

# The Intel® Processor Diagnostic Tool Release Notes

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## TABLE OF CONTENTS

|   |  |   |
|---|--|---|
| 1 | Overview.....                                    | 4 |
| 2 | Purpose of Intel® Processor Diagnostic Tool..... | 4 |
| 3 | IPDT Test System Requirements.....               | 4 |
| 4 | IPDT Software Requirements.....                  | 6 |
| 5 | Release Notes.....                               | 7 |
| 6 | Bug Fixes .....                                  | 9 |
| 7 | Known Issues.....                                | 9 |

## 1 Overview

Intel® Processor Diagnostic Tool 64bit version 4.1.9.41.W has been updated to include functional and security updates. Intel recommends all users update to the latest version.

## 2 Purpose of Intel® Processor Diagnostic Tool

The purpose of the Intel® Processor Diagnostic Tool is to verify the functionality of an Intel® microprocessor. The diagnostic checks for brand identification, verifies the processor operating frequency, tests specific processor features and performs a stress test on the processor.

The diagnostic can be configured to execute in one of three modes, presence test, default verification test, or extended time test. Default configurations are used for these modes of operation. Additionally, the diagnostic can be configured to enable (run) or disable (skip) individual tests in any of these modes.

## 3 IPDT Test System Requirements

### Multiprocessor Systems

The Intel® Processor Diagnostic Tool is compatible with multiprocessor systems.

### Motherboard & Processor

It is essential that the motherboard you use to test your processor is fully compatible with your Intel® processor. Consult your motherboard manufacturer's support to ensure the motherboard supports your processor. If you are using an Intel® Motherboard please use this utility [Intel® Processors and Boards Compatibility Tool](#)

### Motherboard BIOS

It is essential that the motherboards BIOS is at the minimum BIOS revision specified to support your Intel® processor. Consult your motherboard manufacturer's support to ensure the BIOS revision is at the correct revision.

### Motherboard Architecture

IPDT is only compatible with motherboards built using Intel® Architecture.

## **Over-Clocking**

Over-Clocking should be disabled while running Intel® Processor Diagnostic Tool.

## **Power Management**

Some power management features throttle or reduce the operating frequency of components within the system. These types of power management features may result in very low tested frequency results. This does not mean that the processor is operating at degraded performance levels. It means that the enabled power management feature is optimizing the efficiency of the processor, either to save power or reduce heat within the system.

We recommend you disable any power management features such as Intel SpeedStep® technology and configure your system to its optimal power management settings, when running Intel® Processor Diagnostic Tool. For instructions on how to disable these power management features, please contact your system manufacturer.

In addition, Intel® Turbo Boost Technology 2.0 automatically allows processor cores to run faster than the rated operating frequency if they're operating below power, current, and temperature specification limits. Availability and frequency upside of Intel Turbo Boost Technology 2.0 state depends upon several factors including, but not limited to the following: type of workload, number of active cores, estimated current consumption, estimated power consumption, and processor temperature.

## **Operating Systems**

The Windows® version of the Intel® Processor Diagnostic Tool is compatible with the following operating systems (Please download and install the relevant IPDT installer for your Operating System – 64Bit):

- Windows 11
- Windows 10
- Windows Server 2022
- Windows Server 2019
- Windows Server 2016
- Windows Server 2012 R2

## 4 IPDT Software Requirements

The following software (or later version) is required to run IPDT in the Windows® environment and must be installed prior to installing IPDT.

- Microsoft® .NET Framework Version 4.8 Redistributable Package (x86\_x64).  
Click [here](#) to download or copy the following URL into the browser  
<https://dotnet.microsoft.com/en-us/download/dotnet-framework/net48>.

The IPDT Installer program will check for the presence of the above prerequisite on your system.

Microsoft® .NET Framework Version 4.8 minimum Supported Operating System:  
Windows 7 SP1, Windows Server 2008 R2 SP1

Microsoft® .NET Framework Version 4.8 Hardware Requirements:

1 GHz or faster processor

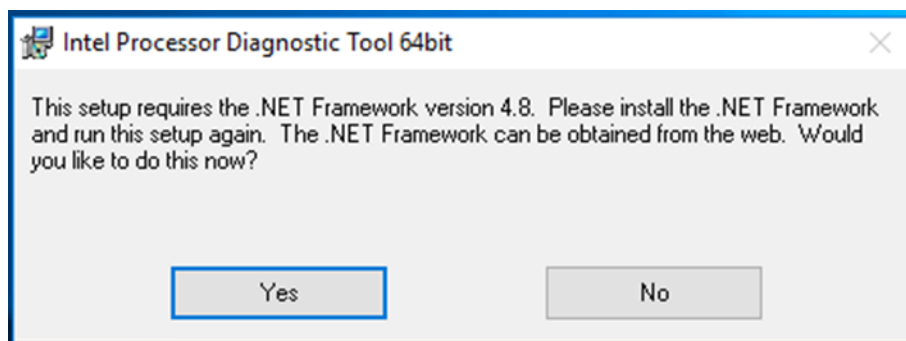
512 MB of RAM

4.5 GB Minimum disk space (32-bit)

4.5 GB Minimum disk space (64-bit)

Additional support information about the .NET 4.8 Runtime is available [here](#) from Microsoft®.

If you require .NET 4.8 prerequisite, and with active internet connection provided, the Setup program will download the .NET web installation package from Microsoft® site by selecting Yes.



If no internet connection is available, the No button can be selected to terminate Setup. An alternate offline installation .NET redistributable package can be provided as indicated above. Then you may proceed with IPDT Setup installation again.

## 5 Release Notes

| Full Version  | IPDT Version |
|---------------|--------------|
| 4.1.9.41.W.MP | 4.1.9.41     |

| Date        | Description  |
|-------------|--|
| 10-Jan-2024 | <p>The 4.1.9.41 release includes:</p> <ul style="list-style-type: none"><li>• Update of all diagnostic modules for feature functionality and/or bug fixes.</li><li>• Add support for 14th Generation Intel® Core™ Processors.</li><li>• Add run-time block for specific third-party processor manufacturers.</li></ul>   |
| 30-Jun-2023 | <p>The 4.1.8.40 release includes:</p> <ul style="list-style-type: none"><li>• IPDT64 GUI update with .NET framework 4.8.</li><li>• Update of all diagnostic modules for feature functionality and/or bug fixes.</li><li>• Add support for currently released 13th Generation Intel® Core™ Processors, and 4th Generation Intel® Xeon® Scalable Processors.</li></ul>   |
| 24-Jun-2022 | <p>The 4.1.7.39 release includes:</p> <ul style="list-style-type: none"><li>• IPDT64 GUI update with .NET framework 4.7.2.</li><li>• Update of all diagnostic modules for feature functionality and/or bug fixes.</li><li>• Update of diagnostic module DetectUtils64 version 1.1.6 to enable detection of Hybrid Logical Cores for 12<sup>th</sup> Gen Processors.</li><li>• Update of diagnostic module GPUStressW version 1.0.19 with addition of NBODY.exe binary and removal of GEMM.exe binary.</li><li>• Test requirements for diagnostic module GPUStressW version 1.0.19 are:<ul style="list-style-type: none"><li>○ Intel 6<sup>th</sup> Gen Core Processor or later with Integrated Graphics.</li><li>○ Windows DCH Driver for Intel Graphics.</li><li>○ Most issues with the N-body Particle Simulation binary not executing can be solved by updating the DCH Graphics Driver.</li><li>○ See Recommended Articles <a href="#">here</a> for information on updating Intel Graphics Driver or refer to your system manufacturer documentation in the case of OEM Graphics Driver installed.</li></ul></li></ul> |

|             |  |
|-------------|--|
| 06-Jan-2021 | <p>The 4.1.5.37 release includes:</p> <ul style="list-style-type: none"> <li>• The addition of diagnostic module: <ul style="list-style-type: none"> <li>○ GraphicsW version 1.0.4.64b.W</li> </ul> </li> <li>• Removal of redundant and obsolete diagnostic module: <ul style="list-style-type: none"> <li>○ VisParticles</li> </ul> </li> <li>• Update of all diagnostic modules for feature functionality and/or bug fixes.</li> <li>• IPDT64 GUI updated to display CPU Model and Stepping in hexadecimal.</li> <li>• OpenCL Legacy Driver entry in GUI will detect Legacy Integrated Graphics Driver with Yes, and DCH Graphics Driver will be indicated as No.</li> <li>• Installer converted from executable to MSI package.</li> </ul> |
| 30-Aug-2019 | <p>The 4.1.4.36 release includes:</p> <ul style="list-style-type: none"> <li>• The addition of diagnostic module: <ul style="list-style-type: none"> <li>○ FrequencyCheck version 1.0.1.64b.W</li> </ul> </li> <li>• Update of diagnostic modules for feature functionality and/or bug fixes. <ul style="list-style-type: none"> <li>○ GPUStressW version 1.0.11.64b.W</li> <li>○ IMC version 1.0.17.64b.W</li> <li>○ IPDT64 GUI version 4.1.4.36</li> </ul> </li> </ul>   |



## 6 Bug Fixes

| Reference No.                    | Description   |
|----------------------------------|---|
| <b>CVE ID:</b><br>CVE-2024-21831 | Addresses CVE-2024-21831  |
| <b>SA ID:</b><br>INTEL-SA-00458  | A potential security vulnerability in the Intel® Processor Diagnostics Tool may allow escalation of privilege. Intel is releasing software updates to mitigate this potential vulnerability.<br><a href="https://www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00458.html">https://www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00458.html</a><br>Intel recommends updating the Intel® Processor Diagnostic Tool to version 4.1.5.37 or later.   |
| <b>SA ID:</b><br>INTEL-SA-00268  | A potential security vulnerability in the Intel® Processor Diagnostic Tool may allow escalation of privilege, denial of service, or information disclosure. Intel is releasing software updates to mitigate this potential vulnerability.<br><a href="https://www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00268.html">https://www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00268.html</a><br>Fix for the following potential vulnerability: Ensure IPDT is at version 4.1.3.35 or newer. |

## 7 Known Issues

| Description  | Workaround  |
|--|---|
| Previously installed bootstrapper version (e.g., IPDT_Installer_4.1.4.36) will remain in “Apps & Features” or “Add/Remove Programs” after successful installation of IPDT_Installer_4.1.5.37 MSI package. This is due to change of IPDT installer from executable (.exe) to MSI package. | There is no action required with both entries appearing in the installed programs list, but the previous bootstrapper version (e.g., IPDT_Installer_4.1.4.36) can be manually uninstalled in “Apps & Features” or “Add/Remove Programs” if desired. |

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