase.google.com/docs/admob)	Google AdMob is an easy way to monetize mobile apps with targeted, in-app advertising.	Mobile Ads	Amazon Publisher Services, Azure API Management
Serverless	Release & monitor	<a href="https://firebase.google.com/docs/app-distribution">Firebase App Distribution</a> (https://firebase.google.com/docs/app-distribution)	Distribute your Firebase apps to trusted testers quickly and easily.		Azure App Center
Serverless	Release & monitor	<a href="https://firebase.google.com/docs/crashlytics">Firebase Crashlytics</a> (https://firebase.google.com/docs/crashlytics)	Get real-time, actionable insight into Firebase application issues with this native crash reporting solution for iOS, Android, and Unity, including streaming data export.		Azure App Center
Serverless	Release & monitor	<a href="https://firebase.google.com/docs/perf-mon">Firebase Performance Monitoring</a> (https://firebase.google.com/docs/perf-mon)	Get insight into your Firebase app's performance with a comprehensive list of performance metrics including network calls, CPU and memory usage, and custom metrics.		

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Serverless	Release & monitor	<a href="https://firebase.google.com/docs/test-lab">Firebase Test Lab</a> (https://firebase.google.com/docs/test-lab)	Test your Firebase application on devices hosted in a Google data center.	AWS Device Farm	Azure App Center
Serverless	Workflow orchestration	<a href="https://cloud.google.com/workflows">Workflows</a> (https://cloud.google.com/workflows)	Orchestrate and automate Google Cloud and HTTP-based API services with serverless workflows.	AWS Step Functions	Azure Logic Apps
Storage	Block storage	<a href="https://cloud.google.com/persistent-disk">Persistent Disk</a> (https://cloud.google.com/persistent-disk)	Store data from VM instances running in Compute Engine or GKE, Google Cloud's state-of-the-art block storage offering.	Amazon Elastic Block Store (EBS)	Azure Disk Storage
Storage	File storage	<a href="https://cloud.google.com/filestore">Filestore</a> (https://cloud.google.com/filestore)	Provide fully managed NFS file servers on Google Cloud for applications running on Compute Engine VMs (VMs) instances or GKE clusters.	Amazon Elastic File System (EFS)	Azure Disk Storage, Azure Files
Storage	Infrequently accessed object storage	<a href="https://cloud.google.com/storage/archival">Cloud Storage Archive</a> (https://cloud.google.com/storage/archival)	Store infrequently accessed data using Google Cloud's ultra low-cost, highly durable, highly available archival storage.	Amazon S3 Glacier	Azure Archive Storage
Storage	Object storage	<a href="https://cloud.google.com/storage">Cloud Storage</a> (https://cloud.google.com/storage)	Store any amount of data and retrieve it as often as you'd like, using Google Cloud's object storage offering.	AWS Simple Storage Service (S3)	Azure Blob Storage

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Last updated 2022-06-24 UTC.