|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Area | Microsoft Azure | Amazon Web Services | Google Cloud Platform | Alibaba Cloud International (AliCloud) |
| Data |  |  |  |  |
| Object | Azure Blob | AWS Simple Storage Service (S3)  Amazon Elastic Block Service (EBS) | Google Cloud Storage (GCS) | Object Storage Service |
| Relational | Azure SQL | AWS Relational Data Service (RDS)  Amazon Redshift | Google CloudSQL | ApsaraDB for RDS |
| Archive | Azure Backup | Glacier | Google Cloud Storage (Nearline)  Google Cloud Storage (Durable Reduced Availability – DRA) | Object Storage Service |
| NoSQL | Azure DocumentDB  Azure Table Storage | DynamoDB | Cloud BigTable  Cloud DataStore | Table Storage |
| File | Azure File | Elastic File | Google Cloud |  |
| Cache | Azure Managed Cache | Elastic Cache | Google App Engine (Memcache) | ApsaraDB for Memcache  ApsaraDB for Redis |
| Data Lakes | Azure Data Lake |  | Google Cloud BigQuery |  |
| Online Analytical Processing | Azure SQL Data Warehouse |  | Google Cloud BigQuery | Analytic DB |
| Orchestration | Azure DataFactory | AWS Data Pipeline | Google Cloud DataFlow |  |
| Hybrid | Azure StorSimple |  |  |  |
| Content Delivery Network (CDN) | Azure CDN | Amazon CloudFront | Google Cloud CDN | Alibaba Cloud CDN |
| Import/Export | Azure Import/Export Service | Amazon Import/Export | Google Cloud Storage Transfer Service |  |
| Visualization and Business Intelligence | Azure PowerBI  Azure HD Insight | AWS QuickSight | Google Cloud Datalab |  |
| Machine Learning | Azure Machine Learning | Amazon Machine Learning | Google Cloud Machine Learning Platform  Google Vision API  Google Speech API |  |
| Bus |  |  |  |  |
| Messaging | Azure Queue  Azure Service Bus | Simple Queue Service (SQS) | Cloud Messaging | Message Service |
| Events | Azure Event Hub  Azure IoT Hub | AWS Kinesis | Cloud Pub/Sub |  |
| Analytics | Azure Stream Analytics  Azure HD Insight | AWS Kinesis  Elastic MapReduce (EMR) | Google Cloud DataProc |  |
| Compute |  |  |  |  |
| VM’s | Virtual Machines | Amazon Elastic Compute Cloud (EC2) | Google Compute Engine | Elastic Compute Service (ECS) |
| Containers | Docker Virtual Machine Extension | Amazon EC2 Container Service | Google Container Registry |  |
| Desktop/App | Azure RemoteApp | Amazon WorkSpaces  Amazon AppStream |  |  |
| Application | Azure Cloud Services  Azure Web Sites and Apps  Azure Functions | Amazon Elastic Beanstalk  AWS Lambda | Google App Engine  Google Cloud Functions |  |
| App Deployment | Azure App Service  Microsoft HockeyApp | AWS CodeDeploy | Google Cloud Deployment Manager |  |
| Microservice Architecture (PaaS) | Azure Service Fabric | Amazon Elastic Beanstalk | Google Cloud App Engine |  |
| Network |  |  |  |  |
| Private Cloud | Azure Virtual Network | AWS Virtual Private Cloud (VPC) | Google Cloud Virtual Network | Virtual Private Cloud |
| On-Prem Connector | Azure ExpressRoute | AWS Direct Connect | Google Cloud Interconnect |  |
| DNS | Azure DNS | AWS Route 53 | Google Cloud DNS |  |
| Traffic Management | Azure Traffic Manager | AWS Brocade Virtual Traffic Manager | Google Brocade Virtual Traffic Manager |  |
| Load Balancing | Azure Load Balancer | Elastic Load Balancing | Google Cloud Load Balancing | Server Load Balancer |
| Region Management | Azure Regions | AWS Global Infrastructure |  |  |
| Security |  |  |  |  |
| Directory | Azure Active Directory | AWS Directory Service |  |  |
| Authentication/Identity Management | Azure Active Directory | AWS Identity and Access Management (IAM) | Google Cloud Identity and Access Management (IAM) |  |
| Multi-Factor (MFA) | Azure Multi-Factor Authentication | AWS Multi-Factor Authentication |  |  |
| Key Management | Azure Key Vault | AWS Key Management Service |  |  |
| Active Security and Pen Testing | Azure Trust Center | AWS Vulnerability and Penetration Testing | Google Cloud Security Scanner | Anti-DDoS |
| Monitoring |  |  |  |  |
| Operations | Azure Operational Insights  Microsoft HockeyApp | AWS CloudTrail | Google Stackdriver Trace  Google Stackdriver Debugging | Cloud Monitor |
| Administration | Azure Management Portal | AWS Management Console | Google Cloud Console  Google Cloud Mobile App | Cloud Monitor |
| Billing | Azure Billing API | AWS Simple Storage Service (S3) | Google Cloud Billing API |  |
| Notifications | Azure Notification Hub | AWS Simple Notification Service (SNS) | Google Cloud Messaging | Messaging Service |
| Resources | Azure Resource Manager | AWS CloudFormation | Google Cloud Resource Manager | Cloud Monitor |
| Government Compliance Services | Azure Government | AWS GovCloud |  |  |
| General Compliance | Azure Trust Center | AWS CloudHSM |  |  |
| Application Logging | Azure Management Portal  Azure Application Insights  Microsoft HockeyApp | AWS CloudWatch | Google Stackdriver Logging |  |
| Exception Monitoring | Azure Application Insights  Microsoft HockeyApp | AWS CloudWatch | Google Stackdriver Error Reporting |  |
| Other Services |  |  |  |  |
| Email | Azure BizTalk Services | AWS Simple Email Service (SES) | Google Cloud Messaging |  |
| Automation | Azure Automation  Azure Batch | AWS OpsWorks  Amazon Simple Workflow (SWF) |  |  |
| Search | Azure Search | Amazon CloudSearch | Google Search API |  |
| Media | Azure Media Services | Amazon Elastic Transcoder |  |  |
| Configuration | Azure API Management | AWS Config | Google Cloud Deployment Manager |  |
| API Management | Azure API Management | Amazon API Gateway | Google Cloud Endpoints |  |
| Scheduling | Azure Scheduler |  |  |  |
| Disaster Recovery | Azure Site Recovery |  | Google Cloud Storage (Nearline) |  |
| Genome Analysis |  |  | Google Genomics |  |
| Natural Language/Translation | Bing Voice Recognition  Cortana Speech API  Project Oxford API | Amazon Alexa Voice Service (AVS) | Google Translate API |  |
| Image Analysis |  |  |  |  |
| Command Line Interface | Azure Command Line Interface | Amazon EC2 Command Line Interface  Amazon EC2 SDK | Google Cloud Shell  Google Cloud SDK |  |
| Testing |  | AWS Device Farm | Google Cloud Test Lab |  |
| Code Repositories | Microsoft Visual Studio Online  Microsoft Team Foundation Services | AWS CodeCommit | Google Cloud Source Repositories |  |