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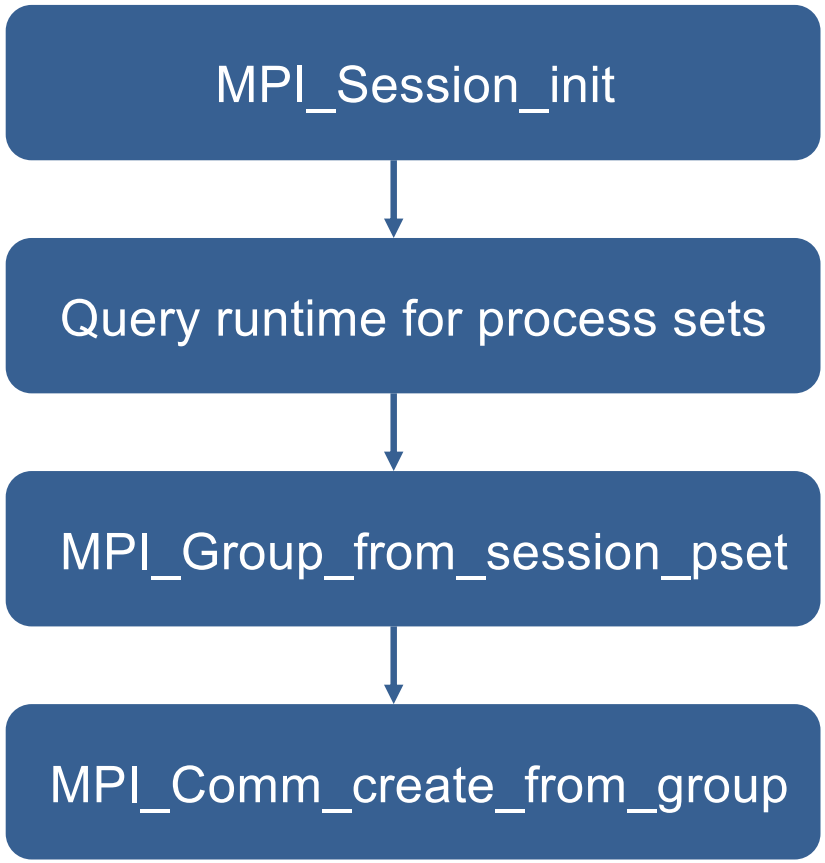
MPI Forum – Sessions WG

MPI BOF SC 2022

Howard Pritchard
Los Alamos National Laboratory

Sessions – what is this?

- **Different way to initialize/finalize MPI resources**
  - Start and stop MPI within a process multiple times
  - Isolation of MPI resources between different components of application
- **Part of MPI 4.0 standard**
- **Implemented in MPICH 4.0.x and Open MPI 5.0.x release streams**



Sessions WG – current activities

- **Preparing/prepared clarifications and minor additions for the MPI 4.1 standard**
- **Working with fault tolerance WG to define Sessions-related behavior in the face of process failure, etc.**
- **Exploring how to better support malleable applications using Sessions-based and other approaches.**
  - Dynamic process sets
  - Coupled with work in the PMIx organization
  - See, for example D. Huber, et al ***Towards Dynamic Resource Management with MPI Sessions and PMIx –*** https://doi.org/10.1145/3555819.3555856
- **Meet weekly (every other week jointly with FT WG)**
  - Mondays @ 1pm US ET
  - https://github.com/mpiwg-sessions/sessions-issues/wiki
- **Related BOF later this afternoon 5:15-6:45 in D170**