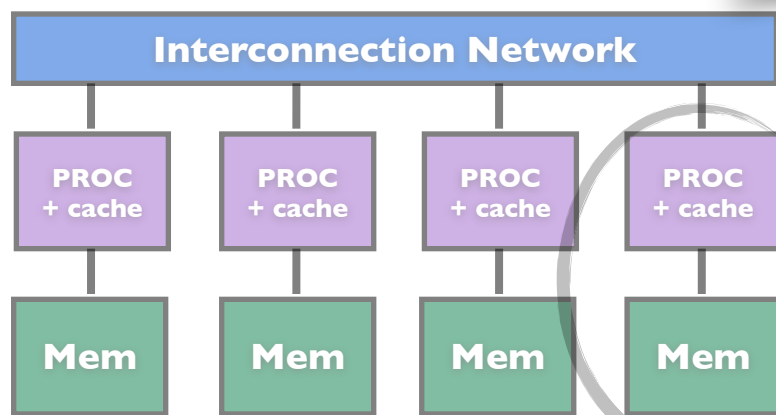


Distributed Memory



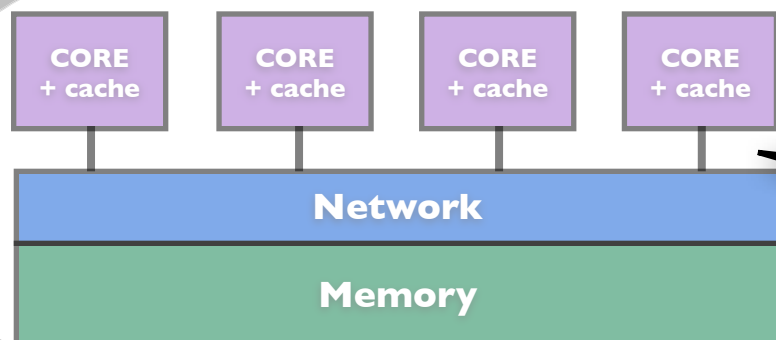
Default is parallel (SPMD): where is my data and who has what I need?

Sockets
MPI
Hadoop

snow
Rmpi
pbdMPI

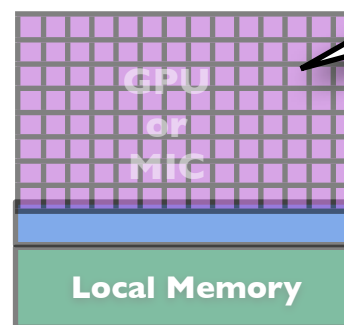
RHadoop

Shared Memory



Default is serial: which tasks can the compiler make parallel?

Co-Processor



GPU: Graphical Processing Unit
MIC: Many Integrated Core

Offload data and tasks. We are slow but many!

CUDA
OpenCL
OpenACC

OpenMP
OpenACC

OpenMP
Pthreads
fork

Foreign
Language
Interfaces:
.C
.Call
Rcpp
OpenCL
inline
.
.
.

snow + multicore = parallel

multicore