Intel® Blade Server Chassis SBCE: Management Module Command-Line Interface Reference Guide

A Guide for Technically Qualified Assemblers of Intel® Identified Subassemblies/Products

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When translations of this guide are availabe, you can find them at the following URL:
http://support.intel.com/support/motherboards/server

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Safety and regulatory information

NOTE

The service procedures are designed to help you isolate problems. They are written with the assumption that you have model-specific training on all computers, or that you are familiar with the computers, functions, terminology, and service information provided in this manual.

Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See *Intel Server Boards and Server Chassis Safety Information* on the Resource CD and/or at http:\\support.intel.com.

Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und -Servergehäusen auf der Ressourcen-CD oder unter http:\\support.intel.com.

重要安全指导

在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。参见 Resource CD（资源光盘） 和/或 http:\\support.intel.com 上的 *Intel Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。

Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server Boards and Server Chassis Safety Information* sur le CD Resource CD ou bien rendez-vous sur le site http:\\support.intel.com.

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea *Intel Server Boards and Server Chassis Safety Information* en el CD Resource y/o en http:\\support.intel.com.

General Safety

Follow these rules to ensure general safety:

- Observe good housekeeping in the area of the machines during and after maintenance.
- When lifting any heavy object:
  1. Ensure you can stand safely without slipping.
  2. Distribute the weight of the object equally between your feet.
  3. Use a slow lifting force. Never move suddenly, or twist,when you attempt to lift.
  4. Lift by standing or by pushing up with you leg muscles; this action removes the strain from the muscles in your back. Do not attempt to lift any object that weighs more than 16 kg (35lb) or any object that you think is too heavy for you.
- Do not perform any action that causes hazards to the customer, or makes the equipment unsafe.
- Before you start the machine, ensure that other service representatives and the customer's personnel are not in a hazardous position.
- Place removed covers and other parts in a safe place, away from all personnel, while you are servicing the machine.
- Keep your tool case away from walk areas so that other people will not trip over it.
- Do not wear loose clothing that can be trapped in the moving parts of a machine. Ensure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing, or fasten it with a nonconductive clip, approximately 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing. **Remember:** Metal objects are good electrical conductors.
- Wear safety glasses when you are: hammering, drilling soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that might be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.

Electrical Safety

CAUTION:

Electrical current from power, telephone, and communication cables can be hazardous. To avoid personal injury or equipment damage, disconnect the server system power cords, telecommunication systems, networks, and modems before you open the server covers, unless instructed otherwise in the installation and configuration procedures.

Important:

Observe the following rules when working on electrical equipment.

- Use only approved tools and test equipment. Some hand tools have handles covered with a soft material that does not protect you when working with live electrical currents.
- Many customers have rubber floor mats (near their equipment) that contain small conductive fibers to decrease electrostatic discharges. Do not use this type of mat to protect yourself from electrical shock.
- Find the emergency power-off (EPO) switch, disconnect switch, or electrical outlet in the room. If an electrical accident occurs, you can quickly turn off the switch or unplug the power cord.
- Do not work alone under hazardous conditions, or near equipment that has hazardous voltages.
- Disconnect all power before:
  - — Performing a mechanical inspection

  - — Working near power supplies
  - — Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box (that supplies power to the machine) and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
  - — Ensure that another person, familiar with the power-off controls, is near you. Remember: another person must be there to switch off the power, if necessary.
  - — Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.
  - — Remember: There must be a complete circuit to cause electrical shock. By observing the above rule, you may prevent a current from passing through your body.
- When using testers, set controls correctly and use the approved probe leads and accessories for that tester.
- Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.
- Observe the special safety precautions when you work with very high voltages; these instructions are in the safety sections of the maintenance information. Use extreme care when measuring high voltages.
- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- Never assume that power has been disconnected from a circuit. First, check that it has been powered-off.
- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.
- Do not touch live electrical circuits with the reflective surface of a plastic dental inspection mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- When the power is on and power supply units, blowers and fans are removed from their normal operating position in a machine, do not attempt to service the units. This practice ensures correct grounding of the units.
- If an electrical accident occurs, use caution:
  - — Switch power off
  - — Send another person to get help/medical aid

Handling electrostatic discharge-sensitive devices

Any computer part containing transistors or integrated circuits (IC) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the server, the part, the work mat, and the person handling the part are all at the same charge.

NOTE

Use product-specific ESD procedures when they exceed the requirements noted here.

Make sure that the ESD-protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.

- Select a grounding system, such as those in the following list, to provide protection that meets the specific service requirement.
  - — Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
  - — Use an ESD common ground or reference point when working on a double-insulated or battery-operated system. You can use coax or connector-outside shells on these systems.
  - — Use the round ground-prong of the AC plug on AC-operated computers.

NOTE

The use of a grounding system is desirable but not required to protect against ESD damage.

DANGER

Electrical current from power, telephone and communication cables is hazardous.

To avoid a shock hazard:

- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **Connect all power cords to a properly wired and grounded electrical outlet.**
- **Connect to properly wired outlets any equipment that will be attached to this product.**
- **When possible, use one hand only to connect or disconnect signal cables.**
- **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
- **Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedure**s.
- **Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.**

To Connect	To Disconnect
1. Turn everything OFF. 2. First, attach all cables to devices. 3. Attach signal cables to connectors. 4. Attach power cords to outlet. 5. Turn device ON.	1. Turn everything OFF. 2. First, remove power cords from outlet. 3. Remove signal cables from connectors. 4. Remove all cables from devices.

CAUTION:

If your system has a module containing a lithium battery, replace it only with the same or an equivalent type battery recommended by the manufacturer. If your system has a module containing a lithium battery, replace it only with the same module type made by the same manufacturer. The battery contains lithium and can explode if not properly used, handled, or disposed of.

Do not:

- Throw or immerse into water
- Heat to more than 100×C (212×F)
- Repair or disassemble

Dispose of the battery as required by local ordinances or regulations.

CAUTION:

When laser products (such as CD-ROMs, DVD-ROM drives, fiber optic devices, or transmitters) are installed, note the following:

- **Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.**
- **Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.**

DANGER

Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following:

Laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

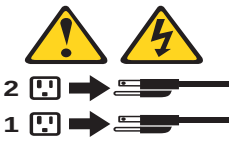
≥18 kg (37 lbs)

≥32 kg (70.5 lbs)

≥55 kg (121.2 lbs)

CAUTION:
Use safe practices when lifting.

CAUTION:
The power control button on the device and the power switch on the power supply do not turn off the electrical current supplied to the device. The device also might have more than one power cord. To remove all electrical current from the device, ensure that all power cords are disconnected from the power source.



CAUTION:

Do not place any object weighing more than 82 kg (180 lbs.) on top of rack-mounted devices.

CAUTION:
Do not place any object weighing more then 82 kg (180lbs.) on top of rack-mounted devices.

CAUTION:
To avoid personal injury, before lifting the unit, remove all the blades to reduce the weight.

CAUTION:
Hazardous energy is present when the blade is connected to the power source. Always replace the blade cover before installing the blade.

Regulatory specifications and disclaimers

Safety compliance:	
USA:	UL 60950 - 3rd Edition/CSA 22.2. No. 60950
Canada:	cUL certified - 3rd Edition/CSA 22.2. No. 60950- for Canada (product bears the single cUL mark for U.S. and Canada)
Europe:	Low Voltage Directive, 73/23/EEC TUV/GS to EN60950 2nd Edition with Amendments, A1 = A2+A3+A4
International:	UL/CB to IEC 60950 3rd Edition UL/CB - EN60 950 3rd Edition UL/CB - EMKO-TSE (74-SEC) 207/94
Australia/New Zealand:	CB Report to IEC 60950, 3rd Edition plus international deviations

Electromagnetic compatibility (ECM)	
USA:	FCC CFR 47 Part 2 and 15, Verified Class A Limit
Canada:	IC ICES-003 Class A Limit

Europe:	EMC Directive, 89/336/EEC EN55022, Class A Limit, Radiated & Conducted Emissions EN55024 ITE Specific Immunity Standard EN61000-4-2 ESD Immunity (Level 2 Contact Discharge, Level 3 Air Discharge) EN61000-4-3 Radiated Immunity (Level 2) EN61000-4-4 Electrical Fast Transient (Level 2) EN61000-4-5 AC Surge EN61000-4-6 Conducted RF EN61000-4-8 Power Frequency Magnetic Fields EN61000-4-11 Voltage Dips and Interrupts EN6100-3-3 Voltage Flicker
Japan:	VCCI Class A ITE (CISPR 22, Class A Limit) IEC 1000-3-2 Limit for Harmonic Current Emissions
Australia/New Zealand:	AS/NZS 3548, Class A Limit
Taiwan:	BSMI Approval
Korea:	RRL Approval
Russia:	GOST Approval
International:	CISPR 22, Class A Limit

Electromagnetic compatibility notices (USA)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

NOTE

Class A device definition: If a Class A device is installed within the is system, then the system is to be considered a Class A system. In this configuration, operation of this equipment in a residential area is likely to cause harmful interference.

NOTE

This product is intended to be installed with CAT5 cable, or equivalent, to minimize electrical interference.

Electromagnetic compatibility notices (International)

Europe (CE Declaration of Conformity): This product has been tested in accordance to, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

Japan EMC Compatibility:

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

English translation of the notice above: This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, the user may be required to take corrective actions.

ICES-003 (Canada): Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le Ministre Canadian des Communications.

English translation of the notice above: This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Canadian Department of Communications.

BSMI (Taiwan): The BSMI Certification number and the following warning is located on the product safety label which is located visibly on the external chassis.

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

RRL Korea:

기 종 별	사 용 자 안 내 문
A급 기기	이 기기는 업무용으로 전자파 적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며 만약 잘못판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.
B급 기기	이 기기는 가정용으로 전자파 적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

※ 비고
A급 기기 : 업무용 정보통신기기를 말한다.
B급 기기 : 가정용 정보통신기기를 말한다.

English translation of the notice above:

Device	User's Information
Class A device	This device complies with RRL EMC and is operated in commercial environment so that distributors or users pay attention to this point. If the product is sold or purchased improperly, please exchange this product to what can be used at home.
Class B device	This device complies with RRL EMC and is operated in a residential area so that it can be used at all other location as well as residential area.
note: Class A device: operated in a commercial area. Class B device: operated in a residential area.	

1 Introduction

The Intel® Blade Server Chassis SBCE Management Module Command-Line Interface provides direct access to the Intel® Blade Server Chassis SBCE management functions as an alternative to using the Web-based user interface.

The command-line interface also provides access to the text-console command prompt on each blade server through a serial over LAN (SOL) connection. See the *Intel® Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for information about SOL and setup instructions.

You access the Management Module Command-Line Interface by establishing a Telnet connection to the IP address of the management module or through a Secure Shell (SSH) connection. You can initiate connections from the client computer using standard remote communication software; no special programs are required. Users are authenticated by the management module before they can issue commands. You enter commands one at a time; however, you can use command scripting to enter multiple commands. The interface does not support keyboard shortcuts, except for the special key sequence (pressing "Esc" then "(") that terminates an SOL session.

Contact your Intel Support Representative for the most recent versions of all Intel® Blade Server Chassis SBCE documentation.

Before you begin

The Intel® Blade Server Chassis SBCE must be correctly configured before you can use the management-module command-line interface. Hardware and software required for the command-line interface are as follows:

Hardware:

No special hardware is required to use the management-module command-line interface.

To use the SOL feature, an Ethernet I/O module that supports SOL must be installed in I/O-module bay 1. You can use the console command to control a blade server through SOL only on blade server types that support SOL functionality and have an integrated system management processor firmware level of version 1.00 or later. See the *Intel® Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for information.

Firmware:

Make sure you are using the latest versions of device drivers, firmware, and BIOS for your blade server, management module, and other SBCE components. Contact your Intel Support Representative for the latest information on upgrading device drivers, firmware, and BIOS. The latest instructions are in the documentation that comes with the updates.

The Management Module Command-Line Interface is supported by management module firmware level version 1.08 or later. The SOL feature has additional firmware requirements. See the *Intel® Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for information.

2 Using the command-line interface

The Management Module Command-Line Interface provides a convenient method for entering commands that manage and monitor server chassis components. This chapter contains the following information about using the command-line interface:

- "Command-line interface guidelines" on page 3
- "Starting the command-line interface" on page 8
- "Starting an SOL session" on page 9
- "Ending an SOL session" on page 9

See Chapter 3, "Command reference," on page 11 for detailed information about commands that are used to monitor and control server chassis components. Command-line interface error messages are in Chapter 4, "Error messages," on page 61. See the *Intel® Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for SOL setup instructions and the documentation for your operating system for information about commands you can enter through an SOL connection.

Command-line interface guidelines

All commands have the following basic structure:

```
command -option parameter
```

Some commands do not require options and some command options do not require parameters. You can add multiple options to a command on one line to avoid repeating the same command. Options that display a value and options that set a value must not be used together in the same command. Some examples of valid command option syntax are:

- *command*
- *command -option*
- *command -option parameter*
- *command -option1_view -option2_view*
- *command -option1_set parameter -option2_set parameter*

For example, `telnetcfg -t 360`.

The information for each option is returned in the order in which it was entered and is displayed on separate lines.

Observe the following general guidelines when using the command-line interface:

- Case sensitivity

  All commands, command options, and pre-defined command option parameters are case sensitive.

  If you receive a `Command not found` error, make sure that you are typing the commands in the correct case; they are case sensitive. For a list of valid commands, type `help` or `?`.

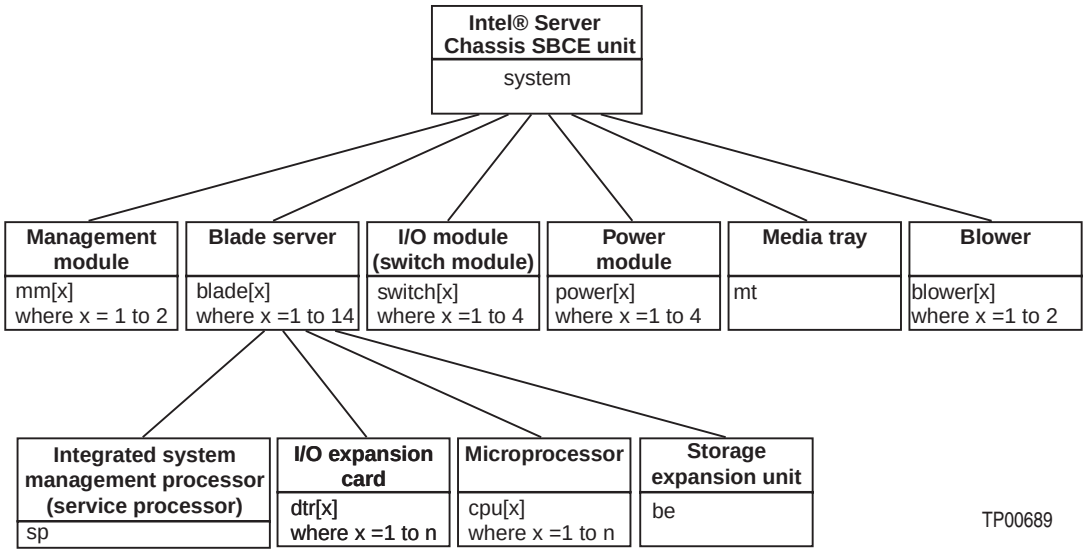
- Data types

  The ip_address data type uses a predefined formatted string of *xxx.xxx.xxx.xxx*, where *xxx* is a number from 0 to 255

- Delimiters
  - — Options are delimited with a minus sign.
  - — In a command that requires parameters, a single space is expected between the option and the parameter. Any additional spaces are ignored.
- Output format
  - — Failed commands generate failure messages.
  - — Successful commands are indicated by the message `OK`, or by the display of command results.
- Strings
  - — Strings containing spaces should be enclosed in quotation marks, such as in `snmp -cn "John B. Doe"`.
  - — String parameters can be mixed case.
- The `help` command lists all commands and brief description of each command. You can also issue the help command by typing `?`. Adding the `-h` parameter to any command displays its syntax.
- You can use the up arrow and down arrow keys in the command-line interface to access previously entered commands.

Selecting the command target

You can use the command-line interface to target commands to the management module or to other devices installed in the SBCE unit. The command line prompt indicates the persistent command environment: the environment where commands are entered unless otherwise redirected. When a command-line interface session is started, the persistent command environment is “system”; this indicates that commands are being directed to the SBCE unit. Command targets are specified hierarchically, as shown in the following illustration.



You can change the persistent command environment for the remainder of a command-line interface session by using the `env` command (see “env (environment) commands” on page 12). When you list the target as a command attribute using the `-T` option, you change the target environment for the command that you are entering, temporarily overriding the persistent command environment. Target environments can be specified

using the full path name, or using a partial path name based on the persistent command environment. Full path names always begin with “system”. The levels in a path name are divided using a colon “:”.

For example:

- Use the `-T system:mm[1]` option to redirect a command to the management module in bay 1.
- Use the `-T system:switch[1]` option to redirect a command to the I/O (switch) module in I/O (switch) module bay 1.
- Use the `-T system:blade[3]:sp` option to redirect a command to the integrated system management processor (service processor) when the persistant command environment is set to the blade server in blade bay 3.

Most management module commands must be directed to the primary management module. If only one management module is installed in the SBCE unit it will always act as the primary management module and attempting to direct a management module command elsewhere will result in an error. When redundant management modules are installed in a SBCE unit, if a command is directed to the standby management module, an error message displays. Either management module can function as the primary management module; however, only one management module can be primary at one time. You can determine which management module is acting as the primary management module using the `list` command (see “list (system physical configuration) command” on page 16).

Command authority

Some commands in the command-line interface can only be successfully executed by users that are assigned a required level of authority. Commands that display information do not require any special command authority. Users with “Supervisor” command authority can successfully execute all commands.

The following table shows command-line interface commands and their required authority levels. To use the table, observe the following guidelines:

- The commands listed in this table only apply to the command variants that set values or cause an action: display variants of the commands do not require any special command authority.
- When only one command authority at a time is required to execute a command, this is indicated by a "•" entry in a table row.
- When a command has several rows associated with it, each row indicates one of the valid user command authorities needed to successfully execute the command. For example, the `clearlog` command is available to users with the “Supervisor” command authority or to users with the “Ability to Clear Event Logs” command authority.
- When a combination of two or more command authorities at a time is required to execute a command, this is indicated by multiple "◊" entries in a table row. The user must be assigned both of these command authorities to successfully execute the command. For example, one available authority combination for the `boot -c` command is the “Blade Server remote Control Access” command authority and the “Blade and I/O Module Power/Restart Access” command authority.

Table 1. Command authority relationships

Command	Authority							
	Supervisor	Blade Server Remote Console Access	Blade Server Remote Console and Virtual Media Access	Blade and I/O Module Power/Restart Access	Ability to Clear Event Logs	Basic Configuration (MM, I/O Modules, Blades)	Network and Security Configuration	Advanced Configuration (MM, I/O Modules, Blades)
boot	•							
				•				
boot -c	•							
		◊		◊				
			◊	◊				
clear -config	•							
								•
clearlog	•							
					•			
console	•							
		•						
			•					
dns	•							
							•	
								•
ifconfig	•							
							•	
								•
power	•							
				•				
power -c	•							
		◊		◊				
			◊	◊				
reset	•							
(blade server or ISMP)				•				

Table 1. Command authority relationships

Command	Authority							
	Supervisor	Blade Server Remote Console Access	Blade Server Remote Console and Virtual Media Access	Blade and I/O Module Power/Restart Access	Ability to Clear Event Logs	Basic Configuration (MM, I/O Modules, Blades)	Network and Security Configuration	Advanced Configuration (MM, I/O Modules, Blades)
reset -c	•							
(blade server, ISMP, or I/O module)		◊		◊				
			◊	◊				
reset	•							
(management module)								•
reset -std, -exd, -full	•							
(I/O module)				•				
smtp	•							
							•	
								•
snmp	•							
							•	
								•
sol	•							
							•	
								•
telnetcfg	•							
							•	
								•

Starting the command-line interface

Access the Management Module Command-Line Interface from a client computer by establishing a Telnet connection to the IP address of the management module or by establishing a Secure Shell (SSH) connection. You can establish up to 20 separate Telnet or SSH sessions to the SBCE management module, giving you the ability to have 20 command-line interface sessions active at the same time.

Although a remote network administrator can access the Management Module Command-Line Interface through Telnet, this method does not provide a secure connection. As a secure alternative to using Telnet to access the command-line interface, SSH ensures that all data that is sent over the network is encrypted and secure.

The following SSH clients are available. While some SSH clients have been tested, support or non-support of any particular SSH client is not implied.

- The SSH clients are distributed with operating systems such as Linux (see your operating-system documentation for more information).
- The SSH client of cygwin (see http://www.cygwin.com for information)
- Putty (see http://www.chiark.greenend.org.uk/~sgatham/putty for information)

The following table shows the types of encryption algorithms that are supported, based on the client software version that is being used.

Algorithm	SSH version 1.5 clients	SSH version 2.0 clients
Public key exchange	SSH 1-key exchange algorithm	Diffie-Hellman-group 1-sha-1
Host key type	RSA (1024-bit)	DSA (1024-bit)
Bulk cipher algorithms	3-des	3-des-cbc or blowfish-cbc
MAC algorithms	32-bit crc	Hmac-sha1

Telnet connection

To log on to the management module using Telnet, complete the following steps:

1. Open a command-line window on the network-management workstation, type `telnet 192.168.70.125` and press Enter. The IP address, 192.168.70.125, is the default IP address of the management module; if a new IP address has been assigned to the management module, use that one instead.

   A command-prompt window opens.
2. At the login prompt, type the management-module user ID. At the password prompt, type the management-module password. The user ID and password are case sensitive and are the same as those that are used for management-module Web access.

   A command prompt is displayed. You can now enter commands for the management module.

Secure Shell (SSH) connection

To log on to the management module using SSH, complete the following steps:

1. Make sure that the SSH service on the network-management workstation is enabled. See your operating-system documentation for instructions.
2. Make sure that the SSH service on the SBCE management module is enabled. See the *Intel®Server Management Module SBCECMM: Installation and User's Guide* for instructions.
3. Start a SSH session to the management module using the SSH client of your choice. For example, if you are using the cygwin client, open a command-line window on the network-management workstation, type `ssh 192.168.70.125` and press Enter. The IP address, 192.168.70.125, is the default IP address of the management module; if a new IP address has been assigned to the management module, use that one instead.

   A command prompt window opens.
4. Type the management-module user ID when prompted. At the password prompt, type the management-module password. The user ID and password are case sensitive and are the same as those that are used for management-module Web access.

   A command prompt is displayed. You can now enter commands for the management module.

Starting an SOL session

Serial over LAN (SOL) must be enabled for both the SBCE unit and the blade server before you can start an SOL session with the blade server. See "sol (serial over LAN) commands" on page 42 and the *Intel®Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for information about setting up and enabling SOL.

After you start a Telnet or SSL session to the SBCE management module, you can start an SOL session to any individual blade server that supports SOL using the `console` command. Since you can start up to 20 separate Telnet or SSL sessions to the SBCE management module, this gives you the ability to have simultaneous SOL sessions active for each blade server installed in the SBCE unit.

Use the `console` command from the command line, indicating the target blade server. For example, to start an SOL connection to the blade server in blade bay 14, type

```
console -T system:blade[14]
```

A blade server that occupies more than one blade bay is identified by the lowest bay number that it occupies.

Once an SOL session is started, all commands are sent to the blade server specified by the `console` command until the SOL session is ended, regardless of the persistent command target that was in effect before the SOL session.

See "sol (serial over LAN) commands" on page 42 and the *Intel®Blade Server Chassis SBCE: Serial Over LAN Setup Guide* for information about configuring a blade server for SOL. See your operating-system documentation for information about SOL commands that you can enter using the command-line interface.

Ending an SOL session

To end an SOL session, press Esc then (. The command-line interface will return to the persistent command target that was in effect before the SOL session.

When the SOL session ends, the command-line interface will return to the persistant command target that was in effect before the SOL session. If you want to end the Telnet or SSH command-line session, type `exit`.

NOTE

Exiting a SOL session does not stop the flow of serial data.

3 Command reference

This section contains command function and usage information and examples. It is divided into the following subsections:

- "Built-in commands" on page 12
  - env (environment) commands
  - help command
  - history command
  - list (system physical configuration) command
- "Configuration commands" on page 17
  - clear command
  - dhcpinfo command
  - dns command
  - ifconfig command
  - smtp command
  - snmp command
  - sol (serial over LAN) commands
  - telnetcfg (Telnet configuration) command
- "Event-log commands" on page 49
  - clearlog command
  - displaylog command
- "Power-control commands" on page 51
  - boot command
  - power command
  - reset command
- "Session commands" on page 58
  - console command
  - exit command

Adding the `-h`, `-help`, or `?` option to a command displays syntax help for that command. For example, to display help for the environment command, type one of the following commands:

- `env -h`
- `env -help`
- `env ?`

You can target a command to a device other than the one that is set as the default by adding the `-T` option to a command. See "Selecting the command target" on page 4 for information.

Built-in commands

Use these commands to perform top-level functions within the command line interface:

- env (environment) commands
- help command
- history command
- list (system physical configuration) command

env (environment) commands

These commands set the persistent environment for commands that are entered during the remainder of the current session. The persistent command environment is indicated by the command prompt. When you start the command-line interface, the persistent command environment is the SBCE unit, denoted as "system" by the command prompt. You can target a single command to an environment other than the one that is set as the default by adding the `-T` option to the command that includes a valid target destination (see "Selecting the command target" on page 4 for information). Target environments can be specified using the full path name, or using a partial path name based on the persistent command environment. Full path names always begin with "system". The levels in a path name are divided using a colon ":".

Table 2. Environment commands

Function	What it does	Command	Valid targets
Set SBCE unit as command target	Sets the SBCE unit as the persistent target for commands during the current session. This is the persistent command environment you are in at the beginning of each command-line interface session, indicated by the `system>` prompt.	`env`	Any installed device.
Set management module as command target	Sets the management module as the persistent target for commands during the current session.	`env -T system:mm[x]` where *x* is the bay (1 or 2) that identifies the primary management module.	The env command can be directed to any installed device, in this case `-T system:mm[x]` where *x* is the primary management module bay number.
Set blade server as command target	Sets the specified blade server as the persistent target for commands during the current session.	env -T system:blade[x] where *x* is the blade bay (1 - 14) that identifies the blade server. A blade server that occupies more than one blade bay is identified by the lowest bay number that it occupies.	The env command can be directed to any installed device, in this case `-T system:blade[x]` where *x* is the blade bay (1 - 14) that identifies the blade server.

Table 2. Environment commands (continued)

Function	What it does	Command	Valid targets
Set blade server integrated system management processor as command target	Sets the integrated system management processor on the specified blade server as the persistent target for commands during the current session.	env -T system:blade[x]:sp where *x* is the blade bay (1 - 14) that identifies the blade server on which the integrated system management processor is installed. A blade server that occupies more than one blade bay is identified by the lowest bay number that it occupies.	The env command can be directed to any installed device, in this case `-T system:blade[`*x*`]:sp` where *x* is the blade bay (1 - 14) that identifies the blade server on which the integrated system management processor is installed.
Set I/O (switch) module as command target	Sets the specified I/O (switch) module as the persistent target for commands during the current session.	env -T system:switch[x] where *x* is the I/O (switch) module bay (1 - 4) where the I/O (switch) module is installed.	The env command can be directed to any installed device, in this case `-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay (1 - 4) where the I/O (switch) module is installed.

Example:
To set the persistent target of commands to the ISMP on the blade server in blade bay 5 while the blade server is set as the default command target, at the `system>` prompt, type

```
env -T system:blade[5]:sp
```

The following example shows the information that is returned:

```
system> env -T system:blade[5]:sp
OK
system:blade[5]:sp>
```

To set the persistant target of commands to the ISMP on the blade servers in blade bay 5 while the SBCE unit is set as the default command target, at the system prompt you can also type

```
env -T system:blade[5]:sp
```

help command

This command displays a list of all commands that are available in the command-line interface with a brief description of each command. You can also issue the help command by typing `?`. Adding an `-h`, `-help`, or `?` option to a command displays syntax help for the command.

Table 3. Help commands

Function	What it does	Command	Valid targets
Help	Displays a list of command and a brief description of each command.	help	Any installed device.
		?	Any installed device.

Example:
To display a list of commands while management module 1 is set as the default command target, at the `system:mm[1]>` prompt type

```
help
```

The following example shows the information that is returned:

```
system:mm[1]> help
           ?  --  Display command list
        boot  --  Boot target
       clear -- clear the configuration
    clearlog  --  Clear the event log
     console  --  Start SOL session to a blade
    dhcpinfo  --  View DHCP server assigned settings
  displaylog  --  Display event log entries, 5 at a time
         dns  --  View/edit DNS configuration
         env  --  Set persistent command target
        exit  --  Log off
        help  --  Display command list
     history  --  Display history of last 8 commands
    ifconfig  --  View/edit network interface configuration
        list  --  Display installed targets
       power  --  Control target power
       reset  --  Reset target
        smtp  --  View/edit SMTP configuration
        snmp  --  View/edit SNMP configuration
         sol  --  View SOL status and view/edit SOL config.
   telnetcfg  --  View/edit telnet configuration

Type "<command> -h" to get syntax help for an individual command.

        [ ] is used for indexing (by bay number)
        < > denotes a variable
        { } denotes optional arguments
         |  denotes choice
system:mm[1]>
```

To obtain help about the `env` command, type one of the following commands:

- `env -h`
- `env -help`
- `env ?`

history command

This command displays the last eight commands that were entered, allowing the user to choose and re-enter one of these commands. Users choose the command to re-enter from the displayed list by typing an exclamation point (!) followed immediately by the numeric designation the command is assigned in the list. Users can also recall one of the past eight previously entered commands using the up-arrow and down-arrow keys.

Table 4. History command

Function	What it does	Command	Valid targets
Command history	Displays the last eight commands that were entered.	history	Any installed device.
Re-enter previous command using numeric designation	Re-enters a numerically-specified command from the command history.	!*x* where *x* is the number of the command (0 - 7) to re-enter from the command history list.	Any installed device.

Example:
To display a list of the last eight commands entered while management module 1 is set as the default command target, at the `system:mm[1]>` prompt type

```
history
```

To re-enter the command designated by “2” in the command history, type

```
!2
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> history
 0 dns
 1 dns -on
 2 dns
 3 dns -i1 192.168.70.29
 4 dns
 5 dns -i1 192.168.70.29 -on
 6 dns
 7 history
system:mm[1]> !2
Enabled
-i1 192.168.70.29
-i2 0.0.0.0
-i3 0.0.0.0
system:mm[1]>
```

list (system physical configuration) command

This command displays a list of devices present within the command target. It can be used to determine how many management modules are installed in the SBCE unit and which management module is set as primary.

Table 5. System physical configuration (list) command

Function	What it does	Command	Valid targets
View command target	Displays the current command target. If a management module bay is the current command target, it will be identified as primary or redundant.	list	Any installed device.
View system configuration tree	Displays the tree structure of devices present in the SBCE unit, starting at the command target level. If management module bays are part of the tree, they will be identified as primary or redundant.	list -l *depth* where *depth* is “all” or “a” for full tree display, starting at the command target level. Specifying a *depth* of “1” displays the current command target. Specifying a *depth* of “2” displays the content of the current command target.	Any installed device.

Example:
To display a list of devices installed in the SBCE unit while the SBCE unit is set as the persistent command environment, at the `system>` prompt type

```
list -l a
```

(This is the command syntax that can be used to determine the primary management module.) The following example shows the information that is returned:

```
system> list -l a
system
        mm[1]    primary
power[4]
blower[1]
blower[2]
blade[1]
                sp
                dtr[1]
blade[5]
                sp
blade[6]
                sp
blade[7]
                sp
blade[8]
                sp
blade[10]
                sp
mt
system>
```

Configuration commands

Use these commands to view and configure network settings and Ethernet interfaces:

- clear command
- dhcpinfo command
- dns command
- ifconfig command
- smtp command
- snmp command
- sol (serial over LAN) commands
- telnetcfg (Telnet configuration) command

clear command

This command resets the primary management module configuration or an I/O (switch) module configuration to the default settings. The command must always include the `-config` option.

Table 6. Clear command

Function	What it does	Command	Valid targets
Reset configuration of primary management module	Resets the configuration of the primary management module to the default settings; then, resets the management module. No results are returned from this command because it resets the management module. When you reset the management module configuration, the Ethernet configuration method is set to a value of dthens. After the management module resets, this causes the management module to try the dhcp configuration and then default to the static IP configuration., which might cause the management module to remain offline for longer than normal.	clear -config Required authority level: • Supervisor • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Reset configuration of I/O (switch) module	Resets the configuration of the specified I/O (switch) module to the default settings.	clear -config Required authority level: • Supervisor • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay number.

Example:
To reset the primary management module configuration to default settings while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
clear -config
```

No results are returned from this command. After the management module resets, you will need to start a new command-line session.

dhcpinfo command

This command displays the IP configuration that is assigned to the primary management module by the DHCP server.

The `dhcpinfo` command does not apply to eth1, which always uses a static IP configuration.

Table 7. dhcpinfo commands

Function	What it does	Command	Valid targets
Display Ethernet channel 0 DHCP configuration	If the IP configuration for eth0 is assigned by a DHCP server, the configuration that is assigned by the DHCP server and DHCP server information is displayed. If the IP configuration for eth0 is *not* assigned by a DHCP server, an error message is displayed. Possible configuration values returned are: • -server *dhcp_ip_address* • -n *hostname* • -i ip_address • -g *gateway_address* • -s *subnet_mask* • -d *domainname* • -dns1 *primary _dns_ip_address* • -dns2 *secondary _dns_ip_address* • -dns3 *tertiary _dns_ip_1address*	dhcpinfo -eth0	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Display DHCP server IP address	If the IP configuration for eth0 is assigned by a DHCP server, the DHCP server IP address is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -server	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned host name	If the IP configuration for eth0 is assigned by a DHCP server, the host name assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -n	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Table 7. dhcpinfo commands (continued)

Function	What it does	Command	Valid targets
Display Ethernet channel 0 DHCP assigned IP address	If the IP configuration for eth0 is assigned by a DHCP server, the IP address assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -i	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned gateway IP address	If the IP configuration for eth0 is assigned by a DHCP server, the gateway IP address assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -g	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned subnet mask	If the IP configuration for eth0 is assigned by a DHCP server, the subnet mask assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -s	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned domain name	If the IP configuration for eth0 is assigned by a DHCP server, the domain name assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -d	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned primary DNS server IP address	If the IP configuration for eth0 is assigned by a DHCP server, the primary DNS server IP address assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -dns1	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned secondary DNS server IP address	If the IP configuration for eth0 is assigned by a DHCP server, the secondary DNS server IP address assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -dns2	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 DHCP assigned tertiary DNS server IP address	If the IP configuration for eth0 is assigned by a DHCP server, the tertiary DNS server IP address assigned by the DHCP server is displayed; otherwise, an error message is displayed.	dhcpinfo -eth0 -dns3	`-T system:mm[x]` where *x* is the primary management module bay number.

Example:
To display the DHCP server assigned network settings for Ethernet channel 0 while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
dhcpinfo -eth0
```

The following example shows the information that is returned:

```
system:mm[1]> dhcpinfo -eth0
-server 192.168.70.29
-n MM00096BCA0C80
-i 192.168.70.183
-g 192.168.70.29
-s 255.255.255.0
-d linux-sp.raleigh.ibm.com
-dns1 192.168.70.29
-dns2 0.0.0.0
-dns3 0.0.0.0
system:mm[1]>
```

dns command

This command configures and displays the management-module DNS settings.

Table 8. dns commands

Function	What it does	Command	Valid targets
Display DNS configuration of management module	Displays the current DNS configuration of the management module. Possible return values are: • enabled • disabled • -i1 *first ip_address* • -i2 *second ip_address* • -i3 *third ip_address*	dns	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS - enable	Enables the management-module DNS configuration.	dns -on Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS - disable	Disables the management-module DNS configuration.	dns -off Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 8. dns commands (continued)

Function	What it does	Command	Valid targets
DNS first IP address - display	Displays the first IP address.	dns -i1	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS first IP address - set	Checks syntax and sets the first IP address.	dns -i1 *ip_address* where *ip_address* is the first IP address. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS second IP address - display	Displays the second IP address.	dns -i2	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS second IP address - set	Checks syntax and sets the second IP address.	dns -i2 *ip_address* where *ip_address* is the second IP address. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
DNS third IP address - display	Displays the third IP address.	dns -i3	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 8. dns commands (continued)

Function	What it does	Command	Valid targets
DNS third IP address - set	Checks syntax and sets the third IP address.	dns -i3 *ip_address* where *ip_address* is the third IP address. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Example:
To set the first IP address of the management-module DNS server to 192.168.70.29 and enable DNS on the primary management module while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
dns -i1 192.168.70.29 -on
```

To display the DNS status of the primary management module while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
dns
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> dns -i1 192.168.70.29 -on
Changes to the network settings will take effect after the next reset of the
MM.
system:mm[1]> dns
Enabled
-i1 192.168.70.29
-i2 0.0.0.0
-i3 0.0.0.0
system:mm[1]>
```

ifconfig command

This command configures and displays the network interface settings for the management-module Ethernet interface and the blade server integrated system management processors.

Table 9. ifconfig commands

Function	What it does	Command	Valid targets
Display Ethernet channel 0 configuration	Displays the current configuration of Ethernet channel 0. Possible return values are: • enabled • disabled • -i *static_ip_address* • -g *gateway_address* • -s *subnet_mask* • -n *hostname* • -c *config_method* • -r *data_rate* • -d *duplex_mode* • -m *mtu* • -l *locally_administered_mac_addr* • -b *burnedin_mac_address*	ifconfig -eth0	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Display Ethernet channel 0 static IP address	Displays the static IP address for Ethernet channel 0.	ifconfig -eth0 -i	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Set Ethernet channel 0 static IP address	Checks syntax and sets the static IP address for Ethernet channel 0.	ifconfig -eth0 -i *ip_address* where *ip_address* is the static IP address for Ethernet channel 0. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Display Ethernet channel 0 gateway IP address	Displays the gateway IP address for Ethernet channel 0.	ifconfig -eth0 -g	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 0 gateway IP address	Checks syntax and sets the gateway IP address for Ethernet channel 0.	ifconfig -eth0 -g *ip_address* where *ip_address* is the gateway IP address for Ethernet channel 0. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 subnet mask	Displays the subnet mask for Ethernet channel 0.	ifconfig -eth0 -s	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 0 subnet mask	Checks syntax and sets the subnet mask for Ethernet channel 0.	ifconfig -eth0 -s *ip_address* where *ip_address* is the subnet mask for Ethernet channel 0. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 hostname	Displays the host name for Ethernet channel 0.	ifconfig -eth0 -n	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 0 hostname	Checks syntax and sets the host name for Ethernet channel 0.	ifconfig -eth0 -n *hostname* where *hostname* is the host name for Ethernet channel 0. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 configuration method	Displays the configuration method for Ethernet channel 0. Possible return values are dhcp, static, and dthens. A value of dthens will try the dhcp configuration and default to the static IP configuration if dhcp is unsuccessful.	ifconfig -eth0 -c	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 0 configuration method	Checks syntax and sets the configuration method for Ethernet channel 0. A value of dthens will try the dhcp configuration and default to the static IP configuration if dhcp is unsuccessful.	ifconfig -eth0 -c *config_method* where *config_method* is dhcp, static, or dthens. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 data rate	Displays the data rate for Ethernet channel 0. Possible return values are auto, 10, and 100.	ifconfig -eth0 -r	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 0 data rate	Checks syntax and sets the data rate for Ethernet channel 0.	ifconfig -eth0 -r *data_rate* where *data_rate* is auto, 10, or 100. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 duplex mode	Displays the duplex mode for Ethernet channel 0. Possible return values are auto, half, and full.	ifconfig -eth0 -d	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 0 duplex mode	Checks syntax and sets the duplex mode for Ethernet channel 0.	ifconfig -eth0 -d *duplex_mode* where *duplex_mode* is auto, half, or full. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 MTU	Displays the MTU for Ethernet channel 0. Possible return values are from 60 to 1500.	ifconfig -eth0 -m	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 0 MTU	Checks syntax and sets the MTU for Ethernet channel 0.	ifconfig -eth0 -m *mtu* where *mtu* is between 60 and 1500, inclusive. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Display Ethernet channel 0 MAC address (locally administered)	Displays the locally administered MAC address for Ethernet channel 0.	ifconfig -eth0 -l	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 0 static MAC address (locally administered)	Checks syntax and sets the locally administered MAC address to the specified MAC address for Ethernet channel 0.	ifconfig -eth0 -l *address* where *address* is the locally administered MAC address for Ethernet channel 0. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 0 MAC address (burned-in)	Displays the burned-in MAC address for Ethernet channel 0.	ifconfig -eth0 -b	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 configuration	Displays the current configuration of Ethernet channel 1. Possible return values are: • enabled • disabled • -i *static_ip_address* • -g *gateway_address* • -s *subnet_mask* • -r *data_rate* • -d *duplex_mode* • -m *mtu* • -l *locally_administered_mac_addr* • -b *burnedin_mac_address*	ifconfig -eth1	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 static IP address	Displays the static IP address for Ethernet channel 1.	ifconfig -eth1 -i	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 1 static IP address	Checks syntax and sets the static IP address for Ethernet channel 1.	ifconfig -eth1 -i *ip_address* where *ip_address* is the static IP address for Ethernet channel 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 gateway IP address	Displays the gateway IP address for Ethernet channel 1.	ifconfig -eth1 -g	`-T system:mm[x]` where *x* is the primary management module bay number.
Set Ethernet channel 1 gateway IP address	Checks syntax and sets the gateway IP address for Ethernet channel 1.	ifconfig -eth1 -g *ip_address* where *ip_address* is the gateway IP address for Ethernet channel 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 subnet mask	Displays the subnet mask for Ethernet channel 1.	ifconfig -eth1 -s	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 1 subnet mask	Checks syntax and sets the subnet mask for Ethernet channel 1.	ifconfig -eth1 -s *ip_address* where *ip_address* is the subnet mask for Ethernet channel 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 data rate	Displays the data rate for Ethernet channel 1. Possible return values are auto, 10, and 100. Ethernet channel 1 data rate is a read-only field used for internal SBCE communication.	ifconfig -eth1 -r	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 duplex mode	Displays the duplex mode for Ethernet channel 1. Possible return values are auto, half, and full. Ethernet channel 1 duplex mode is a read-only field used for internal SBCE communication.	ifconfig -eth1 -d	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 MTU	Displays the MTU for Ethernet channel 1. Possible return values are from 60 to 1500. Ethernet channel 1 MTU is a read-only field used for internal SBCE communication.	ifconfig -eth1 -m	`-T system:mm[x]` where *x* is the primary management module bay number.
Display Ethernet channel 1 MAC address (locally administered)	Displays the locally administered MAC address for Ethernet channel 1.	ifconfig -eth1 -l	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set Ethernet channel 1 static MAC address (locally administered)	Checks syntax and sets the locally administered MAC address to the specified MAC address for Ethernet channel 1.	ifconfig -eth1 -l *address* where *address* is the locally administered MAC address for Ethernet channel 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Enable Ethernet channel 1	Enables Ethernet channel 1.	ifconfig -eth1 -up Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Disable Ethernet channel 1	Disables Ethernet channel 1.	ifconfig -eth1 -down Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
Display IP address for blade server integrated system management processor	Displays the IP address of the integrated system management processor for the specified blade server.	ifconfig -i	`-T system:blade[x]:sp` where *x* bay number of the blade server.

Table 9. ifconfig commands (continued)

Function	What it does	Command	Valid targets
Set starting IP address for blade server integrated system management processor	Sets the starting point of the integrated system management processor IP addresses for blade servers that are installed in the SBCE unit.	ifconfig -i *ip_address* where *ip_address* is the starting IP address for all blade servers that are installed in the SBCE unit. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:blade[1]:sp`

Example:

To display the configuration for Ethernet channel 0 while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
ifconfig -eth0
```

To set the static IP address for Ethernet channel 0 to 192.168.70.133 while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
ifconfig -eth0 -i 192.168.70.133 -c static
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> ifconfig -eth0
Enabled
 -i 10.10.10.10
 -g 0.0.0.0
 -s 255.255.255.0
 -n MM00096BCA0C80
 -c Try DHCP server.  If it fails, use static IP config.
 -r Auto
 -d Auto
 -m 1500
 -l 00:00:00:00:00:00
 -b 00:09:6B:CA:0C:80
system:mm[1]> ifconfig -eth0 -i 192.168.70.133 -c static
Changes to the network settings will take effect after the next reset of the
MM.
system:mm[1]>
```

smtp command

This command configures and displays the management-module SMTP settings.

Table 10. smtp commands

Function	What it does	Command	Valid targets
Display SMTP server host name or IP address	Displays the SMTP server host name or IP address.	smtp	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Server host name or IP address - display	Displays the server host name or IP address.	smtp -s	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Server host name or IP address - set	Checks syntax and sets the server host name or IP address.	smtp -s *hostname/ip_address* where *hostname/ip_address* is the host name or IP address of the server. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Example:

To set the SMTP server host name to us.ibm.com while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
smtp -s us.ibm.com
```

To display the SMTP configuration while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
smtp
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> smtp -s us.ibm.com
OK
system:mm[1]> smtp
-s us.ibm.com
system:mm[1]>
```

snmp command

This command configures and displays the management-module SNMP settings.

Table 11. snmp commands

Function	What it does	Command	Valid targets
Display SNMP configuration of management module	Displays the current SNMP configuration of the management module. Possible return values are: • -a enabled/disabled • -t enabled/disabled • -c1 *community1_name* • -c1i1 *community1_ipaddr1_or_hst name* • -c1i2 *community1_ipaddr2_or_hst name* • -c1i3 *community1_ipaddr3_or_hst name* • -c2 *community2_name* • -c2i1 *community2_ipaddr1_or_hst name* • -c2i2 *community2_ipaddr2_or_hst name* • -c2i3 *community2_ipaddr3_or_hst name* • -c3 *community3_name* • -c3i1 *community3_ipaddr1_or_hst name* • -c3i2 *community3_ipaddr2_or_hst name* • -c3i3 *community3_ipaddr3_or_hst name* • -cn *contact_name* • -l *location*	snmp	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
SNMP agent - display status	Displays the current status of the SNMP agent of the management module. Possible return values are enabled and disabled.	snmp -a	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP agent - enable	Enables the management-module SNMP agent.	snmp -a -on Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP agent - disable	Disables the management-module SNMP agent.	snmp -a -off Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP traps - display status	Displays the current status of the SNMP traps of the management module. Possible return values are enabled and disabled.	snmp -t	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP traps - enable	Enables the management-module SNMP traps.	snmp -t -on Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP traps - disable	Disables the management-module SNMP traps.	snmp -t -off Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 name - display	Displays the name of community 1.	snmp -c1	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 1 name - set	Sets the name of community 1.	snmp -c1 *name* where *name* is a descriptive name of community 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 first host name or IP address - display	Displays the first host name or IP address of community 1.	snmp -c1i1	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 first host name or IP address - set	Checks syntax and sets the first host name or IP address of community 1.	snmp -c1i1 *hostname/ip_address* where *hostname/ip_address* is the first host name or IP address of community 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 second host name or IP address - display	Displays the second host name or IP address of community 1.	snmp -c1i2	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 1 second host name or IP address - set	Checks syntax and sets the second host name or IP address of community 1.	snmp -c1i2 *hostname/ip_address* where *hostname/ip_address* is the second host name or IP address of community 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 third host name or IP address - display	Displays the third host name or IP address of community 1.	snmp -c1i3	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 1 third host name or IP address - set	Checks syntax and sets the third host name or IP address of community 1.	snmp -c1i3 *hostname/ip_address* where *hostname/ip_address* is the third host name or IP address of community 1. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 name - display	Displays the name of community 2.	snmp -c2	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 2 name - set	Sets the name of community 2.	snmp -c2 *name* where *name* is a descriptive name of community 2. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 first host name or IP address - display	Displays the first host name or IP address of community 2.	snmp -c2i1	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 first host name or IP address - set	Checks syntax and sets the first host name or IP address of community 2.	snmp -c2i1 *hostname/ip_address* where *hostname/ip_address* is the first host name or IP address of community 2. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 second host name or IP address - display	Displays the second host name or IP address of community 2.	snmp -c2i2	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 2 second host name or IP address - set	Checks syntax and sets the second host name or IP address of community 2.	snmp -c2i2 *hostname/ip_address* where *hostname/ip_address* is the second host name or IP address of community 2. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 third host name or IP address - display	Displays the third host name or IP address of community 2.	snmp -c2i3	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 2 third host name or IP address - set	Checks syntax and sets the third host name or IP address of community 2.	snmp -c2i3 *hostname/ip_address* where *hostname/ip_address* is the third host name or IP address of community 2. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 name - display	Displays the name of community 3.	snmp -c3	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 3 name - set	Sets the name of community 3.	snmp -c3 *name* where *name* is a descriptive name of community 3. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 first host name or IP address - display	Displays the first host name or IP address of community 3.	snmp -c3i1	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 first host name or IP address - set	Checks syntax and sets the first host name or IP address of community 3.	snmp -c3i1 *hostname/ip_address* where *hostname/ip_address* is the first host name or IP address of community 3. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 second host name/IP address - display	Displays the second host name and IP address of community 3.	snmp -c3i2	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP community 3 second host name or IP address - set	Checks syntax and sets the second host name or IP address of community 3.	snmp -c3i2 *hostname/ip_address* where *hostname/ip_address* is the second host name or IP address of community 3. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 third host name or IP address - display	Displays the third host name or IP address of community 3.	snmp -c3i3	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP community 3 third host name or IP address - set	Checks syntax and sets the third host name or IP address of community 3.	snmp -c3i3 *hostname/ip_address* where *hostname/ip_address* is the third host name or IP address of community 3. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP contact name - display	Displays the contact name. The default value for the SNMP contact name is “No Contact Configured”.	snmp -cn	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 11. snmp commands (continued)

Function	What it does	Command	Valid targets
SNMP contact name - set	Sets the contact name.	snmp -cn *contact_name* Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP location - display	Displays the location. The default value for the SNMP location is “No Location Configured”.	snmp -l	`-T system:mm[x]` where *x* is the primary management module bay number.
SNMP location - set	Sets the location.	snmp -l *hostname/ip_address* Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Example:
To view the SNMP configuration while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
snmp
```

To enable the SNMP agent and SNMP traps while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt, type

```
snmp -a -on -t -on
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> snmp
-a Disabled
-t Disabled
-l No Location Configured
-cn No Contact Configured
-c1 com1
-c1i1 1.2.3.4
-c1i2
-c1i3
-c2 com2
-c2i1 1.2.3.4
-c2i2
-c2i3
-c3
```

```
-c3i1
-c3i2
-c3i3
system:mm[1]> snmp -a -on -t -on
Changes to the network settings will take effect after the next reset of the
MM.
system:mm[1]>
```

sol (serial over LAN) commands

These commands configure SOL functions and indicate SOL status.

Table 12. SOL commands

Function	What it does	Command	Valid targets

Display SOL status	Displays the SOL status for the targeted device:
	• When the command target is a blade server, it displays the same result as the `sol -status -T system:blade[x]` command.
	• When the command target is the primary management module, it displays the status, retry interval, retry count, send threshold, accumulate timeout, and the vlan id; displaying the same results as the `sol -status -i -c -s -t -v -T system:mm[x]` command.
		sol	`-T system:blade[`*x*`]`
			`-T system:mm[`*x*`]`
			where *x* is the blade server or primary management module bay number.

SOL session status (global)	Displays the global SOL session status. Possible return values are disabled and enabled. The global SOL session status does not affect the SOL session status for each blade server.	sol -status	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Table 12. SOL commands (continued)

Function	What it does	Command	Valid targets
SOL session status (for blade server)	Displays SOL session status for the specified blade server. Possible return values are displayed and enabled. If SOL is enabled for the blade server, one of the following return values is also displayed: • There is no SOL session opening for that blade. • There is an SOL session opening for that blade. • There is an SOL session opening and it is connected to a telnet session.	sol -status	`-T system:blade[x]` where *x* is the blade server bay number.
SOL retry interval - display	Displays the SOL retry interval. This is the wait time, in milliseconds, before the first retry attempt and the time between each subsequent retry attempt. The retry interval specified must be 10 ms or greater; if a value of less than 10 ms is entered, it will be changed to 10 ms.	sol -i	`-T system:mm[x]` where *x* is the primary management module bay number.
SOL retry interval - set	Sets the SOL retry interval to the input value.	sol -i *value* where *value* is from 10 ms to 2550 ms, inclusive, in 10 ms increments. If you enter a value less than 10 ms, the retry interval will be set to 10 ms. If you enter a value greater than 2550 ms, the retry interval will be set to 2550 ms. Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 12. SOL commands (continued)

Function	What it does	Command	Valid targets
SOL retry count - display	Displays the SOL retry count. This is the number of retries that will be attempted after a packet is first unsuccessfully transmitted. A packet is dropped and will need to be retransmitted if no ACK/NACK is received by the time the retry interval expires. A SOL retry count of 0 means no retries will be attempted.	sol -c	`-T system:mm[x]` where *x* is the primary management module bay number.
SOL retry count - set	Sets the SOL retry count to the input value.	sol -c *value* where *value* is from 0 to 7, inclusive. If you enter a value greater than 7, an error will be displayed. Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SOL send threshold - display	Displays the SOL send threshold. This is the minimum size of a complete SOL packet, in bytes. The blade server integrated system management processor automatically sends an SOL character data packet containing this number of characters as soon as the blade server integrated system management processor accepts this number of characters (or greater) from the blade server serial controller. Setting the threshold value to 1 causes the blade server integrated system management processor to send a packet as soon as the first character is received.	sol -s	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 12. SOL commands (continued)

Function	What it does	Command	Valid targets
SOL send threshold - set	Sets the SOL send threshold to the input value. Setting the threshold value to 1 causes the blade server integrated system management processor to send an SOL packet as soon as the first character is received.	sol -s *value* where *value* is from 1 to 251, inclusive. If you enter a value outside this range, an error will be displayed. Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.
SOL accumulate timeout - display	Displays the SOL accumulate timeout. This is the amount of time the blade server integrated system management processor waits, in milliseconds, before transmitting a partial SOL character data packet. A partial SOL packet is a packet that has fewer characters to transmit than the number of characters specified by the SOL send threshold (sol -s option).	sol -t	`-T system:mm[x]` where *x* is the primary management module bay number.
SOL accumulate timeout - set	Sets the SOL accumulate timeout to the input value.	sol -t *value* where *value* is from 5 ms to 1275 ms, inclusive. If you enter a value less than 5 ms, the accumulate timeout will be set to 5 ms. If you enter a value greater than 1275 ms, an error will be displayed. Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 12. SOL commands (continued)

Function	What it does	Command	Valid targets
SOL enable - global	Enables SOL globally for the SBCE unit. The global SOL enable command does not affect the SOL session status for each blade server.	sol -on Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
SOL enable - blade server	Enables SOL for the specified blade server.	sol -on Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:blade[`*x*`]` where *x* is the blade server bay number.
SOL disable - global	Disables SOL globally for the SBCE unit. The global SOL disable command does not affect the SOL session status for each blade server.	sol -off Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
SOL disable - blade server	Disables SOL for the specified blade server.	sol -off Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:blade[`*x*`]` where *x* is the blade server bay number.
SOL VLAN ID - display	Displays the SOL VLAN ID.	sol -v	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Table 12. SOL commands (continued)

Function	What it does	Command	Valid targets
SOL VLAN ID - set	Sets the SOL VLAN ID to the input value.	sol -v *value* where *value* is from 1 to 4095, inclusive. If you enter a value outside this range, an error will be displayed. Required authority level: • Supervisor • Network and Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Example:

To set the SOL accumulate timeout to 25 ms while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt, type

```
sol -t 25
```

To display the SOL accumulate timeout while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt, type

```
sol -t
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> sol -t 25
OK
system:mm[1]> sol -t
-t 25
system:mm[1]>
```

telnetcfg (Telnet configuration) command

These commands display and configure the telnet parameters of the primary management module.

Table 13. Telnet configuration (telnetcfg) commands

Function	What it does	Command	Valid targets
Display telnet configuration	Displays the telnet configuration of the primary management module.	telnetcfg	`-T system:mm[x]` where *x* is the primary management module bay number.

Table 13. Telnet configuration (telnetcfg) commands (continued)

Function	What it does	Command	Valid targets
Display telnet timeout	Displays the telnet timeout value, in seconds, of the primary management module.	telnetcfg -t	`-T system:mm[x]` where *x* is the primary management module bay number.
Set telnet timeout for primary management module	Sets the telnet timeout value for the primary management module.	telnetcfg -t *timeout* where *timeout* is from 1 second to 604800 seconds (7-days), inclusive. If you enter a value outside this range, an error will be displayed. Required authority level: • Supervisor • Network & Security Configuration • Advanced Configuration (MM, I/O Modules, Blades)	`-T system:mm[x]` where *x* is the primary management module bay number.

Example:
To set the telnet timeout for the primary management module to 6 minutes while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
telnetcfg -t 360
```

To display the telnet configuration for the primary management module while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
telnetcfg
```

The following example shows the information that is returned from these two commands:

```
system:mm[1]> telnetcfg -t 360
OK
system:mm[1]> telnetcfg
-t 360
system:mm[1]>
```

Event-log commands

Use these commands to view and clear primary management-module event log entries:

- clearlog command
- displaylog command

clearlog command

This command clears the management-module event log.

Table 14. Clear management-module event log (clearlog) commands

Function	What it does	Command	Valid targets
Clear management-module event log	Clears the management-module event log and displays a message confirming that the event log was cleared.	clearlog Required authority level: • Supervisor • Ability to Clear Event Logs	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Example:
To clear the management-module event log while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
clearlog
```

The following example shows the information that is returned:

```
system:mm[1]> clearlog
OK
system:mm[1]>
```

displaylog command

These commands display management-module event log entries.

Table 15. Display management-module event log (displaylog) commands

Function	What it does	Command	Valid targets
Display management-module event log entries	Displays five entries from the management-module event log. The first time the command is executed, the five most recent log entries are displayed. Each subsequent time the command is issued, the next five entries in the log display.	displaylog	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Display management-module event log entries (reset counter)	Resets the counter and displays the first five entries in the management-module event log.	displaylog -f	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.

Example:
To display the first five primary management-module event log entries while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
displaylog -f
```

To display the next five management-module event log entries, type (a second time)

```
displaylog
```

To display the next five management-module event log entries, type

```
displaylog
```

The following example shows the information that is returned from these three commands:

```
system:mm[1]> displaylog -f
1       I       SERVPROC        10/27/03        19:45:57        Remote Login
Successful. Login ID:''USERID' CLI authenticated from 192.168.70.231
(Telnet).'
2       E       SERVPROC        10/27/03        19:42:58        Failure reading
I2C device. Check devices on bus 4.
3       E       SERVPROC        10/27/03        19:42:58        Failure reading
I2C device. Check devices on bus 3.
4       E       SERVPROC        10/27/03        19:42:58        Failure reading
I2C device. Check devices on bus 2.
5       I       SERVPROC        10/27/03        19:41:54        Remote Login
Successful. Login ID:''USERID' from WEB browser at IP@=192.168.70.231'
system:mm[1]> displaylog
6       E       SERVPROC        10/27/03        19:41:53        Blower 2 Fault
Multiple blower failures
7       E       SERVPROC        10/27/03        19:41:53        Blower 1 Fault
Single blower failure
8       I       SERVPROC        10/27/03        19:41:48        Ethernet[1] Link
Established at 100Mb, Full Duplex.
9       I       SERVPROC        10/27/03        19:41:48        Ethernet[1]
configured to do 100Mb/Full Duplex.
10      I       SERVPROC        10/27/03        19:41:48        Ethernet[1] MAC
Address currently being used: 0x00-09-6B-CA-0C-81
system:mm[1]> displaylog
11      I       SERVPROC        10/27/03        19:41:48        Ethernet[0] Link
Established at 100Mb, Full Duplex.
12      I       SERVPROC        10/27/03        19:41:48        Ethernet[0]
configured to do Auto Speed/Auto Duplex.
13      I       SERVPROC        10/27/03        19:41:48        Ethernet[0] MAC
Address currently being used: 0x00-09-6B-CA-0C-80
14      I       SERVPROC        10/27/03        19:41:48        Management Module
Network Initialization Complete.
15      I       SERVPROC        10/27/03        19:41:46        ENET[1] IP-
Cfg:HstName=MM00096BCA0C81, IP@=192.168.70.126 ,GW@=0.0.0.0,
NetMsk=255.255.255.0
system:mm[1]>
```

The following example shows the information that is returned if the displaylog command is run after the event log is cleared:

```
system:mm[1]> displaylog -f
1       I       SERVPROC        10/27/03        19:53:02        System log
cleared.
(There are no more entries in the event log.)
```

```
system:mm[1]>
```

Power-control commands

Use these commands to control operation of the SBCE unit, blade servers, and I/O (switch) modules:

- boot command
- power command
- reset command

boot command

These commands reset blade servers with several different restart options.

Table 16. Boot commands

Function	What it does	Command	Valid targets
Reset blade server	Performs an immediate reset and restart of the specified blade server. This command will not start a blade server that is turned off.	boot Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:blade[x]` where *x* is the blade server bay number.
Reset blade server to command console	Resets the specified blade server, causing it to open a command console with an SOL session when it restarts. This command will not turn a blade server on that is turned off.	boot -c Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console Access • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console and Virtual Media Access	`-T system:blade[x]` where *x* is the blade server bay number.
Power cycle	Cycles power for the specified blade server. If the blade server is off, it will turn on. If the blade server is on, it will turn off and then turn on.	boot -p powercycle Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:blade[x]` where *x* is the blade server bay number.

Table 16. Boot commands (continued)

Function	What it does	Command	Valid targets
Reset blade server	Performs an immediate reset and restart of the specified blade server. This command will not start a blade server that is turned off.	boot -p reset Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:blade[`*x*`]` where *x* is the blade server bay number.

Example:

To boot the blade server in blade bay 3 while management module 1 is set as the persistent command environment, at the `system:mm[1]>` prompt type

```
boot -T system:blade[3]
```

The following example shows the information that is returned:

```
system:mm[1]>  boot -T system:blade[3]
OK
system:mm[1]>
```

power command

These commands turn on and turn off blade servers and I/O (switch) modules.

Table 17. Power commands

Function	What it does	Command	Valid targets

Power on	Turns on the specified blade server or I/O (switch) module.	power -on
		Required authority level:
		• Supervisor
		• Blade and I/O Module Power/Restart Access
			`-T system:blade[`*x*`]`
			`-T system:switch[`*x*`]`
			where *x* is the blade server or I/O (switch) module bay number.

Table 17. Power commands (continued)

Function	What it does	Command	Valid targets
Power on to command console	Opens a command console with an SOL session when the specified blade server is turned on.	power -on -c Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console Access • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console and Virtual Media Access	`-T system:blade[x]` where *x* is the blade server bay number.

Power off	Turns off the specified blade server or I/O (switch) module.	power -off
		Required authority level:
		• Supervisor
		• Blade and I/O Module Power/Restart Access
			`-T system:blade[x]`
			`-T system:switch[x]`
			where *x* is the blade server or I/O (switch) module bay number.

Power cycle	Cycles power for the specified blade server or I/O (switch) module. If the blade server or I/O (switch) module is off, it will turn on. If the blade server or I/O (switch) module is on, it will turn off and then turn on.	power -cycle
		Required authority level:
		• Supervisor
		• Blade and I/O Module Power/Restart Access
			`-T system:blade[x]`
			`-T system:switch[x]`
			where *x* is the blade server or I/O (switch) module bay number.

Power cycle to command console	Cycles power for the specified blade server. If the blade server is off, it opens a command console with an SOL session when it is turned on. If the blade server is on, it will turn off and then turn on.	power -cycle -c Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console Access • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console and Virtual Media Access	`-T system:blade[x]` where *x* is the blade server bay number.

Table 17. Power commands (continued)

Function	What it does	Command	Valid targets

Display power state	Displays the current power state for the specified blade server or I/O (switch) module. Possible return values are on and off.	power -state	`-T system:blade[`*x*`]`
			`-T system:switch[`*x*`]`
			where *x* is the blade server or I/O (switch) module bay number.

Table 17. Power commands (continued)

Function	What it does	Command	Valid targets
Display POST status for I/O (switch) module	Displays the POST status for the specified I/O (switch) module. If the command is run while POST is in progress, it returns the level of POST that is currently in process. If the command is run after POST is complete, it displays one of the following return values: • The `POST results could not be read.` message displays if there was an internal error during POST. • The `POST results not complete: hex_code.` message displays if POST results are not available after POST completes. • If POST returns valid results, one of the following messages displays: – `hex_code: Base internal function failure detected.` – `hex_code: Internal interface failure detected.` – `hex_code: External interface failure detected.` – `hex_code: Module completed POST successfully.` – `hex_code: Cannot decode POST result code.` • The `Invalid POST results.` message displays if none of the above conditions is true. Where `hex_code` is a hexadecimal code. See the documentation that comes with your I/O moudle for information. This command option is not supported for serial concentrator I/O (switch) modules.	power -state -post	`-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay number.

Example:

To display the power state for the blade server in blade bay 5 while this blade server is set as the persistent command environment, at the `system:blade[5]>` prompt type

```
power -state
```

To turn on the blade server in blade bay 5 while this blade server is set as the persistent command environment, at the `system:blade[5]>` prompt type

```
power -on
```

To display the power state for the blade server in blade bay 5 again while this blade server is set as the persistent command environment, at the `system:blade[5]>` prompt type

```
power -state
```

The following example shows the information that is returned from these three commands:

```
system:blade[5]> power -state
Off
system:blade[5]> power -on
OK
system:blade[5]> power -state
On
system:blade[5]>
```

reset command

These commands reset blade servers, blade server integrated system management processors, I/O (switch) modules, or the primary management module.

Table 18. Reset commands

Function	What it does	Command	Valid targets

Reset	Performs an immediate reset and restart of the specified device. This command will not turn on a blade server that is powered off.	reset
		Required authority level (blade server, I/O module, ISMP):
		• Supervisor
		• Blade and I/O Module Power/Restart Access
		Required authority level (management module):
		• Supervisor
		• Advanced Configuration (MM, I/O module, Blades)
			`-T system:blade[x]`
			`-T system:switch[x]`
			`-T system:blade[x]:sp`
			`-T system:mm[x]`
			where *x* is the blade server, I/O (switch) module, or primary management module bay number.

Table 18. Reset commands (continued)

Function	What it does	Command	Valid targets
Reset blade server to command console	Opens a command console with an SOL session when the specified blade server is reset. This command will not turn on a blade server that is powered off.	reset -c Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console Access • Blade and I/O Module Power/Restart Access *and* Blade Server Remote Console and Virtual Media Access	`-T system:blade[`*x*`]` where *x* is the blade server bay number.
Reset management module with failover	Resets the primary management module, enabling failover if a redundant management module is present. An error message is displayed if you try to enable failover when a redundant management module is not installed.	reset -f Required authority level: • Supervisor • Advanced Configuration (MM, I/O module, Blades)	`-T system:mm[`*x*`]` where *x* is the primary management module bay number.
Reset I/O (switch) module with standard diagnostics	Performs an immediate reset and restart of the specified device, running standard diagnostics on the I/O (switch) module after it restarts. Running the `reset -std` command gives the same result as running the `reset` command on a I/O (switch) module.	reset -std Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay number.
Reset I/O (switch) module with extended diagnostics	Performs an immediate reset and restart of the specified device, running extended diagnostics on the I/O (switch) module after it restarts.	reset -exd Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay number.
Reset I/O (switch) module with full diagnostics	Performs an immediate reset and restart of the specified device, running full diagnostics on the I/O (switch) module after it restarts.	reset -full Required authority level: • Supervisor • Blade and I/O Module Power/Restart Access	`-T system:switch[`*x*`]` where *x* is the I/O (switch) module bay number.

Example:
To reset the ISMP on the blade server in blade bay 5 while the SBCE unit is set as the persistent command environment, at the `system>` prompt type

```
reset
```

The following example shows the information that is returned:

```
system> reset -T blade[5]:sp
OK
system>
```

Session commands

Use these commands to start an SOL connection to the command console of a specific blade server or to end a command console session:

- console command
- exit command

console command

This command sets up a serial over LAN connection to the command console of a blade server.

To end an SOL session, press Esc followed by an open parenthesis:

```
Esc (
```

Table 19. Console commands

Function	What it does	Command	Valid targets
Create SOL session with blade server	Creates an SOL connection to the specified blade server.	console Required authority level: • Supervisor • Blade Server Remote Console Access • Blade Server Remote Console and Virtual Media Access	`-T system:blade[x]` where *x* is the blade server bay number.
Create override SOL session with blade server	Creates an SOL connection to the specified blade server, with the override option enabled. This enables you to end an existing SOL session to that blade server and start a new one.	console -o Required authority level: • Supervisor • Blade Server Remote Console Access • Blade Server Remote Console and Virtual Media Access	`-T system:blade[x]` where *x* is the blade server bay number.

Example:
To start an SOL connection to the blade server in blade bay 14 while this blade server is set as the persistent command environment, at the `system:mm[x]>` prompt type

```
sol -T system:blade[14]
```

exit command

This command exits the command-line interface, terminating the current session.

Table 20. Exit command

Function	What it does	Command	Valid targets
Exit	Terminates the current command-line interface session.	exit	Any installed device.

Example:
To terminate the current command-line interface session, type

```
exit
```

4 Error messages

The command-line interface provides error messages specific to each command. The following topics list the error messages for each command, along with their definitions:

- “boot command errors” on page 61
- “clear command errors” on page 62
- “clearlog command errors” on page 62
- “console command errors” on page 63
- “dhcpinfo command errors” on page 63
- “displaylog command errors” on page 64
- “dns command errors” on page 64
- “ifconfig command errors” on page 65
- “list command errors” on page 67
- “power command errors” on page 68
- “reset command errors” on page 69
- “smtp command errors” on page 70
- “sol command errors” on page 71
- “sol command errors” on page 71
- “telnetcfg command errors” on page 73

boot command errors

The following table lists error messages for the `boot` command.

Error message	Definition
Each option can only be used once per command	Displays when a user enters the same option flag in a single command multiple times. For example, `boot -p reset -p powercycle.`
Invalid option	Displays when an invalid command option is entered.
Read/write command error.	Displays when an internal error occurs.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
The target bay is empty.	Displays when the user tries to issue a command to an empty blade bay.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to boot or reset a blade server.

clear command errors

The following table lists error messages for the `clear` command.

Error message	Definition
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `clear -config -config.`
Firmware update is in progress. Try again later.	Displays when the user tries to reset the management module to its default configuration during a firmware update. The error message displays and the management module configuration does not reset.
Internal error resetting to defaults.	Displays when an internal error occurs while resetting the management module to its default configuration. The error message displays and the management module configuration does not reset.
Invalid option	Displays when an invalid command option is entered.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.

clearlog command errors

The following table lists error messages for the `clearlog` command.

Error message	Definition
Error clearing the event log.	Displays when an internal error occurs while clearing the event log.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to clear the event log.

console command errors

The following table lists error messages for the `console` command.

Error message	Definition
A SOL session socket was not available.	Displays when the command-line interface fails to establish an SOL connection to a blade server.
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `console -o -o.`
Error entering console mode.	Displays when an internal error occurs while trying to establish an SOL connection.
Invalid target path	Displays when a user tries to connect to a blade server that is already in use.
That blade is presently not available. Please try again shortly.	Displays when a user tries to connect to a blade server that is already in use.
The maximum number of sessions to this blade has been reached.	Displays when the blade server has no available sessions for a user to connect to.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
The target bay is empty.	Displays when the user tries to issue a command to an empty blade bay.
Unknown error occurred while attempting to connect.	Displays when an unknown error occurs.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to set up an SOL session.

dhcpinfo command errors

The following table lists error messages for the `dhcpinfo` command.

Error message	Definition
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `dhcpinfo -eth0 -n -eth0 -i.`
Invalid option	Displays when an invalid command option is entered.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
Read/write command error.	Displays when an internal error occurs.

Error message	Definition
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.

displaylog command errors

The following table lists error messages for the `displaylog` command.

Error message	Definition
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `displaylog -f -f`.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
(There are no more entries in the event log.)	Displays when there are no more event log entries to display.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.

dns command errors

The following table lists error messages for the `dns` command.

Error message	Definition
At least one address is required to enable DNS.	Displays when a user tries to enable DNS without configuring at least one address.
Each option can only be used once per command	Displays when a user enters the same option flag in a single command multiple times. For example, `dns -i 192.168.70.29 -i`.
Invalid ip address	Displays when a user tries to set an invalid IP address.
Invalid option	Displays when an invalid command option is entered.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.

Error message	Definition
-on and -off cannot both be used in the same command	Displays when a user tries to enable and disable DNS in the same command.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as setting an IP address.

ifconfig command errors

The following table lists error messages for the `ifconfig` command.

Error message	Definition
-up and -down cannot both be used in the same command.	Displays when a user tries to enable and disable an ethernet interface in the same command.
Displays and changes must be done separately	Displays when a user tries to display a value and set a different value in the same command.
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `ifconfig -i -i`.
Error reading gateway address.	Displays when an internal error occurs while reading the gateway address of a network interface (eth0 or eth1).
Error reading IP Address.	Displays when an internal error occurred while reading the IP address of the integrated system management processor on a blade server, or while reading the IP address of a network interface (eth0 or eth1).
Error reading the burned-in MAC address.	Displays when an internal error occurs while reading the burned-in MAC address of a network interface (eth0 or eth1).
Error reading the data rate.	Displays when an internal error occurs while reading the data rate setting of a network interface (eth0 or eth1).
Error reading the DHCP configuration.	Displays when an internal error occurs while reading the DHCP setting of a network interface (eth0).
Error reading the duplex setting.	Displays when an internal error occurs while reading the duplex setting of a network interface (eth0 or eth1).
Error reading the hostname.	Displays when an internal error occurs while reading the hostname of a network interface (eth0).

Error message	Definition
Error reading the locally administered MAC address.	Displays when an internal error occurs while reading the locally administered MAC address of a network interface (eth0 or eth1).
Error reading the maximum transmission unit.	Displays when an internal error occurs while reading the maximum transmission unit (MTU) setting of a network interface (eth0 or eth1).
Error reading the subnet mask.	Displays when an internal error occurs while reading the subnet mask of a network interface (eth0 or eth1).
Error writing gateway address.	Displays when an internal error occurs while setting the gateway address.
Error writing IP Address.	Displays when an internal error occurs while setting the IP address of the integrated system management processor on a blade server.
Error writing the data rate.	Displays when an internal error occurs while setting the data rate.
Error writing the DHCP configuration.	Displays when an internal error occurs while setting the DHCP configuration.
Error writing the duplex setting.	Displays when an internal error occurs while setting the duplex setting.
Error writing the hostname.	Displays when an internal error occurs while setting the hostname.
Error writing the locally administered MAC address.	Displays when an internal error occurs while setting the locally administered MAC address.
Error writing the maximum transmission unit.	Displays when an internal error occurs while setting the MTU.
Error writing the subnet mask.	Displays when an internal error occurs while setting the subnet mask.
Invalid gateway address.	Displays when a user tries to enter an invalid gateway address for the -g (gateway address) command option.
Invalid hostname.	Displays when a user tries to enter an invalid hostname for the -n (hostname) command option.
Invalid ip address.	Displays for one of the following errors: • A user tries to set the IP address of system:blade[1]:sp either to an invalid IP address, or an IP address whose last part is greater than 255 (the max number of blade servers). • A user tries to enter an invalid IP address for the -i (static IP address) command option.
Invalid mac address.	Displays when a user tries to enter an invalid MAC address.
Invalid option	Displays when an invalid command option is entered.
Invalid option for ethernet interface.	Displays when a user tries to change a static property of eth1 (hostname, DHCP, data rate, or duplex).

Error message	Definition
Invalid parameter. The locally administered MAC address cannot be a multicast address.	Displays when a user tries to set a multicast MAC address for the -l (locally administered MAC address) command option.
Invalid parameter. The MTU must be between 60 and 1500, inclusive.	Displays when a user tries to enter a parameter value for the -m (MTU) command option that is outside of the valid range.
Invalid parameter. Valid values for -c are dhcp, static, or dthens.	Displays when a user tries to enter an invalid parameter for the -c (Ethernet configuration method) command option.
Invalid parameter. Valid values for -d are auto, half, and full.	Displays when a user tries to enter an invalid parameter for the -d (duplex mode) command option.
Invalid parameter. Valid values for -r are auto, 10, and 100.	Displays when a user tries to enter an invalid parameter for the -r (data rate) command option.
Invalid subnet mask.	Displays when a user tries to enter an invalid subnet mask for the -s (subnet mask) command option.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
Syntax error. Type ifconfig -h for help.	Displays when a user tries to set an invalid value for an IP address, gateway address, subnet mask, hostname, MTU, or locally administered MAC address.
The target must be system:blade[1]:sp for this command	Displays when a user tries to issue the `ifconfig -i <ip address> -T system:blade[x]:sp` to a blade server other than blade[1].
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
The target bay is empty.	Displays when the user tries to issue a command to an empty blade bay.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as setting an IP address.

list command errors

The following table lists error messages for the `list` command.

Error message	Definition
Each option can only be used once per command	Displays when a user enters the same option flag in a single command multiple times. For example, `list -l 1 -l 2`.

Error message	Definition
Invalid option	Displays when an invalid command option is entered.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
The level must be non-zero.	Displays when the user enters a level of depth for tree-structure display of 0.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.

power command errors

The following table lists error messages for the `power` command.

Error message	Definition
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `power -on -on -c`.
Invalid option	Displays when an invalid command option is entered.
Invalid POST results.	Displays when the POST results are not valid.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
POST results could not be read.	Displays when an internal error occurs during POST.
POST results not complete: *hex_code* where the *hex_code* value varies based on the problem that was encountered.	Displays when the POST results are not available.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
There target bay is empty.	Displays when the user tries to issue a command to an empty blade bay.
There is no switch present in that bay.	Displays when the user tries to issue a command to an empty I/O (switch) bay.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as turning a blade server on or off.

reset command errors

The following table lists error messages for the `reset` command.

Error message	Definition
An error occurred while disabling failover.	Displays when an internal error occurs while disabling failover.
An error occurred while enabling failover.	Displays when an internal error occurs while enabling failover.
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `reset -c -c`.
Firmware update is in progress. Try again later.	Displays when the user tries to reset the management module during a firmware update. The error message displays and the management module does not reset.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
Read/write command error.	Displays when an internal error occurs.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
There is no backup management module installed.	Displays when a user tries to enable failover on a management module reset and there is no back-up management module.
The target bay is empty.	Displays when the user tries to issue a command to an empty blade bay.
There is no switch present in that bay.	Displays when the user tries to issue a command to an empty I/O (switch) bay.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to reset a SBCE device.

smtp command errors

The following table lists error messages for the `smtp` command.

Error message	Definition
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `smtp -s us.ibm.com -s`
Input length is greater than the maximum characters allowed.	Displays when a user tries to enter too many characters in an input field.
Invalid host name or ip address	Displays when a user tries to set the SMTP host name or IP address to an invalid value.
Invalid option	Displays when an invalid command option is entered.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
SMTP server host name or IP address is not set	Displays when a user tries to view the SMTP host name or IP address and the values are not set.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as setting an IP address.

snmp command errors

The following table lists error messages for the `smtp` command.

Error message	Definition
Arguments containing spaces must be enclosed in quotation marks.	Displays when a user treis to enter a string containing spaces that has an opening quotation mark without a closing quotation mark.
At least one configured community is required to enable SNMP.	Displays when a user tries to enable SNMP without configuring at least one community name.
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `snmp -a on -a.`
Input length is greater than the maximum characters allowed.	Displays when a user tries to enter too many characters in an input field.
Invalid community name	Displays when a user tries to set a community name to an invalid value.

Error message	Definition
Invalid host name or ip address	Displays when a user tries to set the SMTP host name or IP address to an invalid value.
Invalid option	Displays when an invalid command option is entered.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as setting a community name.

sol command errors

The following table lists error messages for the `sol` command.

Error message	Definition
-on and -off cannot both be used in the same command.	Displays when a user tries to enable and disable SOL in the same command.
An error occurred while disabling SOL globally	Displays when an internal error occurs while disabling SOL globally.
An error occurred while disabling SOL on that blade	Displays when an internal error occurs while disabling SOL on a blade server.
An error occurred while enabling SOL globally	Displays when an internal error occurs while enabling SOL globally
An error occurred while enabling SOL on that blade	Displays when an internal error occurs while enabling SOL on a blade server.
An error occurred while reading the SOL accumulate timeout	Displays when an internal error occurs while reading the SOL accumulate timeout.
An error occurred while reading the SOL retry count	Displays when an internal error occurs while reading the SOL retry count.
An error occurred while reading the SOL retry interval	Displays when an internal error occurs while reading the SOL retry interval.
An error occurred while reading the SOL send threshold	Displays when an internal error occurs while reading the SOL send threshold.
An error occurred while reading the SOL session status on that blade	Displays when an internal error occurs while reading the SOL session status on a blade server.
An error occurred while reading the global SOL status	Displays when an internal error occurs while reading the global SOL status.

Error message	Definition
An error occurred while reading the SOL VLAN ID	Displays when an internal error occurs while reading the SOL VLAN ID.
An error occurred while setting the SOL accumulate timeout	Displays when an internal error occurs while setting the SOL accumulate timeout.
An error occurred while setting the SOL retry count	Displays when an internal error occurs while setting the SOL retry count.
An error occurred while setting the SOL retry interval	Displays when an internal error occurs while setting the SOL retry interval.
An error occurred while setting the SOL send threshold	Displays when an internal error occurs while setting the SOL send threshold.
Displays and changes must be done separately	Displays when a user tries to display a value and set a different value in the same command.
Each option can only be used once per command.	Displays when a user enters the same option flag in a single command multiple times. For example, `sol -i -i`.
Invalid option	Displays when an invalid command option is entered.
Invalid parameter. The accumulate timeout must be between 1 and 251 inclusive.	Displays when a user tries to enter a accumulate timeout that is outside of the valid range.
Invalid parameter. The retry count must be between 0 and 7, inclusive.	Displays when a user tries to enter a retry count that is outside of the valid range.
Invalid parameter. The send threshold must be between 1 and 251 inclusive.	Displays when a user tries to enter a send threshold that is outside of the valid range.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
Retry interval range is too large. Setting to 250.	Displays when a user tries to enter a retry interval that is greater than 250 ms. If the user tries to enter a retry interval greater than 250 ms, the retry interval will be set to 250 ms.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as configuring SOL parameters.

telnetcfg command errors

The following table lists error messages for the `telnetcfg` command.

Error message	Definition
Each option can only be used once per command	Displays when a user enters the same option flag in a single command multiple times. For example, `telnetcfg -t 100 -t`.
Invalid option	Displays when an invalid command option is entered.
Invalid parameter. Input must be numeric.	Displays when a user tries to enter a Telnet timeout value containing non-numeric characters. For example, `telnetcfg -t 200w`.
Invalid parameter. The telnet timeout range must be less than 604800.	Displays when a user tries to enter a Telnet timeout value that is greater than the maximum allowed value.
Invalid target path	Displays when a user tries to issue a command to a target that is not valid.
Read/write command error.	Displays when an internal error occurs.
The target bay is out of range.	Displays when a user tries to issue a command to a target that is out of range for that target. For example, the `env -T system:blade[15]` command is out of range because the SBCE unit has only 14 blade bays.
User does not have the authority to issue this command	Displays when a user lacks the authority level necessary to run a command, such as configuring Telnet.

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