

# Intel® System Studio 2019 Update 4

## System Requirements

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## 1 Introduction

This document provides the information on the **system requirements** for the **Intel® System Studio 2019 Update 4** product and provides pointers to where you can find the system requirements specific to individual tool products.

Intel® System Studio supports development for Android\*, Embedded Linux\*, Yocto Project\* and Wind River Linux\* deployment targets from Linux\*, Windows\* or macOS\* host.

For full product information for the previous release, as well as links to licenses (90-days), please refer to Intel® System Studio product webpage <https://software.intel.com/intel-system-studio>.

Individual Intel® System Studio components may have a broader range of supported features/targets than the suite level support covers. See the [system requirements](#) of the individual components for detailed information

## 2 Supported Host Operating Systems

Intel® VTune™ Amplifier, Intel® Advisor, and Intel® Inspector graphical user interfaces may require newer versions of host operating systems. See the individual components' release notes for details.

Below is the list of distributions supported by most components. Intel System Studio supports Intel® 64 Host architectures only.

### Linux\* Host:

- Ubuntu\* 18.04 LTS
- Fedora\* 27
- Red Hat Enterprise\* Linux\* 7
- Wind River Linux LTS\* 17
- Ubuntu\* 16.04 LTS
- SUSE LINUX Enterprise Server\* 15 (Intel® Inspector and Intel® Advisor)
- Fedora\* 28
- Wind River\* Linux\* 9
- Fedora\* 26 (limited tool support)
- CentOS\* 7.4
- Red Hat Enterprise\* Linux\* 6

- SUSE LINUX Enterprise Server\* 12
- Ubuntu\* 14.04 LTS (limited tool support)

**Windows\* Host:**

- Microsoft Windows\* 7, 8.x, 10

**macOS\* Host:**

- macOS\* 10.12, 10.13, 10.14

In most cases, Intel® System Studio will install and work on a standard Linux\* OS distribution based on current Linux\* kernel versions without problems, even if they are not listed below. You will, however, receive a warning during installation for Linux\* OS distributions that are not listed.

### 3 Supported Target Operating Systems

**Linux target:**

- Wind River Linux LTS\* 17
- Yocto project\* 2.5 based environment
- Ubuntu\* 16.04,18.04 LTS
- Wind River\* VxWorks\* 7 based environment
- Yocto project\* 2.4 based environment
- Wind River\* Linux\* 9 based environment
- CentOS\* 7.4
- Wind River\* Titanium Server
- OpenWrt\* Project
- Pulsar\*
- One Device Linux

**Windows target:**

- Microsoft Windows\* 7, 8.x, 10 (PC & Embedded)

**Android target:**

- Android\* N

**Other target Operating Systems:**

- QNX\* Neutrino\* RTOS
- FreeBSD\* 10.2, 11.1, 12 (Intel® VTune™ Amplifier only)

## 4 Supported Target Hardware Platforms

- Development platform based on the Intel Atom® processor Z5xx, N4xx, N5xx, D5xx, E6xx, N2xxx, D2xxx, E3xxx, Z2xxx, Z3xxx, C2xxx, or Intel Atom® processor CE4xxx, CE53xx and the Intel® Puma™ 6 Media Gateway
- Intel Atom® Processors X Series Cxxx, Exxx, Zxxx
- Development platform based on a 2nd, 3rd, 4th, 5th, 6th, 7th or 8th generation Intel® Core™ processor
- Intel® Xeon® processors based on 2nd, 3rd 4th, 5th , 6th or 7th generation
- Intel® Xeon® Scalable processors series

## 5 Space Requirement by Component

| Component   | Minimum RAM | Recommended RAM | Disk Space   |
|---|-------------|-----------------|--|
| Intel® C/C++ Compiler                                 | Host 1 GB   | Host 2 GB       | Host 4 GB for all features<br>Target – 13 MB (IA-32)/15 MB (Intel® 64) |
| GNU* GDB  | 1 GB        | 2 GB            | 350 MB   |
| Intel® Inspector                                      | 2 GB        | 4 GB            | 350 MB   |
| Intel® Advisor  | 2 GB        | 4 GB            | 650 MB   |
| Intel® Integrated Performance Primitives (Intel® IPP) | 1 GB        | 4 GB            | 2-4 GB   |
| Intel® Math Kernel Library (Intel® MKL)               | 1GB         | 4 GB            | 2.3 GB   |
| Intel® System Debugger                                | 1 GB        | 2 GB            | 105 MB   |
| Intel® VTune™ Amplifier                               | 2 GB        | 4 GB            | 1.1 GB   |
| OpenCL™ Tools   | 1 GB        | 2 GB            | 1 GB   |
| Docker* build workflow                                | 4 GB        |                 | 20 GB for Docker images and containers                                 |

## 6 Prerequisites by Component

### Intel® System Studio 2019 Update 4

- This update might require installation of webkitgtk for using Eclipse\*:
  - Linux\* host -
    - RedHat/Fedora: dnf install webkitgtk
    - Ubuntu/Debian : apt-get install libwebkitgtk-3.0.0
- This update might also require installation of cmake version 3.5.0 or higher for using native application development of cmake projects.
  - Linux\* host –
    - RedHat/Fedora: sudo dnf install cmake
    - Ubuntu/Debian : apt-get install cmake
  - MacOS\* host -
    - brew install cmake
  - Windows\* host -
    - Download cmake-\*.exe installer from [Download page](#) and run it.

### Intel® C/C++ Compiler

- Linux\* target -
  - Linux Developer tools component installed, including gcc, g++ and related tools
    - gcc versions 4.3 - 6.3 supported
    - binutils versions 2.20-2.26 supported
  - Development for a 32-bit target on a 64-bit host may require optional library components (ia32-libs, lib32gcc1, lib32stdc++6, libc6-dev-i386, gcc-multilib, g++-multilib) to be installed from your Linux distribution.

### Docker\* based application workflow

- Using Intel® System Studio to target Ubuntu Desktop with the free "Community Edition" (CE) version of Docker\* requires Docker version 1.13.0 (Jan 2017 release) or later. We recommend that you install the latest version of Docker on your development system to ensure expected functionality.
- For details see the [Intel® System Studio Docker Install](#).

### Yocto Project\* Compatible Application and Platform Development

- The table below provides a list of supported hosts on which Wind River Linux LTS or Yocto Project can be installed.

| Wind River Linux* LTS 17   | Wind River Linux* LTS 18  | Yocto Project 2.6  |
|--|---|--|
| <ul style="list-style-type: none"> <li>○ Red Hat Enterprise Linux* Workstation 7.2</li> <li>○ Red Hat Enterprise Linux* Workstation 7.3</li> <li>○ CentOS 7.2</li> <li>○ Fedora 25</li> <li>○ Fedora 26</li> <li>○ openSUSE Leap* 42.3</li> <li>○ Novell SUSE Linux* Enterprise Desktop 12 SP3</li> <li>○ Ubuntu* Desktop 16.04 LTS</li> </ul> | <ul style="list-style-type: none"> <li>○ SUSE Linux Enterprise Desktop* 15</li> <li>○ Fedora 27</li> <li>○ Fedora 28</li> <li>○ CentOS 7.5</li> <li>○ Red Hat Enterprise Linux* 7.5</li> <li>○ OpenSUSE* 42.3</li> <li>○ OpenSUSE* Leap 15</li> <li>○ Ubuntu 16.04</li> <li>○ Ubuntu 18.04</li> </ul> | <p>See <a href="#">Supported Linux Distributions for Yocto</a></p> |

- Note: Ubuntu Desktop 18.04 LTS is not supported by Wind River Linux LTS 17 at this time, as it was released after Wind River Linux LTS 17. Please contact Wind River Support to see if this host will be supported prior to Wind River Linux LTS 18 via an RCPL update.

### Intel® VTune™ Amplifier

- Linux\* target
  - Linux\* Kernel version has to be 2.6.32 or higher for Intel® VTune™ Amplifier power and performance analysis.
  - [Kernel Configuration](#)
- On Linux\*, the following packages must be installed for the Intel® VTune™ Amplifier GUI:
  - GTK+3
  - X.Org (v1.0 or higher, v1.7 or higher is recommended)
  - X.Org X11 libXss runtime library
  - Network Security Services library (v3.22 or higher)
  - ALSA library

You can use the following commands to install the required packages:

- On Ubuntu / Debian, install the following libraries:  
\$ sudo apt-get install libgtk-3-0 libasound2 libxss1 libnss3

- On RHEL / CentOS, install the following libraries:  
\$ sudo yum install gtk3 alsa-lib libXScrnSaver nss
- On Fedora, install the following libraries:  
\$ sudo dnf install gtk3 alsa-lib libXScrnSaver nss
- On SUSE SLES, install the following libraries:  
\$ sudo zypper install gtk3 libasound2 libXss1 mozilla-nss

## Intel® System Debugger

- Linux\* host -
  - Install fxload package for all types of target communication
    - Ubuntu\*: sudo apt-get install fxload
    - Fedora\*: sudo yum install fxload
- Windows\* host -
  - Microsoft .NET Framework 4 (dotNetFx40\_Full\_x86\_x64.exe) Microsoft .NET Framework 3.5 SP1 runtime (pre-installed by default on Microsoft\* Windows\* 7)
    - Download Microsoft .NET Framework 4 web installer from Microsoft.com.
    - Run dotNetFx40\_Full\_x86\_x64.exe

## 7 Development environments supported

### Eclipse\* IDE

An Intel flavor of the Eclipse\* IDE is available for Intel® System Studio 2019. Check out the [What's new](#) page for more details

### Microsoft Visual Studio\* integration

To use the Microsoft Visual Studio development environment or command-line tools to build IA-32 or Intel® 64 architecture applications, one of:

- Microsoft Visual Studio 2019\* Professional Edition (or higher edition) with 'Desktop development with C++' component installed
- Microsoft Visual Studio 2017\* Professional Edition (or higher edition) with 'Desktop development with C++' component installed
- Microsoft Visual Studio 2015\* Professional Edition (or higher edition) with 'Common Tools for Visual C++ 2015' component installed (*Deprecated for Intel® C/C++ Compiler*)

- Microsoft Visual Studio Community 2015\* with 'Common Tools for Visual C++ 2015' component installed (*Deprecated for Intel® C/C++ Compiler*)
- Microsoft Visual Studio 2013\* Professional Edition (or higher edition) with C++ component installed (*Deprecated for Intel® C/C++ Compiler*)
- Microsoft Visual Studio Community 2013\* with C++ component installed (*Deprecated for Intel® C/C++ Compiler*)

To use command-line tools only to build IA-32 architecture applications, one of:

- Microsoft Visual C++ Express 2015 for Windows Desktop\* (*Deprecated for Intel® C/C++ Compiler*)
- Microsoft Visual C++ Express 2013 for Windows Desktop\* (*Deprecated for Intel® C/C++ Compiler*)

To use command-line tools only to build Intel® 64 architecture applications, one of:

- Microsoft Visual C++ Express 2015 for Windows Desktop\* (*Deprecated for Intel® C/C++ Compiler*)
- Microsoft Visual C++ Express 2013 for Windows Desktop\* (*Deprecated for Intel® C/C++ Compiler*)

## 8 Component System Requirements

| Component  | System Requirement   |
|--|--|
| GNU* GDB   | <a href="#">Windows host</a><br><a href="#">Linux host</a>                                   |
| Intel® C/C++ Compiler                                    | <a href="#">Windows host</a><br><a href="#">Linux host</a><br><a href="#">Windows target</a> |
| Intel® Data Analytics Acceleration Library (Intel® DAAL) | <a href="#">All hosts</a>  |
| Intel® Integrated Performance Primitives (Intel® IPP)    | <a href="#">All hosts</a>  |
| Intel® Math Kernel Library (Intel® MKL)                  | <a href="#">All hosts</a>  |
| Intel® Threading Building Blocks (Intel® TBB)            | <a href="#">All hosts</a>  |
| Intel® Inspector   | <a href="#">All hosts</a>  |
| Intel® Advisor   | <a href="#">All hosts</a>  |
| OpenCL™ Tools  | <a href="#">All hosts</a>  |



|   |  |
|---|--|
| Docker* Based Application Workflow  | <a href="#">Windows host</a><br><a href="#">Linux host</a><br><a href="#">MacOS host</a>         |
| Intel® SoC Watch (Energy Analysis)  | <a href="#">Windows target</a><br><a href="#">Linux target</a><br><a href="#">Android target</a> |
| Intel® VTune™ Amplifier & Performance Snapshots                             | <a href="#">All hosts(hardware and software requirements)</a>                                    |
| Intel® System Debugger (System Debug, System trace, Extensions for WinDbg*) | <a href="#">Windows host</a><br><a href="#">Linux host</a>                                       |
| MRAA IO Communication Layer   | <a href="#">MRAA</a>   |
| UPM Sensor and Actuator Library   | <a href="#">UPM</a>  |

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