System Event Log (SEL) Viewer User Guide

For Extensible Firmware Interface (EFI) and Microsoft Preinstallation Environment

Part Number: E12461-001

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System Event Log (SEL) Viewer User Guide

Preface

About this Manual

Thank you for purchasing and using Intel® Server Boards. This version of the utility supports the Intel Server Board S7000FC4UR.

This manual is written for system technicians who are responsible for troubleshooting, upgrading, and reparing this server board. The System Event Log (SEL) Viewer is used to display, clear, or save the SEL log on your server. For the latest information on your server, refer to http://support.intel.com/support/motherboards/server/.

Manual Organization

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1. Introduction

The Baseboard Management Controller (BMC) records details about system events in a log in flash memory. Each SEL entry records a single system event.

This version of the SEL Viewer utility runs on the target server in the Extensible Firmware Interface (EFI) v1.1 shell or in a Microsoft* Windows* Preboot Environment version 2005 (released with Microsoft Windows Server 2003 SP1 and Windows XP SP2) command window. The utility displays the SEL records in either a plain text or HEX format.

2. Using the SEL Viewer

Installing the SEL Viewer

To install the SEL Viewer Utility in EFI, do the following:

1. Copy all the files in the SEL Viewer release directory for EFI to a USB flash drive, or create an EFI-bootable CD.

2. Insert the removable media into the server.

3. Boot the server and press the F2 key when prompted to enter BIOS setup.

4. Go to the Boot Manager menu and select the option to boot to EFI shell.

5. At the EFI shell prompt, type fsn: , where n is the filesystem number corresponding to the device that contains the SEL Viewer utility files.

For Windows PE users, refer to Intel® Server Configuration Utilities Deployment Procedure for Windows PE 2005 for setup and installation instructions.

Launching the SEL Viewer

To launch the SEL Viewer in EFI, do the following:

1. Boot to EFI.

2. From the directory containing the SEL viewer files, launch the SEL viewer from the EFI shell using the following syntax:

   `selview [/clear | {/save [`_filename_**`] [/hex]} | /h | /?]`**

   Note: a hyphen (-) may be susbstituted for the forward slash (/).

   Examples:

   `selview`
   (This launches the graphical version of the SEL viewer.)

   `selview /clear`

   `selview /save MyFileName /hex`

   `selview /h`

To launch the SEL Viewer in Windows Preboot Environment, do the following:

1. Create a Winodws Preboot Environment boot disk.

2. Boot to Windows Preboot Environment.

3. From the directory containing the SEL viewer files, launch the SEL viewer from the Windows command window using the following syntax:

```
Selview [/clear | {/save [filename] [/hex]} | /h | /?]
```

Note: a hyphen (-) may be susbstituted for the forward slash (/).

Examples:

```
Selview
```
(This launches the graphical version of the SEL viewer.)

```
selview /clear
```

```
selview /save MyFileName /hex
```

```
selview /h
```

Viewing SEL records

1. Launch the SEL Viewer.

2. The graphical display will display all the SEL entries. The following example shows the text view.

The bottom information pane shows the details on the highlighted SEL entry. Use the arrow keys to move up and down, or the Tab key to highlight a menu. Use the **View** menu to choose how the SEL entries are displayed (raw hexadecimal format or plain text). The abbreviations used in the raw Hex display are shown below.

Acronym	Description
RID	Record ID
RT	Record Type
TS	Time Stamp

Acronym	Description
GID	Generator ID
ER	Event Message Format Revision
ST	Sensor Type
SN	Sensor Number
EDIR	Event Dir and Event Type
ED1, ED2, ED3	Event Data
MID	Manufacturer ID
OEM	OEM Defined

The following screen shows and example of the SEL log in Hex format.

```
══════════════ SEL Viewer Ver 1.4.3 Build 1 (Beta 1) ══════════════
 File  SEL  View  Help

RID:[04][00] RT:[02] TS:[9C][BD][07][0A] GID:[20][00] ER:[04] ST:[10] SN:[09]
RID:[18][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[2C][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[40][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[54][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[68][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[7C][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[90][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[A4][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[B8][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[CC][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[E0][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[F4][00] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[08][01] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[1C][01] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]
RID:[30][01] RT:[02] TS:[A9][BD][07][0A] GID:[21][00] ER:[04] ST:[0F] SN:[06]


RID:[04][00] RT:[02] TS:[9C][BD][07][0A] GID:[20][00] ER:[04] ST:[10] SN:[09]
 EDIR:[6F] ED1: [42] ED2: [0F] ED3: [FF]

 Use arrow keys and <Enter> to select from menu.
```

Saving the SEL to a file

You may want to save the SEL to a file for analysis, record keeping, or to documentation of a system issue. There are two ways to save the SEL to a file (the Windows Preboot Environment version is shown in this example):

- Use the command line syntax: **selview /save** *MyFileName* [**/hex**]

- Use the **File | Save** menu option from the graphical SEL viewer window.

Viewing the SEL from a file

To view the SEL records that you previously saved to a file, use the **File | Open** menu option from the graphical SEL viewer window.

To return to viewing the SEL records from non-volatile memory, use the **SEL | Reload** menu option.

Checking the space available in the SEL

To check the available space for SEL records, use the **SEL | Properties** menu option from the graphical SEL viewer window. The SEL viewer will display the Free Space Remaining in bytes.

```
╔══════════════════ SEL Properties ══════════════════╗
║                                                     ║
║  IPMI Version         : 2.0                         ║
║  Number of Entries    : 114                         ║
║  Last Add Time        : Pre-Init Time Stamp         ║
║  Last Erase Time      : Pre-Init Time Stamp         ║
║  Free Space Remaining : 63252                       ║
║                                                     ║
║                  ▶ OK ◀                             ║
║                                                     ║
╚═════════════════════════════════════════════════════╝
```

Clearing the SEL

The SEL has a limited capacity. Refer to the Specifications in your server board Product Guide for the maximum number of records for server. After the SEL is full, subsequent system events will not be recorded and you will need to manually clear the SEL. There are two ways to Clear the SEL (the Windows Preboot Environment version is shown in this example):

- Use the command line syntax: **`selview /clear`**

- Use the **SEL | Clear** menu option from the graphical SEL viewer window.

Getting additional help

If you need help on the command line syntax or any of the graphical menu items that are not described in this User Guide, use the online help. There are two ways to get help (the Windows Preboot Environment version is shown in this example):

- Use the command line syntax: **`selview /help`**

- Use the **Help** menu option from the graphical SEL viewer window.

Appendix A.   Exit Error Codes

The command line version of the SEL Viewer may be used in a script to automate the tasks of saving the SEL, clearing the SEL, or searching the SEL. The following list of exit codes may be useful in the error handling section of the script.

Integer Value	Interpretation
0	Successful termination
1	Unable to clear SEL
2	SEL log is empty
3	Unable to read SEL entries
4	Unable to create SEL file
5	Invalid invocation
6	IPMI Driver initialization failed
7	String file not found or unable to read string file
8	Unable to read string file
9	Unable to initialize SEL Viewer
10	Unknown error