

STORAGE DEVELOPER CONFERENCE



BY Developers FOR Developers

Virtual Conference
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Future Innovations in Software Defined Flash Storage

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Discussion Ideas

- Flash storage has moved beyond “speeds and feeds!”
- What are the pain points in flash storage today?
- What are the best common abstractions?
- How can developers specify their intent for flash storage?
- How to make it easy for developers?
- Do containers and VMs change the calculus?
- How about accelerators and DPU, do they have custom needs?
- What knobs are developers expecting?

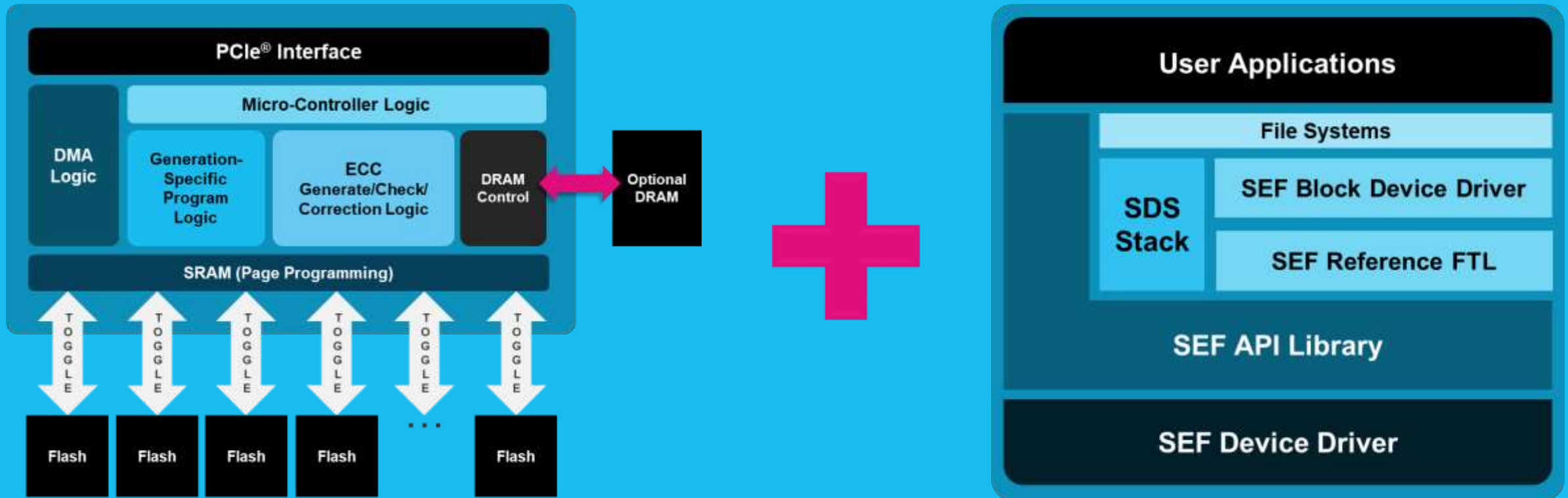
Software-Enabled Flash™ Technology

**Fundamentally
redefines the
relationship
between the host
and solid-state
storage**

- Brings control of media to software
- Host applications have complete control over storage functionality and behavior
- Solves legacy overhead problems and enables new features
- Maximizes flash flexibility, performance and parallelism...

in other words, its value.

Hardware + Software Working Together

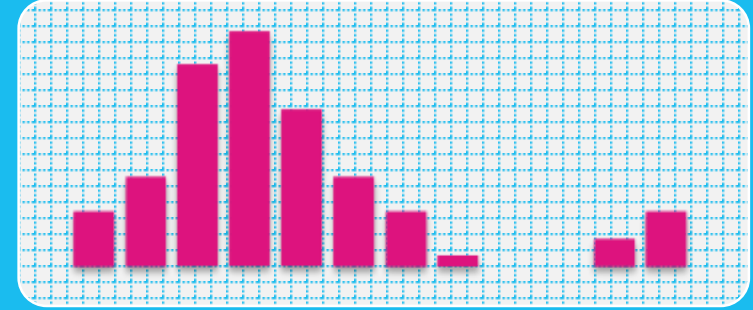


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CAPABILITIES



Workload Isolation



Latency Management

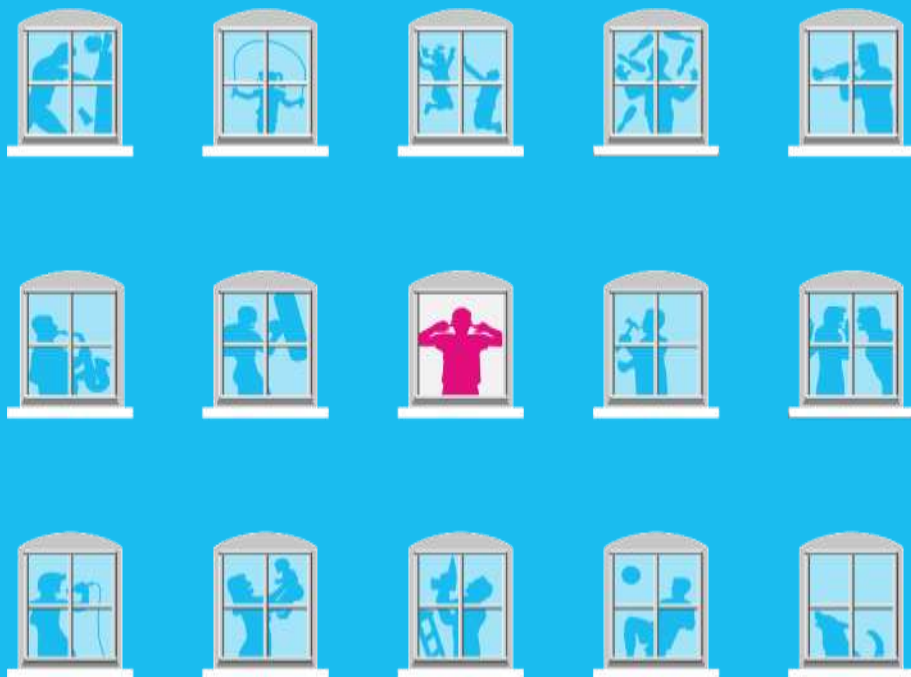


Flash Migration

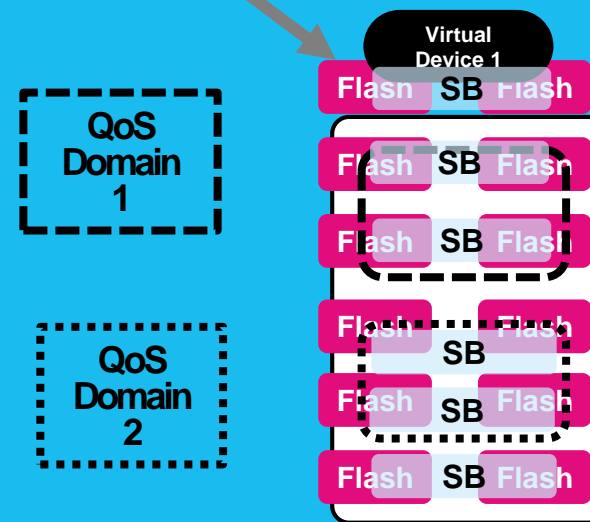
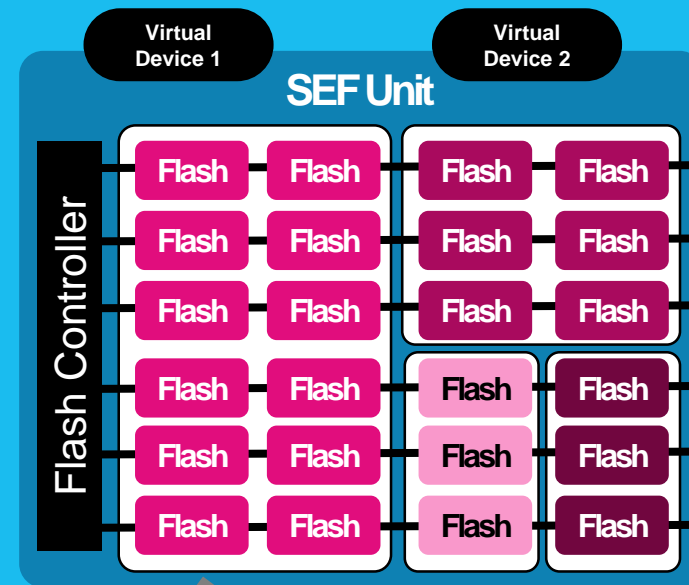


Flash Maintenance

WORKLOAD ISOLATION

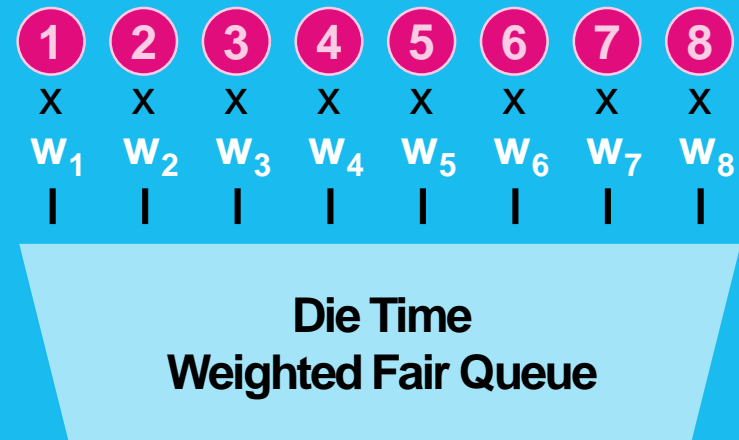
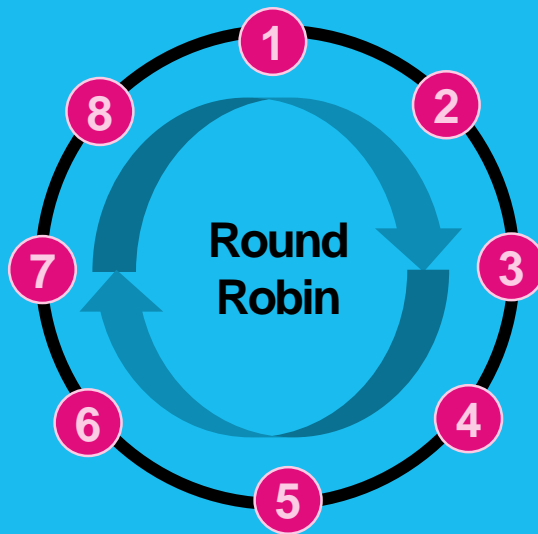
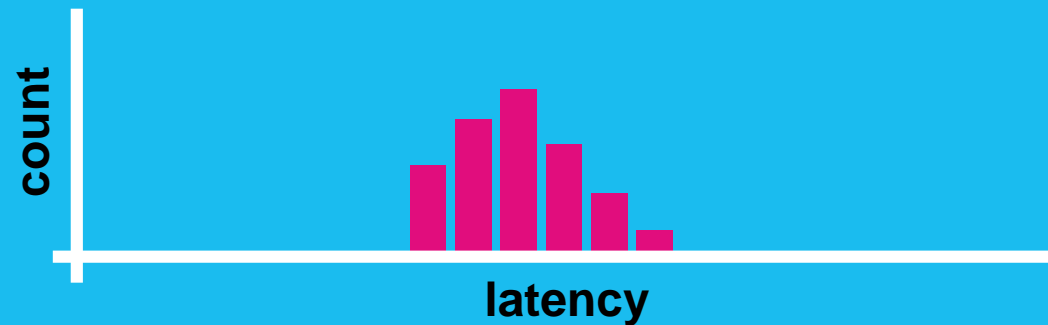
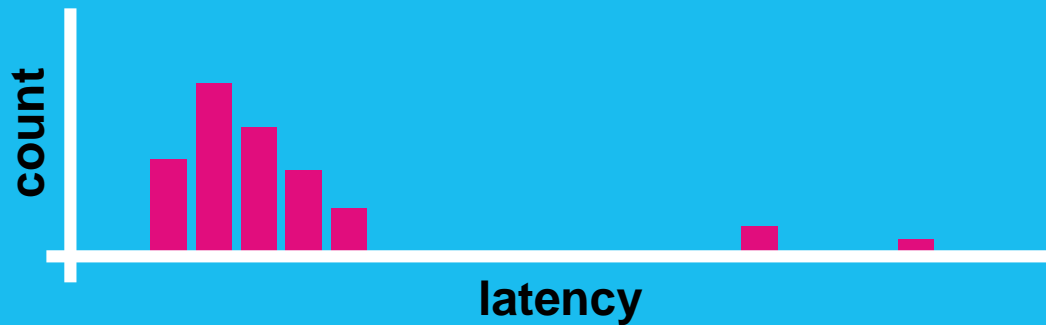


Noisy Neighbor Control

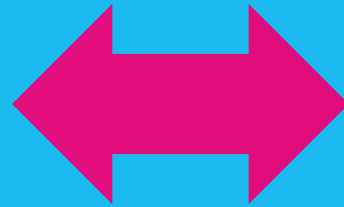


Data placement by die and superblock

LATENCY MANAGEMENT



FLASH MIGRATION



FLASH MANAGEMENT

Orchestrated by host software...
...performed by Software-Enabled Flash™ hardware

- Garbage collection
 - Wear leveling
 - Flash patrol reads
 - Compaction
- ...and more...

