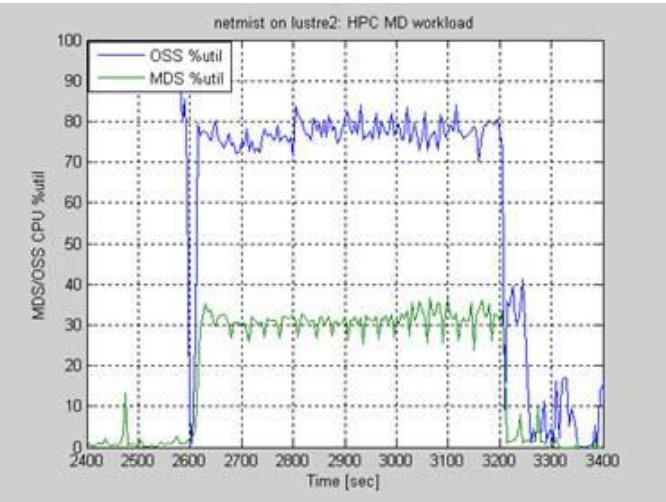
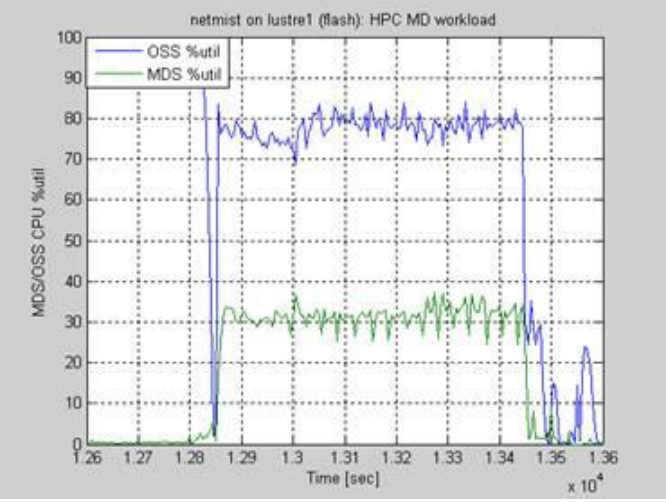
I also ran MPI version of Netmist on same 2 file systems. I used an operation mix that was similar to mdtest and postmark but I decided to run only POSIX and not MPIIO as netmist load on MD with MPI was lower than expected. In order to run it correctly I had to use the Lustre mounted with –o localnolock option otherwise it would hang on the lock operations.

Operation	rand read	rand write	rmw	mkdir	unlink	append	access	stat	chmod	readdir	statfs
%	5	5	1	16	16	16	16	6	2	16	1

./netmist -b 128 -d 8 -B 1 -t 300 -w 300 -f client_list
Client_list included 4 clients and 8 threads each or 32 threads

Netmist HPC POSIX on lustre2 (disk)	Netmist HPC POSIX on lustre1 (flash)
Test run time = 300 seconds, Warmup = 300 sec. Running 32 copies of the test on 4 clnt Results dir: /lab/demo/netmist_pro_mpi Clients have a total of 512 GiB of mem Clients have 16384 MiB of memory size per process Clients each have 8 processes Adjustable aggregate data set value set to 1 GiB Each process file size=16800 KiB Client data set size = 1181250 MiBytes Total starting data set size= 4725000 MiB Total initial file space = 4725000 MiB Total max file space = 5250000 MiB Starting tests: Tue Oct 22 18:35:28 2013 Launching 32 processes. --- Overall average latency 3.32 Milli-seconds Overall Netmist_2012 Ops/sec 9628.83 Ops/sec Overall Read_throughput ~ 34558.33 Kbytes/sec Overall Write_throughput ~ 47386.56 Kbytes/sec Overall throughput ~ 81944.90 Kbytes/sec Public Finger Print 841881307 ---	Test run time = 300 seconds, Warmup = 300 seconds. Running 32 copies of the test on 4 clients Results directory: /lab/demo/netmist_pro_mpi Clients have a total of 512 GiBytes of memory Clients have 16384 MiBytes of memory size per process Clients each have 8 processes Adjustable aggregate data set value set to 1 GiBytes Each process file size = 16800 kbytes Client data set size = 1181250 MiBytes Total starting data set size = 4725000 MiBytes Total initial file space = 4725000 MiBytes Total max file space = 5250000 MiBytes Starting tests: Tue Oct 22 21:26:13 2013 Launching 32 processes. --- Overall average latency 3.29 Milli-seconds Overall Netmist_2012 Ops/sec 9729.73 Ops/sec Overall Read_throughput ~ 34893.23 Kbytes/sec Overall Write_throughput ~ 47683.99 Kbytes/sec Overall throughput ~ 82577.22 Kbytes/sec Public Finger Print 842271196 ---





Total files	Tested FS	rand read	rand write	rmw	mkdir	unlink	append	access	stat	chmod	readdir	statfs
650000	lustre2	481	481	96	1540	1540	1540	1540	578	193	1540	96
650000	lustre1	486	486	97	1557	1557	1557	1557	584	195	1557	97

As the diagrams show there are also some read/write operations that use CPU on the OSS while with the other 2 benchmarks the OSS utilization is neglectable. The MDS usage on the other hand is similar to postmark as there are also read/write operations. The differences between the 2 FS are less prominent. Not sure if the operation mix has an impact on the result but I used a mix similar to postmark.