Intel® Visual Fortran Compiler 9.1 for Windows Subsystem for UNIX* Installation Guide*

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Introduction

This document explains how to install and configure for use the Intel® Visual Fortran Compiler 9.1 for Windows* Subsystem for UNIX* product. Installation is a multi-step process. Please read this document in its entirety before beginning and follow the steps in sequence. For information about the product contents, including new and changed features, please refer to the separate Release Notes.

System Requirements

Architecture Terminology

Intel compilers support three platforms: general combinations of processor architecture and operating system type. This section explains the terms that Intel uses to describe the platforms in its documentation, installation procedures and support site.

IA-32

IA-32 (Intel Architecture, 32-bit) refers to systems based on 32-bit processors generally compatible with the Intel Pentium® II processor, (for example, Intel® Core™ processor or Intel® Xeon® processor), or processors from other manufacturers supporting the same instruction set, running a 32-bit operating system.

Intel® 64

Intel® 64 (formerly Intel® EM64T) refers to systems based on Intel IA-32 processors which have 64-bit architectural extensions, for example, Intel® Core™2 processor or Intel® Xeon® processor), running a 64-bit operating system such as Microsoft Windows XP* Professional x64 Edition or Microsoft Windows Server 2003* x64 Edition. If the system is running a 32-bit version of the Windows operating system, then IA-32 applies instead. Systems based on the AMD* Athlon64* and Opteron* processors running a 64-bit operating system are also supported by Intel compilers for Intel® 64-based applications.

IA-64

Refers to systems based on the Intel Itanium® 2 processor running a 64-bit operating system.

Note: Intel Visual Fortran Compiler for Windows Subsystem for UNIX supports building applications for IA-32 systems only.

Hardware Requirements

- An IA-32 system (minimum Intel® Pentium® 4 2.0GHz, Intel® Core™2 Duo processor or Intel® Xeon® processor recommended) or an Intel® 64 architecture system (application development for IA-32 architecture only)
- 512MB RAM (1GB recommended)
- 500MB disk space

Software Requirements

Each of the following required software products must be licensed and installed before installing or using Intel Visual Fortran Compiler for Windows Subsystem for UNIX:

- Microsoft* Windows* XP Professional or Microsoft* Windows* Server 2003 R2
- Microsoft Windows Services for UNIX* 3.5 or Microsoft Subsystem for UNIX-based Applications for Windows Server 2003 Release 2
- Microsoft* Visual Studio*.NET* 2003 (IA-32 only) or Microsoft Visual Studio 2005 Standard Edition or higher, with Visual C++ component installed
- Intel® Visual Fortran Compiler for Windows version 9.1

Notes:

- Application debugging is supported with Microsoft Subsystem for UNIX-based Applications and Microsoft Visual Studio 2005 only.
- 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 contact Intel® Premier 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.
- Advanced optimization options or very large programs may require additional resources such as memory and disk space
- Adobe* Acrobat Reader* version 5.0 or later is required to view some of the reference documentation.

It is the responsibility of application developers to ensure that the machine instructions contained in the application are supported by the operating system and processor on which the application is to run.

Obtaining the Compiler and Tools

Before installing the compiler and tools, you should check the *Product Downloads* section of the Intel® Registration Center to see if a newer version or update is available. The version listed in your electronic download license letter may not be the most current. In order to download and install a compiler from Intel® Premier Support, you will first have to register for support as described under Technical Support.

Installing the Compiler and Tools

If you encounter difficulty with the initial installation or registration process, please visit https://registrationcenter.intel.com/support to request help from Intel.

Note: You must be logged in to an account with administrative privileges to install the software.

1. Install the desired version of Microsoft Visual Studio, following Microsoft instructions.
2. If you are using Windows Services for UNIX, select a Custom install and select the component `Interix SDK`. If you are using Subsystem for UNIX Applications in Windows Server 2003 and you are using Microsoft Visual Studio 2005, select the optional component `Visual Studio Debugger Extension`. Follow Microsoft instructions for installation.
3. Install Intel Visual Fortran Compiler 9.1. Be sure that the IA-32 compiler and the Visual Fortran Integration into Microsoft Visual Studio components are installed. For installation instructions, please see the Intel Visual Fortran Compiler 9.1 Installation Guide.
4. Download the installer executable for Intel Visual Fortran Compiler for Windows Subsystem for UNIX. This is a Windows application - double-click on the installer executable to begin installation and follow the prompts.

After installation, right click on `My Computer`, select `Properties`, `Advanced`. Click on `Environment Variables`. Under the `System` variables, make sure that the `INTERIX_COMPILERDIR` environment variable is defined with a path that corresponds to the installation folder of your Microsoft Visual Studio product. For example, if you are using Microsoft Visual Studio 2005 and the path is `C:\Program Files\Microsoft Visual Studio 8`, the value of `INTERIX_COMPILERDIR` should be `/dev/fs/C/Program Files/Microsoft Visual Studio 8`. If this environment variable does not exist or is incorrect, create or edit it appropriately.

Setting Up the Compiler Environment

Start a C Shell or Korn Shell window using the appropriate shortcut in the Windows Services for UNIX or Services for UNIX-based Applications program group. Establish the Fortran environment by executing one of the following commands:

- For the C shell, `source /opt/intel/fc/9.1/bin/ifortvars.csh`
- For the Korn shell, use the "dot" command: `. /opt/intel/fc/9.1/bin/ifortvars.sh`

The command to invoke the compiler is `ifort`. For information on how to use the compiler and limitations in the environment, please read `ifort_supplement.pdf` provided in the `/opt/intel/fc/9.1/doc` folder.

If you have any problems running the compiler, please make sure a valid license file (*.lic) is located in the license directory. The compiler uses the environment variable `INTEL_LICENSE_FILE` to locate the license file. If you still have problems, please submit an issue to Intel® Premier Support. See the Technical Support section of this document for details.

If you have not already done so, please register for support after you install this product. See Technical Support for registration instructions.

Uninstalling or Modifying the Compiler and Tools

From the Control Panel, select `Add or Remove Programs` then `Intel(R) Visual Fortran Compiler 9.1 for Windows* Subsystem for UNIX*`.

Note: uninstalling the Intel Visual Fortran Compiler does not delete the corresponding license file.

Obtaining Technical Support

For information about how to find Technical Support, Product Updates, Users Forums, FAQs, tips and tricks, and other support information, please visit: http://support.intel.com/support/performancetools/fortran/windows/. For general 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.

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