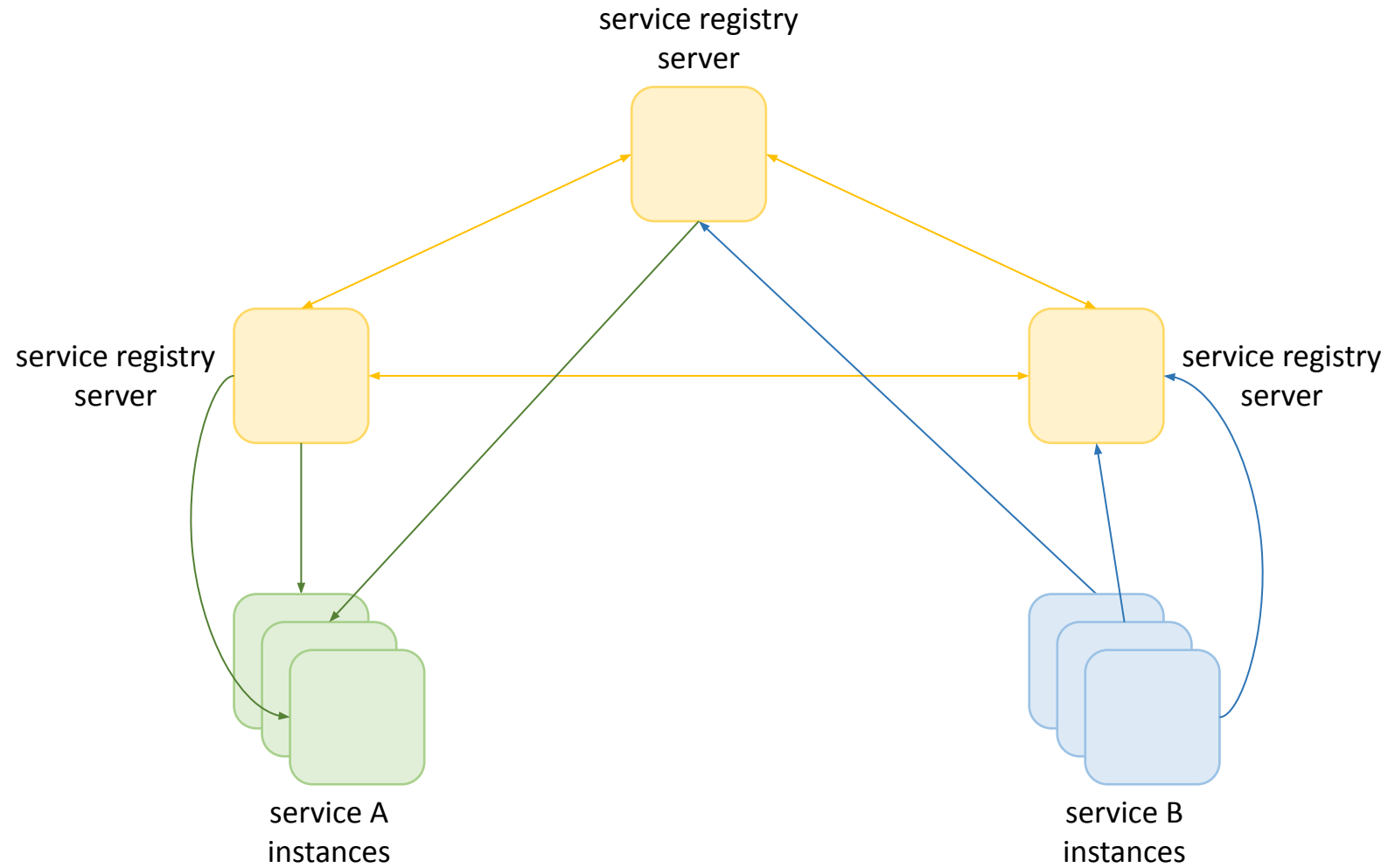
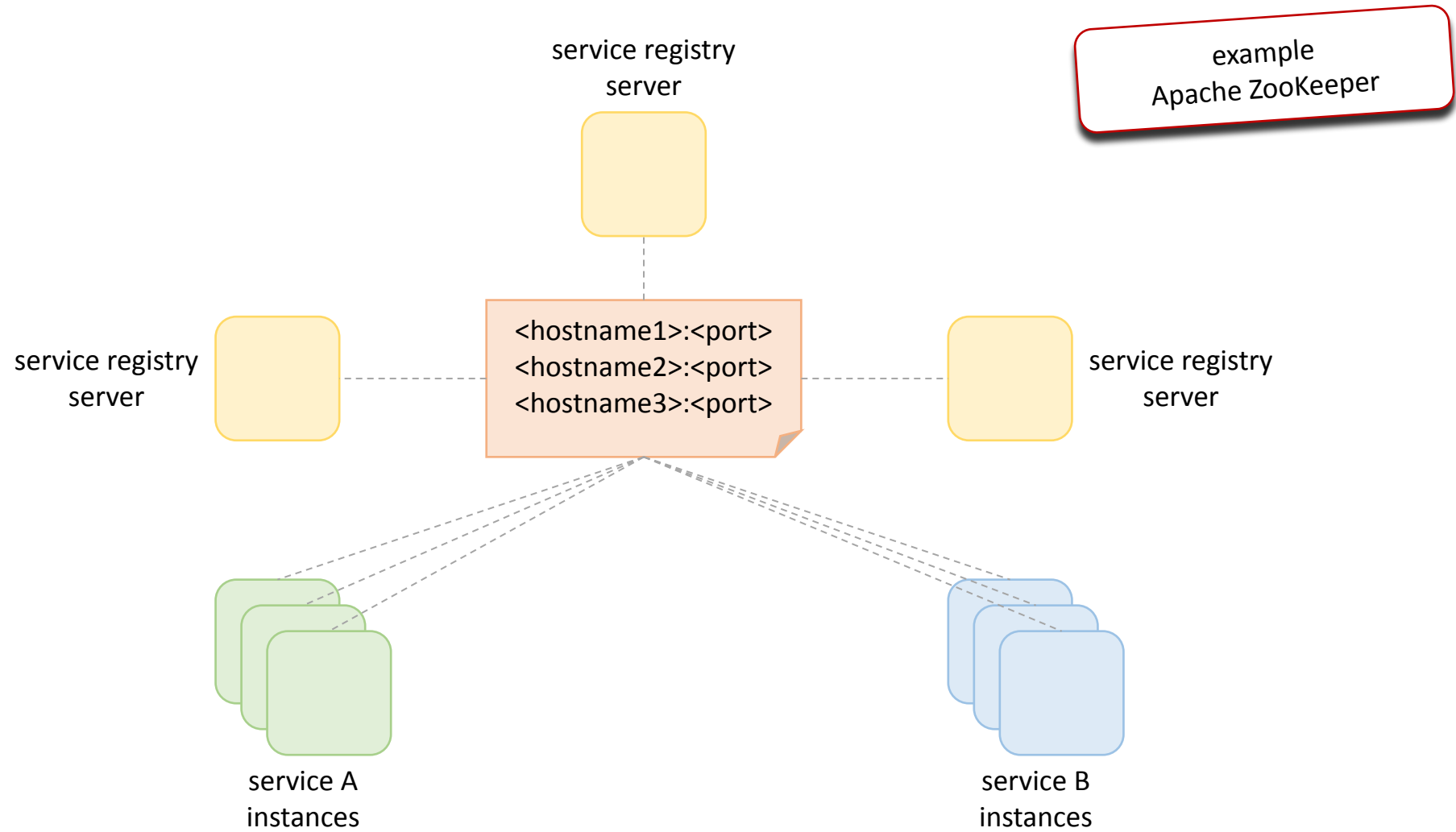


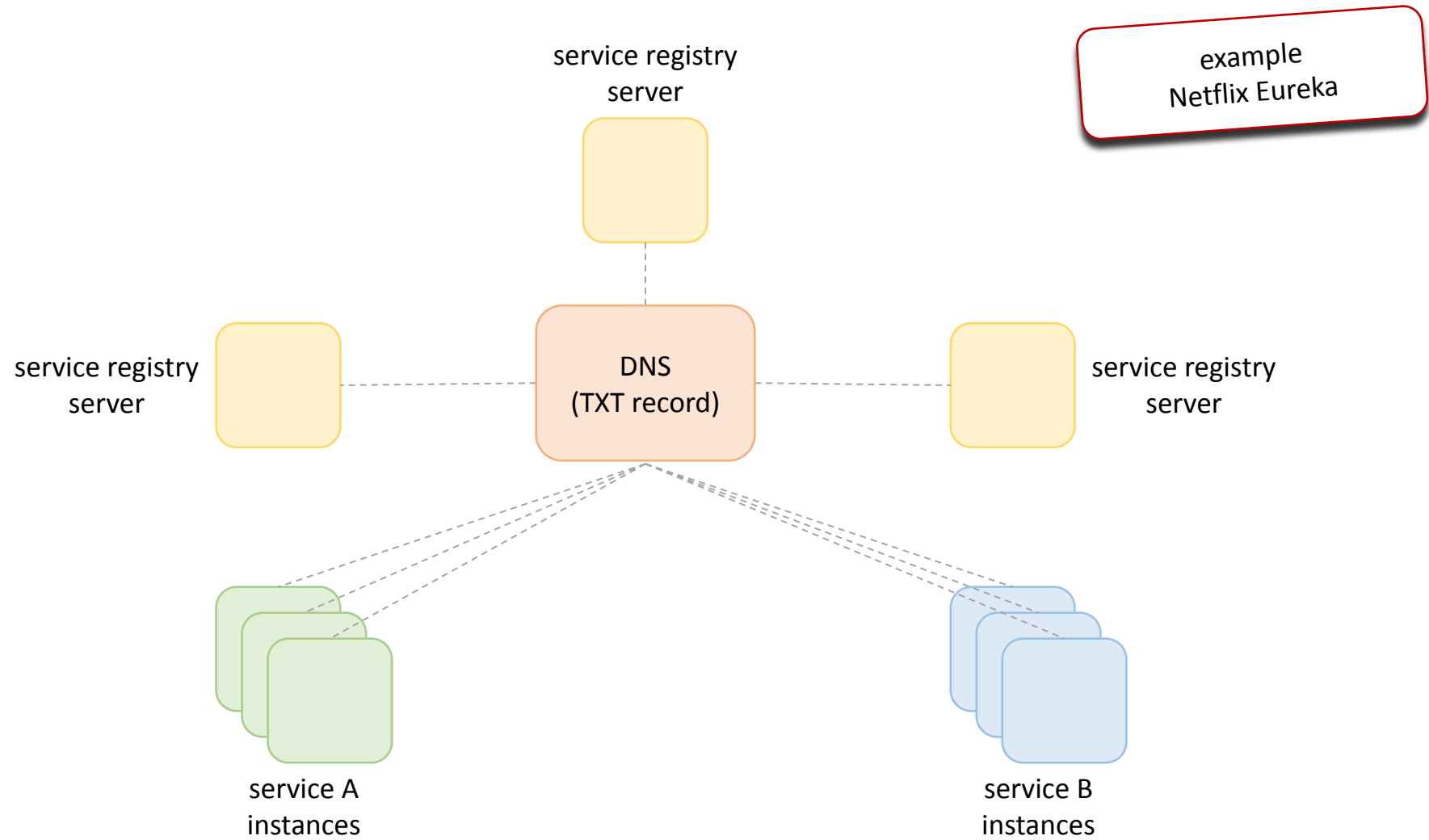
Peer discovery



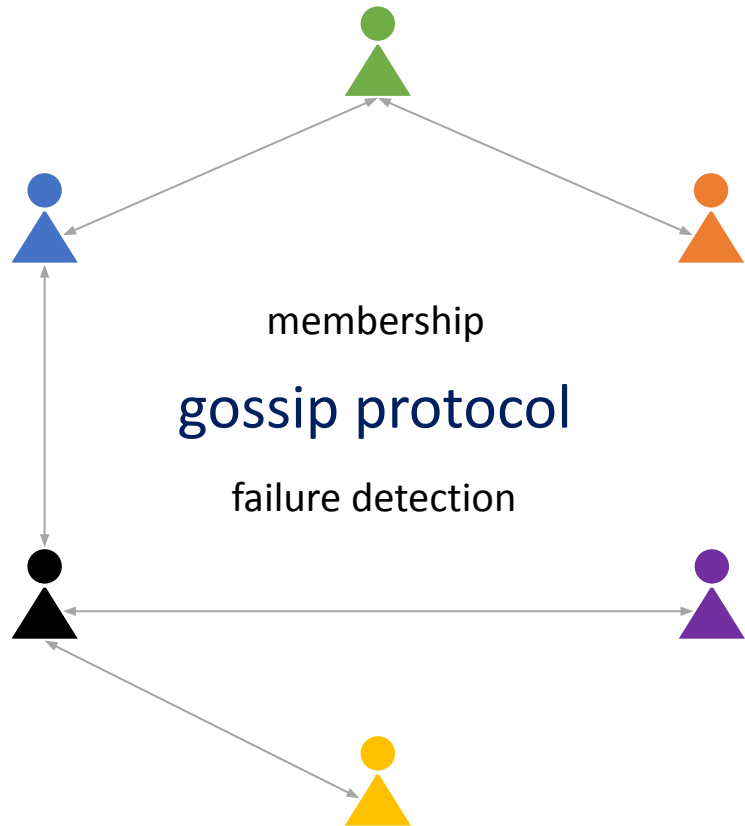
Peer discovery



Peer discovery

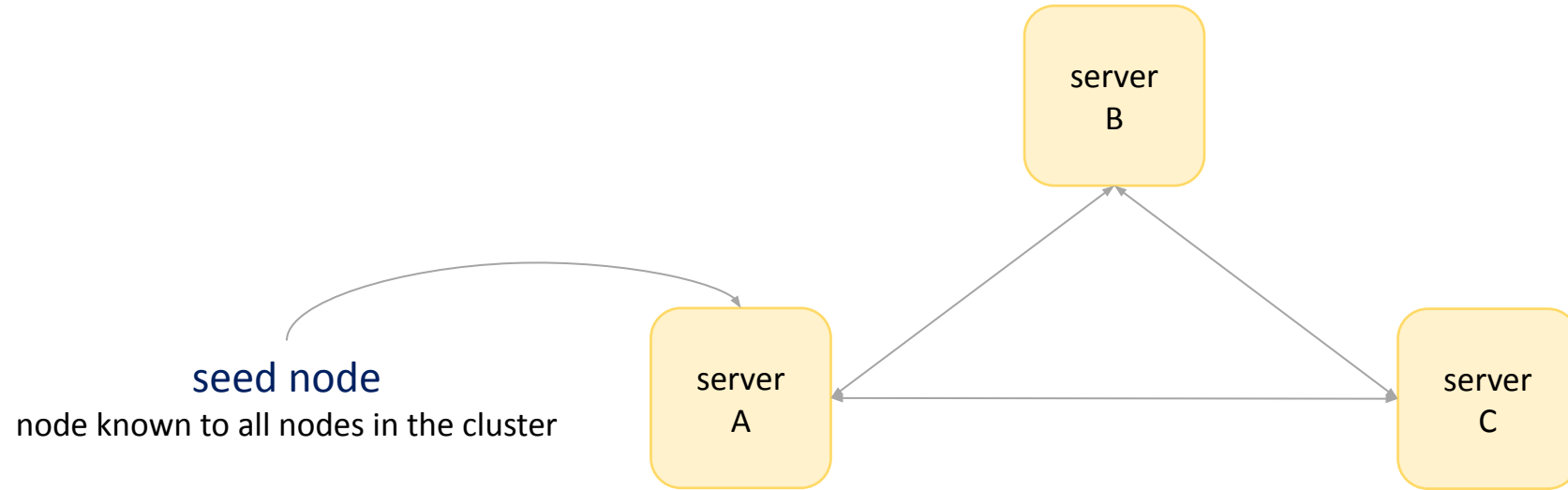


Peer discovery



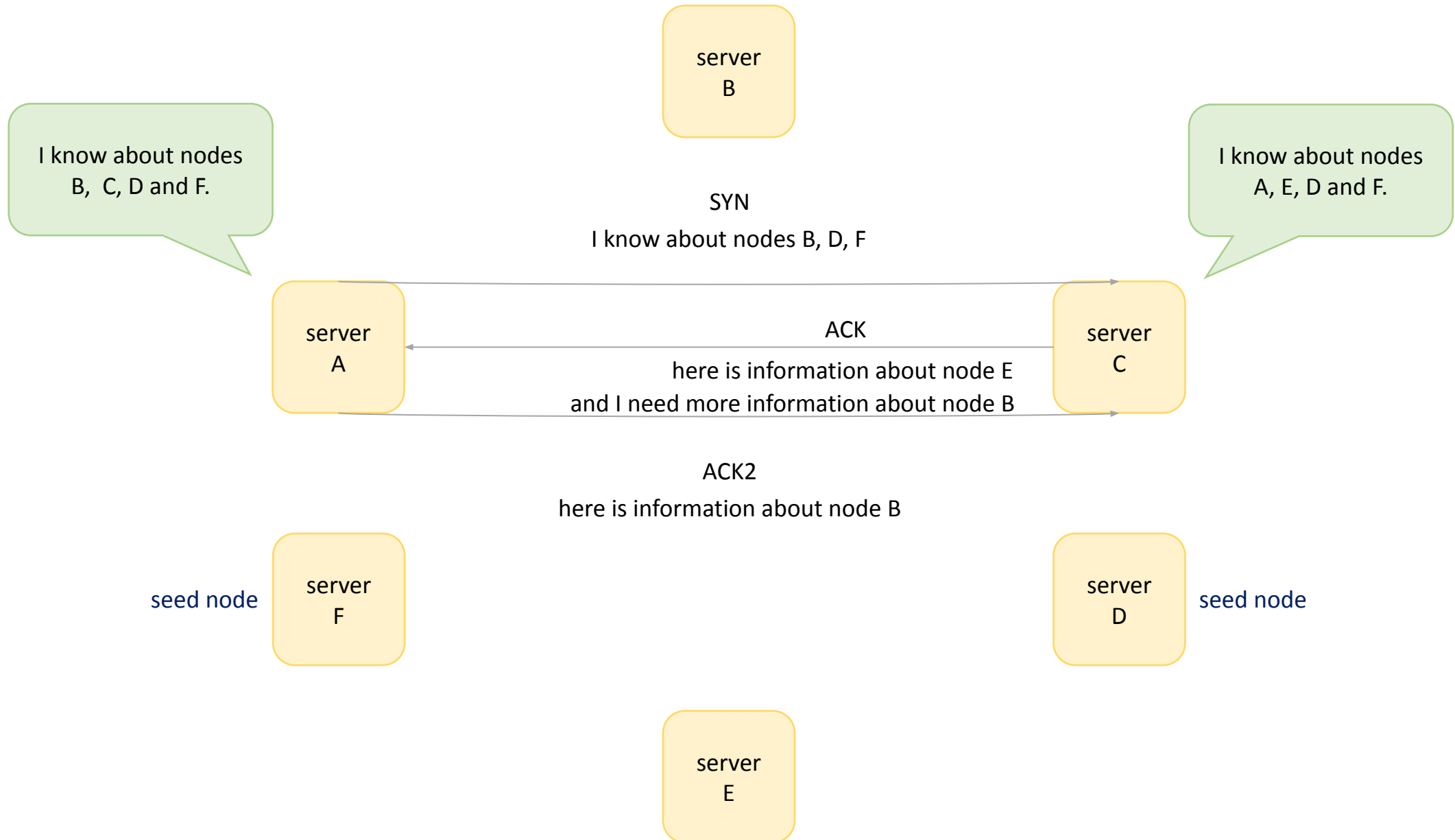
- newly added machine can identify other machines in the cluster
- machines in the cluster can identify a failed machine
- every machine knows the state of its peers

Peer discovery



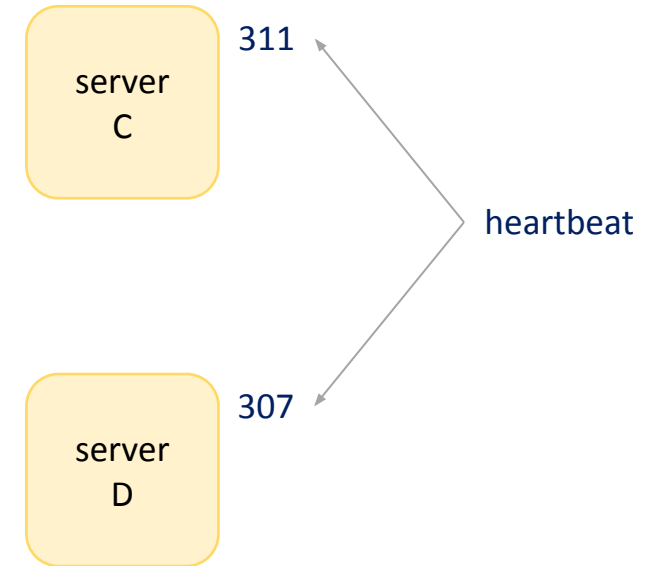
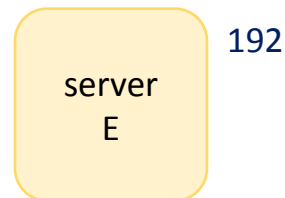
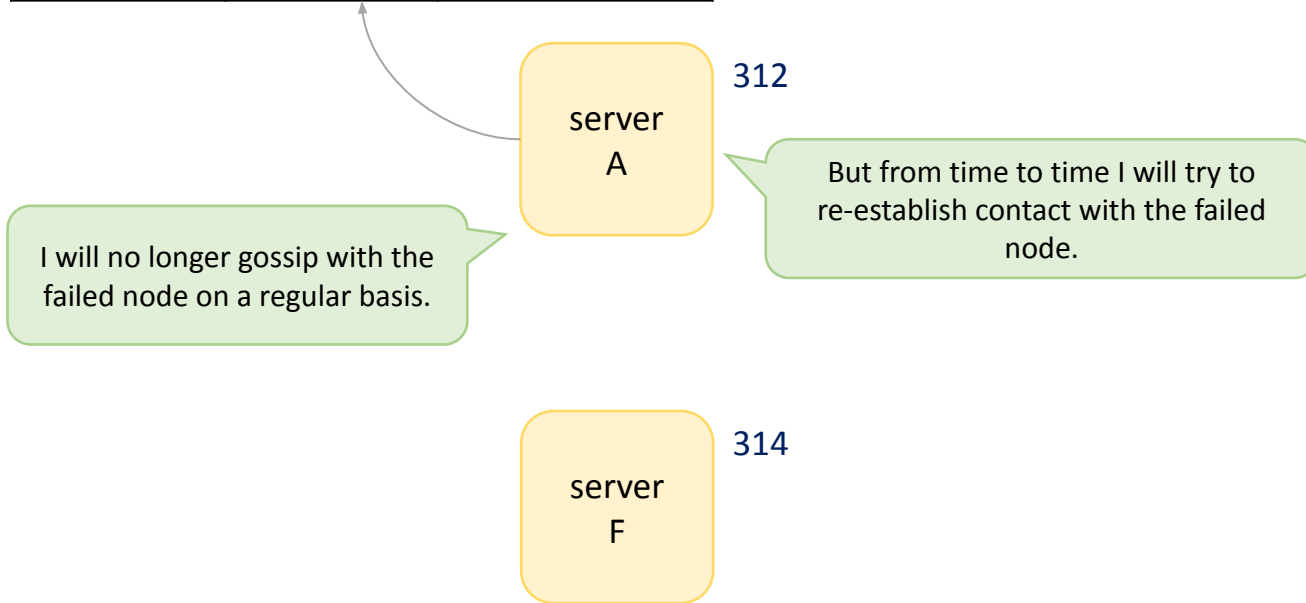
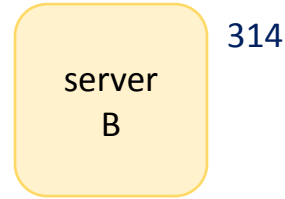
- advertised via a static configuration file
- or DNS

Peer discovery



Peer discovery

Node Name	Heartbeat	Last Updated
server A	312	1 second ago
server B	314	3 seconds ago
server C	311	2 seconds ago
server D	307	2 seconds ago
server E	192	125 seconds ago
server F	314	3 seconds ago



Peer discovery

gossip protocol

characteristics

- peer-to-peer communication protocol
- decentralized (no coordinator, every node is independent)
- fault tolerant
- lightweight, fast and efficient

applications

- databases (Riak, Cassandra, Dynamo)
- service discovery system (Consul)
- object storage (S3)
- distributed cache (Redis)
- distributed rate limiter