
Ring Communication

```
successor := Mod[($IdProc + 1), $NProc];
predecessor := Mod[($IdProc - 1 + $NProc), $NProc];
blocksize = 1024;
x := Range[$IdProc * blocksize + 1, ($IdProc + 1) * blocksize];
Print[mpiGather[{$IdProc, Total[x]}]]];
```

```
Do[
  mpiISend[x, successor, 1, mpiCommWorld, sreq];
  mpiIRecv[v, predecessor, 1, mpiCommWorld, rreq];
  mpiWait[sreq];
  mpiWait[rreq],
  {i, 0, $NProc - 1}]
Print[mpiGather[{$IdProc, Total[v]}]]];
```

```
{{0, 524800}, {1, 1573376}, {2, 2621952}, {3, 3670528},
{4, 4719104}, {5, 5767680}, {6, 6816256}, {7, 7864832}}
```

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{{0, 7864832}, {1, 524800}, {2, 1573376}, {3, 2621952},
{4, 3670528}, {5, 4719104}, {6, 5767680}, {7, 6816256}}
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