

CS 550: Advanced Operating Systems

Networked File Systems

Part 2

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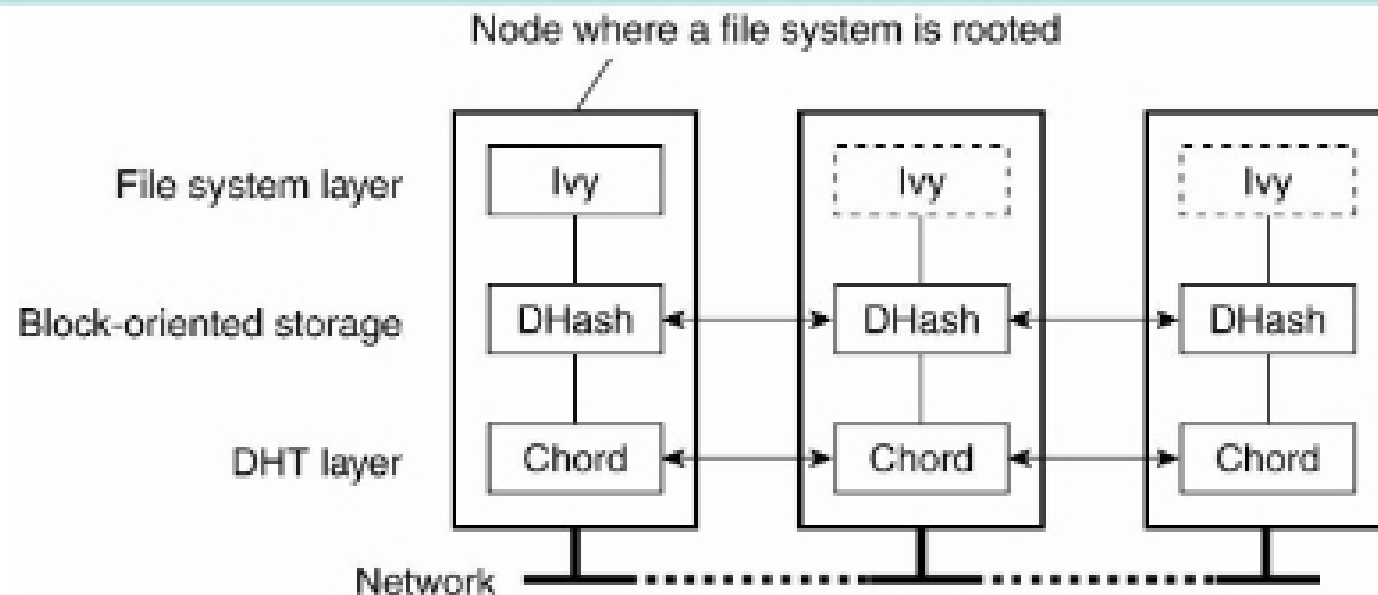
CS 550

Advanced Operating Systems

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Symmetric Architectures

Distributed File Systems



- Commonly used DHT-based systems for distributing data, combined with a key-based lookup mechanism
- Key difference: whether build a file system on top of a distributed storage layer
- Example: Ivy

System Structure

- How should the system be organized?
 - Are clients and server different?
 - Same process implements both functionality
 - Different processes, same machine
 - Different machines (a machine can either be client or server)
 - How are file and directory services organized-same server?
 - Different server processes: cleaner, more flexible, more overhead
 - Same server: just the opposite
 - Caching/no caching
 - server
 - client
 - how are updates handled?
 - File sharing semantics?
 - Server type: stateful vs. stateless