

# Introduction to MPI\_Probe



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- MPI\_Probe is a function in the MPI that allows a process to check if a message is available for reception without actually receiving the message.
- This function is useful for determining the size of an incoming message or for deciding if a message should be received at a particular time.

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- `int MPI_Probe(int source, int tag, MPI_Comm comm, MPI_Status *status);`
- The function returns `MPI_SUCCESS` on success and an error code on failure.

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Suppose we have a program where one process (rank 0) sends a message with varying lengths to another process (rank 1). The receiving process uses MPI\_Probe to determine the size of the incoming message before receiving it with the appropriate buffer size.

