

Intel® System Information Retrieval Utility

User Guide

Reference for using the Intel® System Information Retrieval Utility (Sysinfo)

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Document Revision History

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November 2016	1.01	<ul style="list-style-type: none">• Removed version 13.1, update to version 14.0• Modified Linux installation note
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July 2019	1.03	<ul style="list-style-type: none">• Add new supported platform(Intel® Server Board based on 2nd Generation Intel® Xeon® Scalable processor family)• Corrected the statement from the sysinfo Utility Installation chapter with the correct folder name.• Corrected the statement from the Prerequisites chapter.

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1. Introduction

Described in this user guide are the Sysinfo utility's features, use of the utility, requirements for operating systems and installation procedures.

The Intel® System Information Retrieval Utility (Sysinfo) is used for collecting system information.

The Sysinfo utility is available in versions for different operating systems, for example, UEFI, Windows*, and Linux*.

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

- Intel® Server Board based on Intel® Xeon® Scalable Processor family
- Intel® Server Board based on 2nd Generation Intel® Xeon® Scalable Processor family
- Intel® Server Board based on Intel® Xeon® Platinum 9200 Processor Family

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

1.1 System Information Collected

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

- Platform Firmware Inventory
- Sensors
- Sensor Data Records (SDR)
- BMC SEL (in human readable form)
- BMC SEL (in hex form)
- Baseboard 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, Type 2, Type 3
- Memory
- Processor
- SATA
- IDESCSI
- 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 versions. Refer to detailed information for each version from respective section in Chapter 0.

1.2 Operating Systems Supported

The Intel® System Information Retrieval Utility is available in versions for different platforms, for example, UEFI, Windows*, and Linux*. Table 1. Table 1 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 Board based on Intel® Xeon® Scalable Processor family • Intel® Server Board based on 2nd Generation Intel® Xeon® Scalable Processor family • Intel® Server Board based on Intel® Xeon® Platinum 9200 Processor Family 	<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 • RHEL* 7.5 • RHEL* 7.6 • SLES* 11.4 (x64) • SLES* 12.2 • SLES* 15 • CentOS* 7.3 (x64) • Debian* 8.10

1.3 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/>.

2. Installing and Uninstalling the Intel® System Information Retrieval Utility

1. This section provides instructions to install and uninstall the Intel® System Information Retrieval Utility (Sysinfo).
2. Sysinfo requires Windows* administrative or Linux* root permissions.

2.1 Installing and Uninstalling the Sysinfo Utility on UEFI

2.1.1 Prerequisites

Download the latest System Firmware Update Package for the platform and install it. For the latest System Firmware Update Package, please visit <https://downloadcenter.intel.com/>.

2.1.2 Sysinfo Utility Installation

This section provides installation instructions for the Sysinfo 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 within the current directory.

The following log files contain system information:

- o `sysinfo_log.txt`: Platform Firmware Inventory; Sensors; Sensor Data Records; BMC SEL (in human readable form); BMC SEL (in hex form); 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; Processor; Memory; and Operating System Information
- o `RAID_NVRAMlog.txt`: RAID settings and RAID log
- o `PCI_Log.txt`: PCI Bus information

2.1.3 Sysinfo Utility Uninstallation

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

2.2 Installing and Uninstalling the Sysinfo Utility on Windows*

2.2.1 Prerequisites

The following prerequisites are needed to install and use the Sysinfo 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.
- After installing the `memrw` driver (run `memrwdinstall.bat`), The system will be automatically rebooted under Windows Server 2012, while under other OSES it just prompts “reboot required”, however the reboot should be performed manually.

2.2.2 Sysinfo Utility Installation

This section provides instructions to install the Sysinfo 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 OS 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\Binaries` folder or the `Win_x64\Binaries` 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; BMC SEL (in human readable form); BMC SEL (in hex form); 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; IDE/SCSI; 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

2.2.3 Sysinfo Utility Uninstallation

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

2.3 Installing and Uninstalling the Sysinfo Utility on Linux*

2.3.1 Prerequisites

The following prerequisites are needed to install and use the Sysinfo 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 confliction between an internal driver and the kernel. Start up the `OpenIPMI` driver and ensure the `/dev/ipmi0` device exists.

2.3.2 Sysinfo Utility Installation

This section provides instructions to install the Sysinfo 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 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 Sysinfo components, run `./install.sh` command on the shell prompt.
5. Close the terminal from which `install.sh` was executed and run Sysinfo 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; BMC SEL (in human readable form); BMC SEL (in hex form); 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; 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

2.3.3 Sysinfo Utility Uninstallation

This section provides instructions to uninstall the Sysinfo utility.

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

3. Using the Intel® System Information Retrieval Utility

This section provides instructions to use the Intel® System Information Retrieval Utility under different operating systems.

3.1 Using the Intel® System Information Retrieval Utility on UEFI

This section provides instructions to use the Intel® System Information Retrieval Utility on UEFI.

Commands

```
sysinfo.efi [-Option]
```

- To view the command-line help page:

```
sysinfo.efi -h
```

Or:

```
sysinfo.efi -?
```

- Sysinfo logs system information in two log files in the `LogFiles` folder under the current directory (`sysinfo_log.txt`, `PCI_log.txt`):

```
sysinfo.efi
```

- Sysinfo logs system information in two log files in the `LogFiles` folder under the current directory (`sysinfo_log.txt`, `PCI_log.txt`) in a non-interactive way:

```
sysinfo.efi -ni
```

- Sysinfo logs system information in three log files in the `LogFiles` folder under the current directory (`sysinfo_log.txt`, `RAID_NVRAMlog.txt`, `PCI_log.txt`).

```
sysinfo.efi -raid
```

3.2 Using Intel® System Information Retrieval Utility on Windows*

This section provides instructions to use the Intel® System Information Retrieval Utility on Windows*.

Commands

```
sysinfo.exe [-Option]
```

- To view the command-line help page:

```
sysinfo.exe -h
```

Or:

```
sysinfo.exe -?
```

- Sysinfo logs system information in two log files in the LogFiles folder under the current directory. These two log files are: `sysinfo_log.txt` and `OS_Eventlog.txt`.

```
sysinfo.exe
```

- Sysinfo logs system information in two log files in the LogFiles folder under the current directory in a non-interactive way. These two log files are: `sysinfo_log.txt` and `OS_Eventlog.txt`.

```
sysinfo.exe -ni
```

- Sysinfo logs SATA and PCI bus information in two log files: `SATA_log.txt` and `PCI_log.txt`.

```
sysinfo.exe -sata -pci
```

- Sysinfo logs system information in three log files in the LogFiles folder under the current directory. These three log files are: `sysinfo_log.txt`, `RAID_NVRAMlog.txt`, and `OS_Eventlog.txt`.

```
sysinfo.exe -raid
```

Notes

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

3.3 Using Intel® System Information Retrieval Utility on Linux*

This section provides instructions to use the Intel® System Information Retrieval Utility on Linux*.

Commands

```
./sysinfo [-Option]
```

- To view the command-line help page:

```
./sysinfo -h
```

Or:

```
./sysinfo "-?"
```

- Sysinfo 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`, and `OS_Eventlog.txt`.

```
./sysinfo
```

- Sysinfo logs system information in three log files in the LogFiles folder under the current directory in a non-interactive way. These three log files are: `sysinfo_log.txt`, `PCI_log.txt`, and `OS_Eventlog.txt`.

```
./sysinfo -ni
```

- Sysinfo logs system information in four log files in the LogFiles folder under the current directory. These four log files are: `sysinfo_log.txt`, `RAID_NVRAMlog.txt`, `PCI_log.txt`, and `OS_Eventlog.txt`.

```
./sysinfo -raid
```

- Sysinfo logs system information in three log files to the specified output folder. These three log files are: `sysinfo_log.txt`, `PCI_log.txt`, and `OS_Eventlog.txt`.

```
./sysinfo [Directory name]
```

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 disks 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