Getting Started with the Intel(R) C++ Compiler Professional Edition 11.1 for Linux* OS

This guide shows you how to start the Compiler from the command line and IDE, how to use Intel® Performance Libraries, and where to find additional user and reference information.

Contents

1 Overview ...............................................................................................................1
2 Starting the Compiler from the Command Line .................................................2
3 Starting the Compiler from the IDE ....................................................................2
4 Using Intel® Performance Libraries ....................................................................3
5 User and Reference Documentation ....................................................................3
Legal Information ...................................................................................................5

1 Overview

The Intel® C++ Compiler 11.1 compiles C and C++ source files on Linux* operating systems. The compiler is supported on IA-32, Intel® 64, and IA-64 architectures.

You can run the Intel C++ Compiler from the command line or within the Eclipse* integrated development environment (see the Release Notes for information on installing and configuring Eclipse).

The Intel® C++ Compiler Professional Edition 11.1 for Linux* OS includes the following components:

- Intel® C++ Compiler.
- Intel® Threading Building Blocks.
- Intel® Integrated Performance Primitives.
Getting Started with the Intel(R) C++ Compiler Professional Edition 11.1 for Linux* OS

- Intel® Math Kernel Library.
- Intel® Debugger.

**NOTE:** You can use Intel® Debugger from within the Eclipse* IDE on IA-32 and Intel® 64 architectures only.

## 2 Starting the Compiler from the Command Line

Start using the compiler by performing the following steps:

1. Open a command prompt.
2. Set the environment variables for the compiler.
3. Invoke the compiler.

One way to set the environment variables prior to invoking the compiler is to "source" the compiler environment script, iccvars.sh (or iccvars.csh):

```
source <install-dir>/bin/iccvars.sh <arg>
```

The environment script takes an argument based on architecture; valid arguments are as follows:

- `ia32`: Compilers and libraries for IA-32 architectures only.
- `intel64`: Compilers and libraries for Intel® 64 architectures only.
- `ia64`: Compilers and libraries for IA-64 architectures only.

To compile C++ source files, use this command:

```
icc my_source_file.cpp
```

Following successful compilation, an executable named `a.out` is created in the current directory.

## 3 Starting the Compiler from the IDE

You must install Eclipse* on your system, and configure Eclipse to use the Intel(R) C++ Compiler.
Using Intel® Performance Libraries

See the Building Applications section in the compiler documentation for current information about compiling applications with Eclipse*. The Building Applications with Eclipse* section provides detailed information about configuring and using Eclipse with the Intel(R) C++ Compiler.

4 Using Intel® Performance Libraries

The Intel(R) C++ Compiler includes the following performance libraries. Refer to the appropriate sections of the documentation listed for information about using these libraries.

<table>
<thead>
<tr>
<th>Performance Libraries</th>
<th>See the...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) Threading Building Blocks</td>
<td>Intel(R) Threading Building Blocks Getting Started Guide included with the Intel(R) Threading Building Blocks documentation.</td>
</tr>
<tr>
<td>Intel(R) Integrated Performance Primitives</td>
<td>Installation Guide included with the Intel(R) Integrated Performance Primitives documentation.</td>
</tr>
</tbody>
</table>

5 User and Reference Documentation

This guide focuses on basic Intel® C++ Compiler Professional features. To explore more features, check the following resources.

Locate the Documentation

The documentation is located in the subdirectories under the /opt/intel/Compiler/11.1/xxx/Documentation/en_US/ directory where xxx is the three digit update. If you installed all of the appropriate components, you can find documentation on the following:

- Intel(R) C++ Compiler.
- Intel(R) Threading Building Blocks.
- Intel(R) Integrated Performance Primitives.
- Intel(R) Math Kernel Library.
- Intel(R) Debugger.
• Release Notes.


Find Product Information and Technical Support

For general product information or information on support for Intel software products, visit the Intel web site: http://www.intel.com/software/products/. At this site, you will find comprehensive product information, including:

• Links to each product, where you will find technical information such as white papers and articles.
• Links to user forums.
• Links to news and events.

To find technical support information, to register your product, or to contact Intel, please visit: http://www.intel.com/software/products/support. For additional information, see the Technical Support section of your Release Notes.

See the registration web site for licensing and registration guidance: https://registrationcenter.intel.com/.
Legal Information

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web Site.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See http://www.intel.com/products/processor_number for details.


* Other names and brands may be claimed as the property of others.

Copyright © 2009, Intel Corporation. All rights reserved.

Microsoft product screen shot(s) reprinted with permission from Microsoft Corporation.