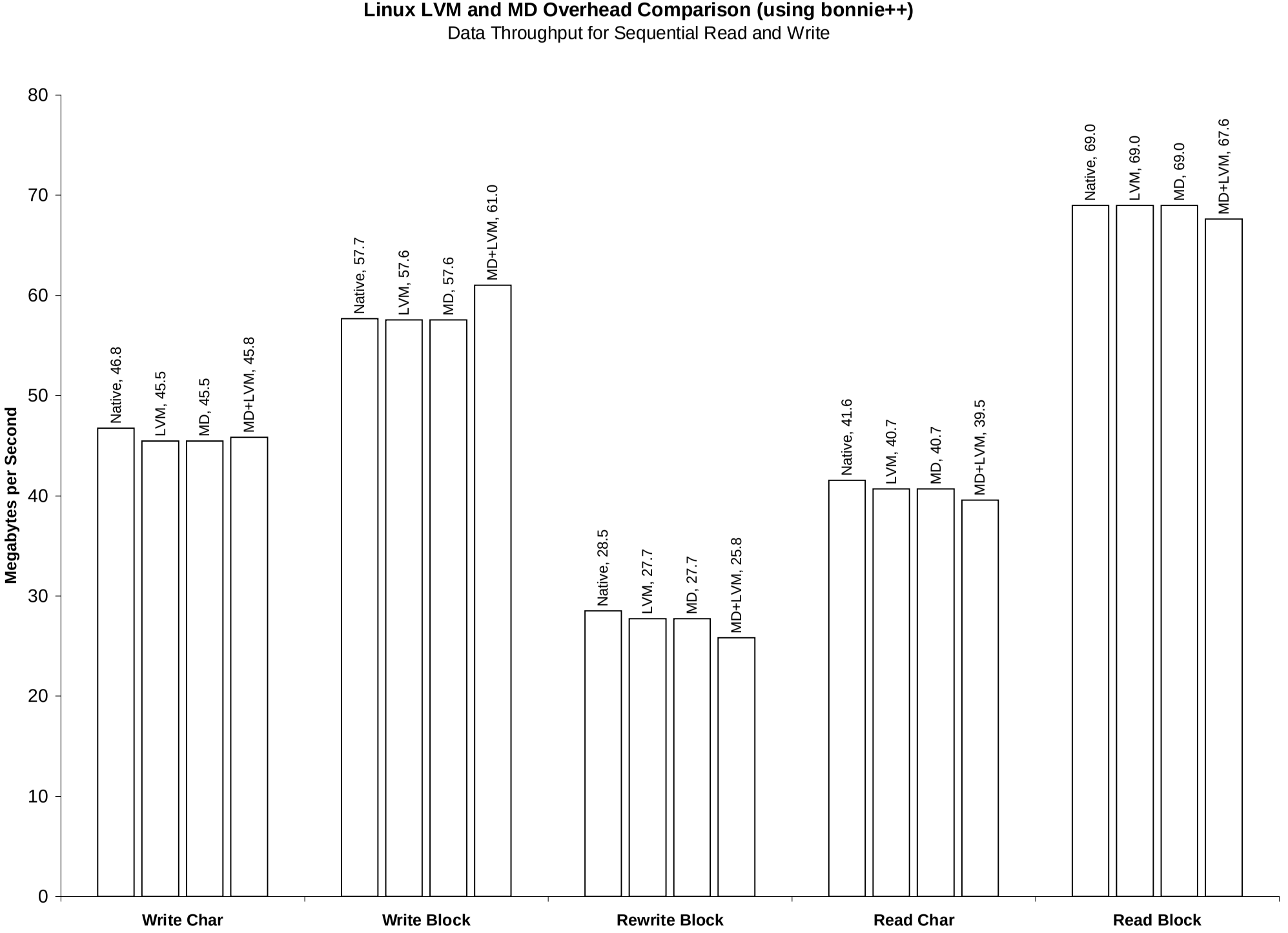
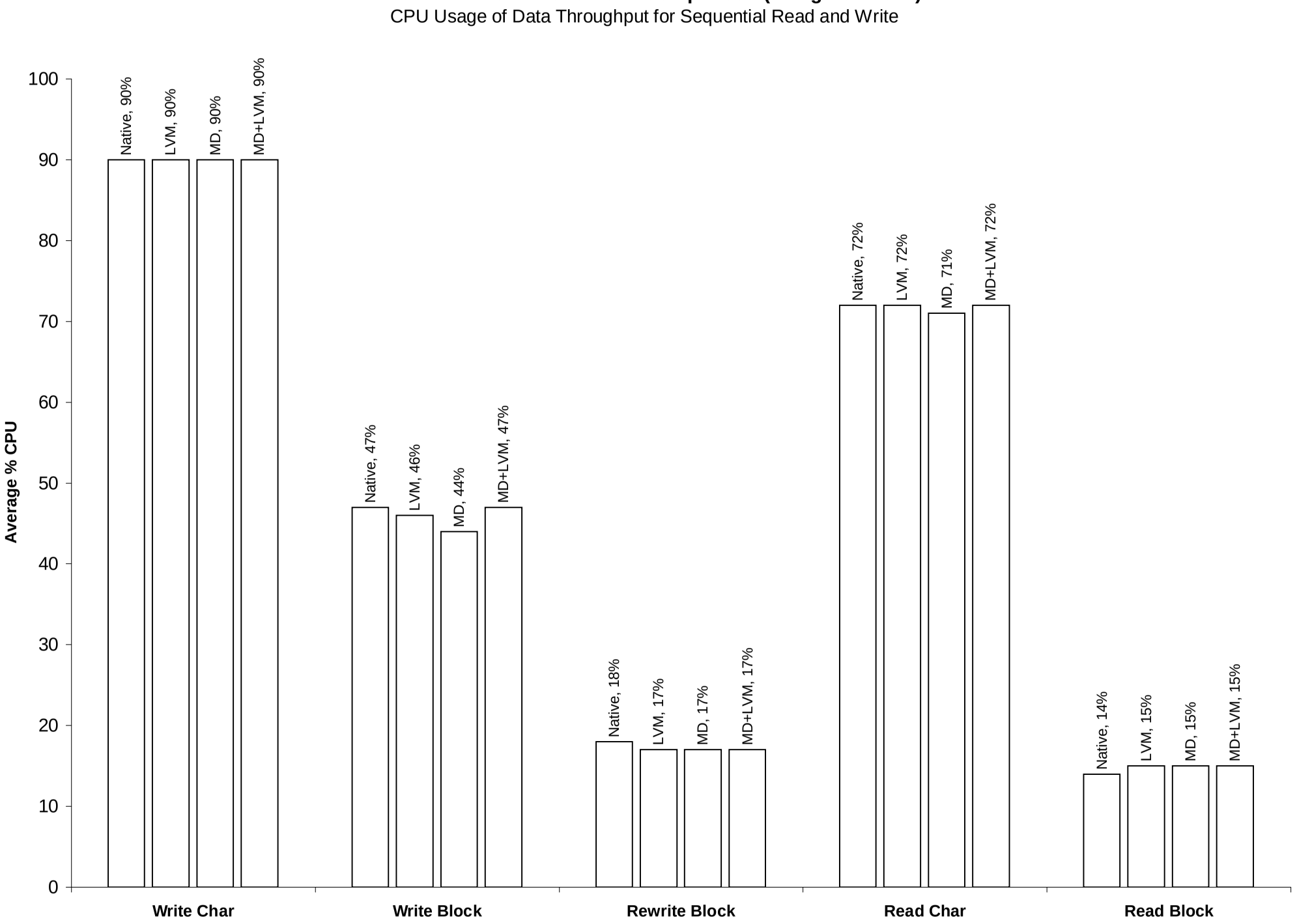
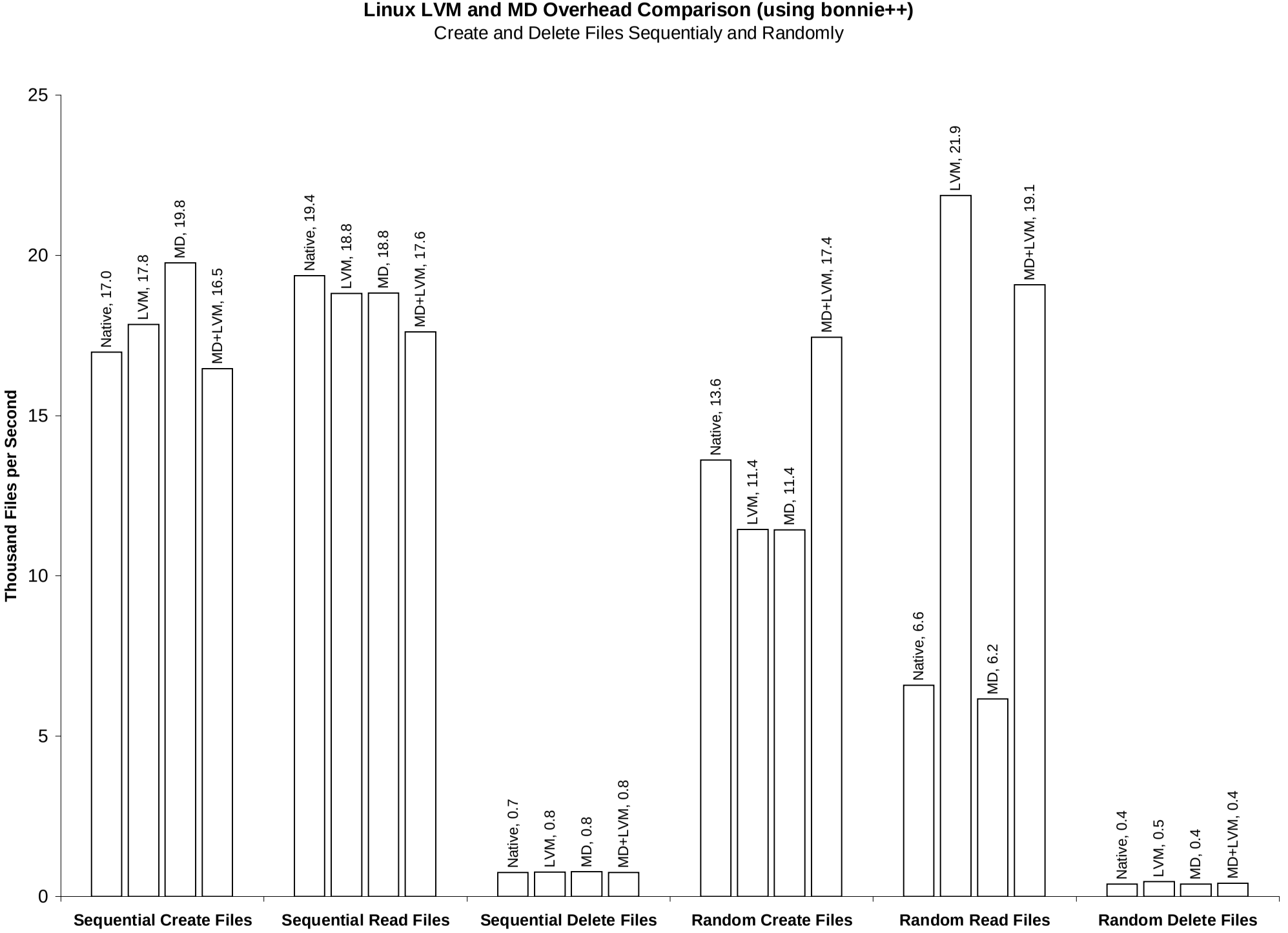
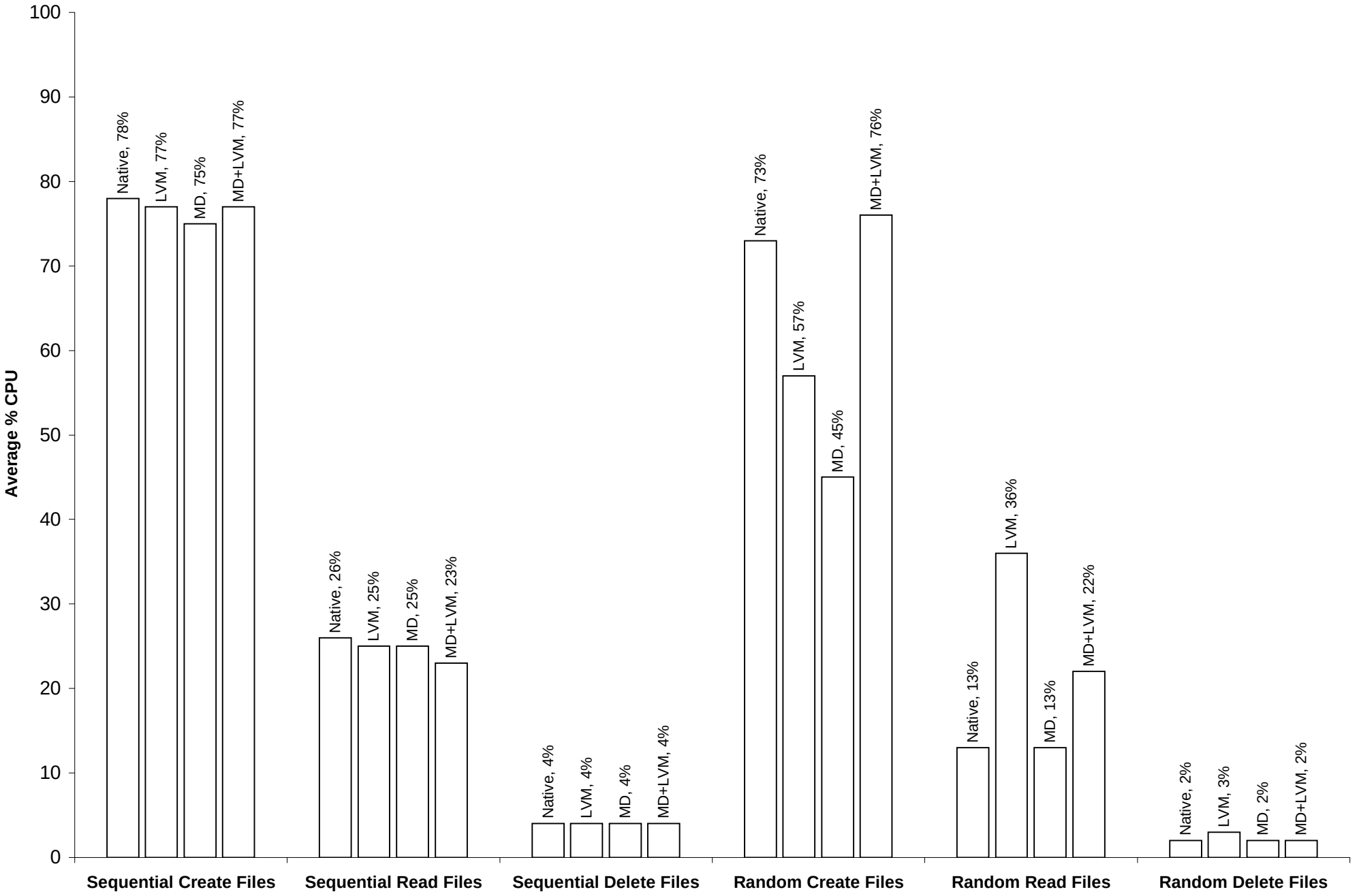

Linux LVM and MD Overhead Comparison (using bonnie++)
Data Throughput for Sequential Read and Write
Megabytes per Second
0
10
20
30
40
50
60
70
80
Native, 46.8
LVM, 45.5
MD, 45.5
MD+LVM, 45.8
Native, 57.7
LVM, 57.6
MD, 57.6
MD+LVM, 61.0
Native, 28.5
LVM, 27.7
MD, 27.7
MD+LVM, 25.8
Native, 41.6
LVM, 40.7
MD, 40.7
MD+LVM, 39.5
Native, 69.0
LVM, 69.0
MD, 69.0
MD+LVM, 67.6
Write Char
Write Block
Rewrite Block
Read Char
Read Block


Linux LVM and MD Overhead Comparison (using bonnie++)
CPU Usage of Data Throughput for Sequential Read and Write
Average % CPU
0
10
20
30
40
50
60
70
80
90
100
Native, 90%
LVM, 90%
MD, 90%
MD+LVM, 90%
Native, 47%
LVM, 46%
MD, 44%
MD+LVM, 47%
Native, 18%
LVM, 17%
MD, 17%
MD+LVM, 17%
Native, 72%
LVM, 72%
MD, 71%
MD+LVM, 72%
Native, 14%
LVM, 15%
MD, 15%
MD+LVM, 15%
Write Char
Write Block
Rewrite Block
Read Char
Read Block


Linux LVM and MD Overhead Comparison (using bonnie++)
Create and Delete Files Sequentialy and Randomly
Thousand Files per Second
25
20
15
10
5
0
Native, 17.0
LVM, 17.8
MD, 19.8
MD+LVM, 16.5
Native, 19.4
LVM, 18.8
MD, 18.8
MD+LVM, 17.6
Native, 0.7
LVM, 0.8
MD, 0.8
MD+LVM, 0.8
Native, 13.6
LVM, 11.4
MD, 11.4
MD+LVM, 17.4
Native, 6.6
LVM, 21.9
MD, 6.2
MD+LVM, 19.1
Native, 0.4
LVM, 0.5
MD, 0.4
MD+LVM, 0.4
Sequential Create Files
Sequential Read Files
Sequential Delete Files
Random Create Files
Random Read Files
Random Delete Files

Linux LVM and MD Overhead Comparison (using bonnie++)

CPU Usage of Create and Delete Files Sequentialy and Randomly