

Data Integrity

Paul Rutherford
Isilon Systems



How breakthroughs begin.™

Real Life

- Disk drive failure
- Controller/Node failure
- User Errors

Methods

- Do Not Trust Storage
 - Verify all data at each level (disk, controller, cluster)
 - Keep Multiple Copies of Data
- Cross Node Protection
 - Do NOT Trust your self either
- Node Based Storage Management
 - Segment/Isolate into Failure Units
 - Improved Recovery
 - Higher Availability
- Fast Recovery from failures
 - Attempt to repair transient errors
 - Use the full capabilities of the system during recovery
 - Design FRUs with recovery time in mind

Data Protection Architecture

