



Diagnosics Commands

This module provides command line interface (CLI) commands for configuring diagnostics on your router.

To use commands of this module, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using any command, contact your AAA administrator for assistance.

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diagnostic load

To load an offline diagnostic image for integrated field diagnostics, use the **diagnostic load** command in Admin EXEC mode.

diagnostic load location node-id [autostart {all|basic}]

Syntax Description	<p>location node-id Loads an offline diagnostic image for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation. All modules in the specified slot are loaded with the offline diagnostic image.</p> <p>autostart {all basic} (Optional) Starts running the diagnostic tests after the image has loaded. The following options are available:</p> <ul style="list-style-type: none"> • all—Runs all tests. • basic—Runs basic tests
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Command Default None

Command Modes Admin EXEC mode

Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.4.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.4.0	This command was introduced.
Release	Modification				
Release 3.4.0	This command was introduced.				

Usage Guidelines Use the **diagnostic load** command to load an offline diagnostic image used for integrated field diagnostics. Loading a diagnostic image places the specified card out of service.

The time it takes to load a diagnostic image varies depending on the card. Use the **show platform** command to determine if the image has been loaded and if the card has been placed out of service.



Note The distributed route processor (DRP) does not support the automatic running of tests when the image is loaded for CPU0 and CPU1. After the diagnostic image is loaded, use the **diagnostic start location node-id test {id | all | basic | non-disruptive}** command to execute the tests.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	<table border="1"> <thead> <tr> <th>Task ID</th> <th>Operations</th> </tr> </thead> <tbody> <tr> <td>diag</td> <td>execute</td> </tr> </tbody> </table>	Task ID	Operations	diag	execute
Task ID	Operations				
diag	execute				

Examples The following example shows how to load an offline diagnostic image:

```
RP/0/RP0/CPU0:router# admin
```

```
RP/0/RP0/CPU0:router(admin)# diagnostic load location 0/0/CPU0 autostart basic
```

```
diagnostic load will bring requested slot out of service. [confirm(y/n)] y
User has confirmed diagnostic load request
Preparing UUT for Diagnostics software.
Downloading IDS diagnostics image /pkg/ucode/hfr-diag-l3sp-fdiags
Downloading IDS diagnostics image /pkg/ucode/hfr-diag-l3-fdiags
Please wait for UUT image downloading ...
diagnostic load in progress.
```

Related Commands

Command	Description
show platform	Displays information and status of each node in the system.

diagnostic monitor

To configure the health-monitoring diagnostic testing for a specified location, use the **diagnostic monitor** command in administration configuration mode. To remove the specified command from the configuration file and restore the system to its default condition, use the **no** form of this command.

diagnostic monitor location *node-id* **test** {*idtest-name*} [**disable**]
no diagnostic monitor location *node-id* **test** {*idtest-name*} [**disable**]

Syntax Description

<i>node-id</i>	Location to enable diagnostic monitoring. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
test { <i>id</i> <i>test-name</i> }	Specifies diagnostic test selection. The following test selections are available: <ul style="list-style-type: none"> • <i>id</i>—Test ID . • <i>test-name</i>—Name of the test. Use the show diagnostic content command in administration EXEC mode to see a list of test names and their associated IDs.
disable	Disables diagnostic monitoring for a specified location.

Command Default

To view the default value for each test, use the **show diagnostic content** command in administration EXEC mode when the diagnostic image is first installed. The default may be different for each test.

Command Modes

Administration configuration

Command History

Release	Modification
Release 3.4.0	This command was introduced.

Usage Guidelines

Use the **diagnostic monitor** command to enable or disable health-monitoring diagnostic testing for a specified test at the specified location.

Use the **disable** keyword to disable a health-monitoring diagnostic test that is enabled by default. For example, if test 1 is enabled by default, the **disable** keyword disables the diagnostic test. If the **no** form of the command is used, the test is set to the default condition, which is enabled.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

Task ID

Task ID	Operations
diag	read, write

Examples

The following example shows how to enable health-monitoring diagnostic testing for 0/1/cpu0:

```
RP/0/RP0/CPU0:router(admin-config)# diagnostic monitor location 0/1/cpu0 test 1
```

Related Commands

Command	Description
show diagnostic content, on page 32	Displays test information including test ID, test attributes, and supported coverage test levels for each test and for all components.

diagnostic monitor interval

To configure the health-monitoring diagnostic testing for a specified interval for a specified location, use the **diagnostic monitor interval** command in administration configuration mode. To remove the specified command from the configuration file and restore the system to its default condition, use the **no** form of this command.

diagnostic monitor interval location *node-id* **test** {*idtest-name*} *number-of-days* *hour* : *minutes* : *seconds* . *milliseconds*

no diagnostic monitor interval location *node-id* **test** {*idtest-name*} *number-of-days* *hour* : *minutes* : *seconds* . *milliseconds*

Syntax Description	location <i>node-id</i>	Specifies a location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
	test { <i>id</i> <i>test-name</i> }	Specifies diagnostic test selection. The following test selections are available: <ul style="list-style-type: none"> • <i>id</i>—Test ID. • <i>test-name</i>—Test name . Use the show diagnostic content command in administration EXEC mode to see a list of test names and their associated IDs.
	<i>number-of-days</i> <i>hour:minutes:seconds.milliseconds</i>	Interval between each test run. The <i>number-of-days</i> argument specifies the number of days between testing. The range is from 0 through 20. The <i>hour:minutes:seconds.milliseconds</i> argument specifies the interval, where <i>hour</i> is a number in the range from 0 through 23, <i>minutes</i> is a number in the range from 0 through 59, <i>seconds</i> is a number in the range from 0 through 59, and <i>milliseconds</i> is a number in the range from 0 through 999.
Command Default		To view the default value for each test, use the show diagnostic content command in administration EXEC mode when the diagnostic image is first installed. The default may be different for each test.
Command Modes		Administration configuration
Command History	Release Modification	
		Release 3.4.0 This command was introduced.
Usage Guidelines		Use the diagnostic monitor interval command to set the health-monitoring interval of a specified test at the specified location. The no version of the command resets the interval to the default setting. The diagnostic monitor command is used to enable health-monitoring.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

Task ID	Task ID	Operations
	diag	read, write

Examples

The following example shows how to set the health-monitoring diagnostic testing at an interval of 1 hour, 2 minutes, 3 seconds, and 4 milliseconds for 0/1/cpu0:

```
RP/0/RP0/CPU0:router(admin-config)# diagnostic monitor interval location 0/1/cpu0 test 1 0
1:2:3.4
```

Related Commands	Command	Description
	diagnostic monitor, on page 4	Configures the health-monitoring diagnostic testing for a specified location.
	show diagnostic content, on page 32	Displays test information including test ID, test attributes, and supported coverage test levels for each test and for all components.

diagnostic monitor syslog

To enable the generation of a syslog message when any health monitoring test fails, use the **diagnostic monitor syslog** command in administration configuration mode. To remove the specified command from the configuration file and restore the system to its default condition, use the **no** form of this command.

diagnostic monitor syslog
no diagnostic monitor syslog

Syntax Description This command has no keywords or arguments.

Command Default Syslog is disabled.

Command Modes Administration configuration

Command History	Release	Modification
	Release 3.4.0	This command was introduced.

Usage Guidelines Use the **diagnostic monitor syslog** command to enable the generation of a syslog message when a health-monitoring test fails.

Task ID	Task ID	Operations
	diag	read, write

Examples The following example shows how to enable the generation of syslog messages:

```
RP/0/RP0/CPU0:router(admin-config)# diagnostic monitor syslog
```

Related Commands	Command	Description
	show diagnostic content, on page 32	Displays test information including test ID, test attributes, and supported coverage test levels for each test and for all components.

diagnostic monitor threshold

To configure the health-monitoring diagnostic testing failure threshold, use the **diagnostic monitor threshold** command in administration configuration mode. To remove the specified command from the configuration file and restore the system to its default condition, use the **no** form of this command.

```
diagnostic monitor threshold location node-id test {id|test-name} failure count failures
no diagnostic monitor threshold location node-id test {id|test-name} failure count failures
```

Syntax Description

location *node-id* Specifies a location. The *node-id* argument is entered in the *rack/slot/module* notation.

test {*id* | *test-name*} Specifies diagnostic test selection. The following test selections are available:

- *id*—Test ID.
- *test-name*—Test name .

Use the **show diagnostic content** command in administration EXEC mode to see a list of test names and their associated IDs.

failure count *failures* Specifies the number of allowable test failures. Range is 1 to 99.

Command Default

To view the default value for each test, use the **show diagnostic content** command in administration EXEC mode when the diagnostic image is first installed. The default can be different for each test.

Command Modes

Administration configuration

Command History

Release	Modification
Release 3.4.0	This command was introduced.

Usage Guidelines

Use the **diagnostic monitor threshold** command to specify health-monitoring diagnostic testing failure threshold.



Note

To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, 0/PL1/SP. PLIM diagnostic tests are supported.

Task ID

Task ID	Operations
diag	read, write

Examples

The following example shows how to set the failure threshold to 35 test failures for all tests for 0/1/cpu0:

diagnostic monitor threshold

```
RP/0/RP0/CPU0:router(admin-config)# diagnostic monitor threshold location 0/1/cpu0 test all  
failure count 35
```

Related Commands

Command	Description
show diagnostic content, on page 32	Displays test information including test ID, test attributes, and supported coverage test levels for each test and for all components.

diagnostic ondemand action-on-failure

To set when to stop test execution for a **diagnostic start** command, use the **diagnostic ondemand action-on-failure** command in Admin EXEC mode. This command is used in conjunction with the **diagnostic ondemand iteration** command.

diagnostic ondemand action-on-failure {**continue** [*failure-count*]|**stop**}

Syntax Description

continue	Specifies that test execution continues until all iterations are complete, no matter how many failures are encountered.
failure-count	(Optional) Specifies that test execution continues until the number of failures reaches the specified <i>failure-count</i> . Range is 0 to 65534. A <i>failure-count</i> of 0 indicates to not stop execution until all iterations are complete, no matter how many failures are encountered.
stop	Stops execution immediately when the first test failure occurs.

Command Default

failure-count: 0

Command Modes

Admin EXEC mode

Command History

Release	Modification
Release 3.5.0	This command was introduced.

Usage Guidelines

Use the **diagnostic ondemand action-on-failure** command to specify whether or when to stop test execution if a test fails. This command is used in conjunction with the **diagnostic ondemand iterations** command.

Task ID

Task ID	Operations
diag	execute

Examples

The following example shows how to set the test failure action to stop:

```
RP/0/RP0/CPU0:router(admin)# diagnostic ondemand action-on-failure stop
```

Related Commands

Command	Description
diagnostic ondemand iterations, on page 12	Sets the number of times to repeat execution of the diagnostic test.
diagnostic start, on page 15	Runs a specified diagnostic test.

diagnostic ondemand iterations

To set the number of times to repeat execution of the tests specified by the **diagnostic start** command, use the **diagnostic ondemand iterations** command in Admin EXEC mode.

diagnostic ondemand iterations *count*

Syntax Description	<i>count</i> Number of times to repeat the specified on-demand tests. Range is 1 to 999.
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Command Default	<i>count</i> : 1
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Command Modes	Admin EXEC mode
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Command History	Release	Modification
	Release 3.5.0	This command was introduced.

Usage Guidelines	Use the diagnostic ondemand iterations command to specify the number of times the specified on-demand tests run. The on-demand tests are specified using the diagnostic start command.
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Task ID	Task ID	Operations
	diag	execute

Examples	The following example shows how to set the number of iterations to 12:
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```
RP/0/RP0/CPU0:router(admin)# diagnostic ondemand iterations 12
```

Related Commands	Command	Description
	diagnostic ondemand action-on-failure, on page 11	Sets when to stop test execution for a diagnostic test.
	diagnostic start, on page 15	Runs a specified diagnostic test.

diagnostic schedule

To configure a diagnostic schedule, use the **diagnostic schedule** command in Admin Configuration mode. To disable the diagnostic schedule, use the **no** form of this command.

diagnostic schedule location node-id test

```
{idtest-name|all|basic|complete|minimal|non-disruptive|per-device} [{device number|all}] {daily|on
month day year|weekly day-of-week} hour:minute
```

no diagnostic schedule location node-id test

```
{idtest-name|all|basic|complete|minimal|non-disruptive|per-device} [{device number|all}] {daily|on
month day year|weekly day-of-week} hour:minute
```

Syntax Description		
location node-id	Schedules a diagnostic test for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.	
test	Specifies a specific diagnostic test, or all diagnostic tests.	
id	Specifies a test ID or list of test IDs. Use the show diagnostic content command in administration EXEC mode to see a list of test names and their associated IDs. Multiple tests can be listed if separated by semicolons (;) as follows: <ul style="list-style-type: none"> • x;y-z (for example: 1; 3-4 or 1;3;4) 	
test-name	Specifies the name of a test. Use the show diagnostic content command in administration EXEC mode to see a list of test names.	
all	Specifies all tests.	
basic	Specifies the basic on-demand test suite [Attribute = B].	
complete	Specifies the complete bootup test suite [Attribute = C].	
minimal	Specifies the minimal bootup test suite [Attribute = M].	
non-disruptive	Specifies the non-disruptive test suite [Attribute = N].	
per-device	Specifies the per-device test suite [Attribute = V].	
device number all	<p>Note This string works only with the all, basic, complete, minimal, non-disruptive, and per-device keywords.</p> <p>(Optional) Specifies the devices on which the diagnostic tests should run. The following options are available:</p> <ul style="list-style-type: none"> • <i>number</i>—Runs tests on one or more devices. The range is 1 through 8. To specify multiple devices, you can use hyphens (-) and semicolons (;); for example, 1; 3-4 or 1;3;4). • all—Runs tests on all devices. 	
daily	Specifies a daily schedule.	
on month day year	Schedules an exact date.	

weekly *day-of-week* Specifies a weekly schedule with a set day of the week. Enter the name of a day of the week or a number that specifies a day of the week in the range from 0 through 6.

hour:minute Scheduled start time, where *hour* is a number in the range from 0 through 23, and *minute* is a number in the range from 0 through 59.

Command Default No default behavior or values

Command Modes Admin Configuration mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, 0/PL1/SP. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	read, write

Examples

The following example shows how to schedule all diagnostic tests for location 0/0/CPU0 every day at 12:30 pm:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# configure
RP/0/RP0/CPU0:router(admin-config)# diagnostic schedule location 0/0/CPU0 test all daily 12:30
```

The following example shows how to schedule all bootup tests for device 1 every Sunday at 12:30 pm:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# configure
RP/0/RP0/CPU0:router(admin-config)# diagnostic schedule location 0/0/CPU0 test all daily complete device 1 weekly 12:30
```

Related Commands	Command	Description
	show diagnostic schedule, on page 44	Displays the current scheduled diagnostic tasks.

diagnostic start

To run a specified diagnostic test, use the **diagnostic start** command in Admin EXEC mode.

```
diagnostic start location node-id test
{idtest-name|all|basic|complete|minimal|non-disruptive|per-device} [{device number|all}]
```

Syntax Description					
location <i>node-id</i>	Runs diagnostic testing for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.				
test	Specifies a specific diagnostic test, or all diagnostic tests.				
id	Test ID or list of test IDs. Use the show diagnostic content command in administration EXEC mode to see a list of test names and their associated IDs. Multiple tests can be listed if separated by semicolons (;) as follows: <ul style="list-style-type: none"> • <i>x;y-z</i> (for example: 1; 3-4 or 1;3;4) 				
test-name	Name of the test. Use the show diagnostic content command in administration EXEC mode to see a list of test names.				
all	Specifies all tests.				
basic	Specifies the basic on-demand test suite [Attribute = B].				
complete	Specifies the complete bootup test suite [Attribute = C].				
minimal	Specifies the minimal bootup test suite [Attribute = M].				
non-disruptive	Specifies the nondisruptive test suite [Attribute = N].				
per-device	Specifies the per-device test suite [Attribute = V].				
device <i>number</i> all	<p>Note This string works only with the all, basic, complete, minimal, non-disruptive, and per-device keywords.</p> <p>(Optional) Specifies the devices on which the diagnostic tests should start. The following options are available:</p> <ul style="list-style-type: none"> • <i>number</i>—Start tests on one or more devices. The range is 1 through 8. To specify multiple devices, you can use hyphens (-) and semicolons (;); for example, 1; 3-4 or 1;3;4). • all—Starts tests on all devices. 				
Command Default	No default behavior or values				
Command Modes	Admin EXEC mode				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 3.3.0</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 3.3.0	This command was introduced.
Release	Modification				
Release 3.3.0	This command was introduced.				

Release	Modification
Release 3.5.0	The per-device keyword was added.

Usage Guidelines

Use the **diagnostic start** command to run a diagnostic test on a specified card.

**Note**

To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, 0/PL1/SP. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID

Task ID	Operations
diag	execute

Examples

The following example shows how to start a suite of basic diagnostic tests for a specified location:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# diagnostic start location 0/0/CPU0 test basic
```

The following example shows how to start a suite of minimal bootup tests for devices 1 through 7 at the specified location:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# diagnostic start location 0/0/CPU0 test minimal devices 1-7
```

Related Commands

Command	Description
diagnostic stop, on page 17	Stops the diagnostic testing in progress on a node.

diagnostic stop

To stop the diagnostic testing in progress on a node, use the **diagnostic stop** command in Admin EXEC mode.

diagnostic stop location *node-id*

Syntax Description	location <i>node-id</i>	Stops diagnostic testing for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
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Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines Use the **diagnostic stop** command to stop a diagnostic test on a specified node. The command is used for scheduled tests, a test that is causing errors, or a test that does not finish.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	execute

Task ID

Examples

The following example shows how to stop the diagnostic test process:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# diagnostic stop location 0/0/CPU0
```

Related Commands	Command	Description
	diagnostic start, on page 15	Runs a specified diagnostic test.

diagnostic test-parameters

The FabricUcastMcastTest diagnostic test is used to periodically verify the fabric connectivity to all fabric destinations (RP, LC, DRP nodes) in a single or multi-chassis system. Automatic reload and shutdown as a result of a single -node failure is disabled by default. To enable this feature, set the parameters of the FabricUcastMcast test by setting one or more of the optional parameters of the **diagnostic test-parameters FabricUcastMcastTest** command in Admin EXEC mode.

diagnostic test-parameters

FabricUcastMcastTest[**single-DRP-node-failure** | **single-LC-node-failure** | **single-RP-node-failure**]*<failure-type | reload threshold | shutdown threshold>*

Syntax Description					
single-DRP-node-failure	(Optional) Enters the mode to set the parameters for the FabricUcastMcast Test when a single node failure occurs as a result of a DRP failure.				
single-LC-node-failure	(Optional) Enters the mode to set the parameters for the FabricUcastMcast Test when a single node failure occurs as a result of a line card (LC) failure.				
single-RP-node-failure	(Optional) Enters the mode to set the parameters for the FabricUcastMcast Test when a single node failure occurs as a result of a route processor (RP) failure.				
<i>failure-type</i>	(Optional) Specifies the type of ping result to use for triggering node reload or shutdown. Options are: <ul style="list-style-type: none"> • unicast-only-Multicast ping results are ignored. • multicast-only-Unicast ping results are ignored. Default is both unicast and multicast ping results are used.				
<i>reload threshold</i>	(Optional) Specifies the number of consecutive single-node failures that trigger the reload of a node. Range is 2 through 255. This value must be less than the shutdown threshold for the same node type.				
<i>shutdown threshold</i>	(Optional) Specifies the number of consecutive single-node failures that trigger the shutdown of a node. Range is 2 through 255. This value must be greater than the reload threshold for the same node type.				
Command Default	None				
Command Modes	Admin EXEC mode				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>Release 4.2.1</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	Release 4.2.1	This command was introduced.
Release	Modification				
Release 4.2.1	This command was introduced.				
Usage Guidelines	No specific guidelines impact the use of this command.				

Task ID	Task ID	Operations
	diag	read, write

Examples

The following example shows how to set a node for automatic reload and shutdown when the FabricUcastMcastTest results return single node failure. This is a result of line card failures for only multicast traffic:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# configuration
RP/0/RP0/CPU0:router(admin-config)# diagnostic test-parameters
RP/0/RP0/CPU0:router(admin-config-diag-test-params)#FabricUcastMcastTest
RP/0/RP0/CPU0:router(admin-config-FabricUcastMcastTest)#single-LC-node-failure
RP/0/RP0/CPU0:router(admin-config-FabricUcastMcastTest-LC)failure-type multicast-only
RP/0/RP0/CPU0:router(admin-config-FabricUcastMcastTest-LC)reload threshold 5
RP/0/RP0/CPU0:router(admin-config-FabricUcastMcastTest-LC)shutdown threshold 6
RP/0/RP0/CPU0:router(admin-config-FabricUcastMcastTest-LC)commit
```

When a single-node failure is detected, the following syslog messages are logged:

```
RP/0/RP1/CPU0:Jan 27 07:58:58.364 : online_diag_rp[276]: %DIAG-XR_DIAG-3-ERROR : (U)
Fabric Ping Failure, 1 of 3 nodes failed(L): 0/3/CPU0
RP/0/RP1/CPU0:Jan 27 07:58:58.802 : online_diag_rp[276]: %DIAG-XR_DIAG-3-ERROR : (U) FIM:
```

```
single-node failure detected - 0/3/CPU0consecutive ucast/mcast failures: 15/0
```

When the reload threshold is reached, the following syslog message is logged prior to the reload:

```
RP/0/RP1/CPU0:Jan 27 07:58:58.803 : online_diag_rp[276]: %DIAG-XR_DIAG-6-INFO :reload
threshold 15 crossed, reloading 0/3/CPU0
```

When the shutdown threshold is reached, the following syslog messages are logged:

```
RP/0/RP1/CPU0:Jan 27 08:11:02.104 : online_diag_rp[276]: %DIAG-XR_DIAG-6-INFO : shutdown
threshold 10 crossed, shutting down 0/3/CPU0
RP/0/RP1/CPU0:Jan 27 08:11:02.137 : online_diag_rp[276]:
%PLATFORM-SHELFMGR-6-BRINGDOWN_REQUEST_LIB : Requesting node 0/3/CPU0 to be shutdown.
reason: [diag fabric ping failure]
RP/0/RP0/CPU0:Jan 27 08:11:02.136 : shelfmgr[306]: %PLATFORM-SHELFMGR-6-BRINGDOWN_REQUEST
: process online_diag_rp running on node0_RP1_CPU0 requested node 0/3/CPU0 to be shutdown.
reason: [diag fabric ping failure]
```

diagnostic unload

To unload an offline diagnostic image, use the **diagnostic unload** command in Admin EXEC mode.

diagnostic unload location *node-id*

Syntax Description	location <i>node-id</i>	Unloads an offline diagnostic image for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation. The diagnostic image is unloaded for all modules in the specified slot.
---------------------------	-----------------------------------	---

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines Use the **diagnostic unload** command to unload an offline diagnostic image used for integrated field diagnostics. Unloading the image returns the specified card to service.

Use the **show platform** command to determine if the card has been placed back into service.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	execute

Examples

The following example shows how to unload a diagnostic image:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# diagnostic unload location 0/0/CPU0
```

Related Commands	Command	Description
	diagnostic load, on page 2	Loads a diagnostic test.
	show platform	Displays information and status of each node in the system.

ping (administration EXEC)

To send internal echo messages from one node to another, use the **ping** command in administration EXEC mode.

ping {control-eth|fabric} {fgid *id*|location *node-id*} [count *pings*] [debug] [interval *milliseconds*] [pattern random] [queue *priority*] [retries *number*] [size *payload_size*] [timeout *seconds*] [tlate *seconds*] [uc] [via-egressq] [via-fabricq-1]

Syntax Description	
control-eth	Specifies a control ethernet ping test.
fabric	Specifies a fabric ping test.
fgid <i>id</i>	Specifies that a multicast ping is sent over a fabric to nodes with the fabric group identifier (FGID) of 1024 through 1000000. Nodes that receive the ping respond with a unicast packet.
location <i>node-id</i>	Specifies that a unicast ping is sent a node. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
count <i>pings</i>	(Optional) Number of pings to send each time the command is run. The test reports results and statistics after all pings have been sent and received (or timed out). Range is from 0 through 4294967295. The default is 1.
debug	Note This keyword is available only if you specified the fgid keyword. (Optional) Specifies verbose debugging of the multicast ping utility.
interval <i>milliseconds</i>	(Optional) Hold-off time between each ping in milliseconds. Range is from 0 through 4294967295. The total test time is as follows: $(count-1) * (RTT + interval) + RTT$ RTT = Round Trip Time for the ping.
pattern random	(Optional) Specifies a data pattern for the ping packet payload.
queue <i>priority</i>	Note This keyword is available only if you specified the fgid keyword. (Optional) Specifies the priority of the queue. The priority can be 0 or 1.
retries <i>number</i>	(Optional) Maximum number of times a failed ping transmission is sent before the packet transmission is considered a failure. Range is from 0 through 4294967295. Note Packet transmission failure is usually an indication of a server software transient. In this case, we recommend that you run the ping command again.
size <i>payload_size</i>	(Optional) Specifies the payload size for each ping packet size. Range is from 0 through 4294967295 bytes. The maximum payload size allowed may be limited, depending on the transport type that is used (fabric or control-ethernet).

timeout <i>seconds</i>	(Optional) Specifies the maximum time to wait for response to a ping. Range is from 0 through 4294967295 seconds. If a ping does not receive a response before the configured timeout expires, the ping statistics reflect it as a discrepancy between the “Sent:” and “Rec’d:” packet count, and the test is considered failed. Because of this, we recommend that you do not set the timeout to 0.
tlate <i>seconds</i>	Note This keyword is available only if you specified the fgid keyword. (Optional) Specifies the amount of time to wait for a response to a multicast ping. The amount of time you specify must be less than the value of the timeout keyword. Range is from 0 through 4294967295 seconds.
uc	Note This keyword is available only if you specified the fgid keyword. (Optional) Specifies that unicast pings (instead of multicast pings) are sent to nodes with the specified FGID.
via-egressq	(Optional) Specifies that a unicast or multicast ping packet is routed to the first fabricq ASIC (instance 0); then, to the egressq ASIC, and finally to the destination CPU. By default, a unicast ping is routed to the first fabricq ASIC (instance 0), then to the destination CPU. A multicast ping is routed to the constituent fabricq ASIC instances, then to the destination CPU.
via-fabricq-1	Note This keyword is available if you specified the location keyword, or both the fgid and uc keywords. (Optional) Specifies that a unicast ping is routed to the current fabricq ASIC (instance 1), then to the egressq ASIC, and finally, to the destination CPU. By default, a unicast ping is routed to the first fabricq ASIC (instance 0), then to the destination CPU.

Command Default No default behavior or values

Command Modes Administration EXEC

Command History	Release	Modification
	Release 3.3.0	This command was introduced.
	Release 3.6.0	The fgid keyword was added.
	Release 3.8.0	The via-egressq and via-fabricq-1 keywords were added.

Usage Guidelines When you enter the **ping** command, a ping is sent to the node at the specified location or to nodes with the specified FGID. The received response is compared byte-by-byte to the sent packet. If a ping response is not received before the specified time-out, or if the ping response does not match the transmitted ping, the ping is considered failed.

A node that is unreachable or intermittently working impacts the total run time for the test as follows:

```
(received_packet_count * RTT + lost_packet_count * timeout + (count-1) * interval)
```

Line cards have two fabricq ASICs and an egressq ASIC. From the first fabricq ASIC (instance 0), the CPU can be reached directly or via the egressq ASIC. From the second fabricq ASIC (instance 1), the CPU can be reached only via the egressq ASIC. In other words, no direct packet path exists between instance 1 and the CPU.

The route processor (RP) and distributed route processor (DRP) cards have only one fabricq ASIC per node (CPU) and no egressq ASIC. Therefore, a fabric ping on an RP or DRP destination specified with the **via-egressq** or **via-fabricq-1** keyword fails.

Task ID	Task ID	Operations
	diag	execute

Examples

The following example shows sample output from a control-ethernet ping to an SP node in slot 0/0:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping control-eth location 0/0/SP count 5

Src node:      529 : 0/RP0/CPU0
Dest node:      0 : 0/0/SP
Local node:     529 : 0/RP0/CPU0
Packet cnt:     5  Packet size: 128  Payload ptn type: default (0)
Hold-off (ms): 300  Time-out(s): 2   Max retries: 5
Destination node has MAC addr 5246.4800.0000

Running CE node ping.
Please wait...
Src: 529:, Dest: 0, Sent: 5, Rec'd: 5, Mismatched: 0
Min/Avg/Max RTT: 0/200/1000
CE node ping succeeded for node: 0
```

The following example shows a fabric ping from the active RP to the active RP. In this example, the ping contains 72 packets of 1 kilobyte each. This command performs a good coverage test of the entire switch fabric:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping fabric location 0/RP0/CPU0 count 72 size 1024

Src node:      529 : 0/RP0/CPU0
Dest node:     529 : 0/RP0/CPU0
Local node:     529 : 0/RP0/CPU0
Packet cnt:     72  Packet size: 1024  Payload ptn type: default (0)
Hold-off (ms): 300  Time-out(s): 2   Max retries: 5

Running Fabric node ping.
Please wait...
Src: 529:, Dest: 529, Sent: 72, Rec'd: 72, Mismatched: 0
Min/Avg/Max RTT: 3000/3013/4000
Fabric node ping succeeded for node: 529
```

The following example shows a ping to a control Ethernet node that has a problem or does not exist:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping control-eth location 0/1/CPU0 count 3

Src node:          529 : 0/RP0/CPU0
Dest node:         17 : 0/1/CPU0
Local node:        529 : 0/RP0/CPU0
Packet cnt:        3   Packet size: 128   Payload ptn type: default (0)
Hold-off (ms):    300 Time-out(s): 2     Max retries: 5
Destination node has MAC addr 5246.4800.0011

Running CE node ping.
Please wait...
Src: 529:, Dest: 17, Sent: 3, Rec'd: 0, Mismatched: 0
Requested ping failed for node: 17
```

The following example shows how to send a multicast fabric ping to nodes with the FGID of 1024. The node that sent the multicast ping waits 1 second for a response from each node.

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping fabric fgid 1024 tlate 1

Src node:          513 : 0/RP0/CPU0
fgid:              1024
Local node:        513 : 0/RP0/CPU0
Packet cnt:        1   Packet size: 128   Payload ptn type: default (0)
Hold-off (ms):    1   Time-out(s): 2     Max retries: 5
DelayTimeout:     1   Priority:      High
Running Fabric node ping.
Please wait...

Multicast (Pinging fgid) ...
```

Node	Sent	Rcv.	Late	Lost
0/1/CPU0 (0x11:17)	1	1	0	0
0/4/CPU0 (0x41:65)	1	1	0	0
0/4/CPU1 (0x42:66)	1	1	0	0
0/6/CPU0 (0x61:97)	1	1	0	0
0/RP0/CPU0 (0x201:513)	1	1	0	0
0/RP1/CPU0 (0x211:529)	1	1	0	0

```
diag_ping: All 6 nodes responded to all 1 pings
```

The following example shows how to send a multicast fabric ping to nodes with the FGID of 1024. The ping packets are routed from the first fabricq ASIC (instance 0) to the destination CPU via the egressq ASIC. The pings to the two line cards (0/1/CPU0 and 0/6/CPU0) succeeded, while the pings to the RPs (0/RP0/CPU0 and 0/RP1/CPU0) and DRPs (0/4/CPU0 and 0/4/CPU1) failed because they do not have an egressq ASIC.

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping fabric fgid 1024 count 10 via-egressq

Src node:          513 : 0/RP0/CPU0
fgid:              1024
Local node:        513 : 0/RP0/CPU0
Packet cnt:        10  Packet size: 128   Payload ptn type: default (0)
Hold-off (ms):    1   Time-out(s): 2     Max retries: 5
DelayTimeout:     1   Priority:      High
Reaching destination CPUs via egressq
```


Running Fabric node ping.
Please wait...

Multicast (Pinging fgid) ...

Node	Sent	Rcv.	Late	Lost
0/1/CPU0 (0x11:17)	10	10	0	0
0/4/CPU0 (0x41:65)	10	0	0	10
0/4/CPU1 (0x42:66)	10	0	0	10
0/6/CPU0 (0x61:97)	10	10	0	0
0/RP0/CPU0 (0x201:513)	10	0	0	10
0/RP1/CPU0 (0x211:529)	10	0	0	10

diag_ping: Out of 6 node(s), 2 node(s) responded to all 10 pings, 4 node(s) hads

The following example shows how to send a unicast ping to nodes with the FGID of 1024. The ping packets are routed from the second fabricq ASIC (instance 1) to the destination CPU via the egressq ASIC. The pings to the two line cards (0/1/CPU0 and 0/6/CPU0) succeeded, while the pings to the RPs (0/RP0/CPU0 and 0/RP1/CPU0) and DRPs (0/4/CPU0 and 0/4/CPU1) failed because they do not have a second fabricq ASIC nor an egressq ASIC.

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# ping fabric fgid 1024 count 10 uc via-fabricq-1
```

```
Src node:      513 : 0/RP0/CPU0
fgid:         1024
Local node:   513 : 0/RP0/CPU0
Packet cnt:   10  Packet size: 128  Payload ptn type: default (0)
Hold-off (ms): 1  Time-out(s): 2  Max retries: 5
DelayTimeout: 1  Priority:      High
Using other fabricq instance
```

Running Fabric node ping.
Please wait...

Multicast (Pinging Individual Sponge Ids) ...

Node	Sent	Rcv.	Late	Lost
0/1/CPU0 (0x11:17)	10	10	0	0
0/4/CPU0 (0x41:65)	10	0	0	10
0/4/CPU1 (0x42:66)	10	0	0	10
0/6/CPU0 (0x61:97)	10	10	0	0
0/RP0/CPU0 (0x201:513)	10	0	0	10
0/RP1/CPU0 (0x211:529)	10	0	0	10

diag_ping: Out of 6 node(s), 2 node(s) responded to all 10 pings, 4 node(s) hads

show diag

To display details about the hardware and software on each node in a router, use the **show diag** command in the appropriate mode.

EXEC Mode

```
show diag [node-id] [{details|eeprom-info|power-regs|summary}]
```

Administration EXEC Mode

```
show diag [node-id] [{chassis|fans|power-supply}] [{details|eeprom-info|power-regs|summary}]
```

Syntax Description

summary	(Optional) Displays a summary of the installed hardware.
node-id	(Optional) Identifies the node for which you want to display information. The <i>node-id</i> argument is expressed in the <i>rack/slot/module</i> notation.
eeprom-info	(Optional) Displays EEPROM information for the specified node or component (chassis, fan, or power supply).
power-regs	(Optional) Displays power register information for the specified node.
chassis	(Optional) Displays information about the chassis.
fans	(Optional) Displays information about the fan trays.
power-supply	(Optional) Displays information about the power supply.

Command Default

Hardware and software information for all nodes installed in the router is displayed

Command Modes

EXEC

Administration EXEC

Command History

Release	Modification
Release 2.0	This command was introduced.
Release 3.2	Command output was modified to display the last diagnostic result for a card.

Usage Guidelines

The **show diag** command displays detailed information on the hardware components for each node, and on the status of the software running on each node.

Task ID

Task ID	Operations
sysmgr	read

Examples

The following example shows excerpts of output from the **show diag details** command:

```
RP/0/RP0/CPU0:router# show diag details
```

```
CARD 0/1/* : Cisco CRS-1 Series Modular Services Card
MAIN: board type 500060
800-25021-05 rev B0
dev 079239
S/N SAD0925050J
PCA: 73-7648-08 rev B0
PID: CRS-MSC
VID: V02
CLEI: IPUCAC1BAA
ECI: 132502
RMA: Test Hist: ab, RMA#: 00-00-00, RMA Hist: 00
DIAGNOSTICS RESULTS:
ENTRY 1: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
ENTRY 2: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
ENTRY 3: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
PLIM 0/PL1/* : Cisco Carrier Routing System SPA Interface Processor Card
MAIN: board type 580070
800-23819-03 rev C0
dev N/A
S/N SAD09410538
PCA: 73-8982-06 rev C0
PID: CRS1-SIP-800
VID: V01
CLEI: COUIAAMCAA
ECI: 134912
RMA: Test Hist: ab, RMA#: 00-00-00, RMA Hist: 00
DIAGNOSTICS RESULTS:
ENTRY 1: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
ENTRY 2: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
ENTRY 3: 0
TIMESTAMP: 00/00/0000 00:00:00
VERSION: v0.0
PARAM1: 0 PARAM2: n/a
```

```

TESTNUM: 0
RESULT: 0 (PASS)
ERRCODE: 0
Interface port config: 0 Ports
Optical reach type: Unknown
Connector type: MT-P
NODE 0/1/CPU0
Node State : IOS XR RUN
PLD: Motherboard: 0x0025, Processor: 0xda13, Power: N/A
MONLIB: QNXFFS Monlib Version 3.1
ROMMON: Version 1.51(20080807:092259) [CRS-1 ROMMON]
CPU0: ASMP, CPU1: N/A
SPEED: OSC Speed: 100 Mhz, CPU Speed: 800 Mhz
BUS Speed: 100 Mhz, MEM Speed: 100 Mhz
MEM Size: 1024 Mbytes
SPA 0/1/0 : 4-port OC3/STM1 POS Shared Port Adapter
MAIN: board type 0440
68-2169-01 rev C0
dev N/A
S/N JAB093305VC
PCA: 73-9313-04 rev B0
PID: SPA-4XOC3-POS
VID: V01
CLEI: IPUIAFNRAA
Node State : OK
...

```

The output displayed for the **show diag details** command is the most comprehensive output displayed for **show diag** command variations. All other variations show a subset of the fields displayed except for the **show diag chassis**, **show diag fans**, and **show diag power-supply** commands, which also enable you to display EEPROM information.

```

Rack 0 - Cisco CRS-1 Series 8 Slots Line Card Chassis
00: 03 00 01 E4 43 52 53 2D 38 2D 4C 43 43 00 00 00 ....CRS-8-LCC...
10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
20: 49 50 4D 45 5A 31 30 42 52 41 06 CF B3 00 00 00 IPMEZ10BRA.....
30: 00 00 00 00 00 00 00 00 15 63 58 B9 00 08 00 00 .....cX.....
40: 00 49 00 21 F8 03 50 03 20 00 5A E7 04 78 00 01 .I!...P. .Z..x..
50: 54 42 41 30 39 33 36 30 30 39 30 00 00 00 00 00 TBA09360090.....
60: 01 2B DB 00 00 00 00 00 00 00 00 00 00 00 00 00 .+.....
70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
90: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 43 49 53 .....CIS
D0: 43 4F 20 53 59 53 54 45 4D 53 2C 20 49 4E 43 2E CO SYSTEMS, INC.
E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....

```

This table describes the significant fields shown in the display.

Table 1: show diag Field Descriptions

Field	Description
MAIN	Provides the following general information about the hardware: <ul style="list-style-type: none"> • Board type • Revision • Device identifier • Serial number
PCA	Cisco printed circuit assembly (PCA) hardware and revision number.
PID	Displays the product identifier (PID) revision for the specified node.
VID	Displays the version identifier (VID) for the specified node.
CLEI	Displays the common language equipment identifier (CLEI) for the specified node.
ECI	Displays the equipment catalog item (ECI) for the specified node.
Board State	Displays the current software on the board and whether or not the board is running.
PLD	Displays the information about the following programmable logic device (PLD) components on the current module: <ul style="list-style-type: none"> • Processor • Power • MONLIB
SPEED	Displays speed information for the various components of the specified node, in megahertz.
MEM Size	Displays the memory size of the specified node, in megabytes.
RMA	Displays returned material adjustment (RMA) information for the specified node.
DIAGNOSTICS RESULTS	Provides the following information about the last diagnostics test that was run on the specified node: <ul style="list-style-type: none"> • ENTRY 1 • TIMESTAMP—Time stamp for the last diagnostic test that was run on the node. • VERSION • PARAM1 • PARAM2 • TESTNUM—Identifies the test that was run on the node. • RESULT—Displays whether the last diagnostic test passed or failed. • ERRCODE

The following example shows how to display EEPROM information:

```
RP/0/RP0/CPU0:router(admin)# show diag chassis eeprom-info
```

```
Rack 0 - Cisco CRS-1 Series 8 Slots Line Card Chassis
00: 03 00 01 E4 43 52 53 2D 38 2D 4C 43 43 00 00 00 ....CRS-8-LCC...
10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
20: 49 50 4D 45 5A 31 30 42 52 41 06 CF B3 00 00 00 IPMEZ10BRA.....
30: 00 00 00 00 00 00 00 00 15 63 58 B9 00 08 00 00 .....cX.....
40: 00 49 00 21 F8 03 50 03 20 00 5A E7 04 78 00 01 .I!..P. .Z..x..
50: 54 42 41 30 39 33 36 30 30 39 30 00 00 00 00 00 TBA09360090.....
60: 01 2B DB 00 00 00 00 00 00 00 00 00 00 00 00 00 .+.....
70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
90: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 43 49 53 .....CIS
D0: 43 4F 20 53 59 53 54 45 4D 53 2C 20 49 4E 43 2E CO SYSTEMS, INC.
E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
```

Related Commands

Command	Description
show platform	Displays information and status for each node in the system.
show version	Displays details on the hardware and software status of the system.

show diagnostic bootup level

To display the current diagnostic bootup level, use the **show diagnostic bootup level** command in Admin EXEC mode.

show diagnostic bootup level location *node-id*

Syntax Description	location <i>node-id</i>	Specifies a card. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
---------------------------	--------------------------------	---

Command Default No default behavior or values.

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.4.0	This command was introduced.

Usage Guidelines Use the **show diagnostic bootup level** command to display the current diagnostic bootup level for a specified card.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

Task ID	Task ID	Operations
	diag	read

Examples

The following example shows how to display the current diagnostic bootup level for 0/1/cpu0:

```
RP/0/RP0/CPU0:router(admin)# show diagnostic bootup level location 0/1/cpu0
```

```
Current bootup diagnostic level for LC 0/1/CPU0: minimal
```

show diagnostic content

To display test information including test ID, test attributes, and supported coverage test levels for each test and for all components, use the **show diagnostic content** command in Admin EXEC mode.

show diagnostic content location *node-id*

Syntax Description	location <i>node-id</i>	Displays the diagnostic content for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
---------------------------	-----------------------------------	---

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines Use the **show diagnostic content** command to display diagnostic test information for a specific location. The test information includes the supported tests and attributes.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	read

Examples

The following example shows how to display the test information for a specified location:

For a route processor:

```
RP/0/RP0/CPU0:router(admin): show diagnostic content
location 0/rp0/cpu0
```

Diagnostics test suite attributes:

M/C/* - Minimal bootup level test / Complete bootup level test / NA

B/* - Basic ondemand test / NA

P/V/* - Per port test / Per device test / NA

D/N/* - Disruptive test / Non-disruptive test / NA

S/* - Only applicable to standby unit / NA

X/* - Not a health monitoring test / NA


```

F/* - Fixed monitoring interval test / NA
E/* - Always enabled monitoring test / NA
A/I - Monitoring is active / Monitoring is inactive

```

ID	Test Name	Attributes	Test Interval (day hh:mm:ss.ms)	Thre- shold
1)	ControlEthernetPingTest	*B*N*X**I	001 00:00:00.000	1
2)	SelfPingOverFabric	*B*N*X**I	001 00:00:00.000	1
3)	FabricPingTest	*B*N*X**I	001 00:00:00.000	1
4)	ControlEthernetInactiveLinkTest	*B*NS***I	001 00:00:00.000	1
5)	RommonRevision	*B*N*X**I	001 00:00:00.000	1
6)	FabricDiagnosisTest	*B*NS***I	000 00:02:00.000	1
7)	FilesystemBasicDisk0	*B*N****I	003 00:00:00.000	1
8)	FilesystemBasicDisk1	*B*N****I	003 00:00:00.000	1
9)	FilesystemBasicHarddisk	*B*N****I	003 00:00:00.000	1
10)	ScratchRegisterTest	CBVN****I	001 00:00:00.000	1
11)	FabricMcastTest	*B*NS***I	000 00:02:00.000	1
12)	ControlEthernetIntraSwitchTest	*B*N****I	000 00:00:02.000	3
13)	FabricUcastMcastTest	*B*N****A	000 00:01:00.000	1

```
RP/0/RP0/CPU0:router(admin)# show diagnostic content location 0/1/cpu0
```

```
Wed Feb 16 09:27:01.424 PST
```

```
MSC 0/1/CPU0:
```

```

Diagnostics test suite attributes:
M/C/* - Minimal bootup level test / Complete bootup level test / NA
B/* - Basic ondemand test / NA
P/V/* - Per port test / Per device test / NA
D/N/* - Disruptive test / Non-disruptive test / NA
S/* - Only applicable to standby unit / NA
X/* - Not a health monitoring test / NA
F/* - Fixed monitoring interval test / NA
E/* - Always enabled monitoring test / NA
A/I - Monitoring is active / Monitoring is inactive

```

ID	Test Name	Attributes	Test Interval (day hh:mm:ss.ms)	Thre- shold
1)	ControlEthernetPingTest	*B*N*X**I	001 00:00:00.000	1
2)	SelfPingOverFabric	*B*N*X**I	001 00:00:00.000	1
3)	RommonRevision	*B*N*X**I	001 00:00:00.000	1
4)	ScratchRegisterTest	CBVN****I	001 00:00:00.000	1
5)	TcamFullScanTest	*B*VN****I	001 00:00:00.000	1
6)	EgressqMemoryBISTTest	**VD*X**I	001 00:00:00.000	1
7)	IngressqMemoryBISTTest	**VD*X**I	001 00:00:00.000	1
8)	FabricqMemoryBISTTest	**VD*X**I	001 00:00:00.000	1

Here is an example of **show diagnostic content location** command for FabricUcastMcast Test.

```
RP/0/RP0/CPU0:router(admin)#show diagnostic content location 0/0/CPU0
```

```
Thu Mar 3 13:45:26.115 PST
```

```
DRP 0/0/CPU0:
```

```

Diagnostics test suite attributes:
M/C/* - Minimal bootup level test / Complete bootup level test / NA
B/* - Basic ondemand test / NA
P/V/* - Per port test / Per device test / NA
D/N/* - Disruptive test / Non-disruptive test / NA

```

show diagnostic content

S/* - Only applicable to standby unit / NA
 X/* - Not a health monitoring test / NA
 F/* - Fixed monitoring interval test / NA
 E/* - Always enabled monitoring test / NA
 A/I - Monitoring is active / Monitoring is inactive

ID	Test Name	Attributes	Test Interval (day hh:mm:ss.ms shold)	Thre-
1)	ControlEthernetPingTest	*B*N*X**I	001 00:00:00.000	1
2)	SelfPingOverFabric	*B*N*X**I	001 00:00:00.000	1
3)	FabricPingTest	*B*N*X**I	001 00:00:00.000	1
4)	ControlEthernetInactiveLinkTest	*B*NS***I	001 00:00:00.000	1
5)	RommonRevision	*B*N*X**I	001 00:00:00.000	1
6)	FabricDiagnosisTest	*B*NS***I	000 00:02:00.000	1
7)	FilesystemBasicDisk0	*B*N****I	003 00:00:00.000	1
8)	FilesystemBasicDisk1	*B*N****I	003 00:00:00.000	1
9)	FilesystemBasicHarddisk	*B*N****I	003 00:00:00.000	1
10)	ScratchRegisterTest	CBVN****I	001 00:00:00.000	1
11)	FabricMcastTest	*B*NS***A	000 00:02:00.000	1
12)	ControlEthernetIntraSwitchTest	***N****I	000 00:00:02.000	3
13)	FabricUcastMcastTest	*B*N****A	000 00:01:00.000	1

Table 2: show diagnostic content Field Descriptions, on page 34 describes the significant fields shown in the display.

Table 2: show diagnostic content Field Descriptions

Field	Description
M/C/* - Minimal bootup level test / Complete bootup level test / NA	Minimal bootup test or complete bootup test.
B/* - Basic ondemand test / NA	Basic on-demand test.
P/V/* - Per port test / Per device test / NA	Test is per port or device.
D/N/* - Disruptive test / Non-disruptive test / NA	Test is disruptive or nondisruptive.
S/* - Only applicable to standby unit / NA	Test is available for standby node only.
X/* - Not a health monitoring test / NA	Test is not a health-monitoring test.
F/* - Fixed monitoring interval test / NA	Test is a fixed monitoring interval test.
E/* - Always enabled monitoring test / NA	Test is an always enabled monitoring test.
A/I - Monitoring is active / Monitoring is inactive	Test is active or inactive.
ID	ID of the test.
Test Name	Name of the test.
Attributes	Attributes for the test.
Test Interval	Interval of the test.

Field	Description
Threshold	Failure threshold of the text.

Related Commands

Command	Description
diagnostic load, on page 2	Loads an offline diagnostic image for integrated field diagnostics.
diagnostic monitor interval, on page 6	Configures the health-monitoring diagnostic testing for a specified interval for a specified location.
diagnostic schedule, on page 13	Configures a diagnostic schedule.
diagnostic start, on page 15	Runs a specified diagnostic test.
diagnostic unload, on page 20	Unloads an offline diagnostic image.

show diagnostic ondemand settings

To display the current on-demand settings, use the **show diagnostic ondemand settings** command in Admin EXEC mode .

show diagnostic ondemand settings

Syntax Description This command has no keywords or arguments.

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.5.0	This command was introduced.

Usage Guidelines No specific guidelines impact the use of this command.

Task ID	Task ID	Operations
	diag	read

Examples

The following example shows how to display the on-demand settings:

```
RP/0/RP0/CPU0:router(admin)# show diagnostic ondemand settings

Test iterations = 45
Action on test failure = continue until test failure limit reaches 25
```

show diagnostic result

To display diagnostic test results, use the **show diagnostic result** command in Admin EXEC mode.

show diagnostic result location *node-id*[test {*id*|*test-name*|all}] [**detail**]

Syntax Description	location <i>node-id</i>	Displays the diagnostic test results for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
	test { <i>id</i> <i>test-name</i> all }	(Optional) Specifies diagnostic test selection. The following test selections are available: <ul style="list-style-type: none"> • <i>id</i>—Test ID or list of test IDs . Multiple tests can be listed if separated by semicolons (;) as follows: <ul style="list-style-type: none"> • x;y-z (for example: 1; 3-4 or 1;3;4) • <i>test-name</i>—Test name. • all—Specifies all tests. <p>Use the show diagnostic content command in administration EXEC mode to see a list of test names and their associated IDs.</p>
	detail	(Optional) Specifies detailed results.

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines Use the **show diagnostic result** command to display diagnostic results for a specific location.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	read

Examples The following example shows how to display detailed diagnostic test results:

show diagnostic result

```
RP/0/RP0/CPU0:router(admin)# show diagnostic result location 0/3/CPU0 test 1 detail
```

```
Test results: (. = Pass, F = Fail, U = Untested)
```

```
-----
1 ) Control Ethernet Ping Test -----> .
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test execution time ----> Thu Aug 11 18:13:38.918 2005
First test failure time ----> n/a
Last test failure time ----> n/a
Last test pass time -----> Thu Aug 11 18:13:38.918 2005
Total failure count -----> 0
Consecutive failure count ---> 0
```

Here is an example of **show diagnostic result** command to view the results of the FabricUcastMcast Test.

```
RP/1/RP0/CPU0:router(admin)#show diagnostic result location 0/rp1/cpu0 test
FabricUcastMcastTest detail
```

```
Fri Mar 4 11:21:01.153 UTC
```

```
Current bootup diagnostic level for RP 0/RP1/CPU0: bypass
```

```
Test results: (. = Pass, F = Fail, U = Untested)
```

```
-----
13 ) FabricUcastMcastTest -----> .
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 17
Last test execution time ----> Fri Mar 4 11:20:54 2011
First test failure time ----> Fri Mar 4 11:19:47 2011
Last test failure time ----> Fri Mar 4 11:19:47 2011
Last test pass time -----> Fri Mar 4 11:20:54 2011
Total failure count -----> 1
Consecutive failure count ---> 0
```

```
Unicast Results
```

```
dest: (all nodes) session_id: 48
ret_code: 0 (No error)
rx_ret_code: 0 (No error)
tx_ret_code: 0 (No error)
min_rtt_ms: 2 max_rtt_ms: 63
ping_mode_mask: 0x00000099 fplane_bitmap: 0x000000ff
inter_packet_delay: 0 max_timeout_ms: 1500
late_timeout_ms: 1500 priority: 0
flags: 0x00000000 pkt_cnt: 10
pkt_size: 1000 num_nodes: 15
tx_start_ts: 11:20:54.488 UTC Fri Mar 04 2011
modes: 0 - LP/fabricq0, 3 - LP/fabricq1, 4 - HP/fabricq0, 7 - HP/fabricq1
node[mode] req'ed rx_good tx_good tx_unrea tx_err rx_unexp rx_corr
=====
0/0/CPU0[0] 10 10 10 0 0 0 0
0/0/CPU0[3] 10 10 10 0 0 0 0
0/0/CPU0[4] 10 10 10 0 0 0 0
0/0/CPU0[7] 10 10 10 0 0 0 0
0/4/CPU0[0] 10 10 10 0 0 0 0
0/4/CPU0[3] 10 10 10 0 0 0 0
0/4/CPU0[4] 10 10 10 0 0 0 0
0/4/CPU0[7] 10 10 10 0 0 0 0
0/5/CPU0[0] 10 10 10 0 0 0 0
0/5/CPU0[3] 10 10 10 0 0 0 0
0/5/CPU0[4] 10 10 10 0 0 0 0
0/5/CPU0[7] 10 10 10 0 0 0 0
0/6/CPU0[0] 10 10 10 0 0 0 0
0/6/CPU0[3] 10 10 10 0 0 0 0
0/6/CPU0[4] 10 10 10 0 0 0 0
```

```

0/6/CPU0[7]      10      10      10      0      0      0      0
0/8/CPU0[0]      10      10      10      0      0      0      0
0/8/CPU0[4]      10      10      10      0      0      0      0
0/RP0/CPU0[0]    10      10      10      0      0      0      0
0/RP0/CPU0[4]    10      10      10      0      0      0      0
0/RP1/CPU0[0]    10      10      10      0      0      0      0
0/RP1/CPU0[4]    10      10      10      0      0      0      0
1/3/CPU0[0]      10      10      10      0      0      0      0
1/3/CPU0[3]      10      10      10      0      0      0      0
1/3/CPU0[4]      10      10      10      0      0      0      0
1/3/CPU0[7]      10      10      10      0      0      0      0
1/4/CPU0[0]      10      10      10      0      0      0      0
1/4/CPU0[3]      10      10      10      0      0      0      0
1/4/CPU0[4]      10      10      10      0      0      0      0
1/4/CPU0[7]      10      10      10      0      0      0      0
1/7/CPU0[0]      10      10      10      0      0      0      0
1/7/CPU0[4]      10      10      10      0      0      0      0
1/9/CPU0[0]      10      10      10      0      0      0      0
1/9/CPU0[3]      10      10      10      0      0      0      0
1/9/CPU0[4]      10      10      10      0      0      0      0
1/9/CPU0[7]      10      10      10      0      0      0      0
1/14/CPU0[0]     10      10      10      0      0      0      0
1/14/CPU0[3]     10      10      10      0      0      0      0
1/14/CPU0[4]     10      10      10      0      0      0      0
1/14/CPU0[7]     10      10      10      0      0      0      0
1/15/CPU0[0]     10      10      10      0      0      0      0
1/15/CPU0[4]     10      10      10      0      0      0      0
1/RP0/CPU0[0]    10      10      10      0      0      0      0
1/RP0/CPU0[4]    10      10      10      0      0      0      0
1/RP1/CPU0[0]    10      10      10      0      0      0      0
1/RP1/CPU0[4]    10      10      10      0      0      0      0
=====
Global           460      460      460      0      0      0      0
Unicast Results (Last Failure)
dest:            (all nodes) session_id:          30
ret_code:        606182912 ('FAB_SVR' detected the 'informational' condition)

'Timed out
waiting for all ping replies.')
```

```

rx_ret_code:          0 (No error)
tx_ret_code:          0 (No error)
min_rtt_ms:          2 max_rtt_ms:          61
ping_mode_mask:      0x00000099 fplane_bitmap: 0x000000ff
inter_packet_delay:  0 max_timeout_ms:      1500
late_timeout_ms:     1500 priority:          0
flags:               0x00000000 pkt_cnt:      10
pkt_size:            1000 num_nodes:         15
tx_start_ts:         11:19:47.167 UTC Fri Mar 04 2011
modes: 0 - LP/fabricq0, 3 - LP/fabricq1, 4 - HP/fabricq0, 7 - HP/fabricq1
```

node[mode]	req'ed	rx_good	tx_good	tx_unrea	tx_err	rx_unexp	rx_corr
0/0/CPU0[0]	10	0	10	0	0	0	0
0/0/CPU0[3]	10	0	10	0	0	0	0
0/0/CPU0[4]	10	0	10	0	0	0	0
0/0/CPU0[7]	10	0	10	0	0	0	0
0/4/CPU0[0]	10	10	10	0	0	0	0
0/4/CPU0[3]	10	10	10	0	0	0	0
0/4/CPU0[4]	10	10	10	0	0	0	0
0/4/CPU0[7]	10	10	10	0	0	0	0
0/5/CPU0[0]	10	10	10	0	0	0	0
0/5/CPU0[3]	10	10	10	0	0	0	0
0/5/CPU0[4]	10	10	10	0	0	0	0
0/5/CPU0[7]	10	10	10	0	0	0	0
0/6/CPU0[0]	10	10	10	0	0	0	0

show diagnostic result

```

0/6/CPU0[3]      10      10      10      0      0      0      0
0/6/CPU0[4]      10      10      10      0      0      0      0
0/6/CPU0[7]      10      10      10      0      0      0      0
0/8/CPU0[0]      10      10      10      0      0      0      0
0/8/CPU0[4]      10      10      10      0      0      0      0
0/RP0/CPU0[0]    10      10      10      0      0      0      0
0/RP0/CPU0[4]    10      10      10      0      0      0      0
0/RP1/CPU0[0]    10      10      10      0      0      0      0
0/RP1/CPU0[4]    10      10      10      0      0      0      0
1/3/CPU0[0]      10      10      10      0      0      0      0
1/3/CPU0[3]      10      10      10      0      0      0      0
1/3/CPU0[4]      10      10      10      0      0      0      0
1/3/CPU0[7]      10      10      10      0      0      0      0
1/4/CPU0[0]      10      10      10      0      0      0      0
1/4/CPU0[3]      10      10      10      0      0      0      0
1/4/CPU0[4]      10      10      10      0      0      0      0
1/4/CPU0[7]      10      10      10      0      0      0      0
1/7/CPU0[0]      10      10      10      0      0      0      0
1/7/CPU0[4]      10      10      10      0      0      0      0
1/9/CPU0[0]      10      10      10      0      0      0      0
1/9/CPU0[3]      10      10      10      0      0      0      0
1/9/CPU0[4]      10      10      10      0      0      0      0
1/9/CPU0[7]      10      10      10      0      0      0      0
1/14/CPU0[0]     10      10      10      0      0      0      0
1/14/CPU0[3]     10      10      10      0      0      0      0
1/14/CPU0[4]     10      10      10      0      0      0      0
1/14/CPU0[7]     10      10      10      0      0      0      0
1/15/CPU0[0]     10      10      10      0      0      0      0
1/15/CPU0[4]     10      10      10      0      0      0      0
1/RP0/CPU0[0]    10      10      10      0      0      0      0
1/RP0/CPU0[4]    10      10      10      0      0      0      0
1/RP1/CPU0[0]    10      10      10      0      0      0      0
1/RP1/CPU0[4]    10      10      10      0      0      0      0
=====
Global           460      420      460      0      0      0      0
Multicast Results
dest:            FGID      1023 session_id:      49
ret_code:        0 (No error)
rx_ret_code:     0 (No error)
tx_ret_code:     0 (No error)
min_rtt_ms:     13 max_rtt_ms:      58
ping_mode_mask: 0x00000011 fplane_bitmap: 0x000000ff
inter_packet_delay: 0 max_timeout_ms: 1500
late_timeout_ms: 1500 priority: 0
flags:          0x00000000 pkt_cnt: 10
pkt_size:       1000 num_nodes: 15
tx_start_ts:    11:20:54.492 UTC Fri Mar 04 2011
modes: 0 - LP/fabricq0, 4 - HP/fabricq0
node[mode] req'ed rx_good tx_good tx_unrea tx_err rx_unexp rx_corr
=====
0/0/CPU0[0]    10      10      10      0      0      0      0
0/0/CPU0[4]    10      10      10      0      0      0      0
0/4/CPU0[0]    10      10      10      0      0      0      0
0/4/CPU0[4]    10      10      10      0      0      0      0
0/5/CPU0[0]    10      10      10      0      0      0      0
0/5/CPU0[4]    10      10      10      0      0      0      0
0/6/CPU0[0]    10      10      10      0      0      0      0
0/6/CPU0[4]    10      10      10      0      0      0      0
0/8/CPU0[0]    10      10      10      0      0      0      0
0/8/CPU0[4]    10      10      10      0      0      0      0
0/RP0/CPU0[0]  10      10      10      0      0      0      0
0/RP0/CPU0[4]  10      10      10      0      0      0      0
0/RP1/CPU0[0]  10      10      10      0      0      0      0
0/RP1/CPU0[4]  10      10      10      0      0      0      0

```



```

1/3/CPU0[0]      10      10      10      0      0      0      0
1/3/CPU0[4]      10      10      10      0      0      0      0
1/4/CPU0[0]      10      10      10      0      0      0      0
1/4/CPU0[4]      10      10      10      0      0      0      0
1/7/CPU0[0]      10      10      10      0      0      0      0
1/7/CPU0[4]      10      10      10      0      0      0      0
1/9/CPU0[0]      10      10      10      0      0      0      0
1/9/CPU0[4]      10      10      10      0      0      0      0
1/14/CPU0[0]     10      10      10      0      0      0      0
1/14/CPU0[4]     10      10      10      0      0      0      0
1/15/CPU0[0]     10      10      10      0      0      0      0
1/15/CPU0[4]     10      10      10      0      0      0      0
1/RP0/CPU0[0]    10      10      10      0      0      0      0
1/RP0/CPU0[4]    10      10      10      0      0      0      0
1/RP1/CPU0[0]    10      10      10      0      0      0      0
1/RP1/CPU0[4]    10      10      10      0      0      0      0
=====
Global           300      300      300      0      0      0      0
Multicast Results (Last Failure)
dest:            FGID           1023 session_id:           31
ret_code:        0 (No error)
rx_ret_code:     0 (No error)
tx_ret_code:     0 (No error)
min_rtt_ms:      14 max_rtt_ms:           58
ping_mode_mask: 0x00000011 fplane_bitmap: 0x000000ff
inter_packet_delay: 0 max_timeout_ms: 1500
late_timeout_ms: 1500 priority:           0
flags:           0x00000000 pkt_cnt:           10
pkt_size:        1000 num_nodes:           15
tx_start_ts:     11:19:47.171 UTC Fri Mar 04 2011
modes: 0 - LP/fabricq0, 4 - HP/fabricq0
node[mode] req'ed rx_good tx_good tx_unrea tx_err rx_unexp rx_corr
=====
0/0/CPU0[0]    10      10      10      0      0      0      0
0/0/CPU0[4]    10      10      10      0      0      0      0
0/4/CPU0[0]    10      10      10      0      0      0      0
0/4/CPU0[4]    10      10      10      0      0      0      0
0/5/CPU0[0]    10      10      10      0      0      0      0
0/5/CPU0[4]    10      10      10      0      0      0      0
0/6/CPU0[0]    10      10      10      0      0      0      0
0/6/CPU0[4]    10      10      10      0      0      0      0
0/8/CPU0[0]    10      10      10      0      0      0      0
0/8/CPU0[4]    10      10      10      0      0      0      0
0/RP0/CPU0[0]  10      10      10      0      0      0      0
0/RP0/CPU0[4]  10      10      10      0      0      0      0
0/RP1/CPU0[0]  10      10      10      0      0      0      0
0/RP1/CPU0[4]  10      10      10      0      0      0      0
1/3/CPU0[0]    10      10      10      0      0      0      0
1/3/CPU0[4]    10      10      10      0      0      0      0
1/4/CPU0[0]    10      10      10      0      0      0      0
1/4/CPU0[4]    10      10      10      0      0      0      0
1/7/CPU0[0]    10      10      10      0      0      0      0
1/7/CPU0[4]    10      10      10      0      0      0      0
1/9/CPU0[0]    10      10      10      0      0      0      0
1/9/CPU0[4]    10      10      10      0      0      0      0
1/14/CPU0[0]   10      10      10      0      0      0      0
1/14/CPU0[4]   10      10      10      0      0      0      0
1/15/CPU0[0]   10      10      10      0      0      0      0
1/15/CPU0[4]   10      10      10      0      0      0      0
1/RP0/CPU0[0]  10      10      10      0      0      0      0
1/RP0/CPU0[4]  10      10      10      0      0      0      0
1/RP1/CPU0[0]  10      10      10      0      0      0      0
1/RP1/CPU0[4]  10      10      10      0      0      0      0

```

```

=====
Global          300    300    300    0    0    0    0

```

Here is an example to display detailed diagnostic test results for the FabSRCC Test:

```

show diagnostic result <location> test FabSRCCTest detail

RP/0/RP0/CPU0:router(admin)#show diagnostic result location 0/4/cpu0 test FabSRCCTest
detail
Tue Jun  1 21:07:38.974 UTC
Current bootup diagnostic level for MSC-140G 0/4/CPU0: bypass
Test results: (. = Pass, F = Fail, U = Untested)

-----
9 ) FabSRCCTest -----> .
   Error code -----> 0 (DIAG_SUCCESS)
   Total run count -----> 1
   Last test execution time ----> Tue Jun  1 21:05:00 2010
   First test failure time ----> n/a
   Last test failure time ----> n/a
   Last test pass time -----> Tue Jun  1 21:05:00 2010
   Total failure count -----> 0
   Consecutive failure count ---> 0

```

Table 3: show diagnostic result Field Descriptions

Field	Description
Test results :	Test result options: <ul style="list-style-type: none"> • .—Pass • F—Fail • U—Untested
Error code	Code for the error. DIAG_SUCCESS is indicated if there were no code errors. DIAG_FAILURE is indicated for any failure. DIAG_SKIPPED is indicated if the test was stopped.
Total run count	Number of times the test has run.
Last test execution time	Last time the test was run.
First test failure time	First time the test failed.
Last test failure time	Last time the test failed.
Last test pass time	Last time the test passed.
Total failure count	Number of times the test has failed.
Consecutive failure count	Number of consecutive times the test has failed.

Related Commands

Command	Description
diagnostic load, on page 2	Loads an offline diagnostic image for integrated field diagnostics.
diagnostic schedule, on page 13	Configures a diagnostic schedule.

Command	Description
diagnostic start, on page 15	Runs a specified diagnostic test.

show diagnostic schedule

To display the current scheduled diagnostic tasks, use the **show diagnostic schedule** command in Admin EXEC mode.

show diagnostic schedule location *node-id*

Syntax Description	location <i>node-id</i>	Displays the diagnostic schedule for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
---------------------------	-----------------------------------	--

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.3.0	This command was introduced.

Usage Guidelines Use the **show diagnostic schedule** command to display scheduled diagnostic tasks for a specific location.



Note To specify a physical layer interface module (PLIM) node using the *node-id* argument, use the following notation: *rack/PLslot-number/SP*. For example, *0/PL1/SP*. PLIM diagnostic tests are supported.

For more information about running Cisco IOS XR diagnostics, refer to *Cisco IOS XR Diagnostics*.

Task ID	Task ID	Operations
	diag	read

Examples

The following example shows how to display scheduled diagnostic tasks:

```
RP/0/RP0/CPU0:router# admin
RP/0/RP0/CPU0:router(admin)# show diagnostic schedule location 0/3/CPU0

Current Time = Tue Sep 27 12:41:24 2005
Diagnostic for LC 0/3/CPU0:

Schedule #1:
  To be run daily 14:40
  Test ID(s) to be executed: 1 .
```

Table 4: show diagnostic schedule Field Descriptions

Field	Description
Current Time	Current system time.
Diagnostic for	Card for which the diagnostic is scheduled.
Schedule	Schedule number.
To be run	Time at which the diagnostics are scheduled to run.
Test ID(s) to be executed	Tests to be run at scheduled time.

Related Commands

Command	Description
diagnostic schedule, on page 13	Configures a diagnostic schedule.

show diagnostic status

To display the current running tests, use the **show diagnostic status** command in Admin EXEC mode.

show diagnostic status

Syntax Description This command has no keywords or arguments.

Command Default No default behavior or values

Command Modes Admin EXEC mode

Command History	Release	Modification
	Release 3.5.0	This command was introduced.

Usage Guidelines No specific guidelines impact the use of this command.

Task ID	Task ID	Operations
	diag	read

Examples

The following example shows how to display the current running tests:

```
RP/0/RP0/CPU0:router (admin)# show diagnostic status

<BU> - Bootup Diagnostics, <HM> - Health Monitoring Diagnostics,
<OD> - OnDemand Diagnostics, <SCHD> - Scheduled Diagnostics
=====
Card Description Current Running Test Run by
-----
RP 0/RP0/CPU0 N/A N/A
-----
RP 0/RP1/CPU0 N/A N/A
-----
DRP 0/4/CPU1 N/A N/A
-----
DRP 0/4/CPU0 SelfPingOverFabric <OD>
DRP-ACC 0/PL4/SP N/A N/A
-----
MSC 0/1/CPU0 N/A N/A
JACKET CARD 0/PL1/SP N/A N/A
-----
MSC 0/6/CPU0 N/A N/A
JACKET CARD 0/PL6/SP N/A N/A
-----
FC/S 0/SM0/SP N/A N/A
-----
FC/S 0/SM3/SP N/A N/A
-----
FC/S 0/SM2/SP N/A N/A
-----
```

```
FC/S 0/SM1/SP N/A N/A
-----
DRP 0/4/SP N/A N/A
-----
MSC 0/1/SP N/A N/A
-----
MSC 0/6/SP N/A N/A
=====
```

show run diagnostic monitor

To display the card type of a line card or a Shared Port Adapter (SPA), use the **show run diagnostic monitor** command in the Admin Configuration mode.

show run diagnostic monitor

Syntax Description This command has no keywords or arguments.

Command Default No default behavior or values

Command Modes Admin Configuration mode

Command History	Release	Modification
	Release 3.8.0	This command was introduced.

Usage Guidelines You need to be aware of the card type when you configure a slot or swap a card, and the configuration must re-apply. If the card type is different, the configuration does not re-apply. You can display the card type using the **show run diagnostic monitor** command in the administration configuration mode.

Task ID	Task ID	Operations
	diag	read, write

Examples

```
RP/0/RP0/CPU0:router#admin
RP/0/RP0/CPU0:router(admin)# config
RP/0/RP0/CPU0:router(admin-config)# diagnostic monitor location 0/RP1/CPU0 test
FabricDiagnosisTest
RP/0/RP0/CPU0:router(admin-config)# commit
RP/0/RP0/CPU0:router(admin-config)# end
RP/0/RP0/CPU0:router(admin)# show run diagnostic monitor

diagnostic monitor location 0/RP1/CPU0 test FabricDiagnosisTest card-type 100006
```