

## Using MS-MPI in Windows 7/8 with VS 2012

1. Download **HPC Pack 2012 Client Utilities Redistributable Package** from

<http://www.microsoft.com/en-us/download/confirmation.aspx?id=36044>

and install it

2. Download **HPC Pack 2012 MS-MPI Redistributable Package** from

<http://www.microsoft.com/en-us/download/confirmation.aspx?id=36045>

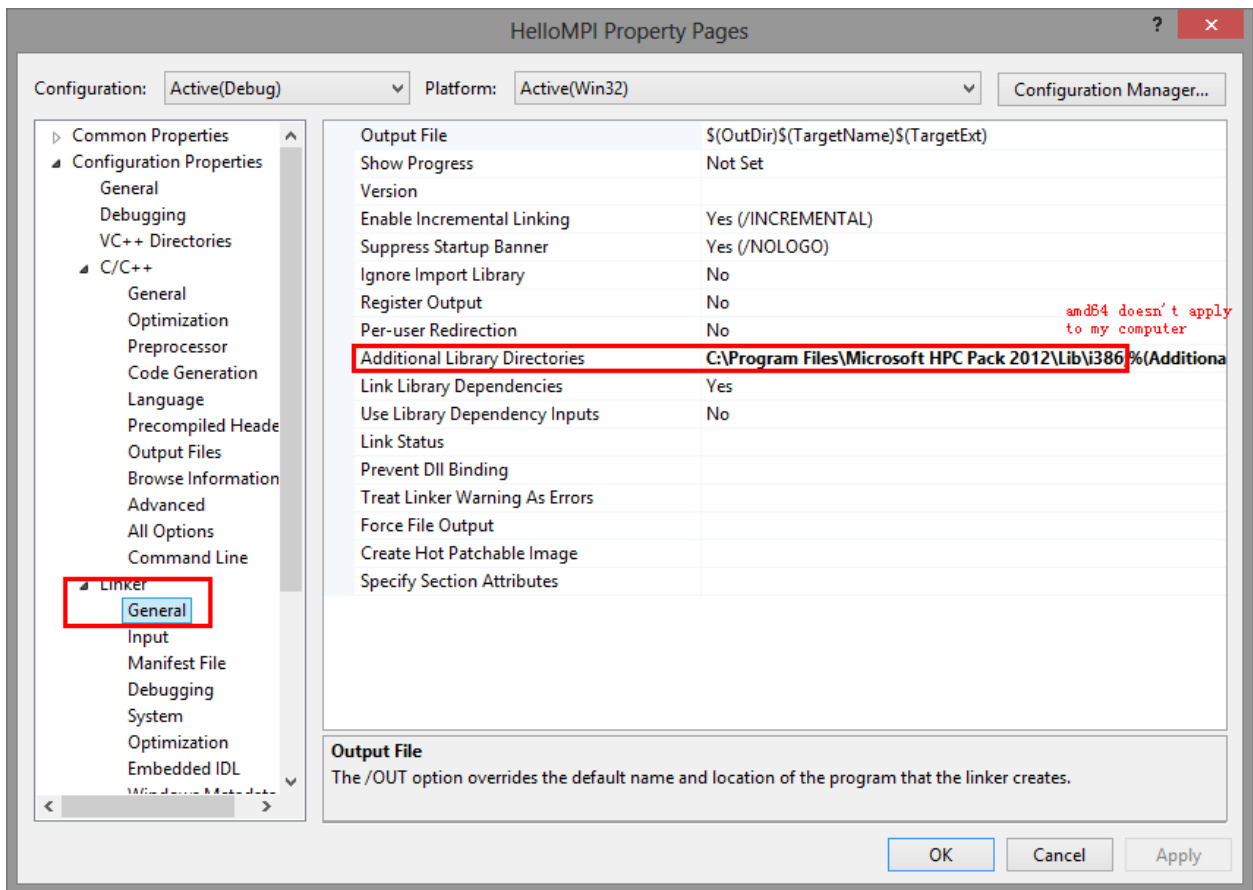
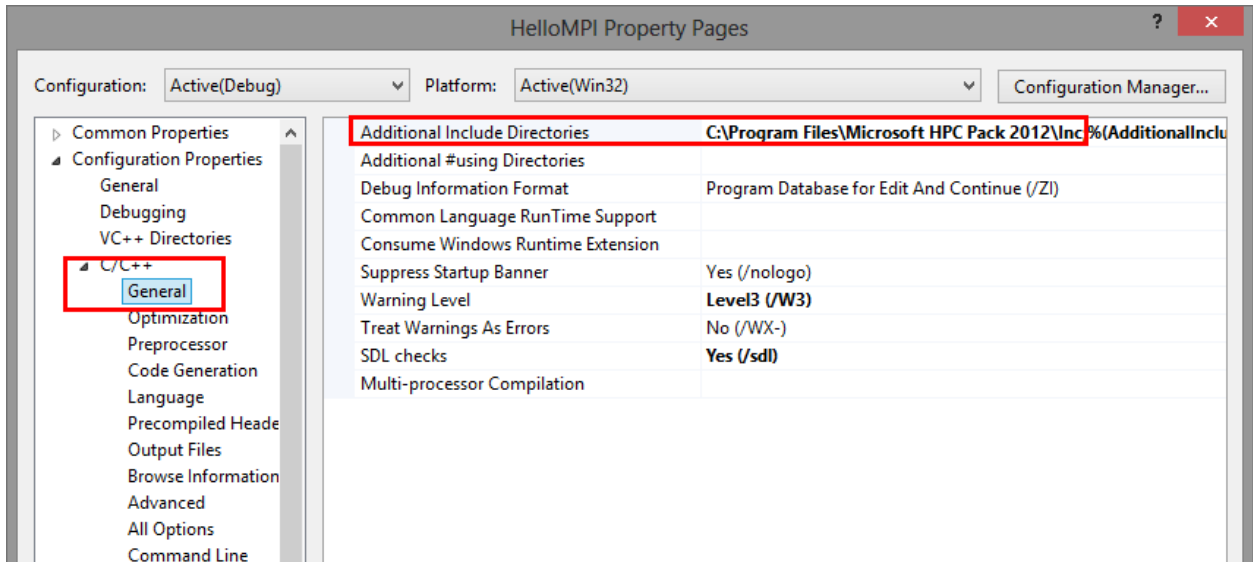
and install it

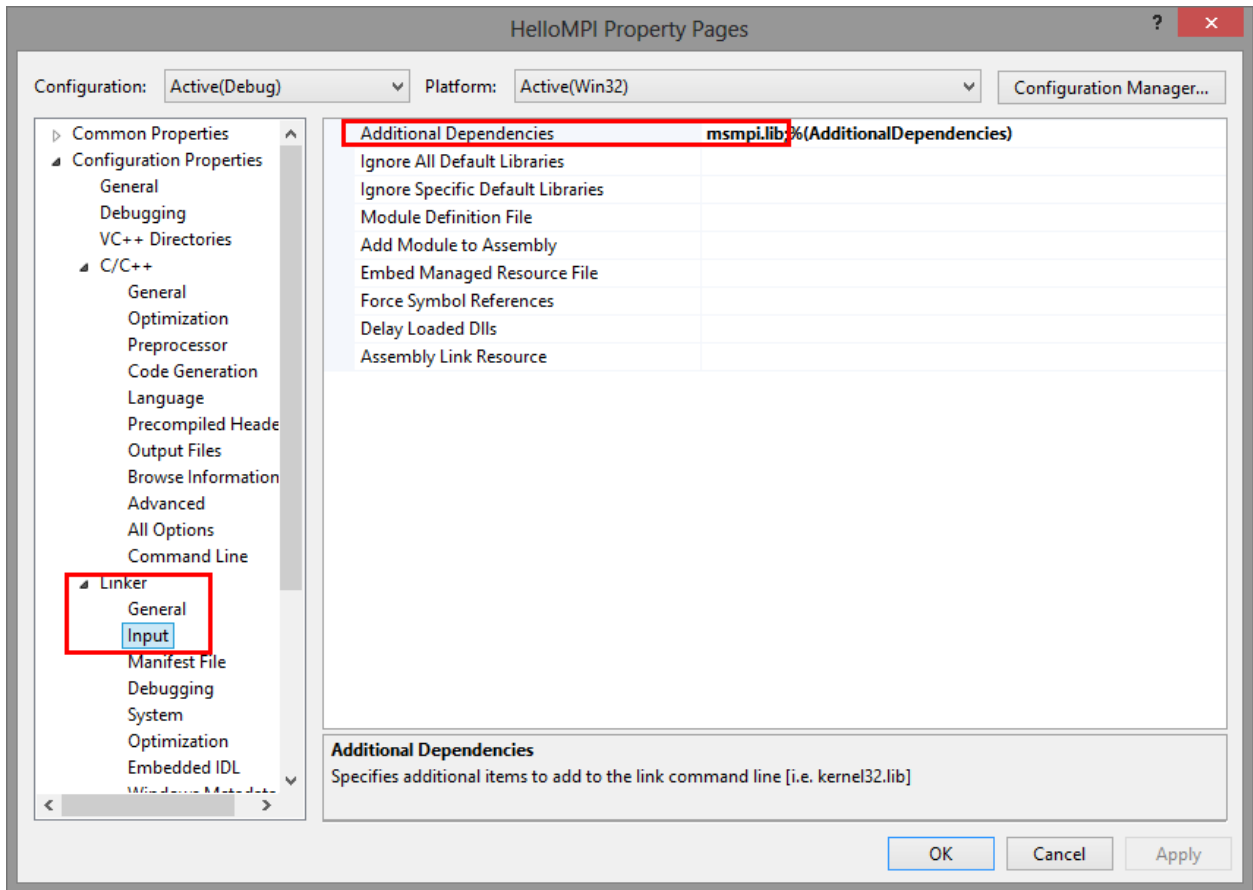
3. Open Visual Studio, and create an empty solution project

4. Add "hello.cpp" to the project with following code

```
/**
 *
 * MPI "hello world" program
 */
#include <mpi.h>
#include <stdio>
int main(int argc, char *argv[])
{
    int rank, nproc;
    MPI_Init(&argc, &argv);
    MPI_Comm_rank(MPI_COMM_WORLD, &rank);
    MPI_Comm_size(MPI_COMM_WORLD, &nproc);
    printf("hello world from MPI process %d of %d\n", rank, nproc);
    MPI_Finalize();
    return 0;
}
```

5. Change Project Property as following steps





6. Now, you should be able to run the sample code without any compile or linking error
7. If you try to run the code in multiple processes, you need mpiexec.exe
  - a. Add "C:\Program Files\Microsoft HPC Pack 2012\Bin" to system environment variables
  - b. Use cmd and change to project directory, and type "mpiexec -n 4 HelloMPI.exe" to run  
  
HelloMPI.exe with 4 processes
  - c. Following is sample result

```
hello world from MPI process 1 of 4  
hello world from MPI process 0 of 4  
hello world from MPI process 2 of 4  
hello world from MPI process 3 of 4
```