

Parallel Computing

Distributed Memory

Introduction

1. Parallel Computing on Multiple Nodes
 - a. Cluster Architecture and Software Review
 - b. Single Program Multiple Data (SPMD)
 - c. pbdMPI: A High-Level Interface to MPI
 - d. Random Forest Example with pbdMPI
2. Using Scalable Matrix Libraries
 - ▶ Brief Overview of BLAS, PBLAS, LAPACK, and ScaLAPACK
 - ▶ pbdDMAT: Distributed Matrix Computing
3. pbdCS: Client-Server Interactive SPMD