Intel® System Configuration Utility

User Guide

Syscfg Version 4.0

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Preface

About this Manual

This document provides is a command reference for version 4.0.x of the System Configuration Utility. This manual is written for Original Equipment Manufacturers who are responsible for configuring the BIOS and management firmware on the following Intel® Server Boards:

- Intel S5000 Series Server Boards (S5000PAL, S5000PSL, S5000VSA, S5000VCL, S5000PHB0)

- Intel S3000 Series Server Boards (S3000AHLX, S3000AH, S3000AHV)

- Intel Server Board X38MLST

- Intel Server Board S3200SH

- Intel Server Board S5400SF

- Intel Server Board S7000FC4UR

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

Platform	System Configuration Utility Version	Supported Operating Systems or Preboot Environment
Intel Server Board S7000FC4UR	4.0.2 or later	EFI version 1.10
		Windows Preboot Execution Environment 2005 (Released with Microsoft Windows Server 2003, Service Pack 1 and Windows XP, Service Pack 2)
		Red Hat Enterprise Linux AS 4 (Intel 64 Architecture edition)
		Red Hat Enterprise Linux AS 5 (Intel 64 Architecture edition)
		Red Hat Enterprise Linux AS 5 (32 bit edition)
		SUSE Linux Enterprise Server 9 (Intel 64 Architecture edition)
		SUSE Linux Enterprise Server 10 (Intel 64 Architecture edition)
Intel Server Board X38MLST	4.0.2 or later	EFI 1.10

Platform	System Configuration Utility Version	Supported Operating Systems or Preboot Environment
		Windows Preinstallation Environment 2005 (Released with Microsoft Windows Server 2003, Service Pack 1 and Windows XP, Service Pack 2)
		RHEL5 (32 bit and Intel 64 Architecture edition)
		SUSE Linux Enterprise Server 10 (32 bit and Intel 64 Architecture edition)
Intel S5000 Series Server Boards and Intel S3000 Series Server Boards	4.0.2 or later	Red Hat Enterprise Linux 4, Update 4 (32-bit x86 Edition only)
		Windows Server 2003 SP1 (32-bit x86 edition only)
		Windows Preinstallation Environment 2005 (Released with Microsoft Windows Server 2003, Service Pack 1 and Windows XP, Service Pack 2)
Intel Server Board S5400SF	4.0.2 or later	Windows Preinstallation Environment 2005 (Released with Microsoft Windows Server 2003, Service Pack 1 and Windows XP, Service Pack 2)
		MSDOS 6.22
		EFI 1.10
		RHEL5 (32 bit and Intel 64 Architecture edition)
		SUSE Linux Enterprise Server 10 (32 bit and Intel 64 Architecture edition)

Platform	System Configuration Utility Version	Supported Operating Systems or Preboot Environment
Intel Server Board S3200SH	4.0.2 or later	EFI 1.10 Windows Preinstallation Environment 2005 (Released with Microsoft Windows Server 2003, Service Pack 1 and Windows XP, Service Pack 2) RHEL5 (32 bit and Intel 64 Architecture edition) SUSE Linux Enterprise Server 10 (32 bit and Intel 64 Architecture edition)

This manual does not cover the ROM DOS version of the System Configuration Utility (v2.0.9). In addition, 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.

Manual Organization

Chapter 1 provides information on how to quickly get started by saving your current settings on one platform and copying them to another (identical) platform.

Chapter 2 provides information on how to run the syscfg.exe utility.

Chapter 3 provides a complete command reference for the utility.

Appendix A is a quick reference that lists the syntax of each command.

Appendix B provides a list of IPMI Channel assignments.

Appendix C provides a list of the BIOS and firmware settings that are saved by the utility.

Related Documentation

IPMI--Intelligent Platform Management Interface Specification, Second Generation, v2.0 (available from support.intel.com)

Server Product Guides for BIOS Setup options

Intel Server Configuration Utilities Deployment Procedure for Windows PE 2005

Syntax Conventions Used in the Manual

The following syntax conventions are used in this document:

{a | b}   Required element. Choose either a or b.

{[a] [b]} One or more optional elements must be selected.

[a | b]   Optional element. You may optionally choose a or b.

XYZ   Type what is shown.

XYZ   Substitute the appropriate value for this element.

[…]   The previous element may be repeated.

1..255   Choose a number in the range from 1 to 255 (decimal).

Contents

1 Quick Start Instructions

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

Save a Configuration

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 Preinstallation Environment, or EFI type: `syscfg /s` *filename*
   In Linux, type: `./syscfg /s` *filename*

The binary file *filename*.scf will contain the saved configuration. You can use this file to restore the configuration on this target server or other servers using the /r command.

Restore a Configuration

If you have already saved a configuration to a file, use the following procedure to restore the system to the saved configuration, or set the configuration on identical servers to the saved configuration. 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 configuration file should also be located in this directory.)

3. To restore the saved BIOS settings in Windows, Windows Preinstallation Environment, or EFI, type: `syscfg /r` *filename.scf* `/b`
   In Linux, type: `./syscfg /r` *filename.scf* `/b`

Syscfg Help

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

Display Current BIOS and Firmware Versions

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

2 Using the System Configuration Utility

Syscfg is a command-line utility that can be used to save and restore BIOS and firmware settings to a file, or to set and display individual settings. Syscfg may be used in a script to automate the process of configuring multiple servers. Some commands may not be supported on all platforms due to limitations in the hardware. 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 EFI, Linux, Windows command prompt, and Windows Preinstallation Environment. Some platforms may not support all the operating environments for this utility.

3 Command Reference

/bap	BIOS Administrator Password	/lgm	LAN Default Gateway MAC Address
/bbo	BIOS Boot Order	/lhi	LAN BMC IP Address
/bcr	BIOS Console Redirection	/lsm	LAN Subnet Mask
/bcs	BIOS Configure Setting	/pefc	PEF Configure
/bht	BIOS Hyper-Threading	/peff	PEF Filter
/bldfs	BIOS Load Default Factory Settings	/pefp	PEF Policy
/bpep	BIOS POST Error Pause	/prp	Power Restore Policy
/bqb	BIOS Quiet Boot	/q	Quiet Mode
/bup	BIOS User Password	/r	Restore
/c	Channels	/s	Save
/csel	Clear SEL	/sc	Serial Configuration
/d	Display	/sds	Serial Dial String
/dt	Date and Time	/se	Serial Enable
/eac	email Alert Configuration	/spc	Serial Page Configuration
/eae	email Alert Enable	/spe	Serial Page Enable
/eam	email Alert Map	/sole	Serial Over LAN Enable
/h or /?	Help	/te	Terminal Enable
/i	Information	/u	Users
/lac	LAN Alert Configuration	/ue	User Enable
/lae	LAN Alert Enable	/un#	User Name
/lc	LAN Configuration	/up#	User Password
/lde	DHCP Enable	/ulcp#	User LAN Privilege Level
/le	LAN Enable	/up	User Privilege
/lgi	LAN Default Gateway IP Address		

BIOS Administrator Password (/bap)

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

old_password
new_password

The maximum length of the password is seven characters. The password cannot have characters other than alphanumeric (a-z, A-Z, 0-9) and is case insensitive. Use two double quotes ("") to represent a null password.

Sets or clears 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. If you set or change the BIOS Administrator password, you cannot change any other BIOS option using syscfg except the BIOS User and Administrator passwords. 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:

```
syscfg /bap "" kwm93a3

syscfg /bap kwm93a9 lqts284

syscfg /bap "" lqts284 /bup "" kwm93a3
```

NOTE

The Set BIOS User Password (/bup) option (described in the following section) can only be used if system has a valid Administrator password set. Clearing the BIOS Administrator password will also clear the User password.

BIOS Boot Order (/bbo)

`syscfg /bbo` [*device_number*[*device_number* […]]]

device_number	The current ordinal number of the BIOS boot device (1 is the first device, 2 is the second device, and so on.). To change the order, specify a order for the device numbers (for example, if you specify "2 1 4 3" then the second boot device will be the first boot device after the command is executed.

Refer to the *Product Guide* for your Intel Server Board for more information on BIOS Setup options.

> **NOTE**
>
> The BIOS will override the /bbo setting for the EFI Boot Manager unless the EFI Boot Manager is the first or last boot device.

Display or set the BIOS boot order.

Examples:

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

syscfg /bbo 2 1 3 4
```

BIOS Console Redirection (/bcr)

```
syscfg /bcr {disable|COM1|COM2}{9600|19200|38400|11520}{none|CTS}{PCANSI|VT100|
VTUTF8}
```

`disable|COM1|COM2`	COM port number.
`9600|19200|38400|11520`	Baud rate options in BIOS Setup.
`none|CTS`	Flow control options in BIOS Setup. (CTS is RTS/CTS)
`PCANSI|VT100|VTUTF8`	Terminal type in BIOS Setup. (PCANSI is PC-ANSI; VT100 is VT100: and VTUTF8 is VT-UTF8)

Enables BIOS serial console redirection.

Refer to the *Product Guide* for your Intel Server Board for more information on BIOS Setup options.

Examples:

```
syscfg /bcr COM1 19200 none VT100
syscfg /bcr disable 19200 none VT100
```

NOTE

If the /bcr option is enabled, the quiet boot option cannot be enabled.

Configure BIOS Setting (/bcs)

`syscfg /bcs` [*BIOS_Group_Name*] *BIOS_Setting_Name Value* [*BIOS_Setting_Name Value* […]]

BIOS_Setting_Name	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.
BIOS_Group_Name	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.
Value	The value for the BIOS Setting.

Set individual BIOS Settings.

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

Examples:

```
syscfg /bcs "Quiet Boot" 0
syscfg /bcs "Main" "Quiet Boot" 0 "POST Error Pause" 1
```

📁 **NOTE**

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

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

BIOS Load Default Factory Settings (/bldfs)

```
syscfg /bldfs
```

Refer to the *Product Guide* for your Intel Server Board for more information on BIOS Setup default settings.

Loads the default factory BIOS settings.

📇 **NOTE**

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

Examples:

```
syscfg /bldfs
```

BIOS Post Error Pause (/bpep)

`syscfg /bpep`

Enable pause on POST error in BIOS option.

Examples:

`syscfg /bldfs`

BIOS Quiet Boot (/bqb)

```
syscfg /bqb {enable | disable}
```

> **enable, disable**　　　　　　　　　Enables or disables the BIOS Quiet Boot
> feature.

Enable quiet boot option in the BIOS. The BIOS default is to enable the quiet boot option.

Refer to the *Product Guide* for your Intel Server Board for more information on BIOS Setup options.

Examples:

```
syscfg /bqb enable
syscfg /bqb disable
```

NOTE

If the /bcr option is enabled, the quiet boot option cannot be enabled.

BIOS User Password (/bup)

`syscfg /bup` {*old_password* | `""`} [*new_password* | `""`]

old_password, *new_password*

The maximum length of the password is seven characters. The password cannot have characters other than alphanumeric (a-z, A-Z, 0-9) and is case insensitive. Use two double quotes ("") to represent a null password.

Sets or clears 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. If you set or change the BIOS User password, you cannot change any other BIOS option using syscfg except the BIOS User and Administrator passwords.

Refer to the *Product Guide* for your Intel Server Board for more information on BIOS Setup options.

Examples:

```
syscfg /bup "" kwm93a3

syscfg /bup kwm93a9 lqts284

syscfg /bup lqts284 ""

syscfg /bap "" lqts284 /bup "" kwm93a3
```

📇 **NOTE**

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.

Channels (/c)

```
syscfg {/c|/channel} [channel_ID {1{none |straight |MD5}|2 {none |straight |MD5 }|3 {none |
straight |MD5 }|4 {none |straight |MD5 }|5 {enable |disable}|6 {enable |disable}|7 {disabled|
preboot |always | shared}|8 {callback |user |operator |admin}|9 {enable |disable}}]
```

Channel_ID	BMC channel ID number.
1	Selects the authentication types for callback privilege level.
2	Selects the authentication types for user privilege level.
3	Selects the authentication types for operator privilege level.
4	Selects the authentication types for Admin privilege level.
5	Selects the Per message authentication.
6	Selects User Level Authentication enable.
7	Selects the Access Mode. Values of `preboot` and `shared` are only valid for serial channels.
8	Selects the Privilege level limit for the channel.
9	Selects Enable PEF on the specified channel.
none |**straight** |**MD5**	Authentication method for callback, user, operator, and admin privilege levels. You can enable multiple authentication methods by separating the possible values with the plus sign.
disabled|**preboot**|**always**|**shared**	Access Mode. Values of `preboot` and `shared` are only valid for serial channels.
callback|**user**|**operator**|**admin**	Privilege Level.
enable|**disable**	Enable or Disable Per Message Authentication, User Level Authentication, and PEF.

Configures the BMC channels. Use this command to change a single parameter (selected by the number 1..9).

📇 **NOTE**

This command is not supported on Intel Server Board X38MLST.

Examples:

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

Clear SEL (/csel)

syscfg {/csel | /clearSEL}

Clears the System Event Log (SEL).

Examples:

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

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| SERIAL Channel_ID Dial_String_Index Page_Destination_Selector
Dial_String_Selector| POWER | PEF Filter_Table_Index [Policy_Table_Index]| SOL Channel_ID} | USER
User_ID [Channel_ID] | FWADVCFG Channel_ID [User_ID [SMTP_Configuration_Index]]}
```

CHANNEL	Displays the BMC Channel configuration for the specified channel.
Channel_ID	IPMI Channel ID.
BIOS	Displays the current values of the BIOS settings that can be configured with this utility (except the Administrator and User passwords.)
BIOSSETTINGS	Displays values of a subset the BIOS settings. The arguments that follow this keyword are used to select the BIOS settings to display.
group	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.
individual	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.
BIOS_Group_Name	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.
BIOS_Setting_Name	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.
LAN	Displays the BMC LAN channel configuration. The Operating System settings may be different.
SERIAL	Displays the Serial channel configuration for the BMC.
POWER	Displays the power restore policy.
PEF	Displays the Platform Event Filters.

SOL	Displays the Serial Over LAN settings.
USER	Displays the BMC user settings.
Channel_ID	IPMI Channel ID.
LAN_Alert_Destination_Index	Enter the LAN Alert Destination Index.
Dial_String_Index	Enter the Serial Modem Dial String Index.
Page_Destination_Selector	Enter the Page Destination Selector.
Dial_String_Selector	Enter the Dial String Selector.
Filter_Table_Index	Enter the Filter Table Index.
Policy_Table_Index	Enter the PEF Policy Table Index.
User_ID	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).
FWADVCFG	Displays the advanced firmware settings for the channel, users, and SMTP configuration.
Channel_ID	IPMI Channel ID.
User_ID	BMC User ID. When used with the FWADVCFG keyword, the configuration information is displayed for the user.
SMTP_Configuration_Index	Specifies the SMTP configuration in the firmware email alerting tables.

Displays the specified BMC and BIOS settings.

🖅 **NOTE**

> The /d serial command is not supported on Intel Server Boards X38MLST and S3200SH.

Examples:

```
syscfg /d channel 1
syscfg /d lan 1 2
syscfg /d serial 1 2 3 4
syscfg /d pef 2 1
syscfg /d BIOSSETTINGS individual "Quiet Boot" "Set Fan Profile"
syscfg /d BIOSSETTINGS group "Main" "Quiet Boot" "POST Error Pause"
syscfg /d FWADVCFG 3 2 1
```

Date and Time (/dt)

```
syscfg {/dt | /timeofday} hh:mm:ss mm/dd/yyyy
```

hh:*mm*:*ss*   Hours (24 hour clock), minutes, and seconds.

mm/*dd*/*yyyy*   Month, day, and year.

Sets the time of day stored in the Real Time Clock (RTC) by the BIOS.

Examples:

```
syscfg /dt 18:45:00 12/20/2007
```

email Alert Configure (/eac)

`syscfg {/eac | /emailalertconf}` *SMTP_Configurtion_Index* `{1|2|3}` *ASCII_String*

SMTP_Configuration_Index	1 to *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).
`{1|2|3}`	Configuration Parameter selector: 1=From Address 2=To Address 3=Subject Line
ASCII_String	1 to 64 characters. This is the value for the selected parameter. Use double quotes (") to enclose strings that include space characters.

Configures the From, To, and Subject lines in the firmware email alerting SMTP configuration table.

Examples:

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

email Alert Enable (/eae)

```
syscfg {/eac | /emailalertconf} Sender_Name
```

Sender_Name   Sender machine name. This string identifies the managed server to the SMTP server.

Sets the sender machine name for SMTP email alerts from the current server.

Examples:

```
syscfg /eac dupont01
```

email Alert Map (/eam)

`syscfg {/eam | /emailalertmap}` *Channel_ID Alert_Destination_Index email_Alert_Index*

Channel_ID	IPMI channel ID number (LAN channel).
Alert_Destination_Index	Alert Destination Index.
email_Alert_Index	Email Alert Index.

Maps the Alert Destination Index to the Email Alert Index.

Examples:

```
syscfg /eam 1 2 2
```

Help (/h)

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

lan|user|serial|pef|sol|power |channel|system|advancedfwcfg| bios
Displays help in the specified area.

📁 **NOTE**

In Linux, to use the /? option, you must enclose it in double quotes.

Displays help on the system configuration utility.

Examples:

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

Information (/i)

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

Filename	File name for a System Configuration File (.SCF) in the current working directory. If the filename is not specified, the command displays the BIOS and firmware versions of the current system.

Displays 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 bd2.scf
```

LAN Alert Configuration (/lac)

`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}`

Channel_ID	IPMI Channel number.
Alert_Destination_Index	Index into the Alert Destination table.
Alert_Destination_IP_Address	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.
Alert_ID_MAC_Address	MAC address of the alert destination in the hexadecimal format separated by hyphens: *hh-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.

Configures the LAN Alert destinations for a channel. 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
```

LAN Alert Enable (/lae)

```
syscfg {/lae | /lanalertenable} Channel_ID Gateway_IP_Address {Gateway_MAC_Address | "resolve"}
SNMP_Community_String [Backup_Gateway_IP_ Address {Backup_Gateway_MAC_Address | "resolve"}]
```

Channel_ID	IPMI Channel ID
Gateway_IP_Address	Gateway IP Address for the specified LAN channel
Gateway_MAC_Address	Gateway MAC Address for the specified LAN channel or "resolve" to automatically resolve the MAC Address
SNMP_Community_String	Enter the SNMP community string, or the null string ("")
Backup_Gateway_IP_ Address	Gateway IP Address for the specified LAN channel
Backup_Gateway_MAC_Address	Gateway MAC Address for the specified LAN channel or "resolve"

📇 **NOTE**

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.

Enable LAN alerting on the specified channel. See *IPMI 2.0 Specification* for more information.

Examples:

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

LAN Configuration (/lc)

```
syscfg {/lc | /lanconf} Channel_ID{2a {none | straight | MD5}| 2b {none | straight | MD5}| 2c
{none | straight | MD5} | 2d {none | straight | MD5}| 3 IP_Address| 4 {static | DHCP}| 6
IP_Address| 10 {enable | disable}| 10b {enable | disable}| 11 {0..127500} | 12 IP_Address| 13
MAC_Address| 14 IP_Address| 15 MAC_Address| 16 SNMP_Community_String}
```

Channel_ID	IPMI Channel ID (LAN channel)
2a	Selects authentication type for callback privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2b	Selects authentication type for user privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2c	Selects authentication type for operator privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2d	Selects authentication type for administrator privilege level. Multiple privilege levels may be specified by using the plus sign (see example 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.)
10	Enables Gratuitous ARP. The BMC will generate ARP packets at regular intervals. (LAN channels 1 and 2 only.) Not supported on Intel Server Boards X38MLST and S3200SH.
10b	Enables the BMC to generated ARP responses when an ARP request is received. (LAN channels 1 and 2 only.) ARP responses cannot be disabled on Intel Server Boards X38MLST and S3200SH.
11	Selects Gratuitous ARP interval in milliseconds (rounded down to a value that is a multiple of 500 ms). (LAN channels 1 and 2 only.) Not supported on Intel Server

	Boards X38MLST and S3200SH.
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
IP_Address	IP Address
MAC_Address	MAC Address
SNMP_Community_String	SNMP Community String. Enclose in double quotes if the string contains spaces.

Configures 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. See *IPMI 2.0 Specification* for more information.

▭▶ **NOTES**

Gratuitous ARPs are not supported on Intel Server Boards X38MLST and S3200SH.

The BMC generated ARP Response cannot be set to "disable" on Intel Server Boards X38MLST and S3200SH.

Examples:

```
syscfg /lc 1 2b none+straight+md5
```

LAN DHCP Enable (/lde)

```
syscfg /lde {1 |0}
```

      {1 | 0}   Enable the BMC to get the IP Address from
DHCP server.
1 = enable
0 = disable (Get IP Address from the BIOS)

Enable DHCP server for the management LAN dedicated to the BMC.

Example:

```
syscfg /lde 1
```

LAN Enable (/le)

`syscfg {/le | /lanenable}` *Channel_ID* `{dhcp |{static` *IP_Address Subnet_Mask*`}}`

Channel_ID	BMC LAN Channel ID
`static`|`dhcp`	IP Address source
IP_Address	IP Address
Subnet_Mask	Subnet mask

Configures the LAN channel used by the BMC on the specified channel. See *IPMI 2.0 Specification* for more information.

Example:

```
syscfg /le 1 dhcp
syscfg /le 1 static 10.30.240.21 255.255.255.0
```

LAN Default Gateway IP Address (/lgi)

```
syscfg /lgi IP_Address
```

IP_Address   IP Address.

Set the LAN IP Address for the management LAN dedicated to the BMC.

Examples:

```
syscfg /lgi 10.30.240.21
```

LAN Default Gateway MAC Address (/lgm)

```
syscfg /lgm MAC_Address
```

MAC_Address   MAC Address.

Set the LAN MAC Address for the management LAN dedicated to the BMC.

Examples:

```
syscfg /lgm 0A-56-CF-06-11-02
```

LAN BMC IP Address (/lhi)

`syscfg /lhi` *IP_Address*

  IP_Address   IP Address.

Set the LAN IP Address for the management LAN dedicated to the BMC.

Examples:

```
syscfg /lhi 255.255.255.0

syscfg /r mycfgfile.scf /lhi 255.255.255.0
```

LAN Subnet Mask (/lsm)

```
syscfg /lsm Subnet_Mask
```

     Subnet_Mask   LAN Subnet Mask.

Set the LAN Subnet Mask for the management LAN dedicated to the BMC.

Example:

```
syscfg /lsm 255.255.255.0
```

PEF Configure (/pefc)

```
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," and diagint means "diagnostic interrupt."

Global enable of the Platform Event Filters used by the BMC. See *IPMI 2.0 Specification*, Chapter 17, for more information on Platform Event Filtering.

🖅 **NOTE**

This command is not supported on Intel Server Boards X38MLST and S3200SH.

Example:

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

PEF Filter (/peff)

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

Configures 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.

NOTE

This command is not supported on Intel Server Boards X38MLST and S3200SH.

Example:

```
syscfg /peff 3 enable pdown 1 /peff 4 enable pdown 1
```

PEF Policy (/pefp)

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

Policy_table_index	Policy Table Index
`enable`|`disable`	Enable policy
`1..15`	Policy number
`ALWAYS`|`NEXT_E`|`STOP`|`NEXT_C`|`NEXT_T`	Alert Policy:
	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, then 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, then 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 that will send an alert 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 a different destination type.
Channel_ID	IPMI Channel ID for a BMC channel
Destination_table_index	Destination Table Index

Configures the Platform Event Filter policy table used by the BMC on the specified channel. See *IPMI 2.0 Specification*, Chapter 17, for more information on Platform Event Filtering.

📇 **NOTE**

> This command is not supported on Intel Server Boards X38MLST and S3200SH.

Example:

```
syscfg /pefp 3 enable 1 always 2 3
```

Power Restore Policy (/prp)

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

> **off|on|restore**   Power restore policy

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

Examples:

```
syscfg /prp off
```

Quiet (/q)

    options   Any other valid option. The /q switch must be at the end of the command line.

    /q   Quiet Mode. This option prevents all output from the command.

Suppress all messages..

Example:

```
syscfg /r /f /b /q
```

Restore (/r)

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

filename	Filename of the syscfg configuration file (.SCF) in the current working directory. If no filename is specified, the default filename syscfg.scf is used. The filename suffix must be .SCF.
/f	Restore the firmware settings. (See Appendix A for a list of the settings that are restored.)
/b	Restore the BIOS settings. (See Appendix A for a list of the settings that are restored.)

Restores the BIOS and firmware settings from a SCF file.

Examples:

```
syscfg /r /f /b
syscfg /r saved.scf /f
syscfg /r myscfg.scf /b /bap kwqt821
```

📖 **NOTE**

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.

Reset BMC (/rbmc)

```
syscfg {/rbmc|resetBMC}
```

Resets the Baseboard Management Controller.

Examples:

```
syscfg /rbmc
```

📇 **NOTE**

This command should be used by itself. Do not issue Syscfg commands for a few seconds after this command to allow the BMC to initialize.

Restore Firmware Settings (/rfs)

`syscfg {/rfs | restorefirmwaresettings}`

Restores the factory default Baseboard Management Controller settings.

Examples:

`syscfg /rfs`

📇 **NOTE**

This command should be used by itself. Do not issue Syscfg commands for a few seconds after this command to allow the BMC to initialize. After a few seconds, follow this command with the Reset BMC or AC Power Cycle. Unpredictable operation may occur if you do not reset the BMC after this command.

Save (/s)

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

filename	File name to be used for the syscfg configuration file (.SCF) in the current working directory. If no filename is specified, the default file name syscfg.scf is used. The filename suffix must be .SCF, or, if omitted, syscfg will add the .SCF suffix. The filename should consist of only alphanumeric characters.
`/f`	Save the firmware settings. (See Appendix A for a list of the settings that are saved.)
`/b`	Save the BIOS settings. (See Appendix A for a list of the settings that are saved.)

Saves the BIOS and firmware settings to a SCF file.

Examples:

```
syscfg /s /f /b
syscfg /s saved.scf /f
```

Serial Configuration (/sc)

```
syscfg {/sc | /serialconf} Channel_ID {
[2a {None | Straight | MD5}]
[2b {None | Straight | MD5}]
[2c {None | Straight | MD5}]
[2d {none | Straight | MD5}]
[3a {enable | disable}]
[3b direct]
[4 {0..450}]
[6a {enable | disable}]
[6b {enable | disable}]
[7a {9600 | 19200 | 38400 | 115200}]
[7b {enable | disable}]
[7c {none | RTSCTS | XONXOFF}]
[8a {enable | disable}]
[8b {enable | disable}]
[8c {enable | disable}]
[8i {enable | disable}]
[8j {enable | disable}]
[8k {enable | disable}]
[8l {enable | disable}]
[14 {0..255}]
[15 ASCII_String]
[29a {enable | disable}]
[29b {enable | disable}]
[29c {BSB | DEL}]
[29f {CR | NULL}]
[29g {CRLF | NULL | CR | LFCR | LF}]
}
```

Channel_ID	IPMI Channel ID (this must be 4 for all supported server boards).
2a	Authentication type for Callback privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2b	Authentication type for User privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2c	Authentication type for Operator privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
2d	Authentication type for Administrator privilege level. Multiple privilege levels may be specified by using the plus sign (see example below).
3a	Selects Terminal mode.

3b	Selects Connection mode.
4	Set Inactivity Timeout (in 30 second increments).
6a	Set Close on DCD loss.
6b	Enable Inactivity timeout.
7a	Set Baud rate in bits per second.
7b	Enable DTR hang-up.
7c	Set Flow control.
8a	Enable MUX switch on DCD loss.
8b	Set MUX baseboard to BMC switch.
8c	Set MUX BMC to baseboard switch.
8i	Enable Ping before MUX switch.
8j	Enable Ping.
8k	Enable Ping during callback.
8l	Set Connection Mode settings.
14	Set Page blackout interval in minutes.
15	Set SNMP Community string. Linux users should enclose the string in double quotes.
29a	Enable Terminal handshake.
29b	Enable Terminal echo.
29c	Set Terminal delete control.
29d	Enable Terminal line edit.
29g	Set Terminal output newline sequence.
29f	Set Terminal input newline sequence.

Configures the serial port for server management.

📇 **NOTE**

This command is not supported on Intel Server Board X38MLST.

Examples:

```
syscfg /sc 4 2d none+straight+MD5
```

Serial Dial String (/sds)

`syscfg {/sds | /serialdialstring}` *Channel_ID Dial_String_Index Dial_string*

Channel_ID	IPMI Channel ID (this must be 4 for S5000PAL, S5000PSL, and S5000PSA server boards)
Dial_String_Index	Dial String Index
Dial_String	ASCII string with the modem dial command and phone number

Sets the serial modem dial string used by the BMC on the specified channel. See *IPMI 2.0 Specification*, Chapters 14 and 25, for more information on IPMI Serial/Modem interface and commands.

> **NOTE**
> This command is not supported on Intel Server Board X38MLST.

Example:

```
syscfg /sds 4 3 P@S=5154884627,@
```

Serial Enable (/se)

```
syscfg {/se | /serialenable} Channel_ID {callback | user | operator | admin}{modem | direct}
{9600 | 19200 | 38400 | 115200}
```

Channel_ID	IPMI Channel ID (this must be 4 for S5000PAL, S5000PSL, S5000PSA server boards)
`callback	user	operator	admin`	Serial channel privilege level
`modem	direct`	Modem or direct connection
`9600	19200	38400	115200`	Baud rate

Enables serial communications with the BMC on the specified channel. See *IPMI 2.0 Specification*, Chapters 14 and 25, for more information on IPMI Serial/Modem interface and commands.

⬛ NOTE

This command is not supported on Intel Server Boards X38MLST and S3200SH.

Example:

```
syscfg /se 4 admin modem 19200
```

Serial Page Configuration (/spc)

```
syscfg {/spc | /serialpageconf} Channel_ID Page_Destination_Selector Dial_String_Selector {1|2}{7|8}
{none|odd|even}{9600 | 19200 | 38400 | 115200}
```

Channel_ID	IPMI Serial Channel ID (this must be 4 for S5000PAL, S5000PSL, and S5000PSA server boards)
Page_Desitination_Selector	Page Destination Selector
Dial_String_Selector	Page String Selector
`1|2`	Number of parity bits
`7|8`	Number of data bits
`none|odd|even`	Parity
`9600	19200	38400	115200`	Baud Rate

Configures serial paging for platform alerting with the BMC on the specified channel. See
IPMI 2.0 Specification, Chapters 14 and 25, for more information on IPMI Serial/Modem interface
and commands.

📠 **NOTE**

This command is not supported on Intel Server Board X38MLST.

Example:

```
syscfg /spc 4 2 4 1 8 none 19200
```

Serial Page Enable (/spe)

```
syscfg {/spe | /serialpageenable} Channel_ID {0..255} SNMP_Community_String
```

Channel_ID	IPMI Channel ID (this must be 4 for S5000PAL, S5000PSL, and S5000PSA server boards)
`0..255`	Page Blackout in minutes
SNMP_Community_String	SNMP Community String

Enables serial paging for platform alerting by the BMC on the specified channel. See *IPMI 2.0 Specification*, Chapters 14 and 25, for more information on IPMI Serial/Modem interface and commands.

> **NOTE**
>
> This command is not supported on Intel Server Board X38MLST.

Example:

```
syscfg /spe 4 3 "modem public"
```

Serial Over LAN Enable (/sole)

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

Channel_ID	IPMI Channel ID
enable |**disable**	SOL enable
user |**operator** |**admin**	Privilege Level Limit
9600 |**19200** |**38400** |**115200**	Baud Rate
0..7	Retry count
0..2550	Retry interval in milliseconds, rounded to the nearest 10 ms

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

Example:

```
syscfg /sole 1 enable admin 19200 0 10
```

Terminal Enable (/te)

```
syscfg {/te | /termenable} Channel_ID {enable | disable}{BSB | DEL}{enable | disable}{enable |
disable}{CRLF | NULL | CR | LFCR | LF}{CR | NULL}
```

Channel_ID	IPMI Channel ID (this must be 4 for S5000PAL, S5000PSL, and S5000PSA server boards)
enable | **disable**	Line Edit enable
BSB | **DEL**	Delete control
enable | **disable**	Echo control
enable | **disable**	Handshake control
CRLF | **NULL** | **CR** | **LFCR** | **LF**	Output newline sequence
CR | **NULL**	Input newline sequence

Configures terminal mode communications on the specified BMC channel. See *IPMI 2.0 Specification*, Chapters 14 and 25, for more information on IPMI Serial/Modem interface and commands.

📭 NOTE

This command is not supported on Intel Server Board X38MLST.

Examples:

```
syscfg /te 4 enable DEL enable enable lfcr cr
```

Users (/u)

`syscfg {/u | /user}` *User_ID User_name Password*

User_ID

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.

User_name

BMC User name consisting of up to 20 ASCII characters in the range 0x21 to 0x7e, except "[" and "]". Use "" to leave user name as anonymous.

Password

User BMC Password. ASCII string of up to 20 characters.

Set the user name and password for the specified BMC user. See *IPMI 2.0 Specification* for more information on user passwords.

NOTES

User 1 (NULL) and User 2 (Root) cannot be changed on Intel Server Boards X38MLST and S3200SH.

Duplicate user names are not supported on Intel Server Boards X38MLST and S3200SH.

Only four user names are supported on Intel Server Boards X38MLST and S3200SH.

Examples:

```
syscfg /u  3 BobT gofps
syscfg /u 2 "" ""
```

User Enable (/ue)

`syscfg {/ue | /userenable} User_ID {enable|disable} Channel_ID`

User_ID	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.
`enable|disable`	Enable or disable the specified user
Channel_ID	IPMI Channel ID

Enables or disables the BMC user on the specified BMC channel. See *IPMI 2.0 Specification* for more information on user configuration settings.

📼 NOTES

Users cannot be disabled on Intel Server Boards X38MLST and S3200SH.

Examples:

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

User Name (/un#)

```
syscfg /un# Username
```

#	User ID number.
Username	BMC user name.

Set BMC user number # to the specified user name.

> ### 📼 NOTES
>
> User 1 (NULL) and User 2 (Root) cannot be changed on Intel Server Board X38MLST.
>
> Duplicate user names are not supported on Intel Server Board X38MLST.
>
> Only four user names are supported on Intel Server Boards X38MLST and S3200SH.

Example:

```
syscfg /un2 Steve
```

User Password (/up#)

```
syscfg /up# Password
```

    #   User ID number.

    Password   BMC user password.

Set the password for BMC user number # to the specified password.

Examples:

```
syscfg /up# t4x
```

User LAN Channel Privilege (/ulcp#) (/ulcp#)

`syscfg /up# {callback|user | operator | admin | none}`

#	User ID number.
callback｜user ｜ operator ｜ admin ｜ none	IPMI privilege level.

Set the IPMI user privilege for BMC user number # to the specified level.

🖅 NOTES

User 2 (Root) privileges cannot be changed on Intel Server Board X38MLST.

Examples:

`syscfg /ulcp2 Adin`

User Privilege (/up)

```
syscfg {/up | /userprivilege} User_ID Channel_ID{callback|user | operator | admin | none}
[SOL|KVM | SOL+KVM]
```

User_ID	BMC user ID.
Channel_ID	BMC channel number.
`callback|user	operator	admin	none`	IPMI privilege level. Privilege level "none" is not supported on Intel Server Boards X38MLST and S3200SH.
`SOL	KVM	SOL+KVM`	Specifies the type of payload: Serial Over LAN, KVM, or both.

Enables or disables the BMC user on the specified BMC channel. See *IPMI 2.0 Specification* for more information on user privilege levels.

> 📇 **NOTES**
>
> User 2 (Root) privileges cannot be changed on Intel Server Board X38MLST.
>
> Privilege level "none" is not supported on Intel Server Boards X38MLST and S3200SH.

Examples:

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

A. Quick Reference

/bap   **BIOS Administrator Password**
    `syscfg /bap` {*old_password* | `""`} [*new_password* | `""`]

/bup   **BIOS User Password**
    `syscfg /bup` {*old_password* | `""`} [*new_password* | `""`]

/bcr   **Console Redirection**
    `syscfg /bcr` {`disable`|`COM1`|`COM2`} {`9600`|`19200`|`38400`|`11520`} {`none`|`CTS`|`XON`|`CTSCD`} {`PCANSI`|`VT100`|`VTUTF8`}

/bcs   **Configuration BIOS Settings**
    `syscfg /bcs` [*BIOS_Group_Name*] *BIOS_Setting_Name Value* [*BIOS_Setting_Name Value* […]]

/bqb   **Quiet Boot**
    `syscfg /bqb` {`enable` | `disable`}

/bbo   **BIOS Boot Order**
    `syscfg /bbo` [*device_number* [*device_number* […]]]

/bldfs   **BIOS Load Default Factory Settings**
    `syscfg /bldfs`

/bpep   **BIOS POST Error Pause**
    `syscfg /bpep`

/c   **Channel**
    `syscfg` {`/c`|`/channel`} [*channel_ID* { `1` {`none` |`straight` |`MD5`}|`2` {`none` |`straight` |`MD5`}|`3` {`none` |`straight` |`MD5`}|`4` {`none` |`straight`|`MD5`}|`5` {`enable`|`disable`}|`6` {`enable`|`disable`}| `7` {`disabled`|`preboot` |`always` |`shared`}|`8` {`callback`|`user` |`operator` |`admin`}|`9` {`enable` | `disable`} }]

/csel   **Clear SEL**
    `syscfg` {`/csel` | `/clearSEL`}

/d   **Display**
    `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* | `SERIAL` *Channel_ID Dial_String_Index Page_Destination_Selector Dial_String_Selector* | `POWER` | `PEF` *Filter_Table_Index* [*Policy_Table_Index*] | `SOL` *Channel_ID*} | `USER` *User_ID* [*Channel_ID*] | `FWADVCFG` *Channel_ID* [*User_ID* [*SMTP_Configuration_Index*]] }

/dt   **Date and Time**
    `syscfg` {`/dt` | `/timeofday`} *hh*:*mm*:*ss mm*/*dd*/*yyyy*

/eac   **email Alert Configuration**
    `syscfg` {`/eac` | `/emailalertconf`} *SMTP_Configurtion_Index* {`1`|`2`|`3`} *ASCII_String*

/eae   **email Alert Enable**
    `syscfg` {`/eae` | `/emailalertenable`} *Sender_Name*

/eam   **email Alert Map**
    `syscfg` {`/eam` | `/emailalertmap`} *Channel_ID Alert_Destination_Index email_Alert_Index*

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

/i   **Information**
    `syscfg /i` [*filename*.`SCF`]

/lac   **LAN Alert Configuration**

`syscfg {/lac | /lanalertconf}` *Channel_ID Alert_Destination_Index Alert_Destination_IP_Address* {*Alert_ID_MAC_Address* `{enable | disable }`| `"resolve"`} `{enable | disable}` `{0..7}` `{1..255}` `{SNMP | SMTP}`

/lae   **LAN Alert Enable**

`syscfg {/lae | /lanalertenable}` *Channel_ID Gateway_IP_Address* {*Gateway_MAC_Address* | `"resolve"`} *SNMP_Community_String* [*Backup_Gateway_IP_ Address* {*Backup_Gateway_MAC_Address* | `"resolve"`}]

/lc   **LAN Configuration**

`syscfg {/lc | /lanconf}` *Channel_ID* `{2a {none|straight|MD5}|2b {none|straight|MD5}|` `2c {none|straight|MD5}|2d {none|straight|MD5}|3` *IP_Address* `|4 {static|DHCP}|6` *IP_Address* `|10 {enable|disable}|10b {enable|disable}|11 {0..127500}|12` *IP_Address* `|13` *MAC_Address* `|14` *IP_Address* `|15` *MAC_Address* `|16` *SNMP_Community_String* `}`

/le   **LAN Enable**

`syscfg {/le | /lanenable}` *Channel_ID* `{dhcp|{static` *IP_Address Subnet_Mask*`}}`

/lgi   **LAN Default Gateway IP Address**

`syscfg /lgi` *IP_Address*

/lgm   **LAN Default Gateway MAC Address**

`syscfg /lgm` `MAC_`*Address*

/lhi   **LAN BMC IP Address**

`syscfg /lhi` *IP_Address*

/lsm   **LAN Subnet Mask**

`syscfg /lsm` *Subnet_Mask*

/pefc   **PEF Configure**

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

/peff   **PEF Filter**

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

/pefp   **PEF Policy**

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

/prp   **Power Restore Policy**

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

/q   **Quiet**

`syscfg` *options* `/q`

/r   **Restore**

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

/rbmc   **Reset BMC**

`syscfg {/rbmc | /resetBMC}`

/rfs   **Restore Firmware Settings**

`syscfg {/rfs | /restorefirmwaresettings}`

/s   **Save**

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

/sc   **Serial Configuration**

`syscfg {/sc | /serialconf}` *Channel_ID* `{ [2a {None|Straight|MD5}][2b {None|Straight|` `MD5}][2c {None|Straight|MD5}][2d {none|Straight|MD5}][3a {enable/disable}][3b direct]` `[4 {0..450}][6a {enable/disable}][6b {enable/disable}][7a {9600 | 19200 | 38400 |`

115200}] [7b {enable / disable}] [7c {none / RTSCTS / XONXOFF}] [8a {enable / disable}] [8b {enable / disable}] [8c {enable / disable}] [8i {enable / disable}] [8j {enable / disable}] [8k {enable / disable}] [8l {enable / disable}] [14 {0..255}] [15 *ASCII_String*] [29a {enable / disable}] [29b {enable / disable}] [29c {BSB / DEL}] [29f {CR / NULL}] [29g {CRLF / NULL / CR / LFCR / LF}]}

/sds   Serial Dial String
`syscfg {/sds | /serialdialstring}` *Channel_ID Dial_String_Index Dial_string*

/se   Serial Enable
`syscfg {/se | /serialenable}` *Channel_ID* `{callback | user | operator | admin} direct {9600 | 19200 | 38400 | 115200}`

/spc   Serial Page Configuration
`syscfg {/spc | /serialpageconf}` *Channel_ID Page_Destination_Selector Dial_String_Selector* `{1 | 2} {7 | 8} {none | odd | even} {9600 | 19200 | 38400 | 115200}`

/spe   Serial Page Enable
`syscfg {/spe | /serialpageenable}` *Channel_ID* `{0..255}` *SNMP_Community_String*

/sole   SOL Enable
`syscfg {/sole | /soleenable}` *Channel_ID* `{enable | disable} {user | operator | admin} {9600 | 19200 | 38400 | 115200} {0..7} {0..2559}`

/te   Terminal Mode Enable
`syscfg {/te | /termenable}` *Channel_ID* `{enable | disable} {BSB | DEL} {enable | disable} {enable | disable} {CRLF | NULL | CR | LFCR | LF} {CR | NULL}`

/u   User Configuration
`syscfg {/u | /user}` *User_ID User_name Password*

/ue   User Enable
`syscfg {/ue | /userenable}` *User_ID* `{enable | disable}` *Channel_ID*

/un#   User Name
`syscfg /un#` *Username*

/up#   User Password
`syscfg /up#` *Password*

/ulcp#   User LAN Channel Privilege Level
`syscfg /up# {callback|user | operator | admin | none}`

/up   User Privilege
`syscfg {/up | /userprivilege}` *User_ID Channel_ID* `{callback | user | operator | admin | none} [SOL | disable]`

B. IPMI Channel Assignments

The Intel® S5000 and S7000 Series Server Boards have the following IPMI Channel assignments:

Channel 1   Baseboard LAN Channel A
Channel 2   Baseboard LAN Channel B
Channel 3   Optional Intel® Remote Management Module NIC
Channel 4   Serial Channel

C. List of Saved Settings

The following table lists the firmware settings that are saved and restored with syscfg.

Table 1.   Saved Firmware Settings

Component	Setting
Power Configuration Settings	Power Restore Policy
LAN Channel Settings	Alert Enable
	Per Message Authentication
	User Level Authentication Enable
	Access Mode
	Privilege Level Limit
	Community String
	Gratuitous ARP enable
	ARP interval
	Authentication Types
	DHCP enabled
	Host IP
	Subnet Mask
	Gateway IP
	Gateway MAC
	Backup Gateway IP
	Backup Gateway MAC
	BMC ARP Response Enable
LAN Alert Settings[†]	Alert Acknowledge Enabled
	Alert IP
	Alert MAC
	Gateway Selector
	Retry Count
	Retry Interval
User Settings	User Name
	User Password
	Privilege Level Limit
	Callback Status
	Link Authentication Enable
	IPMI messaging enabled
	User Payload
Platform Event Filter Settings[†]	PEF Enable
	Event Message for PEF Action
	Startup Delay
	Alert Startup Delay

Component	Setting
	Global Control Actions
	Event Filters
	Alert Policies
Serial Settings[†]	Paging Enable
	Per Message Authentication
	User Level Authentication
	Access Mode
	Privilege Level Limit
	Community String
	Authentication Types
	Connection Mode
	Flow Control
	Baud Rate
	DTR Hang-up Enable
	Inactivity Timeout Enabled
	Inactivity Timeout Interval
	Connection Mode Sharing
	Baseboard to BMC Switch
	BMC to Baseboard Switch
	Ping Before MUX Switch
	Ping Enabled
	Close on DCD Loss
	MUX Switch on DCD Loss
	Modem Init String
	Modem Ring Duration
	Modem Call Retry Interval
	Modem Ring Dead Time
	Ping During Callback
	Modem Enabled Callback
	Blackout Interval
	Modem Dial Command
	Modem Hang-up Command
	Modem Escape Command
	System Phone Number
	Terminal Mode Enable
	Terminal Line Edit Enable
	Terminal Delete Control
	Terminal Echo Enable
	Terminal Handshake Enable
	Terminal Newline Output Sequence
	Terminal Newline Input Sequence

Component	Setting
	Dial String Length
	Destination Dial Strings
Serial Paging Alert Settings[†]	Alert Acknowledge Enable
	Retry Count
	Retry Delay
	Paging Flow Control
	Paging Baud Rate
	Paging Stop Bits
	Paging Data Bits
	Paging Parity
	Dial String Selector
Serial Over LAN Settings	SOL Enable
	SOL Privilege Level
	SOL Retry Count
	SOL Retry Interval
	SOL Baud Rate
	SOL Authentication Enable
SMTP Alert Settings	Sender Machine Name
	From Address
	To Address
	Subject Line
	LAN Alert Destination/SNMP Alert Index Mapping

[†]Intel Server Boards X38MLST and S3200SH do not support these settings.

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