Debug Commands

Use the following commands to debug the Cisco ONS 15530. For information on other debug commands refer to the *Cisco IOS Debug Command Reference* document.

debug aps

To debug APS operation, use the **debug aps** command. To disable APS debugging, use the **no** form of this command.

debug aps

no debug aps

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled.

Command Modes

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

To turn off all debugging, use the **undebug all** command.

Examples

The following example shows how to enable debugging of APS operations.

```
Switch# debug aps
```

Related Commands

Command	Description
associate group	Creates or specifies an APS interface group and enters APS configuration mode.
associate interface	Associates wavepatch interfaces for APS splitter protection.
undebug all	Disables all debugging.

debug cdl defect-indication

To enable debugging for the in-band message channel defect indications, use the **debug cdl defect-indication** command. To disable debugging for in-band message channel defect indications, use the **no** form of this command.

debug cdl defect-indication {**error** | **events** | **periodic**}

no debug cdl defect-indication {**error** | **events** | **periodic**}

Syntax Description

error	Enables debugging for in-band message channel error conditions.
events	Enables debugging for in-band message channel internal software event conditions.
periodic	Enables debugging for in-band message channel periodic events.

Defaults

Disabled

Command Modes

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 enable debugging for the message channel.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to enable debugging for the in-band message channel.

```
Switch# debug cdl defect-indication errors
```

Related Commands

Command	Description
diag online	Enables online diagnostics for the system.
diag online slot	Enables online diagnostics for a specified slot number.
undebug all	Disables all debugging.

debug cm

To enable debugging for the connection manager, use the **debug cm** command. To disable debugging for the connection manager, use the **no** form of this command.

debug cm {**errors** | **events** | **sync** {**errors** | **events**}}

no debug cm {**errors** | **events** | **sync** {**errors** | **events**}}

Syntax Description

errors	Enables debugging for message channel error conditions.
events	Enables debugging for internal software event conditions.
sync {errors | events}	Enables debugging for synchronization errors and events.

Defaults

Disabled

Command Modes

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 enable debugging for the connection manager.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to enable debugging of the connection manager.

```
Switch# debug cm events
```

Related Commands

Command	Description
undebug all	Disables all debugging.

debug cpu

To debug IPC (interprocess communication) initialization and switchover events, use the **debug cpu** command. To disable debugging IPC initialization and switchover events, use the **no** form of this command.

debug cpu {**ipc** | **redundancy** | **ehsa** | **sub-ipc**}

no debug cpu {**ipc** | **redundancy** | **ehsa** | **sub-ipc**}

Syntax Description

ipc	Enables debugging for processor IPC (interprocessor communications) initialization and switchover events.
redundancy	Enables debugging for CPU switch module redundancy initialization and operation.
ehsa	Enables debugging for processor EHSA (enhanced high system availability) services such as host name, config register, and calendar synchronizing to the standby CPU switch module.
sub-ipc	Enables debugging for the IPC channel layer below the IPC level.

Defaults

Disabled.

Command Modes

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 enable debugging of IPC initialization and switchover events. To debug redundancy software operations, use the **debug redundancy** command.

To turn off all debugging, use the **undebug all** command.

Examples

The following example shows how to enable redundancy state debugging.

```
Switch# debug cpu redundancy
```

Related Commands

Command	Description
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug diag online

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

debug diag online [**online-insertion-removal** | **background** | **redundancy**]

no debug diag online [**online-insertion-removal** | **background** | **redundancy**]

Syntax Description

online-insertion-removal	Enables debugging of OIR (online insertion and removal) tests for online diagnostics.
background	Enables debugging of background tests for online diagnostics.
redundancy	Enables debugging of redundancy tests for online diagnostics.

Defaults

Disabled

Command Modes

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 enable debugging for online diagnostics.

To turn off all debugging, use the **undebug all** command.

Examples

The following example shows how to enable debugging of background tests for online diagnostics.

```
Switch# debug diag online background
```

Related Commands

Command	Description
undebug all	Disables all debugging.

debug driver 2gfc

To enable 4-port 1-Gbps/2-Gbps FC aggregation card driver debugging, use the **debug driver 2gfc** command. To disable 4-port 1-Gbps/2-Gbps FC aggregation card driver debugging operations, use the **no** form of this command.

debug driver 2gfc {**errors** | **events** | **fpga** | **periodic**}

no debug driver 2gfc {**errors** | **events** | **fpga** | **periodic**}

Syntax Description

errors	Enables debugging for 4-port 1-Gbps/2-Gbps FC aggregation card driver error conditions.
events	Enables debugging for internal software events.
fpga	Enables debugging 4-port 1-Gbps/2-Gbps FC aggregation card FPGA operations.
periodic	Enables periodic debugging for the 4-port 1-Gbps/2-Gbps FC aggregation card.

Defaults

Disabled

Command Modes

Privileged EXEC

Command History

This table includes the following release-specific history entries:

- SV-Release

SV-Release	Modification
12.2(23)SV	This command was integrated in this release.

Usage Guidelines

Use this command to enable 4-port 1-Gbps/2-Gbps FC aggregation card driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate 4-port 1-Gbps/2-Gbps FC aggregation card driver debugging.

```
Switch# debug driver 2gfc errors
```

Related Commands

Command	Description
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver control ethernet

To enable backplane Ethernet driver debugging, use the **debug driver control ethernet** command. To disable backplane ethernet driver debugging operations, use the **no** form of this command.

debug driver control ethernet {**errors** | **events** | **packets**}

no debug driver control ethernet {**errors** | **events** | **packets**}

Syntax Description

errors	Enables debugging for SRC driver error conditions.
events	Enables debugging for internal software error conditions.
packets	Enables debugging of the backplane Ethernet driver packets.

Defaults

Disabled

Command Modes

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 activate backplane Ethernet driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate backplane Ethernet driver error debugging.

```
Switch# debug driver control ethernet errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug driver escon

To enable ESCON aggregation card driver debugging, use the **debug driver escon** command. To disable ESCON aggregation card driver debugging operations, use the **no** form of this command.

debug driver escon {**errors** | **events** | **fpga**}

no debug driver escon {**errors** | **events** | **fpga**}

Syntax Description

errors	Enables debugging for ESCON aggregation card driver error conditions.
events	Enables debugging for internal software events.
fpga	Enables debugging FPGA operations.

Defaults

Disabled

Command Modes

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 enable ESCON aggregation card driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate ESCON aggregation card driver debugging.

```
Switch# debug driver escon errors
```

Related Commands

Command	Description
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver gefc

To enable 8-port FC/GE aggregation card driver debugging, use the **debug driver gefc** command. To disable 8-port FC/GE aggregation card driver debugging operations, use the **no** form of this command.

debug driver gefc {**errors** | **events** | **fpga** | **periodic**}

no debug driver gefc {**errors** | **events** | **fpga** | **periodic**}

Syntax Description

errors	Enables debugging for 8-port FC/GE aggregation card driver error conditions.
events	Enables debugging for internal software events.
fpga	Enables debugging 8-port FC/GE aggregation card driver FPGA operations.
periodic	Enables periodic debugging for the 8-port FC/GE aggregation card.

Defaults

Disabled

Command Modes

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 enable 8-port FC/GE aggregation card driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate 8-port FC/GE aggregation card driver debugging.

```
Switch# debug driver gefc errors
```

Related Commands

Command	Description
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver multirate

To enable 8-port multi-service muxponder driver debugging, use the **debug driver multirate** command. To disable 8-port multi-service muxponder driver debugging operations, use the **no** form of this command.

debug driver multirate {**errors** | **events** | **fpga** | **periodic** | **stop** | **tle1** | **tsi** {**errors** | **events** | **messages**} | **xcrv**}

no debug driver multirate {**errors** | **events** | **fpga** | **periodic** | **stop** | **tle1** | **tsi** {**errors** | **events** | **messages**} | **xcrv**}

Syntax Description

errors	Enables debugging for driver error conditions.
events	Enables debugging for internal software events.
fpga	Enables debugging FPGA settings.
periodic	Enables debugging periodic processing events.
stop	Stops periodic processing for copper Gigabit Ethernet and Fast Ethernet.
tle1	Enables debugging T1 and E1 protocol processing.
tsi	Enables debugging TSI protocol processing.
messages	Enables debugging for TSI messages.
xcrv	Enables debugging transceivers.

Defaults

Disabled

Command Modes

Privileged EXEC

Command History

This table includes the following release-specific history entries:

- SV-Release

SV-Release	Modification
12.2(25)SV	This command was integrated in this release.

Usage Guidelines

Use this command to enable 8-port multi-service muxponder driver debugging.

To turn off all debugging, use the **undebug all** command.

Examples

The following example shows how to activate 8-port multi-service muxponder driver debugging.

```
Switch# debug driver multirate errors
```

Related Commands

Command	Description
undebug all	Disables all debugging.

debug driver nvram

To enable NVRAM file system debugging, use the **debug driver nvram** command. To disable NVRAM file system debugging operations, use the **no** form of this command.

debug driver nvram {**errors** | **events**}

no debug driver nvram {**errors** | **events**}

Syntax Description

errors	Enables debugging for NVRAM driver error conditions.
events	Enables debugging for internal software events.

Defaults

Disabled

Command Modes

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 enable NVRAM file system platform specific debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate NVRAM file system platform specific debugging.

```
Switch# debug driver nvram errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of OSCP activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug driver osc

To enable the OSC driver debugging, use the **debug driver osc** command. To disable the OSC driver debugging, use the **no** form of this command.

debug driver osc {**events** | **fpga**}

no debug driver osc {**events** | **fpga**}

Syntax Description

events	Enables debugging for internal software error conditions.
fpga	Enables debugging of the FPGA.

Defaults

Disabled

Command Modes

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 activate the OSC driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate the OSC driver error debugging.

```
Switch# debug driver osc errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of VOA driver activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug driver psm

To enable the PSM driver debugging, use the **debug driver psm** command. To disable PSM driver debugging, use the **no** form of this command.

debug driver psm {**errors** | **events**}

no debug driver psm {**errors** | **events**}

Syntax Description

errors	Enables debugging for PSM driver error conditions.
events	Enables debugging for internal software events.

Defaults

Disabled

Command Modes

Privileged EXEC

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 activate the PSM driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate the PSM driver error debugging.

```
Switch# debug driver psm errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver src

To enable SRC driver debugging, use the **debug driver src** command. To disable SRC driver debugging operations, use the **no** form of this command.

debug driver src {**errors** | **events** | **poll-errors** | **portfail** | **defect-indication** {**errors** | **events** | **periodic**}}

no debug driver src {**error** | **events** | **poll-errors** | **portfail** | **defect-indication** {**errors** | **events** | **periodic**}}

Syntax Description

errors	Enables debugging for NVRAM driver error conditions.
events	Enables debugging for SRC driver events.
poll-errors	Enables debugging for internal software error conditions.
portfail	Enables debugging for port failures.
defect-indication {errors | events | periodic}	Enables debugging for defect indications

Defaults

Disabled

Command Modes

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 activate SRC driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate SRC driver debugging.

```
Switch# debug driver src
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of OSCP activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug driver ten-gigabit trunk

To enable 10-Gbps ITU tunable and non tunable trunk card driver debugging, use the **debug driver ten-gigabit trunk** command. To disable 10-Gbps ITU tunable and non tunable trunk card driver debugging operations, use the **no** form of this command.

debug driver ten-gigabit trunk {**errors** | **events**}

no debug driver ten-gigabit trunk {**error** | **events**}

Syntax Description

errors	Enables debugging for driver error conditions.
events	Enables debugging for driver events.

Defaults

Disabled

Command Modes

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.
12.2(26)SV	Added support for the 10-Gbps ITU tunable trunk card.
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 activate 10-Gbps ITU tunable and non tunable trunk card driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate 10-Gbps ITU tunable and non tunable trunk card driver debugging.

```
Switch# debug driver ten-gigabit trunk events
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver transponder events

To enable transponder line card driver events debugging, use the **debug driver transponder** command. To disable transponder line card driver events debugging operations, use the **no** form of this command.

debug driver transponder events

no debug driver transponder events

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled

Command Modes

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 activate transponder line card driver events debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate transponder line card events driver debugging.

```
Switch# debug driver transponder events
```

Related Commands

Command	Description
undebug all	Disables all debugging.

debug driver two-five-gigabit trunk

To enable 2.5-Gbps ITU trunk card driver debugging, use the **debug driver two-five-gigabit trunk** command. To disable 2.5-Gbps ITU trunk card driver debugging operations, use the **no** form of this command.

debug driver two-five-gigabit trunk {**errors** | **events**}

no debug driver two-five-gigabit trunk {**error** | **events**}

Syntax Description

errors	Enables debugging for driver error conditions.
events	Enables debugging for driver events.

Defaults

Disabled

Command Modes

Privileged EXEC

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 activate 2.5-Gbps ITU trunk card driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate 2.5-Gbps ITU trunk card driver debugging.

```
Switch# debug driver two-five-gigabit trunk events
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug ports	Enables debugging of optical port activity.
undebug all	Disables all debugging.

debug driver voa

To enable VOA (variable optical attenuator) module driver debugging, use the **debug driver voa** command. To disable VOA module driver debugging operations, use the **no** form of this command.

debug driver voa

no debug driver voa

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled

Command Modes

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 activate VOA module driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to activate VOA module driver debugging.

```
Switch# debug driver voa
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.

Command	Description
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug oscp

To debug OSCP operations, use the **debug oscp** command. To disable debugging for OSCP operations, use the **no** form of this command.

debug oscp {**events** | **hello-packet** | **transport**} [**wave** *slot/subcard*]

no debug oscp {**events** | **hello-packet** | **transport**} [**wave** *slot/subcard*]

Syntax Description

events	Enables debugging for OSCP events.
hello-packet	Enables printing of the information contained in the OSCP Hello packets.
transport	Enables debugging for OSCP transport services.
wave *slot*	Specifies the OSC interface on which to enable debugging. (Optional)

Defaults

Disabled

Command Modes

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 enable debugging for OSCP activity.

To disable all debugging, use the **undebug all** command.

Caution This command can generate a significant amount of output and may interfere with other activity on the system once the command is invoked.

Examples

The following example shows how to enable debugging for OSCP events.

```
Switch# debug oscp events
```

```
01:53:59:Control interface Wave1 is going up
01:54:00:OSCP:Adding neighbor on wave Wave1
```

The following example shows how to display information contained in the OSCP Hello packets.

```
Switch# debug oscp hello-packet wave 0
01:53:08:OSCP:Hello at Wave1 Tx, state 2way
01:53:08:  NodeId:0202.0304.0506  Port:10000
01:53:08:  Remote:NodeId:0202.0304.0506  Port:10000
01:53:08:OSCP:Hello at Wave1 Rx, state 2way
01:53:08:  NodeId:0202.0304.0506  Port:10000
01:53:08:  Remote:NodeId:0202.0304.0506  Port:10000
01:53:08:OSCP:Hello event 2wayd
```

Related Commands

Command	Description
show oscp info	Displays OSCP configuration information.
show oscp neighbor	Displays OSCP neighbor information.
show oscp statistics	Displays OSCP activity statistics.
show oscp traffic	Displays OSCP message traffic information.
undebug all	Disables all debugging.

debug ports

To debug port operations, use the **debug ports** command. To disable debugging for port operations, use the **no** form of this command.

debug ports {**errors** [*type slot*[/*subcard*[/*port*]]] | **events** [*type slot*[/*subcard*[/*port*]]] | **patch**}

no debug ports {**errors** [*type slot*[/*subcard*[/*port*]]] | **events** [*type slot*[/*subcard*[/*port*]]] | **patch**}

Syntax Description

errors	Enables debugging for internal software error conditions.
type slot[/*subcard*[/*port*]]	Specifies an interface on which debugging is enabled. Valid *type* values are **filter**, **tengigthernetphy, thru**, **transparent**, **wave, waveethernetphy, wavepatch, wdm**, **and wdmsplit**. (Optional)
events	Enables debugging for internal software event conditions.
patch	Enables debugging for patch connections.

Defaults

Disabled

Command Modes

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 debug common software errors and events, patch connection activity, and cross connection activity. If the interface option is not specified, debugging is enabled for all interfaces.

To disable all debugging, use the **undebug all** command.

Examples

The following example shows how to enable error debugging for transparent interface 2/0/0.

```
Switch# debug ports errors transparent 2/0/0
```

Related Commands

Command	Description
clock rate	Configures a clock rate on a transparent interface.
encapsulation	Configures the encapsulation of the client signal on the transparent interface.
monitor enable	Enables signal monitoring for certain protocol encapsulations.
monitor enable	Configures patch connections for a shelf.
show connect	Displays optical connection information.
show interfaces	Displays interface information.
show patch	Displays optical patch connection configuration.
undebug all	Disables all debugging.

debug redundancy

To debug redundancy operations, use the **debug redundancy** command. To disable debugging for redundancy operations, use the **no** form of this command.

debug redundancy {**ehsa** | **errors** | **fsm** | **kpa** | **msg** | **progression** | **status** | **timer**}

no debug redundancy {**ehsa** | **errors** | **fsm** | **kpa** | **msg** | **progression** | **status** | **timer**}

Syntax Description

ehsa	Enables debugging for early software initialization suspend points associated with EHSA (enhanced high system availability).
errors	Enables debugging for redundancy internal software error conditions.
fsm	Enables debugging for redundancy finite state machine transition events.
kpa	Enables debugging for redundancy keepalive messaging events.
msg	Enables debugging for general redundancy messaging software.
progression	Enables debugging for redundancy internal state progression software.
status	Enables debugging for redundancy internal status notification software.
timer	Enables debugging for redundancy internal timers.

Defaults

Disabled

Command Modes

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 debug redundancy software operations. Use the **debug cpu** command to debug CPU switch module redundancy.

To disable all debugging, use the **undebug all** command.

Caution This command can generate a significant amount of output and may interfere with other activity on the system once the command is invoked.

Examples

The following example shows how to debug finite state machine transition events.

```
Switch# debug redundancy fsm
```

Related Commands

Command	Description
debug cpu	Enables debugging of CPU switch module redundancy.
show redundancy summary	Displays CPU switch module redundancy status and configuration information.
undebug all	Disables all debugging.

debug switch

To enable switch driver debugging, use the **debug switch** command. To disable debugging switch driver operations, use the **no** form of this command.

debug switch {**errors** | **events** | **sync**}

no debug switch {**errors** | **events** | **sync**}

Syntax Description

errors	Enables debugging for switch driver error conditions.
events	Enables debugging for switch driver event conditions.
sync	Enables debugging for switch driver connections.

Defaults

Disabled

Command Modes

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 activate switch driver debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to enable switch fabric error debugging.

```
Switch# debug switch errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of OSCP activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

debug topology

To enable topology neighbor debugging, use the **debug topology** command.

To disable debugging for redundancy operations, use the **no** form of this command.

debug topology {**ehsa** | **errors** | **fsm** | **kpa** | **msg** | **progression** | **status** | **timer**}

no debug topology {**ehsa** | **errors** | **fsm** | **kpa** | **msg** | **progression** | **status** | **timer**}

Syntax Description

ehsa	Enables debugging for early software initialization suspend points associated with EHSA (enhanced high system availability).
errors	Enables debugging for redundancy internal software error conditions.
fsm	Enables debugging for redundancy finite state machine transition events.
kpa	Enables debugging for redundancy keepalive messaging events.
msg	Enables debugging for general redundancy messaging software.
progression	Enables debugging for redundancy internal state progression software.
status	Enables debugging for redundancy internal status notification software.
timer	Enables debugging for redundancy internal timers.

Defaults

Disabled

Command Modes

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 activate topology neighbor debugging.

To turn off all debugging, use th**e undebug all co**mmand.

Examples

The following example shows how to enable topology debugging.

```
Switch# debug topology errors
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of OSCP activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.
undebug all	Disables all debugging.

undebug all

To disable all debugging, use the **undebug all** command.

undebug all

Syntax Description

This command has no other arguments or keywords.

Defaults

None

Command Modes

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 turn off all debugging.

Examples

The following example shows how to turn off all debugging.

```
Switch# undebug all
```

Related Commands

Command	Description
debug aps	Enables debugging of APS and APS Channel Protocol activity.
debug cpu	Enables debugging of IPC initialization and switchover events.
debug diag online	Enables debugging of the online diagnostics.
debug driver voa	Enables debugging of OSCP activity.
debug ports	Enables debugging of optical port activity.
debug redundancy	Enables debugging of redundancy software operation.