ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
UNIVERSITY OF CRETE

HY590.45
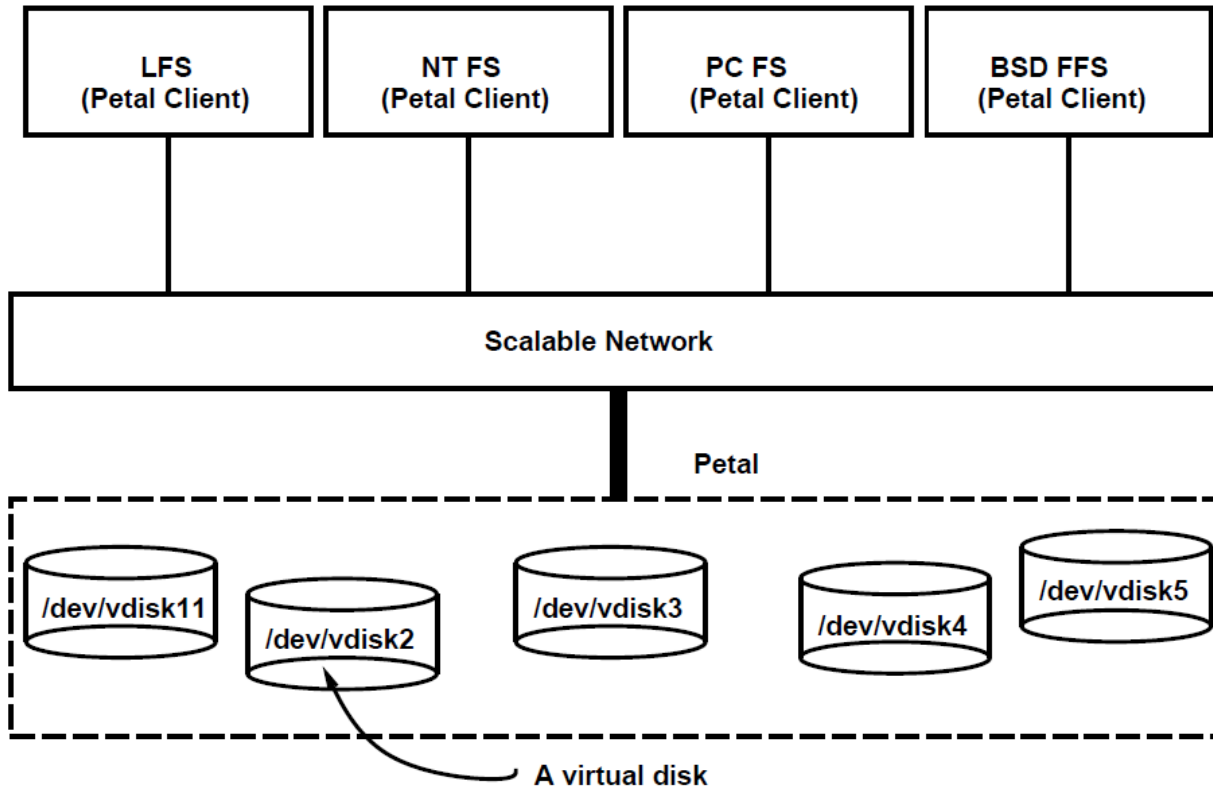# Modern Topics in
Scalable Storage Systems

Kostas Magoutis

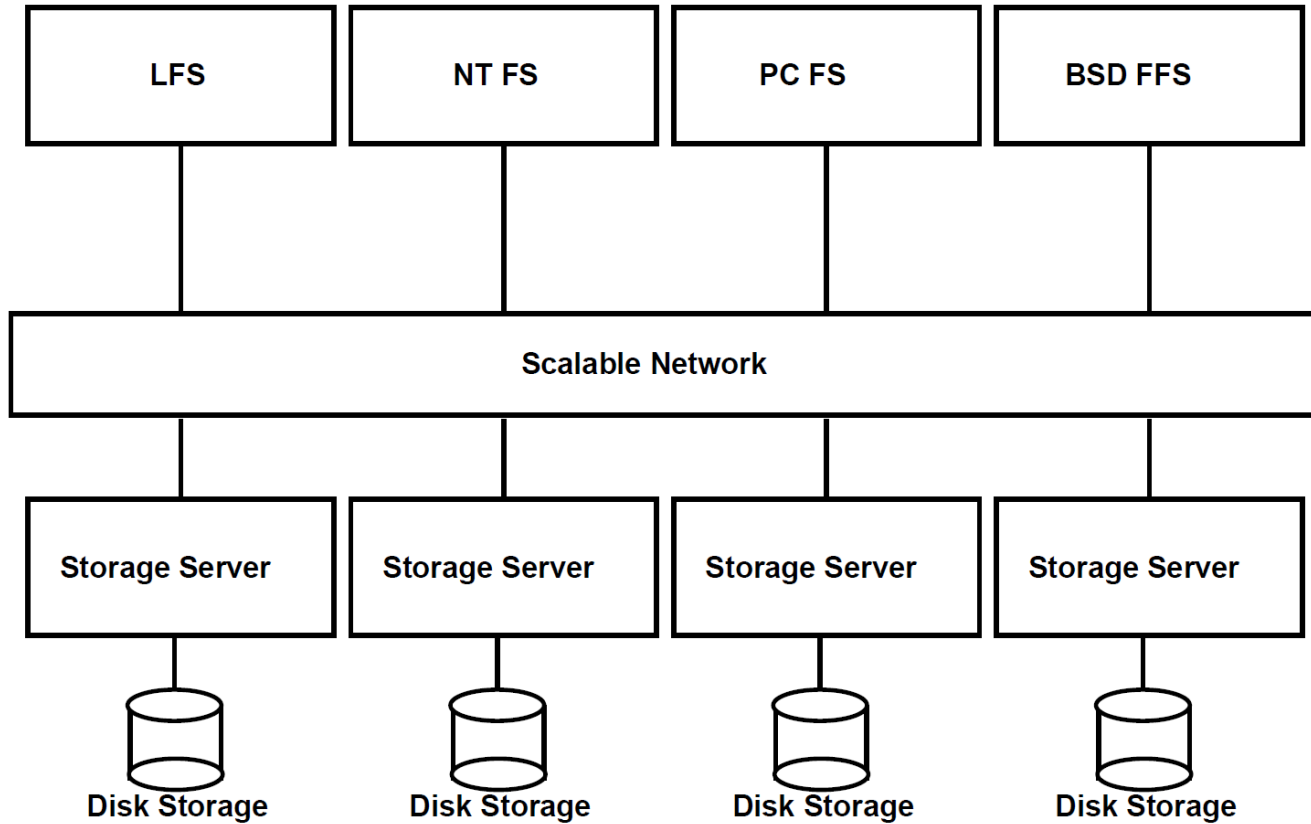magoutis@csd.uoc.gr

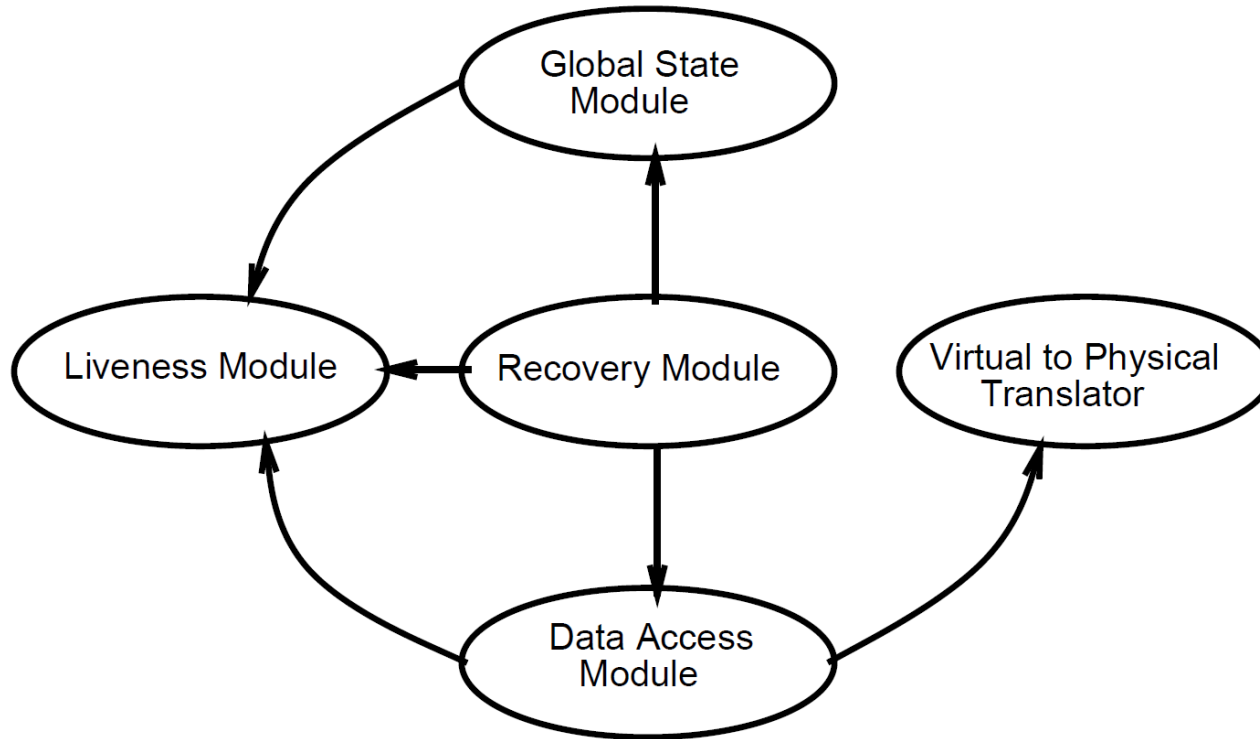http://www.csd.uoc.gr/~hy590-45

Petal: Client view

Goals of Petal

- Tolerate and recover from any component failure

- Geographically distribute to tolerate site failures

- Transparently reconfigure to expand, balance load

- Dynamically balance load

- Fast and efficient support for backups and recovery

Physical structure

Server modules

Virtual to physical mapping

<vdiskID, offset> -> <serverID, diskID, diskOffset>

Server 0	Server 1	Server 2	Server 3
VDir	VDir	VDir	VDir
GMap	serverID	GMap	GMap
PMap0	PMap1	PMap2	PMap3

vdiskID →

offset →

<diskID, diskOffset>