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Efficient Persistent Memory

Dumb Persistent Memory (DPM) is a lower-cost, high-performance data storage system that treats persistent memory as passive storage, allowing for remote access and significant reductions in both operational and capital expenditures for datacenters.

Although knowledge of the new hardware technology, persistent memory, and the improved performances it could bring to datacenters is well known, widespread usage is hindered by the high cost of purchasing and operating the technology. Researchers at Purdue University have developed a more efficient persistent memory (PM) data storage system called Dumb Persistent Memory (DPM). DPM treats PM as a passive media to store data persistently, accesses PM remotely from the interconnected network, and builds data stores upon PMs. This technology is lower cost than current PM data storage systems as it removes the expensive processing units where the data is stored. From evaluation results, this technology demonstrates that DPM can achieve the same or better performance and scalability as traditional distributed and remote non-DPM in-memory stores when reducing operational expenditures by 30% to 99% and capital expenditures by 75%.

Advantages:

-Efficient

-Low cost

-Scalable

Potential Applications:

-Datacenters

-Data storage

TRL: 4

Intellectual Property:

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