



Intel® System Information Retrieval Utility

User Guide

Reference for using the Intel® System Information Retrieval Utility (Sysinfo). For Intel® Server System M50CYP and D50TNP Families.

Rev. 1.00

April 2021

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Document Revision History

Date	Revision	Changes
April 2021	1.00	Initial release for M50CYP and D50TNP families

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1. Introduction

1.1 Purpose of the document

This document describes the functionality of the System Information Retrieval Utility, also referred to as “sysinfo”.

1.2 Platforms and Operating System Support

System Information Retrieval Utility (Sysinfo) is only supported on the following Intel® Server products:

- Intel® Server System M50CYP Family
- Intel® Server System D50TNP Family

Note: The System Information Retrieval Utility (Sysinfo) is not intended for and should not be used on any non-Intel server products.

The System Information Retrieval Utility is available in versions for different platforms, such as UEFI, Windows*, and Linux*. The following table summarizes the operating systems and platforms that each utility revision supports.

Table 1: Operating Systems Supported

Platforms	Operating Systems/Preboot Environment Supported
<ul style="list-style-type: none"> • Intel® Server System M50CYP • Intel® Server System D50TNP 	<ul style="list-style-type: none"> • UEFI Shell • WinPE* 4.0 (x64) • Windows* Server 2019 • Windows* Server 2016 • Windows* Server 2012 R2 • Windows* 10 • RHEL* 6.8 (x64) • RHEL* 7.3(x64) • RHEL* 7.5(x64) • RHEL* 7.6(x64) • RHEL* 8.0(x64) • SLES* 11.4 (x64) • SLES* 12.2(x64) • SLES* 15 and SP1(x64) • CentOS* 7.3 (x64) • Debian* 8.10(x64)

1.3 Intended Audience

This document is intended for:

- Users of the utility who desire a more detailed understanding of its operation.
- Manufacturing personnel using the utility in a factory environment.

1.4 Document Overview

This document is organized as follows:

Chapter 1: Introduction

Describes the purpose of the document.

Chapter 2: Product Overview

Provides an overview of the architectural components that comprise the system configuration save/restore utility.

Chapter 3: Functional Specification

Describes the operation, how to use the utility, and a description of the input files.

Chapter 4: Installing and Uninstalling

Describes the procedure to install and uninstall the syscfg utility in Linux* and Windows*.

2. Product Overview

The System Information Retrieval Utility is a command-line tool that provides the ability to collect system information on which this utility operates, as fully described in the IPMI and BMC specifications.

The System Information Retrieval Utility requires Windows* administrative or Linux* root permissions.

2.1 System Information Collected

The System Information Retrieval Utility collects the following system information and writes the information into log files:

- Platform Firmware Inventory
- Sensors
- Sensor Data Records (SDR)
- Baseboard FRU
- System Boot Order
- BMC User Settings
- BMC LAN Channel Settings
- BMC SOL Channel Settings
- BMC Power Restore Policy Settings
- BMC channel settings
- SMBIOS Type 1, Type 2, Type 3
- Memory
- Processor
- Hard drive
- Operating System Information
- Device Manager Information (such as drivers)
- List of Software Installed
- Operating System Event Log
- PCI Bus Device Information
- RAID settings and RAID log
- BIOS Settings (per the BIOS setup)
- Power Telemetry (if available)

Note: Types of system information in each log file could vary among different System Configuration Utility versions.

2.2 Support Information

For more information, visit Intel's support site at <http://support.intel.com/support/>.

For an updated support contact list, see <http://www.intel.com/support/9089.htm/>.

3. Functional Specification

The executable file for the System Firmware Update utility is named **sysinfo.exe** for Windows*, **sysinfo** for Linux*, and **sysinfo.efi** for UEFI shell.

3.1 Command-line interface

This utility parses the command-line arguments and sets internal flags to control operation. Any invalid parameters will result in a “usage” message being displayed and the program exiting with an error code. The command line switches are listed in the following table. They are accessed with a dash “-” or a slash “/”. The basic command line format is:

```
sysinfo [-Option]
```

Table 2: Command-Line Switches

Parameter	Description
sysinfo	The name of the utility. Linux* is case sensitive. Without any option followed, System Information Retrieval Utility logs system information in three log files in the LogFiles folder under the current directory. These three log files are: sysinfo_log.txt, PCI_log.txt (with -pci in Windows*), and OS_Eventlog.txt (Not available in UEFI).
-ni	System Information Retrieval Utility logs system information in a non-interactive way
-h or -?	Displays command line help information. When this option is used, any other options on the command line are ignored. When using /? In Linux*, enclose within double quotes (“/?”)
-raid	With this option, additional log file RAID_NVRAMlog.txt will be generated
-sata -pci	With these two options, SATA and PCI bus information will be logged in two log files: SATA_log.txt and PCI_log.txt. "-sata" and "-pci" must be used together
[Directory name]	System Information Retrieval Utility logs system information into three log files to the specified output folder

Notes:

1. The System Information Retrieval Utility does not log HDD information with the backplane installed.
2. To collect PCI/SATA info, sysinfo uses the memrwd.sys driver. This driver is not WHQL certified.
3. To display sensor information, install Intel IMB driver (if only the IPMI driver from Microsoft* is installed on the system).
 - a. To install Intel IMB driver:
Run install-imbdriver.bat on console. The install-imbdriver.bat is available in Binaries\ folder.
 - b. To uninstall Intel IMB driver:
Run uninstall-imbdriver.bat on console. The uninstall-imbdriver.bat is available in Binaries\ folder.

4. Installation and Un-installation

4.1 Windows* Installation

4.1.1 Prerequisites

The following prerequisites are needed to install and use the System Information Retrieval Utility:

- Boot to the Windows* system with WMI enabled.
- All RAID drivers for the corresponding Intel® Server Board must be installed. Otherwise, the utility does not display RAID information.
- The system needs to be rebooted after installing the memrw driver (run memrwdinstall . bat) on Windows Server* 2012.

4.1.2 System Information Retrieval Utility Installation

This section provides instructions to install the System Information Retrieval Utility:

1. Copy the compressed .zip file into your local directory (for example, C:\sysinfo).
2. Unzip the file.
3. Install the driver.

According to operating system architecture, go to the Win_x86\Drivers folder or the Win_x64\Drivers folder and run `install.bat` to install the IPMI, SMI, and memory map drivers.

4. Depending on the operating system, go to the Win_x86\Drivers folder or the Win_x64\Drivers folder as administrator and run `sysinfo.exe`.

The utility collects system information and writes it into five different log files in a `LogFiles` folder under the current directory.

The following lists the system information each log file contains:

- `sysinfo_log.txt`: Platform Firmware Inventory; Sensors; Sensor Data Records; Base Board FRU; System BMC Boot Order; BMC User Settings; BMC LAN Channel Settings; BMC SOL Channel Settings; BMC Power Restore Policy Settings; BMC channel settings; SMBIOS Type 1, SMBIOS Type 2, and SMBIOS Type 3; Memory; Processor; SATA; IDESCSI; hard drive; Operating System Information; Device Manager Information (such as drivers); List of Software Installed; and BIOS Settings (per the BIOS setup)
- `RAID_NVRAMlog.txt`: RAID settings and RAID log
- `OS_Eventlog.txt`: Operating System Event Log
- `SATA_log.txt`: SATA information
- `PCI_log.txt`: PCI Bus information

4.1.3 System Information Retrieval Utility Un-Installation

1. Go to the Win_x86\Drivers folder or the Win_x64\Drivers folder.
2. Run `uninstall.bat` (for uninstalling System Information Retrieval Utility).

4.2 Linux* Installation

4.2.1 Prerequisites

The following prerequisites are needed to install and use the System Information Retrieval Utility:

- Boot to Red Hat* Enterprise Linux*, SUSE* Linux* Enterprise Server, or the CentOS system.
- All RAID drivers for the corresponding platform must be installed. Otherwise, the utility does not display RAID information.
- On Red Hat*, CentOS, SUSE, UEFI-aware Linux*, there might be a driver conflict between an internal driver and the kernel. Start the OpenIPMI driver and ensure the `/dev/ipmi0` device exists.

4.2.2 System Information Retrieval Utility Installation

This section provides instructions to install the System Information Retrieval Utility:

1. Copy the uncompressed `.zip` file into a local directory (for example, `/root/sysinfo/`).
2. Depending on the Linux operating system used, go to the `Linux_X64` folder and use `chmod 755` to change the executable file and script.
3. If another version has already been installed, uninstall the previously installed version by running `./uninstall.sh` before installing the new version.
4. To install the System Information Retrieval Utility components, run `./install.sh` command on the shell prompt.
5. Close the terminal from which `install.sh` was executed and run System Information Retrieval Utility from a new terminal.

The utility collects system information and writes it into four different log files in the `LogFiles` folder under the current directory.

The following lists the system information each log file contains:

- `sysinfo_log.txt`: Platform Firmware Inventory; Sensor information; Sensor Data Records; Base Board FRU; System Boot Order; BMC User Settings; BMC LAN Channel Settings; BMC SOL Channel Settings; BMC Power Restore Policy Settings; BMC channel settings; SMBIOS Type 1, SMBIOS Type 2, and SMBIOS Type 3; Processor; Memory; Operating System Information; Device drivers installed; List of Software installed; and BIOS Settings (per the BIOS setup)
- `RAID_NVRAMlog.txt`: RAID settings and RAID log
- `PCI_Log.txt`: PCI Bus info
- `OS_Eventlog.txt`: Operating System events

4.2.3 System Information Retrieval Utility Un-installation

This section provides instructions to uninstall the System Information Retrieval Utility.

1. Run the `./uninstall.sh` in the `Linux_X64/RHEL` folder or the `Linux_X64/SUSE` folder or `Linux_X64/UBUNTU` folder (depending on Linux* distribution).
2. Remove the Linux* folder.

4.3 UEFI Installation

4.3.1 Prerequisites

Download the latest System Firmware Update Package for the platform and install it.

For the latest System Firmware Update Package, go to <https://downloadcenter.intel.com/>.

4.3.2 System Information Retrieval Utility Installation

This section provides instructions to install the System Information Retrieval Utility:

1. Copy the uncompressed .zip file into a local directory (for example, fs0:\sysinfo).
2. Go to the UEFI folder.
3. Run `sysinfo.efi`.

The utility collects system information and writes it into three different log files in the `LogFiles` folder under the current directory.

The following lists the system information each log file contains:

- o `sysinfo_log.txt`: Platform Firmware Inventory; Sensors; Sensor Data Records; Base Board FRU; System Boot Order; BMC User Settings; BMC LAN Channel Settings; BMC SOL Channel Settings; BMC Power Restore Policy Settings; BMC channel settings; SMBIOS Type 1, SMBIOS Type 2, and SMBIOS Type 3; Processor; Memory; and Operating System Information
- o `RAID_NVRAMlog.txt`: RAID settings and RAID log
- o `PCI_Log.txt`: PCI Bus information

4.3.3 System Information Retrieval Utility Un-installation

Remove the folder where `sysinfo.efi` is located.

Appendix A. Glossary

Term	Definition
BIOS	Basic Input/Output System
BMC	Baseboard management controller. The primary microcontroller that controls the operation of the Intel® server management subsystem.
FRU	Field replaceable unit
IPMI	Intelligent Platform Management Interface
LAN	Local area network
PCI	Peripheral Component Interconnect
RPM	Red Hat* Package Manager
SATA	Serial ATA. A computer bus technology for connecting hard disk drives and other devices.
SDR	Sensor data record
SEL	System event log
SMI	Server Management Interrupt. SMI is the highest priority non-maskable interrupt.
SOL	serial-over-LAN
WHQL	Windows* Hardware Quality Labs
WMI	Windows* Management Instrumentation