

# Lock-Free, Resilient Data Structures for Fast I/O Accesses

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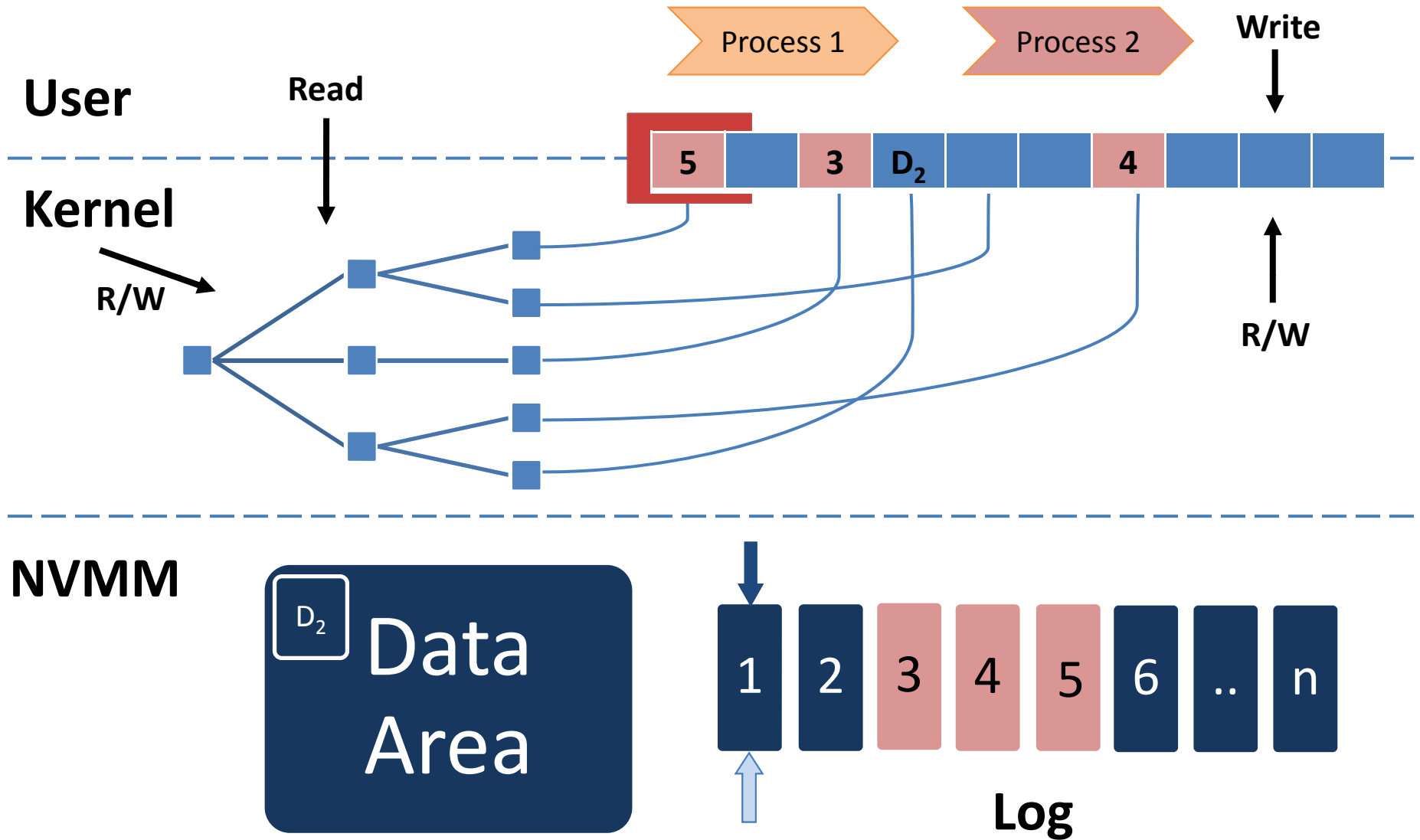


# Kernel Hinders I/O Performance

- Future I/O devices are fast
  - NVMM access time **within 100 nanoseconds**
- Kernel involvement slows down I/O operations
  - Protection, synchronization, naming, etc.
  - Up to **a few microseconds**

**Our solution:**  
**Minimize kernel involvement and  
synchronization with new data structures**

# Kernel/User Hybrid Data Structures



# Future Work

- Measurement
- Detailed design
- Implementation
- Evaluation

# Thank you !

## Questions ?

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