NVIDIA UFM-SDN Appliance Command Reference Guide v4.16.0

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About This Document

NVIDIA Unified Fabric Manager for Software Defined Networks (UFM-SDN) appliance enables data center operators to efficiently provision, monitor and operate large-scale compute and storage data center interconnect infrastructures. UFM eliminates the complexity of fabric management, while also providing deep visibility into traffic and optimizing fabric performance.

This reference guide documents all the commands that can be used to configure the NVIDIA® UFM®-SDN Appliance.

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Document Revision History

For the list of changes made to this document, refer to Document Revision History.

1 Using Command Line Interface

UFM-SDN Appliance is equipped with an industry-standard command line interface (CLI). The CLI is accessed through SSH or Telnet sessions or directly through the console port on the front panel, if it exists. This page explains how to use the CLI of UFM-SDN Appliance.

1.1 CLI Modes

The CLI has the following modes, and each mode makes available a different set of commands for execution. The different CLI configuration modes are:

Mode/Context	Description
standard	When the CLI is launched, it begins in Standard mode. This is the most restrictive mode and only has commands to query a restricted set of state information. Users cannot take any actions that directly affect the system, nor can they change any configuration.
enable	The "enable" command moves the user to Enable mode. This mode offers commands to view all state information and take actions like rebooting the system, but it does not allow any configuration to be changed. Its commands are a superset of those in Standard mode. To return to Standard mode, enter "disable" or "exit".
config	The "configure terminal" command moves the user from Enable mode to Config mode. Config mode is allowed only for user accounts in the "admin" role (or capabilities) - see Users, Roles and Capabilities. This mode has a full unrestricted set of commands to view anything, take any action, or change any configuration. Its commands are a superset of those in Enable mode. To return to Enable mode, enter "exit" or "no configure". Note that moving directly from/to Standard mode to/from Config mode is not possible.
config ufm	Configuration mode for UFM interface. Config ufm mode is allowed only for user accounts in the "admin" role (or capabilities) - see Users, Roles and Capabilities. This mode has a full unrestricted set of commands to view anything, take any action, or change any configuration. Its commands are a superset of those in config mode and enables you to configure UFM-related commands.
config interface management	Configuration mode for management interfaces
Any configuration mode	Several commands such as "show" can be applied within any context

1.2 Syntax Conventions

To help you identify the different parts of a CLI command, the following table explains conventions of presenting the syntax of commands.

Syntax Convention	Description	Example
< > Angled brackets	Indicate a value/variable that must be replaced. mtu <value> value - MTU size in MB	<1...65535> or <interface>

Syntax Convention	Description	Example
[ ] Square brackets	Enclose optional parameters. However, only one parameter out of the list of parameters listed can be used. The user cannot have a combination of the parameters unless stated otherwise.	[destination-ip | destination-port | destination-mac]
{ } Braces	Enclose alternatives or variables that are required for the parameter in square brackets.	[mode {active | on | passive}]
| Pipe	Identify mutually exclusive choices.	active | on | passive

Do not use the angled or square brackets, vertical bar, or braces in command lines. This guide uses these symbols only to show the different entry types.

CLI commands and options are in lowercase and are case-sensitive.
For example, when you enter the enable command, enter it all in lowercase. It cannot be ENABLE or Enable. Text entries you create are also case-sensitive.

1.3 Prompt and Response Conventions

The prompt always begins with the hostname of the system. What follows depends on what command mode the user is in. To demonstrate by example, assuming the machine name is "ufm-sdn-app", the prompts for each of the modes are:

```
ufm-sdn-app >              (Standard mode)
ufm-sdn-app #              (Enable mode)
ufm-sdn-app (config) #     (Config mode)
```

The following session shows how to move between command modes:

```
ufm-sdn-app >                       (You start in Standard mode)
ufm-sdn-app > enable                    (Move to Enable mode)
ufm-sdn-app #                       (You are in Enable mode)
ufm-sdn-app # configure terminal        (Move to Config mode)
ufm-sdn-app (config) #              (You are in Config mode)
ufm-sdn-app (config) # exit         (Exit Config mode)
ufm-sdn-app #                       (You are back in Enable mode)
ufm-sdn-app # disable               (Exit Enable mode)
ufm-sdn-app >                       (You are back in Standard mode)
```

Commands entered do not print any response and simply show the command prompt after you press <Enter>.

If an error is encountered in executing a command, the response will begin with "%", followed by some text describing the error.

1.4 Getting Help

You may request context-sensitive help at any time by pressing "?" on the command line. This will show a list of choices for the word you are on, or a list of top-level commands if you have not typed anything yet.

For example, if you are in Standard mode and you type "?" at the command line, then you will get the following list of available commands.

```
ufm-sdn-app > ?
cli              Configure CLI shell options
enable           Enter enable mode
exit             Log out of the CLI
help             View description of the interactive help system
no               Negate or clear certain configuration options
show             Display system configuration or statistics
slogin           Log into another system securely using ssh
switch           Configure switch on system
telnet           Log into another system using telnet
terminal         Set terminal parameters
traceroute       Trace the route packets take to a destination
switch >
```

If you type a legal string and then press "?" without a space character before it, then you will either get a description of the command that you have typed so far or the possible command/parameter completions. If you press "?" after a space character and "<cr>" is shown, this means that what you have entered so far is a complete command, and that you may press Enter (carriage return) to execute it.

Try the following to get started:

```
?
show ?
show c?
show clock?
show clock ?
show interfaces ?     (from enable mode)
```

You can also enter "help" to view a description of the interactive help system.
Note also that the CLI supports command and/or parameter tab-completions and their shortened forms. For example, you can enter "en" instead of the "enable" command, or "cli cl" instead of "cli clear-history". In case of ambiguity (more than one completion option is available, that is), then you can hit double tabs to obtain the disambiguation options. Thus, if you are in Enable mode and wish to learn which commands start with the letter "c", type "c" and click twice on the tab key to get the following:

```
ufm-sdn-app # c<tab>
clear       cli       configure
ufm-sdn-app # c
```

This signifies that there are three commands that start with the letter "c": clear, cli and configure.

1.5 Using "no" Command Form

Several config commands feature a "no" form whose purpose is to reset a parameter value to its inherited or default value, or to disable a configuration.

The command sequence below performs the following:

1. Displays the current CLI session option.
2. Disables auto-logout.
3. Displays the new CLI session options (auto-logout is disabled).
4. Re-enables auto-logout (after 15 minutes).
5. Displays the final CLI session options (auto-logout is enabled).

```
// 1. Display the current CLI session options
```

```
ufm-sdn-app (config) # show cli
CLI current session settings:
Maximum line size: 8192
Terminal width: 157 columns
Terminal length: 60 rows
Terminal type: xterm
Auto-logout: 15 minutes
Paging: enabled
Progress tracking: enabled
Prefix modes: enabled
...
// 2. Disable auto-logout
ufm-sdn-app (config) # no cli session auto-logout
// 3. Display the new CLI session options
ufm-sdn-app (config) # show cli
CLI current session settings:
Maximum line size: 8192
Terminal width: 157 columns
Terminal length: 60 rows
Terminal type: xterm
Auto-logout: disabled
Paging: enabled
Progress tracking: enabled
Prefix modes: enabled
...
// 4. Re-enable auto-logout after 15 minutes
ufm-sdn-app (config) # cli session auto-logout 15
// 5. Display the final CLI session options
ufm-sdn-app (config) # show cli
CLI current session settings:
Maximum line size: 8192
Terminal width: 157 columns
Terminal length: 60 rows
Terminal type: xterm
Auto-logout: 15 minutes
Paging: enabled
Progress tracking: enabled
Prefix modes: enabled
...
```

1.6 CLI Pipeline Operator Commands

1.6.1 CLI Filtration Options "include" and "exclude"

The UFM-SDN appliance CLI supports filtering "show" commands to display lines containing or excluding certain phrases or characters. To filter the outputs of the "show" commands use the following format:

```
ufm-sdn-app (config) # <show command> | {include | exclude} <extended regular expression> [<ignore-case>] [next
<lines>] [prev <lines>]
```

The filtering parameters are separated from the show command they filter by a pipe character (i.e. "|"). Quotation marks may be used to include or exclude a string including space, and multiple filters can be used simultaneously. For example:

```
ufm-sdn-app (config) # <show command> | {include <extended regular expression>} [<ignore-case>] [next <lines>]
[prev <lines>] | exclude <extended regular expression> [<ignore-case>] [next <lines>] [prev <lines>]]
```

Example for "include":

```
ufm-sdn-app (config) # show clock | include Time
Time:       15:46:54
Time zone:  UTC
```

Example for "exclude":

```
ufm-sdn-app (config) # show clock | exclude Time
Date:       2020/08/07
            (Etc/UTC)
```

1.6.2 CLI Monitoring Option "watch"

Running this command displays a show-command output that is updated at a time interval specified by the "interval" parameter (2 seconds is the default).

```
ufm-sdn-app (config) # <show command> | watch [diff] [interval <1-100 secs>]
```

The "diff" parameter highlights the differences between each iteration of the command.

For example running the command "show power | watch diff interval 1" yields something similar to the following:

```
------------------------------------------------------------------------
Module  Device          Sensor  Power   Voltage  Current  Feed  Status
                                [Watts] [Watts]  [Amp]
------------------------------------------------------------------------
PS1     power-mon       input   85.00   230.00   0.38     AC    OK
PS2     power-mon       -       -       -        -        -     FAIL

Total power used : 85.00 Watts
Total power capacity : 460.00 Watts
Total power available : 375.00 Watts
Maximum consumed power of all turned on modules: 46.00 Watts
```

With the highlighted black blocks indicating the change that has occurred between one iteration of the command from one second to the next.

To exit "watch" mode, press Ctrl+C. The "watch" option may be used in conjunction with the "include" and "exclude" options as follows:

```
ufm-sdn-app (config) # <show command> | {include | exclude} <extended regular expression> | watch [diff] [interval
<1-100 secs>]
```

It is possible to count the number of lines in an output of a "show" command by using the following:

```
ufm-sdn-app (config) # <show command> | count
```

For example:

```
ufm-sdn-app (config) # show clock | count
4
```

1.6.3 CLI "json-print" Option

The UFM-SDN appliance CLI supports printing "show" commands in JSON syntax.

To print the output of the show commands as JSON, use the following format:

```
ufm-sdn-app (config) # <show command> | json-print
```

Running the command displays an output of the show command in JSON syntax structure instead of its regular format. For example:

```
ufm-sdn-app (config) # show ftp-server
FTP server enabled: no
ufm-sdn-app (config) # show ftp-server | json-print
```

```
{
    "FTP server enabled": "no"
}
```

The "json-print" option cannot be used together with filtering ("include" and "exclude") and/or monitoring ("watch").

1.6.4 CLI Shortcuts

The following table presents the available keyboard shortcuts for the UFM-SDN CLI.

Key Combination	Description
Ctrl-a	Move cursor to beginning of line
Ctrl-b	Move cursor backward one character without deleting
Ctrl-c	Terminate operation
Ctrl-d	If cursor is in the middle of the line, delete one character forward If cursor is at the end of the line, show autocomplete options for current word or word fragment If cursor at an empty line, same as Esc
Ctrl-e	Move cursor to end of line
Ctrl-f	Move cursor forward one character
Ctrl-h	Delete one character backwards from cursor
Ctrl-i	Auto-complete current word (same as TAB)
Ctrl-j	Return carriage (same as ENTER)
Ctrl-k	Delete line after cursor
Ctrl-l	Clear screen and show line at the top of terminal window
Ctrl-m	Return carriage (same as ENTER)
Ctrl-n	Next line (same as DOWN ARROW)
Ctrl-p	Next line (same as UP ARROW)
Ctrl-t	Transpose the two characters on either side of cursor
Ctrl-u	Delete line
Ctrl-w	Delete the last word
Ctrl-y	Retrieve ("yank") last item deleted
Esc b	Move cursor one word backward
Esc c	Capitalizes first letter in word after cursor
Esc d	Delete one word forward from cursor
Esc f	Move one word forward from cursor
Esc l	Change word after cursor to lowercase letters
Esc Ctrl-h	Delete one word backward from cursor
Esc [A	Next line (same as DOWN ARROW)
Esc [B	Next line (same as UP ARROW)
Esc [C	Move forward one character from cursor
Esc [D	Move backward one character from cursor

1.7 Users, Roles and Capabilities

The following table describes the predefined users and their roles and capabilities. The roles described below can be assigned to new users and to existing ones as well.

Username	Role and Capability	Description
admin	System Administrator	Can perform all operations allowed to System Administration group for both Appliance Management and UFM Application
ufmsysadmin	UFM System Administrator	Can perform all operations allowed to Fabric Administration group
ufmfabadmin	UFM Fabric Administrator	Can perform all operations allowed to Fabric Operator group users, and can also create, delete, and modify environments and global networks
ufmfaboperator	UFM Fabric Operator	Can perform all operations allowed to Monitoring group users, and can also configure fabric, modify the fabric design, define logical objects, and allocate resources. Fabric Operator group users cannot create, delete or modify environments or global networks.
ufmfabmonitor	UFM Monitoring Only	Can see the fabric configuration, open monitoring sessions, define monitoring templates, and export monitoring data to CSV files
ufmportalmanager	Multi-site Portal Administration	Multi-site Portal Administration group
ufmportaluser	Multi-site Portal Monitoring	Multi-site Portal Monitoring group

2 System Management

2.1 Network Interfaces

2.1.1 Interface

This chapter describes the commands that configure and monitor the network interface.

2.1.1.1 interface

	interface {eth0 | eth1 | eth2 | eth3 | ib0 | ib1 | bond0} Enters a network interface context.	
Syntax Description	eth0	Management port 0 (out of band)
	eth1	Management port 1 (out of band)
	eth2	Management port 2 (out of band)
	eth3	Management port 3 (out of band)
	ib0	InfiniBand interface 0 (part of bond0)

	ib1	InfiniBand interface 1 (part of bond0)
	bond0	IP-over-IB bonded interface which consist of ib0 and ib1
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # interface eth0 ufmapl [mgmt-sa] (config interface eth0) #	
Related Commands	show interfaces	
Notes		

2.1.1.2 ip address

	ip address <IP address> <netmask> no ip address Sets the IP address and netmask of this interface. The no form of the command clears the IP address and netmask of this interface.	
Syntax Description	IP address	IPv4 address
	netmask	Subnet mask of IP address
Default	0.0.0.0/0	
Configuration Mode	config interface	
History	1.5	
Example	ufmapl [mgmt-sa] (config interface eth0) # ip address 10.10.10.10 255.255.255.0	
Related Commands	interface show interfaces	
Notes	If DHCP is enabled on the specified interface, then the DHCP IP assignment will hold until DHCP is disabled	

2.1.1.3 alias ip address

	alias <index> ip address < IP address> <netmask> no alias <index> Adds an additional IP address to the specified interface. The secondary address will appear in the output of “show interface” under the data of the primary interface along with the alias. The no form of the command removes the secondary address to the specified interface.	
Syntax Description	alias	A number to be associated with the secondary IP
	IP address	IPv4 address
	netmask	Subnet mask of IP address

Default	N/A
Configuration Mode	config interface
History	1.5
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # alias 2 ip address 9.9.9.9 255.255.255.255`
Related Commands	interface show interfaces
Notes	• If DHCP is enabled on the specified interface, then the DHCP IP assignment will hold until DHCP is disabled • More than one additional IP address can be added to the interface

2.1.1.4 mtu

	mtu <size> no mtu Sets the maximum transmission unit (MTU) size for this interface in bytes. The no form of the command resets the MTU to its default.	
Syntax Description	bytes	Range: 65-1500 [bytes]
Default	N/A	
Configuration Mode	config interface	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # mtu 1500`	
Related Commands	interface show interfaces <if-name>	
Notes		

2.1.1.5 duplex

	duplex <duplex> no duplex Sets the duplex mode of the interface. The no form of the command resets the duplex setting to its default value.	
Syntax Description	duplex	• half - half duplex • full - full duplex • auto - auto-duplex sensing (half or full)
Default	auto	
Configuration Mode	config interface	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config interface eth0) # duplex auto`
Related Commands	interface show interfaces <if-name>
Notes	• Setting the duplex to “auto” also sets the speed to “auto” • Setting the duplex to “half” or “full” also sets the speed to a manual setting which is determined by querying the interface to find out its current auto-detected state

2.1.1.6 speed

	speed <speed> no speed Sets interface speed in Mbps. The no form of the command resets the speed setting to its default value.	
Syntax Description	speed	• 10 – 10Mbps • 100 – 100Mbps • 1000 – 1000Mbps • auto – auto-speed sensing (10/100/1000Mbps)
Default	auto	
Configuration Mode	config interface	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # speed auto`	
Related Commands	interface show interfaces <if-name>	
Notes	• Setting the speed to “auto” also sets the duplex to “auto” • Setting the speed to 10, 100, or 1000 also sets the duplex to a manual setting which is determined by querying the interface to find out its current auto-detected state	

2.1.1.7 dhcp

	dhcp [renew] no dhcp Enables DHCP on the specified interface. The no form of the command disables DHCP on the specified interface.	
Syntax Description	renew	Forces a renewal of the IP address. A restart on the DHCP client for the specified interface will be issued.
Default	Enabled	
Configuration Mode	config interface	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config interface eth0) # dhcp`
Related Commands	interface show interfaces <if-name> configured
Notes	• When enabling DHCP, the IP address and netmask are received via DHCP hence, the static IP address configuration is ignored • Enabling DHCP disables zeroconf and vice versa • Setting a static IP address and netmask does not disable DHCP. DHCP is disabled by using the “no” form of this command, or by enabling zeroconf.

2.1.1.8 zeroconf

	zeroconf no zeroconf Enables zeroconf on the specified interface. The no form of the command disables the use of zeroconf on the specified interface.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config interface
History	1.5
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # zeroconf`
Related Commands	interface show interfaces <if-name> configured
Notes	• Enabling zeroconf randomly chooses a unique link-local IPv4 address from the 169.254.0.0/16 block • This command is an alternative to DHCP • Enabling zeroconf disables DHCP and vice versa

2.1.1.9 shutdown

	shutdown no shutdown Disables the specified interface. The no form of the command enables the specified interface.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config interface
History	1.5
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # shutdown`

Related Commands	interface show interfaces <if-name> configured
Notes	

2.1.1.10 comment

	comment <string> no comment Adds a comment for an interface. The no form of the command removes a comment for an interface.	
Syntax Description	string	A free-form string that has no semantics other than being displayed when interface records are listed
Default	""	
Configuration Mode	config interface	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config interface eth0) # comment my_interface`	
Related Commands	interface show interfaces <if-name>	
Notes		

2.1.1.11 show interfaces

	show interfaces <ifname> [configured | brief] Displays information about the specified interface, configuration status, and counters.	
Syntax Description	ifname	The interface whose data to display (e.g., “eth0”, “eth1”, etc.)
	configured	Displays interface configuration
	brief	Displays interface configuration and status in brief format
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
	4.1.0	Updated output

Example	ufmapl [mgmt-sa] (config) # show interfaces eth0 Interface eth0 status: Comment: Admin up: yes Link up: yes DHCP running: yes IP address: 172.30.30.8 Netmask: 255.255.0.0 IPv6 enabled: yes Autoconf enabled: no Autoconf route: yes Autoconf privacy: no DHCPv6 running: no IPv6 addresses: 1 IPv6 address: fe80::a6bf:1ff:fe00:9c20/64 Speed: 1000Mb/s (auto) Duplex: full (auto) Interface type: ethernet Interface source: physical MTU: 1500 HW address: A4:BF:01:00:9C:20 RX bytes: 1629833421 TX bytes: 2808005 RX packets: 12981118 TX packets: 51988 RX mcast packets: 26852703 TX discards: 0 RX discards: 0 TX errors: 0 RX errors: 0 TX overruns: 0 RX overruns: 0 TX carrier: 0 RX frame: 0 TX collisions: 0 TX queue len: 1000
Related Commands	interface <ifname> ip address <IP address> <netmask>
Notes	

2.1.1.12 ipv6 enable

	ipv6 enable no ipv6 enable Enables all IPv6 addressing for this interface. The no form of the command disables all IPv6 addressing for this interface.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config interface management
History	4.1.0
Example	ufmapl (config interface eth0)# ipv6 enable
Related Commands	ipv6 address show interface
Notes	• The interface identifier is a 64-bit long modified EUI-64, which is based on the MAC address of the interface. • If IPv6 is enabled on an interface, the system will automatically add a link-local address to the interface. Link-local addresses can only be used to communicate with other hosts on the same link, and packets with link-local addresses are never forwarded by a router. • A link-local address, which may not be removed, is required for proper IPv6 operation. The link-local addresses start with “fe80::”, and are combined with the interface identifier to form the complete address.

2.1.1.13 ipv6 address

	ipv6 address {<IPv6 address>/<netmask> | autoconfig [default | privacy]} no ipv6 {<IPv6 address/netmask> | autoconfig [default | privacy]} Configures IPv6 address and netmask to this interface, static or autoconfig options are possible. The no form of the command removes the given IPv6 address and netmask or disables the autoconfig options.	
Syntax Description	IPv6 address/netmask	Configures a static IPv6 address and netmask. Format example: 2001:db8:1234::5678/64.
	autoconfig	Enables IPv6 stateless address auto configuration (SLAAC) for this interface. An address will be automatically added to the interface based on an IPv6 prefix learned from router advertisements, combined with an interface identifier.
	autoconfig default	Enables default learning routes. The default route will be discovered automatically, if the autoconfig is enabled.
	autoconfig privacy	Uses privacy extensions for SLAAC to construct the autoconfig address, if the autoconfig is enabled
Default	No IP address available, auto config is enabled	
Configuration Mode	config interface management	
History	4.1.0	
Example	`ufmapl (config interface eth0)# ipv6 fe80::202:c9ff:fe5e:a5d8/64`	
Related Commands	ipv6 address show interface	
Notes	• On a given interface, up to 16 addresses can be configured • For Ethernet, the default interface identifier is a 64-bit long modified EUI-64, which is based on the MAC address of the interface	

2.1.1.14 ipv6 dhcp client enable

	ipv6 dhcp client enable no ipv6 dhcp client enable Enables DHCPv6 on this interface. The no form of the command disables DHCPv6 on this interface.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config interface management
History	4.1.0
Example	`ufmapl (config interface eth0)# ipv6 dhcp client enable`

Related Commands	ipv6 dhcp client renew show ipv6 dhcp
Notes	

2.1.1.15 ipv6 dhcp client renew

	ipv6 dhcp client renew Renews DHCPv6 lease for this interface.
Syntax Description	N/A
Default	N/A
Configuration Mode	config interface management
History	4.1.0
Example	`ufmapl (config interface eth0)# ipv6 dhcp client renew`
Related Commands	ipv6 dhcp client enable show ipv6 dhcp
Notes	

2.1.2 Hostname

2.1.2.1 hostname

	hostname <hostname> no hostname Sets a static system hostname. The no form of the command clears the user-configured hostname.	
Syntax Description	hostname	String
Default	Default hostname	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # hostname ufmapl-hostname` `ufmapl-hostname [ mgmt-sa ] (config) #`	
Related Commands	show hosts	
Notes	"." is not permitted as a valid character of the hostname.	

2.1.2.2 ip name-server

	ip name-server <IPv4/IPv6 address> no name-server Sets the static name server. The no form of the command clears the name server.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ip name-server 9.9.9.9`
Related Commands	show hosts
Notes	

2.1.2.3 ip domain-list

	ip domain-list <domain_name> no ip domain-list Sets the static domain name. The no form of the command clears the domain name.	
Syntax Description	domain_name	String
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ip domain-list mydomain2.com`	
Related Commands	show hosts	
Notes	• A domain name is an identification string that defines a realm of administrative autonomy, authority, or control in the Internet • Domain names are formed by the rules and procedures of the Domain Name System (DNS)	

2.1.2.4 {ip | ipv6} host

	{ip | ipv6} host <hostname> <ip-address> no {ip | ipv6} host <hostname> <ip-address> Sets the static domain name. The no form of the command clears the domain name.	
Syntax Description	hostname	String
	ip-address	IPv4 or IPv6 address

Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ip host test-host 1.2.3.4` `ufmapl [ mgmt-sa ] (config) # ipv6 host my-ipv6-host 2001::8f9`
Related Commands	show hosts
Notes	

2.1.2.5 {ip | ipv6} map-hostname

	{ip | ipv6} map-hostname no {ip | ipv6} map-hostname Maps between the currently-configured hostname and the loopback address 127.0.0.1. The no form of the command clears the mapping.
Syntax Description	N/A
Default	IPv4 mapping is enabled by default IPv6 mapping is disabled by default
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ip map-hostname`
Related Commands	show hosts
Notes	• If no mapping is configured, a mapping between the hostname and the IPv4 loopback address 127.0.0.1 will be added • The no form of the command maps the hostname to the IPv6 loopback address if there is no statically configured mapping from the hostname to an IPv6 address (disabled by default) • Static host mappings are preferred over DNS results. As a result, with this option set, you will not be able to look up your hostname on your configured DNS server; but without it set, some problems may arise if your hostname cannot be looked up in DNS.

2.1.2.6 show hosts

	show hosts Displays hostname, DNS configuration, and static host mappings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode

History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show hosts
	Hostname: ufmapl
	
	Name servers:
	 9.9.9.9 configured
	 10.211.0.121 (DHCP on eth0)
	
	Domain names:
	 mydomain2.com configured
	 lab.mydomain.com dynamic (DHCP on eth0)
	 vmlab.mydomain.com dynamic (DHCP on eth0)
	 tok.mydomain.com dynamic (DHCP on eth0)
	 mydomain.com dynamic (DHCP on eth0)
	
	Static IPv4 host mappings:
	  10.7.144.133 --> ufmapl1
	  127.0.0.1 --> localhost
	
	Static IPv6 host mappings:
	  ::1 --> localhost6
	  fcfc:fcfc:209:36:a6bf:1ff:fe00:9c20 --> ufmapl1
	
	Automatically map hostname to loopback address: yes
	Automatically map hostname to IPv6 loopback address: no
	ufmapl [mgmt-sa] (config) #</pre>

Related Commands	show hosts
Notes	

2.1.3 Routing

2.1.3.1 {ip | ipv6} default-gateway

	{ip | ipv6} default-gateway {<ip-address> | <ifname>} no {ip | ipv6} default-gateway Sets a static default gateway. The no form of the command deletes the default gateway.	
Syntax Description	ip-address	The default gateway IP address
	ifname	Name of the interface interface name (e.g. eth0, eth1).
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	<pre>ufmapl [mgmt-sa] (config) # ip default-gateway 172.30.0.1</pre>	
Related Commands	show {ip | ipv6} default-gateway show {ip | ipv6} route	
Notes	• The configured default gateway will not be used if DHCP is enabled • In order to configure ipv4 default-gateway use "ip route" command	

2.1.3.2 show {ip | ipv6} default-gateway

	show {ip | ipv6} default-gateway [static] Displays the default gateway.

Syntax Description	static	Displays the static configuration of the default gateway
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show ip default-gateway
	Active default gateways:
	172.30.0.1 (interface: eth0)</pre>	

Related Commands	{ip | ipv6} default-gateway	
Notes		

2.1.3.3 {ip | ipv6} route

	{ip | ipv6} route {<network-prefix> <netmask> | <network-prefix>/<masklen>} <next-hop> no ip route {<network-prefix> <netmask> | <network-prefix>/<masklen>} <next-hop> Sets a static route for a given IP. The no form of the command deletes the static route.	
Syntax Description	network-prefix	IPv4 or IPv6 network prefix
	netmask	IPv4 netmask formats are: • /24 • 255.255.255.0 IPv6 netmask format is: • /48 (as a part of the network prefix)
	nexthop-address	IPv4 or IPv6 address of the next hop router for this route
	ifname	Interface name (e.g. eth0, eth1)
Default	N/A	
Configuration Mode	config	
History	4.1.0	
Example	<pre>ufmapl [mgmt-sa] (config) # ip route 20.20.20.0 255.255.255.0 eth0</pre>	
Related Commands	show ip route	
Notes		

2.1.3.4 show {ip | ipv6} route

	show {ip | ipv6} route [static] Displays the routing table in the system.	
Syntax Description	static	Filters the table with the static route entries
Default	N/A	

Configuration Mode	Any configuration mode
History	4.1.0

Example	`ufmapl [ mgmt-sa ] (config) # show ip route`
	`Destination Mask Gateway Interface Source`
	`default 0.0.0.0 172.30.0.1 eth0 DHCP`
	`10.10.10.10 255.255.255.255 0.0.0.0 eth0 static`
	`20.10.10.10 255.255.255.255 172.30.0.1 eth0 static`
	`20.20.20.0 255.255.255.0 0.0.0.0 eth0 static`
	`172.30.0.0 255.255.0.0 0.0.0.0 eth0`
	`interface`

Related Commands	{ip | ipv6} route
Notes	

2.1.4 Network to Media Resolution (ARP & NDP)

IPv4 network use Address Resolution Protocol (ARP) to resolve IP address to MAC address.

2.1.4.1 arp

	arp <ip-address> <mac-address> no arp <ip-address> <mac-address> Sets a static ARP entry. The no form of the command deletes the static ARP.	
Syntax Description	ip-address	IPv4 address
	mac-address	MAC address
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # arp 172.30.0.1 00:00:5E:00:01:01`	
Related Commands	show ip arp	
Notes		

2.1.4.2 show arp

	show arp [static] Displays the ARP table.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	ufmapl [mgmt-sa] (config) # show arp ARP cache contents IP 172.30.0.1 maps to MAC 00:00:5E:00:01:01 (interface eth0) ufmapl [mgmt-sa] (config) # show arp static Static ARP entries IP 1.1.1.1 maps to MAC 00:01:02:03:04:05
Related Commands	arp
Notes	

2.1.4.3 ipv6 neighbor

	ipv6 neighbor <ipv6-address> <ifname> <mac-address> no ipv6 neighbor <ipv6-address> <ifname> <mac-address> Adds a static neighbor entry. The no form of the command deletes the static entry.	
Syntax Description	ipv6-address	IPv6 address
	ifname	Management interface (i.e. eth0, eth1)
	mac-address	MAC address
Default	N/A	
Configuration Mode	config	
History	4.1.0	
Example	ufmapl [mgmt-sa] (config) # ipv6 neighbor 2001:db8:701f::8f9 eth0 00:11:22:33:44:55	
Related Commands	show ipv6 neighbor ipv6 route arp clear ipv6 neighbors	
Notes	• ARP is used only with IPv4. In IPv6 networks, Neighbor Discovery Protocol (NDP) is used similarly. • Use The no form of the command to remove static entries. Dynamic entries can be cleared via the “clear ipv6 neighbors” command.	

2.1.4.4 clear ipv6 neighbors

	clear ipv6 neighbors Clears the dynamic neighbors cache.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.1.0

Example	`ufmapl [ mgmt-sa ] (config) # clear ipv6 neighbors`
Related Commands	ipv6 neighbor show ipv6 neighbor arp
Notes	• Clearing Neighbor Discovery Protocol (NDP) cache removes only the dynamic entries learned and not the static entries configured • Use the no form of the command to remove static entries

2.1.4.5 show ipv6 neighbors

	show ipv6 neighbors [static] Displays the Neighbor Discovery Protocol (NDP) table.	
Syntax Description	static	Filters only the table of the static entries
Default	N/A	
Configuration Mode	Any configuration mode	
History	4.1.0	

Example	`ufmapl [ mgmt-sa ] (config) # show ipv6 neighbors`
	`IPv6 Address Age MAC Address`
	`State Interf`
	`----------`
	`2001::2 9428 AA:AA:AA:AA:AA:AA`
	`permanent eth0`	

Related Commands	ipv6 neighbor clear ipv6 neighbor show ipv6	
Notes		

2.1.5 DHCP

2.1.5.1 ip dhcp

	ip dhcp {default-gateway yield-to-static | hostname <hostname>| primary-intf <ifname> | send-hostname} no ip dhcp {default-gateway yield-to-static | hostname | primary-intf | send-hostname} Sets global DHCP configuration. The no form of the command deletes the DHCP configuration.	
Syntax Description	yield-to-static	Does not allow you to install a default gateway from DHCP if there is already a statically configured one
	hostname	Specifies the hostname to be sent during DHCP client negotiation if send-hostname is enabled
	primary-intf	Sets the interface from which a non-interface-specific configuration (resolver and routes) will be accepted via DHCP

	send-hostname	Enables the DHCP client to send a hostname during negotiation
Default	no ip dhcp yield-to-static no ip dhcp hostname ip dhcp primary-intf eth0 no ip dhcp send-hostname	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ip dhcp default-gateway yield-to-static`	
Related Commands	show ip dhcp dhcp [renew]	
Notes	DHCP is supported for IPv4 networks only	

2.1.5.2 show {ip | ipv6} dhcp

	show {ip | ipv6} dhcp Displays the DHCP/DHCPv6 configuration and status.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show ip dhcp`
	`----------`
	`Interface DHCP Enabled DHCP Running Valid lease`
	`----------`
	`bond0 no no no`
	`eth0 yes yes yes`
	`eth1 no no no`
	`ib0 no no no`
	`ib1 no no no`
	`lo no no no`
	
	`IPv4 dhcp default gateway yields to static configuration: no`
	
	`DHCP primary interface:`
	`Configured: eth0`
	`Active: eth0`
	
	`DHCP client options:`
	`Send Hostname: no`
	`Client Hostname: ufmapl (using system hostname)`

Related Commands	ip dhcp dhcp [renew]
Notes	

2.1.5.3 ipv6 dhcp primary-intf

	ipv6 dhcp primary-intf <if-name> no ipv6 dhcp primary-intf Sets the interface from which non-interface-specific (resolver) configuration is accepted via DHCPv6. The no form of the command resets non-interface-specific (resolver) configuration.	
Syntax Description	if-name	• lo • eth0 • eth1
Default	N/A	
Configuration Mode	config	
History	4.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # ipv6 dhcp primary-intf eth0`	
Related Commands	ipv6 enable ipv6 address show interface <ifname>	
Notes		

2.1.5.4 ipv6 dhcp stateless

	ipv6 dhcp stateless no ipv6 dhcp stateless Enables stateless DHCPv6 requests. The no form of the command disables stateless DHCPv6 requests.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.1.0
Example	`ufmapl [ mgmt-sa ] (config) # ipv6 dhcp stateless`
Related Commands	ipv6 enable ipv6 address show interface <ifname>
Notes	• This command only gets DNS configuration, not an IPv6 address • The no form of the command requests all information, including an IPv6 address

2.1.6 IP Diagnostic Tools

2.1.6.1 ping | ping6

	{ping | ping6} [-LRUbdfnqrvVaA] [-c count] [-i interval] [-w deadline] [-p pattern] [-s packetsize] [-t ttl] [-I interface or address] [-M mtu discovery hint] [-S sndbuf] [-T timestamp option] [-Q tos] [hop1 ...] destination Sends ICMP echo requests to a specified host.	
Syntax Description	Linux Ping options	http://linux.about.com/od/commands/l/blcmdl8_ping.htm
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # ping 172.30.2.2
	PING 172.30.2.2 (172.30.2.2) 56(84) bytes of data.
	64 bytes from 172.30.2.2: icmp_seq=1 ttl=64 time=0.703 ms
	64 bytes from 172.30.2.2: icmp_seq=2 ttl=64 time=0.187 ms
	64 bytes from 172.30.2.2: icmp_seq=3 ttl=64 time=0.166 ms
	64 bytes from 172.30.2.2: icmp_seq=4 ttl=64 time=0.161 ms
	64 bytes from 172.30.2.2: icmp_seq=5 ttl=64 time=0.153 ms
	64 bytes from 172.30.2.2: icmp_seq=6 ttl=64 time=0.144 ms
	^C
	--- 172.30.2.2 ping statistics ---
	6 packets transmitted, 6 received, 0% packet loss, time 5004ms
	rtt min/avg/max/mdev = 0.144/0.252/0.703/0.202 ms</pre>	

Related Commands	traceroutes	
Notes		

2.1.6.2 traceroutes

	traceroute [-46dFITUnrAV] [-f first_ttl] [-g gate,...] [-i device] [-m max_ttl] [-N squeries] [-p port] [-t tos] [-l flow_label] [-w waittime] [-q nqueries] [-s src_addr] [-z sendwait] host [packetlen] Traces the route packets take to a destination.	
Syntax Description	-4	Uses IPv4
	-6	Uses IPv6
	-d	Enables socket level debugging
	-F	Sets DF (do not fragment bit) on
	-I	Uses ICMP ECHO for tracerouting
	-T	Uses TCP SYN for tracerouting
	-U	Uses UDP datagram (default) for tracerouting
	-n	Does not resolve IP addresses to their domain names
	-r	Bypasses the normal routing and send directly to a host on an attached network
	-A	Performs AS path lookups in routing registries and print results directly after the corresponding addresses

	-V	Prints version info and exit
	-f	Starts from the first_ttl hop (instead from 1)
	-g	Routes packets throw the specified gateway (maximum 8 for IPv4 and 127 for IPv6)
	-i	Specifies a network interface to operate with
	-m	Sets the max number of hops—max TTL to be reached (default is 30)
	-N	Sets the number of probes to be tried simultaneously (default is 16)
	-p	Uses destination port. It is an initial value for the UDP destination port (incremented by each probe, default is 33434), for the ICMP seq number (incremented as well, default from 1), and the constant destination port for TCP tries (default is 80)
	-t	Sets the TOS (IPv4 type of service) or TC (IPv6 traffic class) value for outgoing packets
	-l	Uses specified flow_label for IPv6 packets
	-w	Sets the number of seconds to wait for response to a probe (default is 5.0). Non-integer (float point) values allowed too.
	-q	Sets the number of probes per each hop (default is 3)
	-s	Uses source src_addr for outgoing packets
	-z	Sets minimal time interval between probes (default is 0). If the value is more than 10, then it specifies a number in milliseconds, else it is a number of seconds (float point values allowed too).
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # traceroute 192.168.10.70
	traceroute to 192.168.10.70 (192.168.10.70), 30 hops max, 40 byte packets
	1 172.30.0.1 (172.30.0.1) 3.632 ms 2.849 ms 3.544 ms
	2 10.222.128.46 (10.222.128.46) 3.176 ms 3.289 ms 3.656 ms
	3 10.158.128.30 (10.158.128.30) 15.331 ms 15.819 ms 16.388 ms
	4 10.158.128.65 (10.158.128.65) 20.468 ms 7.893 ms 12.27 ms
	5 10.7.34.115 (10.7.34.115) 16.405 ms 11.985 ms 12.264 ms
	6 192.168.10.70 (192.168.10.70) 16.377 ms 16.091 ms 20.475 ms</pre>	

Related Commands	ping | ping6	
Notes		

2.1.6.3 tcpdump

	tcpdump [-aAdeflLnNOpqRStuUvxX] [-c count] [-C file_size] [-E algo:secret] [-F file] [-i interface] [-M secret] [-r file] [-s snaplen] [-T type] [-w file] [-W filecount] [-y datalinktype] [-Z user] [expression] Invokes standard binary, passing command line parameters straight through. Runs in foreground, printing packets as they arrive, until the user hits Ctrl+C.

Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	ufmapl [mgmt-sa] (config) # tcpdump ..... 09:37:38.678812 IP 192.168.10.7.ssh > 192.168.10.1.54155: P 1494624:1494800(176) ack 625 win 90 <nop,nop,timestamp 5842763 858672398> 09:37:38.678860 IP 192.168.10.7.ssh > 192.168.10.1.54155: P 1494800:1495104(304) ack 625 win 90 <nop,nop,timestamp 5842763 858672398> ... 9141 packets captured 9142 packets received by filter 0 packets dropped by kernel
Related Commands	
Notes	

2.1.7 Network Bonding

2.1.7.1 bond

	bond <bonded-if> [mode <string>] [link-mon-time <milliseconds>] [up-delay-time <milliseconds>] [down-delay-time <milliseconds>] no bond <bonded-if> Creates the named bonded interface. The no form of the command deletes the named bonded interface.	
Syntax Description	mode	Specifies the type of mode the bonded interface is: • balance-rr • backup • balance-xor • balance-xor-layer3+4 • broadcast • link-agg • link-agg-layer3+4 • balance-tlb • balance-alb
	link-mon-time	Specifies the link monitoring frequency (in msecs)
	up-delay-time	Specifies the time (in msecs) to wait before enabling a slave after a link recovery has been detected
	down-delay-time	Specifies the time (in msecs), to wait before disabling a slave after a link failure has been detected for the specified bonded interface
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	ufmapl [mgmt-sa] (config) # bond bond0 mode backup ufmapl [mgmt-sa] (config) # bond bond0 link-mon-time 100
Related Commands	interface show bonds
Notes	

2.1.7.2 interface

	interface <ifname> bond <bond-if> no interface <ifname> bond <bond-if> Adds the named interface from the specified bonded interface. The no form of the command removes the named interface from the specified bonded interface.	
Syntax Description	bond	The bonded interface
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # interface ib0 bond bond0	
Related Commands	bond show bonds	
Notes		

2.1.7.3 show bonds

	show bonds [bonded-if] Displays bonding configuration and status.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show bonds Bonded Interface bond0: Enabled: yes Mode: backup Link Monitor Time: 100 Interfaces: ib0 ib1
Related Commands	bond interface
Notes	

2.2 NTP, Clock and Time Zones

2.2.1 clock set

	clock set <hh:mm:ss> [<yyyy/mm/dd>] Sets the time and date.	
Syntax Description	hh:mm:ss	Time
	yyyy/mm/dd	Date
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # clock set 23:23:23 2012/12/15`	
Related Commands	show clock	
Notes	If not specified, the date will be left as is	

2.2.2 clock timezone

	clock timezone [<zone word> [<zone word> [<zone word>] [<zone word>]]] Sets the system time zone. The time zone may be specified in one of three ways: • A nearby city whose time zone rules to follow. The system has a large list of cities which can be displayed by the help and completion system. They are organized hierarchically because there are too many of them to display in a flat list. A given city may be required to be specified in two, three, or four words, depending on the city. • An offset from UTC. This will be in the form UTC-offset UTC, UTC-offset UTC+<0-14>, UTC-offset UTC-<1-12>. • UTC (Universal Time, which is almost identical to GMT), and this is the default time zone The no form of the command resets time zone to its default (GMT).	
Syntax Description	zone word	The possible forms this could take include: continent, city, continent, country, city, continent, region, country, city, ocean, and/or island.
Default	GMT	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # clock timezone America North United_States Other New_York`	
Related Commands	show clock	
Notes	If not specified, the date will be left as is	

2.2.3 ntp

	ntp {disable | enable | {peer | server} <ip-address> [version <number> | disable]} no ntp {disable | enable | {peer | server} <ip-address> [disable]} Configures NTP. The no form of the command negates NTP options.	
Syntax Description	disable	Disables NTP
	enable	Enables NTP
	peer | server	Configures an NTP peer or server node
	ip-address	IPv4 address
	version	Specifies the NTP version number of this peer. Possible values are 3 or 4.
Default	NTP is enabled NTP version number is 4	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # no ntp peer 192.168.10.24 disable`	
Related Commands	show ntp	
Notes		

2.2.4 ntpdate

	ntpdate <ip-address> Sets the system clock using the specified SNTP server.	
Syntax Description	ip-address	IP address
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ntpdate 192.168.10.10` `15 Dec 17:25:40 ntpdate[15206]: adjust time server 192.168.10.10 offset -0.000092 sec`	
Related Commands	show ntp	
Notes	This is a one-time operation and does not cause the clock to be kept in sync on an ongoing basis. It will generate an error if SNTP is enabled since the socket it requires will already be in use.	

2.2.5 show clock

	show clock Displays the current system time, date and time zone.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show clock Time: 23:23:26 Date: 2012/12/15 Time zone: America North United_States Other New_York
Related Commands	clock set clock timezone ntp ntpdate
Notes	

2.2.6 show ntp

	show ntp Displays the current NTP settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show ntp NTP is enabled. Clock is unsynchronized. No NTP peers or servers configured.
Related Commands	ntp ntpdate
Notes	

2.3 Software Management

This chapter displays all the relevant commands used to manage the system software image.

2.3.1 image boot

	image boot {location <location-id> | next} Specifies the default location where the system should be booted from.

Syntax Description	location-id	Specifies the default destination location. There can be up to 2 images on the system. Possible values: 1-2.
	next	Sets the boot location to be the next once after the one currently booted from, thus avoiding a cycle through all the available locations
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # image boot location 2`	
Related Commands	show images	
Notes		

2.3.2 boot next

	boot next fallback-reboot enable no boot next fallback-reboot enable Sets the default setting for next boot. Normally, if the system fails to apply the configuration on startup (after attempting upgrades or downgrades, as appropriate), it will reboot to the other partition as a fallback. The no form of the command tells the system not to do that, only for the next boot.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # boot fallback-reboot enable`
Related Commands	show images
Notes	Normally, if the system fails to apply the configuration on startup (after attempting upgrades or downgrades, as appropriate), it will reboot to the other partition as a fallback. The 'no' variant of this command tells the system NOT to do that, ONLY for the next boot. Note that this setting is not persistent, and will go back to enabled automatically after every boot.

2.3.3 image delete

	image delete <image-name> Deletes the specified image file.	
Syntax Description	image-name	Specifies the image name
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # image delete image-ufm_appliance-x86_64-x86_64-20121205-152024.img`	
Related Commands	show images	
Notes		

2.3.4 image fetch

	image fetch <URL> [<filename>] Downloads an image from the specified URL or via SCP.	
Syntax Description	URL	HTTP, HTTPS, FTP, TFTP, SCP and SFTP are supported Example: scp://username[:password]@hostname/path/filename
	filename	Specifies a filename for this image to be stored as locally
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # image fetch scp://<username>@192.168.10.125/var/www/html/<image_name>`
	`Password  ******`
	`100.0%`
	`[##########################################################################################]`	

Related Commands	show images	
Notes	• Please delete the previously available image, prior to fetching the new image • See section "Updating UFM™ SDN Appliance Software" in the Mellanox UFM SDN Appliance User Manual for a full upgrade example	

2.3.5 image install

	image install <image-filename> [location <location-id>] | [progress <prog-options>] [verify <ver-options>] Downloads an image from the specified URL or via SCP.

Syntax Description	image filename	Specifies the image name
	location-id	Specifies the image destination location
	prog-options	• “no-track” overrides CLI default and does not track the installation progress. • “track” overrides CLI default and tracks the installation progress.
	ver-options	• “check-sig” requires an image to have either a valid signature or no signature. • “ignore-sig” allows unsigned or invalidly signed images to be installed. • “require-sig” requires from the installed image to have a valid signature. If a valid signature is not found on the image, the image cannot be installed.
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # image install image-ufm_appliance-x86_64-x86_64-20121205-152024.img
	Step 1 of 4: Verify Image
	100.0%
	[##########]
	Step 2 of 4: Uncompress Image
	100.0%
	[##########]
	Step 3 of 4: Create Filesystems
	100.0%
	[##########]
	Step 4 of 4: Extract Image
	100.0%
	[##########]</pre>	

Related Commands	show images	
Notes	• The image cannot be installed on the “active” location (the one which is currently being booted) • On a two-location system, the location is chosen automatically if no location is specified	

2.3.6 image move

	image move <src image name> <dest image name> Renames the specified image file.	
Syntax Description	src image name	Specifies the old image name
	dest image name	Specifies the new image name
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # image move image1.img image2.img`
Related Commands	show images
Notes	

2.3.7 image option

	image options require-sig no image options require-sig Requires from all the installed images a valid signature. The no form of the command does not require a signature. However if one is present, it must be valid.	
Syntax Description	require-sig	Requires images to be signed by a trusted signature
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # image options require-sig`	
Related Commands	show images	
Notes		

2.3.8 show bootvar

	show bootvar Displays the installed system images and the boot parameters.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show bootvar`
	`Installed images:`
	`Partition 1:`
	`ufm_appliance UFMAPL_1.1.0.11_UFM_3.8.2.5 2012-12-05 15:20:24 x86_64`
	
	`Partition 2:`
	`ufm_appliance UFMAPL_1.0.5.0_UFM_3.8.0.16 2012-10-24 14:27:53 x86_64`
	
	`Last boot partition: 1`
	`Next boot partition: 1`
	
	`Boot manager password is set.`
	
	`No image install currently in progress.`
	
	`Image signing: trusted signature always required`
	`Admin require signed images: yes`
	
	`Settings for next boot only:`
	`Fallback reboot on configuration failure: yes (default)`

Related Commands	N/A
Notes	

2.3.9 show images

	show image Displays information about the system images and boot parameters.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show images
	Images available to be installed:
	  image-ufm_appliance-x86_64-x86_64-20121205-152024.img
	  ufm_appliance UFMAPL_1.1.0.11_UFM_3.8.2.5 2012-12-05 15:20:24 x86_64
	
	Installed images:
	  Partition 1:
	  ufm_appliance UFMAPL_1.1.0.11_UFM_3.8.2.5 2012-12-05 15:20:24 x86_64
	
	  Partition 2:
	  ufm_appliance UFMAPL_1.0.5.0_UFM_3.8.0.16 2012-10-24 14:27:53 x86_64
	
	Last boot partition: 1
	Next boot partition: 1
	
	Boot manager password is set.
	
	No image install currently in progress.
	
	Image signing: trusted signature always required
	Admin require signed images: yes
	
	Settings for next boot only:
	  Fallback reboot on configuration failure: yes (default)</pre>

Related Commands	image boot image delete image fetch image install image move image option boot next
Notes	

2.4 Configuration Management

2.4.1 Saving a Configuration File

To save the current configuration to the active configuration file, you can either use the “configuration write” command (requires running in Config mode) or the “write memory” command (requires running in Enable mode).

- To save the configuration to the active configuration file, run:

```
ufmapl (config) # configuration write
```

- To save the configuration to a user-specified file without making the new file the active configuration file, run:

```
ufmapl (config) # configuration write to myconf no-switch
```

- To save the configuration to a user-specified file and make the new file the active configuration file, run:

```
ufmapl (config) # configuration write to myconf
```

- To display the available configuration files and the active file, run:

```
ufmapl (config) # show configuration files
initial
myconf (active)
ufmapl (config) #
```

2.4.2 Loading a Configuration File

By default, or after a system reset, the system loads the default “initial” configuration file.

To load a different configuration file and make it the active configuration:

```
ufmapl >
ufmapl > enable
ufmapl # configure terminal
ufmapl (config) # configuration ufmapl-to myconfig
ufmapl (config) #
```

2.4.3 Restoring Factory Default Configuration

If system configuration becomes corrupted, it is suggested to restore factory default configuration.

To restore factory default configuration on a single management module system, run:

```
ufmapl (config) # reset factory keep-basic
```

2.4.4 Managing Configuration Files

There are two types of configuration files that can be applied on the host, BIN files (binary) and text-based configuration files.

2.4.4.1 BIN Configuration Files

BIN configuration files are not human readable. Additionally, these files are encrypted and contain integrity verification preventing them from being edited and used on the host.

To create a new BIN configuration file:

```
ufmapl (config) # configuration new my-filename
```

A newly created BIN configuration file is always empty and is not created from the running-config.

To upload a BIN configuration file from a host to an external file server:

```
ufmapl (config) # configuration upload my-filename scp://myusername@my-server/path/to/my/<file>
```

To fetch a BIN configuration file:

```
ufmapl (config) # configuration fetch scp://myusername@my-server/path/to/my/<file>
```

To see the available configuration files:

```
ufmapl (config) # show configuration files
initial (active)
my-filename

Active configuration: initial
Unsaved changes:      no
ufmapl (config) #
```

To load a BIN configuration file:

```
ufmapl (config) # configuration ufmapl-to my-filename
This requires a reboot.
Type 'yes' to confirm: yes
```

Applying a new BIN configuration file changes the whole host's configuration and requires system reboot which can be performed using the command "reload".

A binary configuration file uploaded from the host is encrypted and has integrity verification. If the file is modified in any manner, the fetch to the host fails.

2.4.4.2 Text Configuration Files

Text configuration files are text based and editable. It is similar in form to the output of the command "show running-config expanded".

To create a new text-based configuration file:

```
ufmapl (config) # configuration text generate active running save my-filename
```

A newly created text configuration file is always created from the running-config.

To apply a text-based configuration file:

```
ufmapl (config) # configuration text file my-filename apply
```

> Applying a text-based configuration file to an existing/running data port configuration may result in unpredictable behavior. It is therefore suggested to first clear the host's configuration by applying a specific configuration file (following the procedure in "BIN Configuration File") or by resetting the host back to factory default.

To upload a text-based configuration file from a host to an external file server:

```
ufmapl (config) # configuration text file my-filename upload scp://root@my-server/root/tmp/my-filename
```

To fetch a text-based configuration file from an external file server to a host:

```
ufmapl (config) # configuration text fetch scp://root@my-server/root/tmp/my-filename
```

To apply a text-based configuration file:

```
ufmapl (config) # configuration text file my-filename apply
```

> When applying a text-based configuration file, the configuration is appended to the host's existing configuration. Only new or changed configuration is added. Reboot is not required.

2.4.5 Configuration Management Commands

- File Transfer
- File System
- Configuration File

2.4.6 File Transfer

2.4.6.1 ftp-server enable

	ftp-server enable no ftp-server enable Enables the FTP server. The no form of the command disables the FTP server.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ftp-server enable`
Related Commands	show ftp-server
Notes	

2.4.6.2 show ftp-server

	show ftp-server Displays FTP server settings.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # show ftp-server` `FTP server enabled:  yes`
Related Commands	ftp-server enable
Notes	

2.4.7 File System

2.4.7.1 File System Commands

2.4.7.1.1 debug generate dump

	debug generate dump Generates a debug dump.e
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # debug generate dump` `Generated dump sysdump-ufmapl-112104-201140526-091707.tgz`
Related Commands	file debug-dump
Notes	The dump can then be manipulated using the “file debug-dump...” commands

2.4.7.1.2 file debug-dump

	file debug-dump {delete {<filename> | latest} | email {<filename> | latest} | upload {{<filename> | latest} <URL>}}| Manipulates debug dump files.	
Syntax Description	filename	The specified file name
	latest	Delete, upload, or e-mail the latest debug dump file to a remote host

	URL	HTTP, HTTPS, FTP, TFTP, SCP and SFTP are supported Example: scp://username[:password]@hostname/path/filename
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.8	Updated delete/email/upload syntax
Example	`ufmapl [ mgmt-sa ] (config) # file debug-dump email sysdump-ufmapl-112104-20114052-091707.tgz`	
Related Commands		
Notes		

2.4.7.1.3 file docker-label delete

	file docker-label delete <filename> Deletes a docker label archive file.	
Syntax Description	filename	The specified file name
Default	N/A	
Configuration Mode	config	
History	4.7.0	
Example	`ufmapl [ mgmt-sa ] (config) # file docker-label delete dockerfile`	
Related Commands	show files docker-label	
Notes		

2.4.7.1.4 file stats

	file stats {delete <filename> | move {<source filename> | <destination filename>} | upload <filename> <URL>} Manipulates statistics report files.	
Syntax Description	delete	Deletes a stats report file
	move	Renames a stats report file
	upload	Uploads a stats report file. HTTP, HTTPS, FTP, TFTP, SCP and SFTP are supported. Example: scp://username[:password]@hostname/path/filename
Default	N/A	
Configuration Mode	config	

History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # file stats move memory-1.csv memory-2.csv`
Related Commands	show files stats
Notes	

2.4.7.1.5 file tcpdump

	file tcpdump {delete <filename> | upload <filename> <URL>} Manipulates tcpdump output files.	
Syntax Description	delete	Deletes the specified tcpdump output file
	upload	Uploads the specified tcpdump output file to the specified URL. HTTP, HTTPS, FTP, TFTP, SCP and SFTP are supported. Example: scp://username[:password]@hostname/path/filename
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # file tcmpdump delete my-tcpdump-file.txt`	
Related Commands	show files stats tcpdump	
Notes		

2.4.7.1.6 show files debug-dump

	show files debug-dump [<filename>] Displays a list of debug dump files.	
Syntax Description	filename	Displays a summary of the contents of a particular debug dump file
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	ufmapl [mgmt-sa] # show files debug-dump sysdump-r-ufm237-20210809-211426.tgz ========== System information: Hostname: r-ufm237 Version: ufm_appliance UFMAPL_4.6.0.6_UFM_6.7.0.8 2021-08-08 19:27:47 x86_64 Current time: 2021-08-09 21:14:26 System uptime: 0d 21h 27m 28s ========== ========== Output of 'uname -a': Linux r-ufm237 3.10.0-1127.19.1.el7MELLANOXsmp-x86_64 ufm_appliance UFMAPL_4.6.0.6_UFM_6.7.0.8 #1 2021-08-08 18:45:38 x86_64 x86_64 x86_64 GNU/Linux ==========
Related Commands	file debug-dump
Notes	

2.4.7.1.7 show files docker-label

	show files docker-label Displays a list of docker label archive files.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.7.0
Example	ufmapl [mgmt-sa] (config) # show file docker-label ribd.config.zip
Related Commands	file docker-label delete
Notes	

2.4.7.1.8 show files stats

	show files stats <filename> Displays a list of statistics report files.	
Syntax Description	filename	Display the contents of a particular statistics report file
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # show files stats memory-201140524-111745.csv	
Related Commands	file stats	

Notes	

2.4.7.1.9 show files system

	show files system [detail] Displays usage information of the file systems on the system.	
Syntax Description	detail	Displays more detailed information on file-system
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # show files system Statistics for /config filesystem: Space Total 182 MB Space Used 1 MB Space Free 181 MB Space Available 172 MB Space Percent Free 99% Inodes Percent Free 99% Statistics for /var filesystem: Space Total 50529 MB Space Used 1880 MB Space Free 48650 MB Space Available 46076 MB Space Percent Free 96% Inodes Percent Free 99% Statistics for /opt/ufm/history filesystem: Space Total 775980 MB Space Used 674 MB Space Free 775306 MB Space Available 735882 MB Space Percent Free 99% Inodes Percent Free 99% Statistics for /opt/ufm/files filesystem: Space Total 50267 MB Space Used 107 MB Space Free 50160 MB Space Available 47600 MB Space Percent Free 99% Inodes Percent Free 99%	
Related Commands		
Notes		

2.4.7.1.10 show files tcpdump

	show files tcpdump Displays a list of statistics report files.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show files stats test dump3
Related Commands	file tcpdump tcpdump

Notes	

2.4.7.1.11 reload

	reload [force | halt [noconfirm] | noconfirm] Reboots or shuts down the system.	
Syntax Description	force	Forces an immediate reboot of the system even if the system is busy
	halt	Shuts down the system
	noconfirm	Reboots the system without asking about unsaved changes
Default	1000	
Configuration Mode	config	
History	1.5	
Example	ufm-apl [mgmt-sa] (config) # reload Configuration has been modified; save first? [yes] yes Configuration changes saved. ...	
Related Commands	reset factory	
Notes		

2.4.7.1.12 reset factory

	reset factory [keep-all-config | keep-basic | only-config] [halt] Clears the system and resets it entirely to its factory state.	
Syntax Description	keep-all-cofig	Preserves all configuration files including licenses. Removes the logs, stats, images, snapshots, history, known hosts. The user is prompted for confirmation before honoring this command, unless confirmation is disabled with the command: "no cli default prompt confirm-reset".
	keep-basic	Preserves licenses in the running configuration file.
	only-config	Removes configuration files only. Logs, stats, images, snapshots, history, and known hosts are preserved.
	halt	The system is halted after this process completes
Default	N/A	
History	4.2.0	
Example	ufm-apl (config) # reset factory Warning - confirming will cause system reboot. Type 'YES' to confirm reset: YES Resetting and rebooting the system -- please wait... ...	
Related Commands	reload	

Notes	• Effects of parameter "keep-all-cofig": Licenses - not deleted; profile - no change; configuration - unchanged; management IP - unchanged • Effects of parameter "keep-basic": Licenses - not deleted; profile - reset; configuration - reset; management IP - reset • Confirming the command causes system reboot

2.4.7.1.13 reset factory keep-docker

	reset factory keep-docker Resets all host configuration except for docker configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.2.0
Example	`ufm-apl (config) # reset factory keep-docker`
Related Commands	reset factory
Notes	

2.4.7.1.14 configuration new factory keep-docker

	configuration new <filename> factory keep-docker Creates new file with only factory defaults except docker current configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.2.0
Example	`ufm-apl (config) # no configuration new my_file factory keep-docker`
Related Commands	configuration new factory
Notes	

2.4.8 Configuration File

2.4.8.1 configuration audit

	configuration audit max-changes <number> Chooses settings related to configuration change auditing.	
Syntax Description	max-changes	Set maximum number of audit messages to log per change

Default	1000
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # configuration audit max-changes 100`
Related Commands	show configuration
Notes	

2.4.8.2 configuration copy

	configuration copy <source-name> <dest-name> Copies a configuration file.	
Syntax Description	source-name	Name of source file
	dest-name	Name of destination file. If the file of specified filename does not exist a new file will be created with said filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # configuration copy initial.bak example`	
Related Commands		
Notes	• This command does not affect the current running configuration • The active configuration file may not be the target of a copy. However, it may be the source of a copy in which case the original remains active.	

2.4.8.3 configuration delete

	configuration delete <filename> Deletes a configuration file.	
Syntax Description	filename	Name of file to delete
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`example initial initial.bak initial.prev`
	`ufmapl [ mgmt-sa ] (config) # configuration delete example`
	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`initial initial.bak initial.prev`	

Related Commands	show configuration	

Notes	• This command does not affect the current running configuration • The active configuration file may not be deleted

2.4.8.4 configuration fetch

	configuration fetch <URL or scp or sftp://username:password@hostname[:port]/path/filename> [<name>] Downloads a configuration file from a remote host.	
Syntax Description	name	Configuration filename
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # configuration fetch scp://root:password@192.168.10.125/tmp/conf1`	
Related Commands	configuration switch-to	
Notes	• The downloaded file should not override the active configuration file, using the <name> parameter • If no name is specified for a configuration fetch, it is given the same name as it had on the server • No configuration file may have the name "active"	

2.4.8.5 configuration jump-start

	configuration jump-start Runs the initial-configuration wizard.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	ufmapl [mgmt-sa] (config) # configuration jump-start Mellanox UFM appliance configuration wizard Step 1: Hostname? [ufm-appliance-8990b8] Step 2: Use DHCP on eth0 interface? [yes] Step 3: Enable IPv6? [yes] Step 4: Enable IPv6 autoconfig (SLAAC) on eth0 interface? [no] Step 5: Enable DHCPv6 on eth0 interface? [yes] Step 6: Admin password (Enter to leave unchanged)? Step 7: bond0 IPv4 address and masklen? [192.168.1.234/24] You have entered the following information: 1. Hostname: ufm-appliance-8990b8 2. Use DHCP on eth0 interface: yes 3. Enable IPv6: yes 4. Enable IPv6 autoconfig (SLAAC) on eth0 interface: yes 5. Enable DHCPv6 on eth0 interface? yes 6. Admin password (Enter to leave unchanged): (unchanged) 7. bond0 IP address and masklen: 192.168.1.234/24 To change an answer, enter the step number to return to. Otherwise hit <enter> to save changes and exit. Choice: Configuration changes saved. UFM is configured as an external SM.
Related Commands	
Notes	• The wizard is automatically invoked whenever the CLI is launched when the active configuration file is fresh (i.e. not modified from its initial contents) • This command invokes the wizard on demand

2.4.8.6 configuration merge

	configuration merge <filename> Merges the “shared configuration” from one configuration file into the running configuration.	
Syntax Description	filename	Name of file from which to merge settings
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # configuration merge new-config-file	
Related Commands		
Notes	• No configuration files are modified during this process • The configuration name must be a non-active configuration file	

2.4.8.7 configuration move

	configuration move <source-name> <dest-name> Moves a configuration file.	
Syntax Description	source-name	Old name of file to move
	dest-name	New name for moved file
Default	N/A	

Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`example1 initial initial.bak initial.prev`
	`ufmapl [ mgmt-sa ] (config) # configuration move example1 example2`
	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`example2 initial initial.bak initial.prev`

Related Commands	show configuration
Notes	• This command does not affect the current running configuration • The active configuration file may not be the target of a move

2.4.8.8 configuration new

	configuration new <filename> [factory [keep-basic] [keep-connect]] Creates a new configuration file under the specified name. The parameters specify what configuration, if any, to carry forward from the current running configuration.	
Syntax Description	filename	Names for new configuration file
	factory	Creates new file with only factory defaults
	keep-basic	Keeps licenses and host keys
	keep-connect	Keeps configuration necessary for connectivity (interfaces, routes, and ARP)
Default	Keeps licenses and host keys	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`initial initial.bak initial.prev`
	`ufmapl [ mgmt-sa ] (config) # configuration new example2`
	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`example2 initial initial.bak initial.prev`	

Related Commands	show configuration	
Notes		

2.4.8.9 configuration switch-to

	configuration switch-to <filename> [no-reboot] Loads the configuration from the specified file and makes it the active configuration file.	
Syntax Description	no-reboot	Forces configuration change without rebooting the host
Default	N/A	
Configuration Mode	config	
History	4.2.0	

Example	ufmapl [mgmt-sa] (config) # show configuration files initial (active) newcon initial.prev initial.bak ufmapl [mgmt-sa] (config) # configuration switch-to newcon ufmapl [mgmt-sa] (config) # show configuration files initial newcon (active) initial.prev initial.bak
Related Commands	show configuration files
Notes	• The current running configuration is lost and not automatically saved to the previous active configuration file. • When running the command without the "no-reboot" parameter, the user is prompted to OK a reboot. If the answer is "yes", the configuration is replaced and the host is rebooted immediately.

2.4.8.10 configuration text fetch

	configuration text fetch <download-URL> [apply] [discard] [fail-continue] [filename <file>] [verbose] Downloads a text-based configuration file from a remote host.	
Syntax Description	download-URL	Supported types are HTTP, HTPPS, FTP, TFTP, SCP and SFTP Example: scp://username[:password]@hostname/path/filename
	apply	Applies the configuration on the system
	discard	Deletes the configuration text after applying it
	fail-continue	Continues execution of the commands even if some commands fail
	filename	Specifies filename for saving downloaded text file
	verbose	Displays all commands being executed and their output, instead of just those that get errors
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # configuration text fetch example@host.com	
Related Commands	show configuration files	
Notes		

2.4.8.11 configuration text file

	configuration text file <filename> {apply [fail-continue] [verbose] | delete | rename <filename> | upload < URL>} Performs operations on text-based configuration files.	
Syntax Description	filename	Specifies the filename
	apply	Applies the configuration on the system
	fail-continue	Continues execution of the commands even if some commands fail
	verbose	Displays all commands being executed and their output, instead of just those that get errors
	delete	Deletes the file
	rename	Renames the file
	upload	Supported types are HTTP, HTPPS, FTP, TFTP, SCP and SFTP Example: scp://username[:password]@hostname/path/filename
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # configuration text file my-config-file delete`	
Related Commands	show configuration files	
Notes		

2.4.8.12 configuration text generate

	configuration text generate {active {running | saved} | file <filename> } {save <filename> | upload <URL>} Generates a new text-based configuration file from this system's configuration.	
Syntax Description	active	Generates from currently active configuration
	running	Uses running configuration
	saved	Uses saved configuration
	file	Generates from inactive saved configuration
	save	Saves new file to local persistent storage
	upload	Supported types are HTTP, HTPPS, FTP, TFTP, SCP and SFTP Example: scp://username[:password]@hostname/path/filename
Default	N/A	

Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # configuration text generate file initial.prev save example`
	`ufmapl [ mgmt-sa ] (config) # show configuration files`
	`initial (active)`
	`initial.prev`
	`initial.bak`
	`Active configuration: initial`
	`Unsaved changes: yes`

Related Commands	show configuration files
Notes	

2.4.8.13 configuration upload

	configuration upload {active | <name>} <URL> Uploads a configuration file to a remote host.	
Syntax Description	active	Upload the active configuration file
	URL	Supported types are HTTP, HTPPS, FTP, TFTP, SCP and SFTP Example: scp://username[:password]@hostname/path/filename
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # configuration upload active scp://root:password@192.168.10.125/tmp/conf1`	
Related Commands	show configuration files	
Notes	Configuration filename cannot be "active"	

2.4.8.14 configuration write

	configuration write [local | to <filename> [no-switch]] Saves the running configuration to the active configuration file.	
Syntax Description	local	Saves the running configuration locally (same as "write memory local").
	to <filename>	Saves the running configuration to a new file under a different name and makes it the active file.
	no-switch	Saves the running configuration to this file but keep the current one active.
Default	N/A	
Configuration Mode	config	
History	4.2.0	

Example	`ufmapl (config) # configuration write`
Related Commands	write
Notes	

2.4.8.15 write

	write {memory [local] | terminal} Saves or displays the running configuration.	
Syntax Description	memory	Saves running configuration to the active configuration file. It is the same as "configuration write".
	local	Saves the running configuration only on the local node. It is the same as "configuration write local".
	terminal	Displays commands to recreate current running configuration. It is the same as "show running-config".
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # write terminal`
	`##`
	`## Running database "initial"`
	`## Generated at 20114/05/27 10:05:16 +0000`
	`## Hostname: ufmapl`
	`##`
	`##`
	`## Network interface configuration`
	`##`
	`interface eth0 comment ""`
	`interface eth0 create`
	`interface eth0 dhcp`
	`interface eth0 display`
	`interface eth0 duplex auto`
	`interface eth0 mtu 1500`
	`no interface eth0 shutdown`
	`interface eth0 speed auto`
	`no interface eth0 zeroconf`
	`##`
	`## Local user account configuration`
	`##`
	`username a** capability admin`
	`no username a** disable`
	`username a** disable password`
	`......`	

Related Commands	show running-config configuration write	
Notes		

2.4.8.16 show configuration

	show configuration [audit | | files [<filename>] | full | running [full] | text files] Displays a list of CLI commands that will bring the state of a fresh system up to match the current persistent state of this system.

Syntax Description	audit	Displays settings for configuration change auditing
	files	Displays a list of configuration files in persistent storage if no filename is specified. If a filename is specified, it displays the commands to recreate the configuration in that file. In the latter case, only non-default commands are shown, as for the normal “show configuration” command.
	full	Does not exclude commands that set default values
	running	Displays commands to recreate current running configuration. Same as “show configuration” except that it applies to the currently running configuration, rather than the current persisted configuration.
	text files	Displays names of available text-based configuration files
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show configuration
	##
	## Active saved database "newcon"
	## Generated at 20114/05/25 10:18:52 +0000
	## Hostname: ufmapl-3cc29c
	##
	##
	## Network interface configuration
	##
	interface eth0 comment ""
	interface eth0 create
	interface eth0 dhcp
	interface eth0 display
	interface eth0 duplex auto
	interface eth0 mtu 1500
	no interface eth0 shutdown
	interface eth0 speed auto
	no interface eth0 zeroconf</pre>	

Related Commands	configuration audit configuration delete configuration move configuration new	
Notes		

2.4.8.17 show running-config

	show running-config [full] Displays commands to recreate current running configuration.	
Syntax Description	full	Does not exclude commands that set default values
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show running-config
	##
	## Running database "initial"
	## Generated at 2012/02/28 14:59:02 +0000
	## Hostname: ufmapl-5ea5d8
	##
	
	##
	## License keys
	##
	   license install LK2-
	EFM_SX-5M11-5K11-5HGL-0KAL-64QK-8C2Q-60Q3-6C1G-88A1-F5DF-
	2KGK-8
	   license install LK2-RESTRICTED_CMDS-88A0-RFD7-W4CF-Y
	
	##
	## Network interface configuration
	##
	   interface eth0 create
	   interface eth0 comment ""
	   interface eth0 dhcp
	   interface eth0 display
	   interface eth0 duplex auto
	   interface eth0 mtu 1500
	no interface eth0 shutdown
	...</pre>

Related Commands	show configuration running
Notes	Same as "show configuration running" except that it applies to the currently running configuration rather than the current persisted configuration.

2.5 Local and Remote Logging

2.5.1 logging local

	logging local <log-level> no logging local Sets the minimum severity of log messages to be saved in log files on local persistent storage. The no form disables the ability to log messages locally and remotely.	
Syntax Description	log-level	• alert - alert notification, action must be taken immediately • crit - critical condition • debug - debug level messages • emerg - system is unusable (emergency) • err - error condition • info - informational condition • none - disables the logging locally and remotely • notice - normal, but significant condition • warning - warning condition
Default	info	
Configuration Mode	config	
History	1.5	
Example	<pre>ufmapl [mgmt-sa] (config) # logging local info</pre>	
Related Commands	show logging logging local override	

Notes	• The commands "logging local none" and "no logging local" have the same effect.
	• Disabling the logging messages will disable all logging:
	  • Local logging
	  • Logging messages sent from hosts to be logged in the system
	  • Remote logging (syslog)

2.5.2 logging local override

	logging local override [class <class> priority <log-level>] no logging local override [class <class> priority <log-level>] Enables class-specific overrides to the local log level. The no form of the command disables all class-specific overrides to the local log level without deleting them from the configuration, but disables them so that the logging level for all classes is determined solely by the global setting.	
Syntax Description	override	Enables class-specific overrides to the local log level
	class	Sets or removes a per-class override on the logging level. All classes which do not have an override set will use the global logging level set with "logging local <log level>". Classes that do have an override will do as the override specifies. If "none" is specified for the log level, MLNX-OS will not log anything from this class. Classes available: • iss-modules - protocol stack • mgmt-back - system management back-end • mgmt-core - system management core • mgmt-front - system management front-end • mlx-daemons - management daemons • sx-sdk - switch SDK
	log-level	• alert - alert notification, action must be taken immediately • crit - critical condition • debug - debug level messages • emerg - system is unusable (emergency) • err - error condition • info - informational condition • none - disables the logging locally and remotely • notice - normal, but significant condition • warning - warning condition
Default	Override disabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging local override class mgmt-front priority warning`	
Related Commands	show logging logging local	

Notes	

2.5.3 logging <syslog-ip-address>

	logging <syslog-ip-address> [trap {<log-level> | override class <class> priority <log-level>}] no logging <syslog-ip-address> [trap {<log-level> | override class <class> priority <log-level>}] Enables (by setting the IP address) sending logging messages, with ability to filter the logging messages according to their classes. The no form of the command stops sending messages to the remote syslog server.	
Syntax Description	syslog-ip-address	IPv4 address of the remote syslog server
	class	Sets or removes a per-class override on the logging level. All classes which do not have an override set will use the global logging level set with "logging local <log level>". Classes that do have an override will do as the override specifies. If "none" is specified for the log level, MLNX-OS will not log anything from this class. Classes available: • iss-modules - protocol stack • mgmt-back - system management back-end • mgmt-core - system management core • mgmt-front - system management front-end • mlx-daemons - management daemons • sx-sdk - switch SDK
	log-level	• alert - alert notification, action must be taken immediately • crit - critical condition • debug - debug level messages • emerg - system is unusable (emergency) • err - error condition • info - informational condition • none - disables the logging locally and remotely • notice - normal, but significant condition • warning - warning condition
Default	Remote logging is disabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging local info`	
Related Commands	show logging logging local override	
Notes		

2.5.4 logging receive

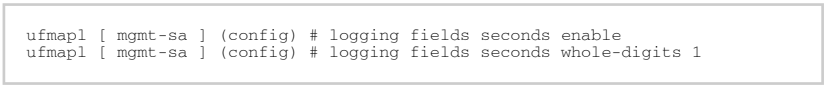
	logging receive no logging receive Enables receiving logging messages from a remote host. The no form of the command disables the option of receiving logging messages from a remote host.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # logging receive`
Related Commands	show logging logging local logging local override
Notes	• This does not log to the console TTY port • Inband management should be enabled in order to open a channel from the host to the CPU • If enabled, only log messages matching or exceeding the minimum severity specified with the "logging local" command will be logged, regardless of what is sent from the remote host

2.5.5 logging format

	logging format {standard | welf [fw-name <hostname>]} no logging format {standard | welf [fw-name <hostname>]} Sets the format of the logging messages. The no form of the command resets the format to its default.	
Syntax Description	standard	Standard format
	welf	WebTrends Enhanced Log file (WELF) format
	fw-name	Specifies the firewall hostname that should be associated with each message logged in WELF format. If no firewall name is set, the hostname is used by default
Default	Standard	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging format standard`	
Related Commands	show logging	

Notes	

2.5.6 logging fields

	logging fields seconds {enable | fractional-digits <f-digit> | whole-digits <w-digit>} no logging fields seconds {enable | fractional-digits <f-digit> | whole-digits <w-digit>} Specifies whether to include an additional field in each log message that shows the number of seconds since the Epoch or not. The no form of the command disallows including an additional field in each log message that shows the number of seconds since the Epoch.	
Syntax Description	enable	Specifies whether to include an additional field in each log message that shows the number of seconds since the Epoch or not
	fractional-digits	The fractional-digits parameter controls the number of digits to the right of the decimal point. Truncation is done from the right. Possible values: 1, 2, 3, or 6.
	whole-digits	The whole-digits parameter controls the number of digits to the left of the decimal point. Truncation is done from the left. Except for the year, all of these digits are redundant with syslog's own date and time. Possible values: 1, 6, or all.
Default	Disabled	
Configuration Mode	config	
History	1.5	
Example		
Related Commands	show logging	
Notes	This is independent of the standard syslog date and time at the beginning of each message in the format of "July 15 18:00:00". Aside from indicating the year at full precision, its main purpose is to provide subsecond precision.	

2.5.7 logging level

	logging level {cli commands <log-level> | audit mgmt <log-level>} Sets the severity level at which CLI commands or the management audit message that the user executes are logged. This includes auditing of both configuration changes and actions.	
Syntax Description	cli commands	Sets the severity level at which CLI commands which the user executes are logged
	audit mgmt	Sets the severity level at which all network management audit messages are logged

	log-level	• alert - alert notification, action must be taken immediately • crit - critical condition • debug - debug level messages • emerg - system is unusable (emergency) • err - error condition • info - informational condition • none - disables the logging locally and remotely • notice - normal, but significant condition • warning - warning condition
Default	CLI commands and audit message are set to notice logging level	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging level cli commands info`	
Related Commands	show logging	
Notes		

2.5.8 logging files delete

	logging files delete {current | oldest [<number-of-files>]} Deletes the current or oldest log files.	
Syntax Description	current	Deletes current log file
	oldest	Deletes oldest log file
	number-of-files	Sets the number of files to be deleted
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging files delete current`	
Related Commands	show logging show log files	
Notes		

2.5.9 logging files rotation

	logging files rotation {criteria { frequency <freq> | size <size-mb>| size-pct <size-percentage>} | force | max-number <number-of-files>} Sets the rotation criteria of the logging files.

Syntax Description	frequency	Sets rotation criteria according to time. Possible options: Daily, Weekly, Monthly
	size	Sets rotation criteria according to size in megabytes. Range: 1-9999.
	size-pct	Sets rotation criteria according to size in percentage of the partition where the logging files are kept in. The percentage given is truncated to three decimal points (thousandths of a percent).
	force	Forces an immediate rotation of the log files. This does not affect the schedule of auto-rotation if it was done based on time: the next automatic rotation will still occur at the same time for which it was previously scheduled. Naturally, if the auto-rotation was based on size, this will delay it somewhat as it reduces the size of the active log file to zero.
	max-number	The number of log files will be kept. If the number of log files ever exceeds this number (either at rotation time, or when this setting is lowered), the system will delete as many files as necessary to bring it down to this number, starting with the oldest.
Default	10 files are kept by default with rotation criteria of 5% of the log partition size	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # logging files rotation criteria size-pct 6`	
Related Commands	show logging show log files	
Notes		

2.5.10 logging files upload

	logging files upload {current | <file-number>} <url> Uploads a log file to a remote host.	
Syntax Description	current	The current log file. The current log file will have the filename "messages" if you do not specify a new name for it in the upload URL.
	file-number	An archived log file. The archived log file will have the name “messages<n>.gz” (while “n” is the file number) if you do not specify a new name for it in the upload URL. The file will be compressed with gzip.
	url	Uploads URL path. FTP, TFTP, SCP, and SFTP are supported. Example: scp:// username[:password]@hostname/path/filename.
Default	N/A	
Configuration Mode	config	

History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # logging files uplaod 1 scp://admin@scpserver`
Related Commands	show logging show log files
Notes	

2.5.11 show logging

	show logging Displays the logging configurations.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show logging`
	`Local logging level: info`
	`  Override for class mgmt-front: warning`
	`Default remote logging level: notice`
	`No remote syslog servers configured.`
	`Allow receiving of messages from remote hosts: no`
	`Number of archived log files to keep: 10`
	`Log rotation size threshold: 5.000% of partition (43 megabytes)`
	`Log format: standard`
	`Subsecond timestamp field: enabled`
	`Subsecond timestamp precision: 1 whole digit; 3 fractional digits`
	`Levels at which messages are logged:`
	`  CLI commands: info`
	`  Audit messages: notice`

Related Commands	logging fields logging files rotation logging level logging local logging receive logging <syslog IP address>
Notes	

2.5.12 show log

	show log [continues | files [<file-number>]] [[not] matching <reg-exp>] Displays the log file with optional filter criteria.	
Syntax Description	continues	Displays the last few lines of the current log file and then continues to display new lines as they come in until the user hits Ctrl+C, similar to LINUX "tail" utility
	files	Displays the list of log files
	file-number	Displays an archived log file, where the number may range from 1 up to the number of archived log files available

	[not] matching <reg-exp>	The file is piped through a LINUX "grep" utility to only include lines either matching, or not matching, the provided regular expression
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show log matching INFO
	Feb 1 10:57:04 switch clusterd[2659]: [4.193] [clusterd.INFO]: master browse reply: add service 0x20000 mxyzzy--0002c95ea5d8 _tms_cluster._tcp. local.
	Feb 1 10:57:04 switch clusterd[2659]: [4.199] [clusterd.INFO]: master resolve reply via browse: name mxyzzy--0002c95ea5d8 type _tms_cluster._tcp. domain local. addr 172.30.2.2 port 60102 ifindex 1
	31072
	Feb 1 10:57:07 switch SX[2785]: TID 1208106288: [7.746] [hwd.INFO]: hwd_kernel_interrupt_sim: Entry
	Feb 1 10:57:07 switch SX[2785]: TID 1208106288: [7.747] [hwd.INFO]: hwd_kernel_interrupt_sim: err=0
	Feb 1 10:57:07 switch mgmtd[2599]: [7.748] [mgmtd.INFO]: Handling EVENT request (session 26)
	Feb 1 10:57:07 switch mgmtd[2599]: [7.749] [mgmtd.INFO]: EVENT: /system/chassis/events/hw-isr-event
	Feb 1 10:57:07 switch mgmtd[2599]: [7.750] [mgmtd.INFO]: EVENT: [0] mask = 0 (uint32)
	Feb 1 10:57:07 switch health[2900]: TID 1208104656: [7.751] [health.INFO]: Received ISR event with mask 0
	Feb 1 10:57:07 switch mgmtd[2599]: [7.754] [mgmtd.INFO]: Sending externally: type event session 36 id 1732128
	Feb 1 10:57:07 switch mgmtd[2599]: [7.755] [mgmtd.INFO]: Event sent by user i:2785-0-0 has been handled</pre>	

Related Commands	logging fields logging files rotation logging level logging local logging receive logging <syslog IP address>	
Notes		

2.6 User Management and AAA

- User Accounts
- AAA Methods
- RADIUS
- TACACS+
- LDAP

2.6.1 User Accounts

2.6.1.1 username

	username <username> [capability <cap> | disable [login | password] | full-name <name> | nopassword | password [0 | 7] <password>] no username <username> [capability | disable [login | password] | full-name] Creates a user and sets its capabilities, password and name. The no form of the command deletes the user configuration.

Syntax Description	username	Specifies a username and creates a user account. New users are created initially with admin privileges but is disabled.
	capability	User capabilities: • admin – full administrative capabilities • monitor – read only capabilities and actions, can not change the running configuration
	disable [login | password]	• Disable – disable this account • Disable login – disable all logins to this account • Disable password – disable login to this account using a local password
	full-name	Full name of the user
	nopassword	The next login of the user will not require password
	0 | 7	• 0 – specifies a login password in cleartext • 7 – specifies a login password in encrypted text
	password	Specifies a password for the user in string form. If [0 | 7] was not specified then the password is in cleartext.
Default	The following usersnames are available by default: • admin • monitor • xmladmin • xmluser	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # username monitor full-name smith`	
Related Commands	show usernames show users	
Notes	• To enable a user account, set a password on it (or use the "... nopassword" command to enable it with no password required for login) • Removing a user account does not terminate any current sessions that user has open; it just prevents new sessions from being established • Encrypted password is useful for the "show configuration" command, since the cleartext password cannot be recovered after it is set	

2.6.1.2 show usernames

	show usernames Displays list of users and their capabilities.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show usernames
	USERNAME FULL NAME CAPABILITY ACCOUNT STATUS
	USERID System Administrator admin Password set
	admin System Administrator admin Password set
	monitor smith monitor Password set
	xmladmin XML Admin User admin No password required xmluser XML Monitor User
	monitor No password required</pre>

Related Commands	username show users
Notes	

2.6.1.3 show users

	show users [history] Displays logged in users and related information such as idle time and what host they have connected from.	
Syntax Description	history	Displays current and historical sessions
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show users
	USERNAME FULL NAME LINE HOST IDLE
	admin System Administrator pts/0 172.22.237.174 0d0h34m4s
	admin System Administrator pts/1 172.30.0.127
	1d3h30m49s
	admin System Administrator pts/3 172.22.237.34 0d0h0m0s
	ufmapl [mgmt-sa] (config) # show users history
	admin pts/3 172.22.237.34 Wed Feb 1 11:56 still logged in
	admin pts/3 172.22.237.34 Wed Feb 1 11:42 - 11:46 (00:04)
	
	wtmp begins Wed Feb 1 11:38:10 2012</pre>	

Related Commands	username show usernames	
Notes		

2.6.1.4 show whoami

	show whoami Displays username and capabilities of user currently logged in.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show whoami
	Current user: admin
	Capabilities: admin</pre>

Related Commands	username show usernames show users
Notes	

2.6.2 AAA Methods

2.6.2.1 aaa accounting

	aaa accounting changes default {<time-frame> | stop-only} tacacs+ no aaa accounting changes default {<time-frame> | stop-only} tacacs+ Enables logging of system changes to a AAA accounting server. The no form of the command disables the accounting.	
Syntax Description	stop-only	Sends a stop accounting notice at the end of requested user process
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # aaa accounting changes default stop-only tacacs+`	
Related Commands	show aaa	
Notes	• TACACS+ is presently the only accounting service method supported • Change accounting covers both configuration changes and system actions that are visible under audit logging, however this feature operates independently of audit logging, so it is unaffected by the "logging level audit mgmt" or "configuration audit" commands • Configured TACACS+ servers are contacted in the order in which they appear in the configuration until one accepts the accounting data, or the server list is exhausted • Despite the name of the "stop-only" keyword, which indicates that this feature logs a TACACS+ accounting "stop" message, and in contrast to configuration change accounting, which happens after configuration database changes, system actions are logged when the action is started, not when the action has completed	

2.6.2.2 aaa authentication login default

	aaa authentication login default <auth method> [<auth method> [<auth method> [<auth method> [<auth method>]]]] no aaa authentication login Sets a sequence of authentication methods. Up to four methods can be configured. The no form of the command resets the configuration to its default.

Syntax Description	auth-method	Possible values: • local • radius • tacacs+ • ldap
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # aaa authentication login default local radius tacacs+ ldap	
Related Commands	show aaa	
Notes	The order in which the methods are specified is the order in which the authentication is attempted. It is required that "local" is one of the methods selected. It is recommended that "local" be listed first to avoid potential problems logging in to local accounts in the face of network or remote server issues.	

2.6.2.3 aaa authorization map

	aaa authorization map [default-user <username> | order <policy>] no aaa authorization map [default-user | order] Sets the mapping permissions of a user in case a remote authentication is done. The no form of the command resets the attributes to default.	
Syntax Description	username	Specifies what local account the authenticated user will be logged on as when a user is authenticated (via RADIUS or TACACS+) and does not have a local account. If the username is local, this mapping is ignored.
	policy	Sets the user mapping behavior when authenticating users via RADIUS or TACACS+ to one of three choices. The order determines how the remote user mapping behaves. If the authenticated username is valid locally, no mapping is performed. The setting has the following three possible behaviors: • remote-first - If a local-user mapping attribute is returned and it is a valid local username, it maps the authenticated user to the local user specified in the attribute. Otherwise, it uses the user specified by the default-user command. • remote-only - Maps a remote authenticated user if the authentication server sends a local-user mapping attribute. If the attribute does not specify a valid local user, no further mapping is tried. • local-only - Maps all remote users to the user specified by the "aaa authorization map default-user <user name>" command. Any vendor attributes received by an authentication server are ignored.
Default	Default user: admin Map order: remote-first	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # aaa authorization map default-user admin`
Related Commands	show aaa username
Notes	If, for example, the user is locally defined to have admin permission, but in a remote server such as RADIUS the user is authenticated as monitor and the order is remote-first, then the user will be given monitor permissions.

2.6.2.4 show aaa

	show aaa Displays the AAA configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show aaa`
	`AAA authorization:`
	`  Default User: admin`
	`  Map Order: remote-first`
	`Authentication method(s):`
	`  local`
	`Accounting method(s):`
	`  tacacs+`

Related Commands	aaa accounting aaa authentication aaa authorization show aaa show usernames username
Notes	

2.6.3 RADIUS

2.6.3.1 radius-server

	radius-server {key <secret>| retransmit <retries> | timeout <seconds>} no radius-server {key | retransmit | timeout} Sets global RADIUS server attributes. The no form of the command resets the attributes to their default values.	
Syntax Description	key	Sets a secret key (shared hidden text string), known to the system and to the RADIUS server
	retransmit	Number of retries (0-5) before exhausting from the authentication
	timeout	Timeout in seconds between each retry (1-60)

Default	3 seconds, 1 retry
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # radius-server retransmit 3`
Related Commands	aaa authorization radius-server host show radius
Notes	Each RADIUS server can override those global parameters using the command "radius-server host"

2.6.3.2 radius-server host

	radius-server host <ip-address> {enable | auth-port <port> | key <secret>| retransmit <retries> | timeout <seconds>} no radius-server host <ip-address> {enable | auth-port } Configures RADIUS server attributes. The no form of the command resets the attributes to their default values and deletes the RADIUS server.	
Syntax Description	ip-address	RADIUS server IP address
	enable	Administrative enable of the RADIUS server
	auth-port	RADIUS server UDP port number
	key	Sets a secret key (shared hidden text string) known to the system and to the RADIUS server
	retransmit	Number of retries (0-5) before exhausting from the authentication
	timeout	Timeout in seconds between each retry (1-60)
Default	3 seconds, 1 retry Default UDP port is 1812	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # radius-server host 40.40.40.40`	
Related Commands	aaa authorization radius-server show radius	
Notes	• RADIUS servers are tried in the order they are configured • If you do not specify a parameter for this configured RADIUS server, the configuration will be taken from the global RADIUS server configuration. Refer to "radius-server" command.	

2.6.3.3 show radius

	show radius Displays RADIUS configurations.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show radius`
	`RADIUS defaults:`
	`  Key:  3333`
	`  Timeout:  3`
	`  Retransmit:  1`
	`RADIUS servers:`
	`  40.40.40.40:1812`
	`  Enabled:  yes`
	`  Key:  3333 (default)`
	`  Timeout:  3 (default)`
	`  Retransmit:  1 (default)`

Related Commands	aaa authorization radius-server radius-server host
Notes	

2.6.4 TACACS+

2.6.4.1 tacacs-server

	tacacs-server {key <secret>| retransmit <retries> | timeout <seconds>} no tacacs-server {key | retransmit | timeout} Sets global TACACS+ server attributes. The no form of the command resets the attributes to default values.	
Syntax Description	key	Set a secret key (shared hidden text string) known to the system and to the TACACS+ server
	retransmit	Number of retries (0-5) before exhausting from the authentication
	timeout	Timeout in seconds between each retry (1-60)
Default	3 seconds, 1 retry	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # tacacs-server retransmit 3`	
Related Commands	aaa authorization show radius show tacacs tacacs-server host	

Notes	Each TACACS+ server can override those global parameters using the command "tacacs-server host"

2.6.4.2 tacacs-server host

	tacacs-server host <ip-address> {enable | auth-port <port> | auth-type <type> | key <secret> | retransmit <retries> | timeout <seconds>} no tacacs-server host <ip-address> {enable | auth-port} Configures TACACS+ server attributes. The no form of the command resets the attributes to their default values and deletes the TACACS+ server.	
Syntax Description	ip-address	TACACS+ server IP address
	enable	Administrative enable for the TACACS+ server
	auth-port	TACACS+ server UDP port number
	key	Set a secret key (shared hidden text string) known to the system and to the TACACS+ server
	retransmit	Number of retries (0-5) before exhausting from the authentication
	timeout	Timeout in seconds between each retry (1-60)
Default	3 seconds, 1 retry Default TCP port is 49 Default auth-type is PAP	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # tacacs-server host 40.40.40.40`	
Related Commands	aaa authorization show tacacs tacacs-server	
Notes	• TACACS+ servers are tried in the order they are configured • A PAP auth-type similar to an ASCII login, except that the username and password arrive at the network access server in a PAP protocol packet instead of being typed in by the user, so the user is not prompted • If the user does not specify a parameter for this configured TACACS+ server, the configuration will be taken from the global TACACS+ server configuration. Refer to "tacacs-server" command.	

2.6.4.3 show tacacs

	show tacacs Displays TACACS+ configurations.
Syntax Description	N/A
Default	N/A

Configuration Mode	Any configuration mode
History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show tacacs
	TACACS+ defaults:
	    Key: 3333
	    Timeout: 3
	    Retransmit: 1
	TACACS+ servers:
	   40.40.40.40:49
	      Enabled: yes
	      Auth-type PAP
	      Key: 3333 (default)
	      Timeout: 3 (default)
	      Retransmit: 1 (default)</pre>

Related Commands	aaa authorization tacacs-server tacacs-server host
Notes	

2.6.5 LDAP

2.6.5.1 ldap base-dn

	ldap base-dn <string> no ldap base-dn Sets the base distinguished name (location) of the user information in the schema of the LDAP server. The no form of the command resets the attribute to its default values.	
Syntax Description	string	A case-sensitive string that specifies the location in the LDAP hierarchy where the server should begin searching when it receives an authorization request. For example: "ou=users,dc=example,dc=com", with no spaces. Where: • ou - organizational unit • dc - domain component • cn - common name • sn - surname
Default	ou=users,dc=example,dc=com	
Configuration Mode	config	
History	1.5	
Example	<pre>ufmapl [mgmt-sa] (config) # ldap base-dn ou=department,dc=example,dc=com</pre>	
Related Commands	show ldap	
Notes		

2.6.5.2 ldap {bind-dn | bind-password}

	ldap {bind-dn | bind-password} <string> no ldap {bind-dn | bind-password} Gives the distinguished name or password to bind to on the LDAP server. This can be left empty for anonymous login (the default). The no form of the command resets the attribute to its default values.	
Syntax Description	string	A case-sensitive string that specifies distinguished name or password to bind to on the LDAP server
Default	""	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap bind-dn my-dn` `ufmapl [ mgmt-sa ] (config) # ldap bind-password my-password`	
Related Commands	show ldap	
Notes	For anonymous login, bind-dn and bind-password should be empty strings ""	

2.6.5.3 ldap {group-attribute | group-dn}

	ldap {group-attribute {<group-att> | member | uniqueMember} | group-dn <group-dn>} no ldap {group-attribute | group-dn} Sets the distinguished name or attribute name of a group on the LDAP server. The no form of the command resets the attribute to its default values.	
Syntax Description	group-attribute	Specifies a custom attribute name
	member	groupOfNames or group membership attribute
	uniqueMember	groupOfUniqueNames membership attribute
	group-dn	DN of group required for authorization
Default	group-att: member group-dn: ""	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap group-attribute member` `ufmapl [ mgmt-sa ] (config) # ldap group-dn my-group-dn`	
Related Commands	show ldap	

Notes	• The user's distinguished name must be listed as one of the values of this attribute or the user will not be authorized to log in. • After login authentication, if the group-dn is set, a user must be a member of this group or the user will not be authorized to log in. If the group is not set ("" - the default) no authorization checks are done.

2.6.5.4 ldap host

	ldap host <ip-address> [order <number> last] no ldap host <ip-address> Adds an LDAP server to the set of servers used for authentication. The no form of the command deletes the LDAP host.	
Syntax Description	ip-address	IP address
	number	The order of the LDAP server
	last	The LDAP server will be added in the last location
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap host 10.10.10.10`	
Related Commands	show aaa show ldap	
Notes	• The system will select the LDAP host to try according to its order • New servers are by default added at the end of the list of servers	

2.6.5.5 ldap login-attribute

	ldap login-attribute {<string> | uid | sAMAccountName} no ldap login-attribute Sets the attribute name which contains the login name of the user. The no form of the command resets this attribute to its default.	
Syntax Description	string	Custom attribute name
	uid	LDAP login name is taken from the user login username
	sAMAccountName	SAM Account name, active directory login name
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # ldap login-attribute uid`
Related Commands	show aaa show ldap
Notes	

2.6.5.6 ldap port

	ldap port <port> no ldap port Sets the TCP port on the LDAP server to connect to for authentication. The no form of the command resets this attribute to its default value.	
Syntax Description	port	TCP port number
Default	389	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap port 1111`	
Related Commands	show aaa show ldap	
Notes		

2.6.5.7 ldap referrals

	ldap referrals no ldap referrals Enables LDAP referrals. The no form of the command disables LDAP referrals.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # no ldap referrals`
Related Commands	show aaa show ldap

Notes	Referral is the process by which an LDAP server, instead of returning a result, will return a referral (a reference) to another LDAP server which may contain further information.

2.6.5.8 ldap scope

	ldap scope <scope> no ldap scope Specifies the extent of the search in the LDAP hierarchy that the server should make when it receives an authorization request. The no form of the command resets the attribute to its default value.	
Syntax Description	scope	• one-level - searches the immediate children of the base dn • subtree - searches at the base DN and all its children
Default	subtree	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap scope subtree`	
Related Commands	show aaa show ldap	
Notes		

2.6.5.9 ldap ssl

	ldap ssl {cert-verify | mode <mode>| port <port-number>} no ldap ssl {cert-verify | mode | port} Sets SSL parameter for LDAP. The no form of the command resets the attribute to its default value.	
Syntax Description	cert-verify	Enables verification of SSL/TLS server certificates. This may be required if the server's certificate is self-signed, or does not match the name of the server.
	mode	Sets the security mode for connections to the LDAP server. • none - requests no encryption for the LDAP connection • ssl - the SSL-port configuration is used, an SSL connection is made before LDAP requests are sent (LDAP over SSL) • tls - the normal LDAP port is used, an LDAP connection is initiated, and then TLS is started on this existing connection
	port	Sets the port on the LDAP server to connect to for authentication when the SSL security mode is enabled (LDAP over SSL)

Default	cert-verify is enabled mode is none (LDAP SSL is not activated) port-number is 636
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ldap ssl mode ssl`
Related Commands	show aaa show ldap
Notes	• If available, the TLS mode is recommended, as it is standardized, and may also be of higher security • The port number is used only for SSL mode. If the mode is TLS, the LDAP port number will be used.

2.6.5.10 ldap timeout

	ldap {timeout-bind | timeout-search} <seconds> no ldap {timeout-bind | timeout-search} Sets a global communication timeout in seconds for all LDAP servers to specify the extent of the search in the LDAP hierarchy that the server should make when it receives an authorization request. The no form of the command resets the attribute to its default value.	
Syntax Description	timeout-bind	Sets the global LDAP bind timeout for all LDAP servers
	timeout-search	Sets the global LDAP search timeout for all LDAP servers
	seconds	Range: 1-60
Default	5 seconds	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ldap timeout-bind 10`	
Related Commands	show aaa show ldap	
Notes		

2.6.5.11 ldap version

	ldap version <version> no ldap version Sets the LDAP version. The no form of the command resets the attribute to its default value.	
Syntax Description	version	Sets the LDAP version. Possible values: 2 or 3.
Default	3	

Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ldap version 3`
Related Commands	show aaa show ldap
Notes	

2.6.5.12 show ldap

	show ldap Displays LDAP configurations.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show ldap`
	`User base DN : ou=department,dc=example,dc=com`
	`User search scope : subtree`
	`Login attribute : uid`
	`Bind DN : my-dn`
	`Bind password : my-password`
	`Group base DN : my-group-dn`
	`Group attribute : member`
	`LDAP version : 3`
	`Referrals : no`
	`Server port : 1111`
	`Search Timeout : 5`
	`Bind Timeout : 10`
	`SSL mode : none`
	`Server SSL port : 636 (not active)`
	`SSL cert verify : yes`
	
	`LDAP servers:`
	`1: 10.10.10.10`
	`2: 10.10.10.12`

Related Commands	show aaa show ldap
Notes	

2.7 Security

2.7.1 ip filter enable

	ip filter enable no ip filter enable Enables IP filtering. The no form of the command disables IP filtering.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config

History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # no ip filter enable`
Related Commands	show ip filter
Notes	

2.7.2 ip filter chain

	ip filter chain [FORWARD <clear> <policy> <rule> | INPUT <clear> <policy> <rule> | OUTPUT <clear> <policy> <rule>] no ip filter chain Sets the policy, as a default target, for a specified chain. The no form of the command resets the policy to its default.	
Syntax Description	clear	Delete all rules from this chain
	policy	Specify default policy for this chain
	rule	Add or modify an IP filtering rule
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ip filter chain FORWARD clear`	
Related Commands	show ip filter	
Notes		

2.7.3 show ip filter

	show ip filter [all | configured] Displays IP filtering configuration or status.	
Syntax Description	all	Displays IP filtering state (including unconfigured rules)
	configured	Displays IP filtering configuration
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	ufmapl [mgmt-sa] (config) # show ip filter Packet filtering for IPv4: DISABLED Active IPv4 filtering rules (omitting any not from configuration): Chain 'INPUT' No rules. Policy: ACCEPT Chain 'OUTPUT' No rules. Policy: ACCEPT Chain 'FORWARD' No rules. Policy: ACCEPT
Related Commands	ip filter chain ip filter enable
Notes	

2.8 Firmware Management

2.8.1 firmware install

	firmware install Installs the updated HCA firmware supplied in the software image.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	ufmapl [mgmt-sa] (config) # firmware install
Related Commands	show firmware
Notes	Running this command requires system reboot.

2.8.2 show firmware

	show firmware Displays the HCA firmware information.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show firmware Installed firmware version: 2.11.500 Running firmware version: 2.11.500 Image available for installation: 2.11.500
Related Commands	firmware install

Notes	

2.9 CLI Session

This chapter displays all the relevant commands used to manage CLI session terminal.

2.9.1 cli clear-history

	cli clear-history Clears the command history of the current user.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # cli clear-history`
Related Commands	
Notes	

2.9.2 cli default

	cli default {auto-logout <minutes> | paging enable | prefix-modes {enable | show-config} | progress enable | prompt {confirm-reload | confirm-reset | confirm-unsaved | empty-password} no cli default {auto-logout | paging enable | prefix-modes {enable | show-config} | progress enable prompt {confirm-reload | confirm-reset | confirm-unsaved | empty-password} Configures default CLI options for all future sessions. The no form of the command deletes or disables the default CLI options.	
Syntax Description	minutes	Configures keyboard inactivity timeout for automatic logout. Range: 0-35791. Setting the value to 0 or using the no form of the command disables the auto-logout.
	paging enable	Enables text viewing one screen at a time
	prefix-modes {enable | show-config}	Configures the prefix modes feature of CLI. • "prefix-modes enable" enables prefix modes for current and all future sessions • "prefix-modes show-config" uses prefix modes in “show configuration” output for current and all future sessions
	progress enable	Enables progress updates
	prompt confirm-reload	Prompts for confirmation before rebooting
	prompt confirm-reset	Prompts for confirmation before resetting to factory state

	prompt confirm-unsaved	Confirms whether or not to save unsaved changes before rebooting
	prompt empty-password	Prompts for a password if none is specified in a pseudo-URL for SCP
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # cli default prefix-modes enable`	
Related Commands	show cli	
Notes		

2.9.3 cli session

	cli session {auto-logout <minutes> | paging enable | prefix-modes {enable | show-config} | progress enable | terminal {length <size> | resize | type <terminal-type> | width} | x-display full <display>} no cli session {auto-logout | paging enable | prefix-modes {enable | show-config} | progress enable | terminal type | x-display} Configures default CLI options for all future sessions. The no form of the command deletes or disables the CLI sessions.	
Syntax Description	minutes	Configures keyboard inactivity timeout for automatic logout. Range: 0-35791. Setting the value to 0 or using the no form of the command disables the auto logout.
	paging enable	Enables text viewing one screen at a time
	prefix-modes enable | show-config	Configures the prefix modes feature of CLI. “prefix-modes enable” enables prefix modes for current and all future sessions “prefix-modes show-config” uses prefix modes in “show configuration” output for current and all future sessions
	progress enable	Enables progress updates
	terminal length	Sets the number of lines for the current terminal. Range: 5-999.
	terminal resize	Resizes the CLI terminal settings (to match the actual terminal window)
	terminal-type	Sets the terminal type. Valid options: ansi, console, dumb, linux, unknown, vt52, vt100, vt102, vt220, vt320, xterm.
	terminal width	Sets the width of the terminal in characters. Range: 34-999.
	x-display full <display>	Specifies the display as a raw string (e.g localhost:0.0)
Default	N/A	
Configuration Mode	config	

History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # cli session auto-logout`
Related Commands	show terminal
Notes	

2.9.4 show cli

	show cli Displays the CLI configuration and status.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show cli`
	`CLI current session settings:`
	`  Maximum line size:  8192`
	`  Terminal width:  171 columns`
	`  Terminal length:  38 rows`
	`  Terminal type:  xterm`
	`  X display setting:  (none)`
	`  Auto-logout:  disabled`
	`  Paging:  enabled`
	`  Progress tracking:  enabled`
	`  Prefix modes:  disabled`
	
	`CLI defaults for future sessions:`
	`  Auto-logout:  disabled`
	`  Paging:  enabled`
	`  Progress tracking:  enabled`
	`  Prefix modes:  enabled (and use in 'show configuration')`
	
	`Settings for both this session and future ones:`
	`  Show hidden config:  yes`
	`  Confirm losing changes:  yes`
	`  Confirm reboot/shutdown:  no`
	`  Confirm factory reset:  yes`
	`  Prompt on empty password:  yes`

Related Commands	cli default
Notes	

2.10 Banner

2.10.1 banner login

	banner login <string> no banner login Sets the CLI welcome banner message. The no form of the command resets the system login banner to its default.	
Syntax Description	string	Text banner
Default	"Mellanox MLNX-OS UFM Appliance Management"	
Configuration Mode	config	

History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # banner login example`
Related Commands	show banner
Notes	The banner's content changes in case of different system issues

2.10.2 banner motd

	banner motd <string> no banner motd Sets the contents of the /etc/motd file. The no form of the command resets the system Message of the Day banner.	
Syntax Description	string	Text banner
Default	"Mellanox Switch"	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # banner motd Testing`	
Related Commands	show banner	
Notes	If more then one word is used (there is a space) quotation marks should be added (i.e. "xxxx xxxx")	

2.10.3 show banner

	show banner Displays configured banners.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show banner`
	`Banners:`
	`  MOTD:`
	`Mellanox UFM Appliance`
	
	`  Login:`
	`Mellanox MLNX-OS UFM Appliance Management`

Related Commands	banner login banner motd
Notes	

2.11 SSH

2.11.1 ssh server enable

	ssh server enable no ssh server enable Enables the SSH server. The no form of the command disables the SSH server.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ssh server enable`
Related Commands	show ssh server
Notes	Disabling SSH server does not terminate existing SSH sessions, it only prevents new ones from being established.

2.11.2 ssh server host-key

	ssh server host-key {<key type> {private-key <private-key>| public-key <public-key>} | generate} Manipulates host keys for SSH.	
Syntax Description	key-type	• rsa1 - RSAv1 • rsa2 - RSAv2 • dsa2 - DSAv2
	private-key	Sets new private-key for the host keys of the specified type
	public-key	Sets new public-key for the host keys of the specified type
	generate	Generates new RSA and DSA host keys for SSH
Default	SSH keys are locally generated	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # ssh server host-key dsa2 private-key`
	`Key: **********`
	`Confirm: **********`	

Related Commands	show ssh server	
Notes		

2.11.3 ssh server listen

	ssh server listen {enable | interface <inf>} no ssh server listen {enable | interface <inf>} Enables the listen interface restricted list for SSH. If enabled, and at least one non-DHCP interface is specified in the list, the SSH connections are only accepted on those specified interfaces. The no form of the command disables the listen interface restricted list for SSH. When disabled, SSH connections are not accepted on any interface.	
Syntax Description	enable	Enables SSH interface restrictions on access to this system
	interface	Adds interface to SSH server access restriction list Possible values: {lo | eth0}
Default	SSH listen is enabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ssh server listen enable`	
Related Commands	show ssh server	
Notes		

2.11.4 ssh server min-version

	ssh server min-version <version> no ssh server min-version Sets the minimum version of the SSH protocol that the server supports. The no form of the command resets the minimum version of SSH protocol supported.	
Syntax Description	version	Values: 1 or 2
Default	2	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ssh server min-version 2`	
Related Commands	show ssh server	
Notes		

2.11.5 ssh server ports

	ssh server ports {<port1> [<port2>...]} Specifies which ports the SSH server listens on.

Syntax Description	port	Port number in [1...65535]
Default	22	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ssh server ports 22`	
Related Commands	show ssh server	
Notes	• Multiple ports can be specified by repeating the <port> parameter • The command will remove any previous ports if not listed in the command	

2.11.6 ssh server x11-forwarding

	ssh server x11-forwarding enable no ssh server x11-forwarding enable Enables X11 forwarding on the SSH server. The no form of the command disables X11 forwarding.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ssh server x11-forwarding enable`
Related Commands	show ssh server
Notes	

2.11.7 ssh client global

	ssh client global {host-key-check <policy>} | known-host <known-host-entry>} no ssh client global {host-key-check | known-host localhost} Configures global SSH client settings. The no form of the command negates global SSH client settings.

Syntax Description	host-key-check	Sets SSH client configuration to control how host key checking is performed. This parameter may be set in 3 ways. • If set to "no" it always permits connection, and accepts any new or changed host keys without checking • If set to "ask" it prompts user to accept new host keys, but does not permit a connection if there was already a known host entry that does not match the one presented by the host • If set to "yes" it only permits connection if a matching host key is already in the known hosts file
	known-host	Adds an entry to the global known-hosts configuration file. The entry consists of "<IP> <key-type> <key>".
Default	host-key-check – ask, no keys are configured by default	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ssh client global host-key-check no`	
Related Commands	show ssh client	
Notes		

2.11.8 ssh client user

	ssh client user <username> {authorized-key sshv2 <public key> | identity <key type> {generate | private-key [<private key>] | public-key [<public key>]} | known-host <known host> remove} no ssh client user admin {authorized-key sshv2 <public key ID> | identity <key type>} Adds an entry to the global known-hosts configuration file, either by generating new key, or by adding manually a public or private key. The no form of the command removes a public key from the specified user's authorized key list, or changes the key type.	
Syntax Description	username	The specified user must be a valid account on the system. Possible values: admin, monitor, xmladmin, and xmluser.
	authorized-key sshv2	Adds the specified key to the list of authorized SSHv2 RSA or DSA public keys for this user account. These keys can be used to log into the user's account.
	identity	Sets certain SSH client identity settings for a user, dsa2 or rsa2
	generate	Generates SSH client identity keys for specified user
	private-key	Sets private key SSH client identity settings for the user
	public-key	Sets public key SSH client identity settings for the user

	known-host	Removes host from user's known host file
Default	No keys	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ssh client user admin known-host 172.30.1.116 remove`	
Related Commands	show ssh client	
Notes	If a key is being pasted from a cut buffer and was displayed with a paging program, it is likely that newline characters have been inserted, even if the output was not long enough to require paging. One can specify "no cli session paging enable" before running the "show" command to prevent the newlines from being inserted.	

2.11.9 slogin

	slogin [<slogin options>] <hostname> Invokes the SSH client. The user is returned to the CLI when SSH finishes.	
Syntax Description	slogin options	usage: slogin [-1246AaCfgkNnqsTtVvXxY] [-b bind_address] [-c cipher_spec] [-D port] [-e escape_char] [-F configfile] [-i identity_file] [-L port:host:hostport] [-l login_name] [-m mac_spec] [-o option] [-p port] [-R port:host:hostport] [user@]hostname [command]
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # slogin 192.168.10.70`
	`The authenticity of host '192.168.10.70 (192.168.10.70)' can't be established.`
	`RSA key fingerprint is 2e:ad:2d:23:45:4e:47:e0:2c:ae:8c:34:f0:1a:88:cb.`
	`Are you sure you want to continue connecting (yes/no)? yes`
	`Warning: Permanently added '192.168.10.70' (RSA) to the list of known hosts.`
	
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	`Last login: Sat Feb 28 22:55:17 2009 from 10.208.0.121`
	
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Related Commands		
Notes		

2.11.10 show ssh client

	show ssh client Displays the client configuration of the SSH server.
Syntax Description	N/A

Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show ssh client SSH client Strict Hostkey Checking: ask SSH Global Known Hosts: Entry 1: 72.30.2.2 Finger Print: 1e:b7:8b:ec:ab:35:98:be:6b:d6:12:c2:18:72:12:d6 No SSH user identities configured. No SSH authorized keys configured.
Related Commands	ssh client global ssh client user
Notes	

2.11.11 show ssh server

	show ssh server Displays SSH server configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show ssh server SSH server configuration: SSH server enabled: yes Minimum protocol version: 2 X11 forwarding enabled: no SSH server ports: 22 Interface listen enabled: yes No Listen Interfaces. Host Key Finger Prints: RSA v1 host key: a0:63:db:96:e2:95:5a:5a:fd:a8:d0:f4:ab:e3:5f:f8 RSA v2 host key: 1e:b7:8b:ec:ab:35:98:be:6b:d6:12:c2:18:72:12:d6 DSA v2 host key: 7c:4a:f7:72:51:67:b5:0b:cd:a2:d2:b9:f3:be:3e:68
Related Commands	ssh server
Notes	

2.12 Remote Login

2.12.1 telnet-server enable

	telnet-server enable no telnet-server enable Enables the telnet server. The no form of the command disables the telnet server.
Syntax Description	N/A

Default	Disabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # telnet-server enable`
Related Commands	show telnet-server
Notes	

2.12.2 show telnet-server

	show telnet-server Displays telnet server settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # show telnet-server` `Telnet server enabled:  yes`
Related Commands	telnet-server
Notes	

2.13 Web Server

2.13.1 web auto-logout

	web auto-logout <number-of-minutes> no web auto-logout Configures length of user inactivity before auto-logout of a web session. The no form of the command disables the web auto-logout (web sessions will never logged out due to inactivity).	
Syntax Description	number-of-minutes	The length of user inactivity in minutes. 0 disables the inactivity timer (same as a "no web auto-logout" command).
Default	60 minutes	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web auto-logout 60`	
Related Commands	show web	

Notes	The no form of the command does not automatically log users out due to inactivity.

2.13.2 web enable

	web enable no web enable Enables the web-based management console. The no form of the command disables the web-based management console.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # web enable`
Related Commands	show web
Notes	

2.13.3 web http

	web http {enable | redirect} no web http {enable | redirect} Configures HTTP access to the web-based management console. The no form of the command negates HTTP settings for the web-based management console.	
Syntax Description	enable	Enable HTTP access to the web-based management console
	redirect	Enables redirection to HTTPS
Default	HTTP is enabled HTTP TCP port is 80 HTTP redirect to HTTPS is disabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web http enable`	
Related Commands	show web	
Notes	If HTTP access is enabled, this specifies whether a redirect from the HTTP port to the HTTPS port sh	

2.13.4 web httpd listen

	web httpd listen {enable | interface <ifName>} no web httpd listen {enable | interface <ifName>} Enables the listen interface restricted list for HTTP and HTTPS. The no form of the command disables the HTTP server listen ability.

Syntax Description	enable	Enable HTTP access to the web-based management console
	interface	Adds interface to Web server access restriction list (i.e. eth0, eth1)
Default	Listening is enabled All interfaces are permitted	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web httpd enable`	
Related Commands	show web	
Notes	If enabled, and if at least one of the interfaces listed is eligible to be a listen interface, then HTTP/HTTPS requests will only be accepted on those interfaces. Otherwise, HTTP/HTTPS requests are accepted on any interface.	

2.13.5 web https

	web https {certificate {default-cert | name <name> | regenerate} | enable | ssl} no web https {certificate | enable | ssl} Configure HTTPS access to the web-based management console. The no form of the command disables the HTTPS server listen ability.	
Syntax Description	certificate	Configure the certificate to use for HTTPS connections • default-cert - Configure HTTPS to use the configured default certificate • name - Configure the named certificate to be used for HTTPS connections • regenerate - Regenerate the system default certificate for HTTPS connections
	enable	Enable HTTPS access o the web-based management console
	ssl	Configure SSL/TLS settings for HTTPS
Default	HTTPS is enabled Default port is 443	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web https enable`	
Related Commands	show web web enable	
Notes		

2.13.6 web sessions

	web session {renewal <minutes> | timeout <minutes>} no web session {renewal | timeout} Configures session settings. The no form of the command resets session settings to default.	
Syntax Description	renewal	Configures time before expiration to renew a session
	timeout	Configures time after which a session expires
Default	timeout - 2.5 hours renewal - 30 min	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web sessions renewal 30`	
Related Commands	show web	
Notes		

2.13.7 web proxy auth

	web proxy auth {authtype <type>| basic [password <password> | username <username>]} no web proxy auth {authtype | basic {password | username } Configures authentication settings for web proxy authentication. The no form of the command resets the attributes to their default values.	
Syntax Description	type	Configures the type of authentication to use with web proxy. Possible values: • basic - HTTP basic authentication • none - No authentication
	basic	Configures HTTP basic authentication settings for proxy
	password	A password used for HTTP basic authentication with the web proxy
	username	A username used for HTTP basic authentication with the web proxy
Default	Web proxy is disabled	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # web proxy auth authtype basic`
	`ufmapl [ mgmt-sa ] (config) # web proxy auth basic username web-user`
	`ufmapl [ mgmt-sa ] (config) # web proxy auth basic password web-password`	

Related Commands	show web web proxy host	

Notes	

2.13.8 web proxy host

	web proxy host <ip-address> [port <port-number>] no web proxy Adds and enables a proxy to be used for any HTTP or FTP downloads. The no form of the command disables the web proxy.	
Syntax Description	ip-address	IPv4 address
	port	Sets the web proxy default port
Default	1080	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # web proxy host 10.10.10.10 port 1080`	
Related Commands	show web web proxy auth	
Notes		

2.13.9 show web

	show web Displays the web configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show web`
	
	`Web User Interface:`
	`  Web interface enabled:  yes`
	`  Web caching enabled:  no`
	`  HTTP enabled:  no`
	`  HTTP redirect to HTTPS:  no`
	`  HTTPS enabled:  yes`
	`  HTTPS ssl-ciphers:  TLS1.2`
	`  HTTPS ssl-renegotiation: no`
	`  HTTPS ssl-secure-cookie: yes`
	`  HTTPS certificate name:  default-cert`
	`  Listen enabled:  yes`
	`  Listen interfaces:`
	`  No interface configured.`
	
	`  Inactivity timeout:  5 min`
	`  Session timeout:  10 min`
	`  Session renewal:  5 min`
	
	`Web file transfer proxy:`
	`  Proxy enabled: no`
	
	`Web file transfer certificate authority:`
	`  HTTPS server cert verify: yes`
	`  HTTPS supplemental CA list: default-ca-list`

Related Commands	

Notes	

2.14 SNMP

The commands in this section are used to manage the SNMP server. UFM SNMP settings must be modified in the configuration file using the "ufm configuration export/import" commands.

2.14.1 snmp-server community

	snmp-server community <community> [ro | rw] no snmp-server community <community> Sets a community name for either read-only or read-write SNMP requests. The no form of the command sets the community string to default.	
Syntax Description	community	Community name
	ro	Sets the read-only community string
	rw	Sets the read-write community string
Default	Read-only community: "public" Read-write community: ""	
Configuration Mode	config	
History	1.5	
Example	`switch[ mgmt-sa ] (config) # snmp-server community private rw`	
Related Commands	show snmp	
Notes	• If neither the "ro" or the "rw" parameters are specified, the read-only community is set as the default community • If the read-only community is specified, only queries can be performed • If the read-write community is specified, both queries and sets can be performed	

2.14.2 snmp-server contact

	snmp-server contact <contact-name> no snmp-server contact Sets a value for the sysContact variable in MIB-II. The no form of the command resets the parameter to its default value.	
Syntax Description	contact-name	Contact name
Default	""	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # snmp-server contact my-name`
Related Commands	show snmp
Notes	

2.14.3 snmp-server listen

	snmp-server listen {enable | interface <ifName>} no snmp-server listen {enable | interface <ifName>} Configures SNMP server interface access restrictions. The no form of the command disables the listen interface restricted list for SNMP server.	
Syntax Description	enable	Enables SNMP interface restrictions on access to this system
	interface	Adds an interface to the "listen" list for SNMP server. For example: "eth0", "eth1".
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # snmp listen enable`	
Related Commands	show snmp	
Notes	If enabled, and if at least one of the interfaces listed is eligible to be a listen interface, then SNMP requests will only be accepted on those interfaces. Otherwise, SNMP requests are accepted on any interface.	

2.14.4 snmp-server location

	snmp-server location <system-location> no snmp-server location Sets a value for the sysLocation variable in MIB-II. The no form of the command clears the contents of the sysLocation variable.	
Syntax Description	system-location	string
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # snmp-server location lab`	
Related Commands	show snmp	
Notes		

2.14.5 snmp-server port

	snmp-server port <port> no snmp-server port Sets the UDP listening port for the SNMP agent. The no form of the command resets the parameter to its default value.
Syntax Description	N/A
Default	161
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # snmp-server port 1000`
Related Commands	show snmp
Notes	

2.14.6 snmp-server traps

	snmp-server traps {community <community> | event <event name> | port <port> | send-test} no snmp-server traps {community | event <event name> | port} Configures hosts to which to send SNMP traps. The no form of the commands removes a host from which SNMP traps should be sent.	
Syntax Description	community	Sets the default community for traps sent to hosts which do not have a custom community string set
	event	Specifies which events will be sent as traps
	port	Sets the default port to which traps are sent
	send-test	Sends a test trap
Default	Community: public All traps are enabled Port: 162	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # snmp-server community public`	
Related Commands	show snmp show snmp events	
Notes	• This setting is only meaningful if traps are enabled, though the list of hosts may still be edited if traps are disabled • Refer to Mellanox MIB file for the list of supported traps	

2.14.7 snmp-server user

	snmp-server user {admin | <username>} v3 {[encrypted] auth <hash-type> <password> [priv <privacy-type> [<password>]] | capability <cap> | enable <sets> | prompt auth <hash-type> [priv <privacy-type>]} no snmp-server user {admin | <username>} v3 {[encrypted] auth <hash-type> <password> [priv <privacy-type> [<password>]] | capability <cap> | enable <sets> | prompt auth <hash-type> [priv <privacy-type>]} Specifies an existing username, or a new one to be added. The no form of the command disables access via SNMP v3 for the specified user.	
Syntax Description	v3	Configures SNMPv3 users
	auth	Configures SNMPv3 security parameters, specifying passwords in plaintext on the command line. Note that passwords are always stored encrypted.
	capability	Sets capability level for SET requests
	enable	Enables SNMPv3 access for this user
	encrypted	Configures SNMPv3 security parameters, specifying passwords in encrypted form
	prompt	Configures SNMPv3 security parameters, specifying passwords securely in follow-up prompts, rather than on the command line
Default	No SNMPv3 users defined	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # snmp-server user admin v3 enable`	
Related Commands	show snmp user	
Notes		

2.14.8 show snmp

	show snmp [engineID | events | user] Displays SNMP-server configuration and status.	
Syntax Description	engineID	SNMP Engine ID
	events	SNMP events
	user	SNMP users
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	ufmapl [mgmt-sa] (config) # show snmp SNMP enabled : yes SNMP port : 161 System contact : www.mellanox.com System location: Read-only community: public Read-write community: private Interface listen enabled: yes Listen Interfaces: No Listen Interfaces.
Related Commands	
Notes	

2.15 Scheduled Jobs

Use the commands in this section to manage and schedule the execution of jobs.

2.15.1 job

	job <job-id> no job <job-id> Creates a job. The no form of the command deletes the job.	
Syntax Description	job-id	An integer
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # job 100 ufmapl [mgmt-sa] (config job 100) #	
Related Commands	show jobs	
Notes	Job state is lost on reboot.	

2.15.2 comment

	comment <comment> no comment Adds a comment to the job. The no form of the command deletes the comment.	
Syntax Description	comment	String
Default	""	
Configuration Mode	config job	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config job 100) # comment example_comment`
Related Commands	show jobs
Notes	

2.15.3 command

	command <sequence #> | <command> no command <sequence #> Adds a CLI command to the job. The no form of the command deletes the command from the job.	
Syntax Description	sequence #	An integer that controls the order the command is executed relative to other commands in this job. The commands are executed in an ascending order.
	command	CLI command
Default	N/A	
Configuration Mode	config job	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config job 100) # command 10 "show power"`	
Related Commands	show jobs	
Notes	• The command must be defined with quotation marks ("") • The command must be added as it was executed from the "config" mode. For example, in order to change the interface description you need to add the command: "interface <type> <number> description my-description".	

2.15.4 enable

	enable no enable Enables the specified job. The no form of the command disables the specified job.
Syntax Description	N/A
Default	N/A
Configuration Mode	config job
History	1.5
Example	`ufmapl [ mgmt-sa ] (config job 100) # enable`
Related Commands	show jobs

Notes	If a job is disabled, it will not be executed automatically according to its schedule; nor can it be executed manually.

2.15.5 execute

	execute Forces an immediate execution of the job.
Syntax Description	N/A
Default	N/A
Configuration Mode	config job
History	1.5
Example	`ufmapl [ mgmt-sa ] (config job 100) # execute`
Related Commands	show jobs
Notes	• The job timer (if set) is not canceled and the job state is not changed (i.e. the time of the next automatic execution is not affected) • The job will not be run if not currently enabled

2.15.6 fail-continue

	fail-continue no fail-continue Continues the job execution regardless of any job failures. The no form of the command returns fail-continue to its default.
Syntax Description	N/A
Default	A job will halt execution as soon as any of its commands fails
Configuration Mode	config job
History	1.5
Example	`ufmapl [ mgmt-sa ] (config job 100) # fail-continue`
Related Commands	show jobs
Notes	

2.15.7 name

	name <job-name> no name Configures a name for this job. The no form of the command resets the name to its default.

Syntax Description	job-name	String defining a name for the job
Default	""	
Configuration Mode	config job	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config job 100) # name my-job`	
Related Commands	show jobs	
Notes		

2.15.8 schedule type

	schedule type <recurrence-type> no schedule type Sets the type of schedule the job will automatically execute on. The no form of the command resets the schedule type to its default.	
Syntax Description	recurrence-type	The available schedule types are: • daily - the job is executed every day at a specified time • weekly - the job is executed on a weekly basis • monthly - the job is executed every month on a specified day of the month • once - the job is executed once at a single specified date and time • periodic - the job is executed on a specified fixed time interval starting from a fixed point in time
Default	once	
Configuration Mode	config job	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config job 100) # schedule type once`	
Related Commands	show jobs	
Notes	A schedule type is essentially a structure for specifying one or more future dates and times for a job to execute.	

2.15.9 schedule <recurrence-type>

	schedule <recurrence-type> <interval-and-date> no schedule Sets the type of schedule the job will automatically execute on. The no form of the command resets the schedule type to its default.

Syntax Description	recurrence-type	The available schedule types are: • daily - the job is executed every day at a specified time • weekly - the job is executed on a weekly basis • monthly - the job is executed every month on a specified day of the month • once - the job is executed once at a single specified date and time • periodic - the job is executed on a specified fixed time interval starting from a fixed point in time
	interval-and-date	Interval and date per recurrence type
Default	once	
Configuration Mode	config job	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config job 100) # schedule monthly interval 10`	
Related Commands	show jobs	
Notes	A schedule type is essentially a structure for specifying one or more future dates and times for a job to execute.	

2.15.10 show jobs

	show jobs [<job-id>] Displays configuration and state (including results of last execution, if any exist) of all jobs, or of one job if a job ID is specified.	
Syntax Description	job-id	Job ID
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # show jobs 10`
	`Job 10:`
	`  Status: inactive`
	`  Enabled: yes`
	`  Continue on failure: no`
	`  Schedule Type: once`
	`  Time and date: 1970/01/01 00:00:00 +0000`
	`  Last Exec Time: Thu 2012/04/05 13:11:42 +0000`
	`  Next Exec Time: N/A`
	`  Commands:`
	`  Command 10: show power`
	`  Last Output:`
	`==========`
	`Module Status`
	`==========`
	`PS1 OK`
	`PS2 NOT PRESENT`	

Related Commands		
Notes		

2.16 Event Notification

2.16.1 email autosupport

	email autosupport {enable | event <event-name>} no email autosupport enable Enables the support of the email notification and specifies which events will be sent as email notifications. The no form of the command disables sending of email notifications globally or per event.	
Syntax Description	enable	Enables the sending of email to vendor autosupport when certain failures occur
	event	Specifies events for which to send autosupport notification emails
Default	Email autosupport is disabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email autosupport enable`	
Related Commands	show email	
Notes	Refer to "show email event" for the full event list	

2.16.2 email dead-letter

	email dead-letter {cleanup max-age <duration> | enable} no email dead-letter Configures settings for saving undeliverable emails. The no form of the command disables sending of emails to vendor auto-support upon certain failures.	
Syntax Description	cleanup max-age	Example: “5d4h3m2s” for 5 days, 4 hours, 3 minutes, 2 seconds
	enable	Saves dead-letter files for undeliverable emails
Default	Save dead letter is enabled The default duration is 14 days	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email dead-letter enable`	
Related Commands	show email	
Notes		

2.16.3 email domain

	email domain <hostname-or-ip-address> no email domain Sets the domain name from which the emails will appear to come from (provided that the return address is not already fully-qualified). This is used in conjunction with the system hostname to form the full name of the host from which the email appears to come. The no form of the command clears email domain override.	
Syntax Description	hostname-or-ip-address	Hostname or IP address
Default	No email domain	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email domain mellanox`	
Related Commands	show email	
Notes		

2.16.4 email mailhub

	email mailhub <hostname-or-ip-address> no email mailhub Sets the mail relay to be used to send notification emails. The no form of the command clears the mail relay to be used to send notification emails.	
Syntax Description	hostname-or-ip-address	Hostname or IP address
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email mailhub 10.0.8.11`	
Related Commands	show email [events]	
Notes		

2.16.5 email mailhub-port

	email mailhub-port <port> no email mailhub-port Sets the mail relay port to be used to send notification emails. The no form of the command resets the port to its default.	
Syntax Description	port	Port number

Default	25
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # email mailhub-port 125`
Related Commands	show email
Notes	

2.16.6 email notify event

	email notify event <event-name> no email notify event <event-name> Enables sending email notifications for the specified event type. The no form of the command disables sending email notifications for the specified event type.	
Syntax Description	event-name	Example event names would include "process-crash" and "cpu-util-high"
Default	No events are enabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email notify event process-crash`	
Related Commands	show email events	
Notes	This does not affect auto-support emails. Auto-support can be disabled overall, but if it is enabled, all auto-support events are sent as emails.	

2.16.7 email notify recipient

	email notify recipient <email-addr> [class {info | failure} | detail] no email notify recipient <email-addr> [class {info | failure} | detail] Adds an email address from the list of addresses to which to send email notifications of events. The no form of the command removes an email address from the list of addresses to which to send email notifications of events.	
Syntax Description	email-addr	Example event names would include "process-crash" and "cpu-util-high"
	class	Specifies which types of events are sent to this recipient
	info	Sends informational events to this recipient
	failure	Sends failure events to this recipient
	detail	Sends detailed event emails to this recipient
Default	No recipients are added	

Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # email notify recipient user2@autosupport.mellanox.com`
Related Commands	show email
Notes	

2.16.8 email return-addr

	email return-addr <username> no email domain Sets the username or fully-qualified return address from which email notifications are sent. • If the string provided contains an “@” character, it is considered to be fully-qualified and used as-is. • Otherwise, it is considered to be just the username, and we append “@<hostname>.<domain>”. The default is “do-not-reply”, but this can be changed to “admin” or whatnot in case something along the line does not like fictitious addresses. The no form of the command resets this attribute to its default.	
Syntax Description	username	Username
Default	do-not-reply	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # email return-addr user1`	
Related Commands	show email	
Notes		

2.16.9 email return-host

	email return-host no email return-host Includes the hostname in the return address for emails. The no form of the command does not include the hostname in the return address for emails.
Syntax Description	N/A
Default	No return host
Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # no email return-host`
Related Commands	show email
Notes	This only takes effect if the return address does not contain an "@" character.

2.16.10 email send-test

	email send-test Sends test-email to all configured event and failure recipients.
Syntax Description	N/A
Default	No return host
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # email autosupport enable`
Related Commands	show email [events]
Notes	

2.16.11 show email

	show email [events] Shows email configuration or events for which email should be sent upon.	
Syntax Description	events	Displays event list
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
Example		

```
ufmapl [ mgmt-sa ] (config) # show email
Mail hub:
Mail hub port:    25
Domain override:
Return address:   do-not-reply
Include hostname in return address: yes

Current reply address: host@localdomain
Security mode:        tls-none
Verify server cert:   yes
Supplemental CA list: default-ca-list

Dead letter settings:
  Save dead.letter files: yes
  Dead letter max age:    14 days
Email notification recipients:
  No recipients configured.

Autosupport emails
  Enabled:              no
  Recipient:            autosupport@autosupport.mellanox.com
  Mail hub:             autosupport.mellanox.com
  Security mode:        tls-none
  Verify server cert:   yes
  Supplemental CA list: default-ca-list
```

Related Commands	
Notes	

2.17 Statistics and Alarms

2.17.1 stats alarm clear

	stats alarm <alarm-id> clear Clears alarm state.	
Syntax Description	alarm-id	Alarms supported by the system, for example: • cpu_util_indiv – average CPU utilization too high: percent utilization • disk_io – operating system disk I/O per second too high: kilobytes per second • fs_mnt – free filesystem space too low: percent of disk space free • intf_util – network utilization too high: bytes per second • memory_pct_used – too much memory in use: percent of physical memory used • paging – paging activity too high: page faults • temperature – temperature is too high: degrees
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats alarm cpu_util_indiv clear`	
Related Commands	show stats alarm	
Notes		

2.17.2 stats alarm enable

	stats alarm <alarm-id> enable no stats alarm <alarm-id> enable Enables the alarm. The no form of the command disables the alarm. Notifications will not be received.

Syntax Description	alarm-id	Alarms supported by the system, for example: • cpu_util_indiv – average CPU utilization too high: percent utilization • disk_io – operating system disk I/O per second too high: kilobytes per second • fs_mnt – free filesystem space too low: percent of disk space free • intf_util – network utilization too high: bytes per second • memory_pct_used – too much memory in use: percent of physical memory used • paging – paging activity too high: page faults • temperature – temperature is too high: degrees
Default	The default is different per alarm ID	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats alarm cpu_util_indiv enable`	
Related Commands	show stats alarm	
Notes		

2.17.3 stats alarm event-repeat

	stats alarm <alarm-id> event-repeat {single | while-not-cleared} no stats alarm <alarm-id> event-repeat Configures repetition of events from this alarm.	
Syntax Description	alarm-id	Alarms supported by the system, for example: • cpu_util_indiv – average CPU utilization too high: percent utilization • disk_io – operating system disk I/O per second too high: kilobytes per second • fs_mnt – free filesystem space too low: percent of disk space free • intf_util – network utilization too high: bytes per second • memory_pct_used – too much memory in use: percent of physical memory used • paging – paging activity too high: page faults • temperature – temperature is too high: degrees
	single	Does not repeat events: only sends one event whenever the alarm changes state
	while-not-cleared	Repeats error events until the alarm clears
Default	Single	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # stats alarm cpu_util_indiv event-repeat single`
Related Commands	show stats alarm
Notes	

2.17.4 stats alarm {rising | falling}

	stats alarm <alarm-id> {rising | falling} {clear-threshold | error-threshold} <threshold-value> Configure alarms thresholds.	
Syntax Description	alarm-id	Alarms supported by the system, for example: • cpu_util_indiv - average CPU utilization too high: percent utilization • disk_io - operating system disk I/O per second too high: kilobytes per second • fs_mnt - free filesystem space too low: percent of disk space free • intf_util - network utilization too high: bytes per second • memory_pct_used - too much memory in use: percent of physical memory used • paging - paging activity too high: page faults • temperature - temperature is too high: degrees
	rising	Configures alarm for when the statistic rises too high
	falling	Configures alarm for when the statistic falls too low
	error-threshold	Sets threshold to trigger falling or rising alarm
	clear-threshold	Sets threshold to clear falling or rising alarm
	threshold-value	Threshold value, different per alarm
Default	Default is different per alarm ID	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats alarm cpu_util_indiv falling clear-threshold 10`	
Related Commands	show stats alarm	
Notes	Not all alarms support all four thresholds.	

2.17.5 stats alarm rate-limit

	stats alarm <alarm-id> rate-limit {count <count-type> <count> | reset | window <window-type> <duration>} Configures alarms rate limit.

Syntax Description	alarm-id	Alarms supported by the system, for example: • cpu_util_indiv – average CPU utilization too high: percent utilization • disk_io – operating system disk I/O per second too high: kilobytes per second • fs_mnt – free filesystem space too low: percent of disk space free • intf_util – network utilization too high: bytes per second • memory_pct_used – too much memory in use: percent of physical memory used • paging – paging activity too high: page faults • temperature – temperature is too high: degrees
	count-type	Long medium, or short count (number of alarms)
	reset	Set the count and window durations to default values for this alarm
	window-type	Long medium, or short count, in seconds
Default	Short window: 5 alarms in 1 hour Medium window: 20 alarms in 1 day Long window: 50 alarms in 7 days	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats alarm paging rate-limit window long 2000`	
Related Commands	show stats alarm	
Notes		

2.17.6 stats chd clear

	stats chd <chd-id> clear Clears CHD counters.

Syntax Description	chd-id	CHD supported by the system, for example: • cpu_util – CPU utilization: percentage of time spent • cpu_util_ave – CPU utilization average: percentage of time spent • cpu_util_day – CPU utilization average: percentage of time spent • disk_device_io_hour – storage device I/O read/ write statistics for the last hour: bytes • disk_io – operating system aggregate disk I/O average: KB/sec • eth_day • eth_hour • fs_mnt_day – filesystem system usage average: bytes • fs_mnt_month – filesystem system usage average: bytes • fs_mnt_week – -ilesystem system usage average: bytes • ib_day • ib_hour • intf_day – network interface statistics aggregation: bytes • intf_hour – network interface statistics (same as “interface” sample) • intf_util – aggregate network utilization across all interfaces • memory_day – average physical memory usage: bytes • memory_pct – average physical memory usage • paging – paging activity: page faults • paging_day – paging activity: page faults
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats chd memory_day clear`	
Related Commands	show stats chd	
Notes		

2.17.7 stats chd enable

	stats chd <chd-id> enable no stats chd <chd-id> enable Enables the CHD. The no form of the command disables the CHD.

Syntax Description	chd-id	CHD supported by the system, for example: • cpu_util – CPU utilization: percentage of time spent • cpu_util_ave – CPU utilization average: percentage of time spent • cpu_util_day – CPU utilization average: percentage of time spent • disk_device_io_hour – storage device I/O read/ write statistics for the last hour: bytes • disk_io – operating system aggregate disk I/O average: KB/sec • eth_day • eth_hour • fs_mnt_day – filesystem system usage average: bytes • fs_mnt_month – filesystem system usage average: bytes • fs_mnt_week – -ilesystem system usage average: bytes • ib_day • ib_hour • intf_day – network interface statistics aggregation: bytes • intf_hour – network interface statistics (same as “interface” sample) • intf_util – aggregate network utilization across all interfaces • memory_day – average physical memory usage: bytes • memory_pct – average physical memory usage • paging – paging activity: page faults • paging_day – paging activity: page faults
Default	Enabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats chd memory_day enable`	
Related Commands	show stats chd	
Notes		

2.17.8 stats chd compute time

	stats chd <chd-id> compute time {interval | range} <time> Sets parameters for when this CHD is computed.

Syntax Description	chd-id	CHD supported by the system, for example: • cpu_util - CPU utilization: percentage of time spent • cpu_util_ave - CPU utilization average: percentage of time spent • cpu_util_day - CPU utilization average: percentage of time spent • disk_device_io_hour - storage device I/O read/ write statistics for the last hour: bytes • disk_io - operating system aggregate disk I/O average: KB/sec • eth_day • eth_hour • fs_mnt_day - filesystem system usage average: bytes • fs_mnt_month - filesystem system usage average: bytes • fs_mnt_week - -ilesystem system usage average: bytes • ib_day • ib_hour • intf_day - network interface statistics aggregation: bytes • intf_hour - network interface statistics (same as “interface” sample) • intf_util - aggregate network utilization across all interfaces • memory_day - average physical memory usage: bytes • memory_pct - average physical memory usage • paging - paging activity: page faults • paging_day - paging activity: page faults
	interval	Specifies calculation interval (how often to do a new calculation) in number of seconds
	range	Specifies calculation range, in number of seconds
	time	Number of seconds
Default	Different per CHD	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats chd memory_day compute time interval 120`	
Related Commands	show stats chd	
Notes		

2.17.9 stats sample clear

	stats sample <sample-id> clear Clears sample history.

Syntax Description	sample-id	Possible sample IDs are: • congested • cpu_util - CPU utilization: milliseconds of time spent • disk_device_io - storage device I/O statistics • disk_io - operating system aggregate disk I/O: KB/sec • eth • fan - fan speed • fs_mnt_bytes - filesystem usage: bytes • fs_mnt_inodes - filesystem usage: inodes • ib • interface - network interface statistics • intf_util - network interface utilization: bytes • memory - system memory utilization: bytes • paging - paging activity: page faults • power - power supply usage • power-consumption • temperature - modules temperature
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats sample temperature clear`	
Related Commands	show stats sample	
Notes		

2.17.10 stats sample enable

	stats sample <sample-id> enable no states sample <sample-id> enable Enables the sample. The no form of the command disables the sample.

Syntax Description	sample-id	Possible sample IDs are: • congested • cpu_util - CPU utilization: milliseconds of time spent • disk_device_io - storage device I/O statistics • disk_io - operating system aggregate disk I/O: KB/sec • eth • fan - fan speed • fs_mnt_bytes - filesystem usage: bytes • fs_mnt_inodes - filesystem usage: inodes • ib • interface - network interface statistics • intf_util - network interface utilization: bytes • memory - system memory utilization: bytes • paging - paging activity: page faults • power - power supply usage • power-consumption • temperature - modules temperature
Default	Enabled	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats sample temperature enable`	
Related Commands	show stats sample	
Notes		

2.17.11 stats sample interval

	stats sample <sample-id> interval <time> Sets the amount of time between samples for the specified group of sample data.

Syntax Description	sample-id	Possible sample IDs are: • congested • cpu_util - CPU utilization: milliseconds of time spent • disk_device_io - storage device I/O statistics • disk_io - operating system aggregate disk I/O: KB/sec • eth • fan - fan speed • fs_mnt_bytes - filesystem usage: bytes • fs_mnt_inodes - filesystem usage: inodes • ib • interface - network interface statistics • intf_util - network interface utilization: bytes • memory - system memory utilization: bytes • paging - paging activity: page faults • power - power supply usage • power-consumption • temperature - modules temperature
	time	Number of seconds
Default	Different per sample	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # stats sample temperature interval 1`	
Related Commands	show stats sample	
Notes		

2.17.12 stats clear-all

	stats clear all Clears data for all samples, CHDs, and status for all alarms.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # stats clear-all`
Related Commands	show stats sample
Notes	

2.17.13 stats export

	stats export <format> <report-name> [{after | before} <yyyy/mm/dd> <hh:mm:ss>] [filename <filename>] Exports statistics to a file.	
Syntax Description	format	Currently the only supported value for <format> is "csv" (comma-separated value)
	report-name	Determines dataset to be exported. Possible report names are: • memory - memory utilization • paging - paging I/O • cpu_util - CPU utilization
	after | before	Only includes stats collected after or before a specific time
	yyyy/mm/dd	Date must be between 1970/01/01 and 2038/01/19
	hh:mm:ss	Time must be between 00:00:00 and 03:14:07 UTC and is treated as local time
	filename	Specifies filename to give new report. If a filename is specified, the stats will be exported to a file of that name; otherwise a name will be chosen automatically and will contain the name of the report and the time and date of the export. Any automatically-chosen name will be given a .csv extension.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example		
Related Commands	show files stats	
Notes		

2.17.14 show stats alarm

	show stats alarm [<alarm-id> [rate-limit]] Displays status of all alarms or the specified alarm.

Syntax Description	alarm-id	• cpu_util_indiv – average CPU utilization too high: percent utilization • disk_io – operating system disk I/O per second too high: kilobytes per second • fs_mnt – free filesystem space too low: percent of disk space free • intf_util – network utilization too high: bytes per second • memory_pct_used – too much memory in use: percent of physical memory used • paging – paging activity too high: page faults • temperature – temperature is too high: degrees
	rate-limit	Displays rate limit parameters
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show stats alarm
	Alarm cpu_util_indiv (Average CPU utilization too high): ok
	Alarm disk_io (Operating System Disk I/O per second too high): (disabled)
	Alarm fs_mnt (Free filesystem space too low): ok
	Alarm intf_util (Network utilization too high): (disabled)
	Alarm memory_pct_used (Too much memory in use): (disabled)
	Alarm paging (Paging activity too high): ok
	Alarm temperature (Temperature is too high): ok</pre>	

Related Commands	stats alarm	
Notes		

2.17.15 show stats chd

	show stats chd [<chd-id>] Displays configuration of all statistics CHDs.

Syntax Description	chd-id	• cpu_util – CPU utilization: percentage of time spent • cpu_util_ave – CPU utilization average: percentage of time spent • cpu_util_day – CPU utilization average: percentage of time spent • disk_device_io_hour – storage device I/O read/write statistics for the last hour: bytes • disk_io – operating system aggregate disk I/O average: KB/sec • eth_day • eth_hour • fs_mnt_day – filesystem system usage average: bytes • fs_mnt_month – filesystem system usage average: bytes • fs_mnt_week – -ilesystem system usage average: bytes • ib_day • ib_hour • intf_day – network interface statistics aggregation: bytes • intf_hour – network interface statistics (same as “interface” sample) • intf_util – aggregate network utilization across all interfaces • memory_day – average physical memory usage: bytes • memory_pct – average physical memory usage • paging – paging activity: page faults • paging_day – paging activity: page faults
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	<pre>ufmapl [mgmt-sa] (config) # show stats chd disk_device_io_hour
	
	CHD "disk_device_io_hour" (Storage device I/O read/write statistics for the last hour: bytes):
	   Enabled: yes
	   Source dataset: sample "disk_device_io"
	   Computation basis: data points
	   Interval: 1 data point(s)
	   Range: 1 data point(s)</pre>	

Related Commands	stats chd	
Notes		

2.17.16 show stats cpu

	show stats cpu Displays some basic stats about CPU utilization: • the current level • the peak over the past hour • the average over the past hour
Syntax Description	N/A
Default	N/A

Configuration Mode	Any configuration mode
History	1.5

Example	`ufmapl [ mgmt-sa ] (config) # show stats cpu`
	
	`CPU 0`
	`  Utilization:  6%`
	`  Peak Utilization Last Hour: 16% at 2012/02/28 08:47:32`
	`  Avg. Utilization Last Hour: 8%`

Related Commands	
Notes	

2.17.17 show stats sample

	show stats sample [<sample-id>] Displays sampling interval for all samples, or the specified one.	
Syntax Description	sample-id	• congested • cpu_util - CPU utilization: milliseconds of time spent • disk_device_io - storage device I/O statistics • disk_io - operating system aggregate disk I/O: KB/sec • eth • fan - fan speed • fs_mnt_bytes - filesystem usage: bytes • fs_mnt_inodes - filesystem usage: inodes • ib • interface - network interface statistics • intf_util - network interface utilization: bytes • memory - system memory utilization: bytes • paging - paging activity: page faults • power - power supply usage • power-consumption • temperature - modules temperature
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # show stats sample fan`
	`Sample "fan" (Fan speed):`
	`  Enabled:  yes`
	`  Sampling interval: 1 minute 11 seconds`	

Related Commands	stats sample	
Notes		

2.18 Chassis Management

2.18.1 show version

	show version [concise] Displays version information for the currently running system image.	
Syntax Description	concise	Fits output onto one line
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # show version Product name: ufm_appliance Product release: UFMAPL_1.5.0.14_UFM_4.0.0.19 Build ID: #1-dev Build date: 2013-03-03 16:39:17 Target arch: x86_64 Target hw: x86_64 Built by: root@r-build01 Version summary: ufm_appliance UFMAPL_1.5.0.14_UFM_4.0.0.19 2013-03-03 16:39:17 x86_64 Product model: x86 Host ID: c194d089f00c System serial num: F6qnuuhLcxjG System UUID: 435a85f4-22cc-e111-a4eb-001e6754a51b Uptime: 1d 1h 48m 43.424s CPU load averages: 0.00 / 0.00 / 0.00 Number of CPUs: 24 System memory: 1441 MB used / 30700 MB free / 32141 MB total Swap: 0 MB used / 1506 MB free / 1506 MB total	
Related Commands		
Notes		

2.18.2 show inventory

	show inventory Displays system inventory.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
	4.3.0	Updated output

Example	ufmapl [mgmt-sa] (config) # show inventory Inventory refresh. Please wait... ========== Module Type Part number Serial Number ========== BOARD S2600GZ G11481-352 QSGR22800436 PS1 DPS-750XB A MUA90-PF E98791D1229075650 PS2 DPS-750XB A MUA90-PF E98791D1229075651 DRIVE1 SATA (931.012 GB) MUA90-HD WD-WCAW33617160WDC DRIVE2 SATA (931.012 GB) MUA90-HD WD-WCAW34670985WDC HCA ConnectX-6 MCX653106A-HDAT MT1234U01297
Related Commands	
Notes	

2.18.3 show chassis health

	show chassis health Displays chassis health status.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	ufmapl [mgmt-sa] (config) # show inventory Inventory refresh. Please wait... ========== Module Type Part number Serial Number ========== BOARD S2600GZ G11481-352 QSGR22800436 PS1 DPS-750XB A MUA90-PF E98791D1229075650 PS2 DPS-750XB A MUA90-PF E98791D1229075651 DRIVE1 SATA (931.012 GB) MUA90-HD WD-WCAW33617160WDC DRIVE2 SATA (931.012 GB) MUA90-HD WD-WCAW34670985WDC HCA ConnectX-6 MCX653106A-HDAT MT1234U01297
Related Commands	
Notes	

2.18.4 show memory

	show memory Displays memory status.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	<pre>ufmapl [mgmt-sa] (config) # show memory
	Total Used Free Used+B/C Free-B/C
	Physical 2027 MB 761 MB 1266 MB 1214 MB 813 MB
	Swap 0 MB 0 MB 0 MB
	
	Physical Memory Borrowed for System Buffers and Cache:
	  Buffers: 0 MB
	  Cache: 452 MB
	  Total Buffers/Cache: 452 MB</pre>

Related Commands	
Notes	

2.18.5 show chassis input power

	show chassis input power Displays chassis input power information.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6

Example	<pre>ufmapl [mgmt-sa] (config) # show chassis input power
	Refreshing input power information. Please wait...
	Input Power Supply 1 0 Watts
	Input Power Supply 2 116 Watts</pre>

Related Commands	
Notes	

2.18.6 chassis altitude

	chassis altitude <elevation> Updates the chassis altitude.	
Syntax Description	elevation	Possible chassis altitude values are: • 300: 300m or less • 900: 301m - 900m • 1500: 901m - 1500m • 3000: Higher than 1500m
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	<pre>ufmapl [mgmt-sa] (config) # chassis altitude 300</pre>	
Related Commands		
Notes		

2.18.7 chassis remote-management dhcp

	chassis remote-management dhcp Updates chassis remote-management interface to DHCP
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # chassis remote-management dhcp`
Related Commands	
Notes	

2.18.8 chassis remote-management ip

	chassis remote-management ip {address <ip> <netmask> | default-gateway <ipv4-address>} Updates chassis remote-management IP address.	
Syntax Description	address	Configures IP address and netmask for remote-management
	default-gateway	Configures a default route for chassis remote management
Default	N/A	
Configuration Mode	config	
History	1.5	
	4.5.0	Added "default-gateway" parameter
Example	`ufmapl [ mgmt-sa ] (config) # chassis remote-management up address 10.10.10.10 /30`	
Related Commands		
Notes		

2.18.9 chassis remote-management ipv6

	chassis remote-management ipv6 [enable | dhcp | autoconfig | address <ipv6-address> <prefix len 0-128> | default-gateway <ipv6-address>] Updates IPv6 support for chassis remote management.	
Syntax Description	enable	Enables IPv6 support for chassis remote management interface
	dhcp	Sets the chassis remote management interface from which non-interface-specific (resolver) configuration is accepted via DHCPv6

	autoconfig	Enables IPv6 stateless address auto configuration (SLAAC) for the chassis remote management interface
	address	Configures a static IPv6 address and prefix length
	default-gateway	Sets a static default gateway for the chassis remote management interface
Default	N/A	
Configuration Mode	config	
History	4.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # chassis remote-management ipv6 dhcp`	
Related Commands	show chassis remote-management ip	
Notes		

2.18.10 chassis remote-management username

	chassis remote-management username <username> <password> Configures the remote-management username and password.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # chassis remote-management username ufm-test Str0nGP4sS`
Related Commands	
Notes	

2.18.11 show chassis firmware

	show chassis firmware Displays the BIOS package information.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # show chassis firmware` `Running chassis image: SE5C600.86B.01.06.0002`
Related Commands	

Notes	

2.18.12 show chassis remote-management

	show chassis remote-management {ip | username} Shows the remote management IP address and username.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show chassis remote-management ip LAN Configuration Settings: --------------------------- LAN Channel Selected: 3 LAN Alert Destination Index Selected: None. LAN Alert Configuration will not be displayed. IP Address Source: DHCP DHCP Host Name: UFMAPL-00:1E:67:49:CF:BD LAN Failover Mode: DISABLE BMC Host IP Address: 172.30.11.214 Subnet Mask: 255.255.0.0 Gateway IP Address: 172.30.0.1 Gateway MAC Address: 00-00-00-00-00-00 Backup Gateway IP Address: 0.0.0.0 Backup Gateway MAC Address: 00-00-00-00-00-00 Community String: public Gratuitous ARP Enable: DISABLE Gratuitous ARP Interval (milliseconds): 0 BMC ARP Response Enable: ENABLE IPV6 Configuration Settings: --------------------------- IPV6 Status: DISABLE IPV6 IP Address Source: STATIC IPV6 Prefix Length: 64 IPV6 IP Address: 000:000:000:000:000:000:000:000 IPV6 Default Gateway: 000:000:000:000:000:000:000:000
Related Commands	chassis remote-management
Notes	

2.18.13 show chassis altitude

	show chassis altitude Displays chassis altitude setup.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5

Example	ufmapl [mgmt-sa] (config) # show chassis altitude Altitude ======== Current Value : 301m - 900m --------------------------- Possible Values --------------- 300 : 300m or less 900 : 301m - 900m 1500 : 901m - 1500m 3000 : Higher than 1500m
Related Commands	chassis altitude
Notes	

2.18.14 show chassis raid

	show chassis raid Displays the status of the RAID configuration.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
	4.3	Updated output
Example	ufmapl [mgmt-sa] (config) # show chassis raid RAID state: Optimal DRIVE1 state: Online,SpunUp DRIVE2 state: Online,SpunUp	
Related Commands		
Notes		

2.18.15 show chassis raid rebuild-status

	show chassis raid rebuild-status [drive1 | drive2] Displays the status of “rebuilding” process for the selected drive.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.5	
	4.3	Updated “HDD” to “drive”

Example	ufmapl [mgmt-sa] (config) # show chassis rebuild-status drive1 Rebuild progress of physical drivers.... Enclosure: Slot Percent Complete Time Elps --:00 #***********35%***************** 00:06:13 Press <ESC> key to quit....
Related Commands	
Notes	

2.19 Cryptography (X.509, IPSec)

2.19.1 crypto ipsec ike

	crypto ipsec ike {clear sa [peer {any | <ipv4v6-address>} local <ip-address>] | restart} Manage the IKE (ISAKMP) process or database state.	
Syntax Description	clear	Clears IKE (ISAKMP) peering state
	sa	Clears IKE generated ISAKMP and IPSec security associations (remote peers are affected)
	peer	Clears security associations for the specified IKE peer (remote peers are affected). • all – clears security associations for all IKE peerings with a specific local address (remote peers are affected) • IPv4 or IPv6 address – clears security associations for specific IKE peering with a specific local address (remote peers are affected)
	local	Clear security associations for the specified/all IKE peering (remote peer is affected)
	restart	Restarts the IKE (ISAKMP) daemon (clears all IKE state, peers may be affected)
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	ufmapl [mgmt-sa] (config) # crypto ipsec ike restart	
Related Commands		
Notes		

2.19.2 crypto ipsec peer local

	crypto ipsec peer <ipv4v6-address> local <ipv4v6-address> {enable | keying {ike [auth {hmac-md5 | hmac-sha1 | hmac-sha256 | null} | dh-group | disable | encrypt | exchange-mode | lifetime | local-identity | mode | peer-identity | pfs-group | preshared-key | prompt-preshared-key | transform-set] | manual [auth | disable | encrypt | local-spi | mode | remote-spi]}} Configures ipsec in the system.	
Syntax Description	enable	Enables IPSec peering
	ike	Configures IPSec peering using IKE ISAKMP to manage SA keys. • auth - configures the authentication algorithm for IPSec peering • dh-group - configures the phase1 Diffie-Hellman group proposed for secure IKE key exchange • disable - configures this IPSec peering administratively disabled • encrypt - configures the encryption algorithm for IPSec peering • exchange-mode - configures the IKE key exchange mode to propose for peering • lifetime - configures the SA lifetime to propose for this IPSec peering • local-identity - configures the ISAKMP payload identification value to send as local endpoint's identity • mode - configures the peering mode for this IPSec peering • peer-identity - configures the identification value to match against the peer's ISAKMP payload identification • pfs-group - configures the phase2 PFS (Perfect Forwarding Secrecy) group to propose for Diffie-Hellman exchange for this IPSec peering • preshared-key - configures the IKE pre-shared key for the IPSec peering • prompt-preshared-key - prompts for the pre-shared key, rather than entering it on the command line • transform-set - configures transform proposal parameters

	keying	Configures key management for this IPSec peering: • auth - configures the authentication algorithm for this IPSec peering • disable - configures this IPSec peering administratively disabled • encrypt - configures the encryption algorithm for this IPSec peering • local-spi - configures the local SPI for this manual IPSec peering • mode - configures the peering mode for this IPSec peering • remote-spi - configures the remote SPI for this manual IPSec peering
	manual	Configures IPSec peering using manual keys
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto ipsec peer 10.10.10.10 local 10.7.34.139 enable`	
Related Commands		
Notes		

2.19.3 crypto certificate ca-list

	crypto certificate ca-list [default-ca-list {name {<CA list name> | system-self-signed}}] no crypto certificate ca-list [default-ca-list {name {<cert-name> | system-self-signed}}] Adds the specified CA certificate to the default CA certificate list. The no form of the command removes the certificate from the default CA certificate list.	
Syntax Description	cert-name	Name of the certificate
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto certificate ca-list default-ca-list name test`	
Related Commands		

Notes	• Two certificates with the same subject and issuer fields cannot both be placed onto the CA list • The no form of the command does not delete the certificate from the certificate database • Unless specified otherwise, applications that use CA certificates will still consult the well-known certificate bundle before looking at the default-ca-list

2.19.4 crypto certificate default-cert

	crypto certificate default-cert [{name {<cert-name> | system-self-signed}}] no crypto certificate default-cert [{name {<cert-name> | system-self-signed} Designates the named certificate as the global default certificate role for authentication of this system to clients. The no form of the command reverts the default-cert name to "system-self-signed" (the "cert-name" value is optional and ignored).	
Syntax Description	cert-name	Name of the certificate
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto certificate default-cert name test`	
Related Commands		
Notes	• A certificate must already be defined before it can be configured in the default-cert role • If the named default-cert is deleted from the database, the default-cert automatically becomes reconfigured to the factory default, the "system-self-signed" certificate	

2.19.5 crypto certificate generation

	crypto certificate generation {default {country-code | days-valid | email-addr | key-size-bits | locality | org-unit | organization | state-or-prov} Configures default values for certificate generation.	
Syntax Description	country-code	Configures the default certificate value for country code with a two-alphanumeric-character code or - for none
	days-valid	Configures the default certificate valid days. Default: 365 days.
	email-addr	Configures the default certificate value for email address
	key-size-bits	Configures the default certificate value for private key size. (Private key length in bits - at least 1024, but 2048 is strongly recommended.)

	locality	Configures the default certificate value for locality
	org-unit	Configures the default certificate value for organizational unit
	organization	Configures the default certificate value for the organization name
	state-or-prov	Configures the default certificate value for state or province
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto certificate generation default days-valid`	
Related Commands		
Notes		

2.19.6 crypto certificate name

	crypto certificate name {<name> | system-self-signed} {comment <new comment> | generate self-signed [comment <cert-comment> | common-name <domain> | country-code <code> | days-valid <days> | email-addr <address> | key-size-bits <bits> | locality <name> | org-unit <name> | organization <name> | serial-num <number> | state-or-prov <name>]} | private-key pem <PEM string> | prompt-private-key | public-cert [comment <comment string> | pem <PEM string>] | regenerate days-valid <days> | rename <new name>} no crypto certificate name <cert-name> Configures default values for certificate generation. The no form of the command clears/deletes certain certificate settings.	
Syntax Description	cert-name	Unique name by which the certificate is identified
	comment	Specifies a certificate comment

	generate self-signed	Generates certificates. This option has the following parameters which may be entered sequentially in any order: • comment – specifies a certificate comment (free string) • common-name– specifies the common name of the issuer and subject (e.g. a domain name) • country-code – specifies the country codwo-alphanumeric-character country code, or “--” for none) • days-valid – specifies the number of days the certificate is valid • email-addr – specifies the email address • key-size-bits – specifies the size of the private key in bits (private key length in bits – at least 1024 but 2048 is strongly recommended) • locality – specifies the locality name • org-unit – specifies the organizational unit name • organization – specifies the organization name • serial-num – specifies the serial number for the certificate (a lower-case hexadecimal serial number prefixed with “0x”) • state-or-prov – specifies the state or province name
	private-key pem	Specifies certificate contents in PEM format
	prompt-private-key	Prompts for certificate private key with secure echo
	public-cert	Installs a certificate
	regenerate	Regenerates the named certificate using configured certificate generation default values for the specified validity period
	rename	Renames the certificate
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto certificate name system-self-signed generate self-signed key-size-bits 2048`	
Related Commands		
Notes		

2.19.7 crypto certificate system-self-signed

	crypto certificate system-self-signed regenerate [days-valid <days>] Configures default values for certificate generation.

Syntax Description	days-valid	Specifies the number of days the certificate is valid
Default	N/A	
Configuration Mode	config	
History	1.1.0	
Example	`ufmapl [ mgmt-sa ] (config) # crypto certificate system-self-signed regenerate days-valid 3`	
Related Commands		
Notes		

2.19.8 show crypto certificate

	show crypto certificate [detail | public-pem | default-cert [detail | public-pem] | [name <cert-name> [detail | public-pem] | ca-list [default-ca-list]] Displays information about all certificates in the certificate database.	
Syntax Description	ca-list	Specifies the number of days the certificate is valid
	default-ca-list	Displays information about the currently configured default certificates of the CA list
	default-cert	Displays information about the currently configured default certificate
	detail	Displays all attributes related to the certificate
	name	Displays information about the certificate specified
	public-pem	Displays the uninterpreted public certificate as a PEM formatted data string
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.1.0	

Example	<pre>ufmapl [mgmt-sa] (config) # show crypto certificate
	Certificate with name 'system-self-signed' (default-cert)
	    Comment: system-generated self-signed
	certificate
	    Private Key: present
	    Serial Number: 0x546c935511bcafc21ac0e8249fbe0844
	    SHA-1 Fingerprint:
	fe6df38dd26801971cb2d44f62dbe492b6063c5f
	
	    Validity:
	        Starts: 2012/12/02 13:45:05
	        Expires: 2013/12/02 13:45:05
	
	    Subject:
	        Common Name: IBM-DEV-Bay4
	        Country: IS
	        State or Province:
	        Locality:
	        Organization:
	        Organizational Unit:
	        E-mail Address:
	
	    Issuer:
	        Common Name: IBM-DEV-Bay4
	        Country: IS
	        State or Province:
	        Locality:
	        Organization:
	        Organizational Unit:
	        E-mail Address:</pre>

Related Commands	
Notes	

2.19.9 show crypto ipsec

	show crypto ipsec [brief | configured | ike | policy | sa] Displays information ipsec configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.1.0

Example	<pre>ufmapl [mgmt-sa] (config) # show crypto ipsec
	IPSec Summary
	------------- 	
	Crypto IKE is using pluto (Openswan) daemon.
	Daemon process state is stopped.
	
	   No IPSec peers configured.
	
	IPSec IKE Peering State
	---------------------- 	
	Crypto IKE is using pluto (Openswan) daemon.
	Daemon process state is stopped.
	
	   No active IPSec IKE peers.
	
	IPSec Policy State
	------------------ 	
	   No active IPSec policies.
	
	IPSec Security Association State
	-------------------------------- 	
	   No active IPSec security associations.</pre>

Related Commands	
Notes	

2.20 Docker Container

2.20.1 docker

	docker no docker Enables dockers then enters docker configuration context. The no form of the command disables dockers, removes configuration, and deletes all containers and docker images.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # docker` `ufm [ mgmt-sa ] (config docker) #`
Related Commands	
Notes	

2.20.2 commit

	commit <container-name> <image-name> <image-version> Creates a new image from a running container.	
Syntax Description	container-name	Name of the running container to commit (limited to 180 characters)
	image-name	Name of the new image to be created
	image-version	Version of the new image to be created
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config docker) # commit mycontainer test latest`	
Related Commands	docker	
Notes		

2.20.3 remove image

	remove image <image-name> <image-version> Removes an image from the Linux docker service.	
Syntax Description	image-name	Name of the new image to be deleted
	image-version	Version of the new image to be deleted
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config docker) # remove image test latest`	
Related Commands	docker	
Notes		

2.20.4 exec

	exec <container-name> <program-executable> Executes a program within a running container.	
Syntax Description	container-name	Name of the running container to commit (limited to 180 characters)
	program-executable	Linux command
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config docker) # exec mycontainer "ls -la"`	
Related Commands	docker	
Notes		

2.20.5 file fetch

	file fetch <url> Download a docker file from a remote host or a USB device.	
Syntax Description	url	FTP, TFTP, SCP and SFTP are supported (e.g. scp:// username[:password]@hostname-or-ip/path/filename)
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	

Example	ufm [mgmt-sa] (config docker) # file fetch scp://root:*******@ufm/tmp/test.txt telemetry.1.config
Related Commands	docker
Notes	

2.20.6 image upload

	image upload <filename> <upload_url> Uploads an image file to a remote host.	
Syntax Description	filename	Name of file
	upload_url	FTP, TFTP, SCP and SFTP are supported (e.g. scp://username[:password]@hostname-or-ip/path/filename)
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	ufm [mgmt-sa] (config docker) # image upload centos.img.gz scp://username:password@10.10.10.10/var/www/html/<image_name>	
Related Commands	docker	
Notes		

2.20.7 file image upload

	file image upload <filename> <upload_url> Uploads a file to a remote host.	
Syntax Description	filename	Name of file
	upload_url	FTP, TFTP, SCP and SFTP are supported (e.g. scp://username[:password]@hostname-or-ip/path/filename)
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	ufm [mgmt-sa] (config docker) # file image upload centos.img.gz scp://username:password@10.10.10.10/var/www/html/<image_name>	
Related Commands	docker	
Notes		

2.20.8 label

	label <label-name> no label <label-name> Creates a label which can be used as a shared storage between containers. The no form of the command removes the label.	
Syntax Description	label-name	Name of label
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config docker) # label new_label`	
Related Commands	docker	
Notes		

2.20.9 label-fetch

	label-fetch <url> Downloads label output files from a remote host or USB device.	
Syntax Description	url	FTP, TFTP, SCP and SFTP are supported (e.g. scp://username[:password]@hostname-or-ip/path/filename)
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config docker) # label-fetch scp://root:******@r-ufm208/tmp/telemetry.1.config.zip telemetry.1.config` `100.0%  [############################################################]`	
Related Commands	docker	
Notes		

2.20.10 label-upload

	label-upload <url> Uploads label output files to a remote host or USB device.	
Syntax Description	url	FTP, TFTP, SCP and SFTP are supported (e.g. scp://username[:password]@hostname-or-ip/path/filename)
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	

Example	ufm [mgmt-sa] (config docker) # label-upload telemetry.1.config scp://root:********@r-ufm208/tmp
Related Commands	docker
Notes	

2.20.11 pull

	pull <image-name>[:<version>] Pulls a docker image from a docker repository.	
Syntax Description	image-name	Image name Format: Name:Version If only “Name” is provided, “version” defaults to latest
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	ufm [mgmt-sa] (config docker) # pull test Using default tag: latest latest: Pulling from library/test 45a2e645736c: Pull complete Digest: sha256:c577af3197aacedf79c5a204cd7f493c8e07ffbce7f88f7600bf19c688c38799 Status: Downloaded newer image for test:latest	
Related Commands	docker	
Notes		

2.20.12 save

	save <image-name> <image-version> <filename> Saves an image to a TAR archive.	
Syntax Description	image-name	Name of image
	image-version	Version of image
	filename	Name of file in which to save image
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	
Example	ufm [mgmt-sa] (config docker) # save busybox latest my_image Saving and compressing image: busybox version: latest this could take a while...	
Related Commands	docker docker load	

Notes	After the file is created, the filename gets appended a *.gz suffix.

2.20.13 shutdown

	shutdown no shutdown Stops all docker containers, and deletes all non-auto containers. The no form of the command enables the docker Linux service and runs all configured auto-start containers.
Syntax Description	N/A
Default	N/A
Configuration Mode	config docker
History	4.3.0
Example	`ufm [ mgmt-sa ] (config docker) # no shutdown`
Related Commands	docker
Notes	After the file is created, the filename gets appended a *.gz suffix.

2.20.14 start

	start <image-name> <image-version> <container-name> <starting-point> [privileged {network | events-forwarder | ufm-licenses}] [cpus <max-cpu-resources>] [memory <max-memory>] [usb-mount] [label <label-name>] [cmd <command>] no start <container-name> Starts a new container from an image. The no form of the command stops a running docker container (and removes the container if it is not persistent).	
Syntax Description	image-name	Name of the new image to start
	image-version	Version of the image to start
	container-name	Name of the running container to commit (limited to 180 characters)
	starting-point	• init - persistent, start the container after boot, when system initialization is done • now - start the container now, this is not persistent • now-and-init - starts the container now and after boot, when system configuration is done

	privileged	• network – adds network privileges to the container (--privilege flag) • events-forwarder – adds required mounts to use events forwarder • ufm-licenses – adds required mounts to use license file
	cpus	Sets how much of the available CPU resources a container can use (e.g. "cpus 1.5" guarantees at most one and a half of the available CPUs for the container)
	memory	Sets the maximum amount of memory the container can use in MB. The minimum amount of memory to configure is 4MB.
	usb-mount	Enables USB mount to the docker container
	label	Creates one or two labels to use as a shared storage between containers
	cmd	Executes specified command inside the docker
Default	N/A	
Configuration Mode	config docker	
History	4.3.0	

Example	`ufm [ mgmt-sa ] (config docker) # start centos latest test now`
	`Starting docker container. Please wait (this can take a minute)...`
	`switch (config) # docker start imagename latestver containername init cpus 0.2 memory 25`	

Related Commands	docker	
Notes	Only one of the privileged options (i.e. events-forwarder, ufm-licenses) can be used	

2.20.15 show docker containers

	show docker containers <container-name> Displays set parameters on containers already running, and containers planned to run in the future.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0

Example	```
	ufm [mgmt-sa] (config) # show docker containers
	
	cont_example:
	  image : busybox
	  version : latest
	  status : running
	  start point : data-path-ready
	  cpu limit : 0.2
	  memory limit: 10m
	  labels : -
	  privileges : network, sdk
	  usb mount : enabled
	another_container:
	  image : busybox
	  version : latest
	  status : -
	  start point : init
	  cpu limit : 0.2
	  memory limit: 10m
	  labels : my_label
	  privileges : network, sdk
	  usb mount : disabled
	
	ufm [mgmt-sa] (config) # show docker containers cont_example
	
	cont_example:
	  image : busybox
	  version : latest
	  status : running
	  start point : data-path-ready
	  cpu limit : 0.2
	  memory limit: 10m
	  labels : -
	  privileges : network, sdk
	  usb mount : enabled
	``

Related Commands	
Notes	• If a container is already started, the status field displays its current status • If a container is configured to run on the next boot, the start point field displays when it will start • If there is a mismatch between the configuration of a running container and its next-boot configuration, two entries for the container are shown with both of the configurations

2.20.16 show docker images

	show docker images Display docker images.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	``` ufm [mgmt-sa] (config) # show docker images -- Image Version Created Size -- ubuntu latest Less than a secon 117MB d ago ubuntu-sdk v1 41 seconds ago 215MB ```
Related Commands	
Notes	

2.20.17 show docker labels

	show docker labels Displays docker labels.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	ufm [mgmt-sa] (config) # show docker labels Storage label : label_name1 configured containers list : cont_name2 active containers list : cont_name1 Storage label : label_name2
Related Commands	
Notes	

2.20.18 show docker ps

	show docker ps Display docker containers.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	ufm [mgmt-sa] (config) # show docker ps --- Container Image:Version Created Status --- my_ubuntu_app ubuntu:latest 56 seconds ago Up 50 seconds
Related Commands	
Notes	

2.20.19 docker prune image

	docker prune image Removes all dangling docker prune images.
Syntax Description	N/A
Default	N/A
Configuration Mode	config docker
History	4.16.0

Example	`ufm [ mgmt-sa ] (config) # docker prune image`
Related Commands	show docker images docker remove image
Notes	

3 UFM Commands

3.1 General

3.1.1 ufm start

	ufm start no ufm start Starts UFM. The no form of the command stops UFM.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) # ufm start`
Related Commands	show ufm status
Notes	

3.1.2 show ufm status

	show ufm status Displays the status of UFM. The outcome of the command varies according to the working mode.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Updated output
	1.7	Updated output
	4.4.0	Updated output
	4.5.0	Updated output
	4.7.0	Updated output
Example		
Related Commands	ufm start	
Notes	• The output example above is taken from a high-availability setup • If working in HA mode, you will receive information on the HA status and virtual IP • The status for events forwarder is displayed only if the feature is enabled The process status can be one of the below: • Running – the process is running • Stopped – the process is not running • N/A – the process status is not applicable (e.g. NVIDIA SHARP is disabled, status on the standby node, etc…)	

```
r-ufm237 [ mgmt-ha-active ] (config) # show ufm status
UFM mode:     Management
Local -     r-ufm237 (10.209.36.86)
========================================
UFM                     Running
SM                      Running
Telemetry               Running
Health                  Running
UnhealthyPorts          Running
DailyReport             Running
SHArP                   N/A
DRBD                    Running Primary
DRBD State              ConnectionState = Connected - DiskState
= UpToDate
Heartbeat               Running (Master)
HA Interface            eth0 (connected to 10.209.36.89)
Mgmt. Interface         eth0 (up)
========================================
UFM mode:     Management
Peer -      r-ufm238 (10.209.36.89)
========================================
UFM                     Stopped
SM                      Stopped
Telemetry               Stopped
Health                  Stopped
UnhealthyPorts          Stopped
DailyReport             N/A
SHArP                   N/A
DRBD                    Running Secondary
DRBD State              ConnectionState = Connected - DiskState
= UpToDate
Heartbeat               Running (Slave)
HA Interface            eth0 (connected to 10.209.36.86)
Mgmt. Interface         eth0 (up)
========================================
Virtual IP -      10.209.36.199
========================================
High Availability Status: OK
========================================
r-ufm237 [ mgmt-ha-active ] (config) #
```

3.1.3 ufm counters

	ufm counters [ext-ports-only | interval <sec> <never> | max-files <number> | upload <filename> <upload URL>] Configures the settings of UFM counters.	
Syntax Description	ext-ports-only	Configures settings for UFM ext ports only
	interval	Configures settings for UFM counters interval. The settings can be: • sec – number of seconds 30 - 3600 • never – disable settings for UFM counters interval
	max-files	Configures the UFM counters maximum number of files (0-72)
	upload	Uploads the UFM counters file to a remote host or a USB device. • filename: UFM counters filename • Upload URL: The URL path from where the counters file can be uploaded. http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`ufm [ mgmt-sa ] (config) # ufm counters max-files 25`	
Related Commands	show ufm counters	
Notes		

3.1.4 show ufm counters

	show ufm counters Displays UFM counters settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6

Example	`ufmapl [ mgmt-sa ] (config) # show ufm counters`
	`counters interval = never`
	`max files = 5`
	`ext ports only = disable`

Related Commands	ufm counters
Notes	

3.2 License

3.2.1 ufm license install

	ufm license install <url> Installs a UFM license file from a remote host or a USB device.	
Syntax Description	url	http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm license install ftp://admin@192.168.11.1/home/admin/licenses/volt-ufm-advanced.lic`	
Related Commands	ufm license delete show ufm license	
Notes	• The license format must be as follow: volt_*.lic • Duplicate license are not permitted. You must delete the previous license before installing the new one.	

3.2.2 ufm license delete

	ufm license delete <filename> Deletes a UFM license file from the hard drive.	
Syntax Description	filename	UFM license filename
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm license delete volt-ufm-advanced.lic`	
Related Commands	ufm license install show ufm license	
Notes		

3.2.3 show ufm license

	show ufm license Displays UFM license information.
Syntax Description	N/A

Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-sa] (config) # show ufm license |--| |Customer ID |SN | swName | Type | MAC Address | Exp. Date |Limit| Functionality | Status | |--| |495760397 |123456778 |UFM |Evaluation |NA |2090-11-21 |1024 |Advanced |Valid | |--|
Related Commands	ufm license install ufm license delete
Notes	

3.3 UFM Configuration Management

3.3.1 ufm configuration delete

	ufm configuration delete <zip-file> Deletes a configuration zip file from the hard drive.	
Syntax Description	zip-file	Zip filename to delete
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # ufm configuration delete ufm-config-20121128-180857.zip	
Related Commands	ufm configuration upload ufm configuration import ufm configuration export ufm configuration fetch	
Notes		

3.3.2 ufm configuration export

	ufm configuration export [<zip-file>] Exports UFM configuration to a file (a zip archive).	
Syntax Description	zip-file	UFM configuration of exporting the zip file
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	`ufmapl [ mgmt-sa ] (config) # ufm configuration export`
Related Commands	ufm configuration upload ufm configuration import ufm configuration delete ufm configuration fetch
Notes	If no zip file is provided, a zip archive is created with the name: ufm-config-<date>-<time>.zip (e.g. ufm-config-20130327-153314.zip)

3.3.3 ufm configuration fetch

	ufm configuration fetch <url> Downloads UFM configuration files from a remote host or a USB device.	
Syntax Description	url	The URL path from where the configuration file can be downloaded. http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm configuration fetch usb:/ufmapp/ufmconf1.zip`	
Related Commands	ufm configuration upload ufm configuration import ufm configuration export ufm configuration delete	
Notes		

3.3.4 ufm configuration import

	ufm configuration import <zip-file> [upgrade] Imports UFM configuration from a file (a zip archive).	
Syntax Description	zip-file	Zip filename from which to import
	upgrade	Imports UFM-SDN Appliance configuration from a previous version and upgrades it to the latest one
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Added the “upgrade” parameter

Example	`ufmapl [ mgmt-sa ] (config) # ufm configuration import ufm-config-20121128-180857.zip`
Related Commands	ufm configuration upload ufm configuration export ufm configuration delete ufm configuration fetch
Notes	

3.3.5 ufm configuration upload

	ufm configuration upload <filename> <url> Uploads UFM configuration to a remote host or a USB device (a zip archive).	
Syntax Description	filename	The UFM configuration of uploading the file name
	url	The URL path from where the configuration file can be uploaded. Supported formats: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm configuration upload ufm-config-20121128-180857.zip scp://mlnx:123456@172.30.3.201/tmp`	
Related Commands	ufm configuration export ufm configuration import ufm configuration delete	
Notes		

3.4 Database Management

3.4.1 ufm database import

	ufm database import [<zip-file>] Imports UFM database files.	
Syntax Description	zip-file	Imported UFM database zip file
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	ufmapl [mgmt-sa] (config) # ufm database import ufm-db-20130328-125141.zip
Related Commands	ufm database delete ufm database upload
Notes	• If the "zip-file" parameter is not provided, a zip archive is created with the name: ufm-db-<date>-<time>.zip (e.g. ufm-db-20130328-125141.zip) • UFM must be stopped before running this command

3.4.2 ufm database export

	ufm database export [<zip-file>] Exports UFM database (to a zip archive).	
Syntax Description	zip-file	Zipfile to export
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # ufm database export	
Related Commands	ufm database delete ufm database upload	
Notes	If the "zip-file" parameter is not provided, a zip archive is created with the name: ufm-db-<date>-<time>.zip (e.g. ufm-db-20130328-125141.zip)	

3.4.3 ufm database delete

	ufm database delete <zip-file> Deletes a UFM database archive from the hard drive.	
Syntax Description	zip-file	Zipfile to delete
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # ufm database delete ufm-database-180857.zip	
Related Commands	ufm database export ufm database upload	
Notes		

3.4.4 ufm database upload

	ufm database upload <zip-file> <url> Uploads UFM database to a remote host or a USB device (a zip archive).	
Syntax Description	zip-file	Zipfile to delete
	url	The UFM database of uploading of the URL path. Formats: ftp, tftp, scp, sftp and usb. Example: scp:// username[:password]@hostname/path/ filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm database upload ufm-database-180857.zip scp://mlnx:1234Kb@172.30.3.201/tmp`	
Related Commands	ufm database export ufm database delete	
Notes		

3.5 Data Management

3.5.1 ufm data backup

	ufm data backup [<backup-file>][with-telemetry] Backs up UFM data files.	
Syntax Description	backup file	Backup file name to be generated
	with-telemetry	Backup UFM historical telemetry
Default	N/A	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [ mgmt-sa ] (config) # ufm data backup ufm-backup.zip`	
Related Commands		
Notes		

3.5.2 ufm data delete

	ufm data delete <zip file> Deletes a UFM data archive from the hard drive.

Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufmapl [ mgmt-sa ] (config) # ufm data delete ufm-backup-20210716-122851.zip`
Related Commands	
Notes	

3.5.3 ufm data fetch

	ufm data fetch <URL> Deletes a UFM data archive from the hard drive.	
Syntax Description	URL	Supported formats: http, https, ftp, tftp, scp, sftp and usb. (e.g., scp://username[:password]@hostname/path/filename, usb:/path/filename)
Default	N/A	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [ mgmt-sa ] (config) # ufm data fetch scp://mlnx:1234Kb@172.30.3.201/tmp`	
Related Commands		
Notes		

3.5.4 ufm data reset

	ufm data reset Resets the UFM data (both the configuration and the database data).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ufm data reset`
Related Commands	
Notes	

3.5.5 ufm data restore

	ufm data restore <zip file> Restores UFM data files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufmapl [ mgmt-sa ] (config) # ufm data restore ufm-backup-20210716-122851.zip`
Related Commands	
Notes	

3.5.6 ufm data upload

	ufm data upload <zip file> <URL> Uploads UFM data files to a remote host or a USB device.	
Syntax Description	URL	Supported formats: http, https, ftp, tftp, scp, sftp and usb. (e.g., scp://username[:password]@hostname/path/filename, usb:/path/filename)
Default	N/A	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [ mgmt-sa ] (config) # ufm data upload ufm-backup-20210716-130311.zip scp://mlnx:1234Kb@172.30.3.201/tmp`	
Related Commands		
Notes		

3.6 High Availability

3.6.1 ufm ha configure

	ufm ha [ipv6] configure <peer-ip> <virtual-ip> [interface] no ufm ha Applies HA configuration. The no form of the command reverts the appliance to a standalone configuration.	
Syntax Description	peer-ip	Management IP address of peer machine
	virtual-ip	Virtual IP used for accessing the active (master) machine

	interface	Sets the working interface. The interface can be eth0...eth3, if no interface is assigned, eth0 is assumed to be the chosen interface.
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Added the "interface" parameter
Example	ufmapl [mgmt-sa] (config) # ufm ha configure 172.30.30.24 172.30.30.100 Please enter admin password for peer machine: ***** Configuring high availability, please wait... High availability is now configured. Please wait a few minutes for UFM machines to synchronize the configuration partition (DRBD). Please make sure all local UFM users on both machines have the same capabilities and passwords.	
Related Commands		
Notes		

3.6.2 ufm ha configure dual-subnet

	ufm ha [ipv6] configure dual-subnet <local-ip> <peer-ip> <interface> no ufm ha dual-subnet Applies HA configuration for dual-subnet. The no form of the command reverts the appliance to a standalone configuration.	
Syntax Description	local-ip	Management IP address of the local machine
	peer-ip	Management IP address of peer machine
	interface	Sets the working interface. The interface can be eth0...eth3, if no interface is assigned, eth0 is assumed to be the chosen interface.
Default	N/A	
Configuration Mode	config	
History	4.1.5	
Example	ufmapl [mgmt-sa] (config) # ufm ha ipv6 configure dual-subnet fcfc:fcfc:209:36:21e:67ff:fe49:ce2a fcfc:fcfc:209:32:21e:67ff:fe4f:483a eth1	
Related Commands		
Notes		

3.6.3 ufm ha

	ufm ha [failover | takeover] Performs High Availability failover/takeover operations.	
Syntax Description	failover	Failover can be performed only on master (active) machine

	takeover	Takeover can be performed only on slave (standby) machine
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ufm ha takeover`	
Related Commands		
Notes		

3.7 Telemetry

3.7.1 telemetry target enable

	telemetry target <target-name> enable no telemetry target <target-name> enable Configures the target collector for the telemetry data. The no form of the command removes target collector configuration.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.5.0
Example	`ufmapl [ mgmt-sa ] (config) # telemetry target example-target enable`
Related Commands	show telemetry show telemetry target
Notes	

3.7.2 telemetry target import-filter-file

	telemetry target <target-name> import-filter-file {counters | fields} <download-url> no telemetry target <target-name> import-filter-file Imports filter file for the target collector. The no form of the command disables filter file.	
Syntax Description	counters	Specifies counters file
	fields	Specifies fields file
	download-url	Supported protocols: http, https, ftp, tftp, scp, sftp, and usb. For example: scp://username[:password]@hostname/path/filename, usb:/path/filename
Default	N/A	

Configuration Mode	config
History	4.5.0
Example	`ufmapl [ mgmt-sa ] (config) # telemetry target ufm-enterprise import-filter-file counters scp://user:password@host/tmp/aaa`
Related Commands	telemetry target enable show telemetry show telemetry target
Notes	If configuration exists for the specified target, then rerunning the command will overwrite the existing configuration.

3.7.3 telemetry target ip port

	telemetry target <target-name> ip <ipv4-address> port <port-id> [message-type {custom | standard}] Configures IP address and port number to use for communication with telemetry target.	
Syntax Description	ip	IPv4 address of the target
	port	Port number of the target
	message-type	Supported types: • extended • custom
Default	N/A	
Configuration Mode	config	
History	4.5.0	
Example	`ufmapl [ mgmt-sa ] (config) # telemetry target ufm-enterprise ip 10.10.10.10 port 443 message-type standard`	
Related Commands	telemetry target enable show telemetry show telemetry target	
Notes	If configuration exists for the specified target, then rerunning the command will overwrite the existing configuration.	

3.7.4 telemetry target message type

	telemetry target <target-name> message type {custom | standard} Configures telemetry target message type.
Syntax Description	N/A
Default	standard
Configuration Mode	config
History	4.5.0

Example	`ufmapl [ mgmt-sa ] (config) # telemetry target ufm-enterprise message-type extended`
Related Commands	show telemetry show telemetry target
Notes	

3.7.5 telemetry streaming enable

	telemetry streaming enable no telemetry streaming enable Enables telemetry streaming. The no form of the command disables telemetry streaming
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.5.0
Example	`ufmapl [ mgmt-sa ] (config) # telemetry streaming enable`
Related Commands	show telemetry
Notes	

3.7.6 show telemetry

	show telemetry Displays telemetry target settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.5.0

Example	`ufmapl [ mgmt-sa ] (config) # show telemetry`
	`Enabled: Yes`
	
	`Telemetry Targets:`
	`Name: ufm-enterprise`
	`Enabled: Yes`
	`Host: 127.0.0.1`
	`Port: 25225`
	`Message Type: Standard`
	`Counters filter file: Yes`
	`Fields filter file: Yes`

Related Commands	telemetry target enable
Notes	

3.7.7 show telemetry target

	show telemetry target Displays telemetry settings for specific target.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.5.0

Example	`ufmapl [ mgmt-sa ] (config) # show telemetry target ufm-enterprise`
	`Enabled: Yes`
	`Name: ufm-enterprise`
	`Enabled: Yes`
	`Host: 127.0.0.1`
	`Port: 25225`
	`Message Type: Standard`
	`Counters filter file: Yes`
	`Fields filter file: Yes`

Related Commands	telemetry target enable
Notes	

3.7.8 ufm low-frequency-telemetry enable

	ufm low-frequency-telemetry enable no ufm low-frequency-telemetry enable Enables UFM low frequency telemetry. The no form of the command disables UFM low frequency telemetry.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.10.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm low-frequency-telemetry enable`
Related Commands	show ufm low-frequency-telemetry
Notes	

3.7.9 show ufm low-frequency-telemetry

	show ufm low-frequency-telemetry Displays UFM low frequency telemetry settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode

History	4.10.0
Example	`ufmapl [ mgmt-ha-active ] (config) # show ufm low-frequency-telemetry` `Low Frequency Telemetry: No`
Related Commands	ufm low-frequency-telemetry enable
Notes	

3.8 UFM Multi-site Portal

3.8.1 ufm multi-site enable

	ufm multi-site enable no ufm multi-site enable Enables UFM multi-site. The no form of the command disables UFM multi-site.
Syntax Description	N/A
Default	Disable
Configuration Mode	config
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site enable`
Related Commands	show ufm multi-site
Notes	

3.8.2 ufm multi-site interval

	ufm multi-site interval <time> no ufm multi-site interval Configures multi-site refresh interval. The no form of the command resets this parameter to its default value.	
Syntax Description	time	60-300 seconds
Default	60	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site interval 100`	
Related Commands	show ufm multi-site	
Notes		

3.8.3 ufm multi-site port

	ufm multi-site port <port-id> no ufm multi-site port Configures the port for the multi-site user. The no form of the command resets this parameter to its default value.	
Syntax Description	port-id	ID of port to use
Default	443	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site port 100`	
Related Commands	show ufm multi-site	
Notes		

3.8.4 ufm multi-site server

	ufm multi-site server {ip <ipv4-address> | ipv6 <ipv6-address> | hostname <name>} no ufm multi-site server {ip | ipv6 | hostname} Configures multi-site server characteristics. The no form of the command clears configurations.	
Syntax Description	ip	Configures IPv4 address for server
	ipv6	Configures IPv6 address for server
	hostname	Configures hostname for server
Default	N/A	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site server ipv6 ::1`	
Related Commands	show ufm multi-site	
Notes		

3.8.5 ufm multi-site site-name

	ufm multi-site site-name <site-name> no ufm multi-site site-name Sets name for multi-site portal. The no form of the command clears name for the multi-site portal.	
Syntax Description	site-name	Name of site

Default	N/A
Configuration Mode	config
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site site-name test_site`
Related Commands	show ufm multi-site
Notes	

3.8.6 ufm multi-site username password

	ufm multi-site username <name> password no ufm multi-site username [password] Configures value for username. The no form of the command deletes multi-site user.	
Syntax Description	name	Username
	password	Configures the login password for the multi-site portal user
Default	Default password: 123456	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ufm multi-site username root password` `Please enter multi site password:******`	
Related Commands	show ufm multi-site	
Notes		

3.8.7 show ufm multi-site

	show ufm multi-site Displays UFM multi-site configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.5.0

Example	`ufm [ mgmt-sa ] (config) # show ufm multi-site`
	`  Enabled: Yes`
	`  Site name:`
	`  Server:`
	`  Port: 443`
	`  Protocol: https`
	`  Interval: 60`

Related Commands	

Notes	

3.9 UFM External Subnet Manager

3.9.1 ufm safe-stop

	ufm safe-stop Stops UFM after remote UFM-SM take mastership.
Syntax Description	N/A
Default	N/A
Configuration Mode	mgmt-allow-sm-sa mgmt-allow-sm-ha-active
History	1.5
Example	`ufmapl [ mgmt-allow-sm-ha-active ](config) # ufm safe-stop`
Related Commands	
Notes	

3.9.2 ufm external-sm trust

	ufm external-sm trust {ip <IPv4> | ipv6 <IPv6>} no ufm external-sm trust {ip <IPv4> | ipv6 <IPv6>} Creates a trust relationship when in HA mode between the standby and the external SM machines. The no form of the command breaks a trust relationship between the standby and the external SM machines.	
Syntax Description	ip	IPv4 address used to access the external SM machine
	ipv6	IPv6 address used to access the external SM machine
Default	N/A	
Configuration Mode	mgmt-allow-sm-sa mgmt-allow-sm-ha-active	
History	1.5	
	4.2.0	Added "ip" and "ipv6" parameters
Example	`ufmapl [ ha-standby ] (config) # ufm external-sm trust ip 172.30.30.20`	
Related Commands	show ufm external-sm show ufm external-sm status	
Notes	This command is available on the standby machine only.	

3.9.3 ufm external-sm register

	ufm external-sm register {ip <ipv4> | ipv6 <ipv6>} no ufm external-sm register {ip <ipv4> | ipv6 <ipv6>} Registers the external SM machine. The no form of the command unregisters the external SM machine.	
Syntax Description	ip	IPv4 address used to access the external SM machine
	ipv6	IPv6 address used to access the external SM machine
Default	N/A	
Configuration Mode	mgmt-allow-sm-sa mgmt-allow-sm-ha-active	
History	1.5	
	4.2.0	Added "ip" and "ipv6" parameters

Example	`ufmapl [ mgmt-sa ] (config) # ufm external-sm register ip 10.30.30.101`
	`Please enter admin password for external SM machine: *****`
	`Configuring external SM, please wait...`
	`Note: when working in HA configuration, you must create trust between the standby machine and the external-SM machine by running the "ufm external-sm trust" command on the standby machine.`	

Related Commands	show ufm external-sm show ufm external-sm status	
Notes		

3.9.4 show ufm external-sm

	show ufm external-sm Displays UFM external SM machines.
Syntax Description	N/A
Default	N/A
Configuration Mode	mgmt-allow-sm-sa mgmt-allow-sm-ha-active
History	1.5
Example	`ufmapl [mgmt-allow-sm-sa] (config) # show ufm external-sm` `10.30.30.101`
Related Commands	show ufm external-sm status ufm external-sm trust ufm external-sm register
Notes	

3.9.5 show ufm external-sm status

	show ufm external-sm status Displays UFM external SM machines status.
Syntax Description	N/A
Default	N/A
Configuration Mode	mgmt-allow-sm-sa mgmt-allow-sm-ha-active
History	1.5

Example	`ufmapl [mgmt-allow-sm-sa] (config) # show ufm external-sm status`
	`10.30.30.19 0 ok  Synchronized on: Sun Mar 10 11:26:22 GMT-2 2013`
	`10.30.30.20 0 ok  Synchronized on: Sun Mar 10 11:26:23 GMT-2 2013`

Related Commands	show ufm external-sm ufm external-sm trust ufm external-sm register
Notes	

3.10 UFM Process Commands

3.10.1 ufm process health start

	ufm process health start ufm process health restart no ufm process health start Starts/restarts the UFM health process. The no form of the command stops the UFM health process.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ufm process health start`
Related Commands	show ufm status
Notes	

3.10.2 ufm process model start

	ufm process model start ufm process model restart no ufm process model start Starts/restarts the UFM ModelMain process. The no form of the command stops the UFM ModelMain process.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-sa ] (config) # ufm process model start`
Related Commands	show ufm status
Notes	When stopping the UFM ModelMain process, the UFM health is also stopped in order not to start the UFM ModelMain process.

3.10.3 ufm process telemetry start

	ufm process telemetry start ufm process telemetry restart no ufm process telemetry start Starts/restarts UFM telemetry process. The no form of the command stops UFM telemetry process.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.10.0
Example	`ufmapl [ mgmt-sa ] (config) # ufm process telemetry start`
Related Commands	show ufm status
Notes	When stopping the UFM telemetry process, the UFM health is also stopped in order not to start the UFM telemetry process.

3.10.4 ufm process sharp start

	ufm process sharp start ufm process sharp restart no ufm process sharp start Starts/restarts the NVIDIA SHARP Aggregation Manager process. The no form of the command stops the NVIDIA SHARP Aggregation Manager process.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.10.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ufm process sharp start`
Related Commands	show ufm status
Notes	When stopping the SHARP AM process, the UFM health is also stopped in order not to start the SHARP AM process.

3.11 UFM Firmware Management

3.11.1 ufm firmware fetch

	ufm firmware fetch <URL> Downloads firmware archive ZIP file from a remote host or a USB device	
Syntax Description	URL	HTTP, HTTPS, FTP, TFTP, SCP, SFTP and USB are supported
	Example	scp://username[:password]@hostname/path/
	File name	usb:/path/filename
Default	N/A	
Configuration Mode	config	
History		
Example	`Ufmapl [ mgmt-ha-active ] (config) # ufm firmware fetch scp://root@10.0.1.11/tmp/switch-fw.zip`	
Related Commands	ufm firmware delete ufm firmware import	
Notes	Refer to In-Band Firmware Upgrade	

3.11.2 ufm firmware import

	ufm firmware import <zip-file> Imports switch FW from a firmware archive ZIP file.	
Syntax Description	zip-file	ZIP file from which to import the switch firmware
Default	N/A	
Configuration Mode	config	
History		
Example	`Ufmapl [ mgmt-ha-active ] (config) # ufm firmware import switch-fw.zip`	
Related Commands	ufm firmware fetch ufm firmware delete	
Notes		

3.11.3 ufm firmware delete

	ufm firmware delete <zip-file> Deletes a firmware archive ZIP file from the hard drive	
Syntax Description	zip-file	ZIP file to delete
Default	N/A	
Configuration Mode	config	
History		
Example	`Ufmapl [ mgmt-ha-active ] (config) # ufm firmware delete switch-fw.zip`	
Related Commands	ufm firmware fetch ufm firmware import	
Notes		

3.12 UFM Running Modes

3.12.1 ufm mode

	ufm mode [mgmt | mgmt-allow-sm | mon | remote-mon | sm-only] Changes the UFM working mode.	
Syntax Description	mgmt	Changes UFM mode to management
	mgmt-allow-sm	Changes UFM mode to management allow-other-sm
	mon	Changes UFM mode to monitoring

	remote-mon	Changes UFM mode to remote monitoring only
	sm-only	Changes UFM mode to sm-only
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.7	Added remote-mon mode
Example	`ufmapl [mgmt-sa] (config) # ufm mode mgmt-allow-sm`	
Related Commands		
Notes		

3.13 UFM Logs

3.13.1 ufm logging files delete oldest

	ufm logging files delete oldest {console | event | opensm | sharp | ufm | ufmhealth} [<number>] Deletes log files.	
Syntax Description	console	Delete the oldest console log files
	event	Delete the oldest event log files
	opensm	Delete the oldest OpenSM log files
	sharp	Delete the oldest NVIDIA® Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™ log files
	ufm	Delete the oldest UFM log files
	ufmhealth	Delete the oldest UFM health log files
	number	Specifies the number of log files to delete
Default	If no number is specified, the command deletes the oldest log file only	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [mgmt-sa] (config) # ufm logging files delete console 3`	
Related Commands	show ufm logging	
Notes		

3.13.2 ufm logging files rotation criteria

	ufm logging files rotation criteria {frequency daily | size <size-in-megabytes>} Sets how the system decides when to rotate UFM log files.	
Syntax Description	frequency daily	Rotates log files once per day at midnight
	size	Rotates log files when they pass a size threshold
Default	100 MB	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [mgmt-sa] (config) # ufm logging files rotation criteria size 100`	
Related Commands	show ufm logging	
Notes		

3.13.3 ufm logging files rotation max-num

	ufm logging files rotation max-num <number> Specifies the maximum number of old log files to maintain.	
Syntax Description	number	Range: 1-999999
Default	10	
Configuration Mode	config	
History	4.6.0	
Example	`ufmapl [mgmt-sa] (config) # ufm logging files rotation criteria size 13`	
Related Commands	show ufm logging	
Notes		

3.13.4 ufm logging level

	ufm logging level <log-level> Sets the severity level of certain log messages.	
Syntax Description	log-level	• CRITICAL - critical conditions • DEBUG - debug-level messages • ERROR - error conditions • INFO - informational messages • WARNING - warning conditions
Default	WARNING	
Configuration Mode	config	

History	1.6
Example	`ufmapl [mgmt-sa] (config) # ufm logging level WARNING`
Related Commands	
Notes	

3.13.5 ufm logging syslog

	ufm logging syslog <host:port> no ufm logging syslog Sends UFM logs to a remote syslog server. The no form of the command sends UFM logs to the local syslog server.	
Syntax Description	port	Remote syslog hostname and port
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [mgmt-sa] (config) # ufm logging syslog 172.30.36.120:514` `This change will take effect after UFM restart.`	
Related Commands		
Notes	This change takes effect after UFM restart.	

3.13.6 ufm logging syslog level

	ufm logging syslog level <log-level> Sets the severity level of certain log messages.	
Syntax Description	log-level	• CRITICAL - critical conditions • DEBUG - debug-level messages • ERROR - error conditions • INFO - informational messages • WARNING - warning conditions
Default	WARNING	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [mgmt-sa] (config) # ufm logging syslog level WARNING` `This change will take effect after UFM restart.`	
Related Commands		
Notes	This change takes effect after UFM restart.	

3.13.7 ufm logging syslog enable

	ufm logging syslog enable no ufm logging syslog enable Enable sending UFM logs to syslog. The no form of the command disables sending UFM logs to syslog.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.6
Example	`ufmapl [mgmt-sa] (config) # ufm logging syslog enable` `This change will take effect after UFM restart.`
Related Commands	
Notes	This change takes effect after UFM restart.

3.13.8 ufm logging syslog ufm-events enable

	ufm logging syslog ufm-events enable no ufm logging syslog ufm-events enable Send UFM event log messages to a syslog server. The no form disables the ability to log UFM event messages to syslog locally and remotely.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [mgmt-sa] (config) # ufm logging syslog ufm-events enable` `This change will take effect after UFM restart.`
Related Commands	
Notes	This change takes effect after UFM restart.

3.13.9 show ufm console log

	show ufm console log [matching <regex> | not matching <regex>] Displays current console event log file in a scrollable pager.	
Syntax Description	matching	Displays new console log messages that match a given regular expression
	not matching	Displays new console log messages that do not match a given regular expression
Default	N/A	

Configuration Mode	Any configuration mode
History	4.6.0
Example	ufmapl [mgmt-sa] (config) # show ufm console log 2021-07-20 13:34:49.090 ufm INIT Prometheus Client: Request time = 0.005601406097412109, Total Processing time = 0.011138916015625 2021-07-20 13:34:49.092 ufm INIT handled device stats. (10) 3887.93 devices/sec. (18) 6998.28 ports/sec, queue: 9 2021-07-20 13:35:19.115 ufm INIT Telemetry packet: size: 0.043 MB, transfer rate: 7.684 MB/sec 2021-07-20 13:35:19.120 ufm INIT Prometheus Client: Request time = 0.0056459903717041016, Total Processing time = 0.010822296142578125 ...
Related Commands	
Notes	

3.13.10 show ufm console log continuous

	show ufm console log continuous [matching <regex> | not matching <regex>] Displays new event log messages as they arrive.	
Syntax Description	matching	Displays new console log messages that match a given regular expression
	not matching	Displays new console log messages that do not match a given regular expression
Default	N/A	
Configuration Mode	Any configuration mode	
History	4.6.0	
Example	ufmapl [mgmt-sa] (config) # show ufm console log continuous matching CRITICAL 2021-07-20 09:40:33.825 eventlog CRITICAL 2021-07-20 09:40:33.825 [10] [394] CRITICAL [Module_Status] Switch [default(6) / Switch: switch-system / NA / NA] [dev_id: 0002c903005dd830]: Module PS 2 on switch-system(10.10.10.10) status is fatal 2021-07-20 10:36:23.962 eventlog CRITICAL 2021-07-20 10:36:23.961 [40] [518] CRITICAL [Maintenance] Grid [Grid]: Process periodic_report_runner is down.	
Related Commands	show ufm console log	
Notes		

3.13.11 show ufm console log files

	show ufm console log files [<file-number> [matching <regex> | not matching <regex>]] Lists all archived log files available.	
Syntax Description	file-number	Displays the selected archived event log file
	matching	Displays entries from the selected log file that match a given regular expression
	not matching	Displays entries from the selected log file that do not match a given regular expression

Default	N/A
Configuration Mode	Any configuration mode
History	4.6.0
Example	ufmapl [mgmt-sa] (config) # show ufm console log files 1 matching INFO 2021-07-20 11:47:43.231 rest_api INFO user: ufmsystem, url: (http:// 11.1.1.11:8000/app/events/external_event), method: (POST) 2021-07-20 11:50:43.437 rest_api INFO user: ufmsystem, url: (http:// 11.1.1.11:8000/app/events/external_event), method: (POST) 2021-07-20 11:53:43.642 rest_api INFO user: ufmsystem, url: (http:// 11.1.1.11:8000/app/events/external_event), method: (POST) 2021-07-20 11:56:43.862 rest_api INFO user: ufmsystem, url: (http:// 11.1.1.11:8000/app/events/external_event), method: (POST)
Related Commands	show ufm console log
Notes	

3.13.12 show ufm event log

	show ufm event log [matching <regex> | not matching <regex>] Displays current event log file in a scrollable pager.	
Syntax Description	matching	Displays new event log messages that match a given regular expression
	not matching	Displays new event log messages that do not match a given regular expression
Default	N/A	
Configuration Mode	Any configuration mode	
History	4.6.0	
Example	ufmapl [mgmt-sa] (config) # show ufm event log matching INFO 2021-07-20 09:35:31.551 [1] [352] INFO [Logical_Model] Grid [Grid]: Network management is added 2021-07-20 09:35:34.454 [3] [604] INFO [Maintenance] Grid [Grid]: Fabric Analysis Report succeeded 2021-07-20 09:40:31.957 [5] [604] INFO [Maintenance] Grid [Grid]: Fabric Analysis Report succeeded ...	
Related Commands		
Notes		

3.13.13 show ufm event log continuous

	show ufm event log continuous [matching <regex> | not matching <regex>] Displays new event log messages as they arrive.	
Syntax Description	matching	Displays new event log messages that match a given regular expression
	not matching	Displays new event log messages that do not match a given regular expression
Default	N/A	
Configuration Mode	Any configuration mode	

History	4.6.0

Example	`ufmapl [ mgmt-sa ] (config) # show ufm event log continuous not matching INFO`
	`2021-07-20 09:38:33.192 [4] [406] WARNING [Communication_Error] Grid [Grid]: Failed to get sysinfo for switch 0002c903005dd830`
	`2021-07-20 09:40:33.825 [10] [394] CRITICAL [Module_Status] Switch [default(6) / Switch: switch-system / NA / NA] [dev_id: 0002c903005dd830]: Module PS 2 on switch-system(10.10.10.10) status is fatal`
	`2021-07-20 10:36:23.961 [40] [518] CRITICAL [Maintenance] Grid [Grid]: Process periodic_report_runner is down.`

Related Commands	show ufm console event log
Notes	

3.13.14 show ufm event log files

	show ufm event log files [<file-number> [matching <regex> | not matching <regex>]] Lists all archived log files available.	
Syntax Description	file-number	Displays the selected archived event log file
	matching	Displays entries from the selected log file that match a given regular expression
	not matching	Displays entries from the selected log file that do not match a given regular expression
Default	N/A	
Configuration Mode	Any configuration mode	
History	4.6.0	
Example	`ufmapl [ mgmt-sa ] (config) # show ufm event log files`	
Related Commands	show ufm event log	
Notes		

3.13.15 show ufm logging

	show ufm logging Displays logging configuration.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.6	
	4.6.0	Updated command output

Example	ufmapl [mgmt-sa] (config) # show ufm logging Number of archived log files to keep: 10 Log rotation size threshold: 100 megabytes Ufm-log level: WARNING Syslog: Enabled: No Server: Local Level: WARNING Ufm-log enabled: No Ufm-events enabled: No
Related Commands	
Notes	

3.13.16 show ufm log

	show ufm log [continuous | files | matching | not] Displays UFM event log.	
Syntax Description	continuous	Displays new event log messages as they arrive
	files	Displays archived log files
	matching	Displays event logs that match a given regular expression
	not	Displays event logs that do not meet certain criteria
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.6	
Example	ufmapl [mgmt-sa] (config) # show ufm log 2013-09-03 14:34:00.407 ufm INIT Request Polling Delta Fabric 2013-09-03 14:34:30.411 ufm INIT Request Polling Delta Fabric 2013-09-03 14:35:00.413 ufm INIT Request Polling Delta Fabric 2013-09-03 14:35:30.416 ufm INIT Request Polling Delta Fabric 2013-09-03 14:36:00.419 ufm INIT Request Polling Delta Fabric 2013-09-03 14:36:06.016 ufm ACTION user ufmsystem called triggerExternalEvent with params : <ws.UFM_services_types.ExternalEvent_Holder instance at 0x6ffe440> 2013-09-03 14:36:30.423 ufm INIT Request Polling Delta Fabric 2013-09-03 14:37:00.426 ufm INIT Request Polling Delta Fabric 2013-09-03 14:37:30.428 ufm INIT Request Polling Delta Fabric 2013-09-03 14:38:00.431 ufm INIT Request Polling Delta Fabric 2013-09-03 14:38:02.175 ufm WARNING Failed to parse host response from host 172.30.105.153 message type 10 2013-09-03 14:38:02.193 ufm WARNING Failed to parse host response from host 172.30.11.161 message type 10 2013-09-03 14:38:02.489 ufm WARNING Failed to parse host response from host 172.30.112.23 message type 10 2013-09-03 14:38:02.723 ufm WARNING Failed to parse host response from host 172.30.112.24 message type 10 2013-09-03 14:38:02.768 ufm WARNING Failed to parse host response from host 172.30.49.89 message type 10 2013-09-03 14:38:30.435 ufm INIT Request Polling Delta Fabric	
Related Commands		
Notes		

3.13.17 show ufmhealth log

	show ufmhealth log [continuous | files | matching | not] Displays UFM health event log.	
Syntax Description	continuous	Displays new event log messages as they arrive
	files	Displays archived log files
	matching	Displays event logs that match a given regular expression
	not	Displays event logs that do not meet certain criteria
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.6	

Example	<pre>ufmapl [mgmt-sa] (config) # show ufmhealth log
	2013-09-03 14:36:30.423 ufm INIT Request Polling Delta Fabric
	2013-09-03 14:37:00.426 ufm INIT Request Polling Delta Fabric
	2013-09-03 14:37:30.428 ufm INIT Request Polling Delta Fabric
	2013-09-03 14:38:00.431 ufm INIT Request Polling Delta Fabric
	2013-09-03 14:38:02.175 ufm WARNING Failed to parse host response from host 172.30.105.153 message type 10
	2013-09-03 14:38:02.193 ufm WARNING Failed to parse host response from host 172.30.11.161 message type 10</pre>	

Related Commands		
Notes		

3.14 Advanced Subnet Manager Configuration

> The UFM must be restarted for this configuration to take effect.

3.14.1 ib sm <hm-action>

	ib sm <hm-action> <value> Enables unhealthy ports configuration. The value parameter can be set to report, ignore or isolate the action.	
Syntax Description	hm-ca-flapping-action	Unhealthy Ports flapping condition options. Default: report.
	hm-ca-illegal-action	Unhealthy ports illegal condition options. Default: report.
	hm-ca-manual-action	Unhealthy ports manual condition options. Default: report.
	hm-ca-noisy-action	Unhealthy Ports Noisy condition options. Default: report.
	hm-ca-reboot-action	CA/RTR unhealthy Ports Reboot condition options. Default: report.

	hm-ca-seterr-action	Unhealthy Ports SetErr condition options. Default: ignore.
	hm-ca-unresponsive-action	CA/RTR Unresponsive Action. Default: report.
	hm-sw-flapping-action	Switch flapping action. Default: report.
	hm-sw-illegal-action	Switch illegal action. Default: report.
	hm-sw-manual-action	Switch manual action. Default: no_discover.
	hm-sw-noisy-action	Switch noisy action. Default: report.
	hm-sw-reboot-action	Switch unhealthy Ports Reboot condition options. Default: report.
	hm-sw-seterr-action	Switch seterr action. Default: ignore.
	hm-sw-unresponsive-action	Switch unresponsive action. Default: report.
Default	See Syntax Description	
Configuration Mode	config	
History	1.7	
Example	`ufmapl [ mgmt-sa ] (config) # ib sm hm-ca-flapping-action ignore`	
Related Commands	show ib sm hm-unhealthy-ports	
Notes		

3.14.2 ib sm <hm-num>

	ib sm <hm-num> <value> Enables unhealthy ports configuration. The options are report, ignore or isolate the action.	
Syntax Description	hm-num-flapping-sweeps	The number of sweeps in which the link was flapping. Default: 5.
	hm-num-flapping-sweeps-window	The number of sweeps of which any port exceeding hm_num_flapping_sweeps is declared unhealthy. Default: 10.
	hm-num-illegal	Number of illegal SMPs a port may return to be declared unhealthy. Default: 1.
	hm-num-no-resp-sweeps	The number of sweeps that had that port unresponsive. Default: 5.
	hm-num-no-resp-sweeps-window	The number of sweeps of which any port exceeding. Default: 7.
	hm-num-reboots	Number of reboots in period to declare a node as unhealthy. Default: 10.
	hm-num-set-err-sweeps	The number of sweeps that had that port report back an error for a Set. Default: 5.
	hm-num-set-err-sweeps-window	The number of sweeps of which any port exceeding hm_num_set_err_sweeps is declared unhealthy. Default: 7.

	hm-num-traps	Number of traps received in period to declare the port as unhealthy. Default: 250.
	hm-num-traps-period	The period for counting number of received traps in seconds. Default: 60.
Default	See Syntax Description	
Configuration Mode	config	
History	1.7	
Example	`ufmapl [ mgmt-sa ] (config) # ib sm hm-num-flapping-action 5`	
Related Commands	show ib sm hm-unhealthy-ports	
Notes		

3.14.3 ib sm hm-reboots-period

	ib sm hm-reboots-period <time> Number of reboots in period to declare a node as unhealthy.	
Syntax Description	time	Range: 60-86400 seconds
Default	900	
Configuration Mode	config	
History	1.7	
Example	`ufmapl [ mgmt-sa ] (config) # ib sm hm-reboots-period 60`	
Related Commands	show ib sm hm-unhealthy-ports	
Notes		

3.14.4 ib sm hm-unhealthy-ports-checks enable

	ib sm hm-unhealthy-ports-checks enable Enables unhealthy ports configuration.
Syntax Description	N/A
Default	Enabled
Configuration Mode	config
History	1.7
Example	`ufmapl [ mgmt-sa ] (config) # ib sm hm-unhealthy-ports-checks enable`
Related Commands	show ib sm hm-unhealthy-ports
Notes	

3.14.5 show ib sm hm-unhealthy-ports

	show ib sm hm-unhealthy-ports Displays unhealthy ports configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.7
Example	ufmapl [mgmt-sa] (config) # show ib sm hm-unhealthy-ports hm_unhealthy_ports_checks enable hm_ca_reboot_action report hm_sw_reboot_action report hm_num_reboots 10 hm_reboots_period_secs 900 hm_ca_unresponsive_action report hm_sw_unresponsive_action report hm_num_no_resp_sweeps 5 hm_num_no_resp_sweeps_window 7 hm_ca_noisy_action report hm_sw_noisy_action report hm_num_traps 250 hm_num_traps_period_secs 60 hm_ca_seterr_action ignore hm_sw_seterr_action ignore hm_num_set_err_sweeps 5 hm_num_set_err_sweeps_window 7 hm_ca_flapping_action report hm_sw_flapping_action report hm_num_flapping_sweeps 5 hm_num_flapping_sweeps_window 10 hm_ca_illegal_action report hm_sw_illegal_action report hm_num_illegal 1 hm_ca_manual_action report
Related Commands	
Notes	

3.14.6 ib sm opensm-health-policy-merge

	ib sm opensm-health-policy-merge Merges the opensm-health-policy.conf.user_ext. To use after importing the specific file or importing all configuration files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.7
Example	ufmapl [mgmt-ha-active] (config) # ib sm opensm-health-policy-merge
Related Commands	
Notes	SM must be running for this command to work.

3.14.7 ib sm reassign-lids

	ib sm reassign-lids no ib sm reassign-lids Enables SM ability to reassign active LIDs. The no form of the command disables SM ability to reassign LIDs
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm reassign-lids`
Related Commands	show ib sm reassign-lids
Notes	

3.14.8 show ib sm reassign-lids

	show ib sm reassign-lids Displays SM LID reassignment policy.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any command mode
History	4.6.0
Example	`ufmapl [ mgmt-ha-active ] (config) #  show ib sm reassign-lids disable`
Related Commands	
Notes	

3.15 UFM Web Client

3.15.1 ufm web-client mode

	ufm web-client mode <http | https | https-client-authentication> Configures Access mode to the UFM web clients.	
Syntax Description	http	HTTP access
	https	HTTPS access
	https-client-authentication	HTTPS access with client authentication

Default	http
Configuration Mode	config
History	1.5
Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client mode https-client-authen`
Related Commands	show ufm web-client ufm web-client client-authentication ufm web-client associate-user
Notes	The new mode is applied upon UFM start.

3.15.2 ufm web-client client-authentication ca-cert fetch

	ufm web-client client-authentication ca-cert fetch <download-url> no ufm web-client client-authentication ca-cert fetch <download-url> Downloads a root/intermediate certificates file from a remote host or a USB device. The no form of the command deletes the root/intermediate certificate file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication certificate fetch scp://root@10.10.32.12/tmp/ca-intermediate.crt`	
Related Commands	show ufm web-client ufm web-client mode ufm web-client associate-user	
Notes		

3.15.3 ufm web-client client-authentication associate-user

	ufm web-client client-authentication associate-user <san> <username> no ufm web-client client-authentication associate-user <san> <username> Associates client certificate subject alternative name with a UFM user. The no form of the command disassociates client certificate subject alternative name from a UFM user.	
Syntax Description	san	Client certificate subject alternative name

	username	UFM username
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ufm web-client associate-user ufm.mellanoxhpc.net ufmsysadmin	
Related Commands	show ufm web-client ufm web-client mode ufm web-client client-authentication	
Notes		

3.15.4 show ufm web-client

	show ufm web-client Displays UFM web client settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.5
Example	ufmapl [mgmt-ha-active] (config) # show ufm web-client Mode: HTTPS Client authentication: Yes Bootstrap certificate file: Present CA certificate file: Present Server certificate file: Present Server certificate hostname: ufm.mellanoxhpc.net User Associations: SAN: ufm.mellanoxhpc.net User: ufmsysadmin Certificate Auto-refresh: Enabled: Yes CA certificate URL: https://mellanox.com/cacert Server certificate URL: https://mellanox.com/servercerts Server certificate thumbprint: 2268BDD79DF7FD9C818EB97F315AE0F35D223A15 Last checked: 2019-04-20 20:57:21 Last update: 2019-04-20 20:57:21
Related Commands	ufm web-client mode ufm web-client client-authentication ufm web-client associate-user
Notes	

3.15.5 ufm web-client server-cert hostname

	ufm web-client server-cert hostname <hostname> no ufm web-client server-cert hostname <hostname> Sets the hostname used to access the UFM web client. The no form of the command deletes the server certificate hostname used to access the UFM web client.

Syntax Description	hostname	Hostname used to access the UFM web client
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client server-cert hostname ufm.mellanoxhpc.net`	
Related Commands	show ufm web-client	
Notes	Multiple hostnames may be configured.	

3.15.6 ufm web-client server-cert fetch

	ufm web-client server-cert fetch <download-url> no ufm web-client server-cert fetch <download-url> Downloads a server certificate file from a remote host or a USB device. The no form of the command deletes the server certificate file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client server-cert fetch scp://admin@192.168.1.10/tmp/certs/server.pfx`	
Related Commands	show ufm web-client	
Notes		

3.15.7 ufm web-client client-authentication cert-refresh enable

	ufm web-client client-authentication cert-refresh enable no ufm web-client client-authentication cert-refresh enable Enables UFM web client certificates auto-refresh. The no form of the command disables the feature.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh enable`
Related Commands	show ufm web-client
Notes	

3.15.8 ufm web-client client-authentication cert-refresh ca-cert

	ufm web-client client-authentication cert-refresh ca-cert <download-url> no ufm web-client client-authentication cert-refresh ca-cert <download-url> Sets the download URL for root/intermediate certificate. The no form of the command clears the root/intermediate certificate auto-refresh settings.	
Syntax Description	download-url	Download URL for root/intermediate certificate
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh ca-cert "https://mellanox.com/cacerts"`	
Related Commands	show ufm web-client	
Notes		

3.15.9 ufm web-client client-authentication cert-refresh self-client-cert fetch

	ufm web-client client-authentication cert-refresh self-client-cert fetch <download-url> <password> no ufm web-client client-authentication cert-refresh self-client-cert fetch <download-url> <password> Downloads a bootstrap certificate file from a remote host or a USB device. The no form on the command deletes the bootstrap certificate file from the hard disk.	
Syntax Description	download-url	http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
	password	Bootstrap certificate password
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh self-client-cert fetch scp://admin@192.168.1.10/tmp/certs/bootstrap.pfx "UMm6gF8bGR81+yUScXpVEnr8Q4t4Svcyy6UkHK8oolv1GF1wyreTHjdsWBcIUYH1TRgQt2yguvDs4wrcRIbGGQ=="
Related Commands	show ufm web-client ufm web-client client-authentication cert-refresh self-client-cert password-file fetch
Notes	

3.15.10 ufm web-client client-authentication cert-refresh self-client-cert password-file fetch

	ufm web-client client-authentication cert-refresh self-client-cert password-file fetch <download-uri> no ufm web-client client-authentication cert-refresh self-client-cert password-file fetch <download-uri> Fetches a bootstrap certificate password file (containing a password to be used to open a bootstrap certificate) rather than having to supply a cleartext password while fetching the bootstrap certificate. The no form on the command deletes the bootstrap certificate password file from the hard disk.	
Syntax Description	download-uri	http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	4.3.0	
Example	ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh self-client-cert password-file fetch scp://admin@192.168.1.10/tmp/certs/bootstrap.txt	
Related Commands	show ufm web-client ufm web-client client-authentication cert-refresh self-client-cert fetch	
Notes		

3.15.11 ufm web-client client-authentication cert-refresh server-cert

	ufm web-client client-authentication cert-refresh server-cert <url> <thumbprint> no ufm web-client client-authentication cert-refresh server-cert <url> <thumbprint> Sets the download URL for server and bootstrap certificates. The no form of the command clears the server and bootstrap certificates auto-refresh settings.

Syntax Description	url	http, https, ftp, tftp, scp, sftp and usb are supported. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
	thumbprint	Server certificate thumbprint
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh server-cert "https://mellanox.com/servercerts" 2268BDD79DF7FD9C818EB97F315AE0F35D223A15	
Related Commands	show ufm web-client	
Notes		

3.15.12 ufm web-client client-authentication cert-refresh run-now

	ufm web-client client-authentication cert-refresh run-now Refreshes the server and root/intermediate certificates manually.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	ufmapl [mgmt-ha-active] (config) # ufm web-client client-authentication cert-refresh run-now
Related Commands	show ufm web-client
Notes	

3.15.13 ufm ws-address

	ufm ws-address <address> Sets the web server external address.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	ufmapl [mgmt-sa] (config) # ufm ws-address 172.10.30.16

Related Commands	show ufm ws-address
Notes	

3.15.14 show ufm ws-address

	show ufm ws-address <address> Displays the web server external address.	
Syntax Description	address	Web server external address
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.6	
Example	`ufmapl [mgmt-sa] (config) # show ufm ws-address` `Web server external address:  UNDEFINED`	
Related Commands	ufm ws-address	
Notes		

3.16 Management Interface Monitoring

3.16.1 ufm mgmt-interface monitor enable

	ufm mgmt-interface monitor enable no ufm mgmt-interface monitor enable Enables monitoring of the management interface. The no form of the command disables monitoring of the management interface.
Syntax Description	N/A
Default	http
Configuration Mode	config
History	4.1.5
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm mgmt-interface monitor enable`
Related Commands	ufm mgmt-interface monitor interval ufm mgmt-interface show ufm mgmt-interface
Notes	

3.16.2 ufm mgmt-interface monitor interval

	ufm mgmt-interface monitor interval <time> Configures the management interface monitoring interval.

Syntax Description	time	The management interface monitoring interval. Range: 5-180 seconds.
Default	10 seconds	
Configuration Mode	config	
History	4.1.5	
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm mgmt-interface monitor interval 15`	
Related Commands	ufm mgmt-interface monitor enable ufm mgmt-interface show ufm mgmt-interface	
Notes		

3.16.3 ufm mgmt-interface

	ufm mgmt-interface <interface> Configures the management interface to be monitored.	
Syntax Description	interface	Management interface to be monitored (e.g. eth0, eth1)
Default	eth0	
Configuration Mode	config	
History	4.1.5	
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm mgmt-interface eth0`	
Related Commands	ufm mgmt-interface monitor enable ufm mgmt-interface monitor interval show ufm mgmt-interface	
Notes	The interface is set automatically when invoking the command "ufm ha configure".	

3.16.4 show ufm mgmt-interface

	show ufm mgmt-interface Displays the management interface settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.1.5

Example	ufmapl [mgmt-ha-active] (config) # show ufm mgmt-interface Management interface monitoring: Interface name: eth0 Enabled: Yes Monitoring interval: 10 seconds
Related Commands	ufm mgmt-interface monitor enable ufm mgmt-interface monitor interval ufm mgmt-interface
Notes	

3.17 AHX Monitoring

3.17.1 ib managed-switch ahx-monitor enable

	ib managed-switch ahx-monitor enable no ib managed-switch ahx-monitor enable Enables AHX monitoring. The no form of the command disables AHX monitoring.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.2
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch ahx-monitor enable
Related Commands	show ib managed-switch ahx-monitor
Notes	

3.17.2 managed-switch ahx-monitor interval

	ib managed-switch ahx-monitor interval <time> no ib managed-switch ahx-monitor interval Configures AHX monitoring interval. The no form of the command resets the AHX monitoring interval to default.

Syntax Description	time	Monitoring interval values: 1m - 1 minute 5m - 5 minutes 10m - 10 minutes 15m - 15 minutes 20m - 20 minutes 30m - 30 minutes 1h - 1 hour 2h - 2 hours 3h - 3 hours 4h - 4 hours 6h - 6 hours 8h - 8 hours 12h - 12 hours 24h - 24 hours
Default	1m	
Configuration Mode	config	
History	4.2	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib managed-switch ahx-monitor interval 10m`	
Related Commands	show ib managed-switch ahx-monitor	
Notes		

3.17.3 ib managed-switch ahx-monitor device

	ib managed-switch ahx-monitor device <switch-name> <ip | ipv6> <primary-ip-address> <secondary-ip-address> [<AHX alternative switch name>] no ib managed-switch ahx-monitor device <switch-name> Adds AHX device to monitoring. The no form of the command removes AHX device from monitoring.	
Syntax Description	switch-name	AHX switch name
	alternative-switch-name	AHX alternative switch name
	ip | ipv6	Sets IPv4/IPv6 addresses for this device
	primary-ip-address	AHX primary IP address
	secondary-ip-address	AHX secondary IP address
Default		
Configuration Mode	config	
History	4.2	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib managed-switch ahx-monitor device ahx_switch01 ip 10.10.10.10 10.10.10.11`	
Related Commands	show ib managed-switch ahx-monitor	
Notes		

3.17.4 show ib managed-switch ahx-monitor

	show ib managed-switch ahx-monitor Displays AHX monitoring settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.2
Example	ufmapl [mgmt-ha-active] (config) # show ib managed-switch ahx-monitor AHX Monitoring: Enabled : Yes Interval: 10m AHX Devices: Switch name : ahx_switch01 Primary IP address : 10.1.1.11 Secondary IP address: 10.1.2.11
Related Commands	ib managed-switch ahx-monitor enable managed-switch ahx-monitor interval ib managed-switch ahx-monitor device
Notes	

3.18 UFM Events Forwarder

3.18.1 ufm events-forwarder enable

	ufm events-forwarder enable no ufm events-forwarder enable Enables events-forwarder. The no form of the command disables events-forwarder.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.4.0
Example	ufmapl [mgmt-sa] (config) # ufm events-forwarder enable
Related Commands	ufm events-forwarder server show ufm events-forwarder
Notes	

3.18.2 ufm events-forwarder server

	ufm events-forwarder server ip <ip-address> port <number> no ufm events-forwarder server Configures server IP and port for events forwarder service. The no form of the command deletes server configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.4.0
Example	`ufmapl [ mgmt-sa ] (config) # ufm events-forwarder server ip 2.2.2.2 port 300`
Related Commands	ufm events-forwarder enable show ufm events-forwarder
Notes	This configuration can be done only if UFM is stopped

3.18.3 show ufm events-forwarder

	show ufm events-forwarder Displays UFM events-forwarder status.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.4.0

Example	`ufmapl [ mgmt-sa ] (config) # show ufm events-forwarder`
	`  Enabled:  Yes`
	`  Server: 2.2.2.2  Port: 300`

Related Commands	ufm events-forwarder enable ufm events-forwarder server
Notes	

3.18.4 ufm events max-restored

	ufm events max-restored <1-1000> Restores max UFM events.	
Syntax Description	max-restored-value	Maximum number of restored events
Default	50	
Configuration Mode	config	
History	4.8.0	

Example	ufmapl [mgmt-sa] (config) # ufm events max-restored 70
Related Commands	ufm events persistency enable show ufm events
Notes	

3.18.5 ufm events persistency enable

	ufm events persistency enable no ufm persistency enable Enables events persistency The no form of the command disables UFM persistency
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.8.0
Example	ufmapl [mgmt-sa] (config) # ufm events persistency enable
Related Commands	show ufm events ufm events max-restored
Notes	

3.18.6 show ufm events

	show ufm events Displays UFM events
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.8.0
Example	ufmapl [mgmt-sa] (config) # show ufm events Events persistency: No Max restored: 50
Related Commands	ufm events persistency enable ufm events max-restored
Notes	

3.19 UFM Virtualization

3.19.1 ufm virtualization enable

	ufm virtualization enable no ufm virtualization enable Enables discovery of all the virtual ports in the fabric. The no form of the command disables discovery of virtual ports in the fabric.
Syntax Description	N/A
Default	Disable
Configuration Mode	config
History	4.5.0
Example	`ufm [ mgmt-sa ] (config) # ufm virtualization enable`
Related Commands	ufm virtualization interval
Notes	

3.19.2 ufm virtualization interval

	ufm virtualization interval <seconds> no ufm virtualization interval Sets the virtual ports discovery interval. The no form of the command resets this parameter to its default.	
Syntax Description	seconds	Range: 5-86400 seconds
Default	60	
Configuration Mode	config	
History	4.5.0	
Example	`ufm [ mgmt-sa ] (config) # ufm virtualization interval 300`	
Related Commands	ufm virtualization enable	
Notes		

3.19.3 show ufm virtualization

	show ufm virtualization Displays UFM virtualization settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.5.0

Example	ufmapl [mgmt-ha-active] (config) # show ufm virtualization Enabled : No
Related Commands	ufm virtualization enable
Notes	

3.20 UFM Agent

3.20.1 ufm agent interface

	ufm agent interface {eth0 | eth1} no ufm agent interface {eth0 | eth1} Sets UFM agent interface. The no form of the command removes the settings for UFM agent interface.	
Syntax Description	eth0	Adds/removes UFM agent interface to eth0
	eth1	Adds/removes UFM agent interface to eth1
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	ufmapl [mgmt-sa] (config interface eth0) # ufm agent interface eth1	
Related Commands		
Notes		

3.20.2 show ufm agent

	show ufm agent Displays the configured settings for UFM agent.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	ufmapl [mgmt-sa] (config) # show ufm agent interface eth0
Related Commands	ufm agent
Notes	

3.21 Unhealthy Ports

3.21.1 ufm unhealthy-ports isolate-high-ber isolation-mode

	ufm unhealthy-ports isolate-high-ber isolation-mode <mode> Configure high BER ports isolation mode.	
Syntax Description	mode	• all - isolates switch-to-switch and switch-to-host unhealthy high-BER ports • switch-switch - isolates switch-to-switch unhealthy high-BER ports • switch-host - isolates switch-to-host unhealthy high-BER ports
Default	switch-switch	
Configuration Mode	config	
History	4.7.0	
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm high-ber-ports isolate-high-ber isolation-mode switch-switch`	
Related Commands	show ufm unhealthy-ports ufm unhealthy-ports isolate-high-ber enable	
Notes		

3.21.2 ufm unhealthy-ports isolate-high-ber enable

	ufm unhealthy-ports isolate-high-ber enable no ufm unhealthy-ports isolate-high-ber enable Enable automatically marking high-BER ports as unhealthy. The no form of the command stops automatically marking high-BER ports as unhealthy.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.6.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm unhealthy-ports isolate-high-ber enable`
Related Commands	show ufm unhealthy-ports
Notes	Please stop UFM before performing attempting to change the event query interval value.

3.21.3 ufm unhealthy-ports switch-ports-threshold

	ufm unhealthy-ports switch-ports-threshold <threshold> Configure the unhealthy switch ports event threshold	
Syntax Description	threshold	0-99 percent

Default	20%
Configuration Mode	config
History	4.12.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm unhealthy-ports switch-ports-threshold 30`
Related Commands	show ufm unhealthy-ports
Notes	

3.21.4 ufm high-ber-ports enable-warnings

	ufm high-ber-ports enable-warnings no ufm high-ber-ports enable-warnings Enables high BER ports warnings. The no form of the command disables the UFM high BER ports warnings.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.7.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm high-ber-ports enable-warnings`
Related Commands	show ufm high-ber-ports
Notes	

3.21.5 show ufm unhealthy-ports

	show ufm unhealthy-ports Displays UFM unhealthy ports settings.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	Any configuration mode	
History	4.6.0	
	4.7.0	Updated output

Example	`ufmapl [ mgmt-ha-active ] (config) # show ufm unhealthy-ports`
	`Enabled: No`
	`Isolation Mode: switch-switch`
	`Switch Ports Event Threshold: 20 percent`	

Related Commands	ufm unhealthy-ports isolate-high-ber enable ufm unhealthy-ports isolate-high-ber isolation-mode	
Notes		

3.21.6 show ufm high-ber-ports

	show ufm high-ber-ports Displays high BER ports configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.7.0
Example	`ufmapl [ mgmt-ha-active ] (config) # show ufm high-ber-ports` `Enable Warnings: No`
Related Commands	ufm high-ber-ports enable-warnings
Notes	

3.21.7 ufm network-fast-recovery enable

	ufm network-fast-recovery enable no ufm network-fast-recovery enable Enables UFM network fast recovery. The no form of the command disables UFM network fast recovery.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.12.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm network-fast-recovery enable`
Related Commands	show ufm network-fast-recovery
Notes	

3.21.8 show ufm network-fast-recovery

	show ufm network-fast-recovery Displays UFM network fast recovery settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.12.0

Example	ufm-apl [mgmt-ha-active] (config) # show ufm network-fast-recovery Network Fast Recovery: No
Related Commands	ufm network-fast-recovery enable
Notes	

3.22 UFM Audit

3.22.1 ufm track-conf-changes enable

	ufm track-conf-changes enable no ufm track-conf-changes enable Enables UFM configuration changes tracking The no form of the command disables UFM configuration changes tracking	
Syntax Description	N/A	
Default	Enabled	
Configuration Mode	config	
History	4.8	First Release
	4.9	Modified command names as follows: • From "ufm track-sm-conf-change enable" to "ufm track-conf-changes enable" • From "no ufm track-sm-conf-change enable" to "no ufm track-conf-changes enable"
Example	ufmapl [mgmt-ha-active] (config) # ufm track-conf-changes enable	
Related Commands	show ufm track-conf-changes	
Notes		

3.22.2 show ufm track-conf-changes

	show ufm track-conf-changes Displays UFM configuration changes tracking settings	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	config	
History	4.8	First release
	4.9	Modified command name from "show ufm track-sm-conf-change" to "show ufm track-conf-changes"
Example	ufmapl [mgmt-ha-active] (config) # show ufm Track UFM configuration changes: No	

Related Commands	ufm track-conf-changes enable no ufm track-conf-changes enable
Notes	

3.23 UFM Plugin Commands

3.23.1 ufm plugin

	ufm plugin <plugin-name> {add [tag <tag name>] | enable | remove} no ufm plugin <plugin-name> enable Add UFM plugin manages UFM plugin. The no form of the command disables UFM plugin.	
Syntax Description	add	Adds UFM plugin
	enable	Enables UFM plugin
	remove	Removes UFM plugin
Default	N/A	
Configuration Mode	config	
History	4.7	
Example	`ufmapl [ mgmt-sa ] (config) # ufm plugin ndt add tag 1.0.0-3`	
Related Commands	show ufm plugin	
Notes	• The plugin can be added, removed, enabled or disabled while UFM is running. • The plugin will be started upon UFM startup. • Disabling the plugin will only stop it. • Removing the plugin also clears all its folders and files (including conflagration and logs).	

3.23.2 show ufm plugin

	show ufm plugin Displays UFM plugin
Syntax Description	N/A
Default	enabled
Configuration Mode	config
History	4.7

Example	ufmapl [mgmt-ha-active] (config) # show ufm plugin Plugin ndt: Enabled: Yes Plugin tag: latest Shared volumes: /opt/ufm/files/log:/log,/dev:/host_dev Httpd port: 8980 State: stop Plugin rest-rdma: Enabled: Yes Plugin tag: 1.0.0-5 Shared volumes: /opt/ufm/files/periodicIbdiagnet:/opt/ufm/files/periodicIbdiagnet,/opt/ufm/files/log:/opt/ufm/files/log,/opt/ufm/files/conf:/opt/ufm/files/conf Httpd port: NA State: stop
Related Commands	ufm plugin add, ufm plugin remove, ufm plugin enable, no ufm plugin enable
Notes	

3.24 Fabric Discovery

3.24.1 ufm discovered-switch-ip-version

	ufm discovered-switch-ip-version <ipv4/ipv6> show ufm discovered-switch-ip-version Sets the UFM discovered switch IP version (IPv4 or IPv6). Displays UFM discovered switch IP version.	
Syntax Description	ipv4	Discover switch IPv4 address
	ipv6	Discover switch IPv6 address
Default	IPv4	
Configuration Mode	config	
History	4.10.0	
Example	ufmapl [mgmt-ha-active] (config) # show ufm discovered-switch-ip-version Discovered Switch IP Version: IPv4	
Related Commands		
Notes		

4 InfiniBand Commands

4.1 InfiniBand Utilities

4.1.1 ib ibdiagnet

	Dib ibdiagnet [<ibdiagnet-options>] Scans the fabric using directed route packets and extracts all the available information regarding its connectivity and devices.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-ha-active ] (config) # ib ibdiagnet`
Related Commands	
Notes	• For further information on the command, please run "ib ibdiagnet --help". • Running this command with the “upload” parameter uploads the last execution of the command.

4.1.2 ib ibdiagnet gmp-window

	ib ibdiagnet gmp-window <value> no ib ibdiagnet gmp-window Set the maximum number of GMPs sent in parallel. The no form of the command resets the parameter to its default.	
Syntax Description	value	Range: 0-16384
Default	128	
Configuration Mode	config	
History	4.3.0	

Example	`ufm [ mgmt-sa ] (config) # ib ibdiagnet gmp-window 10`
Related Commands	show ib ibdiagnet gmp-window
Notes	

4.1.3 show ib ibdiagnet gmp-window

	show ib ibdiagnet gmp-window Displays the maximum number of GMPs sent in parallel.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib ibdiagnet gmp-window 10`
Related Commands	ib ibdiagnet gmp-window
Notes	

4.1.4 ib ibdiagnet smp-window

	ib ibdiagnet smp-window <value> no ib ibdiagnet smp-window Sets the maximum number of SMPs sent in parallel. The no form of the command resets the parameter to its default.	
Syntax Description	value	Range: 0-256
Default	8	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ib ibdiagnet smp-window 10`	
Related Commands	show ib ibdiagnet smp-window	
Notes		

4.1.5 show ib ibdiagnet smp-window

	show ib ibdiagnet smp-window Displays the maximum number of SMPs sent in parallel.
Syntax Description	N/A

Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib ibdiagnet smp-window` `10`
Related Commands	ib ibdiagnet smp-window
Notes	

4.1.6 ib ibdiagnet upload

	ib ibdiagnet upload <upload-url>] Uploads ibdiagnet output files to a remote host or a USB device.	
Syntax Description	upload-url	Formats supported: ftp, tftp, scp, sftp and usb. For example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ib ibdiagnet upload scp://root@10.10.1.11/tmp`	
Related Commands		
Notes	Prior to running this command, you must run the "ib ibdiagnet" command. For further information on the command, please run: "ib ibdiagnet --help".	

4.1.7 ib ibdiagpath

	ib ibdiagpath <ibdiagpath-options> Scans the fabric using directed route packets and extracts all the available information regarding its connectivity and devices.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	

Notes	• For further information on the command, please run "ib ibdiagpath --help". • Running this command with the "upload" parameter uploads the last execution of the command.

4.1.8 ib ibdiagpath upload

	ib ibdiagpath upload <upload-url>] Uploads ibdiagpath output files to a remote host or a USB device.	
Syntax Description	upload-url	Formats supported: ftp, tftp, scp, sftp and usb. For example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-sa ] (config) # ib ibdiagpath upload scp://root@10.10.1.11/tmp`	
Related Commands		
Notes	Prior to running this command, you must run the command "ib ibdiagpath". For further information on the command, please run "ib ibdiagpath --help".	

4.1.9 ib perfquery

	ib perfquery <perfquery-options> Dumps (and optionally clears) the performance counters of the destination port (including error counters).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib perfquery --help".

4.1.10 ib ibtracert

	ib ibtracert <ibtracert-options> Displays unicast or multicast route from source to destination.
Syntax Description	N/A

Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib ibtracert --help".

4.1.11 ib ibportstate

	ib ibportstate <ibportstate-options> Gets the logical and physical port states of an InfiniBand port or disables or enables the port (only on a switch).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib ibportstate --help".

4.1.12 ib smpquery

	ib smpquery <smpquery-options> Enables a basic subset of standard SMP queries including the following: node info, node description, switch info, port info. Fields are displayed in human readable format.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	

Notes	For further information on the command, please run "ib smpquery --help".

4.1.13 ib sminfo

	ib sminfo <sminfo-options> Queries the SMInfo attribute on a node.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib sminfo --help".

4.1.14 ib smpdump

	ib smpdump <smpdump-options> A general purpose SMP utility which gets SM attributes from a specified SMA. The result is dumped in hex by default.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib smpdump --help".

4.1.15 ib ibqueryerrors

	ib ibqueryerrors <ibqueryerrors-options> Queries and reports non-zero IB port counters.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	ufm [mgmt-sa] (config) #
Related Commands	
Notes	For further information on the command, please run "ib ibqueryerrors --help".

4.1.16 ib ibroute

	ib ibroute <ibroute-options> Displays unicast and multicast forwarding tables of the switches.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	ufm [mgmt-sa] (config) #
Related Commands	
Notes	For further information on the command, please run "ib ibroute --help".

4.1.17 ib ibrouters

	ib ibrouters <ibrouters-options> Shows InfiniBand router nodes in topology.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	3.0
Example	ufm [mgmt-sa] (config) # ib routers Rt : 0xe41d2d030048dbf8 ports 3 "MFO;mlnx-switch15:MSB7780/RT" Rt : 0xe41d2d030048dc18 ports 3 "MFO;mlnx-switch18:MSB7780/RT"
Related Commands	
Notes	For further information on the command, please run "ib ibrouters --help".

4.1.18 ib ibnetdiscover

	ib ibnetdiscover [matching <expression> [count]] Assists to match more ibnetdiscover information.	
Syntax Description	matching	A matching expression in a form of a string to ease the information search

	count	The number of times the matching expression appears
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Updated the command’s format and added new parameters
Example	ufmapl [mgmt-sa] (config) # ib ibnetdiscover	
Related Commands		
Notes	For further information on the command, please run "ib ibnetdiscover --help".	

4.1.19 ib ibnetdiscover upload

	ib ibnetdiscover upload <upload-url> Upload ibnetdiscover output file to a remote host or a USB device.	
Syntax Description	upload-url	Supported formats: ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-sa] (config) # ib ibnetdiscover upload scp://root@10.10.1.11/tmp	
Related Commands		
Notes	• For further information on the command, please run "ib ibnetdiscover --help". • Running this command with the “upload” parameter uploads the last execution of the command.	

4.1.20 ib ibstat

	ib ibstat <ibstat options> Shows the host adapters status.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	ufm [mgmt-sa] (config) #

Related Commands	
Notes	For further information on the command, please run "ib ibstat --help"

4.1.21 ib ibstatus

	ib ibstatus <ibstatus-options> Queries basic status of InfiniBand device(s).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib ibstatus --help"

4.1.22 ib ibnodes

	ib ibnodes <ibnodes-options> Scans the net or uses existing net topology file and lists all nodes.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib ibnodes --help"

4.1.23 ib saquery

	ib saquery <saquery-options> Queries InfiniBand subnet administration attributes.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib saquery --help"

4.1.24 ib ibhosts

	ib ibhosts [matching <expression> [count]] Scans the net or uses existing net topology file and lists all hosts.	
Syntax Description	matching	A matching expression in a form of a string to ease the information search
	count	The number of times the matching expression appears
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Updated the command's format and added new parameters
Example	`ufm [ mgmt-sa ] (config) #`	
Related Commands		
Notes	For further information on the command, please run "ib ibhosts --help"	

4.1.25 ib ibswitches

	ib ibswitches [matching <expression> [count]] Scans the net or uses existing net topology file and lists all switches.	
Syntax Description	matching	A matching expression in a form of a string to ease the information search
	count	The number of times the matching expression appears
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Updated the command's format and added new parameters
Example	`ufm [ mgmt-sa ] (config) #`	
Related Commands		
Notes	For further information on the command, please run "ib ibswitches --help"	

4.1.26 ib iblinkinfo

	ib iblinkinfo [<iblinkinfo-options>] [matching <expression>] [count] Reports link info for each port in an IB fabric, node by node. Optionally, iblinkinfo can do partial scans and limit its output to parts of a fabric.	
Syntax Description	matching	A matching expression in a form of a string to ease the information search
	count	The number of times the matching expression appears
Default	N/A	
Configuration Mode	config	
History	1.5	
	1.6	Updated the command's format and added new parameters
Example	`ufm [ mgmt-sa ] (config) #`	
Related Commands		
Notes	For further information on the command, please run "ib iblinkinfo --help"	

4.1.27 ib vendstat

	ib vendstat <vendstat-options> Uses vendor specific MADs to access beyond the IB spec vendor specific functionality.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5
Example	`ufm [ mgmt-sa ] (config) #`
Related Commands	
Notes	For further information on the command, please run "ib vendstat --help"

4.1.28 ib ibaddr

	ib ibaddr <ibaddr options> Shows the LID range and default GID of the target.
Syntax Description	N/A
Default	The local port.
Configuration Mode	config
History	4.10.0

Example	ufmapl [mgmt-ha-active] (config) # ib ibaddr GID fe80::c42:a103:74:f88e LID start 0x4 end 0x4
Related Commands	
Notes	For further information on the command, please run "ib ibaddr --help"

4.1.29 ib ibping

	ib ibping <ibping options> Uses vendor MADs to validate connectivity between InfiniBand nodes. On exit, (IP) ping-like output is shown.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.10.0
Example	ufmapl [mgmt-ha-active] (config) # ib ibping -c 3 5 --- (Lid 5) ibping statistics --- 3 packets transmitted, 0 received, 100% packet loss, time 3000 ms rtt min/avg/max = 0.000/0.000/0.000 ms
Related Commands	
Notes	For further information on the command, please run "ib ibping --help"

4.1.30 ib ibsysstat

	ib ibsysstat <ibsysstat options> Obtains basic information for the specific node which may be remote. This information includes: hostname, CPUs, memory utilization.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.10.0
Example	ufmapl [mgmt-ha-active] (config) # ib ibsysstat 5 sysstat ping succeeded
Related Commands	
Notes	For further information on the command, please run "ib ibsysstat --help"

4.1.31 ib smparquery

	ib smparquery <smparquery options> Queries adaptive-routing related settings from a particular switch.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.10.0
Example	`ufmapl [ mgmt-ha-active ] (config) # smparquery argrouptable 3 1`
Related Commands	
Notes	For further information on the command, please run "ib smparquery --help"

4.2 OpenSM

4.2.1 ib qos

	ib qos [enable] Manages advanced SM QoS options.	
Syntax Description	enable	Enables advanced QoS management on this node
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) #`	
Related Commands		
Notes		

4.2.2 ib sm allow-both-pkeys

	ib sm allow-both-pkeys no ib sm allow-both-pkeys Enables having both a full and limited membership on the same partition. The no form of the command disables having both full and limited memberships on the same partition.
Syntax Description	N/A
Default	Disabled

Configuration Mode	config
History	2.6
Example	`ufmapl [mgmt-ha-active] (config) # ib sm allow-both-pkeys`
Related Commands	show ib sm allow-both-pkey ib partition management defmember
Notes	

4.2.3 show ib sm allow-both-pkeys

	show ib sm allow-both-pkeys Displays if both full and limited memberships on the same partition are enabled or not.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	2.6
Example	`ufmapl [mgmt-ha-active] (config) # show ib sm allow-both-pkeys` `disable`
Related Commands	ib sm allow-both-pkeys
Notes	

4.2.4 ib sm ar-sl-mask

	ib sm ar-sl-mask <mask> no ib sm ar-sl-mask Configures the adaptive routing SL mask. The no form of the command rests the mask value to default.	
Syntax Description	mask	Range: 0x0000-0xffff
Default	0xffff	
Configuration Mode	config	
History	4.2.0	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sm ar-sl-mask 0xfffe`	
Related Commands	show ib sm ar-sl-mask	
Notes		

4.2.5 show ib sm ar-sl-mask

	show ib sm ar-sl-mask Displays the adaptive routing SL mask.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.2.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # show ib sm ar-sl-mask` `0xffff`
Related Commands	ib sm ar-sl-mask
Notes	

4.2.6 ib sm configuration import

	[no] ib sm configuration import [cn-guid | congestion-control | fts | port-search-ordering | guid-routing-order | lid-matrix-dump | prefix-routes | held-back-sw | opensm-health-policy-user-ext | rch-policy | hop-weights | per-module-logging | root-guid | ids-guid | partition-config-user-ext | pgrp-policy | sa-db | io-guid | port-prof-ignore | topo-policy] <url> Imports the Subnet Manager configuration. The no form of the command deletes the imported configuration files.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	config	
History	1.6	
	4.3.0	Added congestion-control parameter
Example	`ufmapl [ mgmt-ha-active ] (config) #`	
Related Commands	show ib sm configuration import	
Notes		

4.2.7 show ib sm configuration import

	show ib sm configuration import Displays imported subnet manager configuration files.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode

History	4.3.0
Example	ufmapl [mgmt-ha-active] (config) # show ib sm configuration import port_prof_ignore_file ----- hop_weights_file ----- port_search_ordering_file ----- mc_roots_file ----- lid_matrix_dump_file ----- lfts_file ----- root_guid_file ----- pgrp_policy_file ----- topo_policy_file ----- rch_policy_file ----- held_back_sw_file ----- cn_guid_file ----- io_guid_file ----- ids_guid_file ----- guid_routing_order_file ----- sa_db_file ----- per_module_logging_file ----- congestion_control_policy_file imported prefix_routes_file ----- router_policy_file ----- verbose_bypass_policy_file ----- sa_db_dump_file ----- subnet_lst_file ----- virt_dump_file ----- health-policy.conf.user_ext imported partitions.conf.user_ext imported
Related Commands	ib sm configuration import
Notes	

4.2.8 ib sm congestion-control

	ib sm congestion-control {enable | ignore} no ib sm congestion-control enable Configure congestion control. The no form of the command disables congestion control configuration.	
Syntax Description	enable	Enables congestion control
	ignore	Ignores congestion control configuration
Default	Disabled	
Configuration Mode	config	
History	4.3.0	
Example	ufm [mgmt-sa] (config) # ib sm congestion-control enable	
Related Commands	show ib sm congestion-control	
Notes		

4.2.9 show ib sm congestion-control

	show ib sm congestion-control Displays congestion control configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode

History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib sm congestion-control` `ignore`
Related Commands	ib sm congestion-control
Notes	

4.2.10 ib sm dfp max-cas-on-spine

	ib sm dfp max-cas-on-spine <int> no ib sm dfp max-cas-on-spine Configures maximum number of CAs on the switch before it is considered a spine instead of leaf. The no form of the command resets the parameter to its default.	
Syntax Description	int	Range: 1-126
Default	2	
Configuration Mode	config	
History	4.3.0	
Example	`ufm [ mgmt-sa ] (config) # ib sm dfp max-cas-on-spine 20`	
Related Commands	show ib sm dfp max-cas-on-spine	
Notes		

4.2.11 show ib sm dfp max-cas-on-spine

	show ib sm dfp max-cas-on-spine Displays maximum number of CAs on the switch before it is considered a spine instead of leaf.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib sm dfp max-cas-on-spine` `20`
Related Commands	ib sm dfp max-cas-on-spine
Notes	

4.2.12 ib sm dfp down-up-turns-mode

	ib sm dfp down-up-turns-mode {allow-in-intermediate-groups | allow-turns-through-intermediate-spine | disable} Configures whether to allow turns through intermediate spine.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # ib sm dfp down-up-turns-mode allow-in-intermediate-groups`
Related Commands	show ib sm dfp down-up-turns-mode
Notes	

4.2.13 show ib sm dfp down-up-turns-mode

	show ib sm dfp down-up-turns-mode Displays mode of taking down up-turns in intermediate groups with DF+ routing engine.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib sm dfp down-up-turns-mode` `allow down up turns in intermediate groups`
Related Commands	ib sm dfp down-up-turns-mode
Notes	

4.2.14 ib sm files opensm-dump delete

	ib sm files opensm-dump delete Deletes OpenSM dump files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0

Example	`ufm [ mgmt-sa ] (config) # ib sm files opensm-dump delete`
Related Commands	
Notes	

4.2.15 ib sm force-log-flush

	ib sm force-log-flush [enable] Forces log flush after every write.	
Syntax Description	enable	Enables force log flush after every write
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm force-log-flush enable`	
Related Commands		
Notes		

4.2.16 ib sm force-link-speed

	ib sm force-link-speed Sets SM behavior for port speed on switch ports.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) #`
Related Commands	
Notes	

4.2.17 ib sm keep-pkey-indexes

	ib sm keep-pkey-indexes no ib sm keep-pkey-indexes Preserves PKey indexes belonging to the historical PKeys configured on the port when generating PKey tables for a certain port. The no form of the command calculates PKey indexes belonging to the historical PKeys configured on the port.

Syntax Description	N/A
Default	Enabled
Configuration Mode	config
History	2.6
Example	`ufmapl [mgmt-ha-active] (config) # no ib sm keep-pkey-indexes`
Related Commands	show ib sm keep-pkey-indexes ib sm allow-both-pkeys
Notes	

4.2.18 show ib sm keep-pkey-indexes

	show ib sm keep-pkey-indexes Displays whether PKey indexes belonging to the historical PKeys configured on the port are preserved or not.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	2.6
Example	`ufmapl [mgmt-ha-active] (config) # show ib sm keep-pkey-indexes` `enable`
Related Commands	ib sm keep-pkey-indexes
Notes	

4.2.19 ib sm log-flags

	ib sm log-flags [all | debug | error | frames | funcs | info | none | routing | verbose] Configures all log-files.	
Syntax Description	all	Error info verbose debug funcs frames routing
	debug	Logs diagnostic messages, high volume
	error	Logs error messages
	frames	Logs all SMP and GMP frames
	funcs	Logs function entry/exit, very high volume
	info	Logs basic messages, low volume
	none	Turns off all logging flags

	routing	Logs FDB routing information
	verbose	Logs interesting stuff, moderate volume
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	ufmapl [mgmt-ha-active] (config) #	
Related Commands		
Notes		

4.2.20 show ib sm log

	show ib sm log [continuous | files | matching | not] Displays ib sm log event.	
Syntax Description	continuous	Displays new event log messages as they arrive
	files	Displays archived log files
	matching	Displays event logs that match a given regular expression
	not	Displays event logs that do not meet certain criteria
Default	N/A	
Configuration Mode	Any configuration mode	
History	1.6	
Example	ufmapl [mgmt-ha-active] (config) #	
Related Commands		
Notes		

4.2.21 ib sm partition-config-merge

	ib sm partition-config-merge Merges the partitions.conf.user_ext into the partitions.conf and starts the heavy sweep on the SM. To use after importing the specific file or importing all configuration files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	2.6

Example	`ufmapl [mgmt-ha-active] (config) # ib sm partition-config-merge`
Related Commands	ib sm configuration import partition-config-user-ext
Notes	The SM must be running for this command to work.

4.2.22 ib sm root-guid

	ib sm root-guid <guid> no ib sm root-guid <guid> Adds a root GUID for the SM. The no form of the command removes the GUID from the SM.	
Syntax Description	guid	The root GUID number in hexadecimal notation For example: 0x0002c903006ad830
Default	N/A	
Configuration Mode	config	
History	2.6	
Example	`ufmapl [mgmt-ha-active] (config) # ib sm root-guid 0x0002c903006ad830`	
Related Commands	show ib sm root-guid	
Notes	The list of root GUIDs are relevant when the routing algorithm is up-down or fat-tree.	

4.2.23 show ib sm root-guid

	show ib sm root-guid Displays all configured root GUIDs for the SM.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	2.6

Example	`ufmapl [mgmt-ha-active] (config) # show ib sm root-guid`
	`0x0002c903006ad830`
	`0x0002c903006ae120`
	`0x0002c903006af520`

Related Commands	ib sm root-guid
Notes	

4.2.24 ib sm routing-engines

	ib sm routing-engines [dfsssp | dor | file | ftree | minhop | torus-2QoS | updn | chain | pqft] Sets the routing engine of the SM. Multiple routing engines can be specified separated by a space so that specific ordering of routing algorithms is tried if earlier routing engines fail.	
Syntax Description	dfsssp	Includes 'dfsssp' (EXPERIMENTAL) engine in selection of routing engines
	dor	Includes 'dor' engine in selection of routing engines
	file	Includes 'file' engine in selection of routing engines
	ftree	Includes 'ftree' engine in selection of routing engines
	minhop	Includes 'minhop' engine in selection of routing engines
	none	No routing engines specified; use SM default(s)
	sssp	Includes 'sssp' (EXPERIMENTAL) engine in selection of routing engines
	torus-2QoS	Includes 'torus-2QoS' engine in selection of routing engines
	updn	Includes 'updn' engine in selection of routing engines
	chain	Includes 'chain' engine in selection of routing engines
	pqft	
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) #`	
Related Commands		
Notes		

4.2.25 ib sm routing-threads-num

	ib sm routing-threads-num <int> no ib sm routing-threads-num Configures number of CPUs to use for parallel calculations. The no form of the command resets the parameter to its default.	
Syntax Description	int	Range: 1-8
Default	1	
Configuration Mode	config	

History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # ib sm routing-threads-num 5`
Related Commands	show ib sm routing-threads-num
Notes	

4.2.26 show ib sm routing-threads-num

	show ib sm routing-threads-num Displays number of CPUs configured to use for parallel calculations.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # show ib sm routing-threads-num` `5`
Related Commands	ib sm routing-threads-num
Notes	

4.2.27 ib sm scatter-ports

	ib sm scatter-ports Assigns ports in a random order instead of round-robin.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) #`
Related Commands	
Notes	

4.2.28 ib sm smp-window

	ib sm smp-window <value> no ib sm smp-window Sets the maximum number of SMPs sent in parallel. The no form of the command resets this parameter to its default.

Syntax Description	value	0-256
Default	8	
Configuration Mode	config	
History	2.6	
Example	`UFM-APL (config) # ib sm smp-window 10`	
Related Commands	show ib sm smp-windows	
Notes		

4.2.29 show ib sm smp-window

	show ib sm smp-window Displays the maximum number of SMPs sent in parallel.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	2.6
Example	`UFM-APL (config) # show ib sm smp-window` `10`
Related Commands	ib sm smp-window
Notes	

4.2.30 ib sm ufm-events

	ib sm ufm-events {all | security} no ib sm ufm-events Configures which traps the SM sends to the UFM. The no form of the command configures that no traps are sent to the UFM (i.e. "none").	
Syntax Description	all	Sends all traps to the UFM
	security	Sends security traps to the UFM only
Default	0xffff	
Configuration Mode	config	
History	4.2.0	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sm ufm-events security`	
Related Commands	show ib sm ufm-events	
Notes		

4.2.31 show ib sm ufm-events

	show ib sm ufm-events Displays the types of traps configured to be sent to the UFM by the SM.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.2.0
Example	UFM-APL [mgmt-ha-active] (config) # show ib sm ufm-events Determines which Subnet Manager traps will be sent to UFM: security
Related Commands	ib sm ufm-events
Notes	

4.2.32 ib sm use-ucast-cache enable

	ib sm use-ucast-cache enable Allows SM to use cached routine data (LMC=0 only).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	ufmapl [mgmt-ha-active] (config) #
Related Commands	
Notes	

4.2.33 ib sm virtualization enable

	ib sm virtualization enable no ib sm virtualization enable Enables virtualization on all supported ports (default). The no form of the command disables virtualization on all supporting ports.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	2.6
Example	UFM-APL [mgmt-ha-active] (config) # ib sm virtualization enable

Related Commands	show ib sm virtualization
Notes	It is not possible to modify the virtualization support in case OpenSM or UFM are running.

4.2.34 ib sm virtualization ignore

	ib sm virtualization ignore No virtualization support.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	2.6
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sm virtualization ignore`
Related Commands	show ib sm virtualization
Notes	It is not possible to modify the virtualization support in case OpenSM or UFM are running.

4.2.35 show ib sm virtualization

	show ib sm virtualization Displays virtualization support.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	2.6
Example	`UFM-APL [ mgmt-ha-active ] (config) # show ib sm virtualization ignore`
Related Commands	ib sm virtualization enable ib sm virtualization ignore
Notes	

4.2.36 ib sm virt-max-ports-in-process

	ib sm virt-max-ports-in-process <value> no ib sm virt-max-ports-in-process Sets the maximum number of ports to be processed simultaneously. The no form of the command resets this parameter to its default.	
Syntax Description	value	Range: 1-65535
Default	64	

Configuration Mode	config
History	2.6
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sm virt-max-ports-in-process 20`
Related Commands	show ib sm virt-max-ports-in-process
Notes	

4.2.37 show ib sm virt-max-ports-in-process

	show ib sm virt-max-ports-in-process Displays the maximum number of ports to be processed simultaneously.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	2.6
Example	`UFM-APL (config) # show ib sm virt-max-ports-in-process` `20`
Related Commands	ib sm virt-max-ports-in-process
Notes	

4.2.38 ufm multi-port-sm

	ufm multi-port-sm enable ufm multi-port-sm ha-enable no ufm multi-port-sm enable Enables configuring OpenSM with multiple GUIDs. The no form of the command disables configuring OpenSM with multiple GUIDs.
Syntax Description	enable - enables configuring OpenSM with multiple GUIDs ha-enable - enables multi-port SM with high availability
Default	Disabled
Configuration Mode	config
History	4.3.0
Example	`ufm [ mgmt-sa ] (config) # ufm multi-port-sm enable`
Related Commands	show ufm multi-port-sm
Notes	

4.2.39 show ufm multi-port-sm

	show ufm multi-port-sm Displays whether configuring OpenSM with multiple GUIDs is enabled.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.3.0
Example	ufm [mgmt-sa] (config) # show ufm multi-port-sm Enable
Related Commands	ufm multi-port-sm enable
Notes	

4.2.40 ufm sm-static-lid

	ufm sm-static-lid <1-49151> no ufm sm-static-lid Sets a static SM LID to be used by the SM. The no form of the command resets the static SM LID to default.
Syntax Description	N/A
Default	Assigned by the SM
Configuration Mode	config
History	4.5.0
Example	ufm [mgmt-sa] (config) # ufm sm-static-lid 20
Related Commands	show ufm sm-static-lid
Notes	

4.2.41 show ufm sm-static-lid

	show ufm sm-static-lid Displays the static SM LID.
Syntax Description	N/A
Default	Assigned by the SM
Configuration Mode	Any configuration mode
History	4.5.0
Example	ufm [mgmt-sa] (config) # show ufm sm-static-lid Static SM LID: 20

Related Commands	ufm sm-static-lid
Notes	

4.3 InfiniBand Router

4.3.1 ib router set-num-of-subnets

	ib router set-num-of-subnets <command-options> Configures system profile to InfiniBand, allowing multiple switch IDs.	
Syntax Description	hostname	IB router hostname or IP address
	username	IP router username
	password	IB router user password
	num-of-subnets	Specified number of subnets (AKA SWIDs) to be initialized by the system. Range: 2-6.
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib router set-num-of-subnets --hostname 10.10.1.12 --username admin --password admin --num-of-subnets 6`	
Related Commands		
Notes	As a result of running this command, reboot is performed and all configuration is removed.	

4.3.2 ib router add-interfaces-to-subnet

	ib router add-interfaces-to-subnet <command-options> Maps an interface to a subnet and enables it.	
Syntax Description	hostname	IB router hostname or IP address
	username	IP router username
	password	IB router user password
	interface | interface-range	Single IB interface or range of IB interfaces. Single IB interface: 1/<interface> Range of IB interfaces: 1/<interface>-1/<interface>
	subnet	Name of IB subnet (i.e. SWID): infiniband-default, infiniband-1…infiniband-5
Default	N/A	
Configuration Mode	config	
History	1.6	

Example	UFM-APL [mgmt-ha-active] (config) # ib router add-interfaces-to-subnet --hostname 10.10.1.12 --username admin --password admin --interface 1/1-1/6 --subnet infiniband-1
Related Commands	
Notes	

4.3.3 ib router remove-interfaces-from-subnet

	ib router remove-interfaces-from-subnet <command-options> Unmaps an interface from a subnet after it has been disabled.	
Syntax Description	hostname	IB router hostname or IP address
	username	IP router username
	password	IB router user password
	interface | interface-range	Single IB interface or range of IB interfaces. Single IB interface: 1/<interface> Range of IB interfaces: 1/<interface>-1/<interface>
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	UFM-APL [mgmt-ha-active] (config) # ib router remove-interfaces-from-subnet --hostname 10.10.1.12 --username admin --password admin --interface 1/6	
Related Commands		
Notes		

4.3.4 ib router add-subnet-to-router

	ib router add-subnet-to-router <command-options> Creates routing on IB subnet interface and enables routing on that interface.	
Syntax Description	hostname	IB router hostname or IP address
	username	IP router username
	password	IB router user password
	subnet	Name of IB subnet (i.e. SWID): infiniband-default, infiniband-1…infiniband-5
Default	N/A	
Configuration Mode	config	
History	1.6	

Example	UFM-APL [mgmt-ha-active] (config) # ib router add-subnet-to-router --hostname 10.10.1.12 --username admin --password admin --subnet infiniband-3
Related Commands	
Notes	As a result of running his command, the set of commands that allow control of IB router functionality will be enabled.

4.3.5 ib router remove-subnet-from-router

	ib router remove-subnet-from-router <command-options> Destroys routing on IB subnet interface after routing on that interface has been disabled.	
Syntax Description	hostname	IB router hostname or IP address
	username	IP router username
	password	IB router user password
	subnet	Name of IB subnet (i.e. SWID): infiniband-default, infiniband-1…infiniband-5
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	UFM-APL [mgmt-ha-active] (config) # ib router remove-subnet-from-router --hostname 10.10.1.12 --username admin --password admin --subnet infiniband-default	
Related Commands		
Notes		

4.3.6 ib router set-ufm-sm-router-support

	ib router set-ufm-sm-router-support <command-options> Configures OpenSM with IB subnet prefix.	
Syntax Description	-c <subnet prefix>]	Configure new IB subnet prefix. Should be followed by new IB router subnet prefix value.
	-r	Reset to default
	-h	Show help
Default	N/A	
Configuration Mode	config	
History	1.6	
Example	UFM-APL [mgmt-ha-active] (config) # ib router set-ufm-sm-router-support -c 0xfec0000000001234	

Related Commands	
Notes	• -c <subnet prefix> is used for updating OpenSM configuration file with new subnet prefix and forces OpenSM to re-read configuration • -r is used for resetting OpenSM configuration to default value and canceling IB routing

4.4 NVIDIA SHARP

- SHARP Aggregation Manager
- SHARP Configuration in OpenSM
- SHARP API

4.4.1 SHARP Aggregation Manager

4.4.1.1 ib sharp enable

	ib sharp enable no ib sharp enable Enables NVIDIA® Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™. The no form of the command disables NVIDIA SHARP.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp enable`
Related Commands	show ib sharp
Notes	

4.4.1.2 ib sharp allocation enable

	ib sharp allocation enable no ib sharp allocation enable Enables NVIDIA SHARP allocation reservation. The no form of the command disables NVIDIA SHARP allocation reservation.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.3.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp allocation enable`
Related Commands	show ib sharp

Notes	

4.4.1.3 ib sharp job-pkey-on-tree enable

	ib sharp job-pkey-on-tree enable no ib sharp job-pkey-on-tree enable Enable setting job PKEY on the aggregation tree allocated for the job. The no form of the command disables setting job PKEY on the aggregation tree allocated for the job.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.5.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp job-pkey-on-tree enable`
Related Commands	show ib sharp
Notes	

4.4.1.4 ib sharp smx-protocol

	ib sharp smx-protocol {sockets | ucx} no ib sharp smx-protocol Configures network protocol to be used by SMX. The no form of the command resets this parameter to its default value.
Syntax Description	N/A
Default	sockets
Configuration Mode	config
History	4.3.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp smx-protocol ucx`
Related Commands	show ib sharp
Notes	

4.4.1.5 ib sharp smx-sock-interface

	ib sharp smx-sock-interface {eth0 | eth1} no ib sharp smx-sock-interface Sets the socket interface to be used by SMX. The no form of the command resets this parameter to its default value.
Syntax Description	N/A

Default	The first interface found in UP state is used	
Configuration Mode	config	
History	1.6	First release
	4.5.0	Updated command from `ib sharp interface` to `ib sharp smx-sock-interface`
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp smx-sock-interface eth0`	
Related Commands	show ib sharp	
Notes		

4.4.1.6 ib sharp smx-sock-port

	ib sharp smx-sock-port <1-65535> no ib sharp smx-sock-port Sets the socket port to be used by SM The no form of the command resets this parameter to its default value.	
Syntax Description	N/A	
Default	6126	
Configuration Mode	config	
History	1.6	First release
	4.5.0	Updated command from `ib sharp port` to `ib sharp smx-sock-port`
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp smx-sock-interface 636`	
Related Commands	show ib sharp	
Notes		

4.4.1.7 ib sharp smx-ucx-interface

	ib sharp smx-ucx-interface {ib0 | ib1} no ib sharp smx-ucx-interface Sets the UCX interface to be used by SMX. The no form of the command resets this parameter to its default value.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.5.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib sharp smx-ucx-interface ib0`

Related Commands	show ib sharp
Notes	

4.4.1.8 ib sharp topology-api enable

	ib sharp topology-api enable no ib sharp topology-api enable Enables the SHARP topology API. The no form of the command disables NVIDIA SHARP topology API.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.5.1
Example	`ufm-apl [ mgmt-ha-active ] (config) # ib sharp topology-api enable`
Related Commands	show ib sharp
Notes	

4.4.1.9 show ib sharp

	show ib sharp Displays the configuration of NVIDIA SHARP Aggregation Manager.	
Syntax Description	N/A	
Default	N/A	
Configuration Mode	config	
History	1.6	
	4.3.0	Updated output
	4.5.0	Updated output
	4.5.1	Updated output

Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp`
	
	`SHArP Aggregation Manager:`
	`  Enabled:  No`
	`  Allocation:  No`
	`  SMX socket interface:  default`
	`  SMX UCX interface:  default`
	`  SMX socket port:  6126`
	`  SMX protocol:  sockets`
	`  Job PKEY on tree:  No`
	`  Topology API:  No`	

Related Commands		
Notes		

4.4.1.10 show ib sharp log

	show ib sharp log Displays NVIDIA SHARP log file in a scrollable pager.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp log`
Related Commands	
Notes	

4.4.1.11 show ib sharp log continuous

	show ib sharp log continuous Displays new NVIDIA SHARP log messages as they happen.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp log continuous`
Related Commands	
Notes	

4.4.1.12 show ib sharp log files

	show ib sharp log files Displays archived log files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp log files`
Related Commands	
Notes	

4.4.1.13 show ib sharp log matching

	show ib sharp log matching <reg-exp> Display NVIDIA SHARP logs that match a given regular expression.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp log matching error`
Related Commands	
Notes	

4.4.1.14 show ib sharp log not matching

	show ib sharp log not matching <reg-exp> Display NVIDIA SHARP logs that do not match a given regular expression.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.6.0
Example	`ufm-apl [ mgmt-ha-active ] (config) # show ib sharp log not matching error`
Related Commands	
Notes	

4.4.2 SHARP Configuration in OpenSM

4.4.2.1 ib sm sharp enable

	ib sm sharp enable no ib sm sharp enable Enables NVIDIA® Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)™ on all supporting switches. The no form disables NVIDIA SHARP on all supporting switches.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6

Example	ufmapl [mgmt-ha-active] (config) # ib sm sharp enable
Related Commands	show ib sm sharp
Notes	It is not possible to modify the NVIDIA SHARP support parameter in case OpenSM is running.

4.4.2.2 ib sm sharp ignore

	ib sm sharp ignore No NVIDIA SHARP support. This command does not change the current switch configuration. If NVIDIA SHARP is enabled on the switch, it will remain enabled. If it is disabled on the switch, it will remain disabled.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	UFM-APL [mgmt-ha-active] (config) # ib sm sharp ignore
Related Commands	show ib sm sharp
Notes	It is not possible to modify the NVIDIA SHARP support parameter in case OpenSM is running.

4.4.2.3 show ib sm sharp

	show ib sm sharp Displays NVIDIA SHARP support.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	UFM-APL [mgmt-ha-active] (config) # show ib sm sharp ignore
Related Commands	ib sm sharp enable ib sm sharp ignore
Notes	

4.4.3 SHARP API

4.4.3.1 ufm sharp-api event-query-interval

	ufm sharp-api event-query-interval <value> no ufm sharp-api event-query-interval Configure SHARP API event query interval in seconds. The no form of the command resets this value to its default.	
Syntax Description	value	Range: 1-1000 seconds
Default	5 seconds	
Configuration Mode	config	
History	4.6.0	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ufm sharp-api event-query-interval 10`	
Related Commands	show ufm sharp-api	
Notes	Please stop UFM before performing attempting to change the event query interval value.	

4.4.3.2 ufm sharp-api event-query-retries

	ufm sharp-api event-query-retries <value> no ufm sharp-api event-query-retries Configure SHARP API event query retries. The no form of the command resets this value to its default.	
Syntax Description	value	Range: 1-1000
Default	3	
Configuration Mode	config	
History	4.6.0	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ufm sharp-api event-query-retries 11`	
Related Commands	show ufm sharp-api	
Notes	Please stop UFM before performing attempting to change the event query interval value.	

4.4.3.3 show ufm sharp-api

	show ufm sharp-api Displays UFM SHARP API settings
Syntax Description	N/A
Default	N/A

Configuration Mode	Any configuration mode
History	4.6.0
Example	UFM-APL [mgmt-ha-active] (config) # show ufm sharp-api Event query retries : 3 Event query interval : 5
Related Commands	ufm sharp-api event-query-interval ufm sharp-api event-query-retries
Notes	

4.5 Partition

4.5.1 ib partition management defmember

	ib partition management defmember <type> no ib partition management defmember Sets the default membership for the management IB partition (default PKEY). The no form of the command resets the parameter to its default value.	
Syntax Description	type	• full - full membership • limited - limited membership • both - both full and limited membership
Default	Full membership	
Configuration Mode	config	
History	1.6	
Example	UFM-APL [mgmt-ha-active] (config) # ib partition management defmember limited	
Related Commands	show ib partition	
Notes	• The defmember setting controls the ability of end nodes to communicate over the management partition • It is not possible to modify the defmember in case OpenSM or UFM are running	

4.5.2 show ib partition

	show ib partition Displays partition information.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6

Example	UFM-APL [mgmt-ha-active] (config) # show ib partition management: Default membership: full MTU limit: 2KB
Related Commands	ib partition management defmember
Notes	N/A

4.5.3 ib partition management mtu-limit <2K|4K>

	ib partition management mtu-limit <2K|4K> no ib partition management mtu-limit <2K|4K> Sets the MTU limit for the default partition. The no form of the command reset the MTU limit for the default partition to default.	
Syntax Description	mtu-limit	2K|4K
Default		
Configuration Mode	config	
History	4.12.0	
Example	UFM-APL [mgmt-ha-active] (config) # no ib partition management mtu-limit 4K	
Related Commands	N/A	
Notes	N/A	

4.6 Switch Auto-provisioning

4.6.1 ib managed-switch image ppc fetch

	ib managed-switch image ppc fetch <download-url> no ib managed-switch image ppc Downloads a PPC switch image file from a remote host or a USB device. The no form deletes the PPC switch image file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch image ppc fetch scp://root@10.10.32.12/tmp/image-PPC_M460EX-3.6.3130.img Password (if required): ******** 100.0%[##]
Related Commands	
Notes	• If the downloaded image file is invalid (not an image file/has wrong architecture), it will be deleted from the hard disk. • The last file downloaded will always overwrite the existing file.

4.6.2 ib managed-switch image x86 fetch

	ib managed-switch image x86 fetch <download-url> no ib managed-switch image x86 Downloads a x86 switch image file from a remote host or a USB device. The no form deletes the x86 switch image file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch image x86 fetch scp://root@10.10.32.12/tmp/image-X86_64-3.6.3130.img Password (if required): ******** 100.0%[##]	
Related Commands		
Notes	• If the downloaded image file is invalid (not an image file/has wrong architecture), it will be deleted from the hard disk. • The last file downloaded will always overwrite the existing file.	

4.6.3 ib managed-switch configuration global fetch

	ib managed-switch configuration global fetch <download-url> no ib managed-switch configuration global Downloads a global switch configuration file from a remote host or a USB device. The no form deletes the global switch configuration file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	

History	1.5
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch configuration global fetch scp://root@10.10.32.12/tmp/global_running_config.txt Password (if required): ******** 100.0%[##]
Related Commands	
Notes	The last file downloaded will always overwrite the existing file.

4.6.4 ib managed-switch list fetch

	ib managed-switch list fetch <download-url> no ib managed-switch list Downloads a switch list file from a remote host or a USB device. The no form deletes the switch list file from the hard disk.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp:// username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch list fetch scp:// root@10.10.32.12/tmp/switch_ips.txt Password (if required): ******** 100.0%[##]	
Related Commands		
Notes	The last file downloaded will always overwrite the existing file.	

4.6.5 ib managed-switch settings fetch

	ib managed-switch settings fetch <download-url> Downloads a switch-auto-provisioning-settings file from a remote host or a USB device.	
Syntax Description	download-url	The URL path from where the image file can be downloaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp:// username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	

Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch settings fetch scp:// root@10.10.32.12/tmp/switch_auto_provisioning.ini Password (if required): ******** 100.0%[##]
Related Commands	
Notes	The last file downloaded will always overwrite the existing file.

4.6.6 ib managed-switch settings upload

	ib managed-switch settings upload <upload-url> Uploads the switch-auto-provisioning-settings file to a remote host or a USB device.	
Syntax Description	upload-url	The URL path from where the image file can be uploaded. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp:// username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch settings upload scp:// root@10.10.32.12/tmp/switch_auto_provisioning.ini Password (if required): ********	
Related Commands		
Notes		

4.6.7 ib managed-switch settings admin-password

	ib managed-switch settings admin-password <password> no ib managed-switch settings admin-password Sets the admin password to use with switch auto provisioning. The no form resets the admin password used for switch auto provisioning to its default.	
Syntax Description	password	The admin password to use with switch auto provisioning
Default	admin	
Configuration Mode	config	
History	1.5	
Example	ufmapl [mgmt-ha-active] (config) # ib managed-switch settings admin- password Password: ********* Confirm: ********* ufmapl [mgmt-ha-active] (config) #	
Related Commands		

Notes	The password argument can either be provided as a clear text, or as encrypted text.

4.6.8 ib managed-switch settings reboot-timeout

	ib managed-switch settings reboot-timeout <time> no ib managed-switch settings reboot-timeout Sets the reboot timeout to use with switch auto-provisioning. The no form of the command restores to default.	
Syntax Description	time	Switch reboot timeout. Range: 10-180 minutes.
Default	30	
Configuration Mode	config	
History	1.5	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib managed-switch settings reboot-timeout 60`	
Related Commands	show ib managed-switch settings	
Notes		

4.6.9 ib managed-switch settings upgrade-both-partitions

	ib managed-switch settings upgrade-both-partitions no ib managed-switch settings upgrade-both-partitions Upgrades both boot partitions as part of switch auto-provisioning. The no form of the command upgrades only one boot partition.
Syntax Description	N/A
Default	upgrade-both-partitions
Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-ha-active ] (config) # ib managed-switch settings upgrade-both-partitions`
Related Commands	show ib managed-switch settings
Notes	

4.6.10 ib managed-switch auto-provisioning start

	ib managed-switch auto-provisioning start no ib managed-switch auto-provisioning start Starts the switch auto provisioning process. The no form stops the switch auto provisioning process.
Syntax Description	N/A
Default	N/A

Configuration Mode	config
History	1.5
Example	`ufmapl [ mgmt-ha-active ] (config) # ib managed-switch auto-provisioning start`
Related Commands	
Notes	

4.6.11 show ib managed-switch settings

	show ib managed-switch settings Displays the switch auto provisioning settings.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-ha-active ] (config) # show ib managed-switch settings`
	`Switch List: Loaded`
	
	`Software Image X86: 3.6.3130`
	`Software Image PPC: 3.6.3130`
	
	`Global Configuration File: Loaded`
	
	`SNMP Community: mlnxpublic`
	`Admin Password: Default Password set`
	`Reboot Timeout 30`
	`Upgrade Both Boot Partitions Yes`

Related Commands	
Notes	

4.6.12 show ib managed-switch auto-provisioning status

	show ib managed-switch auto-provisioning status Displays switch auto provisioning status and progress.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-ha-active ] (config) # show ib managed-switch auto-provisioning status`
	
	`Started: 2017-03-15 08:00:30 UTC`
	`Status: Completed`
	
	`IP Address TAG SW Upgrade Configuration`
	`---------- ---- ---------- -------------`
	`10.10.37.84 MT1452X05493 Updated Updated`
	`10.10.37.85 leaf01 Up-to-Date Not-Required`

Related Commands	

Notes	

4.6.13 show ib managed-switch list

	show ib managed-switch list Displays the content of the switch list file.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.5

Example	`ufmapl [ mgmt-ha-active ] (config) # show ib managed-switch list`
	
	`10.10.37.84`
	`10.10.37.85,leaf01`

Related Commands	
Notes	

4.7 Fabric Topology

4.7.1 ib topo-file generate

	ib topo-file generate Generates a fabric topology file and if relevant, generates IBNL files.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # ib topo-file generate`
Related Commands	ib topo-file upload
Notes	

4.7.2 ib topo-file upload

	ib topo-file upload <upload-url> Uploads the fabric topology file to a remote host or a USB device.	
Syntax Description	upload-url	Upload URL. Supported protocols: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.

Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # ib topo-file upload scp://root@192.168.1.100/tmp` `Password (if required): ******`
Related Commands	ib topo-file generate
Notes	The fabric topology file name is fabric.topo.

4.7.3 ib fabric-split generate

	ib fabric-split generate <num-of-groups> [refresh-topology] Generates an archive file containing ibdiagnet scope files.	
Syntax Description	num-of-groups	Number of groups for fabric division. Range: 2-10.
	refresh-topology	Re-discover the IB fabric before division
Default	N/A	
Configuration Mode	config	
History	4.3.0	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib fabric-split generate 3`	
Related Commands	ib fabric-split upload	
Notes		

4.7.4 ib fabric-split upload

	ib fabric-split upload <upload-url> Uploads the fabric split archive file to a remote host or a USB device.	
Syntax Description	upload-url	Upload URL. Formats supported: http, https, ftp, tftp, scp, sftp and usb. Example: scp://username[:password]@hostname/path/filename, usb:/path/filename.
Default	N/A	
Configuration Mode	config	
History	4.3.0	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib fabric-split upload scp://root@10.10.1.11/tmp`	
Related Commands	ib fabric-split generate	
Notes		

4.7.5 ib fabric-split delete

	ib fabric-split delete Deletes a fabric split archive file from the drive.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	4.3.0
Example	`ufmapl [ mgmt-ha-active ] (config) # ib fabric-split delete`
Related Commands	ib fabric-split generate
Notes	

4.8 SA_Key

- SAETM
- UFM Configuration

4.8.1 SAETM

4.8.1.1 ib sm sa-enhanced-trust-model

	ib sm sa-enhanced-trust-model no ib sm sa-enhanced-trust-model Enables the SA Enhanced Trust Model (SAETM). The no form of the command disables the SAETM.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm sa-enhanced-trust-model`
Related Commands	show ib sm sa-enhanced-trust-model
Notes	

4.8.1.2 ib sm sa-etm-max-num-event-subs

	ib sm sa-etm-max-num-event-subs <event-subscriptions> no ib sm sa-etm-max-num-event-subs Sets the SAETM maximum number of event subscriptions. The no form of the command resets to the default value.

Syntax Description	event-subscriptions	SAETM maximum number of event subscriptions. Range: 1-4294967295; 0=unlimited.
Default	32	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm sa-etm-max-num-event-subs 64`	
Related Commands	show ib sm sa-etm-max-num-event-subs	
Notes		

4.8.1.3 ib sm sa-etm-max-num-mcast-groups

	ib sm sa-etm-max-num-mcast-groups <multicast-groups> no ib sm sa-etm-max-num-mcast-groups Sets the SAETM maximum number of multicast groups. The no form of the command resets to the default value.	
Syntax Description	multicast-groups	SAETM maximum number of multicast groups. Range: 1-4294967295; 0=unlimited.
Default	128	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm sa-etm-max-num-mcast-groups 256`	
Related Commands	show ib sm sa-etm-max-num-mcast-groups	
Notes		

4.8.1.4 ib sm sa-etm-max-num-services

	ib sm sa-etm-max-num-services <number-of-services> no ib sm sa-etm-max-num-services Sets the SAETM maximum number of services. The no form of the command resets to the default value.	
Syntax Description	number-of-services	SAETM maximum number of services Range: 1-4294967295; 0=unlimited.
Default	32	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm sa-etm-max-num-services 64`	

Related Commands	show ib sm sa-etm-max-num-services
Notes	

4.8.1.5 show ib sm sa-enhanced-trust-model

	show ib sm sa-enhanced-trust-model Displays the SA enhanced trust model (SAETM) state.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # show ib sm sa-enhanced-trust-model` `disable`
Related Commands	ib sm sa-enhanced-trust-model
Notes	

4.8.1.6 show ib sm sa-etm-max-num-event-subs

	show ib sm sa-etm-max-num-event-subs Displays the SAETM maximum number of event subscriptions.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # show ib sm sa-etm-max-num-event-subs` `32`
Related Commands	ib sm sa-etm-max-num-event-subs
Notes	

4.8.1.7 show ib sm sa-etm-max-num-mcast-groups

	show ib sm sa-etm-max-num-mcast-groups Displays the SAETM maximum number of multicast groups.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6

Example	ufmapl [mgmt-ha-active] (config) # show ib sm sa-etm-max-num-mcast-groups 128
Related Commands	ib sm sa-etm-max-num-mcast-groups
Notes	

4.8.1.8 show ib sm sa-etm-max-num-services

	show ib sm sa-etm-max-num-services Displays the SAETM maximum number of services.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	ufmapl [mgmt-ha-active] (config) # show ib sm sa-etm-max-num-services 32
Related Commands	ib sm sa-etm-max-num-services
Notes	

4.8.2 UFM Configuration

4.8.2.1 ufm randomize-sa-key

	ufm randomize-sa-key no ufm randomize-sa-key Enables SA key randomization. The no form disables the SA key randomization.
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	ufmapl [mgmt-ha-active] (config) # ufm randomize-sa-key
Related Commands	show ufm randomize-sa-key
Notes	

4.8.2.2 show ufm randomize-sa-key

	show ufm randomize-sa-key Displays the state of the SA key randomization (Enabled/Disabled).
Syntax Description	N/A
Default	N/A
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # show ufm randomize-sa-key` `disable`
Related Commands	ufm randomize-sa-key
Notes	

4.9 MKey

4.9.1 ufm mkey-per-port

	ufm mkey-per-port no ufm mkey-per-port Enables MKey per port enforcement. The no form of the command disables the feature.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # ufm mkey-per-port`
Related Commands	show ufm mkey-per-port
Notes	

4.9.2 show ufm mkey-per-port

	show ufm mkey-per-port Displays MKey per port enforcement state.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6

Example	ufmapl [mgmt-ha-active] (config) # show ufm mkey-per-port disable
Related Commands	ufm mkey-per-port
Notes	

4.9.3 ufm mkey-global-seed

	ufm mkey-global-seed <seed> no ufm mkey-global-seed Sets the seed for the global MKey used by SM. The no form of the command resets the seed for the global MKey to the default value.	
Syntax Description	seed	Global MKey used by SM. Format: 64-bit hexadecimal. Example: 0x0000000000a12c30.
Default	0x0000000000000000	
Configuration Mode	config	
History	1.6	
Example	ufmapl [mgmt-ha-active] (config) # ufm mkey-global-seed 0x0000000000a12c30	
Related Commands	show ufm mkey-global-seed	
Notes		

4.9.4 show ufm mkey-global-seed

	show ufm mkey-global-seed Displays the seed for the global MKey used by SM.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	ufmapl [mgmt-ha-active] (config) # show ufm mkey-global-seed 0x0000000000000000
Related Commands	ufm mkey-global-seed
Notes	

4.9.5 ib sm mkey-lease-period

	ib sm mkey-lease-period <time> no ib sm mkey-lease-period Sets the lease period used when MKey is non-zero. The no form on the command resets the MKey lease period to the default value.	
Syntax Description	time	Lease period used when MKey is non-zero. Range: 1-65535 seconds; 0=unlimited.
Default	60 seconds	
Configuration Mode	config	
History	1.6	
Example	`ufmapl [ mgmt-ha-active ] (config) # ib sm mkey-lease-period 90`	
Related Commands	show ib sm mkey-lease-period	
Notes		

4.9.6 show ib sm mkey-lease-period

	show ib sm mkey-lease-period Displays the MKey lease period.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	1.6
Example	`ufmapl [ mgmt-ha-active ] (config) # show ib sm mkey-lease-period` `90`
Related Commands	ib sm mkey-lease-period
Notes	

4.10 HCA Commands

4.10.1 ib hca-smp-window

	ib hca-smp-window <value> no ib hca-smp-window Sets the maximum number of SMPs sent in HCA. The no form of the command resets this parameter to its default.	
Syntax Description	value	Range: 0-256

Default	128
Configuration Mode	config
History	4.4.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib hca-smp-window 128`
Related Commands	show ib hca-smp-window
Notes	UFM system must be rebooted to apply the new configuration

4.10.2 ib hca-vl15-window

	ib hca-vl15-window <value> no ib hca-vl15-window Sets the HCA VL15 port receive buffer size. The no form of the command resets this parameter to its default.	
Syntax Description	value	1,2,4,8,16,32,64,128
Default	1	
Configuration Mode	config	
History	4.4.0	
Example	`UFM-APL [ mgmt-ha-active ] (config) # ib hca-vl15-window 1`	
Related Commands	show ib hca-vl15-window	
Notes	UFM system must be rebooted to apply the new configuration	

4.10.3 ufm hca-grouping enable

	ufm hca-grouping enable no ufm hca-grouping enable Enables HCA grouping. The no form of the command disables HCA grouping.
Syntax Description	N/A
Default	Disabled
Configuration Mode	config
History	4.5.0

Example	`UFM-APL [ mgmt-ha-active ] (config) # ufm hca-grouping enable`
	`WARNING. Enabling multi-NIC grouping will cause reset of`
	`your fabric network configuration (PKEY and QoS configuration).`
	`You will have to redefine your network PKEYs and QoS configuration`
	`(PKEY->GUIDs and QoS->GUIDs association) after applying the script.`
	`Are you sure you wish to proceed? [yes/no] yes`

Related Commands	show ufm hca-grouping
Notes	To use this capability, it is recommended for users to use this command after performing software upgrade.

4.10.4 show ib hca-smp-window

	show ib hca-smp-window Displays the configured maximum number of SMPs sent in HCA.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.4.0

Example	`UFM-APL [ mgmt-ha-active ] (config) # show ib hca-smp-window`
	`Running configuration: 128`
	`User configuration:    256`
	`Please reload machine to load new configurations.`

Related Commands	ib hca-smp-window
Notes	The example shows an instance where the system has not been rebooted after implementing new configuration

4.10.5 show ib hca-vl15-window

	show ib hca-vl15-window Displays the configured HCA VL15 port receive buffer size.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.4.0

Example	`UFM-APL [ mgmt-ha-active ] (config) # show ib hca-vl15-window`
	`Running configuration: 1`
	`User configuration:    64`
	`Please reload machine to load new configurations.`

Related Commands	ib hca-vl15-window
Notes	The example shows an instance where the system has not been rebooted after implementing new configuration

4.10.6 show ufm hca-grouping

	show ufm hca-grouping Displays UFM HCA grouping configuration.
Syntax Description	N/A
Default	N/A
Configuration Mode	Any configuration mode
History	4.5.0
Example	`UFM-APL [ mgmt-ha-active ] (config) # show ufm hca-grouping` `  HCA grouping: Yes`
Related Commands	ufm hca-grouping enable
Notes	

5 Document Revision History

Revision and	Date	Description
4.15.0	May 5, 2024	Added docker prune image
4.15.0	Feb 8, 2024	No changes
4.14.2	Jan 5, 2024	No changes
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4.12.0	May 8, 2023	Updated: • show ib partition Added: • ib partition management mtu-limit <2K| 4K> • ufm network-fast-recovery enable • show ufm network-fast-recovery
4.11.1	Feb 19, 2023	No changes
4.11.0	Feb 6, 2023	Added ufm unhealthy-ports switch-ports-threshold Updated example in show ufm unhealthy-ports
4.10.1	Dec, 2022	Added UFM Firmware Management
4.10.0	Oct, 2022	Added: • ufm process telemetry start • ufm process telemetry restart • no ufm process telemetry start • ufm process health restart • ufm process model restart • ufm process sharp restart • ib ibaddr • ib ibping • ib ibsysstat • ib smparquery • ufm low-frequency-telemetry enable • no ufm low-frequency-telemetry enable • show ufm low-frequency-telemetry • ufm discovered-switch-ip-version • show ufm discovered-switch-ip-version

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