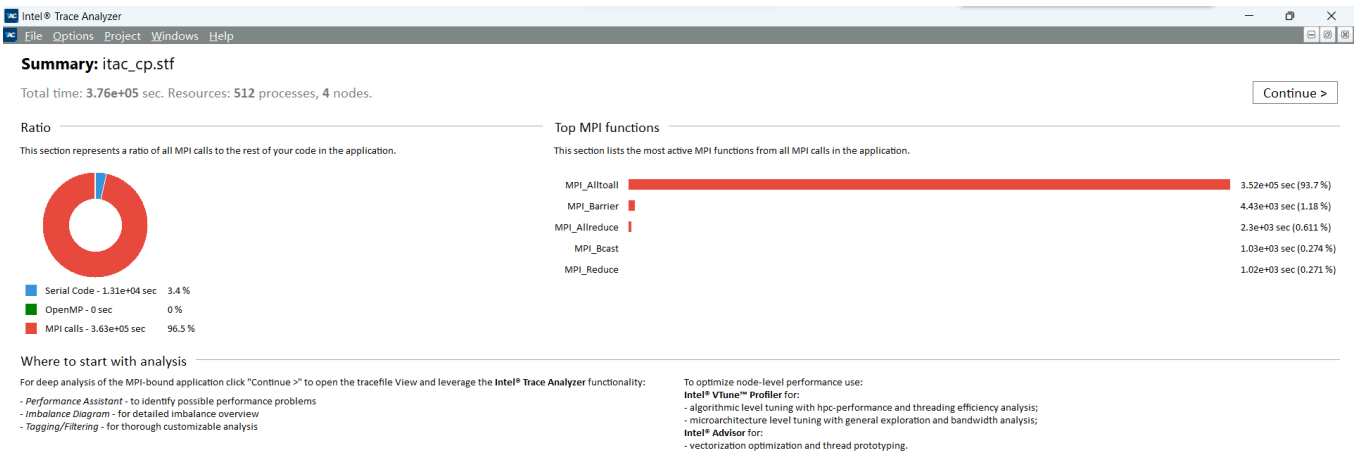
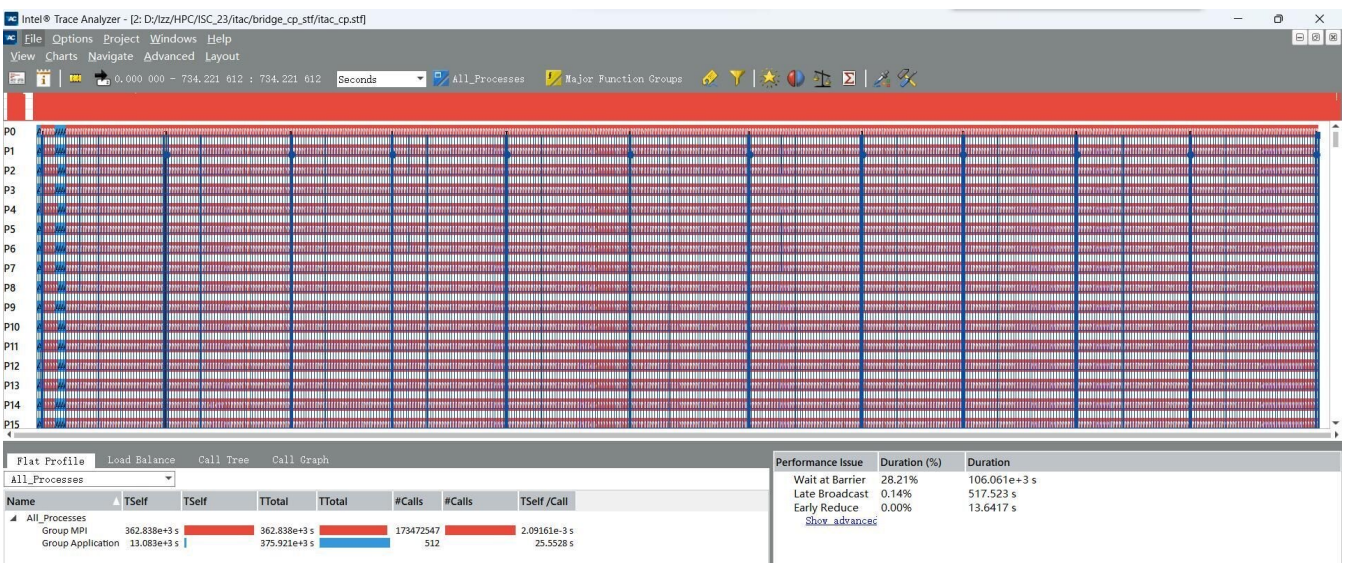
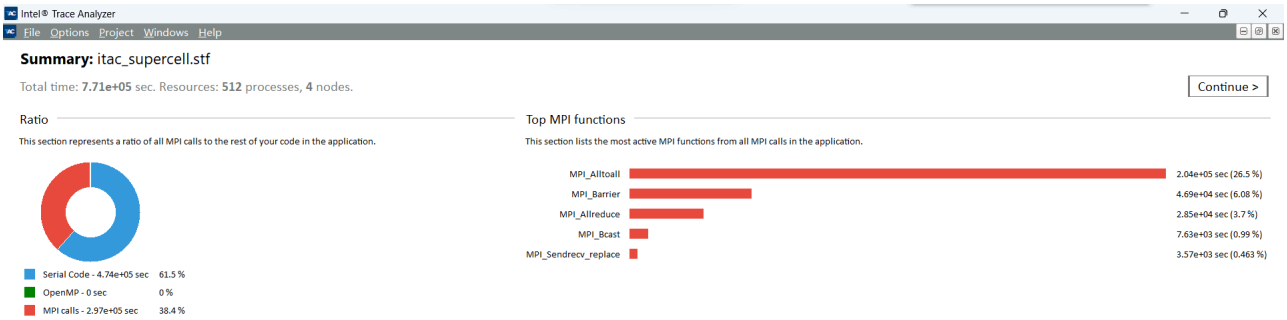
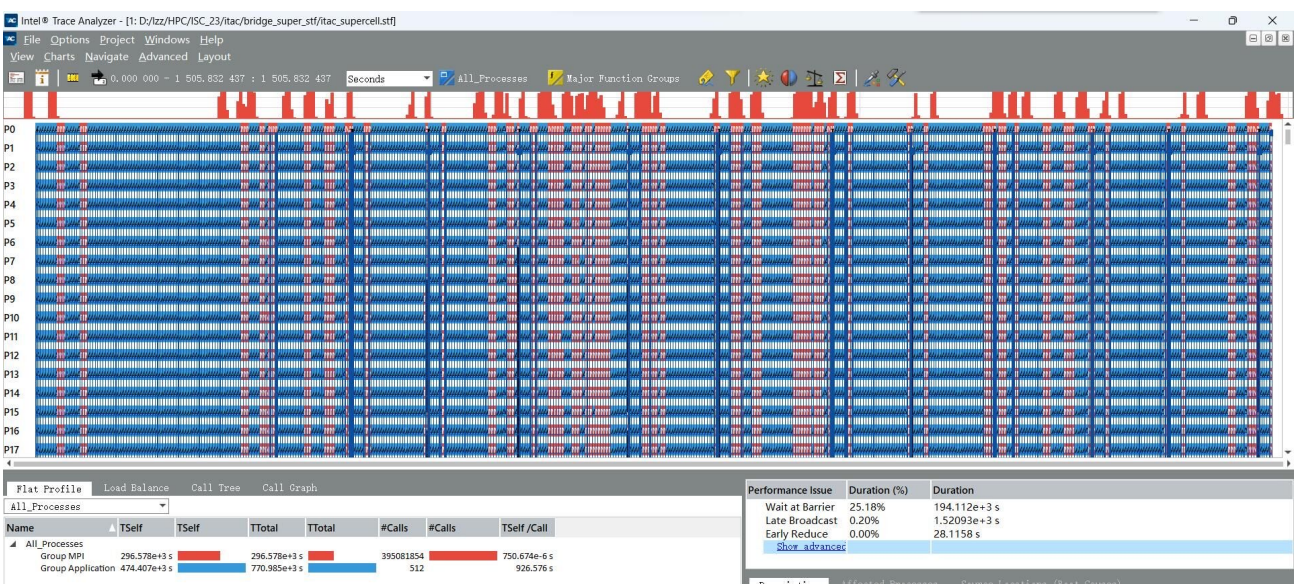

Intel® Trace Analyzer
File Options Project Windows Help
Summary: itac_cp.stf
Total time: 3.76e+05 sec. Resources: 512 processes, 4 nodes.
Continue >
Ratio
This section represents a ratio of all MPI calls to the rest of your code in the application.
Serial Code - 1.31e+04 sec 3.4 %
OpenMP - 0 sec 0 %
MPI calls - 3.63e+05 sec 96.5 %
Top MPI functions
This section lists the most active MPI functions from all MPI calls in the application.
MPI_Alltoall 3.52e+05 sec (93.7 %)
MPI_Barrier 4.43e+03 sec (1.18 %)
MPI_Allreduce 2.3e+03 sec (0.611 %)
MPI_Bcast 1.03e+03 sec (0.274 %)
MPI_Reduce 1.02e+03 sec (0.271 %)
Where to start with analysis
For deep analysis of the MPI-bound application click "Continue >" to open the tracefile View and leverage the Intel® Trace Analyzer functionality:
- Performance Assistant - to identify possible performance problems
- Imbalance Diagram - for detailed imbalance overview
- Tagging/Filtering - for thorough customizable analysis
To optimize node-level performance use:
Intel® VTune™ Profiler for:
- algorithmic level tuning with hpc-performance and threading efficiency analysis;
- microarchitecture level tuning with general exploration and bandwidth analysis;
Intel® Advisor for:
- vectorization optimization and thread prototyping.


Intel® Trace Analyzer - [2: D:/lzz/HPC/ISC_23/itac/bridge_cp_stf/itac_cp.stf]
File Options Project Windows Help
View Charts Navigate Advanced Layout
0.000 000 – 734.221 612 : 734.221 612
Seconds
All_Processes
Major Function Groups
P0
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
Flat Profile
Load Balance
Call Tree
Call Graph
All_Processes
Name TSelf TSelf TTotal TTotal #Calls #Calls TSelf /Call
All_Processes
Group MPI 362.838e+3 s 362.838e+3 s 173472547 2.09161e-3 s
Group Application 13.083e+3 s 375.921e+3 s 512 25.5528 s
Performance Issue Duration (%) Duration
Wait at Barrier 28.21% 106.061e+3 s
Late Broadcast 0.14% 517.523 s
Early Reduce 0.00% 13.6417 s
Show advanced


Intel® Trace Analyzer
File Options Project Windows Help
Summary: itac_supercell.stf
Total time: 7.71e+05 sec. Resources: 512 processes, 4 nodes.
Continue >
Ratio
This section represents a ratio of all MPI calls to the rest of your code in the application.
Serial Code - 4.74e+05 sec 61.5 %
OpenMP - 0 sec 0 %
MPI calls - 2.97e+05 sec 38.4 %
Top MPI functions
This section lists the most active MPI functions from all MPI calls in the application.
MPI_Alltoall 2.04e+05 sec (26.5 %)
MPI_Barrier 4.69e+04 sec (6.08 %)
MPI_Allreduce 2.85e+04 sec (3.7 %)
MPI_Bcast 7.63e+03 sec (0.99 %)
MPI_Sendrecv_replace 3.57e+03 sec (0.463 %)


Intel® Trace Analyzer - [1: D:/lzz/HPC/ISC_23/itac/bridge_super_stf/itac_supercell.stf]
File Options Project Windows Help
View Charts Navigate Advanced Layout
Seconds
All_Processes
Major Function Groups
P0
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
P17
Flat Profile
Load Balance
Call Tree
Call Graph
All_Processes
Name
TSelf
TSelf
TTotal
TTotal
#Calls
#Calls
TSelf /Call
All_Processes
Group MPI 296.578e+3 s 296.578e+3 s 395081854 750.674e-6 s
Group Application 474.407e+3 s 770.985e+3 s 512 926.576 s
Performance Issue
Duration (%)
Duration
Wait at Barrier 25.18% 194.112e+3 s
Late Broadcast 0.20% 1.52093e+3 s
Early Reduce 0.00% 28.1158 s
Show advanced