Technische Universität München

Assignment 4: MPI Collectives and MPI-IO

Programming of Super Computers

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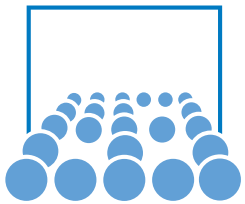

Contents

Optimizations

- Would you expect performance or scalability benefits from the changes in this application? Explain.
- Is the resulting code easier to understand and maintain after the changes? If yes, why?

Performance Measurements

Show some measurements for falsification/verification of our guess

Data Sieving and 2-Phase IO

What is ”Data Sieving” and ”2-Phase IO”? How do they help improve IO performance?

Scalability of original application

- Was the original implementation scalable in terms of IO performance?
- Was the original implementation scalable in terms of RAM storage?

Impact of parallel IO

How much of the communication in the application was replaced with MPI-IO operations?