



Intel[®] Server Information Retrieval Utility

User Guide

Single build reference on how to use the command-line tool, covering all platforms that support Intel[®] Server Information Retrieval Utility.

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November 2021	1.0	<ul style="list-style-type: none">• Initial release. First version of the single build user guide for all platforms that support the Intel® Server Information Retrieval Utility.
January 2022	1.1	<ul style="list-style-type: none">• Made minor edits throughout the document to improve clarity and style.
March 2022	1.2	<ul style="list-style-type: none">• Added KCS policy control modes section.

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1. Introduction

The Intel® Server Information Retrieval Utility is used for collecting system information. The features and instructions on the use of all supported commands of this utility are described in this user guide. The utility is available in versions for different operating systems, for example, UEFI*, Windows*, and Linux*.

This *Intel® Server Information Retrieval Utility User Guide* describes features and instructions on the use of all the commands supported by the command-line tool's version 16.x.x. This document is different from the previous platform-specific document versions. This new version is a single build user guide that covers all the Intel® server products that support Intel® Server Information Retrieval Utility.

Intel® Server Information Retrieval Utility is only supported on the following Intel® server products:

- Intel® Server Board S2600WT/S2600WTR
- Intel® Server Board S2600KP/S2600KPR
- Intel® Server Board S2600TP/S2600TPR
- Intel® Server Board S2600CW/S2600CWR
- Intel® Server Board S2600WF/S2600WFR
- Intel® Server Board S2600ST/S2600STR
- Intel® Server Board S2600BP/S2600BPR
- Intel® Server Board S9200WK
- Intel® Server Board D50TNP
- Intel® Server Board M50CYP
- Intel® Server Board D40AMP
- Intel® Server Board M70KLP
- Intel® Server Board M20NTP2SB

Disclaimer: The Intel® Server Information Retrieval Utility is not intended for and should not be used on any non-Intel server products.

1.1 Server Information Collected

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

- Platform firmware inventory
- Sensors
- Sensor data records (SDR)
- Baseboard FRU
- BMC SEL (hexadecimal and human-readable)
- BMC SEL (in hexadecimal form)
- 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 drives
- 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)

Notes:

- Types of system information in each log file could vary among different versions. Refer to detailed information for each version in its respective section in [Chapter 2](#).
 - This is not valid for Intel® Server Board M70KLP family and Intel® Server Board M20NTP2SB.
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1.2 Operating Systems Supported

The Intel® Server Information Retrieval Utility is available in versions for different platforms, for example, UEFI, Windows*, and Linux*. [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 S2600WT/S2600WTR • Intel® Server Board S2600KP/S2600KPR • Intel® Server Board S2600TP/S2600TPR • Intel® Server Board S2600CW/S2600CWR • Intel® Server Board S2600WF/S2600WFR • Intel® Server Board S2600ST/S2600STR • Intel® Server Board S2600BP/S2600BPR • Intel® Server Board S9200WK • Intel® Server Board D50TNP • Intel® Server Board M50CYP • Intel® Server Board D40AMP • Intel® Server Board M70KLP • Intel® Server Board M20NTP2SB 	<ul style="list-style-type: none"> • UEFI* Shell. • Windows* Server 2019. • Windows* Server 2016. • Windows* Server 2012 R2. • Windows* 10. • Red Hat* Enterprise Linux* 8.1, 8.2, 7.3, 7.5 and 7.6–64 bit. • SUSE Linux Enterprise Server* (SLES*) 15, 12 service pack 3–64 bit. • Ubuntu*16.04 LTS and Ubuntu* 20.04 LTS.

1.3 KCS Policy Control Modes – Messages in the Integrated Baseboard Management Controller (Integrated BMC) Web Console

The keyboard controller style (KCS) policy control modes allow an authenticated BMC administrative user to control the level of protection from Intelligent Platform Management Interface (IPMI) commands executed over the KCS channels. Within this generation of BMC firmware, three different KCS policy control modes are supported: allow all, restricted, and deny all.

1.3.1 Allow All/Provisioning

This configuration setting is intended for normal IPMI-compliant communications between the host operating system and the BMC. This mode should be used when provisioning the BMC configuration for deployment.

In this KCS policy control mode, update, display, configuration changes, and help commands are executable.

1.3.2 Restricted/Provisioned Passlist

This configuration setting disables the IPMI KCS command interfaces between the host operating system and the BMC. This is a configuration that is non-compliant with IPMI. The restricted mode impacts the operation of the Intel® Server Management software running on the host operating system.

This mode only applies to the IPMI commands over the KCS interfaces and does not apply to the authenticated network interfaces to the BMC.

In this mode, display and help commands are executable.

When the KCS policy control mode is set to Restricted, the message displayed can be one of the following:

- KCS Policy Control Mode is currently set to "RESTRICTED". This function depends on an unrestricted KCS environment to operate. To run utility, please change "KCS Policy Control Mode" using BMC web console or other authenticated session.
- KCS Policy Control Mode is currently set to "Provisioned Host Whitelist". This function depends on an unrestricted KCS environment to operate. To run utility, please change "KCS Policy Control Mode" using BMC web console or other authenticated session.

1.3.3 Deny All/Provisioned Host Disabled

This configuration setting enables the BMC firmware to use an access control list that allows applications executing on the host operating system to have access to a limited set of IPMI commands via the KCS interfaces. This is a configuration that is non-compliant with IPMI. The deny all mode may impact the operation of the Intel® Server Management software running on the host operating system.

This mode only applies to the IPMI commands over the KCS interfaces and does not apply to the authenticated network interfaces to the BMC.

In this mode, none of the commands are executable.

When the KCS policy control mode is set to Deny All, the message displayed can be one of the following:

- KCS Policy Control Mode is currently set to "DENY ALL". This function depends on an unrestricted KCS environment to operate. To run utility, please change "KCS Policy Control Mode" using BMC web console or other authenticated session.
- KCS Policy Control Mode is currently set to "Provisioned Host Disabled". This function depends on an unrestricted KCS environment to operate. To run utility, please change "KCS Policy Control Mode" using BMC web console or other authenticated session.

1.4 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. Intel® Server Information Retrieval Utility Installation and Removal

This chapter provides instructions to install and uninstall the Intel® Server Information Retrieval Utility.

2.1 Prerequisites

The installation of the Intel® Server Information Retrieval Utility can only be done with the following prerequisites:

- Download the latest Server Information Retrieval Utility Package. For the latest package, go to <https://downloadcenter.intel.com/>.
- It requires Windows* administrative or Linux* root permissions.

2.2 UEFI: Installation and Removal of Intel® Server Information Retrieval Utility

2.2.1 Prerequisites in UEFI

- 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/>.

2.2.2 Intel® Server Information Retrieval Utility Installation on UEFI

This section provides instructions to install the Intel® Server 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`.
4. The utility collects system information and writes it into three different log files in the `LogFiles` folder under the current directory.
5. The following lists the system information each log file contains:
 - `sysinfo_log.txt`: Platform Firmware Inventory; Sensors; Sensor Data Records; Base Board FRU; BMC SEL (hexadecimal and human-readable); 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
 - `RAID_NVRAMlog.txt`: RAID settings and RAID log
 - `PCI_Log.txt`: PCI Bus information

Notes:

- Types of system information in each log file could vary among different versions. Refer to detailed information for each version in its respective section in [Chapter 2](#).
 - This is not valid for Intel® Server Board M70KLP family and Intel® Server Board M20NTP2SB.
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2.2.3 Intel® Server Information Retrieval Utility Removal from UEFI

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

2.3 Windows*: Installation and Removal of Intel® Server Information Retrieval Utility

2.3.1 Prerequisites in Windows*

The following prerequisites are needed to install and use the Intel® Server 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.

2.3.2 Intel® Server Information Retrieval Utility Installation on Windows*

This section provides instructions to install the Intel® Server 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 OS architecture, go to 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_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; 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; 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

Notes:

- Types of system information in each log file could vary among different versions. Refer to detailed information for each version in its respective section in [Chapter 2](#).
 - This is not valid for Intel® Server Board M70KLP family and Intel® Server Board M20NTP2SB.
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2.3.3 Intel® Server Information Retrieval Utility Removal from Windows*

1. Go to the `Win_x64\Drivers` folder.
2. Run `uninstall.bat` (for uninstalling Intel® Server Information Retrieval Utility).

2.4 Linux*: Installing and Removal of Intel® Server Information Retrieval Utility

2.4.1 Prerequisites in Linux*

The following prerequisites are needed to install and use the Intel® Server Information Retrieval Utility:

- Boot to Red Hat Enterprise Linux*, SUSE Linux Enterprise Server* (SLES*), 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 conflicting between an internal driver and the kernel. Start the `OpenIPMI` driver and ensure the `/dev/ipmi0` device exists.

2.4.2 Intel® Server Information Retrieval Utility Installation on Linux*

This section provides instructions to install the Intel® Server Information Retrieval Utility:

1. Copy the `Sysinfo_VX.X.X_AllOS.zip` file into a local directory (for example, `/root/sysinfo/`).
2. 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 Intel® Server Information Retrieval Utility components, run `./install.sh` command on the shell prompt.
5. Close the terminal from which `install.sh` was executed and run Intel® Server 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; BMC SEL (hexadecimal and human-readable); 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

Notes:

- Types of system information in each log file could vary among different versions. Refer to detailed information for each version in its respective section in [Chapter 2](#).
 - This is not valid for Intel® Server Board M70KLP family and Intel® Server Board M20NTP2SB.
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2.4.3 Intel® Server Information Retrieval Utility Removal from Linux*

This section provides instructions to uninstall the Intel® Server Information Retrieval Utility.

1. Run the `./uninstall.sh` from `Linux_x64` folder
2. Remove the `Linux*` folder.

3. Intel® Server Information Retrieval Utility Usage

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

3.1 Intel® Server Information Retrieval Utility Usage on UEFI

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

Commands

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

- To view the command-line help page:

```
sysinfo.efi -h
```

Or:

```
sysinfo.efi /?
```

- Intel® Server Information Retrieval Utility logs system information in two log files in the `LogFiles` folder under the current directory (`sysinfo_log.txt`, `PCI_log.txt`):

```
sysinfo.efi
```

- Intel® Server Information Retrieval Utility 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
```

- Intel® Server Information Retrieval Utility 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 Intel® Server Information Retrieval Utility Usage on Windows*

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

Commands

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

- To view the command-line help page:

```
sysinfo.exe -h
```

Or:

```
sysinfo.exe -?
```

- Intel® Server Information Retrieval Utility 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
```

- Intel® Server Information Retrieval Utility 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
```

- Intel® Server Information Retrieval Utility logs SATA and PCI bus information in two log files: `SATA_log.txt` and `PCI_log.txt`.

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

Notes:

- Intel® Server Information Retrieval Utility does not log HDD information with the backplane installed.
 - To collect PCI/SATA information, the Intel® Server Information Retrieval Utility 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 Intel® Server Information Retrieval Utility Usage on Linux*

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

Commands

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

- To view the command-line help page:

```
./sysinfo -h
```

Or:

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

- Intel® Server 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`, and `OS_Eventlog.txt`.

```
./sysinfo
```

- Intel® Server Information Retrieval Utility 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
```

- Intel® Server Information Retrieval Utility 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
```

- Intel® Server Information Retrieval Utility 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.
KCS	Keyboard controller style.
LAN	Local area network.
PCI	Peripheral Component Interconnect.
RPM	Red Hat* Package Manager.
SATA	Serial ATA. A computer bus technology for connecting hard drives and other devices.
SDR	Sensor data record.
SEL	System event log.
SLES*	SUSE Linux Enterprise Server*.
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*.