Intel® Math Kernel Library Link Line Advisor

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Introduction

The Intel® Math Kernel Library (Intel® MKL) is designed to run on multiple processors and operating systems. It is also compatible with several compilers and third party libraries, and provides different interfaces to the functionality. To support these different environments, tools, and interfaces Intel MKL provides mutliple libraries from which to choose.

To see what libraries are recommended for a particular use case, specify the parameters in the drop down lists below.

Intel® Math Kernel Library (Intel® MKL) Link Line Advisor v4.7

Reset

Select Intel® product:	Intel(R) MKL 2018.0
Select OS:	Linux*
Select usage model of Intel® Xeon Phi™ Coprocessor:	None
Select compiler:	Intel(R) C/C++
Select architecture:	Intel(R) 64
Select dynamic or static linking:	Static
Select interface layer:	64-bit integer
Select threading layer:	OpenMP threading
Select OpenMP library:	Intel(R) (libiomp5)
Select cluster library:	☐ Cluster PARDISO (BLACS required) ☐ CDFT (BLACS required) ☑ ScaLAPACK (BLACS required) ☑ BLACS
Select MPI library:	Intel(R) MPI
Select the Fortran 95 interfaces:	☐ BLAS95 ☐ LAPACK95
Link with Intel® MKL libraries explicitly:	☐

Use this link line:

```
 ${MKLROOT}/lib/intel64/libmkl_scalapack_ilp64.a -Wl,--start-group
${MKLROOT}/lib/intel64/libmkl_intel_ilp64.a
${MKLROOT}/lib/intel64/libmkl_intel_thread.a
${MKLROOT}/lib/intel64/libmkl_core.a
${MKLROOT}/lib/intel64/libmkl_blacs_intelmpi_ilp64.a -Wl,--end-group -
liomp5 -lpthread -lm -ldl
```

Compiler options:

```
 -DMKL_ILP64 -I${MKLROOT}/include
```

Notes:

o Set the INCLUDE, MKLROOT, LD_LIBRARY_PATH, LIBRARY_PATH, CPATH and NLSPATH environment variables in the command shell using one of mklvars script files in the 'bin' subdirectory of the Intel(R) MKL installation directory. Please see also the Intel(R) MKL User Guide.

o Please be sure that you have used the recommended compiler options for the selected interface layer. Caution: linking Intel(R) MKL libraries with your objects compiled for different interface layer may lead to run-time errors.

o If you are using a non-default MPI, assign the same appropriate value to MKL_BLACS_MPI on all nodes. Set MKL_BLACS_MPI variable to one of the following values: INTELMPI, MPICH2 or MSMPI.
