

ImageDiags 4.0 User Guide

ImageDiags 4.0 is a diagnostics tool used by HP support personnel provided by HP. It is intended to identify common issues and collect system information required to assist in identifying a resolution for customer escalations.

Requirements

HP Business Personal Systems under warranty

Windows 10 or later

.Net Framework 4.5

Network connection with FTP and HTTP access for full functionality

Local administrator or equivalent permissions for full functionality

Microsoft Edge V93 and above

ImageDiags 4.0 does not require installation

Running ImageDiags

Downloading

- It is recommended that you download ImageDiags to a local folder or the Windows desktop prior to running the application.

Executing

- Run as Local Administrator or equivalent for best results. Right-click on the ImageDiags4.exe icon and select "Run as administrator".

Results

- IDR HTML report is a user-friendly customer-facing report
- IDR text log file is a text document containing detailed results
- IDR zip file contains the other 2 files along with all files collected during analysis

License Agreement:

HP Image Diagnostic Tool and all of its associated maintenance tools are being provided for no additional charge to aid in the diagnosis of the issues you have reported. These tools are designed to assist you with usage and maintenance and to provide you solutions to problems you may be encountering. HP Image Diagnostic Tool will collect information about the current state of your PC, including product serial number, platform and BIOS information, and information about user-installed software and hardware components. HP encourages you to review the report before sending it to HP. The data collected is retained by HP and used solely for analysis of the performance and quality of our products and to improve the support we provide you and others who own similar HP products.

Providing to customers:

HP ImageDiags may be provided to customers that currently have a product support case opened with HP.

Analysis Options

ImageDiags 4.0 presents Collection Type options that allow the user to decide which tools to run based on the selected collection type. The time taken to run for each collection will differ by the selected options. Listed below, are the available collection types.

1. Recommended
2. Fast and Light
3. Full collection
4. By Problem Area
5. Specific Options

1. Recommended

Recommended is the default collection type if no choices are made. The tools executed in this collection type are shown below, and if you are unsure which option to choose, this is the best choice to select for most scenarios.

- Computer
- Operating System
- HP Image Assistant
- Softpaq Download Manager
- Application Info
- Windows devices and drivers
- CPU Information
- Memory Information
- Intel Optane Status
- HP OS Image Information
- Web Browser Information
- McAfee MER
- MSInfo Tool
- Services Info
- Analyze crash dump files
- Event Logs Significant Entries
- Powershell reports
- MS QFEs Installed
- Audio Devices
- Storage Devices
- System File Checker
- Windows System Assessment tool
- Display Panel Info
- Network Settings
- Intel AMT
- RWE (Read & Write Everything)
- HP Sure Start Logs
- Docking Station Devices
- Unified Communications
- SMBIOS Table
- Security Info
- Power Info
- Fan Information
- Bios Configuration Utility
- Collect Log Files

2. Fast & Light

This option executes a minimal set of tools that are necessary. It is the fastest and light weight with the smallest collection file. The tools run in this collection type are included below:

- Computer
- Operating System
- HP Image Assistant
- Softpaq Download Manager
- Application Info
- Windows devices and drivers
- CPU Information
- Memory Information
- HP OS Image Information
- MS QFEs Installed
- Audio Devices
- Storage Devices
- Fan Information
- Bios Configuration Utility
- Collect log files

ImageDiags 4.0 Collection Type Options UI:

ImageDiags 4.0.0.9

Collection Type

Select a collection type:

- Recommended (default options)
- Fast and Light
- Full Collection
- By Problem Area
- Select Specific Options...

Collection Type Description:

Runs standard set of tools to collect typical information

System Logs Operation:

In addition to collecting system logs and registry keys, the output of the following tools is included:

- HP BCU for BIOS configuration
- Windows GetMAC for MAC address
- Windows ipconfig for IP configuration
- Windows netsh mb for WWAN info
- Windows bcdedit for boot configuration
- Win32_Battery WMI provider
- Win32_VideoController WMI provider
- Windows powercfg for energy reports
- Intel AMT SDSDiscovery.exe (optional)
- MER utility for McAfee software (optional)

Storage Device Reporting:

- SMART tool output is Included in both the IDR text log file and zip archive
- Any SMART values outside of acceptable range will be reported in the HTML report
- Any errors discovered in the SFC output will be reported in the HTML report

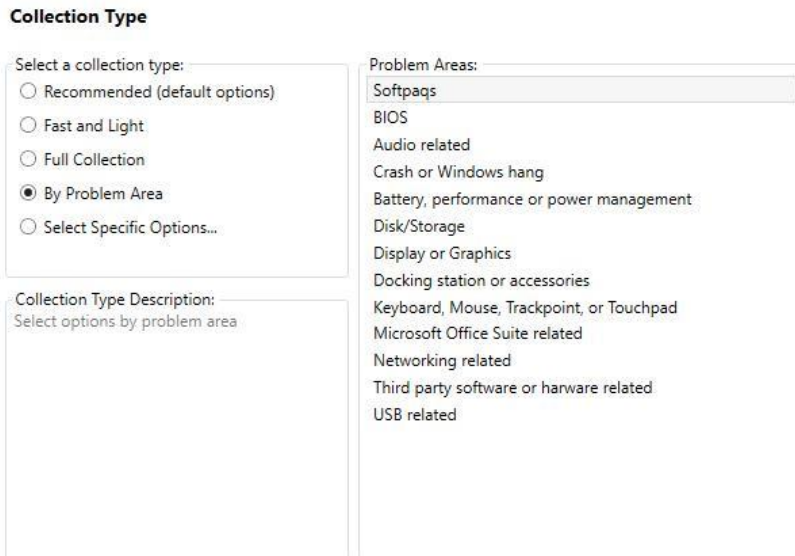
3. Full Collection

This option executes all available tools and collects the required information. The diagnostics executed in this collection type are shown below:

- Computer
- Operating System
- HP Image Assistant
- Softpaq Download Manager
- Application Info
- Windows devices and drivers
- CPU Information
- Memory Information
- Intel Optane Status
- HP OS Image Information
- Web Browser Information
- McAfee MER
- MSInfo Tool
- Services Info
- Analyze crash dump files
- Event Logs Significant Entries
- Powershell reports
- MS QFEs Installed
- Robust Office Inventory Scan
- Audio Devices
- Storage Devices
- System File Checker
- Windows System Assessment tool
- Display Panel Info
- Network Settings
- Intel AMT
- RWE (Read & Write Everything)
- HP Sure Start Logs
- Docking Station Devices
- Unified Communications
- SMBIOS Table
- Security Info
- Power Info
- Fan Information
- Bios Configuration Utility
- Collect Log Files

4. By Problem Area

This option provides a symptom-based list available in the Problem Areas window. By selecting an option from the list, it will run the corresponding tools related to that problem area option selected.



5. Select Specific Options.

This option will display a list of all possible tools available. Based on the requirements, one or more tools can be selected. The selected tools along with default tools will be considered for this option. This option should generally be used only if your HP support engineer has instructed you on which options to pick.

Select specific options to run:

- Computer
- Operating System
- HP Image Assistant
- Softpaq Download Manager
- Application Info
- Windows devices and drivers
- CPU Information
- Memory Information
- Intel Optane Status
- HP OS Image Information
- Web Browser Information
- McAfee MER
- MSInfo Tool
- Services Info
- Analyze crash dump files
- Event Logs Significant Entries
- Powershell Reports
- MS QFEs Installed
- Audio Devices
- Storage Devices
- System File Checker
- Windows System Assessment Tool
- Display Panel Info
- Network Settings
- Intel AMT
- RWE (Read & Write Everything)
- HP Sure Start Logs
- Docking Station Devices
- Unified Communications
- SMBIOS Table
- Security Info
- Power Info
- Fan Information
- Robust Office Inventory Scan
- BIOS Configuration Utility
- Collect log files

Some of the Analysis Tools

Drivers and Softpaqs

Analyzes all HP drivers and applications to ensure that they are installed and up to date. Requires a network connection with FTP access. Results are saved to the IDR HTML report and IDR text log file.

System Logs

Collects log files and registry keys and runs embedded and Windows system tools commonly needed by engineers during a support event. Results are saved to the IDR text log file and ImageDiags zip archive.

Run Windows energy reports

Runs the Windows powercfg.exe utility to collect an energy and a battery report. Results are HTML reports saved to the ImageDiags zip archive.

Collect Windows event logs

Attempts to collect the Windows Application, Security and System evtx files accessible from the Windows Event Viewer.

Windows Command-line Debugger:

ImageDiags embeds and executes cdb.exe and all required dependencies. It is available in Microsoft Debugging Tools for Windows. The symbol files required for analysis are downloaded from Microsoft and stored temporarily in %temp%\ImageDiags.

Temporary File Locations:

All embedded tools are temporarily stored in the ImageDiags temp folder, %temp%\ImageDiags and deleted on application exit. The command-line switch "SKIPCLEANUP" will override file deletion for debugging ImageDiags issues. See the topic "Command-line Execution" for details.

Storage Devices

Collects information about disks, partitions, and logical drives. Collects SMART disk info about disk performance and failures. Results are saved to the IDR HTML report and IDR text log file.

System file verification check

Runs the Windows system file checker, sfc.exe in read-only mode. SFC checks the integrity of system files, sometimes corrupted by the imaging process or by security threats and viruses. SFC is a long running process that should not be interrupted. Results are saved to the IDR HTML report and IDR text log file.

Crash Dumps

Analyzes any crash dumps found on the system using cdb.exe, the Windows command-line debugger. Requires a network connection with HTTP access. If the debugger can find a failing driver, it will be listed in the HTML report. The complete debugger log file is saved to the zip archive.

Collect crash dump files

Adds the system crash dump files to the ImageDiags zip archive. Storage requirements vary depending on the size of the crash dump files found.

ImageDiags Results

All results are saved to the ImageDiags zip archive file. It will be saved to the same directory as the ImageDiags executable or the Windows desktop if run from the browser.

Reports and Log Files

IDR HTML report: HTML report containing high-level details of the analysis in the form "IDR_[unit S\N]_[file number].htm". For example, "IDR_5CG60445JM_1.htm"

IDR log file: Fixed-width text log containing all details of the analysis in the form "IDR_[unit S\N]_[file number].log". For example, "IDR_5CG60445JM_1.log"

IDE log file: Text log containing errors and results of the ImageDiags executable in the form "IDR_[unit S\N]_[file number].log". For example, "IDE_5CG60445JM_1.log". It will mostly be used by development but feel free to review it for errors.

CSV Folder

Contains all the datasets collected during analysis converted to CSV comma-delimited format. The contents will vary based on the analysis options chosen. The files can be opened with Microsoft Excel.

Product Catalog Folder

Contains all the HP CVA and XML files used for softpaq analysis. These are provided for debugging softpaq analysis issues and to provide the supporting softpaq information found in CVA files.

Option Dependencies:

- IAMT, MER, SKIPDOWNLOAD and SIKPCLEANUP are hidden and not available in the UI. They are all OFF by default.

ImageDiags 4.0 runs Silently:

ImageDiags 4.0 has the ability to run in Silent mode and results will be stored in Zip File in the ImageDiags folder.

Note: Some tools ImageDiags runs do not run silently, so windows may still appear for those tools when running silently.

System Logs Folder

Contains all collected log files and registry keys along with the output of embedded and Windows system tools organized in folders.

Getting More Information

Developer: Image_Diags@HP.onmicrosoft.com

Manager:

Command-line Execution

Parameters may be passed on the command line to control Analysis Option state, run ImageDiags silently or change application configuration. Parameters are *not* case-sensitive. To see parameters from the command line use "?", "HELP" or "H".

Parameters Available

| | |
|--------------|---|
| ? H or HELP | Display help message |
| BCU | BIOS Configuration Utility |
| DISK | Storage Devices |
| RWE | Read & Write Everything |
| SP | Driver and Softpaq analysis |
| SYSLOGS | Collect system logs |
| ENERGY | Run Windows powercfg.exe for energy reports |
| IAMT | Collect Intel AMT information |
| MER | Run McAfee MER utility for desktop antivirus |
| DISK | Disk analysis |
| SFC | Run Windows system file checker sfc.exe |
| NOSFC | To Skip the System File Check |
| CRASHDUMP | Analyze kernel crash dumps (BSODs) |
| DC | Collect dump files |
| SKIPDOWNLOAD | Skip download of SDM product catalog |
| SKIPCLEANUP | Leave all files on exit |
| NTPATH | Network path where the ZIP file needs to be placed. |
| SILENT | Runs the ImageDiags in silent mode. |

Usage

ImageDiags.exe [arguments delimited by spaces]

[argument] = TRUE

[argument]:on = TRUE

[argument]:off = FALSE

NO[argument] = FLASE

Examples

ImageDiags.exe SP DISK

ImageDiags.exe NOSP NODISK

ImageDiags.exe NOUI SKIPCLEANUP

ImageDiags.exe ?

ImageDiags 4.0 PSExe Execution

- 1.Download PSTools from Microsoft
- 2.Extract tools to folder "PSTools" and place it in C drive.
- 3.Start an elevated PowerShell prompt.
- 4.Change directory to C:\PSTools. (type psexec and press TAB)
- 5.Run following Command
.\PsExec \\TARGET_DEVICE_NAME "Share Folder ImageDiags.exe path" NOUI YESAGREE SFC

Example:

```
.\PsExec \\MySystemName "C:\ShareFolder\ImageDiags.exe" NOUI YESAGREE SFC
```