





Cloud Services technology cheat sheet 1.0

			
Compute / virtual machines :	EC2, Amazon Elastic Compute. 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Azure Virtual Machines. 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Compute Engine. 3 different types of machines, but custom configurations are optional
Machine type pricing/billing options :	On-Demand, Spot Instances, Reserved Instances, and Dedicated Hosts	On-Demand a.k.a. Pay as you Go, and Reserved Virtual Machine Instances	Pay as you Go, Preemptible, and Commitment. However, pricing will always be based on resource (vCPU and memory) consumption
Load Balancing / Auto scaling :	Elastic Load Balancing, Auto Scaling	Azure Load Balancer and Auto Scale, VM Scale sets	Cloud Load Balancing, Instance Groups
Kubernetes / Docker :	ECS, EC2 Container Service	Azure Container Service	Kubernetes Engine
Serverless :	Lambda	Azure Functions	Cloud Functions (Beta)
Management, monitoring, and automation :	AWS Management Console, CLI, API, CloudWatch, CloudTrail, CloudFormation (YAML, JSON)	Resource Manager, Cloud Shell, API, Azure Monitor, Log Analyses, Network Watcher, Application Insights, Automation (JSON)	Cloud Console, Cloud Shell, API, Google Stackdriver (Monitoring, Logging, Diagnostics), Cloud Deployment Manager (YAML, JSON)
Authentication / authorization :	Identity and Access Management, Active Directory	(Azure) Active Directory, Active Directory Premium	Cloud Identity and Access Management, Cloud Identity aware Proxy
Object based storage :	S3 (Buckets), Simple Storage Service	Object based Blob Storage	Cloud Storage Buckets
Block based storage :	EBS, Elastic Block Storage	Storage Disk Page Blobs, Premium Storage Disks	Persistent Disk - various Compute Engine HDD and SSD options
File based storage :	Elastic File System	Azure Files	Cloud Filestore
Archive storage :	S3 infrequent Access, Glacier, Data archive	CoolStorage, Storage (Standard Archive)	Nearline and Coldline Storage
Hybrid storage options :	Storage Gateway	StorSimple	Egnyte Sync
Data encryption :	Server and Client-side encryption options (key managed), EBS Volume Encryption (Disk), TLS/SSL	Server and Client-side encryption options (key managed). BitLocker (Disk), Azure Storage Service Encryption, TLS/SSL	Server and Client-side encryption options (key managed), Encryption by Default (Disk), TLS/SSL
(Bulk) Data transfer options :	Snowball (Edge and Mobile), Import/Export Disk, CLI, PowerShell, Rsync, Transfer Acceleration, plus various partner options	Azure Data Box, Import/Export Disk, AzCopy, PowerShell, Azure CLI, plus various partner options	Cloud Data Transfer, Transfer Appliance, Cloud Storage Transfer Service
Disaster Recovery / backup :	Various best practices and setups: Back-up & Restore, Pilot Light, Warm Standby, and Multi-Site. Partner options available	Azure Site Recovery, plus various partner options	Multiple best practices and whitepapers available – Google Cloud Disaster Recovery Planning Guide
Database options :	SQL, MySQL, PostgreSQL, Oracle, MariaDB, DynamoDB, Neptune	SQL, MySQL, PostgreSQL, Cosmos, Table Storage, MariaDB	MySQL, PostgreSQL, Cloud Datastore, Cloud BigTable, Cloud Spanner, YugaByte DB (Cassandra, Redis & PostgreSQL)
Data Warehouse :	Amazon Redshift	SQL Data Warehouse	N.A. Done with various Big Data services
Caching :	ElastiCache (Redis and Memcached)	RedisCache	Cloud CDN and Cloud Memorystore (Redis compatible)
Virtual network options :	VPC, Virtual Private Cloud and subnets, API and NAT Gateway, VPN options available, network Peering	Virtual Network and subnets, API Management, VPN Gateway, Network Peering	VPC, Virtual Private Cloud and Subnets, Google Cloud Endpoints (API), Google Cloud VPN, Network Peering
Firewall options :	Web Application Firewall, AWS Shield (DDOS), Firewall Manager, Security Groups	Web Application Firewall, DDOS Protection. Azure Firewall, Network Security Groups	Google Cloud Platform Firewall Rules (part of VPC's), Cloud Armor, IP Deny/Allow List (Beta)
Content Delivery Network :	CloudFront	Content Delivery Network	Cloud Interconnect
Dedicated private Network :	Direct Connect	Express Route	N.A. VPN options only
Domain Name System :	Route 53	Azure DNS, Traffic Manager	Google Cloud DNS
Regions / Zones :	18 Regions and 55 Availability Zones (AZ's)	54 regions. They started rolling out AZ's in March of 2018	17 Regions and 52 Availability Zones
Availability / SLA :	Depends on service and configuration. Up to 99,95 for EC2	Depends on service and configuration. Up to 99,95 for VM's	Depends on service and configuration. SLO up to 99,99% for Compute Engine VM's