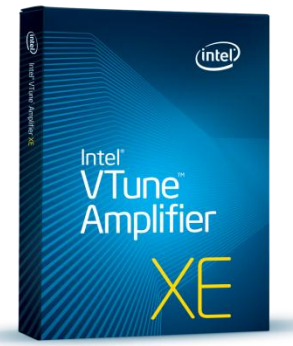
OPTIMIZE PERFORMANCE
AND MULTICORE SCALABILITY
ON WINDOWS* AND LINUX*

Intel® VTune™ Amplifier XE

Product Brief

Intel® VTune™ Amplifier XE
Performance Profiler
For Windows* and Linux*

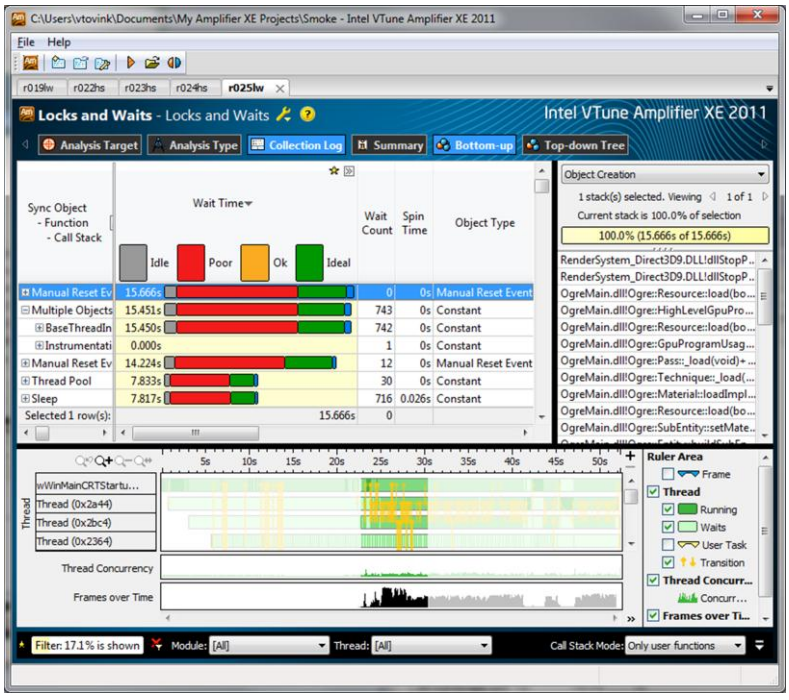


Is your software sluggish?
Does your performance scale on multicore processors?

- Easy preset performance profiles – choose a standard profile or create your own
- Visualize thread interactions on the timeline and balance workloads
- Filter data using the timeline and regroup it for easier analysis
- Optimize for the latest processor -new processor updates available fast

Intel® VTune™ Amplifier XE is our newest performance profiler that builds on the success of Intel® VTune™ Performance Analyzer. It includes all the capabilities of Intel® Parallel Amplifier plus a number of advanced capabilities for developers needing to dig deeper.

- **Tune threaded and non-threaded code**—Identify the threads and synchronization objects that impact performance.
- **Low overhead**—Intel VTune Amplifier XE keeps data collection overhead low, making it faster and the results more accurate.
- **Normal production build**—Use a production build with symbols from your normal compiler or assembler. No special builds are required.
- **Source view**—See profile data on your source and assembly.
- **Analyze MPI applications**—Easy install on clusters. Results sorted by rank.
- **Linux:** No root privileges required—Root privileges are not required for basic performance analysis. Installation of the driver for event-based sampling (EBS) requires root access, but it can be done later if needed.



Use Intel VTune Amplifier XE to fine-tune for optimal performance, ensuring cores are fully exploited and new processor capabilities are supported to the fullest.

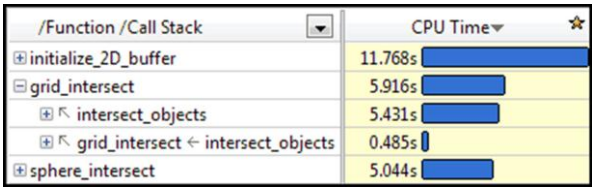
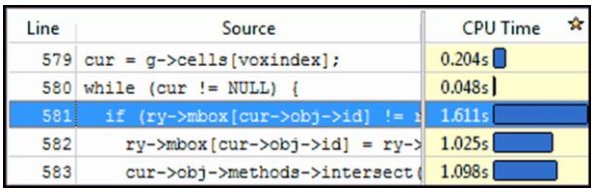
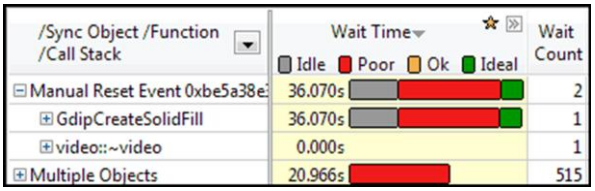
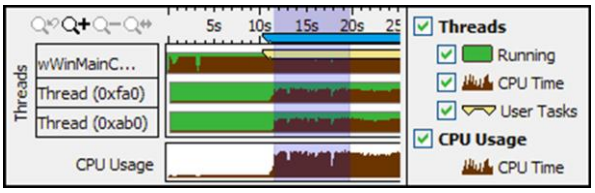
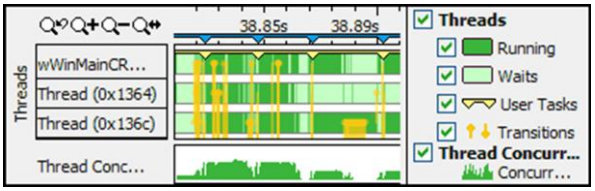
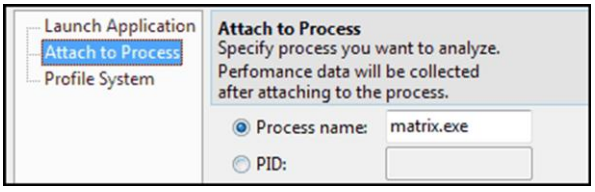
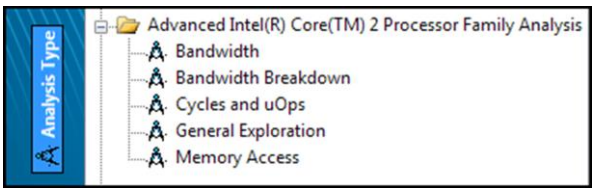
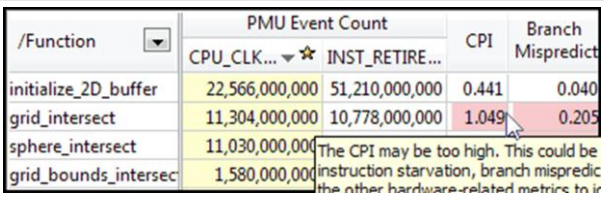
"The new VTune™ Amplifier XE brings even more capability to an already indispensible tool. The sampling based call stack hotspots is excellent and alone is worthy of the upgrade. We have also been impressed by how the concurrency and Locks and Waits analysis can even provide useful data on complex applications such as Premiere Pro."

Rich Gerber - Engineering Manager, MediaCore, Adobe Systems Inc.

"Using Intel® VTune™ Amplifier XE makes my work easer and speeds up the development process...it has helped us achieve performance gains from 20% to 360%"

Sergey Zaritchny – Open Cascade SAS

Features

Feature	Benefit
	**Fast, Accurate Performance Profiles** Hotspot analysis finds functions using the most time. Click [+] for the call stacks. Double click to see the source.
	**See the Results on Your Source** A double click from the function list takes you to the hottest spot in the function.
	**Locks and Waits** Quickly find a common cause of slow performance in parallel programs: waiting too long on a lock while the cores are underutilized during the wait.
	**Timeline Filters Results** Select a time range in the timeline and filter out data (e.g., application startup) that masks the information you need.
	**Timeline Visualizes Thread Behavior** See when threads are running and waiting, and when transitions occur.
	**Profile a Running Application** There is no need to stop and re-launch the application when profiling • Attach to Process • Profile the whole system with EBS, filter out what you need later
	**System-Wide Event-Based Sampling (EBS)** The Intel® VTune Amplifier XE performance profiling tool uses the on-chip PMU to count performance events like cache misses, clock ticks, and instructions retired.
	**Predefined EBS Profiles** Enjoy easy EBS setup for newer processors, and no memorizing complex event names. Profiles vary by microarchitecture.
	**Opportunities Highlighted** General Exploration turns the cell pink when it suspects a tuning opportunity is present. Hover to get suggestions.

Purchase Options: Language Specific Suites

Several suites are available combining the tools to build, verify and tune your application. The products covered in this product brief are highlighted in green. Single or multi-user licenses and volume, academic, and student discounts are available.

	Suites >>	Intel® Parallel Studio XE	Intel® C++ Studio XE	Intel® Fortran Studio XE	Intel® Composer XE	Intel® C++ Composer XE	Intel® Fortran Composer XE	Intel® Cluster Studio XE	Intel® Cluster Studio
Components	Intel® C / C++ Compiler	●	●		●	●		●	●
	Intel® Fortran Compiler	●		●	●		●	●	●
	Intel® Integrated Performance Primitives[3]	●	●		●	●		●	●
	Intel® Math Kernel Library[3]	●	●	●	●	●	●	●	●
	Intel® Cilk™ Plus	●	●		●	●		●	●
	Intel® Threading Building Blocks	●	●		●	●		●	●
	Intel® Inspector XE	●	●	●				●	
	Intel® VTune™ Amplifier XE	●	●	●				●	
	Static Security Analysis	●	●	●				●	
	Intel® MPI Library							●	●
	Intel® Trace Analyzer & Collector							●	●
	Rogue Wave IMSL* Library[2]						●		
	Operating System[1]	W, L	W, L	W, L	W, L	W, L, M	W, L, M	W, L	W, L

Note: (1)[1] Operating System: W=Windows, L= Linux, M= Mac OS* X. (2)[2] Available in Intel® Visual Fortran Composer XE for Windows with IMSL*
(3)[3] Not available individually on Mac OS X, it is included in Intel® C++ & Fortran Composer XE suites for Mac OS X

Technical Specifications	
Processor Support	Many profiling features work on both genuine Intel® processors and compatible processors. Features using the on-chip performance monitoring unit require a genuine Intel® processor for data collection.
Operating Systems	Windows & Linux
Programming Languages	C++, Fortran, .NET, assembly.
System Requirements	See http://www.intel.com/software/products/systemrequirements for details
Support	All product updates, Intel® Premier Support services and Intel® Support Forums are included for one year. Intel Premier Support provides confidential support, technical notes and application notes.
Community	Join the Intel® Support Forums community to learn, contribute, or just browse! http://software.intel.com/en-us/forums

Download a trial version today

www.intel.com/software/products/eval

Optimization Notice

Notice revision #20110804

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.