

Intel® Cluster Studio XE 2013 Release Notes

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Introduction

Intel® Cluster Studio XE 2013 for Linux* OS and Windows* OS accelerates parallel software development on cluster systems based on IA-32 and Intel® 64 architectures, as well as **Intel® Many Integrated Core Architecture (Intel® MIC Architecture)** on Linux* OS. For Intel® MIC Architecture, only Intel® Xeon Phi™ coprocessor (codename: Knights Corner) is supported.

Intel® Cluster Studio XE 2013 provides a software tools environment for **hybrid parallel programming** (message passing and threading). In terms of the Intel® Cluster Studio XE software for Windows* OS, consider references within this document to Microsoft* Windows* HPC Server 2008 OS and Microsoft* Windows* HPC Server 2008 R2 OS as interchangeable. The Microsoft Windows HPC Server

2008 and Microsoft Windows HPC Server 2008 R2 operating systems support only Intel® 64 architecture.

Intel® Cluster Studio XE 2013 supports hybrid-parallel-programming application development using Intel® MPI Library with optimized parallel libraries, performance analysis, and benchmarks. Intel® Cluster Studio XE 2013 saves software developers time and improves performance on distributed computing systems.

Intel® Cluster Studio XE 2013 for Linux OS and Windows* OS supports critical parts of the message-passing interface (MPI) application development process including:

- Compiler support through Intel® C++ Compiler XE 13.0 Update 1 and Intel® Fortran Compiler XE 13.0 Update 1. Intel® C++ Compiler XE 13.0 Update 1 and Intel® Fortran Compiler XE 13.0 Update 1 for Linux* OS provide support for **Intel® Many Integrated Core Architecture (Intel® MIC Architecture)**.
- Parallel Debugging with Intel® Debugger 13.0 Update 1 on Linux OS. Parallel debugging with Intel® Debugger on Windows OS has been discontinued beginning with the 3.2 release of Intel® Cluster Toolkit and Intel® Cluster Toolkit Compiler Edition. Intel® Cluster Studio XE supports parallel debugging on Linux OS.
- Intel® MPI Library 4.1, which implements the Message Passing Interface 2.2 Standard (MPI-2.2). Intel MPI library enables multiple interconnect solutions with a single implementation. Intel seeks to be a software leader in MPI and open standards. **Intel® MPI Library 4.1 for Linux* OS supports Intel® Many Integrated Core Architecture (Intel® MIC Architecture)**.
- Intel® Trace Analyzer and Collector 8.1
 - o Intel® Trace Collector 8.1 provides event-based tracing in cluster applications through an instrumentation library that ensures low overhead in execution. The trace information provides performance data, statistics, multi-threaded events, and automatic instrumentation of user binaries on IA-32 architecture.
 - o Intel® Trace Analyzer 8.1 provides visual analysis of application activities gathered by the Intel Trace Collector.
 - o A message checking component of the Intel Trace Collector provides a novel MPI correctness technology that detects errors with data types, buffers,

communicators, point-to-point messages and collective operations, deadlocks, and data corruption.

- Application tuning with optimized mathematical library functions from Intel® Math Kernel Library (Intel® MKL) 11.0 Update 1 that includes ScaLAPACK* solvers and Cluster DFTs (Discrete Fourier Transforms). **Intel® MKL 11.0 Update 1 for Linux* OS supports Intel® Many Integrated Core Architecture (Intel® MIC Architecture).**
- Intel® MPI Benchmarks 3.2.4 that makes it easy to gather performance information about a cluster system.

On completing the Intel® Cluster Studio XE 2013 installation process, locate a file called `Doc_Index.htm` in the `doc` folder on the master node of the cluster. This file is a documentation map to navigate to various information resources of the Intel® Cluster Studio XE. See the [Installation Notes](#) section of these Release Notes for additional information about the exact location of `Doc_Index.htm` and its content.

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Product Contents

The table below lists the product components and related documentation.

Component	Version	Documentation
Intel® Advisor XE	2013 Update 1	documentation_advisor.htm
Intel® C++ Compiler XE	13.0 Update 1	get_started_wc.htm for Windows* OS get_started_lc.htm for Linux* OS
Intel® Debugger (Linux* OS only)	13.0 Update 1	debugger_documentation.htm
Intel® Fortran Compiler XE	13.0 Update 1	get_started_wf.htm for Windows* OS get_started_lf.htm for Linux* OS

Intel® Inspector XE	2013 Update 2	documentation_inspector_xe.htm
Intel® Integrated Performance Primitives (Intel® IPP)	7.1 Update 1	ipp_documentation.htm
Intel® Math Kernel Library (Intel® MKL)	11.0 Update 1	mkl_documentation.htm
Intel® MPI Benchmarks	3.2 Update 4	IMB_Users_Guide.htm Readme_Addendum_for_MIC_Architecture.txt (Linux* OS only)
Intel® MPI Library	4.1	Doc_Index.html for Linux* OS and Doc_Index.htm for Windows* OS Release_Notes_Addendum_for_MIC_Architecture.txt (Linux* OS only)
Intel® Threading Building Blocks (Intel® TBB)	4.1 Update 1	tbb_documentation.htm
Intel® Trace Analyzer and Collector	8.1	ITA_Reference_Guide.htm ITC_Reference_Guide.htm Release_Notes_Addendum_for_MIC_Architecture.txt (Linux* OS only)
Intel® VTune™ Amplifier XE	2013 Update 2	documentation_amplifier.htm

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What's New

Intel® Cluster Studio XE 2013

- Within one installation session, the Intel® Cluster Studio XE installer on Linux* OS or Windows* OS installs:
 - Intel® C++ Compiler XE 13.0 Update 1
 - Intel® Debugger 13.0 Update 1 (For Linux* OS only)
 - Intel® Fortran Compiler XE 13.0 Update 1
 - Intel® Inspector XE 2013 Update 2

- o Intel® Integrated Performance Primitives 7.1 Update 1
 - o Intel® MKL 11.0 Update 1
 - o Intel® MPI Benchmarks 3.2 Update 4
 - o Intel® MPI Library 4.1
 - o Intel® Advisor XE 2013 Update 1
 - o Intel® Threading Building Blocks 4.1 Update 1
 - o Intel® Trace Analyzer and Collector 8.1
 - o Intel® VTune™ Amplifier XE 2013 Update 2
 - o Microsoft* Visual Studio* Shell for Intel® Visual Fortran **(For Windows* OS; installs only on the master node)**. Intel® Cluster Studio XE 2013 for Windows* OS provides Microsoft Visual Studio 2010 Shell. As a prerequisite, if you install the included Microsoft Visual Studio 2010 Shell, additional Microsoft software may be required to be installed prior to beginning the installation of the Intel® Cluster Studio XE 2013. **Microsoft .NET* 4.0 Framework is required for Microsoft* Visual Studio* 2010 Shell. If you do not have this framework installed already, you can download the installer from:**
<http://www.microsoft.com/en-us/download/details.aspx?id=17851>
- As with Intel® Cluster Studio XE 2012, the topic *Integrated Development Environments (IDEs)* can be found both for Linux* OS and Windows* OS in the **Getting Started Guide** for the Intel® Cluster Studio XE.
 - The topic *Using Intel® MPI Library on Intel® Many Integrated Cores Architecture (Intel® MIC Architecture)* can be found in the **Getting Started Guide** for applications running on Linux* OS.
 - The topic *Using Intel® Trace Analyzer and Collector on Intel® Many Integrated Cores Architecture (Intel® MIC Architecture)* can be found in the **Getting Started Guide** for MPI applications running on Linux* OS.
 - The topic *Using Intel® MPI Benchmarks on Intel® Many Integrated Core Architecture (Intel® MIC Architecture)* can be found in the **Getting Started Guide** for the Intel® MPI Benchmark 3.2.4 applications running on Linux* OS
 - The topic *Using Intel® Advisor XE for non-MPI C/C++ or non-MPI Fortran Software Applications* of the **Getting Started Guide** provides simple steps for using Intel® Advisor XE for a Fortran or C/C++ application that is a candidate for threading.

Intel® MPI Library 4.1 for Linux* OS

Intel® MPI Library 4.1 for Linux* OS includes the following new features compared to the Intel® MPI Library 4.0 Update 3 (see the product documentation for more details):

- Support for the MPI-2.2 standard
- Backward compatibility with Intel MPI Library 4.0.x based applications
- Support for clusters with different Intel® Architecture Processors
- Intel® Many Integrated Core Architecture (Intel® MIC Architecture) support
- Support for the PBS Pro* job management system
- Support for Intel® Composer XE 2013
- New documentation in the HTML-based format

Intel® MPI Library 4.1 for Windows* OS

Intel® MPI Library 4.1 for Windows* OS includes the following new features compared to the Intel® MPI Library 4.0 Update 3 (see the product documentation for more details):

- Support for the MPI-2.2 standard
- Extended interoperability
- Intel® Composer XE 2013 support
- New documentation in the HTML-based format

Intel® Math Kernel Library (Intel® MKL) 11.0 Update 1

Intel MKL now has support for the Intel® Many Integrated Core Architecture (Intel® MIC Architecture) on Linux* OS. Most of Intel MKL has been ported to run natively on processors based on this architecture. A smaller number of functions have been optimized to automatically divide their computational work between the host CPU and Intel® Xeon Phi™ coprocessors, a feature called automatic offload (AO). Read the Intel MKL User's Guide for more information. The following describes the parts of Intel MKL currently supported and optimized.

- The following components are tuned for the Intel MIC Architecture:
 - BLAS
 - AO: ?TRMM, ?TRSM, ?GEMM
 - native: Level 3 BLAS and key functions from Level 1 and 2 BLAS
 - Sparse BLAS
 - native: ?CSRMM, ?CSRMM
 - LAPACK
 - native: LU, Cholesky, and QR factorization

- FFTS
 - native: Single- and double-precision real-to-complex and complex-to-complex one-, two-, and three-dimensional fast Fourier transforms
 - VML
 - native: real functions
 - Random number generators
 - native: MT19937, MT2203, MRG32k3a BRNGs, and discrete Uniform and Geometric RNGs
- Most standard Intel MKL functions run on coprocessors based on Intel MIC Architecture with the following exceptions:
 - ScaLAPACK and cluster FFTs
 - Poisson library, iterative sparse solvers, and trust region solvers
- Only static native libraries
- Conditional Numerical Reproducibility (CNR): New functionality in Intel MKL now allows you to balance performance with reproducible results by allowing greater flexibility in code branch choice and by ensuring algorithms are deterministic. See the Intel® MKL User's Guide for more information. All of Intel MKL supports this new capability except the following: ScaLAPACK, cluster FFTs, data fitting functions, summary statistics functions, and the vsRngBeta random number generator on 32-bit operating systems.
- Intel MKL also introduces optimizations using the new Intel® Advanced Vector Extensions 2 (Intel® AVX2) including the new FMA3 instructions. The following parts of Intel MKL have been optimized:
 - BLAS
 - FFTs
 - Vector math functions
 - Data fitting functions
 - Random number generators
 - Summary statistics functions
- Other new features
 - FFT: Completed support for real-to-complex transforms with sizes given by 64-bit integers
 - Random number generators: Added support for a non-deterministic random number generator (VSL_BRNG_NONDETERM) based on the RdRand instruction
- Intel® Xeon® processor optimizations

- Improved ?CSRMM algorithm by improving scalability on all multicore processors
- Improved Geometric RNG performance on Intel® Core™ i7-2600 and Intel® Xeon® E7-4870 processors
- Improved data fitting Integrate1D function performance on Intel® Core™ i7-2600 and Intel® Xeon® E7-4870 processors
- Documentation
 - Intel MKL Reference Manual in HTML format is no longer available with the product but accessible online. For Windows OS, Intel MKL Reference manual in HTML-based format is delivered with the product and integrates into Microsoft* Visual Studio 2008, 2010, and 2012.
 - Man pages and Eclipse help integration are no longer provided
- Other changes
 - Removed Intel MKL GNU Multiple Precision* (GMP) function interfaces
 - Disabled timing function `mkl_set_cpu_frequency()` to perform useful work – use `mkl_get_max_cpu_frequency()`, `mkl_get_clocks_frequency()`, and `mkl_get_cpu_frequency()` as described in the Intel MKL Reference Manual.
 - Removed MKL_PARDISO constant – used MKL_DOMAIN_PARDISO to specify the PARDISO domain with the `mkl_domain_set_num_threads()` function
 - Removed special backward compatibility functions for convolution and correlation functions in Intel MKL 10.2 update 4
 - Removed the OpenMP* static runtime library from the Windows* version of Intel MKL and Intel® compilers.

Intel® Trace Analyzer and Collector 8.1

- Usability improvements
 - New interactive help system with support for non-ASCII installation path
 - New documentation in the HTML-based format
- Intel® Many Integrated Core Architecture (Intel® MIC Architecture) support for Linux* OS
- Extended interoperability
 - Intel® Composer XE 2013 support

Intel® MPI Benchmarks 3.2 Update 4

- Intel® MPI Benchmarks on Linux* OS now supports Intel® Many Integrated Core Architecture (Intel® MIC Architecture)
- New documentation in HTML-based format.

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System Requirements

Processor Requirements

Systems based on IA-32 architecture:

A system based on the Intel® Pentium® 4 processor or higher
Intel® Core® i7 processor recommended

Systems based on Intel® 64 architecture:

Intel® Core™ processor family or higher
Intel® Xeon® 5500 processor series recommended

NOTE: It is assumed that the processors listed above are configured into homogeneous clusters. For the Microsoft Windows HPC Server* 2008 operating system, only processors based on the Intel® 64 architecture are supported.

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Disk Space Requirements

100 GB of disk space (minimum)

NOTE: During the installation process, the installer may need up to 12 GB of temporary disk storage to manage the intermediate installation files.

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Operating System Requirements

OS Distributions	IA-32 Architecture	Intel® 64 Architecture	
		32-Bit Applications	64-Bit Applications

Intel® Cluster Ready ¹	N/A	N/A	S
Red Hat Enterprise Linux* 5.0	S	S	S
Red Hat Enterprise Linux* 6.0	S	S	S
SUSE Linux Enterprise Server* 11	S	S	S
Microsoft* Windows* HPC Server 2008	N/A	S	S
Microsoft* Windows* HPC Server 2008 R2	N/A	S	S

S = Supported

¹ Intel® Cluster Ready is an applications platform architecture standard for Linux* OS clusters. Please convey to your users the Linux* OS platform needed for your MPI application with:

This application has been verified to run correctly on Linux* OS clusters that conform to the Intel® Cluster Ready platform architecture. Each Intel® Cluster Ready system is shipped and tested with a diagnostic tool: Intel® Cluster Checker. Intel® Cluster Checker is used to validate operability and compliance, as well as overall system health. On an Intel® Cluster Ready system, start with these commands to easily view diagnostic logs:

```
$ . /opt/intel/clck/<version>/clckvars.sh
$ cluster-check --report
```

For more information on Intel® Cluster Ready and on the alliance of partner vendors, please visit <http://www.intel.com/go/cluster>.

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Memory Requirements

2 GB RAM (minimum)

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Intel® Professional Edition C++ Compiler and Intel® Fortran Compilers

For all of the Intel® architectures, the version number on the Intel compilers should be 11.1 or higher.

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Adobe* Reader*

There are certain documents within the Intel® Cluster Studio XE that require Adobe Reader for viewing. You can download Adobe Reader onto your system from <http://get.adobe.com/reader/>.

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Installation Notes

For instructions on installing and uninstalling the Intel® Cluster Studio XE 2013 on Linux* OS and Windows* OS, see the [Installation Guide](#).

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Documentation

The documentation index file `Doc_Index.htm` provides hyperlinks to the [Intel® Cluster Studio XE](#) documentation

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Issues and Limitations

1. When trying to install the Intel® Cluster Studio or Intel® Cluster Studio XE product via the “*activate by using a license manager*” option, you may experience delays of up to 10 minutes. Do not immediately shut down the install in such cases but wait for the installer to complete. If you experience delays exponentially longer than this, contact Intel® Premier Support at <http://premier.intel.com>
2. There have been situations where during the installation process, /tmp has been filled up. We recommend that you have **at least 12 GB of free space** in /tmp when installing the Intel® Cluster Studio XE. Also, the installer script `install.sh` has the command-line options:

`-t [FOLDER]`

or

`--tmp-dir [FOLDER]`

where `[FOLDER]` is a directory path, which can direct the use of intermediate storage to another disk partition referenced by `[FOLDER]`. `[FOLDER]` should be a non-shared storage location on each node of the cluster. Note that `[FOLDER]` should also contain **at least 12 GB of free space**.

3. On Linux* OS, if any software component of the Intel® Cluster Studio XE is detected as pre-installed on the head node, that software component will not be processed by the Intel Cluster Studio installer. There is a similar problem on Windows* OS in the ‘Modify’ mode. For Windows* OS, if some software component of the Intel® Cluster Studio XE is pre-installed on the head node using the Intel Cluster Studio installer, that software component will not be installed on the compute nodes of the cluster. For either Linux* OS or Windows* OS, if you already installed some of the software components only on the head node, and you want to install them on the other nodes using the Intel Cluster Studio installer, you need to uninstall such components from the head node manually before starting the installer.
4. For Linux* OS versions of the Intel® Cluster Studio XE, the Java* Runtime Environment is used by the Intel® Debugger graphical environment, which is a

Java* application. On Linux* OS, the installer may display the following message with respect to the Java* Runtime Environment (JRE) during installation:

```
Step no: 4 of 6 | Installation configuration > Missing Optional  
Prerequisite
```

```
-----  
-----  
There is one or more optional unresolved issues. It is highly  
recommended to fix  
them all before you continue the installation. You can fix it  
without exiting the  
installation and re-check. Or you can quit the installation, fix the  
issues, and  
run the installation again.
```

```
-----  
-----  
Missing optional prerequisite  
-- No compatible Java* Runtime Environment (JRE) found
```

- ```

1. Skip missing optional prerequisites [default]
2. Show the detailed info about issue(s)
3. Re-check the prerequisites
```

- ```
h. Help  
b. Back to the previous menu  
q. Quit
```

```
-----  
-----  
Please type a selection or press "Enter" to accept default choice  
[1]:
```

You can resolve this issue by entering value 2 after the prompt message for the installation state shown above. This will generate the following diagnostic information:

Step no: 4 of 6 | Installation configuration > Missing Optional Prerequisite

This system does not appear to have a Java* JRE version 5.0 (also referred to as 1.5.0) installed. This may prevent operation of the Intel(R) Debugger GUI. For further details, please refer to the System Requirement section of the product Release Notes.

- -----
1. Finish with prerequisites and continue installation [default]
 2. Back to Prerequisite summary dialog

- h. Help
- b. Back to the previous menu
- q. Quit

Please type a selection or press "Enter" to accept default choice [1]:

The generated instructions indicate that a version of the Java* Runtime Environment is missing from your system. For the prompt message above, enter the character "q" to quit the installation process. Make sure that the Java* Runtime Environment package is installed on your system. The directory path for the Java* Runtime Environment might be:

/usr/java

If you cannot find the Java* Runtime Environment library on your system, you can download the appropriate version of the Java* Runtime Environment from <http://www.java.com/en/download/>

After the download completes, install the Java* Runtime Environment on your system. You may need a system administrator to help you with the installation. The Java* Runtime Environment is used by the Intel® Debugger graphical environment, which is a Java* application.

If you have located an existing and compatible Java* Runtime Environment library on your system, or you have proceeded to visit the URL above and completed a download and installation, set your `PATH` environment variable to include the directory path to the Java* Runtime Environment library. The Bourne* and Korn* Shell syntax for setting the `PATH` environment variable might be as follows:

```
export PATH=/usr/java/jre1.5.0_22/bin:$PATH
```

For C Shell, the syntax for setting the `PATH` environment variable might be as follows:

```
setenv PATH /usr/java/jre1.5.0_22/bin:$PATH
```

After setting the `PATH` environment variable, repeat the installation process. The message regarding the missing Java* Runtime Environment library will disappear.

5. You may encounter a symbolic links creation error on Linux* OS when upgrading from Intel® Cluster Studio to Intel® Cluster Studio XE, with the following symptoms:
 - a. No symbolic links are created in `/opt/intel/icsxe/<version>/`
 - b. Lots of error messages are returned in case of the distributed install, such as:

```
ln: creating symbolic link `/root/icsxe/2013.0.028/mpi' to
`/root/icsxe/impi/4.1.0.008': No such file or directory
ln: creating symbolic link `/root/icsxe/2013.0.028/impi' to
`/root/icsxe/impi/4.1.0.008': No such file or directory
ln: creating symbolic link `/root/icsxe/2013.0.028/mpi' to
`/root/icsxe/impi/4.1.0.008': No such file or directory
```

```
ln: creating symbolic link `/root/icsxe/2013.0.028/impi' to
`/root/icsxe/impi/4.1.0.008': No such file or directory
```

The workaround is to put the Intel® Cluster Studio XE license into either `/opt/intel/licenses` or `${HOME}/intel/licenses` before starting the installation procedure described in the Linux* OS installation guide.

6. If you use the C/C++ memory leak programming example described in the topic *Using Intel® Inspector XE* of the Intel® Cluster Studio XE 2013 [Getting Started Guide](#) and issue the Intel® MPI Library/Intel® Inspector XE command-line:

```
mpiexec -n 4 inspxe-cl -r inspectorxe_results -collect mi1 --
./a.out
```

You may encounter a message of the following type:

```
Inspector reports 0 issues for all processes
```

Then try running the Intel® Inspector XE with the `mi2` collector as follows:

```
mpiexec -n 4 inspxe-cl -r inspectorxe_results -collect mi2 --
./a.out
```

`mi1` is the Intel® Inspector XE collector that detects memory leaks. `mi2` is the Intel® Inspector XE collector that detects other memory problems.

7. If you use the Intel® MPI Library command `mpirun` with the Intel® Inspector XE as follows:

```
mpirun -f ./mpd.hosts -nolocal -ppn 1 -n 4 inspxe-cl -c ti2 -r
r003_{mpirank} `pwd`/inspxe_mpirank.exe inspxe-cl -c mi2 -r r000_{mpirank}
`pwd`/inspxe_mpirank.exe
```

where the above command line is collecting two types of instrumentation data (`ti2` and `mi2`), and you encounter a run-time error that may look as follows:


```
... HYDU_create_process (./utils/launch/launch.c:94): execvp error on
file r000_{mpirank} (No such file or directory)
... HYDU_create_process (./utils/launch/launch.c:94): execvp error on
file r000_{mpirank} (No such file or directory)
... HYDU_create_process (./utils/launch/launch.c:94): execvp error on
file r000_{mpirank} (No such file or directory)
... HYDU_create_process (./utils/launch/launch.c:94): execvp error on
file r000_{mpirank} (No such file or directory)
```

In this case, you can use the `mpiexec` command in lieu of the `mpirun` command:

```
mpiexec -nolocal -ppn 1 -n 4 inspxe-cl -c ti2 -r
/shared/cluster_common/inspector_test/cluster/r003_{mpirank}
`pwd`/inspxe_mpirank.exe inspxe-cl -c mi2 -r r000_{mpirank}
inspxe_mpirank.exe
```

where `/shared/cluster_common/inspector_test/cluster/r003_{mpirank}` is a shared path for collecting `ti2` instrumentation data.

Alternatively, you can create a Bourne* Shell or C Shell script that contains instrumentation information that may look as follows:

```
inspxe-cl -c ti2 -r
/shared/cluster_common/inspector_test/cluster/r003_{mpirank}
`pwd`/inspxe_mpirank.exe inspxe-cl -c mi2 -r r000_{mpirank}
inspxe_mpirank.exe
```

Using Bourne* Shell syntax, the script might be called `run.sh`, where it is used with the `mpirun` command in the following manner:

```
mpirun -ppn 1 -n 4 ./run.sh
```

You also need to remove the `-nolocal` command-line option because the `-f <hosts_file>` option was not specified, and therefore all processes are started locally.

8. Intel® Cluster Studio XE 2013 for Windows* OS requires **the creation and use of symbolic links for installation of the Intel® software product components**. If you have a File Allocation Table (FAT32) file system deployed on your Windows* OS platform, these symbolic links cannot be created and the integrity of the Intel® Cluster Studio XE 2013 installation is compromised.
9. Intel® Trace Analyzer and Collector 8.1 - itcpin is not supported for Linux* OS kernels version 3.x.
10. Intel® MPI Library supports only Intel® Xeon Phi™ coprocessor (codename: Knights Corner) based on Intel® MIC Architecture.

This release of the Intel® MPI Library 4.1 for Linux* OS does not support certain features for Intel® Xeon Phi™ coprocessor:

- o MPD process manager
- o Checkpoint-Restart Support. See the Checkpoint-Restart Support topic in the Reference Manual for more details.

Intel® MPI Library 4.1 for Linux* OS supports multiple DAPL* providers for communication between host and Intel® Xeon Phi™ coprocessor and between several Intel® Xeon Phi™ coprocessors inside one node.

Currently supported providers are DAPL over InfiniBand* Architecture and DAPL over Symmetric Communications Interface (SCIF). This feature requires using symbolic names in the hostfile.

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Technical Support

Your feedback is very important to us. To receive technical support for the tools provided in this product and technical information including FAQ's and product updates, you need to register for an Intel® Premier Support account at the [Intel® Registration Center](#).

NOTE: Registering for support varies for release product or pre-release products (alpha, beta, etc) - only released software products have support web pages at <http://software.intel.com/sites/support/>.

To register for an account, please visit the Intel® Registration Center website at <http://www.intel.com/software/products/registrationcenter/index.htm>. If you have forgotten your password, please email a request to: quadsupport@mailbox.intel.com. Please do not email your technical issue to this email address.

The product support web site, located under the SUPPORT tab of the <http://www.intel.com/go/clustertools> product page, provides top technical issues, FAQs & Known Issues, [Documentation](#) and Training, and product errata. For more information, and to connect with the Intel® HPC community, visit the Intel® Cluster Studio XE forums: <http://software.intel.com/en-us/forums/intel-clusters-and-hpc-technology>.

Submitting Issues

To submit an issue via the Intel Premier Support website, please perform the following steps:

1. Ensure that Java* and JavaScript* are enabled in your browser.
2. Go to <https://premier.intel.com/>.
3. Type in your Login and Password. Both are case-sensitive.
4. Click the "Submit Issues" button in the left margin.
5. Read the Confidentiality Statement and click the "I Accept" button.
6. Click on the "Go" button next to the "Product" drop-down list.
7. Click on the "Submit Issue" link in the left navigation bar.
8. Choose "Development Environment (tools, SDV, EAP)" from the "Product Type" drop-down list.
9. If this is a software or license-related issue choose "Intel(R) Cluster Studio XE" from the "Product Name" drop-down list.
10. Enter your question and complete the fields in the web-page windows that follow to successfully submit the issue.

Follow these guidelines when forming your problem report or product suggestion:

1. Describe your difficulty or suggestion. For problem reports, please be as specific as possible (for example, including compiler and link command-line options), so that we may reproduce the problem. Please include a small test case if possible.

2. Describe your system configuration information. Be sure to include specific information that may be applicable to your setup: operating system, name and version number of the installed applications, and anything else that may be relevant to helping us address your concern.

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