

# CAP theorem

## Consistency

1. All nodes keep **the same data at the same time**.
2. It achieves via updating all nodes' data before any reads.
3. Very important to money transaction. Ex, bank, Amazon, PayPal.

## Availability

1. Request can get valid responses, even when **some nodes are failure**.
2. It achieves via **replicating** data in several nodes.

## Partition tolerance

1. Nodes can still work, **even when communication between some nodes are broken**.

