Cloud Services technology cheat sheet 2.0

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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, Application Load Balancer	Cloud Load Balancer, Instance Groups
Kubernetes / Docker :	ECS, EC2 Container Service, Firecracker, Fargate	Azure Kubernetes Service, Azure Container Instance	Kubernetes Engine, Container Registry
Serverless :	Lambda	Azure Functions	Cloud Functions
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, FSx hybrid Windows file storage	Azure Files, NetApp Files (Beta), Filestore (Q1 2019)	Cloud Filestore (Beta)
Archive storage :	S3 Infrequent Access, Glacier, Data archive	Cool Storage, Storage (Standard Archive)	Nearline and Coldline Storage
Hybrid storage options :	Storage Gateway	StorSimple, Data Box	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 (GPU) and Mobile), Import/Export Disk, CLI, PowerShell, Rsync, Transfer Acceleration, DataSync, partner options	Azure Data Box (Disk), 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), Firestore
Data Warehouse / Big data :	Amazon Kinesis (Firehose), Redshift, S3 Data Lake, Athena, EMR, QuickSight, Elasticsearch, and more	SQL Data Warehouse, Data Lake Analytics & Storage, Data Factory, Analytic Service, Data Catalog & Explorer, HDInsight, Steam Analytics, and more	BigQuery, Cloud Pub/Sub, Dataflow, Dataproc, Apache Beam & Airflow, Composer, Data Studio, BigQuery ML, TensorFlow, and more
Caching :	ElastiCache (Redis and Memcached)	RedisCache	Cloud CDN and Cloud Memorystore (Redis compatible)
Main Protocol (connection) options :	Nice DCV (graphics intensive 3D), RDP (Windows EC2), PCoIP (AWS Workspaces), BLAST (VMware), ICA/HDX (Citrix), Frame Remoting Protocol, SSH/Putty (Linux), PowerShell	RDP (Windows VM's), PCoIP/BLAST (VMware), ICA/HDX (Citrix), Frame Remoting Protocol, SSH/Putty (Linux), PowerShell	RDP & RDP for GCP Extension – for use with GCP Console (Windows Compute Engine), PCoIP, ICA/HDX (Citrix), Frame Remoting Protocol, SSH (Linux), PowerShell
Virtual network options :	VPC, Virtual Private Cloud and subnets, API, NAT, and Transit 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), Cloud NAT, 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 (Beta), IP Deny/Allow List (Beta)
Content Delivery Network :	CloudFront	Content Delivery Network	Cloud Interconnect, Cloud CDN
Dedicated private Network :	Direct Connect	Express Route	Dedicated Interconnect
* **Ping times from IJmuiden NL :**	Machine location: Frankfurt, region: eu-central-1, machine type: t2-micrso, Ping: 21 ms on average.	Machine location: Netherlands, region: west-europe, machine type: B1ms, Ping: 15 ms on average.	Machine location: Netherlands, region: europe-west4a, machine type: n1-standard-1, Ping: 17 ms on average.
Domain Name System :	Route 53	Azure DNS, Traffic Manager	Google Cloud DNS
Regions / Zones :	21 Regions and 60 Availability Zones (AZ's)	54 regions. They started rolling out AZ's in March of 2018	18 Regions and 55 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 VM's

* See the accompanying blogpost on basvankaam.com for more details on how the above ping test is performed (plus additional tests and results).