

## Developing NAND Flash-Memory SSD-Based File System Design

**Authors :** Jaechun No

**Abstract :** This paper focuses on I/O optimizations of N-hybrid (New-Form of hybrid), which provides a hybrid file system space constructed on SSD and HDD. Although the promising potentials of SSD, such as the absence of mechanical moving overhead and high random I/O throughput, have drawn a lot of attentions from IT enterprises, its high ratio of cost/capacity makes it less desirable to build a large-scale data storage subsystem composed of only SSDs. In this paper, we present N-hybrid that attempts to integrate the strengths of SSD and HDD, to offer a single, large hybrid file system space. Several experiments were conducted to verify the performance of N-hybrid.

**Keywords :** SSD, data section, I/O optimizations, hybrid system

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