SSD vs. HDD

Contrary to popular belief, HDDs are not giving way to all-SSD cloud environments for the foreseeable future. Datacenters are driving a resurgence in demand for HDDs with IDC research projecting 46 percent compounded annual growth in this segment for 2011-2016.*

Although SSDs have many benefits (including ruggedness, better small block random performance, and lower power), the truth is that SSDs are still 3-30 times more expensive than hard drives. As a result, the most efficient cloud datacenters use SSDs sparingly for only the hottest applications requiring the highest read/write performance. HDDs continue to store the vast majority of data because of their cost/GB advantage.

The smart focus is to use both HDDs and SSDs appropriately in a tiered infrastructure. HDDs are most efficient for the vast majority of cloud applications in Tier 1 (10K/15K RPM SAS hard drives for mission critical data) and Tier 2 (7200 RPM SAS/SATA hard drives to store objects, social network content and Big Data), while SSDs are reserved for Tier 0 high performance transactional applications.

IDC Worldwide 2012-2016 Forecast: The Industry Hits the Reset Button, IDC Doc#233547, March 2012