

MPI_Allgather



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- `int MPI_Allgather(const void* sendbuf, int sendcount, MPI_Datatype sendtype, void* recvbuf, int recvcount, MPI_Datatype recvtype, MPI_Comm comm);`

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- **MPI_Allgather** can be thought of as **MPI_Gather** except all processes receive the result instead of just the root.

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- The i th block of data sent from each process is received by every process and placed in the i th block of the receive buffer.
- The outcome of a call to **MPI_Allgather** is *as if* all processes executed n calls to **MPI_Gather** for root = 0, ..., $n-1$.