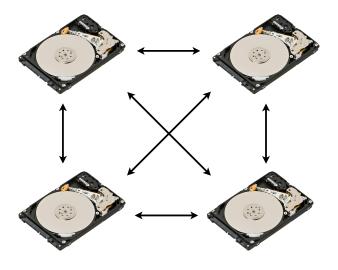
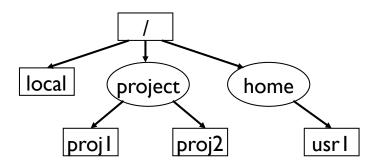
Distributed File Systems

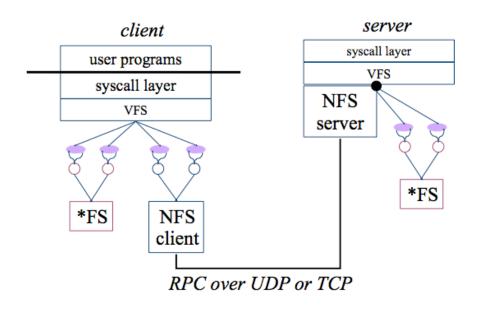


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Naming: Mount Points

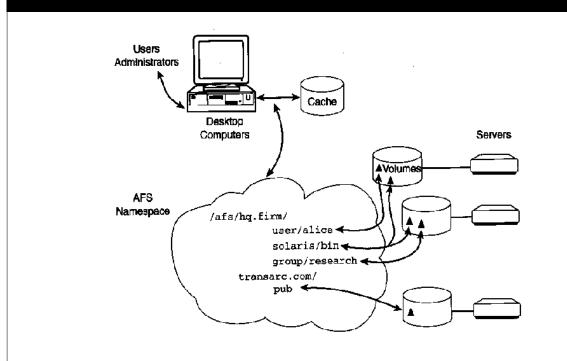


Network File System (NFS)

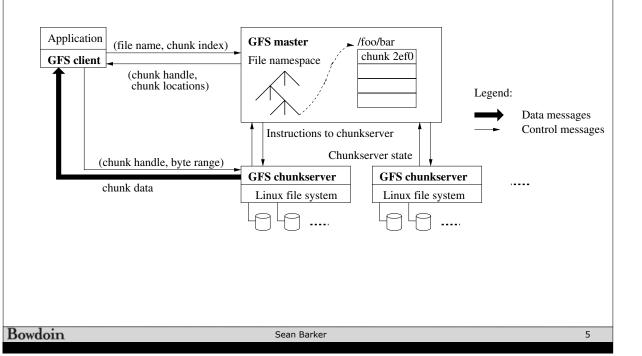


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Andrew File System (AFS)



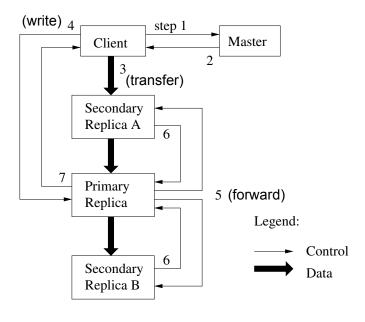
Google File System (GFS)



GFS Cluster Statistics (c. 2003)

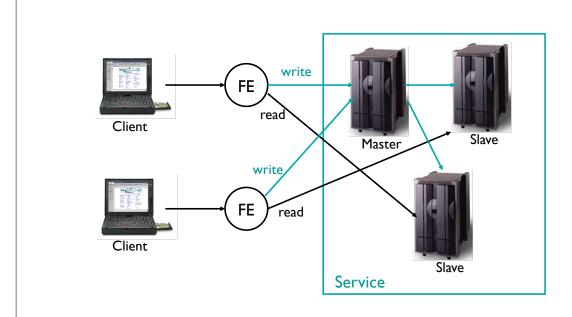
| Cluster | A | В |
|--------------------------|--------|------------------|
| Chunkservers | 342 | 227 |
| Available disk space | 72 TB | 180 TB |
| Used disk space | 55 TB | 155 TB |
| Number of Files | 735 k | 737 k |
| Number of Dead files | 22 k | 232 k |
| Number of Chunks | 992 k | 1550 k |
| Metadata at chunkservers | 13 GB | 21 GB |
| Metadata at master | 48 MB | $60~\mathrm{MB}$ |

GFS Mutations

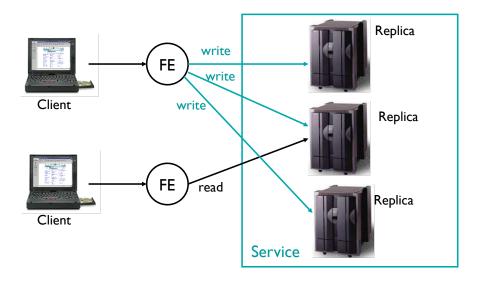


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Passive Replication



Active Replication



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Gossip Architecture

