

Intel® Parallel Studio XE 2013 for Linux*

Installation Guide and Release Notes

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1 Introduction

This document describes system requirements and how to install Intel® Parallel Studio XE 2013. Additional release notes for each component, with details of changes and additional technical information, can be found after installation, in the respective components' Documentation folder.

The default top-level installation folder is `/opt/intel`

First-time users should view the Getting Started page that is displayed at the end of product installation.

1.1 What's New

This section highlights important changes from the previous product version and changes in product updates. For information on what is new in each component, please read the individual component release notes.

Update 2 – February 2013

- Component products updated to current versions

Update 1 – October 2012

- Component products updated to current versions

1.1.1 Changes since Intel® Parallel Studio XE 2011

- Intel® Advisor XE is a new component included in this product.
- Other components updated to current versions
- Development of applications that offload work to an Intel® Many Integrated Core architecture (Intel® MIC architecture) coprocessor (Intel® Xeon Phi™ product family) is now supported
- Ubuntu* 11.10 and Ubuntu 12.04 now supported
- Support for the following versions of Linux distributions has been dropped:
 - Red Hat Enterprise Linux 4*
 - Fedora 15*
 - Ubuntu 11.04*

1.2 Product Contents

Intel® Parallel Studio XE 2013 includes the following components:

- Intel® C++ Composer XE 2013 Update 2 - includes Intel® Integrated Performance Primitives (Intel® IPP), Intel® Threading Building Blocks (Intel® TBB) and Intel® Math Kernel Library (Intel® MKL)
- Intel® Fortran Composer XE 2013 Update 2 - includes Intel® Math Kernel Library (Intel® MKL)
- Intel® Advisor XE 2013 Update 2
- Intel® Inspector XE 2013 Update 4
- Intel® VTune™ Amplifier XE 2013 Update 4
- Sample programs
- On-disk documentation

1.3 System Requirements

For an explanation of architecture names, see <http://intel.ly/mXlIjK>

- A PC based on an IA-32 or Intel® 64 architecture processor supporting the Intel® Streaming SIMD Extensions 2 (Intel® SSE2) instructions (Intel® Pentium® 4 processor or later, or compatible non-Intel processor)
 - Development of 64-bit applications, and those that offload work to an Intel® Many Integrated Core architecture (Intel® MIC architecture) coprocessor, is supported on a 64-bit version of the OS only. Development of 32-bit applications is supported on either 32-bit or 64-bit versions of the OS.

- Development for a 32-bit on a 64-bit host may require optional library components (ia32-libs, lib32gcc1, lib32stdc++6, libc6-dev-i386, gcc-multilib) to be installed from your Linux distribution.
- For the best experience, a multi-core or multi-processor system is recommended
- 2GB of RAM
- 8GB free disk space for all features
- One of the following Linux distributions (this is the list of distributions tested by Intel; other distributions may or may not work and are not recommended - please refer to [Technical Support](#) if you have questions):
 - Debian* 6.0
 - Fedora* 16
 - Red Hat Enterprise Linux* 5, 6
 - SUSE LINUX Enterprise Server* 10 SP4, 11 SP2
 - Ubuntu* 11.10, 12.04
 - Individual components may support additional Linux distributions – please see the component release notes for more information
- Linux Developer tools component installed, including gcc, g++ and related tools
- Library `libunwind.so` is required in order to use the `-traceback` option. Some Linux distributions may require that it be obtained and installed separately.

Additional Requirements to use the Graphical User Interface of the Intel® Debugger

- IA-32 Architecture system or Intel® 64 Architecture system
- Java* Runtime Environment (JRE) 6.0 (1.6)
 - A 32-bit JRE must be used on an IA-32 architecture system and a 64-bit JRE must be used on an Intel® 64 architecture system

Notes

- The Intel® compilers are tested with a number of different Linux distributions, with different versions of gcc. Some Linux distributions may contain header files different from those we have tested, which may cause problems. The version of glibc you use must be consistent with the version of gcc in use. For best results, use only the gcc versions as supplied with distributions listed above.
- The default for the Intel® compilers is to build IA-32 architecture applications that require a processor supporting the Intel® SSE2 instructions - for example, the Intel® Pentium® 4 processor. A compiler option is available to generate code that will run on any IA-32 architecture processor. However, if your application uses Intel® Integrated Performance Primitives or Intel® Threading Building Blocks, executing the application will require a processor supporting the Intel® SSE2 instructions.
- Compiling very large source files (several thousands of lines) using advanced optimizations such as `-O3`, `-ipo` and `-openmp`, may require substantially larger amounts of RAM.
- Some optimization options have restrictions regarding the processor type on which the application is run. Please see the documentation of these options for more information.

- OpenMP* applications to be analyzed by Intel® Inspector XE or Intel® VTune™ Amplifier XE must be linked with the “compatibility” OpenMP library as supplied by an Intel® compiler.

1.4 Documentation

Product documentation for each component of Intel® Parallel Studio XE can be found in the component's folder.

1.5 Technical Support

If you did not register your product during installation, please do so at the [Intel® Software Development Products Registration Center](http://www.intel.com/software/products/support). Registration entitles you to free technical support, product updates and upgrades for the duration of the support term.

For information about how to find Technical Support, Product Updates, User Forums, FAQs, tips and tricks, and other support information, please visit <http://www.intel.com/software/products/support>

Note: If your distributor provides technical support for this product, please contact them for support rather than Intel.

2 Installation

The installation of the product requires a valid license file or serial number. If you are evaluating the product, you can also choose the “Evaluate this product (no serial number required)” option during installation

If you received your product on DVD, mount the DVD, change the directory (`cd`) to the top-level directory of the mounted DVD and begin the installation using the command:

```
./install.sh
```

If you received the product as a downloadable file, first unpack it into a writeable directory of your choice using the command:

```
tar -xzf name-of-downloaded-file
```

Then change the directory (`cd`) to the directory containing the unpacked files and begin the installation using the command:

```
./install.sh
```

Follow the prompts to complete installation.

Note that there are several different downloadable files available, each providing different combinations of components. Please read the download web page carefully to determine which file is appropriate for you.

You do not need to uninstall previous versions or updates before installing a newer version – the new version will coexist with the older versions.

2.1.1 Using a License Server

If you have purchased a “floating” license, see <http://intel.ly/oPEdEe> for information on how to install using a license file or license server. This article also provides a source for the Intel® License Manager for FLEXlm* product that can be installed on any of a wide variety of systems.

2.1.2 Known Installation Issues

- On some versions of Linux, auto-mounted devices do not have the "exec" permission and therefore running the installation script directly from the DVD will result in an error such as:

```
bash: ./install.sh: /bin/bash: bad interpreter: Permission denied
```

If you see this error, remount the DVD with exec permission, for example:

```
mount /media/<dvd_label> -o remount,exec
```

and then try the installation again.

- The product is fully supported on Ubuntu and Debian Linux distributions for IA-32 and Intel® 64 architecture systems as noted above under System Requirements. Due to a restriction in the licensing software, however, it is not possible to use the Trial License feature when evaluating IA-32 components on an Intel® 64 architecture system under Ubuntu or Debian. This affects using a Trial License only. Use of serial numbers, license files, floating licenses or other license manager operations, and off-line activation (with serial numbers) is not affected. If you need to evaluate IA-32 components of the product on an Intel® 64 architecture Ubuntu or Debian system, please visit the Intel® Software Evaluation Center (<http://intel.ly/nJS8y8>) to obtain an evaluation serial number.

3 Disclaimers, Notices and Legal Information

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