

Categories (I/O)

- Category I: Uniquely Exascale
 - **Customization within I/O, purpose-driven I/O**
 - **new I/O models, software, runtime systems and libraries**
 - Intelligent/proactive caching mechanisms for I/O
 - **Fault-tolerance mechanisms**
- Category II: Exascale plus trickle down
 - **balanced architectures with newer devices**
 - File Systems or alternative mechanisms
 - Active Storage
 - **Wide-Area I/O and integration of external Storage Systems**
 - Special purpose network protocols for parallelism
 - I/O into Programming Models and Languages
- Category III: Primarily Sub-exascale
 - balanced architectures with newer devices embedded within the node

Categories (Scientific Data Management)

- Category I: Uniquely Exascale
 - **Scalable Data Analysis and Mining Software and Tools**
 - **Scalable Data Format and High-level Libraries**
- Category II: Exascale plus trickle down
 - **Scientific WorkFlow Tools**
 - Search and Query Tools
 - Wide-Area data access, movement and query tools
 - Scientific Databases