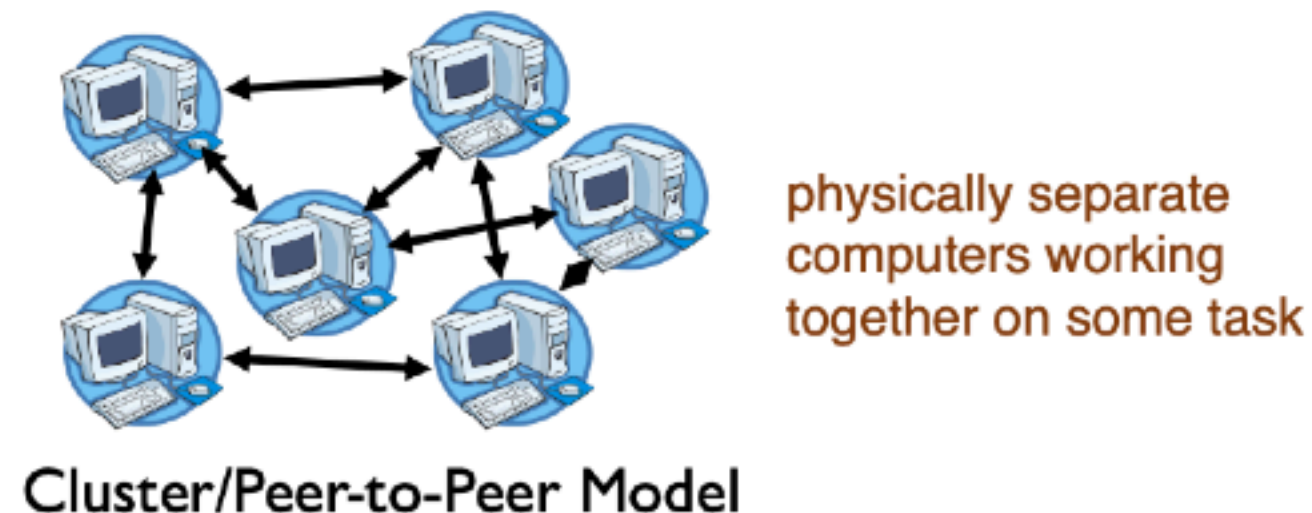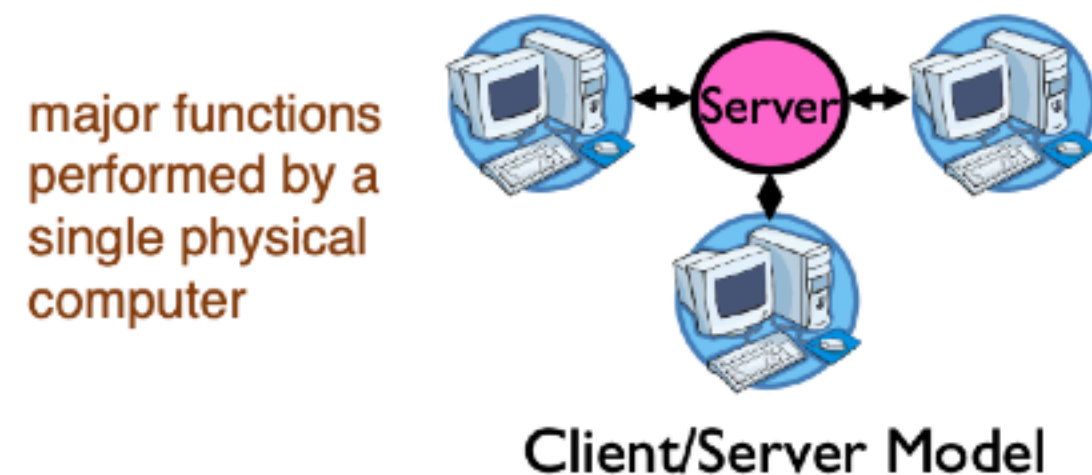# Forms & models of distributed systems?

Degree of integration

- **Loosely-coupled**
  internet applications (e.g email, web, FTP, SSH)

- **Mediumly-coupled**
  remote execution (e.g RPC), remote file system (e.g NFS)

- **Tightly-coupled**
  distributed file systems (e.g. AFS)

major functions performed by a single physical computer

Client/Server Model

physically separate computers working together on some task

Cluster/Peer-to-Peer Model

Why distributed systems?

Why do we want distributed systems?

- Performance - parallelism across multiple nodes

- Scalability - by adding more nodes

- Reliability - leverage redundancy to provide fault tolerance

- Cost - cheaper and easier to build lots of simple computers

- Control - users can have complete control over some components

- Collaboration - much easier for users to collaborate through network resources