The promise of distributed systems

The promise of distributed systems

- Higher availability - one machine goes down, use another
- Better durability - store data in multiple locations
- More security - each piece easier to make secure

The reality of distributed systems

Reality has been disappointing

- Worse availability - depend on every machine being up

- Worse reliability - can lose data if any machine crashes

- Worse security - anyone in world can break into system

◉ Coordination is more difficult - must coordinate multiple copies of shared state information (using only a network)