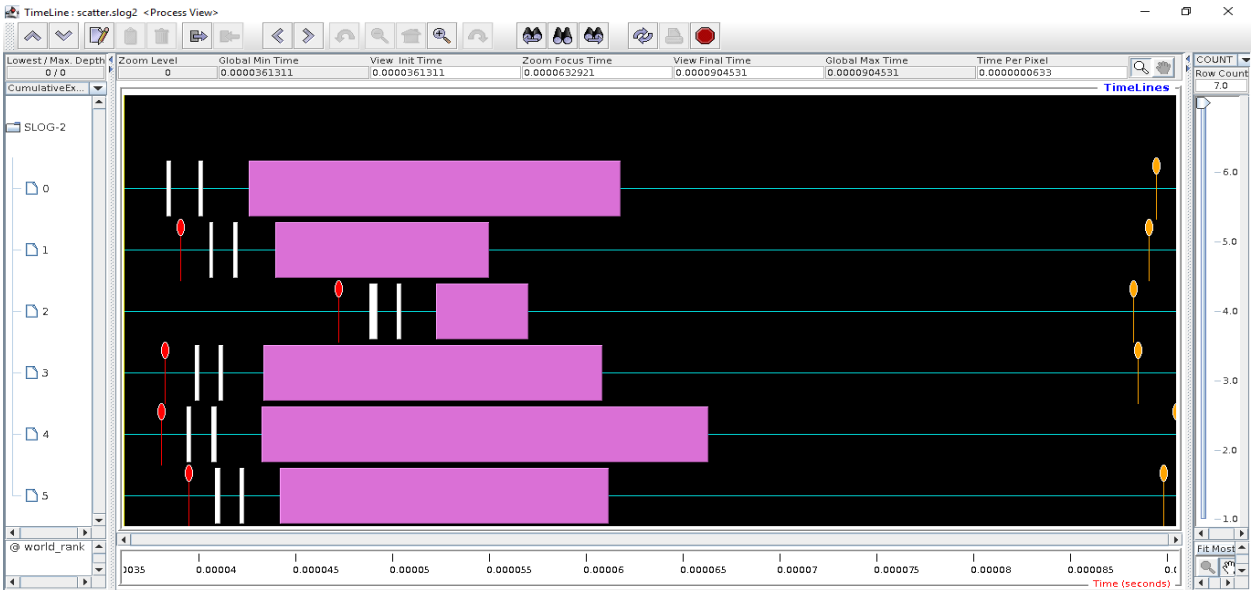
SHASHIPAL REDDY PINGILI

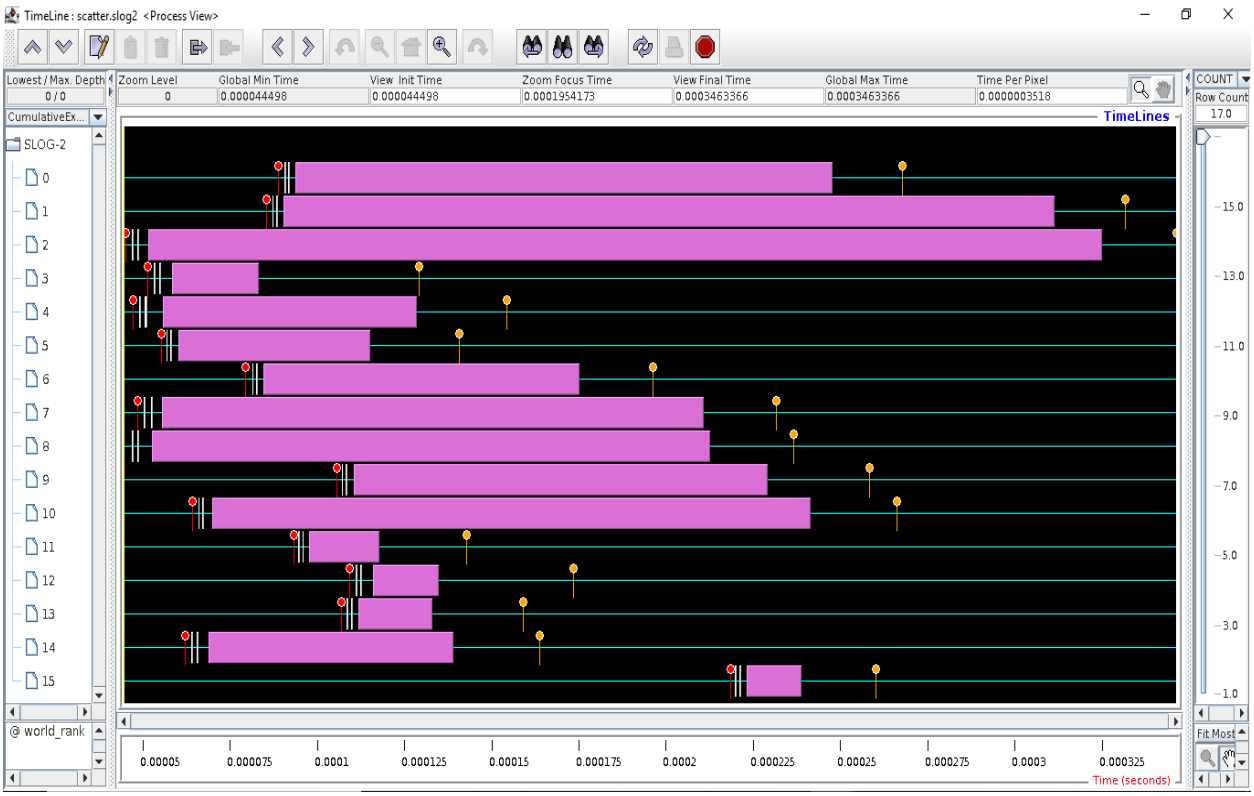
PROJECT NO: 1

MPI_Scatter: In this program I have used an array for size and used MPI_Scatter function

6 processes:



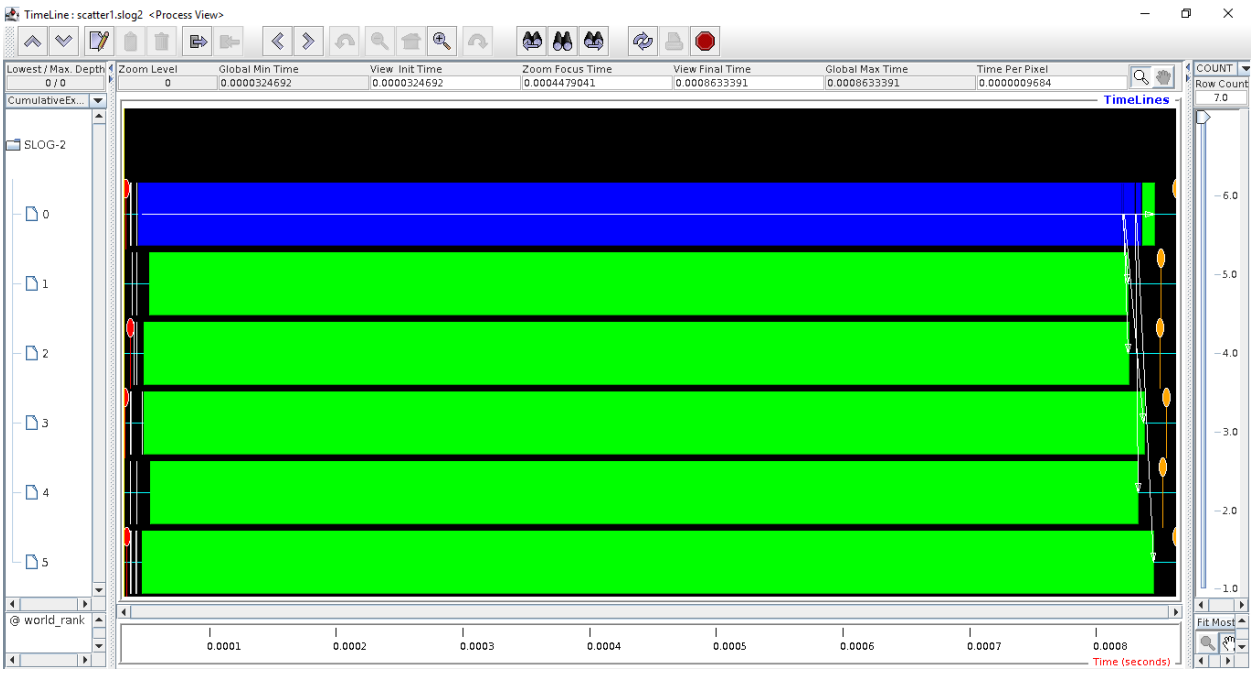
16 processes:



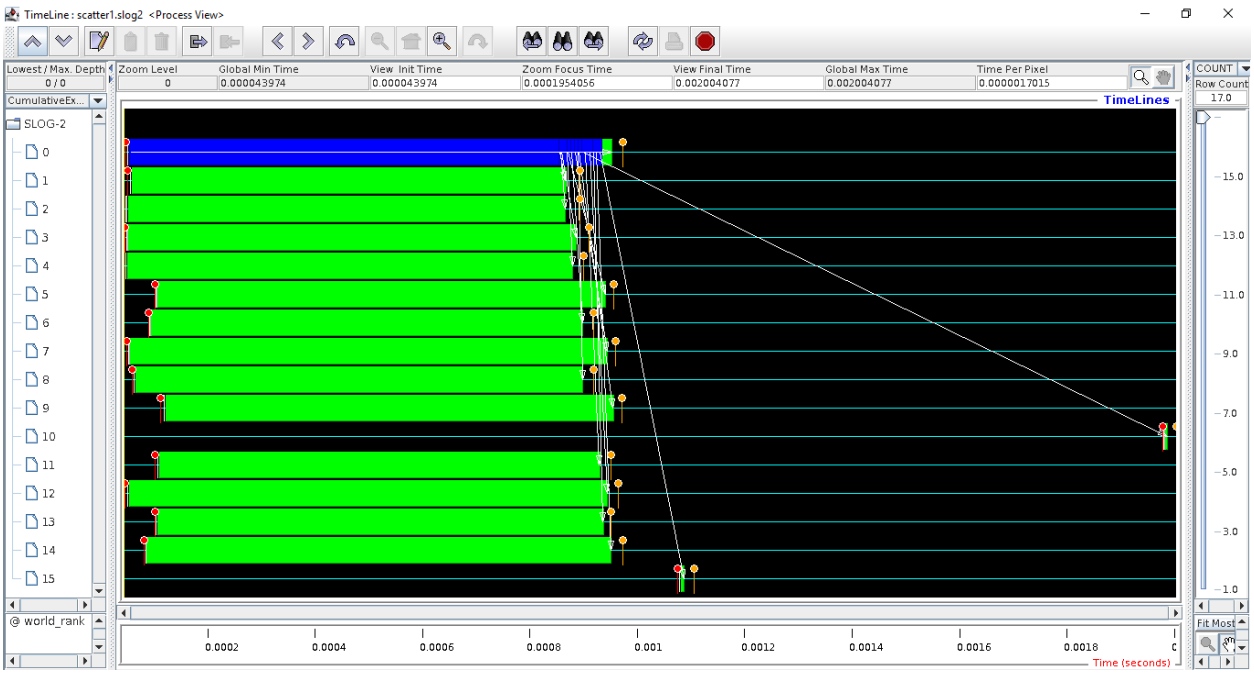
My Scatter

In this program in process 0, I have sent the data to all other processes and to itself. The data to be sent is stored in an array same as no. of process in all other processes I wrote a receive function that will receive the data sent by process 0. I used an integer variable to store the receiving data then I printed the data

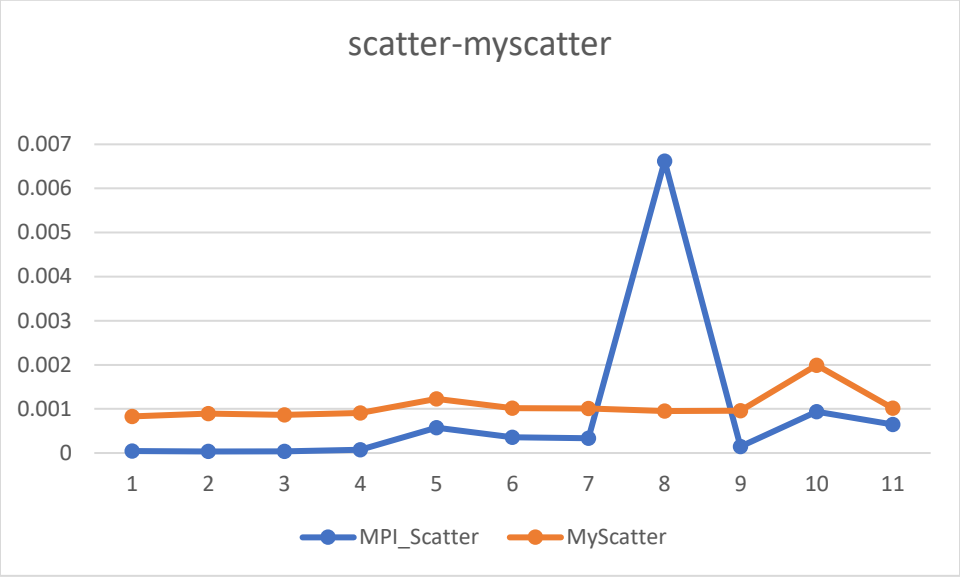
6 Processes:



16 Processes:



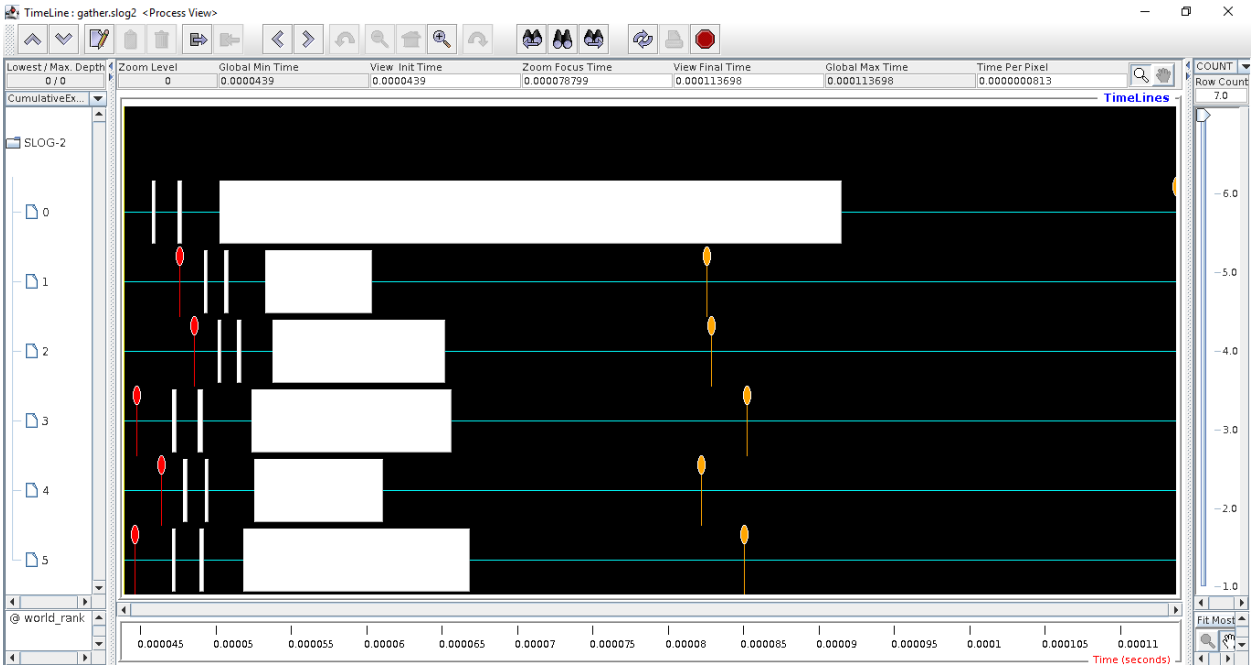
Graph:


scatter-myscatter
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
1
2
3
4
5
6
7
8
9
10
11
MPI_Scatter
MyScatter

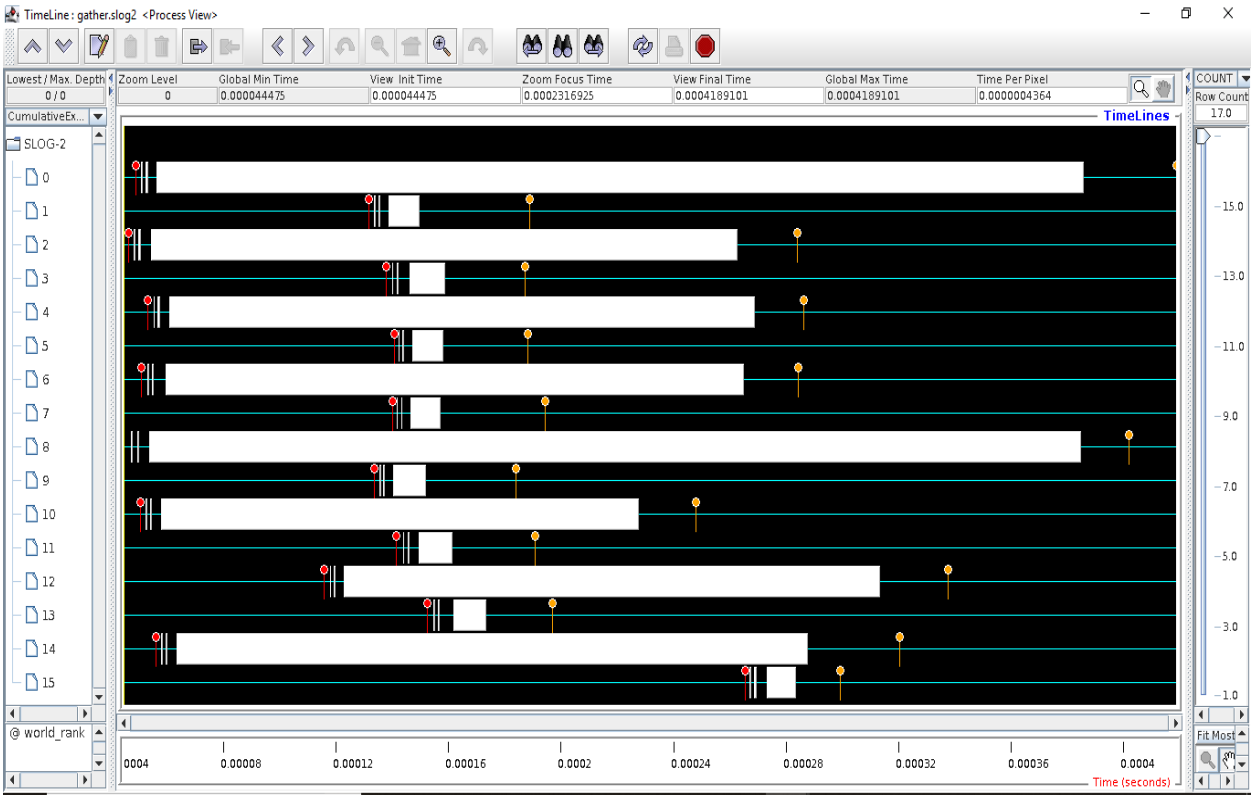
MPI_GATHER:

In this program I have used an array for size I have used MPI_Gather function.

6 Processes:



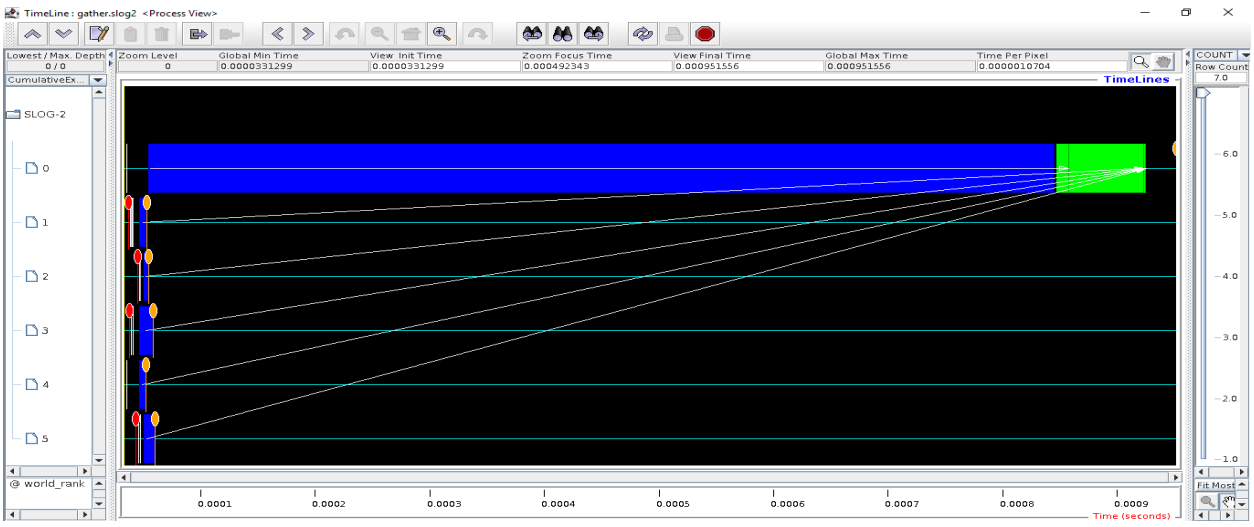
16 Processes:



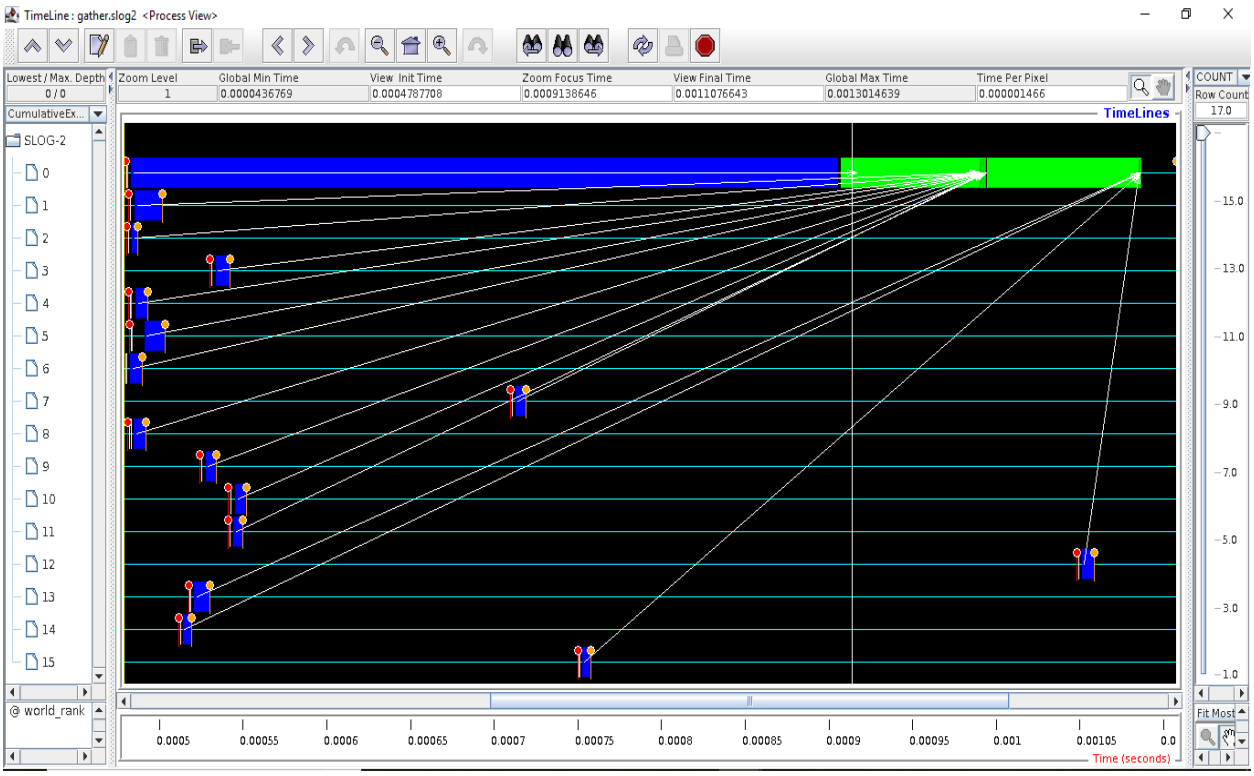
My Gather:

In this program in process 0, I have used a receive function to receive the data sent by all other processes, in this I have used an array with size same as no. of processes in all other processes I wrote a send function which sends data to process 0.

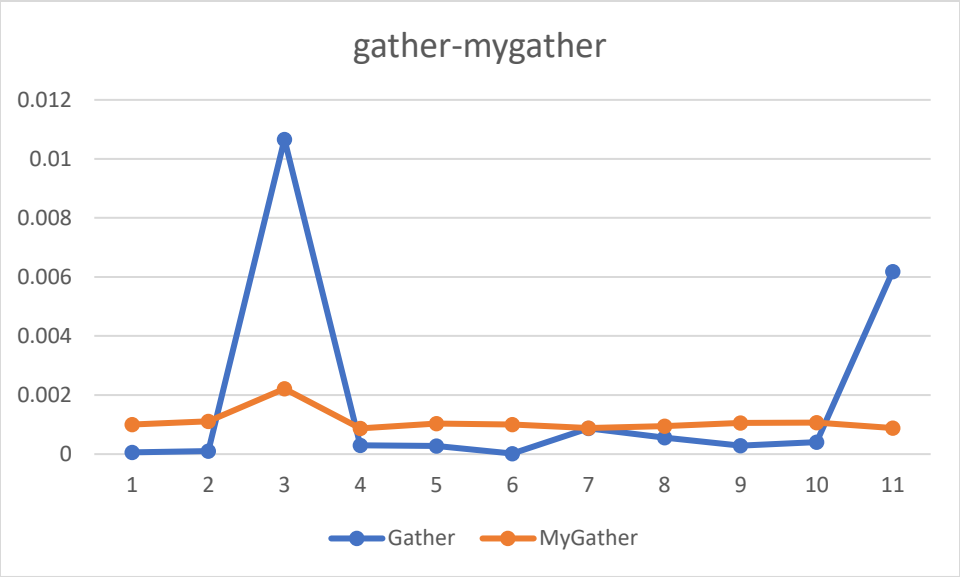
6 Processes:



16 Processes:



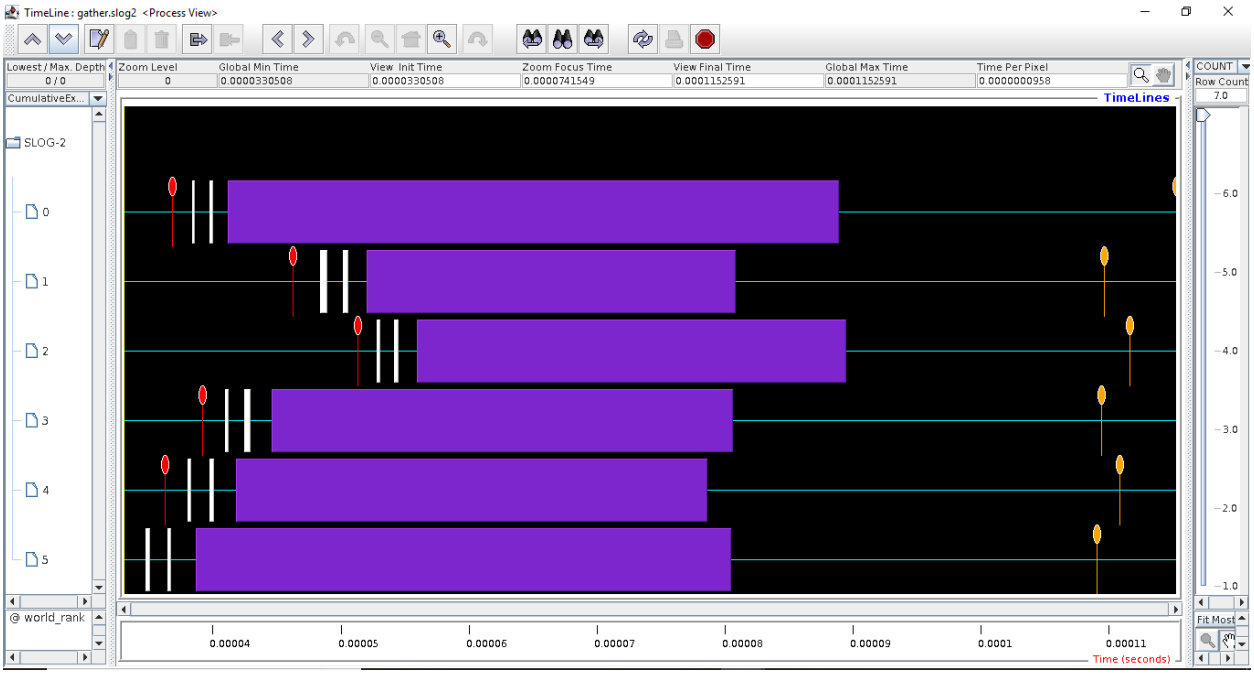
Graph:


gather-mygather
0.012
0.01
0.008
0.006
0.004
0.002
0
1
2
3
4
5
6
7
8
9
10
11
Gather
MyGather

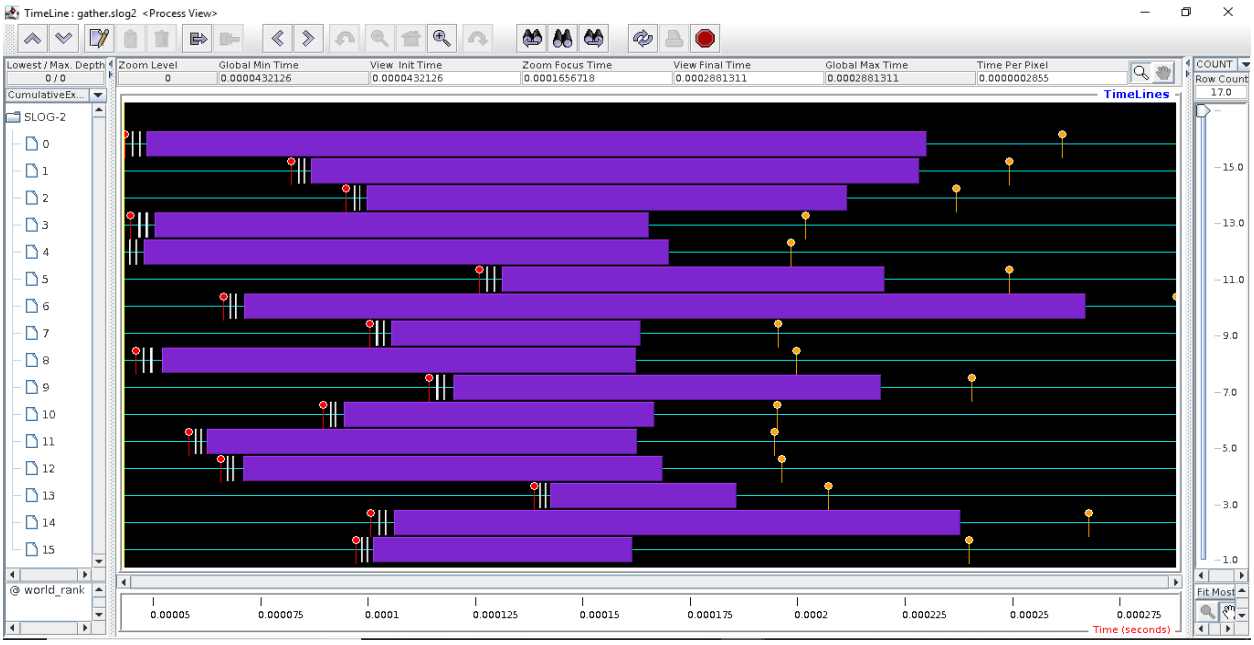
MPI_ALLGATHER:

In this program I have used an array for size I have used MPI_Allgather function.

6 Processes:



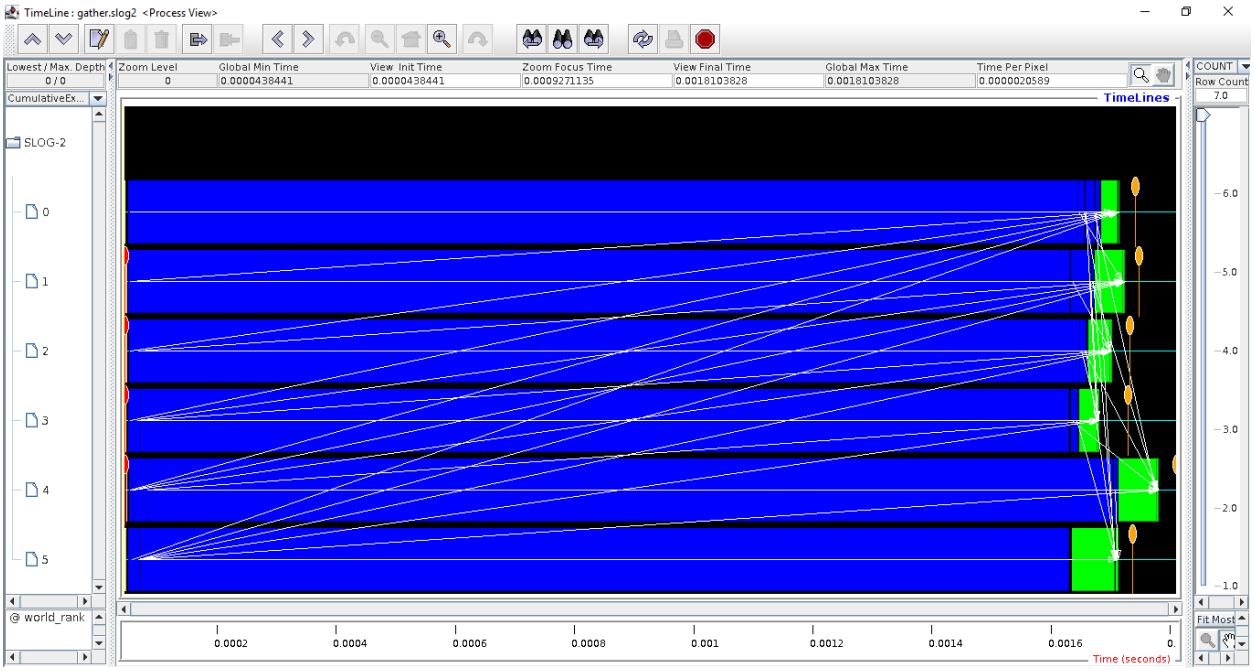
16 Processes:



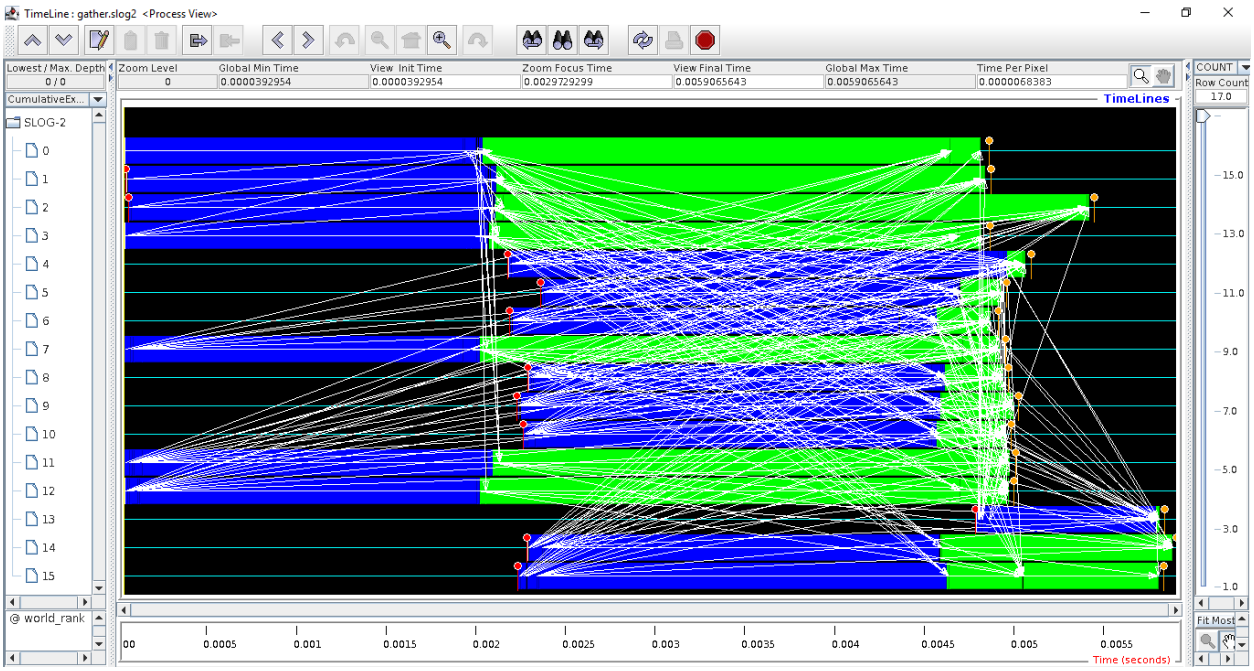
My_AllGather:

I have a send and receive function such a way that all the processes send and receive data to and from all other processes and itself in this I have used an array of size same as no. of processes to receive the data.

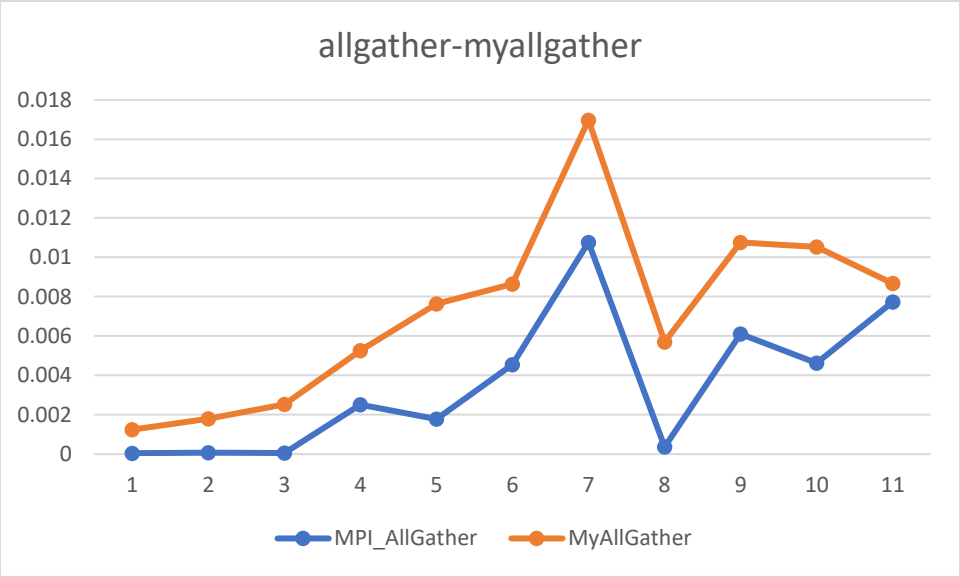
6 Processes:



16 Processes:



Graph:


allgather-myallgather
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
1
2
3
4
5
6
7
8
9
10
11
MPI_AllGather
MyAllGather