Online Diagnostics Commands

Online diagnostics test the accessibility of the components on the Cisco ONS 15530. Use the following commands to configure and monitor online diagnostic operations.

diag online

To enable online diagnostics for the system, use the **diag online** command. To disable online diagnostics for the system, use the **no** form of this command.

diag online

no diag online

Syntax Description   This command has no other arguments or keywords.

Defaults   Disabled

Command Modes   Global configuration

Command History   This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(10)EV2	This command was introduced.

SV-Release	Modification
12.2(18)SV	This command was integrated in this release.

S-Release	Modification
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines   Use this command to enable or disable online diagnostics for the system. Online diagnostics run in background mode or during OIR (online insertion and removal). Any slot level diagnostics previously configured with the **diag online slot** command take precedence over the **diag online** command.

When online diagnostics are disabled, no further diagnostics can run.

Examples   The following example shows how to enable online diagnostics.

```
Switch# configure terminal
Switch(config)# diag online
```

Related Commands

Command	Description
debug diag online	Enables debugging of the online diagnostics.
diag online slot	Enables online diagnostics for a specified slot number.
diag online subslot	Enables online diagnostics for a specified subslot number.
show diag online	Displays the configuration and status of the online diagnostics.
show diag online detail	Shows detailed online diagnostic test results for the shelf.
show diag online slot	Shows detailed online diagnostic test results for a specific slot.

diag online slot

To enable online diagnostics for a specified slot number, use the **diag online slot** command. To disable online diagnostics for a specified slot number, use the **no** form of this command.

> **diag online slot** *slot-number* [**timer** *seconds*]

> **no diag online slot** *slot-number* [**timer** *seconds*]

Syntax Description

slot-number	Specifies the number of the slot on which to run online diagnostics. The range is 0 to 10.
timer *seconds*	Specifies a timer the background tests. The range is 30 to 600 seconds. The default value is 60 seconds.

Defaults

Disabled

The timer default is 60 seconds.

Command Modes

Global configuration

Command History

This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(10)EV2	This command was introduced.
SV-Release	**Modification**
12.2(18)SV	This command was integrated in this release.
S-Release	**Modification**
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines

Use this command to enable or disable online diagnostics for a specified slot number. It can be useful to disable online diagnostics on a particular slot when there is a spurious error that causes excessive console messages.

Examples

The following example shows how to enable online diagnostics for a specific slot number.

```
Switch# configure terminal
Switch(config)# diag online slot 2
```

The following example shows how to enable online diagnostics on all the slots and then disable online diagnostics for a specific slot number.

```
Switch# configure terminal
Switch(config)# diag online
Switch(config)# no diag online slot 10
```

Related Commands

Command	Description
debug diag online	Enables debugging of the online diagnostics.
diag online	Enables online diagnostics for the system.
diag online subslot	Enables online diagnostics for a specified subslot number.
show diag online	Displays the configuration and status of the online diagnostics.
show diag online detail	Shows detailed online diagnostic test results for the shelf.
show diag online slot	Shows detailed online diagnostic test results for a specific slot.

diag online subslot

To enable online diagnostics for a specified subslot number, use the **diag online subslot** command. To disable online diagnostics for a specific slot number, use the **no** form of this command.

> **diag online subslot** *slot*/*subcard* [**timer** *seconds*]

> **no diag online subslot** *slot*/*subcard* [**timer** *seconds*]

Syntax Description

slot	Specifies the number of the slot on which to run online diagnostics. The range is 0 to 10.
subcard	Specifies the number of the subslot on which to run online diagnostics. The range is 0 to 1.
timer *seconds*	Specifies a timer the background tests. The range is 30 to 600 seconds. The default value is 60 seconds.

Defaults

Disabled

The timer default is 60 seconds.

Command Modes

Global configuration

Command History

This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(12c)EV	This command was introduced.
SV-Release	**Modification**
12.2(18)SV	This command was integrated in this release.
S-Release	**Modification**
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines

Use this command to enable or disable online diagnostics for a specific subslot.

You can disable online diagnostics on a particular subslot when there is a spurious error that causes excessive console messages.

Examples

The following example shows how to enable online diagnostics for a specific slot number.

```
Switch# configure terminal
```

```
Switch(config)# diag online subslot 0/0
```

The following example shows how to enable online diagnostics on all the slots and then disable online diagnostics for a specific slot number.

```
Switch# configure terminal
Switch(config)# diag online
Switch(config)# no diag online subslot 0/1
```

Related Commands

Command	Description
debug diag online	Enables debugging of the online diagnostics.
diag online	Enables online diagnostics for the system.
diag online slot	Enables online diagnostics for specified slot number.
show diag online	Displays the configuration and status of the online diagnostics.
show diag online detail	Shows detailed online diagnostic test results for the shelf.
show diag online slot	Shows detailed online diagnostic test results for a specific slot.

show diag online

To display current online diagnostic test results, use the **show diag online** command. Information displayed includes the cards installed, their current status, and the status of online tests performed on the cards.

show diag online

Syntax Description

This command has no other arguments or keywords.

Defaults

None

Command Modes

EXEC and privileged EXEC

Command History

This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(10)EV2	This command was introduced.
SV-Release	**Modification**
12.2(18)SV	This command was integrated in this release.
S-Release	**Modification**
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines

Use this command whenever a card is unavailable or is not coming up, to determine card status and the status of various background online tests performed on them.

Examples

The following example shows how to display online diagnostic test results for the hardware components. (See Table 4-1 for field descriptions.)

```
Switch# show diag online
Online Diagnostics Current Summary Information
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
On ACTIVE CPU card Slot: 6
CPU Uptime:    21 hours, 52 minutes

  Slot       CardType        Enabled     Bootup/     Periodic      Previous
                                         Insertion   Background    Failures
                                         tests       tests
  ~~~~~~     ~~~~~~~~~~~~~~   ~~~~~~~     ~~~~~~~~~    ~~~~~~~~~~~    ~~~~~~~~
  0/*/*      Mx-DMx-Mthrbd      Yes       Pass          Pass           No
```

```
0/ 3/*Mx-DMx-8Mod-Plus1-W      Yes      Pass      Pass         No

1/*/*       Mx-DMx-Mthrbd      Yes      Pass      Pass         No
1/ 3/*Mx-DMx-8Mod-Plus1-W      Yes      Pass      Pass         No

6/*/*           Queens CPU     Yes      Pass      Pass         No

7/*/*           Queens CPU     Yes      Pass      Pass         No

10/*/*   XpndrMotherboard      Yes      Pass      Pass         No
10/ 0/*  NPlugXpndrMonitor     Yes      Pass      Pass         No
10/ 1/*  NPlugXpndrMonitor     Yes      Pass      Pass         No
10/ 2/*  NPlugXpndrMonitor     Yes      Pass      Pass         No
10/ 3/*  NPlugXpndrMonitor     Yes      Pass      Pass         No
```

Table 4-1   show diag online Field Descriptions

Field	Description
Slot	Shows the slot on which online diagnostics have been run.
CardType	Shows the card type on which online diagnostics have been run.
Enabled	Indicates whether online diagnostic tests are enabled on the slot.
Bootup/Insertion tests	Indicates whether the card passed the test run at system bootup or when the component is inserted in the chassis.
Periodic Background tests	Indicates whether the card passed the periodic background tests.
Previous Failures	Shows when the last failure occurred for the component.

Related Commands

Command	Description
diag online	Enables online diagnostics for the system.
diag online slot	Enables online diagnostics for the specified slot.
diag online subslot	Enables online diagnostics for a specified subslot number.
show diag online detail	Shows detailed online diagnostic test results for the shelf.
show diag online slot	Shows detailed online diagnostic test results for a specific slot.

show diag online detail

To display the cards currently installed on the system and the detailed results of online diagnostic tests performed on them, use the **show diag online detail** command.

show diag online detail

Syntax Description

This command has no other arguments or keywords.

Defaults

None

Command Modes

EXEC and privileged EXEC

Command History

This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(10)EV2	This command was introduced.
SV-Release	**Modification**
12.2(18)SV	This command was integrated in this release.
S-Release	**Modification**
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines

Use this command to display detailed status information about all the online diagnostic tests run on the hardware in the system. Information displayed includes the number of times background tests passed or failed, as well as the status of OIR tests.

Use this command to debug possible hardware problems on the cards or subcards installed.

Examples

The following example shows how to display current, detailed online diagnostics for the system. (See Table 4-2 for field descriptions.)

```
Switch# show diag online detail

Online Diagnostics Detailed Information
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
On ACTIVE CPU card Slot: 6
CPU Uptime:    21 hours, 57 minutes


_____

Slot[0]:Mx-DMx-Mthrbd
```

```
Enabled: Yes

Online Insertion Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  0/*/*       Mx-DMx-Mthrbd    lrcAccess      Pass     0 minutes      never
                               idpromAccess    Pass
  0/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces     Pass     0 minutes      never

Online Background Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  0/*/*       Mx-DMx-Mthrbd    lrcAccess      Pass21 hours, 57       never
                               idpromAccess    Pass
  0/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces     Pass21 hours, 57       never
_____
Slot[1]:Mx-DMx-Mthrbd
Enabled: Yes

Online Insertion Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  1/*/*       Mx-DMx-Mthrbd    lrcAccess      Pass     0 minutes      never
                               idpromAccess    Pass
  1/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces     Pass     0 minutes      never

Online Background Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  1/*/*       Mx-DMx-Mthrbd    lrcAccess      Pass21 hours, 57       never
                               idpromAccess    Pass
  1/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces     Pass21 hours, 57       never
_____
Slot[6]:Queens CPU
Enabled: Yes

Online Insertion Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  6/*/*        Queens CPU      srcStatus      Pass     0 minutes      never
                               PCIAccess       Pass
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
                               PCMCIAAccess    Pass

Online Background Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  6/*/*        Queens CPU      srcStatus      Pass21 hours, 57       never
                               PCIAccess       Pass
                               PCMCIAAccess    Pass
_____
Slot[7]:Queens CPU
Enabled: Yes

Online Insertion Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
  ~~~~~~    ~~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
  7/*/*        Queens CPU      srcStatus      Pass     0 minutes      never
                               PCIAccess       Pass
                               PCMCIAAccess    Pass

Online Background Tests
  Slot          CardType         TestType      Status    LastRunTime    LastFailTime
```

Cisco ONS 15530 Command Reference Guide

```
 ~~~~~~    ~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
 7/*/*         Queens CPU     srcStatus     Pass21 hours, 51      never
                              PCIAccess      Pass
                              PCMCIAAccess   Pass
_____
Slot[10]:XpndrMotherboard
Enabled: Yes

Online Insertion Tests
  Slot        CardType        TestType      Status   LastRunTime    LastFailTime
 ~~~~~~    ~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
10/*/*    XpndrMotherboard   lrcAccess      Pass    0 minutes       never
                             idpromAccess   Pass
10/ 0/*   NPlugXpndrMonitor   scAccess      Pass    0 minutes       never
                             idpromAcces    Pass
10/ 1/*   NPlugXpndrMonitor   scAccess      Pass    0 minutes       never
                             idpromAcces    Pass
10/ 2/*   NPlugXpndrMonitor   scAccess      Pass    0 minutes       never
                             idpromAcces    Pass
10/ 3/*   NPlugXpndrMonitor   scAccess      Pass    0 minutes       never
                             idpromAcces    Pass

Online Background Tests
  Slot        CardType        TestType      Status   LastRunTime    LastFailTime
 ~~~~~~    ~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
10/*/*    XpndrMotherboard   lrcAccess      Pass21 hours, 57      never
                             idpromAccess   Pass
  Slot        CardType        TestType      Status   LastRunTime    LastFailTime
 ~~~~~~    ~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~    ~~~~~~~~~~~    ~~~~~~~~~~~~~
10/ 0/*   NPlugXpndrMonitor   scAccess      Pass21 hours, 57      never
                             idpromAcces    Pass
10/ 1/*   NPlugXpndrMonitor   scAccess      Pass21 hours, 57      never
                             idpromAcces    Pass
10/ 2/*   NPlugXpndrMonitor   scAccess      Pass21 hours, 57      never
                             idpromAcces    Pass
10/ 3/*   NPlugXpndrMonitor   scAccess      Pass21 hours, 57      never
                             idpromAcces    Pass
```

Table 4-2   *show diag online detail Field Descriptions*

Field	Description
On ACTIVE CPU card Slot:	Shows the chassis slot that contains the active CPU switch module.
CPU Uptime	Shows the amount of time since the system booted.
Slot	Shows the slot on which the online diagnostics are being run.
Enabled	Indicates whether online diagnostics are enabled on the slot.
CardType	Shows the card type on which the online diagnostics are being run.
TestType	Shows the type of test run. Test types can be: • lrcAccess (Accesses the LRC) • idpromAccess (Accesses the IDPROM) • srcAccess (Accesses the SRC) • PCMCIAAccess (Accesses Flash PC Cards • scAccess (Accesses transponder line cards)
Status	Shows the result of the diagnostic test (Pass/Fail)

Table 4-2   show diag online detail Field Descriptions (continued)

Field	Description
LastRunTime	Shows the amount of time since the test was last run.
LastFailTime	Shows the amount of time since the test failed.

Related Commands

Command	Description
diag online	Enables online diagnostics for the system.
diag online slot	Enables online diagnostics for the specified slot.
diag online subslot	Enables online diagnostics for a specified subslot number.
show diag online	Shows a summary of the online diagnostic test results for the shelf.
show diag online slot	Shows detailed online diagnostic test results for a specific slot.

show diag online slot

To display the results of online diagnostic tests performed on a card in a specific slot, use the **show diag online slot** command.

show diag online slot *slot-number*

Syntax Description

slot-number	Specifies the slot number. The range is 0 to 10.

Defaults

None

Command Modes

EXEC and privileged EXEC

Command History

This table includes the following release-specific history entries:

- EV-Release
- SV-Release
- S-Release

EV-Release	Modification
12.1(10)EV2	This command was introduced.

SV-Release	Modification
12.2(18)SV	This command was integrated in this release.

S-Release	Modification
12.2(22)S	**This command was integrated in this release from release 12.2(22)SV.**

Usage Guidelines

Use this command to display the status of online diagnostics performed on components installed in a specific slot.

Examples

The following example shows how to display the results of online diagnostic tests performed on slot 0. (See Table 4-3 for field descriptions.)

```
Switch# show diag online slot 0
Online Diagnostics Information Per Slot
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Slot[0]:Mx-DMx-Mthrbd
Enabled: Yes
CPU Uptime:    21 hours, 59 minutes

Online Insertion Tests
 Slot        CardType       TestType      Status    LastRunTime    LastFailTime
 ~~~~~~    ~~~~~~~~~~~~~~   ~~~~~~~~~    ~~~~~~   ~~~~~~~~~~~   ~~~~~~~~~~~~~
 0/*/*     Mx-DMx-Mthrbd    lrcAccess     Pass    0 minutes      never
                           idpromAccess    Pass
```

```
         0/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces     Pass    0 minutes      never

Online Background Tests
 Slot          CardType         TestType     Status    LastRunTime    LastFailTime
~~~~~~   ~~~~~~~~~~~~~~    ~~~~~~~~~    ~~~~~~   ~~~~~~~~~~~   ~~~~~~~~~~~~~
 0/*/*      Mx-DMx-Mthrbd    lrcAccess      Pass21 hours, 58      never
                            idpromAccess     Pass
 0/ 3/* Mx-DMx-8Mod-Plus1- idpromAcces       Pass21 hours, 58      never
```

Table 4-3   show diag online slot Field Descriptions

Field	Description
Slot	Shows the slot on which online diagnostics were performed.
Enabled	Indicates whether online diagnostics are enabled on the slot.
CPU Uptime	Shows the amount of time since the system booted.
CardType	Shows the card type on which the online diagnostics are being run.
TestType	Shows the type of test run. Test types can be: • lrcAccess (accesses the LRC) • idpromAccess (accesses the IDPROM) • srcAccess (accesses the SRC) • PCMCIAAccess (accesses Flash PC Cards) • scAccess (accesses transponder line cards)
Status	Shows the result of the diagnostic test (Pass/Fail).
LastRunTime	Shows the amount of time since the test was last run.
LastFailTime	Shows the amount of time since the test failed.

Related Commands

Command	Description
diag online	Enables online diagnostics for the system.
diag online slot	Enables online diagnostics for the specified slot.
diag online subslot	Enables online diagnostics for a specified subslot number.
show diag online	Shows a summary of the online diagnostic test results for the shelf.
show diag online detail	Shows detailed online diagnostic test results for the shelf.

show diag online slot