Cloud Platform analysis

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How do AWS, GCP and Azure compare?

Computing

AWS -

- offers computing with EC2, ECS, Lambda.
- Offers services like BeanStalk for deployment.
- Offers peer to peer communication between VPCs
- Database support - SQL (RDS) and noSQL (DynamoDB)

Azure -

- offers computing with VMs.
- Cloud Services and Resource Manager for deployment.
- Communication between different VPCs are done by setting up VPNs
- Database support - SQL (Azure SQl DB) and noSql (DocumentDB)

GCP -

- delivers VMs through their data centres.
- Database support - SQL (Google Cloud) and noSQL(Bigtable)
- Supports peer to peer VPC

Storage

Azure -

- Provides Blob, File, Queue storage
- Replication upto a minimum of 11 9’s
- Block BLOB upto 4.7TB, Page BLOB up to 8TB

AWS -

- EBS storage
- 99.999% availability
- Storage 16TB at max

GCP -

- storage upto 64TB

Networking

Subnets:
Azure VNet does not provide a default VNet and does not have private or public subnet as in AWS VPC. Resources connected to a VNet have access to the Internet, by default unlike AWS

GCP supports multi modes of subnet creation. A mixture of AWS and Azure.

Routing Table:
Azure provides routing by default for subnets(system routes) while AWS provides a default private route in the routing table. Azure supports forced traffic with UDR(only outbound connections)

Gateway:
AWS provides 4 types of gateways while Azure provides two.

Security Groups

Security Groups and Access Control Lists:
AWS provides two levels of security (SG and NACL) while Azure combines the two(NSG). SG is stateless while NACL and NSG is stateful.
Only one NSG can be applied to a NIC, but in AWS you can apply more than one Security Group (SG) to an Elastic Network Interface (ENI)

- Rules count/ SG: AWS - 50, Azure - 100, GCE - 100
- GCE Firewall doesnt have Egress support (outbound rules)
- Azure doesnt support elastic groups and traffic logging support
- Only Azure has support for explicit drops

Deployment & DNS

Amazon has its own aws cli, Azure has xcli and google uses gcloud

Gcloud components list is a command used to list all components

Lot of similarities between gcloud and aws cli in terms of commands

DNS -

No of sites: Azure - 11,521 AWS - 375,857

Amazon uses Route53, Azure uses Azure DNS and Google uses Google Cloud DNS

References

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