

#

Matrix Dimension

Time(s)

4 Processes

One Node

Time(s)

4 Processes

4 Nodes

Time(s)

10 Processes

One Node

Time(s)

10 Processes

4 Nodes

Time(s)

4 Processes

4 Nodes Using Developed Environment

Time(s)

10 Processes

4 Nodes Using Developed Environment

1

4×4

0.000394

0.000357

0.018342

0.001619

0.000474

0.001077

2

10×10

0.001856

0.000962

2

0.001051

0.001031

0.000747

0.001445

3

50×50

0.003024

0.030410

0.034712

0.014968

0.023148

0.010870

4

100×100

0.016589

0.044565

3

0.033515

0.032812

0.036890

0.043155

5

200×200

0.133310

0.189957

0.252617

0.361668

0.166840

0.150523

6

500×500

3.185988

1.617311

4

3.226778

1.738753

1.605045

1.746090

7

1000×1000

25.188466

9.864645

11.411941

11.567683

13.411713

11.478360

8

1200×1200

38.602467

14.355652

5

38.779208

16.027339

14.617809

16.044751

9

1500×1500

88.373521

29.206442

87.033709

32.928097

30.128878

33.834536

Table 6-7: Execution Time in seconds for All cases

10 processes on 4 nodes using developed middleware

10

2000×2000

185.856406

60.309522

6

187.459467

68.662808

61.300923

68.553200

11

3000×3000

820.600097

267.797306

911.361837

390.978870

240.604194

454.728156

Figure 6-7: Comparison of Execution Time for all Cases