Intel® C++ Studio XE 2011 SP1 for Linux*
Installation Guide and Release Notes

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1 Introduction

This document describes system requirements and how to install Intel® C++ Studio XE 2011 Service Pack 1 (SP1). 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.

First-time users should view the Getting Started Tutorials of the individual components.

1.1 What's New

This section highlights important changes in product updates.

SP1 Update 3

- Update to current versions of included components

SP1 Update 2

- [Linux distributions supported updated](#)
- Update to current versions of included components

SP1 Update 1

- Update to current versions of included components

Service Pack 1

- [Support for Red Hat Enterprise Linux 4* deprecated](#)
- Update to current versions of included components

For information on what is new in each component, please read the individual component release notes.

1.2 Product Contents

Intel® C++ Studio XE 2011 SP1 includes the following components:

- Intel® C++ Composer XE 2011 Update 11 (includes Intel® IPP, Intel® TBB and Intel® MKL)
- Intel® Inspector XE 2011 Update 10
- Intel® VTune™ Amplifier XE 2011 Update 9
- Sample programs
- On-disk documentation

1.3 System Requirements

For an explanation of architecture names, see http://intel.ly/mXIljK

- 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)
    - o Development for a target different from the host may require optional library components to be installed from your Linux Distribution.
    - o For the best experience, a multi-core or multi-processor system is recommended.
    - o Incompatible or proprietary instructions in non-Intel processors may cause the analysis capabilities of this product to function incorrectly. Any attempt to analyze code not supported by Intel® processors may lead to failures in this product.
- 1GB of RAM (2GB recommended)
- 4GB free disk space for all features
- One of the following Linux distributions (this is the list of distributions tested by Intel and supported by all components; other distributions may or may not work and are not recommended - please refer to [Technical Support](#) if you have questions). Individual components support additional distributions – see the individual component (Amplifier, Composer, Inspector) Release Notes for details.

- o Debian* 6.0
- o Fedora* 15
- o Red Hat Enterprise Linux* 4 (Deprecated), 5, 6
- o SUSE LINUX Enterprise Server* 10 SP4,11 SP1
- o Ubuntu* 10.04

- 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.
- If developing on an Intel® 64 architecture system, some Linux distributions may require installation of one or more of the following additional Linux components: ia32-libs, lib32gcc1, lib32stdc++6, libc6-dev-i386, gcc-multilib

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) 5.0 (also called 1.5) or 6.0 (1.6) – 5.0 recommended
  - o 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.
- The above lists of processor model names are not exhaustive - other processor models correctly supporting the same instruction set as those listed are expected to work. Please refer to Technical Support if you have questions regarding a specific processor model
- 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.

1.3.1   Support for Red Hat Enterprise Linux 4* deprecated

In a future major release of Intel® C++ Studio XE, installation and use on Red Hat Enterprise Linux 4 will be removed.

1.4   Documentation

Product documentation for each component of Intel® C++ 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. 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 –xzvf 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 Activation of Purchase after Evaluation Using the Intel Activation Tool

Note for evaluation customers: a new tool Intel Activation Tool "`Activate`" is included in this product release and installed at `/opt/intel/ActivationTool/Activation/` directory.

If you installed the product using an Evaluation license or Serial Number (SN), or using the "Evaluate this product (no serial number required)" option during installation, and then purchased the product, you can activate your purchase using the Intel Activation Tool at `/opt/intel/ActivationTool/Activation/Activate`. It will convert your evaluation software to a fully licensed product. To use the tool:

```
$ /opt/intel/ActivationTool/Activation/Activate [SN_here]
```

2.1.2 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.

2.1.3 Known Installation Issues

- If you have enabled the Security-Enhanced Linux (SELinux) feature of your Linux distribution, you must change the `SELINUX` mode to `permissive` before installing Intel® C++ Studio XE 2011 SP1. Please see the documentation for your Linux distribution for details. After installation is complete, you may reset the `SELINUX` mode to its previous value.
- 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://www.intel.com/cd/software/products/asmo-na/eng/download/eval/) to obtain an
evaluation serial number.

3 Disclaimers, Notices and Legal Information

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