

TIPS FOR SOFTWARE INSTALLATION

By Chun-Min Chang, iCER Research Consultant

Most tickets received in June were related to software installation. HPC users are always encouraged to install software using the directions provided by the download website. However, even with instructions, you may still have difficulties. Here are a few tips to keep in mind:

1. Check software installation instructions. If the software you wish to download requires other dependent softwares or libraries, please use our module system to check if they are already installed. Load the required modules or install the dependencies before you do any compilation. The key to successful compilation is to set up the environment variables correctly.

2. Install software without sudo. HPC users do not have permission to use “sudo” command. It only works for system administrators.

3. Install software only in your home/research directory. Users have no permission to write to `/usr` or `/bin`. Please specify your installed directory during configuration or in the make file.

4. Libraries or packages of Python, Perl and R can be installed locally by users. Please refer to our wiki pages:

Python:

<https://wiki.hpcc.msu.edu/display/hpccdocs/Using+Python+virtualenv+on+the+HPCC>
<https://wiki.hpcc.msu.edu/display/hpccdocs/Creating+a+Python+virtualenv+for+msmbuilder>
<https://wiki.hpcc.msu.edu/display/ITH/Using+conda>

R:

<https://wiki.hpcc.msu.edu/display/hpccdocs/R>

Perl:

<https://wiki.hpcc.msu.edu/display/ITH/Managing+Perl+modules>
<https://wiki.hpcc.msu.edu/display/ITH/Installing+Local+Perl+Modules+with+CPAN>

5. Intel MKL library optimizes code for Intel processors with minimal effort.

Core math functions, including BLAS, LAPACK, ScaLAPACK, FFT, sparse solvers, and vector math, are well optimized for science, engineering, and financial applications. If you compile programs with MKL library, the link advisor: <https://software.intel.com/en-us/articles/intel-mkl-link-line-advisor> is helpful to you.

Jul. 2017



If you need help or training in software installation, please submit a ticket at <http://contact.icer.msu.edu/>.