Intel® System Information Retrieval Utility

User Guide

This User Guide serves as a reference document providing instruction on the use of Intel's *System Information Retrieval (Sysinfo) Utility*.

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Intel Server Boards and Systems

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Document Revision History

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1 Introduction

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

The Utility is available in versions for different platforms, i.e. UEFI, Windows*, and Linux*.

1.1 Document Scope

This User Guide describes the utility's features and provides installation instruction including requirements for platforms and installation procedures. It also serves as a reference document provides instruction on the use of the utility.

Features and commands described in this document apply to the following *Intel® System Information Retrieval Utility* (Sysinfo) revisions:

14.0

The Intel® System Configuration Utility (SYSCFG) is only supported on the following Intel Server products:

- Intel® Server Board based on Intel® Xeon® processor E5-1600/2600/4600 v2 product family
- Intel® Server Board based on Intel® Xeon® processor E5-2400 v2 product family
- Intel® Server Board based on Intel® Xeon® processor E5-2600 v3/v4 product family
- Intel® Server Board based on Intel® Xeon® processor E3-1200 v2/v3/v4 product family
- Intel® Server Board based on Intel® Xeon® processor E3-1200 v5 product family
- Intel® Server Board based on Intel® Xeon® Phi™ product family

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

1.2 Overview

The *Intel® System Information Retrieval Utility* collects the following 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 (aka drivers)

- List of Software Installed

- Operating System Event Log

- PCI Bus Device Information

- RAID settings and RAID log

- BIOS Settings (per BIOS SETUP F2 Screen)

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 2.

1.3 Supported Operating System/Platforms

Intel® System Information Retrieval Utility is available in versions for different platforms, i.e. UEFI, Windows*, Linux*. The following table summarizes the Operating Systems and platforms that each utility revision supported.

Table 1. Supported Operating Systems

Platforms	Sysinfo utility version	Operating Systems/Preboot environment supported
• Intel® Server Board based on Intel® Xeon® processor E5-1600/2600/4600 v2 product family • Intel® Server Board based on Intel® Xeon® processor E5-2400 v2 product family • Intel® Server Board based on Intel® Xeon® processor E5-2600 v3/v4 product family • Intel® Server Board based on Intel® Xeon® processor E3-1200 v2/v3/v4 product family • Intel® Server Board based on Intel® Xeon® processor E3-1200 v5 product family • Intel® Server Board based on Intel® Xeon® Phi™ product family	14.0	EFI shell Windows 2016 (EM64T) Windows* Server 2012 Enterprise (32bit & EM64T) Windows Server 2012 R2 EM64T Windows Server 2008 Enterprise (32bit & EM64T) Windows Server 2008 R2 SP1 EM64T Windows Server 2003 Enterprise (32 bit SP2 & EM64T SP2) Windows 7 (32bit & EM64T) for Work Station SKU's Windows PE 2.0 – built from Windows Vista, 32 bit Windows PE 2.1 – built from Windows Vista SP1 or Windows Server 2008, EM64T) Windows PE 3.x (32bit & EM64T) Windows PE 4.x (32bit & EM64T) RHEL*6.x and 7.x (32 bit & EM64T) CentOS* 6.x (32 bit & EM64T) SuSE* 11 SP1/SP2/SP3 and 12.x (32 bit & EM64T)

1.4 Glossary of Terms

The following table lists the terminology used in this document and the description.

Table 2. Glossary of Terms

Term	Description
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
IPMB	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

1.5 Support Information

World Wide Web

http://support.intel.com/support/

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

2 Install and Uninstall

This section provides instructions on how to install and uninstall the *Intel® System Information Retrieval Utility*.

2.1 UEFI Version

2.1.1 Prerequisites

Download the latest System Firmware Update Package for the platform and install it. Ensure the system is running with the latest platform BIOS, BMC, and FRUSDR.

For the latest System Firmware Update Package, download it from http://support.intel.com.

2.1.2 Utility Installation

This section provides instructions on how to install the *Intel® System Information Retrieval Utility*:

1. Copy the uncompressed ZIP file into your 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 list specifies the type(s) of the system information that 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, Type 2, Type 3, Processor, Memory, Operating System Information)

   - RAID_NVRAMlog.txt (RAID settings and RAID log)

   - PCI_Log.txt (PCI Bus info)

2.1.3 Utility Uninstallation

Remove the folder where sysinfo.efi is located.

2.2 Windows* Version

2.2.1   Prerequisites

Following are the prerequisites to install and use the *Intel® System Information Retrieval Utility*:

- Boot to Windows* 2003 R2 SP2 or Windows* 2008 (32 bit or EM64T) with WMI enabled.
- All RAID drivers for the corresponding platform must be installed. Otherwise, the utility will not display RAID information.
- The system needs to be rebooted after installing memrw driver (run "memrwdinstall.bat") on Windows 2012.

2.2.2   Utility Installation

This section provides instructions on how to install the *Intel® System Information Retrieval Utility*:

1. Copy the compressed ZIP file into your local directory (for example, C:\sysinfo).
2. Unzip the file.
3. Go to the Windows* or WinPE* folder.
4. Install the driver.

   According to OS architecture, go to folder "Drivers\x86" or "Driver\EM64T" folder and run install.bat to install IPMI, SMI, and memory map drivers.

5. Go to the Binaries\ folder.
6. Run sysinfo.exe.

   - For 32&64 bit Windows*, go to the x86\ folder and run sysinfo.exe.
   - For WinPE* 64, go to the EM64T\ folder and run sysinfo.exe.

   The utility collects system information and writes it into five different log files in the LogFiles folder under the current directory. The following list specifies the type(s) of the system information that 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, Type 2, Type 3, Memory, Processor, SATA, IDESCSI, HARD Drive, Operating System Information, Device Manager Information (aka drivers), List of Software Installed, BIOS Settings (per BIOS SETUP F2 Screen))
   - 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   Utility Uninstallation

1. Go to Windows* or WinPE* folder in the main folder.

2. According to OS architecture, go to folder "Drivers\x86" or "Drivers\EM64T".

3. Run uninstall.bat (for uninstalling Sysinfo).

2.3 Linux Version

2.3.1   Prerequisites

Following are the prerequisites to install and use the *Intel® System Information Retrieval Utility*:

*   Boot to Red Hat* Enterprise Linux* 6, SuSE* Linux* Enterprise Server 11 or CentOS* 6.

*   All RAID drivers for the corresponding platform must be installed. Otherwise, the utility will not display RAID information.

*   On RHEL* 6.4 (or above), CentOS* 6.x, UEFI-aware Linux, there might be a driver confliction between internal driver and kernel. User has to start up OpenIPMI driver and make sure "/dev/ipmi0" device is existed.

2.3.2   Utility Installation

This section provides instructions on how to install the *Intel® System Information Retrieval Utility*:

Regular Installation

1. Copy the uncompressed ZIP file into your local directory (for example, /root/sysinfo/).

2. Go to the Linux folder and use "chmod 755" to change executable and script.

3. If there is another version already has been installed previously, uninstall that version with running ./uninstall.sh first before installing the new version.

4. Run ./install.sh command on the shell prompt, to install the Sysinfo components.

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 list specifies the type(s) of the system information that 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, Type 2, Type 3, Processor, Memory, Operating System Information, Device drivers installed, List of S/W installed, BIOS Settings (per BIOS SETUP F2 Screen))

    *   RAID_NVRAMlog.txt (RAID settings and RAID log)

- PCI_Log.txt (PCI Bus info).

- OS_Eventlog.txt (operating System Events)

2.3.3   Utility Uninstallation

This section provides instructions on how to uninstall the *Intel® System Information Retrieval Utility*.

Regular Uninstallation:

1. Run the ./uninstall.sh in Linux folder (depends on Linux distribution).

2. Remove the Linux folder.

3 Using the Intel® System Information Retrieval Utility

This section provides information on how to use the Intel® System Information Retrieval Utility under different OS environments.

3.1 Using UEFI–version Intel® System Information Retrieval Utility

This section details how to use the *Intel® System Information Retrieval Utility* on UEFI.

Command Line Interface

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 Windows-version Intel® System Information Retrieval Utility

This section details how to use the *Intel® System Information Retrieval Utility* on Windows*.

Command Line Interface

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 (sysinfo_log.txt, OS_Eventlog.txt).

  sysinfo.exe

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

  sysinfo.exe –ni

- sysinfo logs SATA and PCI bus information in two log files (SATA_log.txt, PCI_log.txt).

  sysinfo.exe -sata –pci

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

  sysinfo.exe -raid

Important Notes:

- Sysinfo does not log HDD information with backplane installed.

- To collect PCI/SATA info, SIT uses memrwd.sys driver. This driver is not WHQL certified.

- To display sensor information, you need to install Intel IMB driver (if only Microsoft* IPMI driver 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 Linux-version Intel® System Information Retrieval Utility

This section details how to use the *Intel® System Information Retrieval Utility* on Linux*.

Command Line Interface

./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 (sysinfo_log.txt, PCI_log.txt, OS_Eventlog.txt).

  ./sysinfo

- sysinfo logs system information in three log files in the LogFiles folder under the current directory (sysinfo_log.txt, PCI_log.txt, OS_Eventlog.txt) in a non-interactive way.

  ./sysinfo -ni

- sysinfo logs system information in four log files in the LogFiles folder under the current directory (sysinfo_log.txt, RAID_NVRAMlog.txt, PCI_log.txt, OS_Eventlog.txt).

  ./sysinfo -raid

- sysinfo logs system information in three log files to the specified output folder (sysinfo_log.txt, PCI_log.txt, OS_Eventlog.txt).

  ./sysinfo [Directory name]