Research on Performance Optimization of Virtual Data Space across WAN

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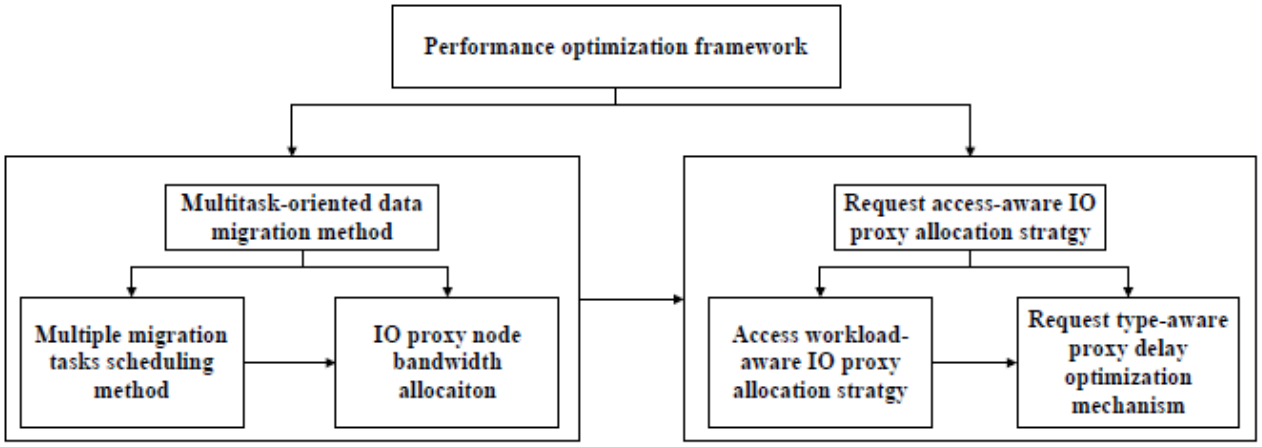
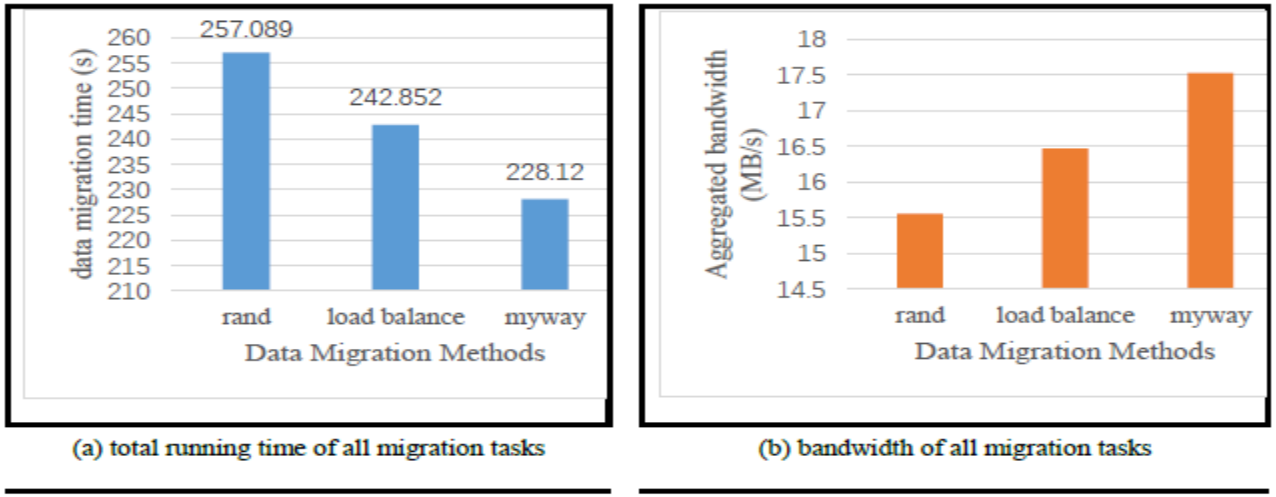
Problems & Ideas

- Performance problems of GVDS in data migration and access across WANs:
  - the applications running on the GVDS are often data-intensive, requiring large amounts of data from multiple supercomputing centers across WANs.
- Ideas: a performance optimization framework of GVDS including the multitask-oriented data migration method and the request access-aware IO proxy resource allocation strategy



Main Contributions

- Contributions:
  - The framework has taken consideration of the current information of the WAN bandwidth, and can meet the performance requirements of the data migration tasks by making full use of the idle bandwidth of the WAN;
  - The framework can measure the highest pressure of users accessing the corresponding data space, and can solve the performance bottleneck caused by the inefficient IO proxy resource allocation of the GVDS



Comparison of data migration method