Intel® System Configuration Utility

User Guide

This User Guide serves as a reference document providing instruction on the use of Intel's System Configuration (SYSCFG) Utility.
Document Revision History

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<thead>
<tr>
<th>Date Published</th>
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</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>
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# Table of Contents

1 Introduction ........................................................................................................................................... 1

1.1 Operating Systems Supported ........................................................................................................... 2

1.2 Target Audience ................................................................................................................................. 2

1.3 Reference Documents ......................................................................................................................... 3

1.4 Glossary of Terms ............................................................................................................................... 3

1.5 Support Information .......................................................................................................................... 3

2 Using the Intel® System Configuration (SYSCFG) Utility ........................................................................ 4

3 Quick Start Instructions .......................................................................................................................... 5

3.1 Utility Installation ............................................................................................................................... 5

3.2 Saving a Configuration ....................................................................................................................... 6

3.3 Restoring a Configuration .................................................................................................................. 6

3.4 Displaying Syscfg Help ...................................................................................................................... 7

3.5 Displaying Current BIOS and Firmware Versions ............................................................................. 7

4 Using Commands ................................................................................................................................... 8

4.1 SYSCFG Commands - Quick Reference (Generic, BIOS, and Firmware) ............................................. 8

4.2 Generic Commands/Switches .............................................................................................................. 8

4.2.1 Information (/i) .............................................................................................................................. 8

4.2.2 Quiet (/q) ..................................................................................................................................... 9

4.2.3 Restore (/r) .................................................................................................................................. 9

4.2.4 Save (/s) ...................................................................................................................................... 9

4.2.5 Display (/d) .................................................................................................................................. 10

4.3 BIOS Commands ............................................................................................................................... 11

4.3.1 BIOS Administrator Password (/bap) .......................................................................................... 11

4.3.2 BIOS User Password (/bup) ........................................................................................................ 12

4.3.3 System Boot Order (/bbosys) ..................................................................................................... 12

4.3.4 System Boot Order in detail (/bbosys) ....................................................................................... 13

4.3.5 Configure BIOS Settings (/bcs) .................................................................................................. 14

4.3.6 BIOS Load Default Factory Settings (/bldfs) .............................................................................. 14

4.3.7 BIOS Variable (/bvar) ................................................................................................................ 15

4.3.8 BIOS EFI Secure Boot Settings ................................................................................................. 16

4.3.9 BIOS EFI Secure Boot Key Settings (/securebootkey) ............................................................... 16

4.4 Firmware Commands ........................................................................................................................ 16

4.4.1 Channels (/c) ............................................................................................................................... 16

4.4.2 Clear SEL (/cssel) ....................................................................................................................... 17

4.4.3 Date and Time (/dt) .................................................................................................................... 17

4.4.4 Email Alert Configure (/eac) ...................................................................................................... 17

4.4.5 Email Alert Enable (/eae) ......................................................................................................... 18

4.4.6 Help (/h) ..................................................................................................................................... 18

4.4.7 LAN Alert Configuration (/lac) ................................................................................................. 18

4.4.8 LAN Alert Enable (/lae) ............................................................................................................. 19

4.4.9 LAN Configuration (/lc) .............................................................................................................. 19
<table>
<thead>
<tr>
<th>Appendix B. Saved Firmware Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binary Format</td>
</tr>
<tr>
<td>Appendix A. IPMI Channel Assignments</td>
</tr>
<tr>
<td>4.4.10 LAN Enable (/le)</td>
</tr>
<tr>
<td>4.4.11 LAN Failover Mode (/lfo)</td>
</tr>
<tr>
<td>4.4.12 PEF Configure (/pefc)</td>
</tr>
<tr>
<td>4.4.13 PEF Filter (/peff)</td>
</tr>
<tr>
<td>4.4.14 PEF Policy (/pefp)</td>
</tr>
<tr>
<td>4.4.15 Power Restore Policy (/prp)</td>
</tr>
<tr>
<td>4.4.16 Configure Power Supply Cold Redundancy Setting (/cr)</td>
</tr>
<tr>
<td>4.4.17 Reset BMC (/rbmc)</td>
</tr>
<tr>
<td>4.4.18 Restore Firmware Settings (/rfs)</td>
</tr>
<tr>
<td>4.4.19 Reset Node Manager (/rnm)</td>
</tr>
<tr>
<td>4.4.20 Serial Over LAN (/sole)</td>
</tr>
<tr>
<td>4.4.21 Save BMC debug log</td>
</tr>
<tr>
<td>4.4.22 Save BMC SOL log</td>
</tr>
<tr>
<td>4.4.23 Users (/u)</td>
</tr>
<tr>
<td>4.4.24 User Enable (/ue)</td>
</tr>
<tr>
<td>4.4.25 User Privilege (/up)</td>
</tr>
<tr>
<td>4.4.26 Shutdown Policy Interface (/sdp)</td>
</tr>
</tbody>
</table>
List of Tables

Table 1. Operating Systems Supported ........................................................................................................... 2
Table 2. Glossary of Terms ................................................................................................................................ 3
Table 3. SYSCFG Commands - Quick Reference .......................................................................................... 8
Table 4. Cold Redundancy Configuration Command-line Arguments ................................................................. 23
Table 5. IPMI Channel assignments ................................................................................................................. 27
Table 6. Saved Firmware Settings .................................................................................................................. 28
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1 Introduction

The Intel® System Configuration Utility (SYSCFG) is a command-line utility that can be used to display and/or set a variety of system BIOS and management firmware settings. In addition, the utility can be used to save system settings to or restore them from a file.

This User Guide serves as a reference document describing the utility's features and provides instructions on the use of all supported commands.

Features and commands described in this document apply to the following Intel® System Configuration Utility (SYSCFG) 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 Configuration Utility (SYSCFG) is not intended for and should not be used on any non-Intel server products.

Note: Not all BIOS or management firmware settings can be set using this utility. Refer to the Product Guide for your server board for a complete list of BIOS settings. Refer to IPMI--Intelligent Platform Management Interface Specification, Second Generation, v2.0 for information on the standard management firmware settings.
1.1 Operating Systems Supported

This version of the utility supports the Operating System versions listed in the following table. Refer to the Tested Hardware and Operating System List for your server board to determine which operating systems are supported on your server board.

Table 1. Operating Systems Supported

<table>
<thead>
<tr>
<th>Platforms</th>
<th>System Configuration Utility Version</th>
<th>Operating Systems / Pre-boot Environment Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® processor E5-1600/2600/4600 v2 product family</td>
<td>14.0</td>
<td>EFI Shell</td>
</tr>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® processor E5-2400 v2 product family</td>
<td></td>
<td>Windows 2016 (EM64T)</td>
</tr>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® processor E5-2600 v3/v4 product family</td>
<td></td>
<td>Windows* Server 2012 (32bit &amp; EM64T)</td>
</tr>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® processor E3-1200 v2/v3/v4 product family</td>
<td></td>
<td>Windows Server 2012 R2 (EM64T)</td>
</tr>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® processor E3-1200 v5 product family</td>
<td></td>
<td>Windows Server 2008 R2 SP1 EM64T</td>
</tr>
<tr>
<td>• Intel® Server Board based on Intel® Xeon® Phi™ product family</td>
<td></td>
<td>Windows Server 2008 (32bit &amp; EM64T)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Windows Server 2003 (32 bit SP2 &amp; EM64T SP2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Windows 7 (32 bit &amp; EM64T) for work station SKU's</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RHEL*6.x and 7.x (32 bit &amp; EM64T)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CentOS* 6.x (32 bit &amp; EM64T)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SuSE* Linux 11 SP1/SP2/SP3 and 12.x (32 bit &amp; EM64T)</td>
</tr>
</tbody>
</table>

**Note:** SYSCFG version or build may be different across different platforms. Download the supported SYSCFG utility version and build for your server from the Intel support website. Also refer to the utility release notes for all known issues with installation and usage.

1.2 Target Audience

This User Guide is intended for Original Equipment Manufacturers and those who are responsible for configuring the system BIOS and Management Firmware settings on a Intel Server system.
1.3 Reference Documents

The following documents should be referenced for additional support and usage information.

- IPMI—Intelligent Platform Management Interface Specification, Second Generation, v2.0 (available at support.intel.com)
- Server Product Guides for BIOS Setup Options
- Intel® Server Configuration Utilities Deployment Procedure for Windows PE 2005*

1.4 Glossary of Terms

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

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACPI</td>
<td>Advanced Configuration and Power Interface</td>
</tr>
<tr>
<td>ARP</td>
<td>Address Resolution Protocol</td>
</tr>
<tr>
<td>BMC</td>
<td>Baseboard management controller</td>
</tr>
<tr>
<td>CLTT</td>
<td>Closed-loop thermal throttling (memory throttling mode)</td>
</tr>
<tr>
<td>DHCP</td>
<td>Dynamic Host Configuration Protocol</td>
</tr>
<tr>
<td>FRB</td>
<td>Fault resilient booting</td>
</tr>
<tr>
<td>FRU</td>
<td>Field replaceable unit</td>
</tr>
<tr>
<td>I²C</td>
<td>Inter-integrated circuit bus</td>
</tr>
<tr>
<td>IPMI</td>
<td>Intelligent Platform Management Interface</td>
</tr>
<tr>
<td>LAN</td>
<td>Local area network</td>
</tr>
<tr>
<td>MD5</td>
<td>Message Digest 5. A hashing algorithm that provides higher security than MD2.</td>
</tr>
<tr>
<td>ms</td>
<td>Millisecond</td>
</tr>
<tr>
<td>NIC</td>
<td>Network interface card</td>
</tr>
<tr>
<td>NMI</td>
<td>Non-maskable interrupt</td>
</tr>
<tr>
<td>OLTT</td>
<td>Open-loop thermal throttling (memory throttling mode)</td>
</tr>
<tr>
<td>PCI</td>
<td>Peripheral Component Interconnect</td>
</tr>
<tr>
<td>PEF</td>
<td>Platform event filtering</td>
</tr>
<tr>
<td>PIA</td>
<td>Platform information area</td>
</tr>
<tr>
<td>POST</td>
<td>Power-on self-test</td>
</tr>
<tr>
<td>PWM</td>
<td>Pulse Width Modulation. The mechanism used to control the speed of system fans.</td>
</tr>
<tr>
<td>RAM</td>
<td>Random Access Memory</td>
</tr>
<tr>
<td>RAS</td>
<td>Reliability, availability, and serviceability</td>
</tr>
<tr>
<td>ROM</td>
<td>Read-only memory</td>
</tr>
<tr>
<td>RTC</td>
<td>Real-time clock</td>
</tr>
<tr>
<td>SEL</td>
<td>System event log</td>
</tr>
<tr>
<td>SNMP</td>
<td>Simple Network Management Protocol</td>
</tr>
<tr>
<td>SOL</td>
<td>Serial-over-LAN</td>
</tr>
</tbody>
</table>

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 Using the Intel® System Configuration (SYSCFG) Utility

SYSCFG is a command-line scriptable utility that can be used to save and restore BIOS and firmware settings to a file, or to set and display individual BIOS settings. SYSCFG may be used in a script to automate the process of configuring multiple servers. A few commands may not be supported on all platforms due to limitations in the platform firmware/BIOS. The description of each command will describe any limitations.

The general syntax is:

```
syscfg [{/|-}command [arguments]] [...next_command [arguments]]
```

Multiple commands may be specified on a single line unless otherwise noted in the Command Reference description. The maximum line length is 127 characters.

**Note:** This version of the utility can be run from the EFI, Linux*, Windows* command prompt, and the Windows* Pre-installation Environment. Some platforms may not support all the operating environments for this utility.
3 Quick Start Instructions

This section details the quick start instructions for supported operating systems.

3.1 Utility Installation

A. Linux*
   I. Regular Installation:
      i. Boot into Linux* and unzip the SYSCFG utility zip file into a folder on your hard drive. After unzip, RHEL* or SLES* folder will be generated. The Syscfg directory will have the following file:
         • Syscfg.zip
      ii. Unzip the file to get the Syscfg binaries and execute the Syscfg commands.
      iii. To uninstall SYSCFG utility, remove the Syscfg folder structure.

   II. RPM Installation:
      i. Boot into Linux and unzip the SYSCFG utility zip file into a folder on your hard drive. Copy syscfg rpm from Linux*-RPM-package (for RHEL* or SLES*) to a local folder.
      ii. If there is another version already has been installed previously, uninstall that version first before installing the new version.
      iii. Install SYSCFG utility by using rpm -ivh syscfg-Vxx.x-Bxx.ixxx.rpm. This will install the utility in /usr/bin/syscfg/.
      iv. In RHEL*/SLES* after installing the rpm, close the terminal from which rpm was installed and then execute the utility from a new terminal (for example, # syscfg -i).
      v. To uninstall Syscfg, execute the following command: syscfg –e syscfg

B. UEFI
   I. Unzip SYSCFG utility zip file to a USB pen drive. Boot into EFI and change folder to \UEFI_64 which contains:
      • ipmi.efi
      • NShell.efi
      • syscfg.efi
   II. Run Syscfg commands from the location where the files are copied.
   III. To uninstall SYSCFG utility, delete the contents of the directory where the utility is installed.

C. Windows*/WinPE
   I. Copy the SYSCFG utility zip file into your local directory (for example, C:\syscfg).
   II. Unzip the zip file.
   III. The following folders contain Windows* binaries and drivers in C:\syscfg folder.
      • Win_x64
      • Win_x86
      • Drivers
   IV. For 32-bit or EM64T operating system, go to folder SyscfgVxx_0_BuildXX\Drivers\win\x86 or SyscfgVxx_0_BuildXX\Drivers\win\x64 and run install.cmd to install the Intel® Intelligent Management Bus Driver Vxx.x, Intel® 28F320C3 Flash Update Device Driver Vxx.x, and Intel® Intelligent Management Utility Device Vxx.x.
V. From the command prompt go to Win_x64 or Win_x86 folder and run the desired commands for the utility.

VI. To uninstall SYSCFG utility, do the following:
   - Delete the contents of the directory where the utility is installed.
   - Manually uninstall the drivers from the Device Manager.

### 3.2 Saving a Configuration

The utility utilizes a text based .INI file to save and restore BIOS and Management FW settings in both binary and text formats. Being a text based file, available BIOS and Management FW settings can be easily modified and saved using any text editing tool.

To save the BIOS and firmware configuration to a file, do the following:

1. Boot to one of the supported operating systems on the target system.
2. Change directories to the location of the Syscfg executable. (This location must be writable to allow you to save the system configuration.)
3. In Windows*, Windows Pre-installation Environment*, or EFI, type:

   ```
   syscfg /s <filename>.ini
   ```

   In Linux*, type:

   ```
   ./syscfg /s <filename>.ini
   ```

You can use this saved INI file to restore the configuration on this target server or other servers using the /r command.

### 3.3 Restoring a Configuration

The SYSCFG utility supports restoring BIOS and Management FW settings in both binary and text mode using a text based .INI file. In the following scenario, the .INI file does not clone servers, but instead provides a mechanism of configuring the same items with different values per your requirement.

To restore or install a system configuration from a saved .INI file, use the following procedure.

**Note:** For restoring un-editable fields, section name headers and key names should not be edited or deleted from the INI file.

To restore a configuration, do the following:

1. Boot the system to one of the supported operating systems.
2. Change to the directory containing the Syscfg executable. (The saved .INI configuration file should also be located in this directory.)
3. To restore the saved BIOS settings:

   In Windows*, Windows Pre-installation Environment*, or EFI, type:

   ```
   syscfg /r <filename>.ini /b
   ```
In Linux*, type:

`.syscfg /r <filename>.ini /b`

4. On Intel® Server Board Platform, the BIOS administrator password must be supplied.
   a. If the BIOS administrator password is set
      In Windows*, Windows Pre-installation Environment*, or EFI, type:

      `syscfg /r filename.ini /b /bap <BIOS administrator password>`

      In Linux*, type:

      `.syscfg /r filename.ini /b /bap <BIOS administrator password>`

   b. If the BIOS administrator password is not set
      In Windows*, Windows Pre-installation Environment*, or EFI, type:

      `syscfg /r filename.ini /b`

      In Linux*, type:

      `.syscfg /r filename.ini /b`

3.4 Displaying Syscfg Help

To display Syscfg help, type: `syscfg /h`

3.5 Displaying Current BIOS and Firmware Versions

To display the current BIOS and firmware settings, type: `syscfg /i`
4 Using Commands

This section lists the Generic commands-switches, BIOS, and Firmware commands and their tasks.

4.1 SYSCFG Commands - Quick Reference (Generic, BIOS, and Firmware)

The following table lists all the SYSCFG commands classified – as generic, BIOS, and Firmware – for your quick reference.

Table 3. SYSCFG Commands - Quick Reference

<table>
<thead>
<tr>
<th>Generic Commands/Switches</th>
<th>BIOS Commands</th>
<th>Firmware Commands</th>
</tr>
</thead>
<tbody>
<tr>
<td>/d</td>
<td>Display</td>
<td>/lac Channel Configuration</td>
</tr>
<tr>
<td>/i</td>
<td>Information</td>
<td>/lae LAN Alert Enable</td>
</tr>
<tr>
<td>/q</td>
<td>Quiet Mode switch</td>
<td>/le LAN Configuration</td>
</tr>
<tr>
<td>/r</td>
<td>Restore</td>
<td>/lf0 LAN Failover</td>
</tr>
<tr>
<td>/s</td>
<td>Save</td>
<td>/pfe PEF Filter</td>
</tr>
<tr>
<td>/bap</td>
<td>BIOS Administrator Password</td>
<td>/pfe PEF Configure</td>
</tr>
<tr>
<td>/bup</td>
<td>BIOS User Password</td>
<td>/pef PEF Policy</td>
</tr>
<tr>
<td>/bbosys</td>
<td>System Boot Order</td>
<td>/prp Power Restore Policy</td>
</tr>
<tr>
<td>/bbo</td>
<td>System Boot Order in detail</td>
<td>/rbmc Reset BMC</td>
</tr>
<tr>
<td>/bcs</td>
<td>BIOS Configure Setting</td>
<td>/rf0 Restore firmware settings</td>
</tr>
<tr>
<td>/bldfs</td>
<td>BIOS Load Default Factory Settings</td>
<td>/rnm Reset Node Manager</td>
</tr>
<tr>
<td>/bvar</td>
<td>This command creates a new UEFI variable</td>
<td>/sbmdcl Save BMC debug log</td>
</tr>
<tr>
<td>/secureboot</td>
<td>Set EFI Secure Boot status</td>
<td>/sdp Set shutdown policy</td>
</tr>
<tr>
<td>/securebootkey</td>
<td>Set EFI Secure Boot key</td>
<td></td>
</tr>
<tr>
<td>/c</td>
<td>Channels</td>
<td></td>
</tr>
<tr>
<td>/cset</td>
<td>Clear SEL</td>
<td></td>
</tr>
<tr>
<td>/dt</td>
<td>Date and Time</td>
<td></td>
</tr>
<tr>
<td>/eac</td>
<td>Email Alert Configuration</td>
<td></td>
</tr>
<tr>
<td>/eae</td>
<td>Email Alert Enable</td>
<td></td>
</tr>
<tr>
<td>/h</td>
<td>Help</td>
<td></td>
</tr>
<tr>
<td>/ac</td>
<td>LAN Alert Configuration</td>
<td></td>
</tr>
<tr>
<td>/lae</td>
<td>LAN Alert Enable</td>
<td></td>
</tr>
<tr>
<td>/lc</td>
<td>LAN Configuration</td>
<td></td>
</tr>
<tr>
<td>/le</td>
<td>LAN Enable</td>
<td></td>
</tr>
<tr>
<td>/lf0</td>
<td>LAN Failover</td>
<td></td>
</tr>
<tr>
<td>/u</td>
<td>Users</td>
<td></td>
</tr>
<tr>
<td>/ue</td>
<td>User Enable</td>
<td></td>
</tr>
<tr>
<td>/up</td>
<td>User privilege</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Generic Commands/Switches

4.2.1 Information (/i)

```
syscfg /i [filename.INI]
```

<table>
<thead>
<tr>
<th>Filename</th>
<th>File name for a System Configuration File in the current working directory. If the filename is not specified, the command displays the BIOS and firmware versions of the current system.</th>
</tr>
</thead>
</table>

Display the BIOS and firmware versions of the system or the saved BIOS and firmware settings in a System Configuration File.

Examples:

```
syscfg /i
syscfg /i btp.ini
```
### 4.2.2 Quiet (/q)

```
syscfg options /q
```

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/q</td>
<td>Quiet Mode. This option prevents all output from the command.</td>
</tr>
</tbody>
</table>

Suppress all messages.

Example:
```
syscfg /r /f /b /q
```

### 4.2.3 Restore (/r)

```
syscfg /r [filename.INI] {/f | /b | /f /b}
```

- **Filename**: Filename of the syscfg configuration file in the current working directory. If no filename is specified, the default filename syscfg.ini is used based on the parameter supplied explained in the example below. The filename suffix must be .INI.
- **/f**: Restore the firmware settings. See Appendix B for a list of the settings that are restored.
- **/b**: Restore the BIOS settings. See Appendix B for a list of the settings that are restored.
- **/nobo**: This option is used in conjunction with /r to skip restoring boot order.

Restore the BIOS and firmware settings from an INI file.

Examples:
```
syscfg /r /f /b (default file name is syscfg.ini)
syscfg /r saved.ini /f
syscfg /r myscfg.ini /b /bap kwqt821

syscfg /r ini /f /b (default file name is syscfg.ini)
syscfg /r ini /f /b /nobo (default file name is syscfg.ini)
syscfg /r saved.ini /f
syscfg /r myscfg.ini /b /bap kwqt128
```

**Notes**:
- One or both of the /r and /f options are required.
- If the BIOS Administrator password is set, you must use the /bap command to enter the password.
- The static IP Address assigned by a DHCP server, the BIOS boot order, and other dynamic BIOS settings are not saved or restored.

### 4.2.4 Save (/s)

```
syscfg /s [filename.INI] {/f | /b | /f /b}
```

- **Filename**: File name to be used for the syscfg configuration file in the current working directory. If no filename is specified, the default file name syscfg.ini is used based on the parameter supplied explained in the example below. The filename suffix must be .INI; if omitted, syscfg will add the .INI suffix. The filename should consist of only alphanumeric characters.
- **/f**: Save the firmware settings. See Appendix B for a list of the settings that are saved.
- **/b**: Save the BIOS settings. See Appendix B for a list of the settings that are saved.

Save the BIOS and firmware settings to an INI file.
Examples:

```
syscfg /s /f /b (default file name is syscfg.ini)
syscfg /s saved.ini /f
```

```
syscfg /s ini /f /b (default file name is syscfg.ini)
syscfg /s saved.ini /b
```

Notes:
- Save/Restore process following the INI file is not a means for exact cloning between the servers; it is a means to clone a subset of BIOS/FW configurable settings and duplicate those settings in the deployed servers.
- Save and restore of Host IP, Subnet Mask, Default Gateway IP, and Backup Gateway IP is not supported on Intel® Server Board Platform.

### 4.2.5 Display (/d)

```
syscfg /d {CHANNEL Channel_ID | BIOS | BIOSSETTINGS {[group] BIOS_Group_Name BIOS_Setting_Name [BIOS_Setting_Name...] | [individual] BIOS_Setting_Name [BIOS_Setting_Name...] } | LAN Channel_ID LAN_Alert_Destination_Index | POWER | PEF Filter_Table_Index [Policy_Table_Index] | SOL Channel_ID | USER User_ID [Channel_ID] | FWADVCFG Channel_ID [User_ID SMTP_Configuration_Index] | SDP | SECUREBOOT }
```

<table>
<thead>
<tr>
<th>CHANNEL Channel_ID</th>
<th>Displays the BMC Channel configuration for the specified channel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel_ID</td>
<td>IPMI Channel ID.</td>
</tr>
<tr>
<td>BIOS</td>
<td>Displays the current values of the BIOS settings that can be configured with this utility (except the Administrator and User passwords).</td>
</tr>
<tr>
<td>BIOSSETTINGS</td>
<td>Displays values of a subset of the BIOS settings. The arguments that follow this keyword are used to select the BIOS settings to display.</td>
</tr>
<tr>
<td>group</td>
<td>Selects the BIOS Settings based on the name of the group in BIOS Setup. If both group and individual keywords are omitted, the default is individual.</td>
</tr>
<tr>
<td>individual</td>
<td>Selects the individual BIOS Settings anywhere in BIOS Setup. If two or more settings have the same name, the first setting found in BIOS Setup is displayed.</td>
</tr>
<tr>
<td>BIOS_Group_Name</td>
<td>The name of the page in the BIOS Setup screen. Refer to the Technical Product Specification for your server board for the BIOS Setup screen names.</td>
</tr>
<tr>
<td>BIOS_Setting_Name</td>
<td>The name of the BIOS settings on the BIOS Setup screen. Refer to the Technical Product Specification for your server board for the BIOS Setup setting names.</td>
</tr>
<tr>
<td>LAN</td>
<td>Displays the BMC LAN channel configuration. The operating system settings may be different.</td>
</tr>
<tr>
<td>POWER</td>
<td>Displays the power restore policy.</td>
</tr>
<tr>
<td>PEF</td>
<td>Displays the Platform Event Filters.</td>
</tr>
<tr>
<td>SOL</td>
<td>Displays the Serial Over LAN settings.</td>
</tr>
<tr>
<td>USER</td>
<td>Displays the BMC user settings.</td>
</tr>
<tr>
<td>Channel_ID</td>
<td>IPMI Channel ID.</td>
</tr>
<tr>
<td>LAN_Alert_Destination_Index</td>
<td>Enter the LAN Alert Destination Index.</td>
</tr>
<tr>
<td>Filter_Table_Index</td>
<td>Enter the Filter Table Index.</td>
</tr>
<tr>
<td>Policy_Table_Index</td>
<td>Enter the PEF Policy Table Index.</td>
</tr>
<tr>
<td>User_ID</td>
<td>Enter an integer between 1 and n, where n is the number of users supported by the platform for the BMC User ID. User ID 1 is the anonymous user (no password).</td>
</tr>
<tr>
<td>FWADVCFG</td>
<td>Displays the advanced firmware settings for the channel, users, and SMTP configuration.</td>
</tr>
<tr>
<td>Channel_ID</td>
<td>IPMI Channel ID.</td>
</tr>
<tr>
<td>User_ID</td>
<td>BMC User ID. When used with the FWADVCFG keyword, the configuration information is displayed for the user.</td>
</tr>
</tbody>
</table>
### SMTP Configuration Index
Specifies the SMTP configuration in the firmware email alerting tables.

### SDP
Display the current shutdown policy in the system.

### SECUREBOOT
Display the current EFI secure boot status.

Display the specified BMC and BIOS settings.

**Examples:**

```plaintext
syscfg /d channel 1
syscfg /d lan 1 2
syscfg /d pef 2 1
syscfg /d BIOSSETTINGS individual “Quiet Boot”
syscfg /d BIOSSETTINGS “Set Fan Profile”
syscfg /d BIOSSETTINGS group “Main” “Quiet Boot” “POST Error Pause”
syscfg /d biossettings group “system acoustics and performance configuration” “Set throttling mode” “Altitude” “Set fan profile”
syscfg /d FWADVCFG 3 2 1
syscfg /d sdp
syscfg /d secureboot
```

**Note:** The SYSCFG utility on Intel® S1200V3RP Server Board product family does not support to use /d BIOS option.

### 4.3 BIOS Commands

This section lists the BIOS Commands.

#### 4.3.1 BIOS Administrator Password (/bap)

```
syconfig /bap {old_password | ""} [new_password | ""]
```

- **old_password**
- **new_password**

The password should be a minimum of 8 characters and maximum 14 characters in length. The password can have characters alphanumeric (a-z, A-Z, 0-9) and the following special characters: `! @ # $ % ^ * ( ) - _ + = ? '` which are case insensitive. Use two double quotes (""") to represent a null password.

To set or clear the BIOS Administrator password, you must enter the old password, if set, or the null string if the Administrator password is currently not set, before entering the new password. Enter a null string for the new password to clear the password.

The Administrator password controls access to all BIOS Setup fields including the ability to clear the User password. If only one password (Administrator or User) is set, then this password is required to enter Setup. You can change any other BIOS option using Syscfg by providing the Administrator password. You may combine the /bap and /bup commands to set both the BIOS Administrator and User passwords at the same time.

Refer to the product guide for your Intel® Server Board for more information on BIOS Setup options.

**Examples:**

```plaintext
syscfg /bap "" admin@123
syscfg /bap admin@123 superuser@123
```
Notes: The Set BIOS User Password (/bup) option (described in the following section) can only be used if the system has a valid Administrator password set. Clearing the BIOS Administrator password will also clear the User password.

### 4.3.2 BIOS User Password (/bup)

**syscfg /bup {admin_password | ""} {old_user_password | ""} [new_user_password | ""]**

<table>
<thead>
<tr>
<th>admin_password</th>
<th>You must enter the BIOS admin password, if set, or the null string if the password is currently not set.</th>
</tr>
</thead>
<tbody>
<tr>
<td>old_user_password,</td>
<td>The password should be a minimum of 8 characters and maximum 14 characters in length. The</td>
</tr>
<tr>
<td>new_user_password</td>
<td>password can have characters alphanumeric (a-z, A-Z, 0-9) and the following special characters:</td>
</tr>
<tr>
<td></td>
<td>which are case insensitive. Use two double quotes (&quot;&quot;) to represent a null password.</td>
</tr>
</tbody>
</table>

To set or clear the BIOS User password, you must enter the old password, if set, or the null string if the User password is currently not set, before entering the new password. Enter a null string for the new password to clear the password.

The User password controls access to modify the following BIOS Setup fields: time, date, language, and User password. If only one password (Administrator or User) is set, then this password is required to enter Setup. You can change the user password by providing the administrator password as explained below.

Refer to the product guide for your Intel® Server Board for more information on BIOS Setup options.

Examples:

```
syscfg /bup superuser@123 "" user@123
syscfg /bup superuser@123 user@123 newuser@123 ""
syscfg /bup superuser@123 newuser@123
syscfg /bup "" "" user?123 in this example the admin password is "" (not set)
```

Notes:
- The /bup option can only be used if system has a valid Administrator password set. Clearing the Administrator password will also clear the User password.
- User password cannot be the same as administrator password.

### 4.3.3 System Boot Order (/bbosys)

**syscfg /bbosys [device_number [device_number [...]]]**

<table>
<thead>
<tr>
<th>device_number</th>
<th>The current ordinal number of the system boot device. (1 is the first device, 2 is the second device, etc.) To change the order, specify an order for the device numbers (for example, if you specify &quot;2 1 4 3&quot; then the second boot device will be the first boot device after the command is executed.</th>
</tr>
</thead>
</table>

Refer to the product guide for your Intel® Server Board for more information on BIOS Setup options.

Examples:

```
syscfg /bbosys
1: PS-SONY CD-ROM CDU5221
2: 1st floppy drive
3: PM-WDC WD400BB-23FRA0
4: EFI Boot Manager
```

Examples of how to set the BIOS boot order:
If the BIOS administrator password is not set, use:

```
syscfg /bbosys admin@123 2 1 3 4
```

4.3.4 System Boot Order in detail (/bbo)

The /bbo switch will display elaborate information of all boot devices present in the system under different groups or classifications.

Display the detailed boot device information.

Examples:

```
syscfg /bbo
Number of boot devices = 7
=================================
Boot Device Priority
-----------------------
:: Local Hard Disk Boot Devices (HDD) ::
========================================
1: KingstonDataTraveler 2.01.00
2: Secondary Master Hard Disk
3: JetFlashTranscend 8GB 8.07
:: CD/DVD Boot Devices (DVD) ::
=================================
1: Primary Master CD-ROM
:: Network Boot Devices (NW) ::
================================
1: IBA GE Slot 0100 v1327
2: IBA GE Slot 0101 v1327
:: EFI Boot Devices (EFI) ::
=================================
1: Internal EFI Shell
```

Examples of how to set the detailed system boot order:

```
syscfg /bbo "admin@123" EFI NW DVD HDD
syscfg /bbo "admin@123" NW 2 1
```

If the Administrator password is not set, use:

```
syscfg /bbo "" EFI NW DVD HDD
syscfg /bbo "" NW 2 1
```

Notes:

- Reordering boot devices using /bbo should be followed by a system reset as per IPMI spec. Otherwise an immediate display command using /bbo switch may not display the correct boot device order.
- The /bbo command cannot be cascaded.
  For example, the following commands are valid:
  `syscfg /bbo HDD 3 2 1`
  `syscfg /bbo NW 2 1`
  The following command is not valid:
### 4.3.5 Configure BIOS Settings (/bcs)

`syscfg /bcs [admin_password] [BIOS_Group_Name] BIOS_Setting_Name Value [BIOS_Setting_Name Value [...] ]`

<table>
<thead>
<tr>
<th>admin_password</th>
<th>You must enter the BIOS admin password, if set, or the null string if the password is currently not set.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS_Setting_Name</td>
<td>The name of the BIOS settings on the BIOS Setup screen. Refer to the Technical Product Specification for your server board for the BIOS Setup setting names.</td>
</tr>
<tr>
<td>BIOS_Group_Name</td>
<td>The name of the page in the BIOS Setup screen. Refer to the Technical Product Specification for your server board for the BIOS Setup screen names.</td>
</tr>
<tr>
<td>Value</td>
<td>The value for the BIOS Setting.</td>
</tr>
</tbody>
</table>

Set the value of individual BIOS Settings.

Refer to the Technical Product Specification for your Intel® Server Board for more information on BIOS Setup options.

Examples of how to configure BIOS settings:

```
syscfg /bcs "admin@123" "Quiet Boot" 0
syscfg /bcs "admin@123" "Main" "Quiet Boot" 0 "POST Error Pause" 1
syscfg /bcs "admin@123" "system acoustic and performance configuration" "Set throttling mode" 2 "Altitude" 900 "Set fan profile" 2
```

When the BIOS administrator is not set, use:

```
syscfg /bcs "" "Quiet Boot" 0
syscfg /bcs "" "Main" "Quiet Boot" 0 "POST Error Pause" 1
syscfg /bcs "" "system acoustic and performance configuration" "Set throttling mode" 2 "Altitude" 900 "Set fan profile" 2
```

Use the `syscfg /d biossettings` command to show the possible values for the BIOS Setting. For example:

```
syscfg /d biossettings group "Main" "Quiet Boot"
```

**Notes:**

- The SYSCFG utility does not support configuring “BMC Configuration” under BIOS “Server Management” settings using the switches /bcs or /d biossettings.
- The SYSCFG utility on Intel® S1200V3RP Server Board product family does not support group setting.

### 4.3.6 BIOS Load Default Factory Settings (/bldfs)

`syscfg /bldfs [admin_password ]`

| admin_password | You must enter the BIOS admin password, if set, or the null string if the password is currently not set. |

The /bldfs option requires a reboot to reset the default settings.

Refer to the product guide for your Intel® Server Board for more information on BIOS Setup default settings.

Load the default factory BIOS settings.
Examples:

syscfg /bldfs admin@123

When the BIOS administrator is not set, use:

syscfg /bldfs ""

### 4.3.7 BIOS Variable (/bvar)

**syscfg /bvar [Option][admin_password]**

The command provides BIOS switch to create, modify, or delete a new EFI variable of user choice. It is supported in the versions for Linux*, Windows* and UEFI platform.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin_password</td>
<td>You must enter the BIOS admin password, if set, or the null string if the password is currently not set.</td>
</tr>
</tbody>
</table>
| /bvar create | This command creates a new EFI variable.  
Name: Name of the EFI variable that to be created  
GUID: GUID of the EFI variables  
Data: Data for the variable  
Attributes: Attribute is optional while creating; if not provided it will take an attribute value of 7.  
The command will be successful when the command is executed successfully and the variable is created. However, if a variable with the same name and GUID already exists, the utility will provide an appropriate message. |
| /bvar overwrite | This command will overwrite the data value of an existing EFI variable. Following are the parameters passed to this command:  
Name: Name of the existing variable  
GUID: Optional. However, if the name is not unique, the utility will provide a message for providing GUID as an additional parameter.  
Data: Data to be overwritten |
| /bvar delete | This command will delete an existing EFI variable. The parameters passed are as follows:  
Name: Name of the variable  
GUID: Optional and needed if name is not unique |

**Notes:**

- Take caution before deleting any EFI variable or rewriting the data of an existing variable. Otherwise, this may lead to the system unstable.
- The supported attributes are 3 and 7, while the attributes 0, 1, 2, 4, 5, and 6 are not supported with this switch.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Non-Volatile(NV) + Boot Service Access(BS)</td>
</tr>
<tr>
<td>7</td>
<td>Non-Volatile(NV) + Boot Service Access(BS) + Real Time(RT)</td>
</tr>
</tbody>
</table>

Examples:

syscfg /bvar "admin@123" create testvar 33838512-0BC7-4ba4-98C0-0219C2B61BF9 testvardata  
syscfg /bvar "admin@123" create testvar 33838512-0BC7-4ba4-98C0-0219C2B61BF9 testvardata 3  
syscfg /bvar "admin@123" overwrite testvar testvarnewdata  
syscfg /bvar "admin@123" delete testvar

When the BIOS administrator is not set:

syscfg /bldfs "" create testvar 33838512-0BC7-4ba4-98C0-0219C2B61BF9 testvardata
4.3.8 BIOS EFI Secure Boot Settings

```
syscfg /secureboot [admin_password] [enable/disable]
```

The above command will set EFI secure boot status.

Examples:
- To set EFI Secure Boot status to “disable”:
  ```
syscfg /secureboot “admin@123” disable
  ```
- To set EFI Secure Boot status to “enable”:
  ```
syscfg /secureboot “admin@123” enable
  ```

4.3.9 BIOS EFI Secure Boot Key Settings (/securebootkey)

```
syscfg /securebootkey [admin_password] overwrite [key_name] [key_data_file]
```

The above command will overwrite or append EFI Secure Boot keys. The parameters that “overwrite” command takes are as follows:
- Key_name: name of the key user want to update, such as “PK”, “KEK”, “db” and “dbx”.
- Key_data_file: file path of key data file.

Examples:
If BIOS administrator password is not set, then:
```
syscfg /securebootkey "" overwrite PK key_data_file
```
Configure the BMC channels. Use this command to change a single parameter (selected by the number 1-9).

Examples:

```bash
syscfg /c
syscfg /c 1 1 straight+MD5
syscfg /c 1 7 always /c 1 8 admin
```

**Notes:** The SYSCFG utility on Intel® S1200V3RP Server Board product family does not support serial channels configuration.

### 4.4.2 Clear SEL (/csel)

```bash
syscfg /c/c
```

Clear the System Event Log (SEL).

```bash
syscfg /csel
syscfg /clearSEL
```

### 4.4.3 Date and Time (/dt)

```bash
syscfg /dt /timeofday [admin_password] hh:mm:ss mm/dd/yyyy
```

**Examples:**

When BIOS administrator is not set:

```bash
syscfg /dt "" 18:45:00 08/15/2011
```

### 4.4.4 Email Alert Configure (/eac)

```bash
syscfg /eac /emailalertconf SMTP_Configurtion_Index {0|1 | 2 | 3|4|5|6|7} ASCII_String Channel number
```

<table>
<thead>
<tr>
<th>SMTP_Configurtion_Index</th>
<th>1-n. An index into the SMTP configuration table in firmware. The maximum number n depends on the firmware on your server board (refer to your server documentation for details).</th>
</tr>
</thead>
<tbody>
<tr>
<td>{0</td>
<td>1</td>
</tr>
</tbody>
</table>
Example of how to configure the alerting email settings:

```
syscfg /eac 1 1 server2@companyyx.com 1
```

### 4.4.5 Email Alert Enable (/eae)

```
syscfg {/eae | /emailalertenable} Sender_Name Channel _Number
```

<table>
<thead>
<tr>
<th>Sender_Name</th>
<th>Sender machine name. This string identifies the managed server to the SMTP server.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel _Number</td>
<td>Valid LAN channel number.</td>
</tr>
</tbody>
</table>

Example of how to set the sender machine name for SMTP email alerts from the current server.

```
syscfg /eae dupont01 3
```

### 4.4.6 Help (/h)

Display help on the system configuration utility.

```
syscfg {/h | /?} {lan | user | pef | sol | power | channel | system | fwadvcfg | bios}
```

```
lan | user | pef | sol | power | channel | system | fwadvcfg | bios
```

Displays help in the specified area.

Examples of how to get help of LAN and POWER configuration:

```
syscfg /h lan
syscfg /? power
```

### Notes:
- The SYSCFG utility on Intel® S1200V3RP Server Board product family does not support “sol” option.
- In Linux®, to use the /? option, you must enclose it in double quotes.

### 4.4.7 LAN Alert Configuration (/lac)

Configure the LAN Alert destinations for a channel.

```
syscfg {/lac | /lanalertconf} Channel_Id Alert_Destination_Index Alert_Destination_IP_Address {Alert_ID_MAC_Address | “resolve”} {enable | disable} {enable | disable} {1..7} {1..255} {SNMP | SMTP}
```

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>IPMI Channel number.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert_Destination_Index</td>
<td>Index into the Alert Destination table.</td>
</tr>
<tr>
<td>Alert_Destination_IP_Address</td>
<td>IP address of the alert destination in the dot separated decimal value format: n.n.n.n, where n is a number between 0 and 255.</td>
</tr>
<tr>
<td>Alert_ID_MAC_Address</td>
<td>MAC address of the alert destination in the hexadecimal format separated by hyphens: hh-</td>
</tr>
</tbody>
</table>
hh-hh-hh-hh-hh, where h is a hexadecimal value from 0 to F, or “resolve” to automatically resolve the MAC Address.

| enable | disable | Backup Gateway state. |
| enable | disable | Alert Acknowledge state. |
| 1.7    |         | Retry count. |
| 1.255  |         | Retry interval in seconds. |
| SNMP | SMTP    | Alert destination type: SNMP (Simple Network Management Protocol) or SMTP (Simple Mail Transport Protocol). The default is SNMP. |

See IPMI 2.0 Specification for more information.

Example:

```
syscfg /lac 1 1 10.78.211.40 03-FE-02-41-F3 disable disable 0 1 SNMP
```

### 4.4.8 LAN Alert Enable (/lae)

Enable LAN alerting on the specified channel.

**syscfg /lae | /lanalertenable** Channel_ID Gateway_IP_Address {Gateway_MAC_Address | “resolve”} SNMP_Community_String [Backup_Gateway_IP_Address {Backup_Gateway_MAC_Address | “resolve”}]

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>IPMI Channel ID.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway_IP_Address</td>
<td>Gateway IP Address for the specified LAN channel.</td>
</tr>
<tr>
<td>Gateway_MAC_Address</td>
<td>Gateway MAC Address for the specified LAN channel or “resolve” to automatically resolve the MAC Address.</td>
</tr>
<tr>
<td>SNMP_Community_String</td>
<td>Enter the SNMP community string, or the null string (&quot;&quot;).</td>
</tr>
<tr>
<td>Backup_Gateway_IP_Address</td>
<td>Gateway IP Address for the specified LAN channel.</td>
</tr>
<tr>
<td>Backup_Gateway_MAC_Address</td>
<td>Gateway MAC Address for the specified LAN channel or “resolve”.</td>
</tr>
</tbody>
</table>

**Notes:**

- The Gateway_MAC_Address and Backup_Gateway_MAC_Address may optionally be set to “resolve”. If set to “resolve”, SYSCFG will attempt to resolve the MAC address before writing any values to firmware. If the MAC Address resolution fails, SYSCFG quits, without writing, and prints an error message.
- The “resolve” option is not supported across different subnets. Also, use of resolve command is not encouraged.

See IPMI 2.0 Specification for more information.

Examples:

```
syscfg /ae 2 10.110.40.3 03-FE-02-41-F3 public
syscfg /ae 2 10.110.40.3 03-fe-02-41-f3 "" 10.110.40.4 0f-7e-42-4a-33
```

### 4.4.9 LAN Configuration (/lc)

Configure the LAN settings on a specific channel. This option is similar to /lac, but it is used to only configure one parameter at a time. Select the parameter by choosing one of the parameter number listed above (2a, 2b, ..., 16) followed by a value.

**syscfg /lc | /lanconf** Channel_ID (2a {straight | MD5} | 2b {straight | MD5} | 2c {straight | MD5} | 2d {straight | MD5} | 3 IP_Address | 4 {static | DHCP} | 6 IP_Address | 12 IP_Address | 13 MAC_Address | 14 IP_Address | 15 MAC_Address | 16 SNMP_Community_String)

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>IPMI Channel ID (LAN channel).</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a</td>
<td>Selects authentication type for callback privilege level. Multiple privilege levels may be specified by</td>
</tr>
</tbody>
</table>
Channel_ID | IPMI Channel ID (LAN channel).
-------------|--------------------------------------------------
2b | Selects authentication type for user privilege level. Multiple privilege levels may be specified by using the plus sign (see examples below).
2c | Selects authentication type for operator privilege level. Multiple privilege levels may be specified by using the plus sign (see examples below).
2d | Selects authentication type for administrator privilege level. Multiple privilege levels may be specified by using the plus sign (see examples below).
3  | Selects IP Address for the specified LAN channel. (This is not a valid option when the source is set to DHCP.)
4  | Selects source for IP Address
6  | Selects subnet mask. (This is not a valid option when the source is set to DHCP.)
12 | Selects Gateway IP Address. (This is not a valid option when the source is set to DHCP.)
13 | Selects Gateway MAC Address.
14 | Selects Backup Gateway IP Address.
15 | Selects Backup Gateway MAC Address.
16 | Selects Community String.
C7 | Up to a 64-byte ASCII string (printable characters in the range 0x21 to 0x7e) DHCP Host Name String.
102 | IPV6 Enable. Use Enable or Disable to Enable/Disable “IPV6 Enable” parameter.
103 | Selects source for IPV6 IP Address. Values to be used are STATIC, DHCPV6, and AUTO.
104 | Selects IPV6 IP Address for the specified LAN channel. (This is not a valid option when the IPV6 IP source is set to DHCPV6 or AUTO.) Format is xxxx.xxxx.xxxx.xxxx.xxxx.xxxx.xxxx.xxxx
105 | Selects the IPV6 Prefix Length. (This is not a valid option when the IPV6 IP source is set to DHCPV6 or AUTO.) Prefix length should be from 0 to 128 as per IPv6 spec.
106 | Selects the IPv6 Default Gateway IP. (This is not a valid option when the IPV6 IP source is set to DHCPV6 or AUTO.) Format is xxxx.xxxx.xxxx.xxxx.xxxx.xxxx.xxxx.xxxx

See IPMI 2.0 Specification for more information

Notes:
- The Host IP, Subnet Mask, and Default Gateway IP cannot be set when DHCP is enabled for the LAN channel.
- The Host MAC address cannot be set for any LAN channel in ESB2 BMC.
- The DHCP Host Name is common for all LAN Channels.
- The set DHCP Host name will be used on the next DHCP lease renewal or at the current lease expiration.

Examples:
```
syscfg /lc 1 2b straight+md5
syscfg /lc 1 C7 TestDHCPHostName
syscfg /lc 1 102 ENABLE
syscfg /lc 1 103 AUTO
```

**4.4.10 LAN Enable (/le)**

Configure the LAN channel used by the BMC on the specified channel.
```
syscfg {/le | /lanenable} Channel_ID {dhcp | {static IP_Address Subnet_Mask}}
```

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>BMC LAN Channel ID</th>
</tr>
</thead>
</table>

DHCP Host Name String.
### 4.4.11 LAN Failover Mode (/lfo)

BMC FW provides a LAN failover capability so that the failure of the system HW associated with one LAN link will result in traffic being rerouted to an alternate link.

```
syscfg (/lfo | /lanfailover) {enable | disable}
```

| ENABLE | ENABLE | Enable or Disable LAN Failover |

### 4.4.12 PEF Configure (/pefc)

Globally enable or disable the Platform Event Filters used by the BMC.

```
syscfg (/pefc | /pefconfig) {enable | disable} {none | alert | pdown | reset | pcycle | diagint}
```

```
enable | disable | Global PEF enable.

none | alert | pdown | reset | pcycle | diagint | PEF Action. Enable multiple actions by using a plus sign (+) to concatenate the values. None may not be combined with other options.
"pdown" means power down.
"pcycle" means power cycle.
"diagint" means diagnostic interrupt.
```

See IPMI 2.0 Specification, Chapter 17, for more information on Platform Event Filtering.

Example:

```
syscfg /pefc enable alert+pdown+reset+pcycle
```

**Note:** The SYSCFG utility on Intel® S1200V3RP Server Board product family does not support “diagint” option.

### 4.4.13 PEF Filter (/peff)

Configure the Platform Event Filters used by the BMC on the specified channel. See IPMI 2.0 Specification, Chapter 17, for more information on Platform Event Filtering.

```
syscfg {(/peff | /peffilter) Filter_table_index {enable | disable} {none | alert | pdown | reset | pcycle | diagint} {1..15}}
```

```
Filter_table_index | Index into the PEF filter table for a particular filter.
enable | disable | Enable specified filter.
none | alert | pdown | reset | pcycle | PEF Action. Enable multiple actions by using a plus sign to concatenate
```
the values. None may not be combined with other options.
“pdown” means power down.
“pcycle” means power cycle.

1..15 Policy number. This number maps to the Alert Policy Table. (See also /pefp option.)

Example:
sycfg /peff 3 enable pdown 1 /peff 4 enable pdown 1

### 4.4.14 PEF Policy (/pefp)

Configure the Platform Event Filter policy table used by the BMC on the specified channel.

```
sycfg /pefp | /pefpolicy Policy_table_index {enable | disable} {1..15} {ALWAYS | NEXT_E | STOP | NEXT_C | NEXT_T} Channel_ID Destination_table_index
```

<table>
<thead>
<tr>
<th>Policy_table_index</th>
<th>Policy Table Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>disable</td>
</tr>
<tr>
<td>1..15</td>
<td>Policy number</td>
</tr>
</tbody>
</table>

ALWAYS = Always send an alert to the destination indicated in the policy table entry specified by argument 1.
NEXT_E = If an alert was successfully sent to the previous destination attempted, do not send an alert to the destination indicated in the policy table entry specified in argument 1, but go to the next policy table entry with the same policy number instead.
STOP = If an alert was successfully sent to the previous destination attempted, do not send an alert to the destination indicated in the policy table entry specified in argument 1, and do not process any more policy table entries.
NEXT_C = If an alert was successfully sent to the previous destination attempted, do not send an alert to the destination indicated in the policy table entry specified in argument 1, but go to the next policy table entry with the same policy number but on a different channel.
NEXT_T = If an alert was successfully sent to the previous destination attempted, do not send an alert to the destination indicated in the policy table entry specified in argument 1, but go to the next policy table entry with the same policy number but with a different destination type.

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>IPMI Channel ID for a BMC channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destination_table_index</td>
<td>Destination Table Index</td>
</tr>
</tbody>
</table>

See *IPMI 2.0 Specification*, Chapter 17, for more information on Platform Event Filtering.

Example:
sycfg /pefp 3 enable 1 always 2 3

### 4.4.15 Power Restore Policy (/prp)

Set the power restore policy.

```
sycfg /prp {off | on | restore}
```

<table>
<thead>
<tr>
<th>off</th>
<th>on</th>
<th>restore</th>
<th>Power restore policy</th>
</tr>
</thead>
</table>

See *IPMI 2.0 Specification*, §28.8, for more information on the Set Power Restore Policy IPMI Command.

Example:
sycfg /prp off
4.4.16 Configure Power Supply Cold Redundancy Setting (/cr)

SYSCFG utility provides an option to configure Cold Redundancy settings in the server management firmware. Commands using this option can have the following format:

```
sysecfg {/cr | /coldredundancy} {<Argument 1> <Argument 2>}
```

The table below describes the arguments for this option.

**Table 4. Cold Redundancy Configuration Command-line Arguments**

<table>
<thead>
<tr>
<th>Argument #</th>
<th>Possible Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enable</td>
<td>Disable</td>
</tr>
<tr>
<td>1</td>
<td>Rotation</td>
<td>Enable</td>
</tr>
<tr>
<td>1</td>
<td>Timeout</td>
<td>Timeout value in number of days</td>
</tr>
<tr>
<td>1</td>
<td>Rank</td>
<td>Rank Value</td>
</tr>
</tbody>
</table>

Example 1:

```
sysecfg /cr enable
```

The example above enables the Cold Redundancy feature.

Example 2:

```
sysecfg /cr rotation enable
```

The example above enables the Cold Redundancy Rotation feature.

Example 3:

```
sysecfg /cr timeout 10
```

The example above sets the rotation timeout to 10 days.

Example 4:

```
sysecfg /cr rank "2 1"
```

The example above sets the rank order to 2, 1.

4.4.17 Reset BMC (/rbmc)

Reset the Baseboard Management Controller.

```
sysecfg {/rbmc | resetBMC}
```

Example:

```
sysecfg /rbmc
```
**Note:** Do not issue any Syscfg commands until the BMC initializes (approx. 50sec).

### 4.4.18 Restore Firmware Settings (/rfs)

Restore the factory default Baseboard Management Controller settings.

```
syscfg {/rfs | restorefirmwaresettings}
```

Example:

```
syscfg /rfs
```

**Note:** This command should be followed only by the “Reset BMC” or “AC Power Cycle”. However, do not issue either of the commands until the BMC initializes (approx. 50sec). Unpredictable operation may occur if you do not reset the BMC after this command.

### 4.4.19 Reset Node Manager (/rnm)

Reset the Node Manager (NM).

```
syscfg {/rnm | resetnodemanager}
```

Node Manager (NM) provides a mechanism for the customer to configure multiple power policies on a platform. These policies can have a defined action to “shut down” the platform. If the customer configures a power policy that performs a “shutdown” and the power threshold is set too low, the platform will not boot to the operating system if it is ACPI aware. A utility that runs in the EFI environment (which is not ACPI aware) allows for an in-band recovery mechanism.

Example:

```
syscfg /rnm or syscfg /resetnodemanager
```

### 4.4.20 Serial Over LAN (/sole)

Enable Serial Over LAN (SOL) on the specified LAN channel. See *IPMI 2.0 Specification*, Chapter 26, for more information on IPMI SOL commands.

```
syscfg {/sole | /soleenable} Channel_ID {enable | disable} {user | operator | admin} {9600 | 19200 | 38400 | 115200} {0..7} {0..2550}
```

<table>
<thead>
<tr>
<th>Channel_ID</th>
<th>IPMI Channel ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>disable</td>
</tr>
<tr>
<td>user</td>
<td>operator</td>
</tr>
<tr>
<td>9600</td>
<td>19200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Privilege Level Limit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Baud Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7</td>
</tr>
<tr>
<td>0..2550</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retry count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retry interval in milliseconds, rounded to the nearest 10 ms</td>
</tr>
</tbody>
</table>

Serial Baud Rate is not supported.

Example:

```
syscfg /sole 1 Enable Operator 6 200
```
4.4.21 Save BMC debug log

SYSCFG utility provides an option to save BMC debug log to a ZIP file for system diagnostics purpose.

\[ \text{syscfg \{\text{/sbmcdl | /savebmcdebuglog\} [\text{Public}] [\text{filename}]}} \]

<table>
<thead>
<tr>
<th>Public</th>
<th>Regular System Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filename</td>
<td>Name of the file to save the BMC diagnostics data. The extension should be .zip or .ZIP.</td>
</tr>
</tbody>
</table>

4.4.22 Save BMC SOL log

SYSCFG utility provides an option to save BMC SOL log to a ZIP file for dumping system serial output.

\[ \text{syscfg \{\text{/bmcsol\} [filename]\}} \]

<table>
<thead>
<tr>
<th>Possible Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File name</td>
<td>Name of the file to save the BMC SOL data, the extension should be .zip or .ZIP</td>
</tr>
</tbody>
</table>

Note:
* This feature is only supported on Intel® Server Board S1200SP series.

4.4.23 Users (/u)

Set the user name and password for the specified BMC user.

\[ \text{syscfg \{\text{/u | /user\} User_ID User_name Password}} \]

<table>
<thead>
<tr>
<th>User_ID</th>
<th>User ID. Use a decimal integer in the range [1..n]; the maximum value for n is 5. That is, only five users are supported irrespective of the platforms. User ID 1 is usually the anonymous user.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User_name</td>
<td>BMC User name consisting of up to 16 ASCII characters in the range 0x21 to 0x7e, except &quot;[&quot; and &quot;]&quot;. Use &quot;&quot; to leave user name as anonymous.</td>
</tr>
<tr>
<td>Password</td>
<td>User BMC Password. ASCII string of up to 20 characters.</td>
</tr>
</tbody>
</table>

See IPMI 2.0 Specification for more information on user passwords.

Notes:
* The user names for User 1 (NULL) and User 2 (Root) cannot be changed.
* Duplicate user names are not supported.

Examples:

\text{syscfg /u 3 BobT gofps}  \text{syscfg /u 2 "" ""}

4.4.24 User Enable (/ue)

Enable or disable the BMC user on the specified BMC channel.

\[ \text{syscfg \{\text{/ue | /userenable\} User_ID \{enable | disable\} Channel_ID}} \]

<table>
<thead>
<tr>
<th>User_ID</th>
<th>User ID. Use a decimal integer in the range [1..n], where n is the number of users supported by the platform BMC. User ID 1 is usually the anonymous user.</th>
</tr>
</thead>
<tbody>
<tr>
<td>enable</td>
<td>disable</td>
</tr>
<tr>
<td>Channel_ID</td>
<td>IPMI Channel ID</td>
</tr>
</tbody>
</table>
See *IPMI 2.0 Specification* for more information on user configuration settings.

**Example:**

```bash
syscfg /ue 3 enable 1
```

### 4.4.25 User Privilege (/up)

Enable or disable the BMC user on the specified BMC channel.

**syscfg {/up | /userprivilege} User_ID Channel_ID {callback | user | operator | admin | none} [SOL | Disable]**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User_ID</td>
<td>BMC user ID.</td>
</tr>
<tr>
<td>Channel_ID</td>
<td>BMC channel number.</td>
</tr>
<tr>
<td>callback</td>
<td>user</td>
</tr>
<tr>
<td>SOL</td>
<td>Disable</td>
</tr>
</tbody>
</table>

See *IPMI 2.0 Specification* for more information on user privilege levels.

**Notes:**

- User 2 (Root) privileges cannot be changed.
- Privilege level none is not supported.
- Maximum five users are supported by the utility irrespective of number of users supported in the FW.

**Examples:**

```bash
syscfg /up 1 1 admin
syscfg /up 1 1 admin sol
```

### 4.4.26 Shutdown Policy Interface (/sdp)

This command is used to configure shutdown policy in the server management firmware.

**syscfg /sdp {enable | disable}**

**Examples:**

The example below enables shutdown policy so the server will shut down on a power supply Over Current (OC) or a power supply Over Temperature (OT) event.

```bash
syscfg /sdp enable
```
Appendix A.  IPMI Channel Assignments

The following table lists the IPMI Channel assignments.

Table 5. IPMI Channel assignments

<table>
<thead>
<tr>
<th>IPMI Channel ID</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 1</td>
<td>Baseboard LAN Channel</td>
</tr>
<tr>
<td>Channel 2</td>
<td>Baseboard LAN Channel</td>
</tr>
<tr>
<td>Channel 3</td>
<td>Optional Intel® RMM4 NIC</td>
</tr>
</tbody>
</table>
Appendix B.  Saved Firmware Settings

This section describes firmware settings that are saved and restored with SYSCFG in binary and INI formats.

Binary Format
The following table lists the firmware settings that are saved and restored with SYSCFG in binary formats.

<table>
<thead>
<tr>
<th>Table 6. Saved Firmware Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
</tr>
<tr>
<td>Power Configuration Settings</td>
</tr>
<tr>
<td>LAN Channel Settings</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Note:</td>
</tr>
<tr>
<td>LAN Alert Settings†</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>User Settings</td>
</tr>
<tr>
<td></td>
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<tr>
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</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Platform Event Filter Settings†</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Alert Policies

<table>
<thead>
<tr>
<th>Component</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Over LAN Settings</td>
<td>SOL Enable</td>
</tr>
<tr>
<td></td>
<td>SOL Privilege Level</td>
</tr>
<tr>
<td></td>
<td>SOL Retry Count</td>
</tr>
<tr>
<td></td>
<td>SOL Retry Interval</td>
</tr>
<tr>
<td></td>
<td>SOL Baud Rate*</td>
</tr>
<tr>
<td></td>
<td>SOL Authentication Enable</td>
</tr>
<tr>
<td>SMTP Alert Settings</td>
<td>Enable/Disable SMTP</td>
</tr>
<tr>
<td></td>
<td>Sender Machine Name</td>
</tr>
<tr>
<td></td>
<td>From Address</td>
</tr>
<tr>
<td></td>
<td>To Address</td>
</tr>
<tr>
<td></td>
<td>Subject Line</td>
</tr>
<tr>
<td></td>
<td>User Name</td>
</tr>
<tr>
<td></td>
<td>User Password</td>
</tr>
<tr>
<td></td>
<td>Server Address</td>
</tr>
<tr>
<td></td>
<td>Message Content</td>
</tr>
<tr>
<td></td>
<td>LAN Alert Destination/SNMP Alert Index Mapping</td>
</tr>
</tbody>
</table>

**Note:** SOL Baud Rate is not supported.

---

### Sample <filename>.INI File

The following is for reference purposes only. The content and settings of the .INI file for different server systems may differ from those shown below.

Instructions for editing INI file:
- Section Header – must not be edited – could lead unpredictable behavior.
- Un-editable fields have specific instructions.
- Options for the fields are clearly called out – no other options allowed.
- Not all IPMI/BIOS settings under a section will be available – only those that are required for the user to configure.
- The section headers are generated automatically depending on the platform and a few sections and fields may not be available depending on the platform firmware and BIOS.

```ini
; Warning!!! Warning!!! Warning!!!
; -----------------------------
; This file has been generated in a system with the BIOS/Firmware
; specifications as mentioned under [SYSTEM] section. Please do not
; modify or edit any information in this section. Attempt to restore
; these information in incompatible systems could cause serious
; problems to the sytems and could lead the system non-functional.
; Note: The file is best seen using wordpad.

[SYSTEM]
BIOSVersion=SE5C600.86B.99.99.x032.072520111118 ; This field should not be edited
FWBootVersion=4 ; This field should not be edited
FWOpcodeVersion=21 ; This field should not be edited
PIAVersion=6 ; This field should not be edited
```
[POWER]
PowerRestorePolicy=ON ; Options: On, Off or Restore

[USERS]
NumberOfUsers=5 ; This field should not be edited

[USERS::USER1]
UserName= ; This field should not be edited
GlobalUserStatus=DISABLE ; Options: Enable or Disable
PrivilegeChl1=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh1=DISABLE ; Options: Enable or Disable
SOLEnableCh1=ENABLE ; Options: Enable or Disable
PrivilegeChl2=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh2=DISABLE ; Options: Enable or Disable
SOLEnableCh2=ENABLE ; Options: Enable or Disable
PrivilegeChl3=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh3=DISABLE ; Options: Enable or Disable
SOLEnableCh3=ENABLE ; Options: Enable or Disable

[USERS::USER2]
UserName=root ; This field should not be edited
GlobalUserStatus=DISABLE ; Options: Enable or Disable
PrivilegeChl1=ADMIN ; This field should not be edited
UserAccessCh1=DISABLE ; This field should not be edited
SOLEnableCh1=ENABLE ; Options: Enable or Disable
PrivilegeChl2=ADMIN ; This field should not be edited
UserAccessCh2=DISABLE ; This field should not be edited
SOLEnableCh2=ENABLE ; Options: Enable or Disable
PrivilegeChl3=ADMIN ; This field should not be edited
UserAccessCh3=DISABLE ; This field should not be edited
SOLEnableCh3=ENABLE ; Options: Enable or Disable

[USERS::USER3]
UserName=test1 ; ASCII printable characters in the range of 0x21 to 0x7E. Max length 16 bytes
GlobalUserStatus=DISABLE ; Options: Enable or Disable
PrivilegeChl1=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh1=DISABLE ; Options: Enable or Disable
SOLEnableCh1=ENABLE ; Options: Enable or Disable
PrivilegeChl2=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh2=DISABLE ; Options: Enable or Disable
SOLEnableCh2=ENABLE ; Options: Enable or Disable
PrivilegeChl3=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh3=DISABLE ; Options: Enable or Disable
SOLEnableCh3=ENABLE ; Options: Enable or Disable

[USERS::USER4]
UserName=test2 ; ASCII printable characters in the range of 0x21 to 0x7E. Max length 16 bytes
GlobalUserStatus=DISABLE ; Options: Enable or Disable
PrivilegeCh1=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh1=DISABLE ; Options: Enable or Disable
SOLEnableCh1=ENABLE ; Options: Enable or Disable
PrivilegeCh2=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh2=DISABLE ; Options: Enable or Disable
SOLEnableCh2=ENABLE ; Options: Enable or Disable
PrivilegeCh3=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh3=DISABLE ; Options: Enable or Disable
SOLEnableCh3=ENABLE ; Options: Enable or Disable

[USERS::USER5]
UserName=test3 ; ASCII printable characters in the range of 0x21 to 0x7E. Max length 16 bytes
GlobalUserStatus=DISABLE ; Options: Enable or Disable
PrivilegeCh1=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh1=DISABLE ; Options: Enable or Disable
SOLEnableCh1=ENABLE ; Options: Enable or Disable
PrivilegeCh2=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh2=DISABLE ; Options: Enable or Disable
SOLEnableCh2=ENABLE ; Options: Enable or Disable
PrivilegeCh3=ADMIN ; Options: User, Operator, Admin, NoAccess
UserAccessCh3=DISABLE ; Options: Enable or Disable
SOLEnableCh3=ENABLE ; Options: Enable or Disable

[PEF]
PEFEnable=ENABLE ; Options: Enable, Disable

[PEF::FILTERS]
Filter1=DISABLE ; Options: Enable, Disable
Filter2=DISABLE ; Options: Enable, Disable
Filter3=DISABLE ; Options: Enable, Disable
Filter4=DISABLE ; Options: Enable, Disable
Filter5=DISABLE ; Options: Enable, Disable
Filter6=DISABLE ; Options: Enable, Disable
Filter7=DISABLE ; Options: Enable, Disable
Filter8=DISABLE ; Options: Enable, Disable
Filter9=DISABLE ; Options: Enable, Disable
Filter10=DISABLE ; Options: Enable, Disable
Filter11=DISABLE ; Options: Enable, Disable
Filter12=DISABLE ; Options: Enable, Disable

[LANCHANNEALS]
NumberOfLANChannels=3 ; This field should not be edited
DHCPHostName=DCMI001E670DD158 ; ASCII printable characters in the range of 0x21 to 0x7E. Max length 64 bytes
LANFailOver=DISABLE ; Options: Enable or Disable

[CHANNEL::LAN1]
AlertEnable=ENABLE ; Options: Enable, Disable
PerMessageAuthentication=ENABLE ; Options: Enable, Disable
UserLevelAuthentication=ENABLE ; Options: Enable, Disable
AccessMode=ALWAYS ; Options: Disable, Always, shared
PrivilegeLevelLimit=ADMIN ; Options: User, Operator, Admin
CommunityString=public ; Upto 16 bytes, no space allowed
ARPEnable=DISABLE ; Options: Enable, Disable
ARPResponse=ENABLE ; Options: Enable, Disable
ARPInterval=0 ; Decimal value between 0 & 255. This values is in milliseconds. Input value rounded down to the nearest 500ms value
DHCPEnable=DISABLE ; Options: Enable or Disable. If ‘Disable’ static IP will be used
HostIP=0.0.0.0 ; This field should not be edited
SubnetMask=0.0.0.0 ; This field should not be edited
GatewayIP=0.0.0.0 ; This field should not be edited
GatewayMAC=00-00-00-00-00-00 ; This field should not be edited
BackupGatewayIP=0.0.0.0 ; This field should not be edited
BackupGatewayMAC=00-00-00-00-00-00 ; This field should not be edited
IPV6Status=DISABLE ; Options: Enable or Disable
AlertIP0=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC0=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form
AlertIP1=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC1=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form

[CHANNEL::LAN2]
AlertEnable=ENABLE ; Options: Enable, Disable
PerMessageAuthentication=ENABLE ; Options: Enable, Disable
UserLevelAuthentication=ENABLE ; Options: Enable, Disable
AccessMode=ALWAYS ; Options: Disable, Always, shared
PrivilegeLevelLimit=ADMIN ; Options: User, Operator, Admin
CommunityString=public ; Upto 16 bytes, no space allowed
ARPEnable=DISABLE ; Options: Enable, Disable
ARPResponse=ENABLE ; Options: Enable, Disable
ARPInterval=0 ; Decimal value between 0 & 255. This values is in milliseconds. Input value rounded down to the nearest 500ms value
DHCPEnable=DISABLE ; Options: Enable or Disable. If ‘Disable’ static IP will be used
HostIP=0.0.0.0 ; This field should not be edited
SubnetMask=0.0.0.0 ; This field should not be edited
GatewayIP=0.0.0.0 ; This field should not be edited
GatewayMAC=00-00-00-00-00-00 ; This field should not be edited
BackupGatewayIP=0.0.0.0 ; This field should not be edited
BackupGatewayMAC=00-00-00-00-00-00 ; This field should not be edited
IPV6Status=DISABLE ; Options: Enable or Disable
AlertIP0=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC0=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form
AlertIP1=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC1=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form

[CHANNEL::LAN3]
AlertEnable=ENABLE ; Options: Enable, Disable
PerMessageAuthentication=ENABLE ; Options: Enable, Disable
UserLevelAuthentication=ENABLE ; Options: Enable, Disable
AccessMode=ALWAYS ; Options: Disable, Always, shared
PrivilegeLevelLimit=ADMIN ; Options: User, Operator, Admin
CommunityString=public ; Upto 16 bytes, no space allowed
ARPEnable=DISABLE ; Options: Enable, Disable
ARPResponse=ENABLE ; Options: Enable, Disable
ARPInterval=0 ; Decimal value between 0 & 255. This value is in milliseconds. Input value rounded down to the nearest 500ms value
DHCPEnable=DISABLE ; Options: Enable or Disable. If 'Disable' static IP will be used
HostIP=0.0.0.0 ; This field should not be edited
SubnetMask=0.0.0.0 ; This field should not be edited
GatewayIP=0.0.0.0 ; This field should not be edited
GatewayMAC=00-00-00-00-00-00 ; This field should not be edited
BackupGatewayIP=0.0.0.0 ; This field should not be edited
BackupGatewayMAC=00-00-00-00-00-00 ; This field should not be edited
IPV6Status=DISABLE ; Options: Enable or Disable
AlertIP0=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC0=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form
AlertIP1=0.0.0.0 ; In xxx.xxx.xxx.xxx form
AlertMAC1=00-00-00-00-00-00 ; In xx-xx-xx-xx-xx-xx form

[CHANNEL::LAN1::SOL]
SOLVEnable=ENABLE ; Options: Enable, Disable
PrivilegeLevelLimit=USER ; Options: Admin, User, Operator
SolNumberOfRetries=7 ; Decimal value in the range 0-7
SolRetryInterval=500 ; Decimal value in the range of 0-2559 rounded down to the nearest unit of 10. In milliseconds
SolBaudRate=38400 ; Options: 9600, 19200, 38400, 57600, 115200. Refer respective platform FW specifications for the supported Baudrates

[CHANNEL::LAN2::SOL]
SOLVEnable=ENABLE ; Options: Enable, Disable
PrivilegeLevelLimit=USER ; Options: Admin, User, Operator
SolNumberOfRetries=7 ; Decimal value in the range 0-7
SolRetryInterval=500 ; Decimal value in the range of 0-2559 rounded down to the nearest unit of 10. In milliseconds
SolBaudRate=38400 ; Options: 9600, 19200, 38400, 57600, 115200. Refer respective platform FW specifications for the supported Baudrates

[CHANNEL::LAN3::SOL]
SOLVEnable=ENABLE ; Options: Enable, Disable
PrivilegeLevelLimit=USER ; Options: Admin, User, Operator
SolNumberOfRetries=7 ; Decimal value in the range 0-7
SolRetryInterval=500 ; Decimal value in the range of 0-2559 rounded down to the nearest unit of 10. In milliseconds
SolBaudRate=38400 ; Options: 9600, 19200, 38400, 57600, 115200. Refer respective platform FW specifications for the supported Baudrates

[EMAILCONFIG]
NumberOfEmailConfig=45 ; This field should not be edited

[EMAILCONFIG::CHANNEL1::INFO]
SenderName= ; ASCII printable character max upto 32 bytes
FromAddress= ; ASCII printable character max upto 32 bytes
ToAddress= ; ASCII printable character max upto 64 bytes
Subject= ; ASCII printable character max upto 32 bytes
SMTPUserName= ; ASCII printable character max upto 16 bytes
Message= ; ASCII printable character max upto 64 bytes
ServerAddress=0.0.0.0 ; In xxx.xxx.xxx.xxx form

[EMAILCONFIG::CHANNEL2::INFO]
SenderName= ; ASCII printable character max upto 32 bytes
FromAddress= ; ASCII printable character max upto 32 bytes
ToAddress= ; ASCII printable character max upto 64 bytes
Subject= ; ASCII printable character max upto 32 bytes
SMTPUserName= ; ASCII printable character max upto 16 bytes
Message= ; ASCII printable character max upto 64 bytes
ServerAddress=0.0.0.0 ; In xxx.xxx.xxx.xxx form

[EMAILCONFIG::CHANNEL3::INFO]
SenderName= ; ASCII printable character max upto 32 bytes
FromAddress= ; ASCII printable character max upto 32 bytes
ToAddress= ; ASCII printable character max upto 64 bytes
Subject= ; ASCII printable character max upto 32 bytes
SMTPUserName= ; ASCII printable character max upto 16 bytes
Message= ; ASCII printable character max upto 64 bytes
ServerAddress=0.0.0.0 ; In xxx.xxx.xxx.xxx form

[BIOS]

[BIOS::Main]
Quiet Boot=1 ;Options: 0=Disabled: 1=Enabled
POST Error Pause=0 ;Options: 0=Disabled: 1=Enabled

[BIOS::Processor Configuration]
Intel(R) Turbo Boost Technology=1 ;Options: 0=Disabled: 1=Enabled
Enhanced Intel SpeedStep(R) Tech=1 ;Options: 0=Disabled: 1=Enabled
Processor C3=0 ;Options: 0=Disabled: 1=Enabled
Processor C6=1 ;Options: 0=Disabled: 1=Enabled
Intel(R) Hyper-Threading Tech=1 ;Options: 0=Disabled: 1=Enabled
Active Processor Cores[1]=0 ;Options: 1=1: 2=2: 3=3: 4=4: 5=5: 6=6: 7=7: 0=All
Execute Disable Bit=1 ;Options: 0=Disabled: 1=Enabled
Intel(R) Virtualization Technology=0 ;Options: 0=Disabled: 1=Enabled
Intel(R) VT for Directed I/O=0 ;Options: 0=Disabled: 1=Enabled
MLC Streamer=0 ;Options: 1=Disabled: 0=Enabled
MLC Spatial Prefetcher=0 ;Options: 1=Disabled: 0=Enabled
DCU Data Prefetcher=0 ;Options: 1=Disabled: 0=Enabled
DCU Instruction Prefetcher=0 ;Options: 1=Disabled: 0=Enabled
Direct Cache Access (DCA)=1 ;Options: 0=Disabled: 1=Enabled
Software Error Recover=0 ;Options: 0=Disabled: 1=Enabled

[BIOS::Memory Configuration]
Memory Operating Speed Selection=0  ;Options: 2=1067: 3=1333: 1=800: 0=Auto
Phase Shedding=1                  ;Options: 1=Auto: 0=Disabled: 1=Enabled
Multi-Threaded MRC=1              ;Options: 0=Disabled: 1=Enabled
Memory Type=2                     ;Options: 0=RDIMMs only: 2=UDIMMs and RDIMMs: 1=UDIMMs only
MPST Support=0                    ;Options: 0=Disabled: 1=Enabled
PCCT Support=0                    ;Options: 0=Disabled: 1=Enabled
ECC Support=1                     ;Options: 0=Disabled: 1=Enabled
Rank Multiplication=0             ;Options: 0=Auto: 1=Enabled
LRDIMM Module Delay=1             ;Options: 0=Auto: 1=Disabled
MemTest=1                         ;Options: 0=Disabled: 1=Enabled
SW MemTest=0                      ;Options: 0=Disabled: 1=Enabled
MemTest On Fast Boot=0            ;Options: 0=Disabled: 1=Enabled
Attempt Fast Boot=0               ;Options: 0=Disabled: 1=Enabled
Scrambling Seed High=54165        ;Options: 65535=Max: 0=Min: 0=Step
Battery Back Ch 2=0               ;Options: 0=Disabled: 1=Enabled
Battery Back Ch 3=1               ;Options: 0=Disabled: 1=Enabled
Check PCH_PM_STS=0                ;Options: 0=Disabled: 1=Enabled
Check PlatformDetectADR=1         ;Options: 0=Disabled: 1=Enabled
Patrol Scrub=1                    ;Options: 0=Disabled: 1=Enabled
Demand Scrub=1                    ;Options: 0=Disabled: 1=Enabled
Correctable Error Threshold[1]=10 ;Options: 10=10: 20=20: 5=5
Correctable Error Threshold[2]=10 ;Options: 10=10: 20=20: 5=5: 1=ALL: 0=None

[BIOS::Memory RAS and Performance Configuration]

[BIOS::Mass Storage Controller Configuration]

[BIOS::PCI Configuration]

Maximize Memory below 4GB=0        ;Options: 0=Disabled: 1=Enabled
Memory Mapped I/O above 4GB=0      ;Options: 0=Disabled: 1=Enabled
Onboard Video=1                    ;Options: 0=Disabled: 1=Enabled
Dual Monitor Video=0               ;Options: 0=Disabled: 1=Enabled
Primary Display=1                  ;Options: 3=Auto: 0=IGFX: 2=PCI Bus: 1=PEG

[BIOS::Serial Port Configuration]

Serial A Enable=1                  ;Options: 0=Disabled: 1=Enabled
Address=1                         ;Options: 4=2E8h: 2=2F8h: 3=3E8h: 1=3F8h
IRQ=0                             ;Options: 4=3: 0=4
Serial B Enable=1                  ;Options: 0=Disabled: 1=Enabled
Address=2                         ;Options: 4=2E8h: 2=2F8h: 3=3E8h: 1=3F8h
IRQ=4                             ;Options: 4=3: 0=4

[BIOS::USB Configuration]

USB Controller=1                   ;Options: 0=Disabled: 1=Enabled
Legacy USB Support=0              ;Options: 2=Auto: 1=Disable
d: 0=Enabled
Port 60/64 Emulation=1             ;Options: 0=Disabled: 1=Enabled
Make USB Devices Non-Bootable=0    ;Options: 0=Disabled: 1=Enabled
Device Reset timeout=1             ;Options: 0=10 sec: 1=20 sec: 2=30 sec: 3=40 sec
HP v190w 3000=0                    ;Options: 0=Auto: 4=CD-ROM: 1=Floppy: 2=Forced FDD: 3=Hard Disk
[BIOS::System Acoustic and Performance Configuration]
Set Throttling Mode=0 ;Options: 0=Auto: 6=DCLTT: 2=OLTT: 3=SCLTT
Altitude=900 ;Options: 300=300m or less: 900=301m - 900m: 1500=901m - 1500m: 3000=Higher than 1500m
Set Fan Profile=1 ;Options: 2=Acoustic: 1=Performance
Fan PWM Offset=0 ;Options: 100=Max: 0=Min: 0=Step

[BIOS::Serial Port Console Redirection]
Console Redirection[2]=1 ;Options: 0=Disabled: 1=Enabled
Console Redirection[4]=0 ;Options: 0=Disabled: 1=Enabled
Out-of-Band Mgmt Port=1 ;Options: 1=COM0: 2=COM1: 3=COM2 (Disabled): 4=COM3 (Disabled)

[BIOS::Security]
Front Panel Lockout=0 ;Options: 0=Disabled: 1=Enabled

[BIOS::Server Management]
Assert NMI on SERR=1 ;Options: 0=Disabled: 1=Enabled
Assert NMI on PERR=1 ;Options: 0=Disabled: 1=Enabled
Reset on CATERR=1 ;Options: 0=Disabled: 1=Enabled
Reset on ERR2=1 ;Options: 0=Disabled: 1=Enabled
Resume on AC Power Loss=2 ;Options: 1=Last State: 2=Power On: 0=Stay Off
Clear System Event Log=0 ;Options: 0=Disabled: 1=Enabled
FRB-2 Enable=1 ;Options: 0=Disabled: 1=Enabled
OS Boot Watchdog Timer=0 ;Options: 0=Disabled: 1=Enabled
Plug & Play BMC Detection=0 ;Options: 0=Disabled: 1=Enabled
EuP LOT6 Off-Mode=0 ;Options: 0=Disabled: 1=Enabled

[BIOS::Console Redirection]
Console Redirection[1]=0 ;Options: 0=Disabled: 1=Serial Port A: 2=Serial Port B
Console Redirection[3]=0 ;Options: 0=Disabled: 1=Serial Port A
Console Redirection[4]=0 ;Options: 0=Disabled: 1=Serial Port A
Console Redirection[5]=0 ;Options: 0=Disabled: 2=Serial Port B

[BIOS::BootOrder]
Hard Drive=1
Network Card=2
Internal EFI Shell=3