

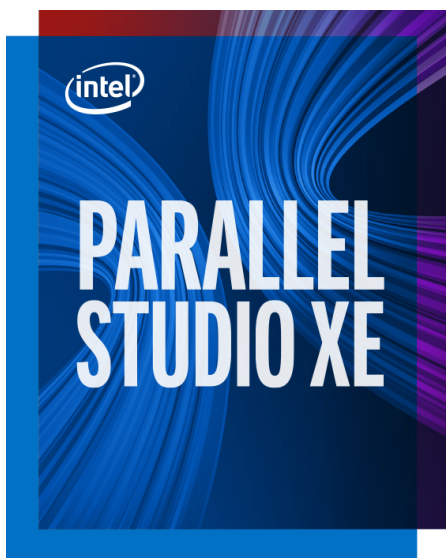
PRODUCT BRIEF

High-Performance Computing
Intel® Parallel Studio XE 2019

Code that Performs



Intel® Parallel Studio XE helps developers take their enterprise-to-cloud HPC and AI applications to the max—with fast, scalable, and portable parallel code



Intel® Parallel Studio XE is a comprehensive suite of development tools that make it fast and easy to build modern code that gets every last ounce of performance out of the newest Intel® processors. This tool-packed suite simplifies creating code with the latest techniques in vectorization, multi-threading, multi-node, and memory optimization. Get powerful, consistent programming with **Intel® Advanced Vector Extensions 512 (Intel® AVX-512)** instructions for **Intel® Core™** and **Xeon®** processors, plus support for the latest standards and integrated development environments (IDEs). New features include greater scalability and reduced latency with next-generation **Intel® MPI Library**; a rapid visual prototyping environment to interactively build, validate, and visualize parallel algorithms with **Intel® Advisor's** Flow Graph Analyzer; a new intuitive, user-friendly interface in **Intel® VTune™ Amplifier** for a simplified profiling workflow; faster machine learning with the Python* scikit-learn* package in **Intel® Distribution for Python**—and more. Take advantage of industry leading **Priority Support** provided by Intel engineers who can help you quickly troubleshoot and accelerate your performance-critical applications for improved business value.

Who Needs It?

- **C, C++, Fortran*, and Python* software developers** building enterprise, cloud, HPC, and AI solutions
- **Developers looking to maximize their software's performance** on current and future Intel® platforms
- **Organizations needing customized technical expertise** to quickly optimize and scale performance-critical applications

What it Does

- **Creates fast parallel code.** Boost application performance that scales on current and future Intel platforms with industry-leading compilers, numerical libraries, performance profilers, code analysis tools, and Intel Distribution for Python.
- **Builds code faster.** Simplify the process of creating fast, scalable, and reliable parallel code.
- **Delivers Priority Support.** Connect directly to Intel's engineers for confidential, quick answers to technical questions, access older versions of the products, and receive free updates for a year (paid license required).

What's New

- **Boost application efficiency and performance** for Intel Core and Xeon processors with new and enhanced capabilities in compilers, performance libraries, and analysis tools. Vectorize and thread your code (using OpenMP*) to take full advantage of the latest SIMD-enabled hardware, including Intel AVX-512. Accelerate diverse workloads across enterprise to cloud, and HPC to AI.

What's New (cont.)


- **Improve performance** through greater scalability and reduced latency with next-generation Intel MPI Library.
- **Interactively build, validate, and visualize parallel algorithms** with Intel Advisor's Flow Graph Analyze.
- **Faster machine learning** with Python and scikit-learn* in Intel Distribution for Python.
- **Enhanced roofline analysis capabilities and simplified application profiling workflow** with a new intuitive user interface in Intel VTune Amplifier.
- **Stay up-to-date with industry standards and IDEs** including full C++14 and expanded C++17; full Fortran 2008 and substantial Fortran 2018 support; full OpenMP* 4.5 and Initial OpenMP 5.0 draft; Python 2.7 and 3.6; and Microsoft Visual Studio* 2017 integration.

Get Priority Support for Quick, Customized Expert Support

- **Paid licenses** of Intel® Software Development Products automatically include **Priority Support** via our **Online Service Center** for at least one year from your date of purchase. You can extend/renew it at a highly discounted rate.²
- **Direct, private support** from Intel engineers for quick answers to your technical questions. Submit confidential inquiries and code samples.
- **Free access to all new product updates** and continued access to and support for older versions of the product.
- **Community product forums** covering all Intel Software Development Products. **Access to a vast library of self-help documents** that build off decades of experience creating high-performance code.

Choose Your Edition

COMPOSER EDITION	PROFESSIONAL EDITION	CLUSTER EDITION
BUILD Compilers & Libraries	ANALYZE Analysis Tools	SCALE Cluster Tools
Intel® Math Kernel Library C / C++, Fortran Compilers Intel® Data Analytics Acceleration Library Intel Threading Building Blocks C++ Threading Intel® Integrated Performance Primitives Image, Signal & Data Processing Intel® Distribution for Python* High Performance Python	Intel® VTune™ Amplifier Performance Profiler Intel® Inspector Memory & Thread Debugger Intel® Advisor Vectorization Optimization Thread Prototyping & Flow Graph Analysis	Intel® MPI Library Message Passing Interface Library Intel® Trace Analyzer & Collector MPI Tuning & Analysis Intel® Cluster Checker Cluster Diagnostic Expert System
Operating System: Windows*, Linux*, MacOS ¹ *		
Intel® Architecture Platforms		



License Options

Each software purchase has a perpetual license with no timeout. Two licensing models are available:

- Named user licenses price products per named user.
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Discounted pricing for academia and free versions for students, educators, and open source contributors are available.

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- Renewal after subscription expiration. You can extend the same serial number any time within 12 months after the expiration date. Your new subscription will begin from your date of purchase. After the 12-month extension period, you can purchase a new license and get a new serial number.



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