

## Using IBM System Storage DS8000 for High OLDS Logging Data Rate

The IMS Performance group at IBM Silicon Valley Laboratory recently set a new high rate for IMS OLDS logging. In December 2008, using IMS Version 10, an IBM System z10 processor, and an IBM System Storage DS8000 disk system (DS8000), they measured an OLDS logging rate of 135 MB per second! Using IMS Version 10, an IBM System z10 processor, and IBM TotalStorage Enterprise Storage Server Model 800 (ESS M800), the peak OLDS logging data rate measured was 33 MB per second.

### ENVIRONMENT:

- Hardware: IBM System z10 processor with 4 Gb FICON channels
- Software: IBM z/OS 1.10, IMS Version 10
- OLDS setup: BUFNO=999, 24KB block size

DASD	DS8000	ESS M800
OLDS logging rate in MB per second	135.5	33.2

To facilitate reaching this high OLDS logging data rate on DASD, we:

- Modified the Fast Path database change logger to always use full-CI logging for DEDB update (X'5950') log records
- Used a DEDB CI size of 24 KB
- Drove the system hard enough so that Fast Path update transactions were always queued, ensuring that the DASD sequential log write capacity was reached

In an IMS online production environment, you would not likely sustain maximum OLDS logging capacity over an extended period of time, but during times of heavy BMP activity, it is possible that logging could be a constraining factor. The IMS Performance group at Silicon Valley Laboratory has measured multiple instances in which the OLDS logging bandwidth using DS8000 significantly exceeds that of ESS M800. Although these results were obtained in a controlled laboratory environment, they demonstrate the relative improvement that might be gained by using the IBM DS8000 for IMS logging.

The bottom line: DS8000 achieved an OLDS logging data rate 3 times higher than ESS M800 due to having significantly faster disk drive modules (DDM), internal buses and FICON ports.

Cedric Chen  
Hsiung Tang  
IMS Performance