Intel® Visual Fortran Studio XE 2011 SP1 for Windows* Installation Guide and Release Notes

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1   Introduction

This document describes system requirements and how to install Intel® Visual Fortran 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 Getting Started Tutorials of the included 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

- Update to current versions of included components

SP1 Update 1

- Update to current versions of included components

Initial Release

- This is the initial release of this combination of products

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

1.2 Product Contents

Intel® Visual Fortran Studio XE 2011 SP1 includes the following components:

- Intel® Visual Fortran Composer XE 2011 Update 9 (includes Intel® MKL and Microsoft Visual Studio 2010 Shell*)
- Intel® Inspector XE 2011 Update 8
- Intel® VTune™ Amplifier XE 2011 Update 7
- 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 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.
  - o 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* SP3, Microsoft Windows Vista*, Microsoft Windows 7*, Microsoft Windows Server 2003*, Microsoft Windows Server 2008* or Microsoft Windows HPC Server 2008* (embedded editions not supported)

- Microsoft Windows Server 2008 or Windows HPC Server 2008 requires Microsoft Visual Studio 2010* or Visual Studio 2010* Shell or Visual Studio 2008* SP1 or Visual Studio 2008 Shell with Visual Studio 2008 SP1 update applied. Other versions of Visual Studio listed below are not supported on Windows Server 2008 or Windows HPC Server 2008.
- Microsoft .NET Framework 4.0*
- To use the Microsoft Visual Studio development environment or command-line tools to build IA-32 or Intel® 64 architecture applications, one of:
  - Microsoft Visual Studio 2010* with C++ and "X64 Compiler and Tools" components installed [1]
  - Microsoft Visual Studio 2008* Standard Edition or higher with C++ and "X64 Compiler and Tools" components installed [1]
  - Microsoft Visual Studio 2005* Standard Edition or higher with C++ and "X64 Compiler and Tools" components installed [1]
  - Intel® Visual Fortran development environment based on Microsoft Visual Studio 2010 Shell (included with some license types of Intel® Fortran Compiler) [2]
  - Intel® Visual Fortran development environment based on Microsoft Visual Studio 2008 Shell (included with compiler versions 11.0, 11.1 and 12.0.)
- To use command-line tools only to build IA-32 architecture applications, one of:
  - Microsoft Visual C++ 2010* Express Edition [3]
  - Microsoft Visual C++ 2008* Express Edition
  - Microsoft Visual C++ 2005* Express Edition and Microsoft Windows SDK for Windows 2008 and .NET Framework 3.5*
- To use command-line tools only to build Intel® 64 architecture applications, one of:
  - Microsoft Windows Software Development Kit Update for Windows Vista*
  - Microsoft Windows SDK for Windows 2008 and .NET Framework 3.5*
- Installation of the included Microsoft Visual Studio 2010 Shell has the following limitations:
  - Windows XP 64-bit is not supported. Microsoft Visual Studio 2008 Shell from earlier versions of Intel® Visual Fortran can be used.
  - Installation on Windows XP, Windows Vista and Windows Server 2003 requires prior installation of Microsoft .NET 4.0* Framework. Installation on Windows XP and Windows Server 2003 requires prior installation of Microsoft Windows Imaging Component. See the Installation section of the Intel Visual Fortran Composer XE 2011 SP1 Release Notes for details.
- To read the on-disk documentation, Adobe Reader* 7.0 or later
- Application coding requirements:
  - Programming Language: C, C++ or Fortran (native, not managed code) [6]
  - Threading methodologies supported by the analysis tools:
    - Intel® Cilk™ Plus
    - Intel's C/C++ Parallel Language Extensions
    - Intel® Threading Building Blocks
    - Win32* Threads
    - OpenMP* [6]

- To read the on-disk documentation, Adobe Reader* 7.0 or later

Notes:

1. Microsoft Visual Studio 2005/2008 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 this component by default.
2. Intel® Visual Fortran development environment based on Microsoft Visual Studio 2010 Shell is included with Academic and Commercial licenses for Intel Visual Fortran Composer XE. It is not included with Evaluation or Student licenses. This development environment provides everything necessary to edit, build and debug Fortran applications. Some features of the full Visual Studio product are not included, such as:
   - Resource Editor (see ResEdit* (http://www.resedit.net/), a third-party tool, for a substitute)
   - Automated conversion of Compaq* Visual Fortran projects
   - Microsoft language tools such as Visual C++ or Visual Basic*
3. If you will be installing Microsoft Visual Studio 2010 Shell and you wish to also use Microsoft Visual C++ 2010 Express Edition (for separate access to the Microsoft C++ compiler), you must uninstall Visual C++ 2010 Express Edition before installing Visual Studio 2010 Shell along with Intel Visual Fortran Compiler. After the Fortran install is complete, you may reinstall Visual C++ 2010 Express Edition if desired. Please note that the Fortran and C++ compiler environments will be separate and not combined.
4. 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.
5. Applications built with Intel® Compilers 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.
6. Intel® Inspector XE and Intel® VTune™ Amplifier XE support analysis of applications built with Intel® Parallel Composer, Intel® C++ or Fortran 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.

1.3.1 Support Deprecated for Microsoft Visual Studio 2005*

In a future major release of the product, Intel® Visual Fortran Studio XE will remove support for Microsoft Visual Studio 2005*. Intel recommends migrating to Visual Studio 2010 at your earliest convenience.

1.3.2 Support Deprecated for Microsoft Windows Vista* and Microsoft Windows Server 2003*

In a future major release of the product, Intel® Visual Fortran Studio XE will remove support for installation and use on Microsoft Windows Vista* or Microsoft Windows Server 2003*.

1.4 Documentation

Product documentation can be accessed through the Help menu in Microsoft Visual Studio. It can also be found, along with "Getting Started" tutorials, in the Windows "Start" menu under Intel Parallel Studio XE 2011. Please note that if you view the documentation in Microsoft Internet Explorer*, the browser may display a security warning when you click on links to open a documentation set. If you see this warning, you should click the option to proceed.

1.5 Technical Support

If you did not register your compiler 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

2.1 Pre-Installation Steps

2.1.1 Configure Visual Studio for 64-bit Applications

If you will be developing 64-bit applications 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, no configuration is needed to build 64-bit 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* and 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

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, insert the first product DVD in your computer's DVD drive; the installation should start automatically. If it does not, open the top-level folder of the DVD 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. 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. If you want to remove older versions, you may do so before or after installing the newer one.

2.2.1 Activation of Purchase after Evaluation Using the Intel Activation Tool

Note for evaluation customers: a new tool Intel Activation Tool "ActivationTool.exe" is included in this product release and installed at "`[Common Files]\Intel\Parallel Studio XE 2011\Activation\`".

If you installed the product using an Evaluation license or 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 Start > All Programs > Intel Parallel Studio XE 2011 > Product Activation. It will convert your evaluation software to a fully licensed product.

2.2.2 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.

3 Disclaimers, Notices and Legal Information

Optimization Notice

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2,

SSE3, and SSSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel. Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.

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