

AWS – GCP – AZURE Equivalents 2023 – adopted from GCP Documentation<https://cloud.google.com/docs/get-started/aws-azure-gcp-service-comparison>

Service category	Service type	AWS offering	Azure offering	Google Cloud product	Google Cloud product description
App modernization	CI/CD	AWS CodeBuild, AWS CodeDeploy, AWS CodePipeline	Azure DevOps, GitHub Enterprise	Cloud Build	Build, test, and deploy on Google Cloud serverless CI/CD platform
App modernization	CI/CD	AWS CodeCommit, AWS CodeBuild, AWS CodeDeploy	Azure DevOps	Google Cloud Deploy	Deliver continuously to Google Kubernetes Engine and Anthos.
App modernization	Execution Control	Amazon EventBridge, Amazon Simple Notification Service (SNS)	Azure Service Bus, Azure Storage Queues	Cloud Tasks	Control and observe asynchronous service requests between independent applications using this zonal, execution-control service.
App modernization	Multi-cloud	Amazon EKS Anywhere, Amazon ECS Anywhere, AWS Outposts	Azure Arc	Anthos	Migrate directly from VMs, build, deploy, and optimize apps on GKE, Anthos serverless landing zones and VMs anywhere—simply, flexibly, and securely
App modernization	Multi-cloud	Amazon EKS Anywhere		Anthos Clusters	Extend GKE to work in multiple environments, including attached clusters, AWS, Azure, bare metal, and VMware.
App modernization	Multi-cloud	AWS Systems Manager	Azure App Configuration	Anthos Config Management	Automate policy and security at scale for your hybrid and multi-cloud Kubernetes deployments.
App modernization	Multi-cloud	AWS Controllers for Kubernetes	Azure Service Operator	Config Connector	Manage Google Cloud resources through Kubernetes.
App modernization	Multi-cloud	AWS Bottlerocket	Azure Container Instances	Container-Optimized OS	Efficiently and securely run Docker containers on Compute Engine VMs.
App modernization	Multi-cloud	AWS Outposts	Azure Stack	Google Distributed Cloud	Extend Google Cloud's infrastructure and services to the edge and your data centers.
App modernization	Multi-cloud	AWS Direct Connect	Azure Express Route	Hybrid Connectivity	Connect your infrastructure to Google Cloud on your terms, from anywhere.
App modernization	Multi-cloud serverless			Cloud Run for Anthos	Flexible serverless development for multicloud environments.
App modernization	Service mesh	AWS App Mesh	Azure Service Fabric	Anthos Service Mesh	Simplify, manage, and secure complex microservices architectures with this fully managed service.
App modernization	Service mesh	Amazon VPC	Azure VPN Gateway	Cloud Router	Dynamically exchange routes between your Virtual Private Cloud (VPC) and on-premises networks by using Border Gateway Protocol (BGP).
App modernization	Service mesh	Istio on Amazon EKS	Istio in Azure Kubernetes Service	Istio on Google Kubernetes Engine	Quickly create GKE clusters with all the components you need to create and run an Istio service mesh in a single step.
AI & ML	Cloud cost optimization	AWS Cost Optimization	Azure Cost Management	Recommender	Optimize your Google Cloud usage with proactive, easily actionable recommendations.
AI & ML	Conversational interface	Amazon Lex	Azure Conversational AI	Dialogflow	Lifelike conversational AI with state-of-the-art virtual agents.
AI & ML	Document understanding	Amazon Textract	Azure Form Recognizer	Document AI	Automate data capture at scale to reduce document processing costs.
AI & ML	Image recognition	Amazon Rekognition Image	Azure Computer Vision	Vision AI	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.
AI & ML	ML for structured data	Amazon SageMaker	AutoML in Azure ML Studio	Vertex AI AutoML tabular models	Automatically build and deploy state-of-the-art machine learning models on structured data.
AI & ML	ML platform	Amazon SageMaker, Amazon EC2 P3	Azure Data Science Virtual Machines	Deep Learning VM Images	Preconfigured VMs for deep learning applications.
AI & ML	ML platform	Tensorflow on AWS	Azure Databricks	TensorFlow Enterprise	Reliability and performance for AI applications with enterprise-grade support and managed services.
AI & ML	ML platform	Amazon SageMaker	Azure AI Platform	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.
AI & ML	ML platform	Amazon SageMaker Autopilot	Azure Cognitive Services	Vertex AI AutoML models	Train high-quality custom machine learning models with minimal effort and machine learning expertise.
AI & ML	ML platform	Amazon SageMaker	Azure Machine Learning	Vertex AI custom training	Host your machine learning models and train them with the power and flexibility of TensorFlow, scikit-learn, XGBoost, and custom containers.
AI & ML	ML platform	Amazon SageMaker	Azure AI Platform	Vertex AI custom-trained models	Host your trained models so that you can send them prediction requests with the power and flexibility of TensorFlow, scikit-learn, and XGBoost.
AI & ML	ML platform	Amazon SageMaker	Azure Notebooks	Vertex AI Workbench	Create instances running JupyterLab that come pre-installed with the latest data science and machine learning frameworks in a single click.
AI & ML	Natural language processing	Amazon Comprehend	Azure Text Analytics	Natural Language AI	Derive insights from unstructured text using Google machine learning.
AI & ML	Personalization	Amazon Personalize	Azure Personalizer	Recommendations AI	Deliver highly personalized product recommendations at scale.
AI & ML	Speech recognition	Amazon Transcribe	Azure Speech to Text	Speech-to-Text	Accurately convert speech into text using an API powered by Google's AI technologies.
AI & ML	Speech synthesis	Amazon Polly	Azure Text to Speech	Text-to-Speech	Convert text into natural-sounding speech using an API powered by Google's AI technologies.
AI & ML	Translation	Amazon Translate	Azure Translator	Translation AI	Dynamically translate between languages using Google machine learning.
AI & ML	Video intelligence	Amazon Rekognition Video	Azure Video Indexer	Video Intelligence API	Quickly categorize video content using thousands of predefined labels and creating additional custom labels to suit your specific needs.
Backup & DR	SaaS	AWS Resilience Hub	Azure Backup and Disaster Recovery	Actifio	Protect your data and business with this backup and disaster recovery offering that supports Google Cloud workloads as well as hybrid workloads like VMware, SAP HANA, Oracle, or SQL Server.
Compute	Core compute	Amazon Elastic Compute Cloud (EC2) P3	GPU Optimized VMs	Cloud GPUs	Train and run machine learning models faster than before.
Compute	Core compute	AWS UltraClusters	Azure Virtual Machines	Cloud TPU	Train and run machine learning models faster than ever before.
Compute	Core compute	Amazon Elastic Compute Cloud (EC2)	Azure Virtual Machines	Compute Engine	Accelerate your digital transformation with high-performance VMs.
Compute	Core compute	AWS EC2 Autoscaling	Azure Autoscale, Azure Virtual Machine Scale Sets	Compute Engine Autoscaler	Automatically add or delete VM instances from a managed instance group (MIG) based on increases or decreases in load.
Compute	Core compute	Amazon EC2 Instance Connect		OS Login	Manage SSH access to your instances using IAM without having to create and manage individual SSH keys.
Compute	Core compute	Amazon Elastic Block Store (EBS)	Azure Managed Disks	Persistent Disk	Reliable, high-performance block storage for VM instances.
Compute	Core compute	AWS EC2 Instance Connect	Azure Bastion	SSH from the browser	Connect to a Compute Engine virtual machine (VM) instance using SSH with the Google Cloud console in your web browser.
Compute	Core Compute	AWS Systems Manager		VM Manager	Manage operating systems for large virtual machine (VM) fleets running Windows and Linux on Compute Engine.
Compute	Dedicated VMs	Amazon EC2 Dedicated Host	Azure Dedicated Host	Sole-tenant nodes	Host your VMs on hardware dedicated only to your project.
Compute	Infrastructure modernization	SAP on AWS	SAP on Azure	SAP on Google Cloud	Run SAP on Google Cloud.
Compute	PaaS	AWS Lambda, AWS Fargate, AWS App Runner	Azure App Service	App Engine	Build highly scalable applications on a fully managed serverless platform.
Compute	VMware connectivity	VMware Cloud on AWS	Azure VMware Solution	VMware Engine	Migrate and run your VMware workloads on Google Cloud.
Containers	CaaS	Amazon Elastic Kubernetes Service (EKS), Amazon Elastic Container Service (ECS)	Azure Kubernetes Service (AKS)	Google Kubernetes Engine	Secured and managed Kubernetes service with four-way autoscaling and multi-cluster support.
Containers	Container registry	Amazon Elastic Container Registry (ECR)	Azure Container Registry	Artifact Registry	Store, manage, and secure your container images.
Containers	Container Security			Binary Authorization	Require images to be signed by trusted authorities during the development process and then enforce signature validation when deploying.
Containers	Gaming	Amazon GameLift	Azure for Gaming	Game Servers	Deliver seamless multiplayer gaming experiences with simpler multicloud management.
Data analytics	Business intelligence	Amazon QuickSight	Microsoft Power BI	Looker	Explore, share, and visualize your company's data so that you can make better business decisions.
Data analytics	Data discovery/ metadata mgmt	AWS Glue Data Catalog	Azure Purview, Azure Data Explorer	Data Catalog	Discover, understand, and manage data at scale with powerful search and seamless integration to BigQuery, Pub/Sub, Cloud Storage, secured via IAM and Cloud Data Loss Prevention.
Data analytics	Data integration / ETL	Amazon AppFlow, Amazon Data Pipeline, AWS Glue	Azure Data Factory	Cloud Data Fusion	Activate fully managed, cloud-native data integration at scale.

Data analytics	Data processing	Amazon Elastic MapReduce (EMR), AWS Batch, AWS Glue	Azure Data Lake Analytics, HDInsight	Dataproc	Deploy open-source data and analytics processing services (Apache Hadoop, Apache Spark, etc.) with improved efficiency and security.
Data analytics	Data warehouse	Amazon Athena, Amazon Redshift	Azure Synapse Analytics	BigQuery	Serverless, highly scalable, and cost-effective multi-cloud data warehouse designed for business agility.
Data analytics	Data wrangling	AWS Glue Data Brew	Azure Data Factory	Dataprep by Trifacta	An intelligent cloud data service to visually explore, clean, and prepare data for analysis and machine learning.
Data analytics	Messaging	AWS Kinesis, Amazon MQ	Azure Service Bus Messaging	Pub/Sub	Messaging and ingestion for event-driven systems and streaming analytics.
Data analytics	Messaging	Amazon Simple Notification Service, Amazon Simple Queueing Service	Azure Service Bus Messaging	Pub/Sub Lite	Send and receive messages between independent applications using this zonal, real-time messaging service.
Data analytics	Query service	Amazon Redshift Spectrum	Azure Synapse Analytics	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.
Data analytics	Stream data ingest	Amazon Kinesis	Azure Event Hubs	Pub/Sub	Create scalable messaging and ingestion for event-driven systems and streaming analytics.
Data analytics	Stream data processing	Amazon Kinesis Data Firehose	Azure Stream Analytics	Dataflow	Unify stream and batch data processing that's serverless, fast, and cost-effective.
Data analytics	Workflow orchestration	Amazon Data Pipeline, AWS Glue, Managed Workflows for Apache Airflow	Azure Data Factory	Cloud 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.
Database	Document data storage	Amazon DocumentDB, Amazon DynamoDB	Azure Cosmos DB	Firestore	Easily develop rich applications using a fully managed, scalable, and serverless document database.
Database	In-memory data store	Amazon ElastiCache	Azure Cache	Memorystore	Reduce latency with scalable, secure, and highly available in-memory service for Redis and Memcached.
Database	NoSQL: Indexed	Amazon DynamoDB	Azure Cosmos DB	Datastore	A highly scalable NoSQL database for your web and mobile applications.
Database	NoSQL: Key-value	Amazon DynamoDB	Azure Cosmos DB	Cloud Bigtable	Run large analytical and operational workloads using this fully managed, scalable NoSQL database service.
Database	RDBMS	Amazon Aurora	Azure Cosmos DB for PostgreSQL, Azure SQL Database	AlloyDB for PostgreSQL	Run transactional workloads 4x faster than standard PostgreSQL, and analytical queries up to 100x faster.
Database	RDBMS	Amazon Aurora	Azure SQL Database	Cloud Spanner	Manage relational data with massive scale, strong consistency worldwide, and up to 99.999% availability.
Database	RDBMS	Amazon Relational Database Service (RDS), Amazon Aurora	Azure Database for MySQL and Azure Database for PostgreSQL	Cloud SQL	Manage relational data for MySQL, PostgreSQL, and SQL Server for workloads under 64 TB.
Database	Relational	Amazon RDS for Oracle	Azure Oracle Database Enterprise Edition	Bare Metal Solution	Lift and shift Oracle workloads to Google Cloud.
Developer tools	Client libraries	AWS SDKs	Azure SDKs	Cloud SDK	Tools and libraries for interacting with Google Cloud products and services.
Developer tools	Cloud development IDE plugin	AWS Toolkit for IntelliJ	Azure Toolkit for IntelliJ	Cloud Code for IntelliJ	Write, debug, and deploy your cloud-based applications for IntelliJ, VS Code, or any browser.
Developer tools	Cloud development IDE plugin	AWS Toolkit for Visual Studio Code	Azure Tools for Visual Studio Code	Cloud Code for VS Code	Write, debug, and deploy your cloud-based applications for IntelliJ, VS Code, or any browser.
Developer tools	Cloud-based IDE	AWS CloudShell	Azure Cloud Shell	Cloud Shell	Manage your infrastructure and develop your applications from any browser.
Developer tools	Command-line interface (CLI)	AWS CLI	Azure CLI	Cloud SDK	Tools and libraries for interacting with Google Cloud products and services.
Developer tools	Error handling			Error Reporting	Real-time exception monitoring and alerting for your applications.
Developer tools	Git Repositories	AWS Code Commit	Azure Repos	Cloud Source Repositories	Access fully featured, private Git repositories hosted on Google Cloud.
Developer tools	Job scheduling	Amazon EventBridge	Azure Scheduler	Cloud Scheduler	Fully managed cron job service.
Developer tools	No-code	AppSheet, Amazon Honeycode	Microsoft Power Platform	AppSheet	Enable anyone to build business applications and automated workflows, without coding.
Developer tools	Parallel task execution	Amazon Simple Queue Service (SQS), Amazon Simple Notification Service (SNS)	Azure Service Bus, Azure Storage Queues	Cloud Tasks	Control and observe asynchronous service requests between independent applications using this zonal, execution-control service.
Developer tools	PowerShell	AWS Tools for PowerShell	Azure Tools for PowerShell	Cloud Tools for PowerShell	Full cloud control from Windows PowerShell.
Enterprise	Abuse prevention	AWS WAF CAPTCHA, AWS Fraud	Microsoft Dynamics Fraud	reCAPTCHA Enterprise	Help protect your website from fraudulent activity, spam, and abuse without creating friction.
Enterprise	Marketplace	AWS Marketplace	Azure Marketplace	Marketplace	Scale procurement for your enterprise via online discovery, purchasing, and fulfillment of enterprise-grade cloud solutions.
Enterprise	ML workflows	Tensorflow on AWS	Azure DataBricks	Tensorflow Enterprise	Scale resources across CPUs, GPUs, and record-setting Cloud TPUs.
Enterprise	Solutions catalog	AWS Service Catalog	Azure Custom Images, Azure API Management	Private Catalog	Control internal enterprise solutions and make them easily discoverable.
Government services	Regulated services	AWS GovCloud	Azure Government	Assured Workloads	Run more secure and compliant workloads on Google Cloud.
Internet of things (IoT)	IoT platform	AWS IoT Core	Azure IoT Hub	Cloud IoT	Easily and securely connect, manage, and ingest data from globally dispersed devices with this fully managed service.
Management tools	API management	Amazon API Gateway	Azure API Management	API Gateway	Develop, deploy, secure, and manage APIs with a fully managed gateway.
Management tools	API management	Amazon API Gateway	Azure API Management	Apigee API Management	Design, secure, analyze, and scale APIs anywhere with visibility and control.
Management tools	Cost management	AWS Cost Explorer, AWS Budgets	Azure Cost Management	Cost Management	Tools for monitoring, controlling, and optimizing your Google Cloud costs.
Management tools	Deployment	AWS CloudFormation, AWS Serverless Application Model (SAM), AWS Cloud Development Kit (CDK)	Azure Deployment Manager	Cloud Deployment Manager	Create and manage cloud resources with simple templates.
Management tools	Monetization	Amazon Publisher Services, Mobile Ads	Azure API Management	Apigee API Management	Easy-to-use and flexible way to monetize your APIs so that you can generate revenue whenever your APIs are used.
Media	AI	Amazon Rekognition Video	Azure Video Analyzer for Media	Video AI	Enable powerful content discovery and engaging video experiences.
Media	Encoding and streaming	AWS MediaLive	Azure Media Services	Livestream API	Encode and transform live video content for use across a variety of user devices.
Media	Encoding and streaming	AWS Media Convert	Azure Media Services	Transcoder API	Convert video files and package them for optimized delivery to web, mobile, and connected TVs.
Media	Monetization	AWS MediaTailor	Azure Media Services	Video Stitcher API	Dynamically insert content and ads for targeted personalization of video-on-demand (VOD) and live content.
Migration	Container migration	AWS App2Container	Azure Migrate	Migrate to Containers	Intelligently extract, migrate, and modernize applications to run natively on containers in GKE and Anthos clusters.
Migration	Server migration	AWS Server Migration Service	Azure Migrate	Migrate to Virtual Machines	Migrate VM instances to Google Cloud from AWS, Azure, or VMware vSphere.
Migration	SQL database migration	AWS Database Migration Service	Azure Database Migration Service	Database Migration Service	Migrate databases to Cloud SQL from on-premises, Compute Engine, and other clouds.
Migration	Storage migration	AWS Storage Gateway, AWS DataSync	Azure Migrate	Storage Transfer Service	Complete large-scale online data transfers from online and on-premises sources to Cloud Storage.
Migration	Storage migration	AWS Snowcone, AWS Snowball, AWS Snowmobile	Azure Data Box	Transfer Appliance	Securely migrate large volumes of data (from hundreds of terabytes up to one petabyte) to Google Cloud without disrupting business operations.
Networking	CDN	Amazon CloudFront	Azure Content Delivery Network, Azure Front Door	Cloud CDN	Serve web and video content globally, efficiently, and reliably.
Networking	CDN	Amazon CloudFront	Azure Content Delivery Network	Media CDN	Deliver exceptional media experiences through Google's planet-scale cache network.
Networking	Domains and DNS	Amazon Route 53	Azure DNS	Cloud DNS	Publish your zones and records in DNS without the burden of managing your own DNS servers and software.
Networking	Domains and DNS	Amazon Route 53		Cloud Domains	Register and configure a domain in Google Cloud.
Networking	Firewall	AWS WAF, AWS Shield	Azure Web Application Firewall (WAF), Azure Front Door	Google Cloud Armor	Help protect your applications and websites against denial of service and web attacks.
Networking	Firewall	AWS Network Firewall, AWS Security Groups, AWS Access Control List	Azure Firewall	Cloud Firewall	Protect your network with firewalls that are fully embedded in the cloud networking fabric, highly scalable, and granular.
Networking	Load balancing	Elastic Load Balancing	Azure Load Balancer	Cloud Load Balancing	Efficiently distribute network traffic across Compute Engine VMs.
Networking	Network connectivity	AWS Direct Connect	Azure ExpressRoute	Cloud Interconnect	Extend your on-premises network to Google's network through a highly available, low-latency connection. You can use Dedicated Interconnect to connect directly to Google or use Partner Interconnect to connect to Google through a supported service provider.
Networking	Network connectivity	AWS Virtual Private Network (VPN)	Azure Virtual Private Network (VPN)	Cloud VPN	Connect your peer network to your Virtual Private Cloud (VPC) network through an IPsec VPN connection.

Networking	Network connectivity	Amazon Cloud WAN, AWS Transit Gateway	Azure Virtual WAN	Network Connectivity Center	Reimagine how you deploy, manage, and scale your networks on Google Cloud and beyond.
Networking	Network connectivity	AWS PrivateLink	Azure Private Link	Private Service Connect	Create a private and secure connection from your VPCs to Google, third parties, or your own services.
Networking	Network monitoring	AWS Network Manager, Amazon CloudWatch	Azure Network Watcher	Network Intelligence Center	Centralize your network monitoring functions to verify network configurations, optimize network performance, increase network security, and reduce troubleshooting time.
Networking	Premium networking	Amazon Global Accelerator		Network Service Tiers	Optimize your network for performance or cost.
Networking	Service mesh	AWS App Mesh	Open Service Mesh	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.
Networking	Services discovery (DNS)	AWS Cloud Map	Hashicorp Consul Service on Azure	Service Directory	Publish, discover, and connect services from a single directory.
Networking	Virtual networks	NAT Gateways for Amazon VPC	Azure Virtual Network NAT	Cloud NAT	Send and receive packets using Google Cloud private GKE clusters or Compute Engine VM instances with no external IP address.
Networking	Virtual networks	Amazon Virtual Private Cloud (VPC)	Azure Virtual Network	Virtual Private Cloud	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.
Operations	Audit logging	AWS CloudTrail	Azure Audit Logs	Cloud Audit Logs	Log all user activity on Google Cloud.
Operations	Debugging	AWS X-Ray	Azure Monitor Application Insights Snapshot Debugger	Cloud Debugger	Investigate your code's behavior in production.
Operations	Logging	Amazon CloudWatch Logs	Azure Monitor Logs	Cloud Logging	Manage logging and analysis in real time at scale.
Operations	Monitoring	Amazon CloudWatch	Azure Monitor	Cloud Monitoring	Monitor the performance, availability, and health of your applications and infrastructure.
Operations	Performance tracing	AWS X-Ray	Azure Monitor Application Insights Distributed Tracing	Cloud Trace	Find performance bottlenecks in production.
Operations	Profiling	Amazon CodeGuru Profiler	Azure Monitor Application Insights Profiler	Cloud Profiler	Understand resource consumption in your code and see the ways the code is actually called.
Security & identity	Certificate management	AWS Certificate Manager	Azure Active Directory Certificate Authority	Certificate Authority Service	Simplify the deployment and management of private certificate authorities without managing infrastructure.
Security & identity	CIAM	Amazon Cognito	Azure Active Directory B2C	Identity Platform	Add Google-grade identity and access management to your apps.
Security & identity	Cloud provider access mgmt	AWS CloudTrail		Access Transparency and Access Approval	Help expand visibility and control over your cloud provider with admin access logs and approval controls.
Security & identity	Container security	Amazon Elastic Container Registry (ECR)	Azure Container Registry	Artifact Registry	Deploy only trusted containers on GKE.
Security & identity	Container security	Amazon ECR Image Scanning	Azure Defender for container registries	Container Analysis	Perform vulnerability scans on container images in Artifact Registry and Container Registry, and monitor vulnerability information to keep it up to date.
Security & identity	Data loss prevention (DLP)	Amazon Macie	Azure Information Protection	Cloud Data Loss Prevention	Discover, classify, and help protect your most sensitive cloud data.
Security & identity	Encryption	AWS Nitro Enclaves	Azure Confidential Computing	Confidential Computing	Encrypt data in-use with Confidential Computing and Confidential GKE Nodes.
Security & identity	Exfiltration prevention	Amazon VPC, AWS IAM, AWS PrivateLink		VPC Service Controls	Isolate resources of multi-tenant Google Cloud services to help mitigate data exfiltration risks.
Security & identity	Hardware security module (HSM)	AWS CloudHSM	Azure Dedicated HSM	Cloud HSM	Host encryption keys and perform cryptographic operations in a cluster of FIPS 140-2 Level 3 certified hardware security modules (HSMs).
Security & identity	IAM	AWS IAM Identity Center	Azure Active Directory	Cloud Identity	A unified identity, access, app, and endpoint management (IAM/EMM) platform.
Security & identity	IAM	Amazon Identity and Access Management	Azure Identity Management	Identity and Access Management	Provide fine-grained access control and visibility for centrally managing resources.
Security & identity	IAM	AWS Systems Manager	Azure Bastion, Azure AD Application Proxy	Identity-Aware Proxy (IAP)	Use identity and context to guard access to your applications and VMs.
Security & identity	IAM	AWS Managed Microsoft AD	Azure Active Directory Domain Services	Managed Service for Microsoft Active Directory	Use a highly available, hardened service running actual Microsoft Active Directory (AD).
Security & identity	Resource access management	AWS Organizations policies	Azure Policy	Organization Policy Service	Configure restrictions on how resources can be used.
Security & identity	Resource monitoring	AWS Config	Azure Security Control	Cloud Asset Inventory	View, monitor, and analyze all your Google Cloud and Anthos assets across projects and services using this metadata inventory service.
Security & identity	Resource monitoring	AWS Resource Access Manager, AWS Organizations, AWS Control Tower	Azure Resource Manager	Resource Manager	Hierarchically manage resources by project, folder, and organization.
Security & identity	SIEM	AWS Security Hub, Amazon CloudWatch	Azure Sentinel	Chronicle	Normalizes, indexes, correlates, and analyzes security and network data to provide instant analysis and context on risky activity.
Security & identity	Secret management	AWS Secrets Manager, AWS Systems Manager Parameter Store	Azure Key Vault	Secret Manager	Store API keys, passwords, certificates, and other sensitive data.
Security & identity	Security administration	AWS Key Management Service (KMS)	Azure Key Vault	Cloud Key Management Service	Manage encryption keys on Google Cloud.
Security & identity	Security and risk management	Amazon Guard Duty, AWS Security Hub, AWS Audit Manager	Azure Security Center, Azure Defender	Security Command Center	Security and risk management platform for Google Cloud.
Security & identity	Zero trust		Azure AD Conditional Access	BeyondCorp Enterprise	Enable secure access to critical applications and services, with integrated threat and data protection.
Serverless	Build	AWS Simple Storage Service (S3)	Azure Blob Storage	Cloud Storage for Firebase	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.
Serverless	Build	Amazon Cognito	Azure Active Directory (AD)	Firebase 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.
Serverless	Build	AWS Amplify Hosting	GitHub Pages, Static Web Apps	Firebase Hosting	Provides fast and secure hosting for your Firebase web app, static and dynamic content, and microservices, including a generous free tier.
Serverless	Build	Amazon DynamoDB, AWS AppSync	Azure Cosmos DB	Firebase Realtime 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.
Serverless	Containers w/o infrastructure	AWS App Runner, AWS Fargate, AWS Lambda	Azure Container Apps, Azure Container Instances	Cloud Run	Develop and deploy highly scalable containerized applications on a fully managed serverless platform.
Serverless	Engage	Amazon Pinpoint	Azure Playfab	Firebase A/B 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.
Serverless	Engage	Amazon Device Messaging (ADM), Amazon Simple Notification Service (SNS)	Azure Notification Hubs	Firebase 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.
Serverless	Engage			Firebase 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	Amazon Device Messaging (ADM), Amazon Simple Notification Service (SNS)	Azure Notification Hubs	Firebase 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.
Serverless	Engage		Azure App Configuration	Firebase Remote Config	Control and optimize your app on the fly.
Serverless	Engage			Google Analytics for Firebase	Make informed decisions regarding application marketing and performance optimizations by understanding user behavior using the Firebase SDK and integration with the Google ecosystem.
Serverless	Event handling	AWS EventBridge	Azure Event Grid	Eventarc	Asynchronously deliver events from Google services, SaaS, and your own apps using loosely coupled services that react to state changes.

Serverless	FaaS	AWS Lambda	Azure Functions Serverless Compute	Cloud Functions	Run your code with zero server management with this scalable, pay-as-you-go functions-as-a-service (FaaS) offering.
Serverless	Mobile FaaS	AWS Lambda	Azure Functions Serverless Compute	Firebase Cloud Functions	Run your mobile backend code without managing servers.
Serverless	Monetization	Amazon Publisher Services, Mobile Ads	Azure API Management	AdMob and Firebase	Google AdMob is an easy way to monetize mobile apps with targeted, in-app advertising.
Serverless	Release & monitor		Azure App Center	Firebase App Distribution	Distribute your Firebase apps to trusted testers quickly and easily.
Serverless	Release & monitor		Azure App Center	Firebase 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.
Serverless	Release & monitor			Firebase Performance Monitoring	Gain insight into your app's performance issues.
Serverless	Release & monitor	AWS Device Farm	Azure App Center	Firebase Test Lab	Test your Firebase application on devices hosted in a Google data center.
Serverless	Workflow orchestration	AWS Step Functions	Azure Logic Apps	Workflows	Orchestrate and automate Google Cloud and HTTP-based API services with serverless workflows.
Storage	Block storage	Amazon Elastic Block Store (EBS)	Azure Disk Storage	Persistent Disk	Store data from VM instances running in Compute Engine or GKE, Google Cloud's state-of-the-art block storage offering.
Storage	File storage	Amazon Elastic File System (EFS)	Azure Disk Storage, Azure Files	Filestore	Provide fully managed NFS file servers on Google Cloud for applications running on Compute Engine VMs (VMs) instances or GKE clusters.
Storage	Infrequently accessed object store	Amazon S3 Glacier	Azure Archive Storage	Cloud Storage Archive	Store infrequently accessed data using Google Cloud's ultra low-cost, highly durable, highly available archival storage.
Storage	Object storage	AWS Simple Storage Service (S3)	Azure Blob Storage	Cloud Storage	Store any amount of data and retrieve it as often as you'd like, using Google Cloud's object storage offering.