

# **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  $\text{root} = 0, \dots, n-1$ .