

# Intel® System Studio 2019 Update 4 for FreeBSD\* Release Notes

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This page provides the Release Notes for Intel® VTune™ Amplifier 2019 Update 4 component of Intel® System Studio 2019 Update 4 for FreeBSD\*.

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## Intel® VTune™ Amplifier 2019 Update 4 for FreeBSD\* Release Notes

Intel® VTune™ Amplifier 2019 Update 4 provides an integrated performance analysis and tuning environment with graphical user interface that helps you analyze code performance on systems with IA-32 or Intel® 64 architectures. It provides a target package for collecting data on the FreeBSD\* system that is then displayed on a host system supporting the graphical interface, either via the remote capability or by manually copying the results to the host.

This document provides system requirements, issues and limitations, and legal information for both the host and target systems.

### System requirements

For an explanation of architecture names, see <https://software.intel.com/en-us/articles/intel-architecture-platform-terminology/>

#### *Host Processor requirements*

- For general operations with user interface and all data collection except Hardware event-based sampling analysis:
  - A PC based on an IA-32 or Intel® 64 architecture processor supporting the Intel® Streaming SIMD Extensions 2 (Intel® SSE2) instructions (Intel® Pentium® 4 processor or later, or compatible non-Intel processor).
  - For the best experience, a multi-core or multi-processor system is recommended.
  - Because VTune Amplifier requires specific knowledge of assembly-level instructions, its analysis may not operate correctly if a program contains non-Intel instructions. In this case, run the analysis with a target executable that contains only Intel® instructions. After you finish using VTune Amplifier, you can use the assembler code or optimizing compiler options that provide the non-Intel instructions.

- For Hardware event-based sampling (EBS) analysis:
  - EBS analysis makes use of the on-chip Performance Monitoring Unit (PMU) and requires a genuine Intel® processor for collection. EBS analysis is supported on Intel® Pentium® M, Intel® Core™ microarchitecture and newer processors (for more precise details, see the list [here](#)).
  - EBS analysis is not supported on the Intel® Pentium® 4 processor family (Intel® NetBurst® MicroArchitecture) and non-Intel processors. However, the results collected with EBS can be analyzed using any system meeting the less restrictive general operation requirements.
  - Event-based sampling and sampling with stacks data collection is functional inside a virtual machine only for architectural events. Please see the [Performance Monitoring Unit Sharing Guide](#) for more details on the supported architectural events. Hardware event-based sampling analysis runs a driverless sampling collection via Linux Perf\* tool. EBS analysis within a virtual machine is available in the following environments virtualizing the on-chip Performance Monitoring Unit (PMU):
    - VMware Fusion\* 5 and higher
    - KVM with Linux Kernel 3.2 and QEMU 1.4
    - XEN 4.0 and higher for User Domain (domU)
- The list of supported processors is constantly being extended. In general, VTune Amplifier supports publicly launched desktop, mobile, server and embedded processors listed at <https://ark.intel.com/>. For pre-release processor support please file a support request at Online Service Center (<https://www.intel.com/supporttickets>).

### *System memory requirements*

At least 2 GB of RAM

### *Disk Space Requirements*

900 MB free disk space is required for all product features and all architectures.

### *Software Requirements*

See [FreeBSD\\* Target Software Requirements](#) for information on supported operating systems, application programming languages, and other run-time environments.

## **Target FreeBSD\* collection**

See [FreeBSD\\* Targets](#) for information on FreeBSD\* target setup and configuring data collection.

## **What's new**

- Stack collection enabled for General Exploration on FreeBSD\*.

## **Issues and limitations**

For information on known issues and limitations, see [Issues and Limitations](#).

## **Attributions**

Attributions can be found [here](#).

## **Disclaimer and Legal Information**

Disclaimer and Legal information can be found [here](#).

See [Optimization Notice](#) for more complete information about compiler optimizations.