Emerging Object/Active Storage Technologies Panel

Dick Watson (moderator)- LLNL Gary Grider - LANL Reagan Moore - SDSC Dave Anderson - Seagate Julian Satran - IBM David Black - EMC Garth Gibson - CMU, Panasas Ethan Miller - UCSC

Questions to be Addressed

- What are OO/Active storage and how do they work?
- Why are they important?
 - How do they improve on existing solutions?
 - How do they compare to alternate approaches?
- What is the state of development and prognosis?
 - What's needed to make them successful
 - How will they affect already deployed technology

What are OO and Active Storage?

- Current storage devices are organized into low level block abstractions
- OO storage devices are organized into higher level abstractions such as segments, files, or data base records
 - Abstraction and device management details, including access control, are handled by intelligence in the devices
 - Information processing of the abstraction contents is, however, handled back at the client applications
- With Active storage, not only are higher level abstractions handled in the devices, but application processing algorithms can be moved to the storage devices
- Given the increased intelligence of OO or Active devices, higher level OO/Active applications can be developed taking advantage of the increased modularity and intelligence of the devices