

## Panel discussion talking points

- 1. Subsystems are designed for disk drives. SSDs are plug-compatible replacements for disk drives, but subsystems are not designed to handle SSD-type I/O rates.
- 2. There are very few housekeeping tasks in a disk drive, so almost all activity is host-driven. This makes disk drives much easier to understand and model than SSDs, which have an asynchronous free space consolidation routine that use substantial internal resources in terms of microprocessor cycles and flash memory bandwidth.
- 3. SSDs are the savior of disk drives, not the enemy. With SSDs we can migrate half the IOPS to SSD while only moving a percent or two of the data. That let's us use disk drives that hold twice as much data.