

Intel® Parallel Studio 2011 Installation Guide and Release Notes

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1 Introduction

This document describes system requirements and how to install Intel® Parallel Studio. 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 read *The Intel® Parallel Studio Overview* (PDF, Adobe Reader* required). This is available during installation by clicking on the “Getting Started” link at the lower left of the install window, or after installation at Start > All Programs > Intel Parallel Studio 2011 > Getting Started > Parallel Studio Overview

1.1 Product Contents

Intel® Parallel Studio 2011 includes the following components:

- Intel® Parallel Composer
- Intel® Parallel Inspector
- Intel® Parallel Amplifier
- Intel® Parallel Advisor
- Integration into Microsoft* development environments
- Sample programs
- On-disk documentation

1.2 What's New

- Intel® Parallel Advisor has been added
- Support for Microsoft Visual Studio 2010*
- Additional tutorials

For details on what is new in the product components, please see the individual components' release notes.

1.3 System Requirements

For an explanation of architecture names, see <http://software.intel.com/en-us/articles/intel-architecture-platform-terminology/>

- 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)
 - 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.
 - For the best experience, a multi-core or multi-processor system is recommended
- 2GB RAM
- 4GB free disk space for all product features and architectures
- Microsoft Windows XP*, Microsoft Windows Vista*, Microsoft Windows 7*, Microsoft Windows Server 2003* or Microsoft Windows Server 2008*, 32-bit or “x64” editions - embedded editions not supported
- When installed on Microsoft Windows Server 2008, one of:
 - Microsoft Visual Studio 2010* with C++ and “x64 Compiler and Tools” components installed [1]
 - Microsoft Visual Studio 2008* Standard Edition (or higher edition) SP1 with C++ and “x64 Compiler and Tools” components installed [1]

- When installed on Microsoft Windows XP, Windows Vista or Windows Server 2003, one of:
 - Microsoft Visual Studio 2010* with C++ and “x64 Compiler and Tools” components installed [\[1\]](#)
 - Microsoft Visual Studio 2008* Standard Edition (or higher edition) with C++ and “x64 Compiler and Tools” components installed [\[1\]](#)
 - Microsoft Visual Studio 2005* Standard Edition (or higher edition) with C++ and “x64 Compiler and Tools” components installed [\[1\]](#)
- Application coding requirements:
 - Programming Language: C or C++ (native, not managed code) [\[4\]](#)
 - Threading methodologies supported by the analysis tools:
 - Intel® Cilk™ Plus
 - Intel® Threading Building Blocks
 - Win32* Threads
 - OpenMP* [\[4\]](#)
- To read the on-disk documentation, Adobe Reader* 7.0 or later

Notes:

1. Microsoft Visual Studio 2005 and 2008 Standard Edition installs the “x64 Compiler and Tools” component by default – the Professional and higher editions require a “Custom” install to select this. Microsoft Visual Studio 2010 includes x64 support by default.
2. 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.
3. Applications built with Intel® Parallel Composer can be run on the same Windows versions as specified above for development. Applications may also run on non-embedded 32-bit versions of Microsoft Windows earlier than Windows XP, though Intel does not test these for compatibility. Your application may depend on a Win32 API routine not present in older versions of Windows. You are responsible for testing application compatibility. You may need to copy certain run-time DLLs onto the target system to run your application.
4. The analysis tools support analysis of applications built with Intel® Parallel Composer, Intel® C++ Compiler version 10.0 or higher, and/or Microsoft Visual C++ 2005, 2008 or 2010. Applications that use OpenMP and are built with the Microsoft compiler must link to the OpenMP “compatibility library” as supplied by an Intel compiler.

1.4 Documentation

Product documentation for each component of Intel® Parallel Studio can be found in the component’s folder. In addition, “Getting Started” documentation can be found in the `Documentation` folder under `Parallel Studio`.

1.5 Samples

A series of samples to help introduce you to Intel® Parallel Studio can be found in the `Samples` folder. The samples are provided as a ZIP archive which should be unpacked to a writable folder of your choice. Each component has additional samples under its respective folder.

1.6 Technical Support

If you did not register your compiler during installation, please do so at the [Intel® Software Development Products Registration Center](http://www.intel.com/software/products/registration). 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

2.1 Pre-Installation Steps

2.1.1 Configure Microsoft Visual Studio for 64-bit Applications

If you are using Microsoft Visual Studio 2005* or 2008 and will be developing 64-bit applications (for the Intel® 64 architecture) you may need to change the configuration of Visual Studio to add 64-bit support.

If you are using Visual Studio 2005/2008 Standard Edition, or Visual Studio 2010 Professional Edition or higher, no configuration is needed to build Intel® 64 architecture applications. For other editions:

1. From Control Panel > Add or Remove Programs, select “Microsoft Visual Studio 2005” (or 2008) > Change/Remove. The Visual Studio Maintenance Mode window will appear. Click Next.
2. Click Add or Remove Features
3. Under “Select features to install”, expand Language Tools > Visual C++
4. If the box “X64 Compiler and Tools” is not checked, check it, then click Update. If the box is already checked, click Cancel.

2.1.2 Installation on Microsoft Windows Vista* or Windows 7*

On Microsoft Windows Vista or Windows 7, Microsoft Visual Studio 2005 users should install Visual Studio 2005 Service Pack 1 (VS 2005 SP1) as well as the Visual Studio 2005 Service Pack 1 Update for Windows Vista, which is linked to from the VS 2005 SP1 page. After installing these updates, you must ensure that Visual Studio runs with Administrator permissions, otherwise you will be unable to use the Intel compiler. For more information, please see

Microsoft's Visual Studio on Windows Vista page (<http://msdn2.microsoft.com/en-us/vstudio/aa948853.aspx>) and related documents.

2.2 Installation

If you are installing the product for the first time, please be sure to have the product serial number available as you will be asked for it during installation. A valid license is required for installation and use.

To begin installation, insert the first product DVD in your computer's DVD-ROM drive; the installation should start automatically. If it does not, open the top-level folder of the DVD-ROM drive in Windows Explorer and double-click on `setup.exe`.

If you received your product as a downloadable file, double-click on the executable file (`.EXE`) to begin installation.

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

2.2.1 Activation of Purchase after Evaluation

If you installed the product using an Evaluation license, and then purchased the product, you can activate your purchase using the tool at Start > All Programs > Intel Parallel Studio 2011 > Product Activation.

2.3 Installation Folders

The product installs into a folder arrangement as shown below. Not all folders will be present in a given installation. If other Intel® Parallel Studio tools are installed, they will share the top-level installation folder.

- C:\Program Files\Intel\Parallel Studio 2011\
 - Documentation
 - Samples
 - Advisor
 - Amplifier
 - Composer
 - Inspector

If you are installing on a system with a non-English language version of Windows, the name of the `Program Files` folder may be different. On Intel® 64 architecture systems, the folder name is `Program Files (X86)` or the equivalent.

2.4 Installation Known Issues

2.4.1 Unicode Characters in License Path

During installation, Intel® software cannot handle Unicode characters in license paths and the names of the licenses. Intel® software tries to find licenses in the standard location (`%CommonProgramFiles%\Intel\Licenses`, most commonly `C:\Program`

Files\Common Files\Intel\Licenses on 32-bit systems and C:\Program Files (x86)\Common Files\Intel\Licenses on 64-bit systems). Do not place licenses in folders or paths containing localized characters. For example: C:\インテルライセンス. Do not rename licenses obtained from Intel using localized characters. For example マイライセンス.lic. Do not set the INTEL_LICENSE_FILE environment variable to contain directory paths and license names containing localized characters. Keep licenses either in the standard location (see above), or use ASCII characters in directory names and license names. For example: C:\Intel\Licenses and License.lic.

2.4.2 Documentation Issue with Multiple Visual Studio Versions

If you have both Microsoft Visual Studio* 2005 and 2008 installed on your system and integrate Intel® Parallel Studio 2011 into both versions, removing the integration from one of the versions will remove the integrated Intel® Parallel Studio documentation from both.

To re-install the documentation:

For Intel® Parallel Composer 2011:

1. Use the Control Panel to select the product.
 - For Windows XP* users: Select **Control Panel > Add/Remove Programs**.
 - For Windows 7* users: Select **Control Panel > Programs and Features**.
 - For Windows Vista* users: Select **Control Panel > Programs**.
2. With the product selected, click the **Change/Remove** button and choose Modify mode.
3. In the **Select Components** dialog box, unselect “Integrated Documentation,” this will remove the documentation.
4. Repeat steps 1 and 2.
5. In the **Select Components** dialog box, select “Integrated Documentation” to install documentation again

For Intel® Parallel Advisor 2011, Intel® Parallel Amplifier 2011, Intel® Parallel Inspector 2011 :

First option:

1. Open the Intel® Parallel Studio command prompt (Start Menu\Programs\Intel Parallel Studio 2011\Command Prompt. You can choose any shortcut here, for example, “IA-32 Visual Studio 2005 mode”).
2. Remove the integration for the Visual Studio version that is missing integrated help. For example:
 - “`ampl-vsreg -d 2005`” for removing the Amplifier integration with VS2005
 - “`insp-vsreg -d 2008`” for removing the Inspector integration with VS2008
 - “`advi-vsreg -d 2005`” for removing the Advisor integration with VS2005
3. Restore the integration. For example:
 - “`ampl-vsreg -i 2005`” for adding the Amplifier integration with VS2005
 - “`insp-vsreg -i 2008`” for adding the Inspector integration with VS2008

- “advi-vsreg –i 2005” for adding the Advisor integration with VS2005

Second option:

1. Uninstall the product.
2. Install it again with the desired Visual Studio integration selected.

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