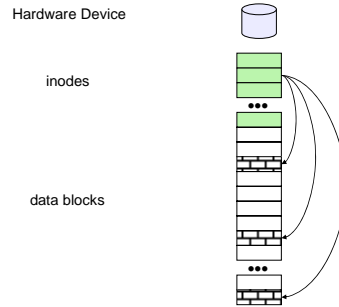


**CSE 451: Operating Systems
Autumn 2010**

**Module 18
File System Summary**

Ed Lazowska
lazowska@cs.washington.edu
Allen Center 570

UFS

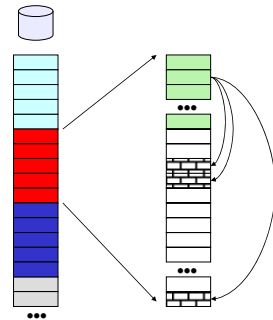


11/14/2010 © 2010 Gribble, Lazowska, Levy, Zahorjan 2

Low throughput addressed by:

- larger blocks
- cylinder groups
- aggressive caching
- hardware awareness

FFS

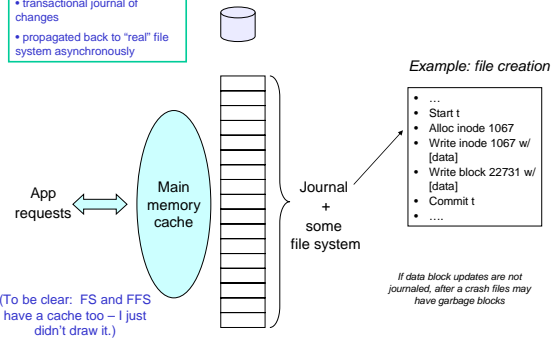


11/14/2010 © 2010 Gribble, Lazowska, Levy, Zahorjan 3

Long post-crash boot times addressed by:

- transactional journal of changes
- propagated back to "real" file system asynchronously

JFS

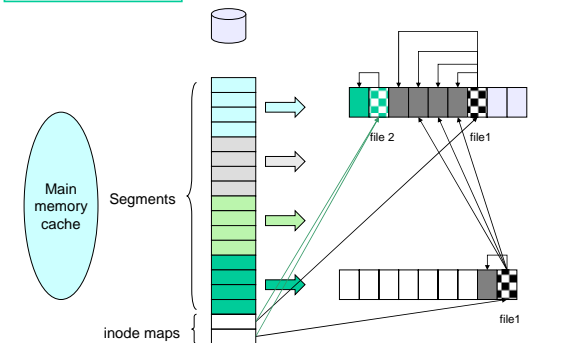


11/14/2010 © 2010 Gribble, Lazowska, Levy, Zahorjan 4

Write throughput addressed by:

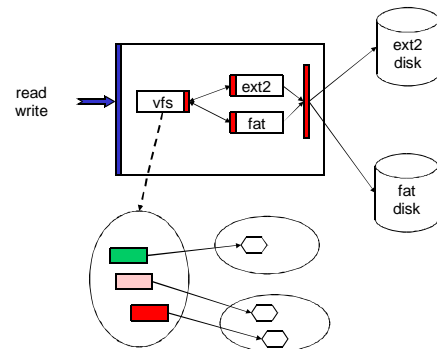
- the file system is a log

LFS



11/14/2010 © 2010 Gribble, Lazowska, Levy, Zahorjan 5

Supporting Multiple File Systems: vfs



11/14/2010 © 2010 Gribble, Lazowska, Levy, Zahorjan 6