ENABLING THE PERSISTENT MEMORY ERA

Company Overview
ST-MRAM - Performance With Persistence

- Memory is fast but volatile
- Storage is slower but non-volatile
- MRAM combines the performance of memory with the persistence of storage
- Write performance is a requirement for a true SCM, otherwise it is just faster storage
- MRAM is only NVM that can be written enough times to avoid wear leveling
- Read performance of all new NVM technologies approaches that of DRAM
Saturate PCIe

<6µs 4KB Random Write with standard drivers

<3µs 512B Random Write

SPDK

No system support required for power fail safe

Hot plug FRU

No initialization time

nvNITRO™ Accelerators

1GB & 2GB capacities this year with 4GB & 8GB next year
Remote Persistent Memory

- Write 10M 64-Byte msgs/sec remotely to a power fail safe buffer
  - End-End latency of less than 2uS
- Write 4GB/s of data to a remote power fail safe buffer on 40Gb/s fabric
NVMe Over Fabrics

- No offload – 19us 4K random writes
- Full offload - <10us 4K random writes
  - Persistent memory in nvNITRO makes this easier and faster
THANK YOU