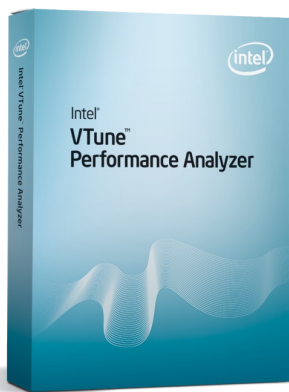




# Intel® VTune™ Performance Analyzer 9.1 for Linux\*

## Product Brief

Intel® VTune™  
Performance Analyzer 9.1  
for Linux\*



“Quick analysis with VTune analyzer allows us to maintain consistent performance levels throughout the development cycle when performance problems are still easy to correct.”<sup>5</sup>

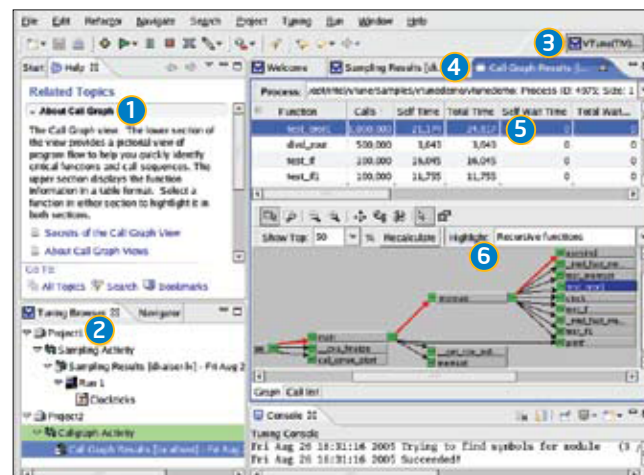
Nick Monyatovsky  
Abaqus Inc.

## Deliver Faster Code

VTune™ Performance Analyzer for Linux\* is a fully Linux-based solution indispensable for making your software run its fastest on the latest single and multicore systems.

## Features

- **Easier application performance tuning** with a graphical user interface and no recompiles required.
- **Compiler and language independent** so it works with C, C++, Fortran, and Java.
- **Low overhead sampling** (typically under 5 percent) identifies where the program is spending its time.
- **Supports the latest Intel® Quad-Core Processors.** New events measure parallelism, core sharing of the bus and cache, and modified data sharing by threads.
- **Call graph** determines call counts, and calling sequences.
- **Advice from Intel compilers** reveals sub-optimal compiler assumptions where just adding a pragma may improve performance.
- **Compatible**—Support for a wide variety of Linux\* distributions and the latest IA-32, Intel® 64 and Intel® Itanium® processors. Now includes a native user interface for Itanium® processors.



- 1 Context sensitive help
- 2 Tuning browser organizes results
- 3 Integrated with Eclipse® 3.1 IDE
- 4 Tabs flip through results
- 5 Select in both table and graph view
- 6 Critical Path shown in red

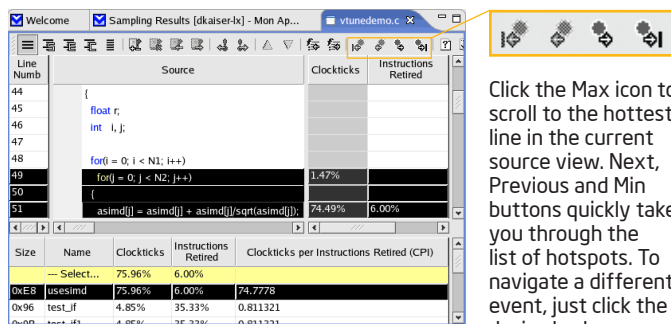
Call graph determines calling sequences, wait times, and finds the critical path. Graphical user interface (GUI) is based on the Eclipse\* development environment

## Performance

Intel® VTune™ Performance Analyzer evaluates applications on all sizes of systems based on Intel® processors, from embedded systems through supercomputers, to help you improve application performance.

### Trouble Shoot Your Application

- **Top five most time-consuming functions** are listed after answering a few simple questions.
- **One click on a function name** displays the source and shows what function is taking all the time, a fast and easy way to find your performance bottlenecks.
- **Hot Spot Navigation and Source View** shows you exactly which lines of code are taking the most time. Clicking on icons allow you to view the disassembly for even more detail.



The screenshot shows the Intel VTune Performance Analyzer interface. The main window displays source code for a function. The code is as follows:

```
44 {
45     float r;
46     int i, j;
47
48     for(i = 0; i < N1; i++)
49         for(j = 0; j < N2; j++)
50             (
51                 asimd[j] = asimd[j] + asimd[j]/sqrt(asimd[j]);
52             )
```

Performance metrics are shown in columns: Clockticks and Instructions Retired. A summary table at the bottom shows the following data:

Size	Name	Clockticks	Instructions Retired	Clockticks per Instructions Retired (CPI)
— Select...		75.96%	6.00%	
0xE8	usesimd	75.96%	6.00%	74.7778
0x96	test_jf	4.85%	35.33%	0.811321
0x09	test_if	4.85%	35.33%	0.811321

Navigation icons (Home, Previous, Next, Max) are highlighted in a yellow box. A text box explains: "Click the Max icon to scroll to the hottest line in the current source view. Next, Previous and Min buttons quickly take you through the list of hotspots. To navigate a different event, just click the desired column."

### Hotspot Navigation

### Listen to the Compiler's Advice

VTune™ Analyzer displays optimization reports from an Intel® compiler.

For example, a single click tells you that the compiler didn't optimize your critical loop because of an assumed vector dependency. You know there is no dependency and insert a pragma telling the compiler to ignore it which results in better performance.

Download a trial version today.

[www.intel.com/software/products/vtune/vlin](http://www.intel.com/software/products/vtune/vlin)

## Compatibility

**Language and Compiler Independent.** Vtune Performance Analyzer supports all compilers that follow industry object standards (ELF, STABS, and DWARF), tools, and architecture.

**No Recompile Required.** Unlike traditional profilers that make you recompile or modify your build script, just run VTune analyzer with your normal production build.

**Integrated with Eclipse\***† development environment, allowing you to become effective quickly with context sensitive hints.

**Both Java\* and Native Language Code** can be analyzed, even when mixed. This is critical if you are using the Java Native Interface (JNI\*) or making system calls.

## System Requirements

Refer to [www.intel.com/software/products/vtune/vlin/sysreq.htm](http://www.intel.com/software/products/vtune/vlin/sysreq.htm) for details on hardware and software requirements.

## Support

Every purchase of an Intel® Software Development Product includes a year of support services, which provides 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.

## About Intel® Software Development Products

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

For details about our entire line of products, visit our Web site at: [www.intel.com/software/products](http://www.intel.com/software/products).

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†. Technical support for Eclipse is not provided by Intel. For more information on Eclipse, please visit the Eclipse Foundation, [www.eclipse.org](http://www.eclipse.org).\*

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