



Online Diagnostics

The online diagnostics contain tests to check different hardware components and verify the status of the software process and interfaces.

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Scheduling Online Diagnostics

You can schedule online diagnostics to run at a designated time of day or on a daily, weekly, or monthly basis for a specific router. Use the **no** form of this command to remove the scheduling.

For information on how to configure, see the configuration example sections.

Configuring Health-Monitoring Diagnostics

You can configure health-monitoring diagnostic testing on a specified router while the router is connected to a live network. You can configure the execution interval for each health-monitoring test, whether or not to generate a system message upon a test failure, or to enable or disable an individual test. Use the **no** form of this command to disable testing.

For information on how to configure Health Monitoring diagnostics, see the *Health-Monitoring Diagnostics Example* section.

Generic Online Diagnostic Commands

```
diagnostic monitor slot slot num test test num
diagnostic monitor syslog
diagnostic monitor threshold slot slot num test test num failure count threshold value
diagnostic schedule slot slot num/all test test num
```

```

diagnostic event-log size size value
diagnostic monitor interval slot slot num test test num interval

```

Generic Online Diagnostic EXEC Commands

```

diagnostic start slot slot num test test num
diagnostic stop slot slot num test test num
clear diagnostic event-log slot slot num/all
test diagnostic simulation [failure | clear] slot slot num test test id

```

EXEC commands to support subslot

```

diagnostic start subslot slot num>/<bay num test test num
diagnostic stop subslot <slot num>/<bay num> test test num
test diagnostic simulation [failure | clear] subslot <slot num>/<bay num> test test id

```

Generic Online Diagnostic Show commands

```

show diagnostic bootup level
show diagnostic slot slot num/all
show diagnostic schedule slot slot num/all
show diagnostic result slot slot num/all
show diagnostic result slot slot num/all detail
show diagnostic events slot slot num/all
show diagnostic content slot slot num/all
show diagnostic description slot slot num/all
show diagnostic status
show diagnostic ondemand test-parameter slot slot num test testid
show diagnostic simulation failure slot slot num

```

show command to support subslot

```

show diagnostic subslot slot num/bay num
show diagnostic schedule subslot slot num/bay num
show diagnostic result subslot slot num/bay num
show diagnostic result subslot slot num/bay num detail
show diagnostic events subslot slot num/bay num
show diagnostic content subslot slot num/bay num
show diagnostic description subslot slot num/bay num
show diagnostic content subslot slot num/bay num
show diagnostic ondemand test-parameter subslot slot num/bay num test testid
show diagnostic simulation failure subslot slot num>/bay num

```

Generic Online Diagnostic Example

```

Router#show diagnostic slot 1

Current bootup diagnostic level: minimal

slot 1: ASR1000-MIP100      SerialNo : JAE210500MM

Overall Diagnostic Result for slot 1 : PASS
Diagnostic level at card bootup: minimal

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

```

```

1) Np5cHeartbeatTest -----> .
2) AstroIlkTest -----> .
3) LCFpgaScratchTest -----> .
4) CCEOBCLinkStateTest -----> .

```

slot 1: ASR1000-MIP100 SerialNo : JAE18160AM6

Overall Diagnostic Result for slot 1 : PASS
Diagnostic level at card bootup: minimal

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

```

1) EPAFpgaScratchTest -----> .
2) EPAStatusTest -----> .
3) EPAHostPrbsStausTest -----> .
4) EPAXcvrTest:

```

Port	0	1	2	3	4	5	6	7	8	9

	U	U	U	U	U	U	U	U	U	U

Router#show diagnostic subslot 1/1

Current bootup diagnostic level: minimal

subslot 1/1: EPA-10X10GE SerialNo : JAE18160AM6

Overall Diagnostic Result for subslot 1/1 : PASS
Diagnostic level at card bootup: minimal

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

```

1) EPAFpgaScratchTest -----> .
2) EPAStatusTest -----> .
3) EPAHostPrbsStausTest -----> .
4) EPAXcvrTest:

```

Port	0	1	2	3	4	5	6	7	8	9

	U	U	U	U	U	U	U	U	U	U

Router#show diagnostic subslot 1/1 detail

Current bootup diagnostic level: minimal

subslot 1/1: EPA-10X10GE SerialNo : JAE18160AM6

Overall Diagnostic Result for subslot 1/1 : PASS
Diagnostic level at card bootup: minimal

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

```

1) EPAFpgaScratchTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Mar 05 2019 14:17:05
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Mar 05 2019 14:17:05

```

```
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
2) EPAStatusTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Mar 05 2019 14:17:05
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Mar 05 2019 14:17:05
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
3) EPAHostPrbsStausTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Mar 05 2019 14:17:05
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Mar 05 2019 14:17:05
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
4) EPAXcvtTest:
```

```
Port  0  1  2  3  4  5  6  7  8  9
-----
      U  U  U  U  U  U  U  U  U  U
```

```
Error code -----> 1 (DIAG_FAILURE)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Mar 05 2019 14:17:05
First test failure time -----> Mar 05 2019 14:17:05
Last test failure time -----> Mar 05 2019 14:17:05
Last test pass time -----> n/a
Total failure count -----> 1
Consecutive failure count ---> 1
```

Health Monitoring Diagnostics Configuration Example

Slot command example :

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#diagnostic monitor slot 2 test ?
```

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	Three- day shold
1)	Np5cHeartbeatTest	*B*N***I	000 00:00:05.00	n/a
2)	AstroIlkTest	*B*N***I	000 00:01:00.00	n/a
3)	LCFpgaScratchTest	*B*N***I	000 00:02:00.00	n/a
4)	CCEOBCLinkStateTest	*B*N***I	000 00:01:00.00	n/a

WORD Test ID list (e.g. 1,3-6) or Test Name
 all Select all test ID

```
Router(config)#
Router(config)#diagnostic monitor slot 2 test all
Router(config)#end
Router#show ru
*Aug 2 06:12:19.254: %SYS-5-CONFIG_I: Configured from console by consolen
Router#show run | sec diagnostic monitor
diagnostic monitor slot 2 test Np5cHeartbeatTest cardindex 4
diagnostic monitor slot 2 test AstroIlkTest cardindex 4
diagnostic monitor slot 2 test LCFpgaScratchTest cardindex 4
diagnostic monitor slot 2 test CCEOBCLinkStateTest cardindex 4
Router#
Router#show diagnostic content slot 2
```

slot 2: ASR1000-MIP100

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	Three- day shold
1)	Np5cHeartbeatTest	*B*N***A	000 00:00:05.00	n/a
2)	AstroIlkTest	*B*N***A	000 00:01:00.00	n/a
3)	LCFpgaScratchTest	*B*N***A	000 00:02:00.00	n/a
4)	CCEOBCLinkStateTest	*B*N***A	000 00:01:00.00	n/a

Router#show diagnostic result slot 2

Current bootup diagnostic level: minimal

slot 2: ASR1000-MIP100 SerialNo : JAE210500MM

Overall Diagnostic Result for slot 2 : PASS
 Diagnostic level at card bootup: minimal

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

1) Np5cHeartbeatTest -----> .

```

2) AstroIlkTest -----> .
3) LCFpgaScratchTest -----> .
4) CCEOBCLinkStateTest -----> .

```

Router#

Subslot :

Router#show diagnostic content subslot 1/0

subslot 1/0: EPA-2X40GE

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- day shold
1)	EPAFpgaScratchTest ----->	*B*N***I	000 00:01:00.00	n/a
2)	EPAStatusTest ----->	*B*N***I	000 00:01:00.00	n/a
3)	EPAHostPrbsStausTest ----->	*B*N***I	not configured	n/a
4)	EPAXcvrTest ----->	*BPN*X**I	not configured	n/a

Router#conf t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#diagno

Router(config)#diagnostic mon

Router(config)#diagnostic monitor sub

Router(config)#diagnostic monitor subslot 1/0 ?

test Diagnostic test selection

Router(config)#diagnostic monitor subslot 1/0 te

Router(config)#diagnostic monitor subslot 1/0 test ?

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- day shold
1)	EPAFpgaScratchTest ----->	*B*N***I	000 00:01:00.00	n/a
2)	EPAStatusTest ----->	*B*N***I	000 00:01:00.00	n/a
3)	EPAHostPrbsStausTest ----->	*B*N***I	not configured	n/a
4)	EPAXcvrTest ----->	*BPN*X**I	not configured	n/a

WORD Test ID list (e.g. 1,3-6) or Test Name
all Select all test ID

```
Router(config)#diagnostic monitor subslot 1/0 test 1
Router(config)#end
Router#sho
*Aug 2 06:29:41.321: %SYS-5-CONFIG_I: Configured from console by consolew ru
Router#show running-config | sec diagnostic monitor subslot
diagnostic monitor subslot 1/0 test EPAFpgaScratchTest cardindex 5
Router#
Router#
*Aug 2 06:30:07.735: %LINK-3-UPDOWN: Interface FortyGigabitEthernet1/0/1, changed state
to up
*Aug 2 06:30:07.734: %LINK-3-UPDOWN: SIP1/0: Interface FortyGigabitEthernet1/0/1, changed
state to up
*Aug 2 06:30:08.735: %LINEPROTO-5-UPDOWN: Line protocol on Interface
FortyGigabitEthernet1/0/1, changed state to up
Router#
Router#
Router#show diagnostic content subslot 1/0
```

subslot 1/0: EPA-2X40GE

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	Three- day shold
1)	EPAFpgaScratchTest	*B*N***A	000 00:01:00.00	n/a
2)	EPAStatusTest	*B*N***I	000 00:01:00.00	n/a
3)	EPAHostPrbsStausTest	*B*N***I	not configured	n/a
4)	EPAXcvrTest	*BPN*X*I	not configured	n/a

Router#

Slot and Subslot Level Show Commands Output Example

Slot related show commands:
=====

Router#show diagnostic slot 0

Current bootup diagnostic level: minimal

slot 0: ASR1000-MIP100 SerialNo : JAE20400315

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

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

```

1) Np5cHeartbeatTest -----> .
2) AstroIlkTest -----> .
3) LCFpgaScratchTest -----> .
4) CCEOBCLinkStateTest -----> .

slot 0: ASR1000-MIP100      SerialNo : JAE214006W6

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

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

1) EPAPpgaScratchTest -----> .
2) EPAStatusTest -----> .
3) EPAHostPrbsStausTest -----> .
4) EPAXcvrTest:

Port  0
-----
      U

```

```

slot 0: ASR1000-MIP100      SerialNo : JAE214006VX

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

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

1) EPAPpgaScratchTest -----> .
2) EPAStatusTest -----> .
3) EPAHostPrbsStausTest -----> .
4) EPAXcvrTest:

Port  0
-----
      .

```

Router#**show diagnostic result slot 0**

Current bootup diagnostic level: minimal

slot 0: ASR1000-MIP100 SerialNo : JAE20400315

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

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

```

1) Np5cHeartbeatTest -----> .
2) AstroIlkTest -----> .
3) LCFpgaScratchTest -----> .
4) CCEOBCLinkStateTest -----> .

```

Router#**show diagnostic result slot 0 detail**

Current bootup diagnostic level: minimal

slot 0: ASR1000-MIP100 SerialNo : JAE20400315

Overall Diagnostic Result for slot 0 : PASS

Diagnostic level at card bootup: minimal

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

1) Np5cHeartbeatTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time -----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ----> 0

2) AstroIlkTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time -----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ----> 0

3) LCFpgaScratchTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time -----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ----> 0

4) CCEOBCLinkStateTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time -----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ----> 0

Slot and Subslot Level Show Commands Output Example

```
Router#
Router#show diagnostic slot 0 detail

Current bootup diagnostic level: minimal

slot 0: ASR1000-MIP100      SerialNo : JAE20400315
```

```
Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal
```

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

```
1) Np5cHeartbeatTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
2) AstroIlkTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
3) LCFpgaScratchTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ---> 0
```

```
4) CCEOBCLinkStateTest -----> .
```

```
Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 2
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:25
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:25
Total failure count -----> 0
Consecutive failure count ---> 0
```

slot 0: ASR1000-MIP100 SerialNo : JAE214006W6

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

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

1) EPAPpgaScratchTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:45
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:45
Total failure count -----> 0
Consecutive failure count ---> 0

2) EPAStatusTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:45
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:45
Total failure count -----> 0
Consecutive failure count ---> 0

3) EPAHostPrbsStausTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:45
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:49:45
Total failure count -----> 0
Consecutive failure count ---> 0

4) EPAXcvrTest:

Port 0

U

Error code -----> 1 (DIAG_FAILURE)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:49:45
First test failure time -----> Jul 22 2019 04:49:45
Last test failure time -----> Jul 22 2019 04:49:45

```

Last test pass time -----> n/a
Total failure count -----> 1
Consecutive failure count ---> 1

```

```

slot 0: ASR1000-MIP100      SerialNo : JAE214006VX

```

```

Overall Diagnostic Result for slot 0 : PASS
Diagnostic level at card bootup: minimal

```

```

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

```

```

1) EPAFpgaScratchTest -----> .

```

```

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0

```

```

2) EPAStatusTest -----> .

```

```

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0

```

```

3) EPAHostPrbsStausTest -----> .

```

```

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0

```

```

4) EPAXcvrTest:

```

```

Port  0
-----
.

```

```

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand

```

```

Last test execution time ----> Jul 22 2019 04:50:03
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0

```

```

Router#
Router#show diagnostic content slot 0

```

```
slot 0: ASR1000-MIP100
```

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)	Np5cHeartbeatTest	*B*N****I	000 00:00:05.00	n/a
2)	AstroIlkTest	*B*N****I	000 00:01:00.00	n/a
3)	LCFpgaScratchTest	*B*N****I	000 00:02:00.00	n/a
4)	CCEOBCLinkStateTest	*B*N****I	000 00:01:00.00	n/a

```

Router#
Router#show diagnostic description slot 0 test all

```

```

Np5cHeartbeatTest :
  It Checks the ezman process heartbeat miss.

```

```

AstroIlkTest :
  It tests astro interlaken status and reports failures if not ok

```

```

LCFpgaScratchTest :
  It checks Read and Write operation of ELC's FPGA

```

```

CCEOBCLinkStateTest :
  It Checks EOBC link status of LC card.

```

```

Router#
Router#show diagnostic events slot 0
Diagnostic events (storage for 500 events, 26 events recorded)
Number of events matching above criteria = 8
Event Type (ET): I - Info, W - Warning, E - Error

```

Time Stamp	ET	[Card]	Event Message
07/22 04:48:23.878	I	[0]	Np5cHeartbeatTest Passed
07/22 04:48:23.880	I	[0]	AstroIlkTest Passed
07/22 04:48:23.882	I	[0]	LCFpgaScratchTest Passed
07/22 04:48:23.886	I	[0]	CCEOBCLinkStateTest Passed

Slot and Subslot Level Show Commands Output Example

```
07/22 04:49:25.297 I [0] Np5cHeartbeatTest Passed
07/22 04:49:25.298 I [0] AstroIlkTest Passed
07/22 04:49:25.300 I [0] LCFpgaScratchTest Passed
07/22 04:49:25.302 I [0] CCEOBCLinkStateTest Passed
```

```
Router#
Router#show diagnostic simulation failure slot 0
slot 0:
    There is no test failure simulation installed.
```

```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#do show clock
*05:43:47.385 UTC Mon Jul 22 2019
Router(config)#diagnostic schedule slot 0 test all on jul 22 2019 05:45
Router(config)#end
Router#
Router#show run | sec diagnostic
diagnostic schedule slot 0 test all on July 22 2019 5:45 cardindex 4 jobindex 1
diagnostic bootup level minimal
Router#
Router#
Router#show diagnostic schedule slot 0
Current Time = 05:44:35 UTC Mon Jul 22 2019
```

Diagnostic for slot 0:

```
Schedule #1:
  To be run on July 22 2019 5:45
  Test ID(s) to be executed: all.
```

```
Router#
*Jul 22 05:44:59.720: %DIAG-6-SCHED_RUNNING: slot 0: Performing Scheduled Online Diagnostic...
*Jul 22 05:44:59.720: %DIAG-6-TEST_RUNNING: slot 0: Running Np5cHeartbeatTest{ID=1} ...
*Jul 22 05:44:59.721: %DIAG-6-TEST_OK: slot 0: Np5cHeartbeatTest{ID=1} has completed
successfully
*Jul 22 05:44:59.721: %DIAG-6-TEST_RUNNING: slot 0: Running AstroIlkTest{ID=2} ...
*Jul 22 05:44:59.722: %DIAG-6-TEST_OK: slot 0: AstroIlkTest{ID=2} has completed successfully
*Jul 22 05:44:59.722: %DIAG-6-TEST_RUNNING: slot 0: Running LCFpgaScratchTest{ID=3} ...
*Jul 22 05:44:59.724: %DIAG-6-TEST_OK: slot 0: LCFpgaScratchTest{ID=3} has completed
successfully
*Jul 22 05:44:59.724: %DIAG-6-TEST_RUNNING: slot 0: Running CCEOBCLinkStateTest{ID=4} ...
*Jul 22 05:44:59.726: %DIAG-6-TEST_OK: slot 0: CCEOBCLinkStateTest{ID=4} has completed
successfully
*Jul 22 05:44:59.726: %DIAG-6-SCHED_COMPLETE: slot 0: Scheduled Online Diagnostic is completed
Router#
Router#show diagnostic schedule slot 0
Current Time = 05:45:07 UTC Mon Jul 22 2019
```

Diagnostic for slot 0 is not scheduled.

```
Router#
```

```
subslot level commands
=====
```

```
Router#show diagnostic result subslot 0/1
```

Current bootup diagnostic level: minimal

```
subslot 0/1: EPA-QSFP-1X100GE      SerialNo : JAE214006VX
```

```
Overall Diagnostic Result for subslot 0/1 : PASS
Diagnostic level at card bootup: minimal
```

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

- ```
1) EPAFpgaScratchTest -----> .
2) EPAStatusTest -----> .
3) EPAHostPrbsStausTest -----> .
4) EPAXcvrTest:
```

```
Port 0

.
```

```
Router#show diagnostic result subslot 0/1 detail
```

```
Current bootup diagnostic level: minimal
```

```
subslot 0/1: EPA-QSFP-1X100GE SerialNo : JAE214006VX
```

```
Overall Diagnostic Result for subslot 0/1 : PASS
Diagnostic level at card bootup: minimal
```

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

---

```
1) EPAFpgaScratchTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time ----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0
```

---

```
2) EPAStatusTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time ----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0
```

---

```
3) EPAHostPrbsStausTest -----> .

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 1
Last test testing type -----> OnDemand
Last test execution time ----> Jul 22 2019 04:50:03
First test failure time ----> n/a
```

## Slot and Subslot Level Show Commands Output Example

```

Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:50:03
Total failure count -----> 0
Consecutive failure count ---> 0

```

## 4) EPAXcvrTest:

```

Port 0

.

```

```

Error code -----> 0 (DIAG_SUCCESS)
Total run count -----> 3
Last test testing type -----> OnDemand
Last test execution time -----> Jul 22 2019 04:57:24
First test failure time -----> n/a
Last test failure time -----> n/a
Last test pass time -----> Jul 22 2019 04:57:24
Total failure count -----> 0
Consecutive failure count ---> 0

```

Router#

Router#**show diagnostic content subslot 0/1**

subslot 0/1: EPA-QSFP-1X100GE

## 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<br>day hh:mm:ss.ms | Thre-<br>day should |
|----|-----------------------------|------------|----------------------------------|---------------------|
| 1) | EPAFpgaScratchTest ----->   | *B*N****I  | 000 00:01:00.00                  | n/a                 |
| 2) | EPAStatusTest ----->        | *B*N****I  | 000 00:01:00.00                  | n/a                 |
| 3) | EPAHostPrbsStausTest -----> | *B*N****I  | not configured                   | n/a                 |
| 4) | EPAXcvrTest ----->          | *BPN*X*I   | not configured                   | n/a                 |

Router#

Router#**show diagnostic description subslot 0/1 test all**

EPAFpgaScratchTest :

it tests read and write operation of EPAs FPGA scratchpad register

EPAStatusTest :

It tests EPA boot status.

EPAHostPrbsStausTest :

It tests mac and EPA phy serdes line auto tune status

```
EPAXcvrTest :
 It tests EPA xcvr staus
```

```
Router#
```

```
Router#show diagnostic events subslot 0/1 all
Diagnostic events (storage for 500 events, 26 events recorded)
Number of events matching above criteria = 9
Event Type (ET): I - Info, W - Warning, E - Error
```

| Time Stamp         | ET | [Card] | Event Message               |
|--------------------|----|--------|-----------------------------|
| 07/22 04:50:03.787 | I  | [0/1]  | EPAFpgaScratchTest Passed   |
| 07/22 04:50:03.788 | I  | [0/1]  | EPAStatusTest Passed        |
| 07/22 04:50:03.789 | I  | [0/1]  | EPAHostPrbsStausTest Passed |
| 07/22 04:50:03.811 | I  | [0/1]  | EPAXcvrTest Passed          |
| 07/22 04:57:19.719 | I  | [0/1]  | EPAXcvrTest Passed          |
| 07/22 04:57:24.616 | I  | [0/1]  | EPAXcvrTest Passed          |
| 07/22 05:00:01.333 | I  | [0/1]  | EPAXcvrTest Passed          |
| 07/22 05:00:06.980 | I  | [0/1]  | EPAXcvrTest Passed          |
| 07/22 05:00:31.421 | I  | [0/1]  | EPAXcvrTest Passed          |

```
Router#
```

```
Router#show diagnostic simulation failure subslot 0/1
subslot 0/1:
 There is no test failure simulation installed.
```

```
Router#
```

```
Router#show run | sec diagnostic
diagnostic bootup level minimal
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#do show clock
*05:48:15.905 UTC Mon Jul 22 2019
Router(config)#diagnostic schedule subslot 0/1 test all on jul 22 2019 05:50
Router(config)#end
Router#
*Jul 22 05:48:44.378: %SYS-5-CONFIG_I: Configured from console by consoleconf t

Router#show run | sec diagnostic
diagnostic schedule subslot 0/1 test all on July 22 2019 5:50 cardindex 5 jobindex 1
diagnostic bootup level minimal
Router#show diagnostic schedule sub
Router#show diagnostic schedule subslot 0/1
Current Time = 05:49:02 UTC Mon Jul 22 2019
```

```
Diagnostic for subslot 0/1:
```

```
Schedule #1:
 To be run on July 22 2019 5:50
 Test ID(s) to be executed: all.
```

```
Router#show diagnostic schedule subslot 0/1
Current Time = 05:49:14 UTC Mon Jul 22 2019
```

```
Diagnostic for subslot 0/1:
```

## Slot and Subslot Level Show Commands Output Example

```
Schedule #1:
 To be run on July 22 2019 5:50
 Test ID(s) to be executed: all.

Router#
*Jul 22 05:49:59.832: %DIAG-6-SCHED_RUNNING: subslot 0/1: Performing Scheduled Online
Diagnostic...
*Jul 22 05:49:59.832: %DIAG-6-TEST_RUNNING: subslot 0/1: Running EPAPpgaScratchTest{ID=1}
...
*Jul 22 05:49:59.833: %DIAG-6-TEST_OK: subslot 0/1: EPAPpgaScratchTest{ID=1} has completed
successfully
*Jul 22 05:49:59.833: %DIAG-6-TEST_RUNNING: subslot 0/1: Running EPAStatusTest{ID=2} ...
*Jul 22 05:49:59.834: %DIAG-6-TEST_OK: subslot 0/1: EPAStatusTest{ID=2} has completed
successfully
*Jul 22 05:49:59.834: %DIAG-6-TEST_RUNNING: subslot 0/1: Running EPAHostPrbsStausTest{ID=3}
...
*Jul 22 05:49:59.835: %DIAG-6-TEST_OK: subslot 0/1: EPAHostPrbsStausTest{ID=3} has completed
successfully
*Jul 22 05:49:59.835: %DIAG-6-TEST_RUNNING: subslot 0/1: Running EPAXcvrTest{ID=4} ...
*Jul 22 05:49:59.857: %DIAG-6-TEST_OK: subslot 0/1: EPAXcvrTest{ID=4} has completed
successfully
*Jul 22 05:49:59.857: %DIAG-6-SCHED_COMPLETE: subslot 0/1: Scheduled Online Diagnostic is
completed
Router#
Router#show diagnostic schedule subslot 0/1
Current Time = 05:50:33 UTC Mon Jul 22 2019

Diagnostic for subslot 0/1 is not scheduled.

Router#
```