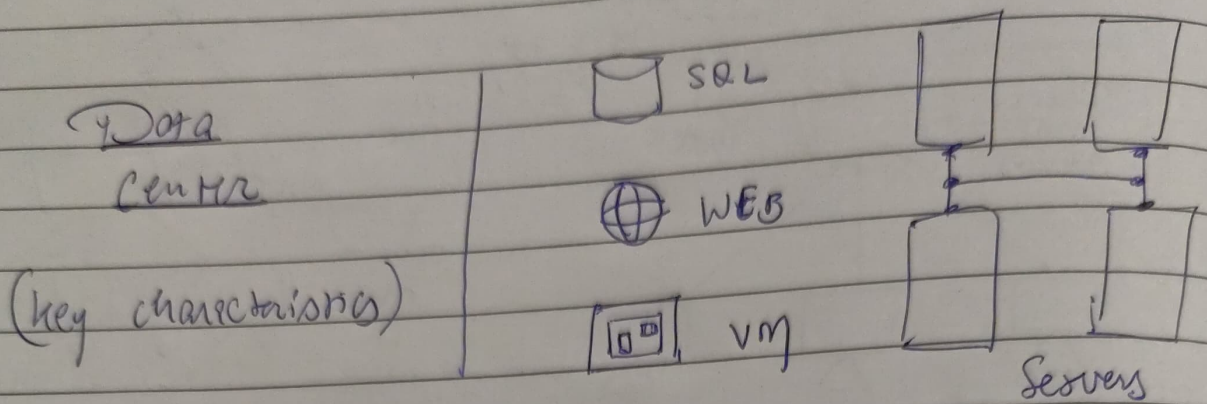


AZURE GLOBAL INFRASTRUCTURE :



→ It also contains the power, cooling & networking

→ It is the building block of AZURE infrastructure

The datacenter which are connected with the high network connectivity are called as regions.

Many regions across the globe of different sizes

→ They can be small or multiple one

→ for ex: One in West US, Other is in EAST US

Characteristics :

① Geographical area on the planet

② One but usually more datacenters connected with low-latency network

③ Location ~~of~~ for your service

IMPORTANT POINTS:

- Some services are available only in certain regions.
- Some services are global services, as they are not assigned / deployed in specific region.
- Globally available with 50+ regions

TWO SPECIAL REGIONS:

- Government regions (US DoD Central, US Gov Virginia)
- Partner regions (China East, China North)

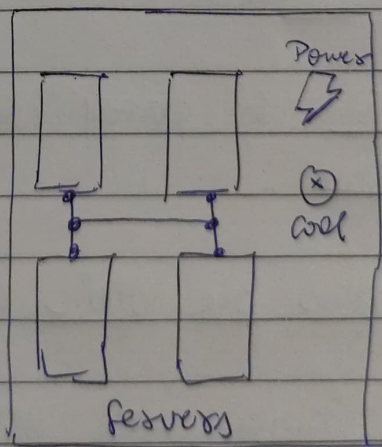
#1 AVAILABILITY ZONE:

Key Characteristics

→ Regional feature

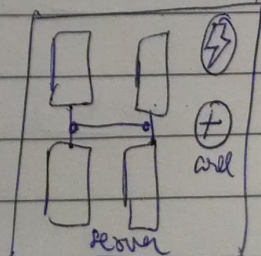
→ Assigned the no. so that
[grouping of physically separate facilities]
like #1, #2

#1



Data Center

#2



Data Center

(If one fails that other would continue to work)

Two Service Categories:

→ Zonal services (Virtual machines, Disks, etc)

[With the help of this service, we create the diff. VM so that if one face failure, the other would continue to work]

→ Zone-redundant services

(SQL, Storage etc)

NOTE: ① Not all regions are supported

② Supported regions has three or more zones

③ A zone is more data center not only one.

REGIONS PAIRS:

→ Each region is paired with another region making it a region pair.

→ Region pairs are static & cannot be chosen

→ Physical isolation with atleast 300 miles distance

→ Some services have platform-provided ~~app~~ replication

GEOGRAPHY :

all regions & region pair are grouped into the geography.

Key Characteristics:

- Typically contains the two or more regions.
- Fault tolerance to protect from region wide failures.
- Each region belong only to one geography.
- It also ensures that the data residency, sovereignty & compliance requirements are met.