Intel® Fortran Compiler 11.0 Professional Edition
for Linux*

Product Brief

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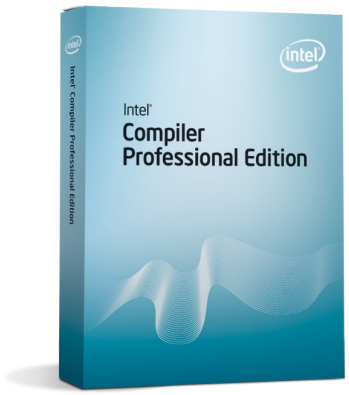
for Linux*



Get High Performance with Intel® Fortran Compiler for Linux* Professional Edition

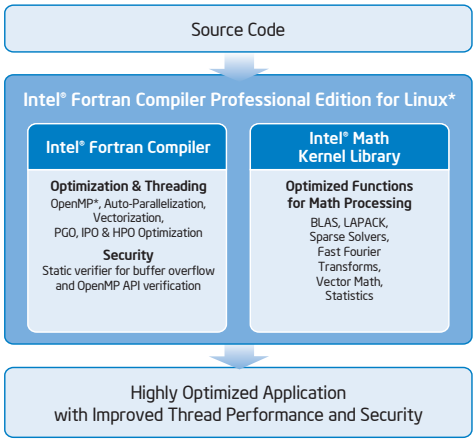
The Intel® Fortran Compiler for Linux* delivers rapid development and winning performance for the full range of Intel® processor-based platforms. The Professional Edition not only comes with the compiler's breadth of advanced optimization, multi threading, and processor support, including automatic processor dispatch, vectorization, and loop un-rolling, it also provides a highly optimized math library.

Professional Edition Components

The Professional Edition creates a strong foundation for building robust, high performance parallel code at significant price savings. It combines the Intel® Fortran Compiler with the following:

Intel® Math Kernel Library (Intel® MKL)

This library includes optimized and scalable math routines for maximizing performance and seamlessly providing forward scaling from current to future many-core platforms.



Intel® Debugger

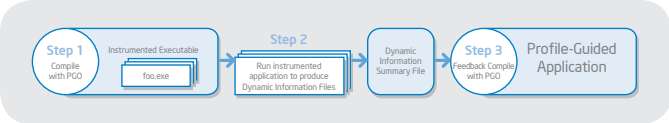
The debugger improves the efficiency of the debugging process on code that has been optimized for Intel® architecture and includes new threaded code debugging features and a new GUI.

New—Intel® Compiler Suite Professional Edition for Linux

This suite includes all the features of the Intel Fortran Compiler Professional Edition, but also includes the Intel C++ Compiler for Linux, Intel Threading Building Blocks, and Intel Integrated Performance Primitives for a more complete solution at significant price savings.

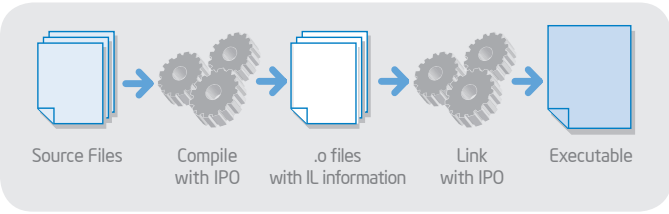
Advanced Optimization Features

- **High Performance Parallel Optimizer (HPO)** offers an improved ability to analyze, optimize, and parallelize more loop nests. This revolutionary capability combines vectorization, parallelization, and loop transformations into a single pass which is faster, more effective, and more reliable than prior discrete phases.
- **Automatic Vectorizer** analyzes loops and determines when it is safe and effective to execute several iterations of the loop in parallel.
- **Profile-Guided Optimization (PGO)** improves application performance by reducing instruction-cache thrashing, reorganizing code layout, shrinking code size, and reducing branch mispredictions.



The profile-guided optimization process

- **Interprocedural Optimization (IPO)** dramatically improves performance of small- or medium-sized functions that are used frequently, especially programs that contain calls within loops.



The interprocedural optimization process

More Features

Open MP* 3.0

OpenMP raises the parallelism abstraction away from the API, simplifying threading and making code more portable. Previously limited to loop-based data-parallelism, the new 3.0 standard simplifies both data and task parallelism.

Developer-Focused Benefits

Provides additional features from the Fortran 2003 standard, run-time uninitialized variable detection, and fast, precise control over the floating point model.

Multi-Threaded Application Support

OpenMP* and auto-parallelization allow you to take full advantage of multicore technology, including the latest Intel® muti-core processors.

Compatibility

Intel Fortran Compiler 11.0 for Linux fully supports the Fortran 95 language standard, as well as the previous standards: Fortran 90, Fortran 77 and Fortran IV. It also includes many features from the Fortran 2003 language standard, as well as numerous popular language extensions.

System Requirements

Please refer to www.intel.com/software/products/compilers/flin for details on hardware and software requirements.

Support

Every purchase of an Intel® Software Development Product includes a year of support services, which provide access to Intel® Premier Support and all product updates during that time. Intel Premier Support gives you online access to technical notes, application notes, and documentation.

Intel® Software Development Products

Intel Software Development Products help you create the fastest software possible by offering a full suite of tools:

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- Intel® VTune™ Performance Analyzers
- Intel® Performance Libraries
- Intel® Threading Analysis Tools
- Intel® Cluster Tools

Visit our Web site at www.intel.com/software/products for details about our entire line of products.

"The Intel compiler generated faster code than other compilers for most of our tests on both IA-32 and x86_64 platforms, which helps us deliver the performance our customers demand. It is the only compiler we've seen that is able to perform multi-file interprocedural analysis (-ipo) with library archive (.a) files. Intel's webbased Premier Support is the best customer support interface that we've used."§

Marc Rieffel
Senior Manager, Research and Development
Paracel

Download a trial version today.
www.intel.com/software/products/compilers/flin

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