

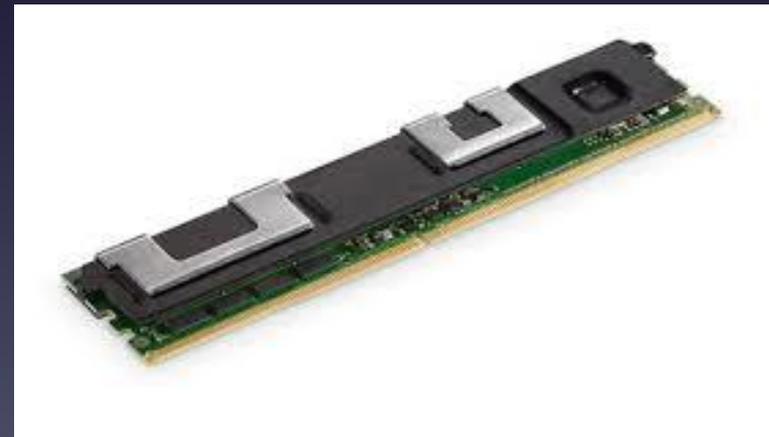
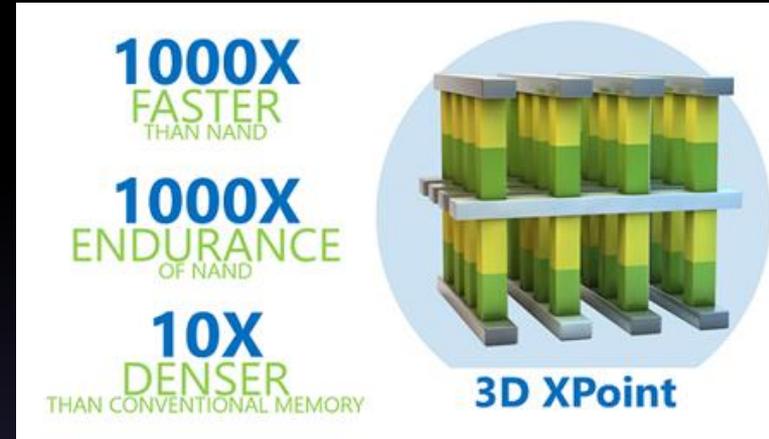


MemVerge

Memorize the Future

A New Physics: 3D XPoint

- Jointly developed by Intel and Micron
- Available as Intel Optane DC Persistent Memory in Q2 2019
 - A NEW addition to Optane SSD product available since 2017
- Volatile Memory Mode
 - Bigger capacity than DRAM (3TB/socket in 2019, 6TB/socket in 2020)
- Block Storage Mode
 - Lower latency than NVMe SSDs (100-250ns)
- App Direct Mode
 - New Persistent Memory programming model



But...

- What distributed storage software stack shall I use?
 - Existing distributed storage software are not designed for media of this speed
- Can I expand my memory beyond the persistent memory of a single node
- Can I use it both for memory expansion and storage acceleration, without modifying my application logic?

Memory Converged Infrastructure Platform



...



MemVerge Distributed Memory Objects

Memory APIs

Storage APIs



Memory Objects for Main Memory Expansion

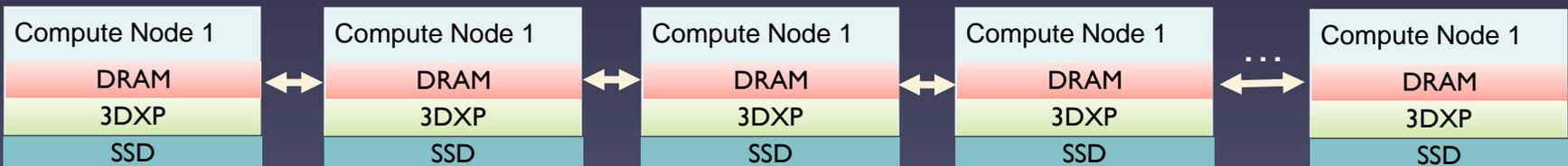
Efficient Metadata Management

Storage Objects with PMEM-optimized tiering

Global Namespace of Persistent Memories



ZeroIO Datapath



Memory Converged Infrastructure

10x IO Speed

10x Memory Size

I-click App Deployment

RDBMS



Data Lake

presto





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