

IO per chunk (independent IO with file setview VS. collective IO)

p 32  
chunks variable

Collective

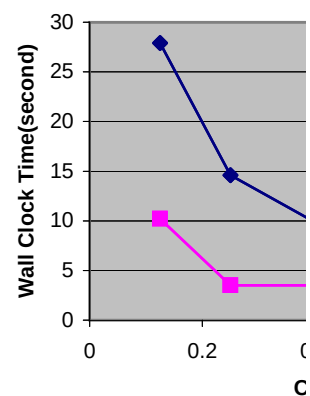
|       |         |        |       |      |     |     |
|-------|---------|--------|-------|------|-----|-----|
|       | 32      | 16     | 8     | 4    | 2   | 1   |
|       | 0.03125 | 0.0625 | 0.125 | 0.25 | 0.5 | 1   |
| read  |         |        | 27.9  | 14.6 | 6.7 | 4.2 |
| write |         |        | 27.2  | 14.2 | 7   | 4.4 |

independent IO with file setview

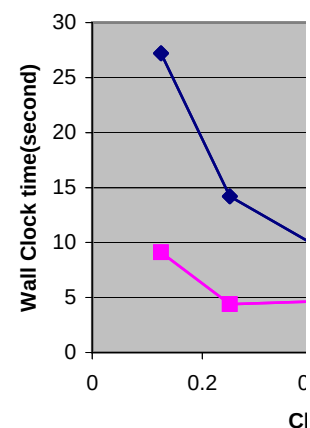
|       |         |        |       |      |     |     |
|-------|---------|--------|-------|------|-----|-----|
|       | 32      | 16     | 8     | 4    | 2   | 1   |
|       | 0.03125 | 0.0625 | 0.125 | 0.25 | 0.5 | 1   |
| read  |         |        | 10.2  | 3.5  | 3.5 | 1.9 |
| write |         |        | 9.1   | 4.4  | 4.8 | 4.7 |

p=32

Read: Multi-ch



Write: Multi-ch



ratio=.25  
multi-chunk

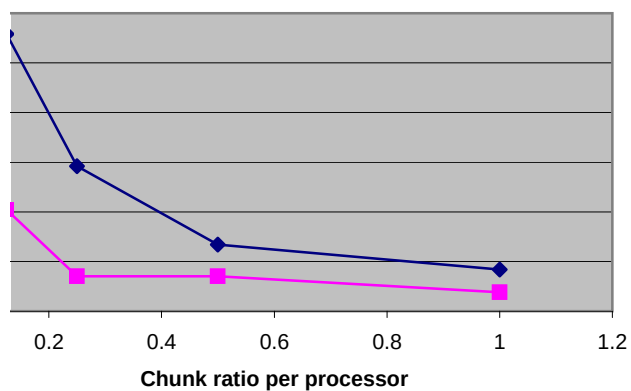
|       |      |      |     |       |       |      |
|-------|------|------|-----|-------|-------|------|
|       | 4    | 8    | 16  | 32    | 64    | 128  |
| read  | 1.41 | 3.54 | 6.7 | 13.28 | 28.77 | 54.5 |
| write | 1.82 | 3.17 | 7.2 | 14.34 | 27.9  | 53.5 |

one-link

|       |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|
|       | 4    | 8    | 16   | 32   | 64   | 128  |
| read  | 0.1  | 0.11 | 0.17 | 0.12 | 0.22 | 0.33 |
| write | 0.13 | 0.17 | 0.31 | 0.23 | 0.45 | 0.45 |

chunks=128

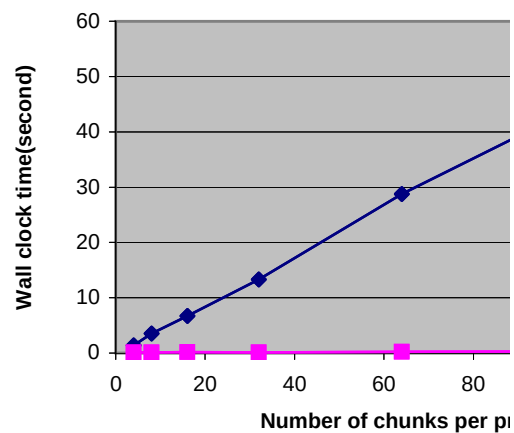
ad: Multi-chunk independent IO with file setview VS  
collective IO



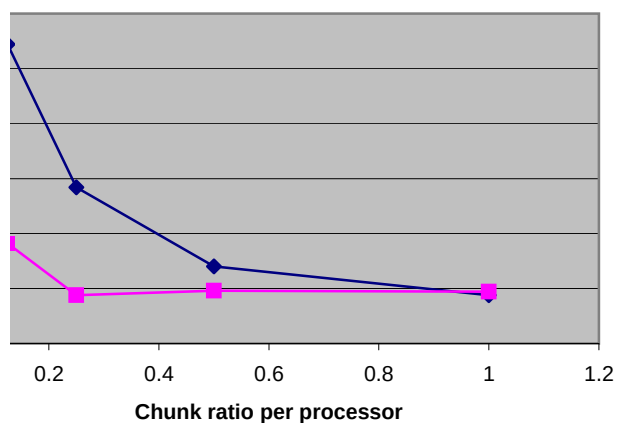
p=32

ratio=.25

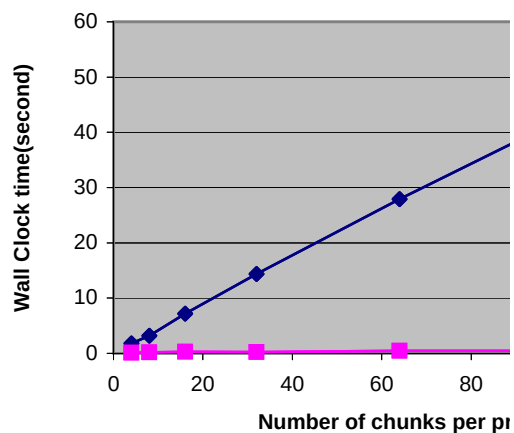
Read



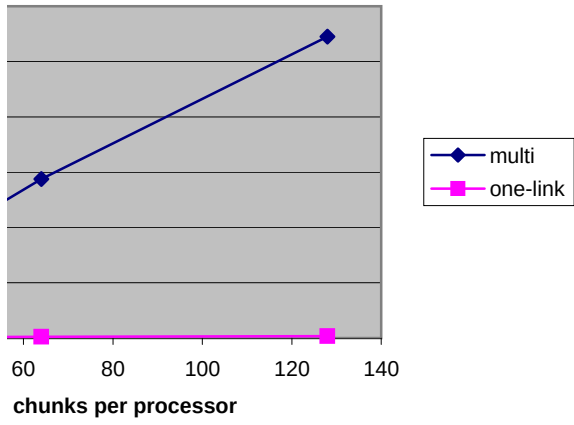
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collective IO



Write



### Read



### Write

