



System Management Commands

To use these commands in System Admin VM, you must be in a user group associated with appropriate command rules and data rules. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

- [activate advanced](#), on page 2
- [attach location](#), on page 3
- [environment](#), on page 4
- [fpd auto-upgrade](#), on page 6
- [interface](#), on page 7
- [logging console](#), on page 8
- [mgmt](#), on page 9
- [power-mgmt action](#), on page 10
- [power-mgmt redundancy](#), on page 11
- [users](#), on page 12
- [show card-inventory](#), on page 14
- [show environment](#), on page 15
- [show fm](#), on page 18
- [show fpd package](#), on page 19
- [show logging](#), on page 23
- [show parser dump](#), on page 25
- [show rack-inventory](#), on page 26
- [show user](#), on page 27
- [show version](#), on page 28

activate advanced

To enable access to advanced system admin commands and configurations used for debugging purpose, use the **activate advanced** command in System Admin EXEC mode.

activate advanced

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines This command should not be used unless specifically requested by Cisco TAC or another Cisco support representative.

This example shows sample output from the **activate advanced** command:

```
sysadmin-vm:0_RP0# activate advanced
Advanced commands must be used carefully. Continue? [yes,NO] yes
Tue Aug 29 20:05:16.635 UTC
sysadmin-vm:0_RP0#
```

attach location

To connect to a host from a remote location, use the **attach location** command in the System Admin EXEC and XR EXEC modes.

attach location *node-id*

Syntax Description	<i>node-id</i> Specifies the target location. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.
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Command Default	None
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Command Modes	System Admin EXEC XR EXEC
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Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Users can attach the host only to RP and LC nodes.
When this command is executed, the user gets into the (low-level) shell prompt of the remote node specified.

This example shows how to attach the host to the node:

```
sysadmin-vm:0_RP0#attach location 0/RP0
exec chvrf 2 bash
^@[sysadmin-vm:0_RP0:~]$ exec chvrf 2 bash
[sysadmin-vm:0_RP0:~]$
```

environment

To configure environment parameters for the chassis, use the environment variable in the System Admin Config mode.

environment {**air-filter replaced** *date* | **router altitude** *meters*}

Syntax Description	
air-filter	Configures chassis air filter status.
replaced <i>date</i>	Specifies air filter replacement date. Enter the date using the <i>yyyy-mm-dd</i> format.
router	Configures chassis environment properties.
altitude <i>meters</i>	Specifies the chassis altitude above sea level in meters. Valid values are from 1 to 4000.

Command Default Router altitude is disabled by default.

Command Modes System Admin Config

Command History	Release	Modification
	Release 5.0.0	This command was introduced.
	Release 6.1.2	The high-altitude keyword has been replaced with the altitude <i>meters</i> keyword.

Usage Guidelines Use the **environment router altitude** *meters* command to increase the fan speed based on the specified altitude. When the altitude is above 6000 ft (1829 m), the fan speed increases.

Use the **environment air-filter replaced** *date* command to specify the date you replaced the air filter. After 6 months, you will be prompted once to replace the air filter if you receive a high-temperature alarm:

```
%PKT_INFRA-FM-6-FAULT_INFO : Fan filter replacement warning :DECLARE :0: Fan Tray filter replacement interval has been exceeded. Last filter reset time 2016-07-01
```



Note The filter replacement warning is only displayed once after the first high-temperature warning.

This example shows how to configure the router altitude:

```
sysadmin-vm:0_RP0#config
sysadmin-vm:0_RP0(config)#environment router altitude 1430
sysadmin-vm:0_RP0(config)#commit
Sun Jul 30 17:49:25.310 UTC
Commit complete.
```

This example shows how to configure the router air-filter replacement date:

```
sysadmin-vm:0_RP0(config)#environment air-filter replaced 2016-07-30
```

```
sysadmin-vm:0_RP0(config)#commit  
Sun Jul 30 17:49:53.312 UTC  
Commit complete.
```

fpd auto-upgrade

To enable the automatic upgrade of FPD images during a software upgrade, use the **fpd auto-upgrade** command in System Admin Config mode. To disable automatic FPD upgrades, use the **no** form of this command.

```
fpd auto-upgrade [{disable | enable}]
no fpd auto-upgrade
```

Syntax Description	<p>disable Disables automatic upgrade of FPD images.</p> <p>enable Enables automatic upgrade of FPD images.</p>				
Command Default	FPD automatic upgrade is disabled by default.				
Command Modes	System Admin Config				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 5.0.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 5.0.0	This command was introduced.
Release	Modification				
Release 5.0.0	This command was introduced.				
Usage Guidelines	<p>Users are recommended to enable automatic upgrade of FPD on the system.</p> <p>This example shows how to enable fpd auto-upgrade:</p> <pre>sysadmin-vm:0_RP0#config sysadmin-vm:0_RP0(config)#fpd auto-upgrade enable sysadmin-vm:0_RP0(config)# commit Sat Aug 31 00:39:44.503 UTC Commit complete. sysadmin-vm:0_RP0(config)# end</pre>				

interface

To configure the management interface, use the **interface** command in the System Admin Config mode. To disable the management interface, use the **no** form of this command.

interface **MgmtEth** *location*

Syntax Description	<i>location</i>	Specifies the location of the management Ethernet interface.
Command Default	None	
Command Modes	System Admin Config	
Command History	Release	Modification
	Release 5.0.0	This command was introduced.
Usage Guidelines	This command is applicable only for RP nodes.	

This example shows how to configure the management ethernet interface:

```

sysadmin-vm:0_RP0# config
sysadmin-vm:0_RP0(config)# interface MgmtEth 0/RP0/0/0

sysadmin-vm:0_RP0(config-MgmtEth-0/RP0/0/0)# ipv4 address 12.28.59.104/16

sysadmin-vm:0_RP0(config-MgmtEth-0/RP0/0/0)# default-gw 12.28.0.1
sysadmin-vm:0_RP0(config-MgmtEth-0/RP0/0/0)#commit
Wed Aug 28 17:56:25.562 UTC
Commit complete.
sysadmin-vm:0_RP0(config-MgmtEth-0/RP0/0/0)#end
Wed Aug 28 17:56:28.307 UTC
sysadmin-vm:0_RP0# show running-config interface MgmtEth
Wed Aug 28 17:56:32.444 UTC
interface MgmtEth 0/RP0/0/0
  ipv4 address 12.28.59.104/16
  default-gw 12.28.0.1
!
sysadmin-vm:0_RP0#

```

logging console

To modify message logging facilities for a group, use the **logging console** command in the System Admin Config mode. To disable message logging facilities, use the **no** form of this command.

logging console {**alert** | **critical** | **debug** | **disable** | **emergency** | **error** | **informational** | **notice** | **warning**}
no logging console

Syntax Description		
	alert	Indicates immediate action is required
	critical	Indicates critical conditions.
	debug	Indicates debugging messages.
	disable	Disables logging.
	emergency	Indicates that the system is unusable.
	error	Indicates error conditions.
	informational	Indicates informational messages.
	notice	Indicates normal but significant conditions.
	warning	Indicated warning conditions.

Command Default Logging is set to Warning.

Command Modes System Admin Config

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Use the **logging console** command to prevent debugging messages from flooding your screen. The logging console is for the console terminal. Use the **logging console disable** command to disable console logging completely. Use the **no logging console** command to return the configuration to the default setting.

This example shows how to disable logging:

```
sysadmin-vm:0_RP0#config
sysadmin-vm:0_RP0(config)# logging console disable
```


mgmt

To configure IP address of the management interface, use the **mgmt** command in the System Admin Config mode. To clear the IP address assigned to the management interface, use the **no** form of this command.

mgmt {**ipv4** [{*A.B.C.D/subnet_bits* | *A.B.C.D subnet_ip*}] | **ipv6** [{*IPv6address/prefix* | *Address Prefix_ipv6 address*}]}

Syntax Description		
ipv4		Specifies an IPv4 address.
ipv6		Specifies an IPv6 address.
<i>A.B.C.D/subnet_bits</i>		Assigns an IPv4 address and subnet mask to the interface in the specified format.
<i>A.B.C.D subnet_ip</i>		Assigns an IPv4 address and subnet mask to the interface in the specified format.
<i>IPv6address/prefix</i>		Assigns an IPv6 address and prefix in the specified format.
<i>Address Prefix_ipv6 address</i>		Assigns an IPv6 address and prefix in the specified format.

Command Default None

Command Modes System Admin Config

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines This command does not configure the physical management interface. It is similar to configuring ipv4 or ipv6 virtual address to the management interfaces.

This example shows how to configure the IP address of the management interface:

```
sysadmin-vm:0_RP0# config
sysadmin-vm:0_RP0(config)# mgmt ipv4 12.28.59.104/16
sysadmin-vm:0_RP0(config)# commit
Sat Aug 31 00:41:20.910 UTC
Commit complete.
sysadmin-vm:0_RP0(config)# end
Sat Aug 31 00:41:21.211 UTC
sysadmin-vm:0_RP0#
```

power-mgmt action

To control the power budget so as to not exceed the power capacity, use the **power-mgmt action** command in the System Admin Config mode. To disable the power budget control, use the **no** form of this command.

power-mgmt action disable location *chassis-id*

Syntax Description	disable	Disables the power budget control.
	location <i>chassis-id</i>	Specifies the target location to disable the power budget control. Enter the chassis identifier.

Command Default Power budget control is enabled by default.

Command Modes System Admin Config

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Power-management action is done at the chassis level.

This example shows you how to disable the chassis power management control:

```
sysadmin-vm:0_RP0# config
sysadmin-vm:0_RP0(config)# power-mgmt action disable location 10
```

power-mgmt redundancy

To disable power tray level redundancy and convert to power module redundancy, use the **power-mgmt redundancy-num-pms** command in the System Admin Config mode. To restore default power tray level redundancy, use the **no** form of this command.

```
power-mgmt redundancy-num-pms [integer]
no power-mgmt redundancy-num-pms [integer]
```

Syntax Description

integer Number of redundant power modules that the user wants to configure. The total number of functioning power modules in the system is at least *integer* number more than the number of power modules needed to support the power required for all the cards in the system. Range of *integer* is from 0 to 12. 0 means no power redundancy is required.

Command Default

Power tray level redundancy is the default option.

The router has two power shelves where each power shelf contains three power trays for LCC (line card chassis) and two power trays for FCC (fabric card chassis).

Power tray level redundancy indicates that both power shelves contain sufficient functioning power modules to support power required for all the cards in the system.

Command Modes

System Admin Config

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

If the system is planned to have power tray level (N+N) power redundancy, then the power redundancy mode need not be configured as that is the default mode.

If the system is planned to have power module redundancy (N+x), then this command can be used to set the number of power modules required for power redundancy.

This example shows how to disable power tray level redundancy and convert it to power module level redundancy:

```
sysadmin-vm:0_RP0#config
sysadmin-vm:0_RP0(config)#power-mgmt redundancy-num-pms 2
sysadmin-vm:0_RP0(config)#commit
Tue Sep 3 12:17:53.891 UTC
Commit complete.
```

users

To configure a user and associate the user with an authentication group, use the **user** command. To delete a user from the specified user group, use the **no** form of this command.

```
user user-name
no user user-name
```

Syntax Description	<i>user-name</i> Name of the user to be added to the users list.
---------------------------	--

Command Default	None
------------------------	------

Command History	Release Modification
	Release 5.2.3 This command was introduced.

Usage Guidelines	No specific guidelines impact the use of this command.
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Task ID	Task ID Operations
	aaa read, write

Examples

The following example shows how to add a user *user1* to the list of users in user group *grp1*:

```
sysadmin-vm:0_RP0(config)#aaa authentication groups group grp1
sysadmin-vm:0_RP0(config-group-grp1)# users user1
Wed Nov 19 15:50:11.706 UTC
sysadmin-vm:0_RP0(config-group-grp1)# commit
```

This example shows how to view that the user *user1* is successfully added to user group *grp1*:

```
sysadmin-vm:0_RP0# show running-config aaa authentication groups group grp1
Wed Nov 19 15:51:32.679 UTC
aaa authentication groups group grp1
  gid 100
  users "%_system_user_% user1"
!
```

This example shows how to delete the user *user1* from user group *grp1*:

```
sysadmin-vm:0_RP0(config-group-grp1)# no users user1
Wed Nov 19 15:53:28.961 UTC
sysadmin-vm:0_RP0(config-group-grp1)# commit
```

This example shows how to delete all the users from user group *grp1*:

```
sysadmin-vm:0_RP0(config-group-grp1)# no users
```

```
Wed Nov 19 15:55:41.121 UTC  
sysadmin-vm:0_RP0(config-group-grp1)# commit
```

show card-inventory

To display System Admin Manager card inventory information, use the **show card-inventory** command in the System Admin EXEC mode.

show card-inventory [**location** *node-id*]

Syntax Description	location <i>node-id</i> Specifies the target location. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.				
Command Default	None				
Command Modes	System Admin EXEC				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 5.0.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 5.0.0	This command was introduced.
Release	Modification				
Release 5.0.0	This command was introduced.				
Usage Guidelines	The location keyword can be used only with RP and LC nodes. However, the output displays information about all the cards (RP, LC, and FC)				

Example

This example shows sample output from the **show card-inventory** command:

```
sysadmin-vm:0_RP0# show card-inventory location 0/3

card-inventory location 0/3
SAD160801NG
  card_type      RP
  card_state     OPERATIONAL
  card_sw_state  OPERATIONAL
  card_slot      1
SAD160801NP
  card_type      RP
  card_state     OPERATIONAL
  card_sw_state  OPERATIONAL
  card_slot      0
SAD161300T6
  card_type      LC
  card_state     OPERATIONAL
  card_sw_state  OPERATIONAL
  card_slot      19
SAD1618003Z
  card_type      FABRIC
  card_state     PRESENT
  card_sw_state  UNKNOWN
  card_slot      8
SAD162001MS
  card_type      LC
.
.
.
```

show environment

To display hardware information of the router, use the **show environment** command in System Admin EXEC mode.

show environment [{**all** | **current** | **fan** | **power** | **temperatures** | **trace** | **voltages** }] [**location** *node-id*]

Syntax Description	
all	(Optional) Displays information for all environmental monitor parameters.
current	(Optional) Displays current information.
fan	(Optional) Displays information about the fan.
power	(Optional) Displays power supply voltage.
temperatures	(Optional) Displays system temperature information.
trace	(Optional) Displays trace data for environment monitoring.
voltages	(Optional) Displays system voltage information.
location <i>node-id</i>	(Optional) Node whose information you want to display. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.

Command Default All environmental monitor parameters are displayed.

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines The show environment command displays information about the hardware that is installed in the system, including fans, LEDs, system power, voltages, current, and temperature information.

This example shows how to displays current information at the specified location:

```
sysadmin-vm:0_RP0#show environment current location 0/3
```

```
=====
Location  Sensor                               Value
                               (mA)
=====
0/3
VRM12 VCC In CS                      468
VRM12 VSA In CS                      250
VRM12 VCC Out CS                    5500
VRM12 VSA Out CS                    3000
Hot Swap(HS_0) CS                   4500
VP3P3 MB CS                          1590
```

show environment

```

VP1P8 MB CS          350
VP1P0 MB CS          1010
VP0P9 MB CS          400
VP0P9_GN MB CS       20
VP1P5_DDR3 MB CS     160
VP1P05 MB CS         360
CPU VCC CS           710
VP2P5 MB CS          1110
Slice 1 VP1P0_SRDS CS 680
Slice 1 VP1P5 CS      2450
Slice 1 PITA VP1P0 CS 725
Slice 1 VP0P9 AVS A CS 2102

```

This example shows how to display fan information at the specified location:

```
sysadmin-vm:0_RP0# show environment fan location 0/FT0
```

```

=====
Location      FRU Type          Fan speed (rpm)
              FAN_0  FAN_1  FAN_2  FAN_3  FAN_4  FAN_5
=====
0/FT0         P-L-FANTRAY      2680   2720   2680   2720   2720   2720
sysadmin-vm:0_RP0#
--

```

```
sysadmin-vm:0_RP0# show environment power location 0/FC0
Fri Sep 20 02:47:11.268 UTC
```

```

=====
Location      Card Type          Power          Status
              Allocated
              Watts
=====
0/FC0         NC6-FC             150            ON

```

This example shows how to display temperature information at the specified location:

```
sysadmin-vm:0_RP0# show environment temperatures location 0/FC0
```

```

=====
Location  Sensor              Value  Crit Major Minor Minor Major Crit
              (deg C)  (Lo) (Lo) (Lo) (Hi) (Hi) (Hi)
=====
0/FC0
Inlet          27   -10  -5   0   50   60   75
HotSpot       32   -10  -5   0   95  100  105
Outlet        29   -10  -5   0   95  100  105
PCIE Die      47   -10  -5   0  105  115  120

```

This example shows how to display voltages information at the specified location:

```
sysadmin-vm:0_RP0# show environment voltages location 0/FC0
```

```

=====
Location  Sensor              Value  Crit Minor Minor Crit
              (mV)  (Lo) (Lo) (Hi) (Hi)
=====
0/FC0
Hot Swap(HS_0) VS          55309  48600  49950  58050  59400
Standby rails(IMON_0)     9975   8000   8500  11500  12210
Common rails(IMON_1)     9950   8000   8500  11500  12210
PS_0 Stdbby VP1P2        1200   1080   1110  1290   1320
PS_0-Stdbby VP3P3        3298   2970   3050  3550   3630
PS_0-Ref VP2P5           2499   2250   2310  2690   2750
PS_0-IBV DIV4            2492   2000   2215  2875   3053
PS_0-PB VP7P0 DIV2       3499   3150   3240  3760   3850

```


PS_0-PCIE VP1P8	1800	1620	1665	1935	1980
PS_0-PCIE VP0P9	900	810	830	970	990
PS_0-VP12P0	9937	8000	8500	11500	12210
PS_2 FE0 VDDC	1000	900	925	1075	1100
PS_2 FE0 TRVDD	999	900	925	1075	1100
PS_2 FE0 FTRVDD	999	900	925	1075	1100
PS_2 FE0 VP3P3	3299	2970	3050	3550	3630
PS_2 FE1 VDDC	1000	900	925	1075	1100
PS_2 FE1 TRVDD	999	900	925	1075	1100
PS_2 FE1 FTRVDD	999	900	925	1075	1100
PS_2 FE1 VP3P3	3299	2970	3050	3550	3630
PS_2-VP12P0	10031	8000	8500	11500	12210
Falafel 0 core	9925	8000	8500	11500	12210
Falafel 0 SerDes	9950	8000	8500	11500	12210
Falafel 0 3.3V	9900	8000	8500	11500	12210
Falafel 1 core	9925	8000	8500	11500	12210
Falafel 1 SerDes	9950	8000	8500	11500	12210
Falafel 1 3.3V	9925	8000	8500	11500	12210

show fm

To display fault management information, use the `show fm` command in the System Admin EXEC and XR EXEC modes.

show fm location *node-id*

Syntax Description	location <i>node-id</i> Specifies the node ID to which fault management is to be scoped. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.				
Command Default	None				
Command Modes	System Admin EXEC XR EXEC				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 5.0.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 5.0.0	This command was introduced.
Release	Modification				
Release 5.0.0	This command was introduced.				

This example shows the sample output from the **show fm** command:

```

sysadmin-vm:0_RP0# show fm location 0/3
Fri Aug 2 06:22:21.925 UTC

-----
                        Fault List Brief
-----
 subsystem   fault   fault
            type   tag    name
-----
 4           10     100   Shutdown card
 4           14     1     Temperature alarm
 4           14     2     High Voltage alarm
 4           14     3     Low Voltage alarm
 4           14     4     Sensor fault alarm
 4           14     5     out of tolerance fault
 4           14     6     I2C Access error

-----
                        Fault Detailed Info
-----
detail fm_subsystem_id 4
detail fm_fault_type 10
detail fm_fault_tag 100
detail name           "Shutdown card"
.
.
.

```

show fpd package

To display field-programmable device (FPD) package information, use the **show fpd package** command in System Admin EXEC mode.

show fpd package

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines If there are multiple FPD images for your card, use the **show fpd package** command to determine which FPD image to use if you only want to upgrade a specific FPD type.

This example shows sample output from the **show fpd package** command:

```
sysadmin-vm:0_RP0# show fpd package
```

```
=====
                                Field Programmable Device Package
                                =====
Card Type                        FPD Description                Req   SW   Min Req  Min Req
=====                        =====                        =    =    =         =
                                Reload Ver   SW Ver   Board Ver
=====                        =====                        =    =    =         =
NC6-4-10X100G-M-K                BAO-MB FPGA                    NO    1.00  1.00     0.0
                                BAO-DB FPGA                    NO    1.00  1.00     0.0
                                Slice-0 GN2411                 YES   2.07  2.07     0.0
                                Slice-1 GN2411                 YES   2.07  2.07     0.0
                                Slice-2 GN2411                 YES   2.07  2.07     0.0
                                Slice-3 GN2411                 YES   2.07  2.07     0.0
                                Slice-4 GN2411                 YES   2.07  2.07     0.0
                                S2 GN2411                     YES   2.07  2.07     0.0
                                S3 GN2411                     YES   2.07  2.07     0.0
                                S4 GN2411                     YES   2.07  2.07     0.0
                                CCC FPGA                      YES   1.14  1.14     0.0
                                CCC Power-On                  YES   1.30  1.30     0.0
                                Ethernet Switch               YES   1.32  1.32     0.0
                                BIOS FPD                      YES   9.10  9.10     0.0
                                SB Certificates               NO    1.00  1.00     0.0
-----
NC6-FC                            CCC FPGA                       YES   1.13  1.13     0.0
                                CCC Power-On                  YES   1.30  1.30     0.0
                                SB Certificates               NO    1.00  1.00     0.0
-----
NC6-10X100G-L-K                  BAO-MB FPGA                    NO    1.00  1.00     0.0
                                BAO-DB FPGA                    NO    1.00  1.00     0.0
                                S2 GN2411                     YES   3.01  3.01     2.0
                                S3 GN2411                     YES   3.01  3.01     2.0
                                S4 GN2411                     YES   3.01  3.01     2.0
                                S2 GN2411                     YES   2.07  2.07     0.0
```

show fpd package

	S3 GN2411	YES	2.07	2.07	0.0
	S4 GN2411	YES	2.07	2.07	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	SB Certificates	NO	1.00	1.00	0.0

NC6-6-10X100G-L-K	BAO-MB FPGA	NO	1.00	1.00	0.0
	BAO-DB FPGA	NO	1.00	1.00	0.0
	Slice-0 GN2411	YES	2.07	2.07	0.0
	Slice-1 GN2411	YES	2.07	2.07	0.0
	Slice-2 GN2411	YES	2.07	2.07	0.0
	Slice-3 GN2411	YES	2.07	2.07	0.0
	Slice-4 GN2411	YES	2.07	2.07	0.0
	S2 GN2411	YES	2.07	2.07	0.0
	S3 GN2411	YES	2.07	2.07	0.0
	S4 GN2411	YES	2.07	2.07	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	SB Certificates	NO	1.00	1.00	0.0

PROTO-CXP-2XPITA	BAO-MB FPGA	NO	1.00	1.00	0.0
	Slice-0 GN2411	YES	3.01	3.01	2.0
	Slice-1 GN2411	YES	3.01	3.01	2.0
	Slice-0 GN2411	YES	2.07	2.07	0.0
	Slice-1 GN2411	YES	2.07	2.07	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	SB Certificates	NO	1.00	1.00	0.0

NC6-FANTRAY	Fantray FPGA	NO	2.01	2.01	0.0

NC6-10X100G-M-P	BAO-MB FPGA	NO	1.00	1.00	0.0
	BAO-DB FPGA	NO	1.00	1.00	0.0
	Slice-0 GN2411	YES	3.01	3.01	2.0
	Slice-1 GN2411	YES	3.01	3.01	2.0
	Slice-0 GN2411	YES	2.07	2.07	0.0
	Slice-1 GN2411	YES	2.07	2.07	0.0
	Slice-2 GN2411	YES	3.01	3.01	2.0
	Slice-3 GN2411	YES	3.01	3.01	2.0
	Slice-4 GN2411	YES	3.01	3.01	2.0
	Slice-2 GN2411	YES	2.07	2.07	0.0
	Slice-3 GN2411	YES	2.07	2.07	0.0
	Slice-4 GN2411	YES	2.07	2.07	0.0
	S2 GN2411	YES	3.01	3.01	2.0
	S3 GN2411	YES	3.01	3.01	2.0
	S4 GN2411	YES	3.01	3.01	2.0
	S2 GN2411	YES	2.07	2.07	0.0
	S3 GN2411	YES	2.07	2.07	0.0
	S4 GN2411	YES	2.07	2.07	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	SB Certificates	NO	1.00	1.00	0.0

NC6-10X100G-M-K	BAO-MB FPGA	NO	1.00	1.00	0.0
	BAO-DB FPGA	NO	1.00	1.00	0.0
	S2 GN2411	YES	3.01	3.01	2.0

	S3 GN2411	YES	3.01	3.01	2.0
	S4 GN2411	YES	3.01	3.01	2.0
	S2 GN2411	YES	2.07	2.07	0.0
	S3 GN2411	YES	2.07	2.07	0.0
	S4 GN2411	YES	2.07	2.07	0.0
	CPAK bay 0 FPD	YES	1.13	1.13	0.0
	CPAK bay 1 FPD	YES	1.13	1.13	0.0
	CPAK bay 2 FPD	YES	1.13	1.13	0.0
	CPAK bay 3 FPD	YES	1.13	1.13	0.0
	CPAK bay 4 FPD	YES	1.13	1.13	0.0
	CPAK bay 5 FPD	YES	1.13	1.13	0.0
	CPAK bay 6 FPD	YES	1.13	1.13	0.0
	CPAK bay 7 FPD	YES	1.13	1.13	0.0
	CPAK bay 8 FPD	YES	1.13	1.13	0.0
	CPAK bay 9 FPD	YES	1.13	1.13	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	SB Certificates	NO	1.00	1.00	0.0

NC6-10X100G-L-P	BAO-MB FPGA	NO	1.00	1.00	0.0
	BAO-DB FPGA	NO	1.00	1.00	0.0
	Slice-0 GN2411	YES	3.01	3.01	2.0
	Slice-1 GN2411	YES	3.01	3.01	2.0
	Slice-0 GN2411	YES	2.07	2.07	0.0
	Slice-1 GN2411	YES	2.07	2.07	0.0
	Slice-2 GN2411	YES	3.01	3.01	2.0
	Slice-3 GN2411	YES	3.01	3.01	2.0
	Slice-4 GN2411	YES	3.01	3.01	2.0
	Slice-2 GN2411	YES	2.07	2.07	0.0
	Slice-3 GN2411	YES	2.07	2.07	0.0
	Slice-4 GN2411	YES	2.07	2.07	0.0
	S2 GN2411	YES	3.01	3.01	2.0
	S3 GN2411	YES	3.01	3.01	2.0
	S4 GN2411	YES	3.01	3.01	2.0
	S2 GN2411	YES	2.07	2.07	0.0
	S3 GN2411	YES	2.07	2.07	0.0
	S4 GN2411	YES	2.07	2.07	0.0
	CCC FPGA	YES	1.14	1.14	0.0
	CCC Power-On	YES	1.30	1.30	0.0
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	SB Certificates	NO	1.00	1.00	0.0

NC6-RP	CCC FPGA	YES	1.00	1.00	0.0
	CCC Power-On	YES	1.31	1.31	0.0
	Ethernet Switch	YES	1.32	1.32	0.2
	Ethernet Switch	YES	1.32	1.32	0.0
	BIOS FPD	YES	9.10	9.10	0.0
	CPU Complex FPD	YES	3.06	3.06	0.0
	SB Certificates	NO	1.00	1.00	0.0

PWR-2KW-DC-V2	DT-PrimCU	NO	6.02	6.02	0.1
	DT-Sec54vMCU	NO	6.02	6.02	0.1
	DT-Sec5vMCU	NO	6.02	6.02	0.1
	EM-PrimCU	NO	3.06	3.06	0.2
	EM-Sec54vMCU	NO	3.09	3.09	0.2
	EM-Sec5vMCU	NO	3.07	3.07	0.2

PWR-3KW-AC-V2	DT-PrimCU	NO	6.01	6.01	1.0
	DT-Sec54vMCU	NO	6.01	6.01	1.0
	DT-Sec5vMCU	NO	6.03	6.03	1.0
	EM-Sec54vMCU	NO	3.08	3.08	0.2
	EM-Sec5vMCU	NO	3.06	3.06	0.2

show fpd package

```
-----  
PROTO-CXP-1XPITA    BAO-MB FPGA          NO      1.00    1.00    0.0  
                    Slice-1 GN2411       YES     3.01    3.01    2.0  
                    Slice-1 GN2411       YES     2.07    2.07    0.0  
                    CCC FPGA           YES     1.14    1.14    0.0  
                    CCC Power-On        YES     1.30    1.30    0.0  
                    Ethernet Switch    YES     1.32    1.32    0.0  
                    BIOS FPD           YES     9.10    9.10    0.0  
                    SB Certificates    NO      1.00    1.00    0.0  
-----
```

show logging

To display the contents of the logging buffer, use the **show logging** command in System Admin EXEC mode.

```
show logging [{local location node-id| onboard {fpd| inventory| temperature| uptime| voltage}}]
```

Syntax Description	location <i>node-id</i>	(Optional) Displays system logging (syslog) messages from the specified local buffer. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.
	onboard	Displays onboard failure logging (OBFL) logging data.
	fpd	Displays OBFL FPD data.
	inventory	Displays OBFL inventory data.
	temperature	Displays OBFL temperature data.
	uptime	Displays OBFL uptime data.
	voltage	Displays OBFL voltage data.

Command Default None

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Use the **show logging** command to display the state of syslog error and event logging on the processor console. The information from the command includes the types of logging enabled and the size of the buffer.

This example shows a sample output from the **show logging** command:

```
sysadmin-vm:0_RP0#show logging local location 0/3

*****
@Location : 0/3
*****

Warning: Permanently added '192.0.76.1' (RSA) to the list of known hosts.
NULL:Jan 1 00:01:03.431 : cm[1733]: %ROUTING-TOPO-6-BAD_SVC_INFO : Bad service info from DS
NULL:Jan 1 00:01:13.073 : esd[1738]: %INFRA-ESD-6-SWITCH_OPERATIONAL : All configuraion is complete and switch is fully operational
NULL:Jan 1 00:01:15.471 : envmon[1737]: %INFRA-FM-4-FAULT_MINOR : ALARM_MINOR :I2C Access error :DECLARE :(null): MB Outlet has raised an alarm for I2C access error
NULL:Jan 1 00:01:15.988 : cm[1733]: %ROUTING-ISIS-4-ERR_BAD_PDU_FORMAT : L2 LAN IIH received from eth-vf1.3073 SNPA e050.72f4.e803 contains a format error: Unknown TLV at packet offset 48 overflows end of packet (length 51; space available 7)
NULL:Jan 1 00:01:18.909 : envmon[1737]: %INFRA-FM-4-FAULT_MINOR : ALARM_MINOR :I2C Access error :DECLARE :(null): HotSpot has raised an alarm for I2C access error
```

```
NULL:Jan 1 00:01:18.910 : envmon[1737]: %INFRA-FM-3-FAULT_MAJOR : ALARM_MAJOR :Sensor fault
alarm :DECLARE :(null): multiple sensor faults
NULL:Jan 1 00:01:28.392 : envmon[1737]: %INFRA-FM-4-FAULT_MINOR : ALARM_MINOR :I2C Access
error :CLEAR :(null): MB Outlet has cleared an alarm for I2C access error
NULL:Jan 1 00:01:28.393 : envmon[1737]: %INFRA-FM-3-FAULT_MAJOR : ALARM_MAJOR :Sensor fault
alarm :CLEAR :(null): multiple sensor faults cleared
NULL:Jan 1 00:01:29.404 : envmon[1737]: %INFRA-FM-4-FAULT_MINOR : ALARM_MINOR :I2C Access
error :CLEAR :(null): HotSpot has cleared an alarm for I2C access error
NULL:Jan 1 00:02:13.537 : cm[1733]: %ROUTING-TOPO-6-LEAD : Lead type: System lead System:
e050.72f4.df03.
NULL:Jan 1 00:02:16.673 : sdr_mgr[1744]: 0/3:Jan 1 00:02:20.502 : slice_manager[1747]:
%INFRA-SLICE-6-CLOCKING_ERR : Slice 1 : Detected loss of lock
0/3:Jan 1 00:02:36.705 : vm_manager[1751]: %INFRA-VM_MANAGER-4-INFO : Info: vm_manager
started VM default-sdr--1
```


show parser dump

To display the command-line interface (CLI) syntax options for all command modes or for a specified command mode, use the **show parser dump** command in System Admin EXEC mode.

show parser dump

Syntax Description This command has no keywords or arguments.

Command Default Displays CLI options for all command modes.

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Output for this command shows the syntax options for all commands available in the specified mode.

This example shows a sample output from the **show parser dump** command:

```
sysadmin-vm:0_RP0#show parser dump

ccc_console ccc_console location WORD
clear controller fabric counter plane all
clear controller fabric statistics plane all
clear controller switch fdb location [0/1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/F0/F1/F2/F3]
[Unknown/RP0/RP1/SC0/SC1/LC0/LC1/LC2/LC3/LC4/LC5/LC6/LC7/LC8/LC9/LC10/LC11/LC12/LC13/LC14/LC15/LC16/LC17/LC18/LC19]
[RP-SW/SC-SW/LC-SW/F-SW0/F-SW1/Unknown] all
clear controller switch mlap statistics location
[0/1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/F0/F1/F2/F3]
[Unknown/RP0/RP1/SC0/SC1/LC0/LC1/LC2/LC3/LC4/LC5/LC6/LC7/LC8/LC9/LC10/LC11/LC12/LC13/LC14/LC15/LC16/LC17/LC18/LC19]
[RP-SW/SC-SW/LC-SW/F-SW0/F-SW1/Unknown] all
clear controller switch sdr statistics location
[0/1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/F0/F1/F2/F3]
[Unknown/RP0/RP1/SC0/SC1/LC0/LC1/LC2/LC3/LC4/LC5/LC6/LC7/LC8/LC9/LC10/LC11/LC12/LC13/LC14/LC15/LC16/LC17/LC18/LC19]
[RP-SW/SC-SW/LC-SW/F-SW0/F-SW1/Unknown] all
clear controller switch statistics location
[0/1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/F0/F1/F2/F3]
[Unknown/RP0/RP1/SC0/SC1/LC0/LC1/LC2/LC3/LC4/LC5/LC6/LC7/LC8/LC9/LC10/LC11/LC12/LC13/LC14/LC15/LC16/LC17/LC18/LC19]
[RP-SW/SC-SW/LC-SW/F-SW0/F-SW1/Unknown] all
clear history
clock read-calendar
clock set time WORD
clock update-calendar
.
.
.
```

show rack-inventory

To displays the System Admin Manager rack inventory, use the **show rack-inventory** command in the System Admin EXEC mode.

show rack-inventory [**location** *node-id*]

Syntax Description	location <i>node-id</i> Specifies the target location. The <i>node-id</i> argument is expressed in the <i>rack/slot</i> notation.				
Command Default	Displays rack information for all the cards in the system.				
Command Modes	System Admin EXEC				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 5.0.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 5.0.0	This command was introduced.
Release	Modification				
Release 5.0.0	This command was introduced.				
Usage Guidelines	Used only for RP and LC cards.				

This example shows sample output from the **show rack-inventory** command:

```
sysadmin-vm:0_RP0# show rack-inventory
Fri Aug 2 06:53:39.250 UTC
rack-inventory location 0/3
  FMP12160201
  rack_number 0
rack-inventory location 0/RP0
  FMP12160201
  rack_number 0
rack-inventory location 0/RP1
  FMP12160201
  rack_number 0
```

show user

To display different users logged-in to the System Admin plane, use the **show user** command in System Admin EXEC mode.

show user

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes System Admin EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines Use the **show user** command to display different users logged-in to the System Admin plane of the router.

This example shows the sample output of the **show user** command:

```
sysadmin-vm:0_RP0#show user
```

```
Session User Context From          Date      Mode
*245    maya cli    127.0.0.1 Console 10:36:42 operational
```

show version

To display the software version, BIOS version, and build details, use the **show version** command in System Admin EXEC and XR EXEC modes.

show version

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes System Admin EXEC
XR EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines The **show version** command displays a variety of system information, including hardware and software version, router uptime, and active software.

Example

This example shows partial output from the **show version** command:

```
sysadmin-vm:0_RP0# show version

Cisco IOS XR Admin Software, Version 5.0.0.40I
Copyright (c) 2013 by Cisco Systems, Inc.

Build Information:
  Built By      : palwal
  Built On     : Tue Sep 10 07:13:26 PDT 2013
  Build Host   : iox-bld4
  Workspace    : /auto/iox-bld4-scratch2/calvados-40thr
  Version     : 5.0.0.40I
  Location     : /opt/cisco/calvados/packages/

BIOS Version  : 9.10

System uptime is 14 hours, 31 minutes
```