



Open MPI Join the Revolution

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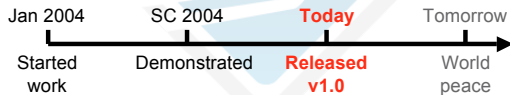
<http://www.open-mpi.org/>

Technical Contributors

- Indiana University
- The University of Tennessee
- Los Alamos National Laboratory
- High Performance Computing Center, Stuttgart
- Sandia National Laboratory - Livermore

MPI From Scratch!

- Developers of FT-MPI, LA-MPI, LAM/MPI
 - Kept meeting at conferences in 2003
 - Culminated at SC 2003: Let's start over
 - Open MPI was born

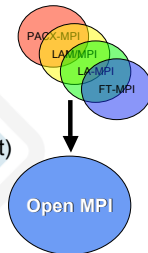


MPI From Scratch: Why?

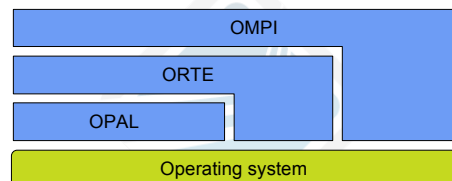
- Each prior project had different strong points
 - Could not easily combine into one code base
- New concepts could not easily be accommodated in old code bases
- Easier to start over
 - Start with a blank sheet of paper
 - Decades of combined MPI implementation experience

MPI From Scratch: Why?

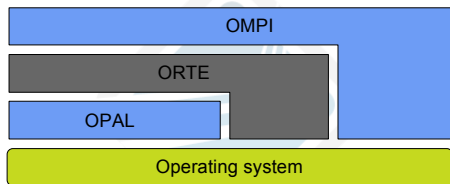
- Merger of ideas from
 - FT-MPI (U. of Tennessee)
 - LA-MPI (Los Alamos)
 - LAM/MPI (Indiana U.)
 - PACX-MPI (HLRS, U. Stuttgart)



Layered Software



Layered Software



Open Run-Time Environment (ORTE)

- Parallel job control
 - Native launching and monitoring parallel jobs
 - rsh/ssh, SLURM, PBS/Torque, BProc, Xgrid
 - *Nothing to do with MPI!*
- Rich set of hooks for tools
 - Open MPI's internal tools (e.g., mpirun)
 - External tools: Greg's parallel debugger

Current Status

- v1.0 released immanently (see web site)
- Much work still to be done
 - More point-to-point optimizations
 - Data and process fault tolerance
 - Support more run-time environments
 - New Fortran MPI bindings
 - More external tools
 - ...
- *Come join the revolution!*