

# Replication: What and Why

- **Replication** = An object has identical copies, each maintained by a separate server
  - Copies are called “replicas”
- Why replication?
  - **Fault-tolerance**: With  $k$  replicas of each object, can tolerate failure of any  $(k-1)$  servers in the system
  - **Load balancing**: Spread read/write operations out over the  $k$  replicas  $\Rightarrow$  load lowered by a factor of  $k$  compared to a single replica
  - Replication  $\Rightarrow$  Higher **Availability**