



## **MPLS Optical-UNI Debug Commands on Cisco IOS XR Software**

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This chapter describes the commands used to debug MPLS Optical-UNI (O-UNI) on Cisco IOS XR software.

# debug mpls lctrl

To display Unified Control Plane (UCP) line control clients and servers, use the **debug mpls lctrl** command in EXEC mode. **To disable debugging output, use the no form of this command.**

**debug mpls lctrl [client | server]**

**no debug mpls lctrl [client | server]**

## Syntax Descriptions

<b>client</b>	Displays all of the below diagnostic messages.
<b>server</b>	Displays O-UNI restart DB diagnostics.

## Defaults

No default behavior or values

## Command Modes

EXEC

## Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.
Release 3.8.0	No modification.

## Usage Guidelines

To use this command, your Cisco IOS XR software system administrator must assign you to a user group associated with a task group that includes the corresponding command task IDs. If you need assistance with your task group assignment, contact your system administrator. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Debugging output is assigned high priority in the CPU process and, therefore, can affect system performance. For more information about the impact on system performance when using debug commands, refer to *Using Debug Commands on Cisco IOS XR Software*.

## Task ID

Task ID	Operations
ouni	read

**Examples**

The following example shows debug output during normal processing when you use the **debug mpls lctrl client** command:

```
RP/0/RP0/CPU0:router# debug mpls lctrl client

RP/0/RP0/CPU0:Aug 9 23:25:34.574: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_find_by_ifhandle
RP/0/RP0/CPU0:Aug 9 23:25:34.575: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_connect_server
RP/0/RP0/CPU0:Aug 9 23:25:34.576: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_bind
RP/0/RP0/CPU0:Aug 9 23:25:34.576: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_bind
msg_init_ver succeeded RP/0/RP0/CPU0:Aug 9 23:25:34.594: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_register RP/0/RP0/CPU0:Aug 9 23:25:34.597: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_connect_server Opened a connection to server on node 32
RP/0/RP0/CPU0:Aug 9 23:25:34.598: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_send_set_time_to_restart_msgRestart time set to: <360, 0>
RP/0/RP0/CPU0:Aug 9 23:25:34.601: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_server_connected Connection To LCTRL Server Opened RP/0/RP0/CPU0:Aug
9 23:25:34.601: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB
before server connected walk RP/0/RP0/CPU0:Aug 9 23:25:34.601: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug 9 23:25:34.601: ucp_ouni[321]: LCTRL CLIENT:
Server reconnected - sendingstate down for IFH 0x3000600 (POS0_2_0_1) RP/0/RP0/CPU0:Aug 9
23:25:34.602: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_state_down_by_ifhandle ifhandle
0x3000600 RP/0/RP0/CPU0:Aug 9 23:25:34.602: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB before IF Line State Down request
RP/0/RP0/CPU0:Aug 9 23:25:34.602: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug 9 23:25:34.602: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_find_by_ifhandle
RP/0/RP0/CPU0:Aug 9 23:25:34.611: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB after IF Line State Down request
RP/0/RP0/CPU0:Aug 9 23:25:34.611: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug 9 23:25:34.612: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_send_set_time_to_restart_msgRestart time set to: <360, 0>
RP/0/RP0/CPU0:Aug 9 23:25:34.624: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB after server connected walk
RP/0/RP0/CPU0:Aug 9 23:25:34.624: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug 9 23:25:34.625: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB after open IF request
RP/0/RP0/CPU0:gmp1s1(config-mpls-ouni-if)# RP/0/RP0/CPU0:Aug 9 23:25:34.625
: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db
Server IF DB Record: IF handle:0x3000600, IF name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug
9 23:25:34.625: ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_intf_line_state_down ifhandle
0x3000600 RP/0/RP0/CPU0:Aug 9 23:25:34.626: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_get_if_nodeid_port_is_pos ifhandle 0x3000600 RP/0/RP0/CPU0:Aug 9
23:25:34.626: ucp_ouni[321]: LCTRL CLIENT:POS interface type for [POS0_2_0_1] [0x3000600]
RP/0/RP0/CPU0:Aug 9 23:25:34.626: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_get_server_conn_entry nodeid 32 RP/0/RP0/CPU0:Aug 9 23:25:34.626:
ucp_ouni[321]: LCTRL CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB before IF Line
State Down request RP/0/RP0/CPU0:Aug 9 23:25:34.626: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2 RP/0/RP0/CPU0:Aug 9 23:25:34.626: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_find_by_ifhandle
RP/0/RP0/CPU0:Aug 9 23:25:34.630: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_prv_show_if_db:Client LIB IF DB after IF Line State Down request
RP/0/RP0/CPU0:Aug 9 23:25:34.630: ucp_ouni[321]: LCTRL
CLIENT:ucp_lctrl_lib_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF state:2
```

The following example shows debug output during normal processing when you use the **debug mpls lctrl server** command:

```

RP/0/RP0/CPU0:router# debug mpls lctrl server

LC/0/2/CPU0:Aug 9 23:26:47.603: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_server_sync_message_handler
LC/0/2/CPU0:Aug 9 23:26:47.607: ucp_lctrl_server[211]: LCTRL SERVER:
Version: [2,0]
LC/0/2/CPU0:Aug 9 23:26:47.608: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_show_if_db:Server IF DB before client request LC/0/2/CPU0:Aug 9
23:26:47.608: ucp_lctrl_server[211]: LCTRL SERVER:ucp_lctrl_if_db_walk_test_show_db Server
IF DB Record: IF handle:0x3000600, IF name:POS0_2_0_1, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.609: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_server_sync_message_handler SERVER RECEIVED REQ -
LCTRL_STATE_DOWN_REQUEST LC/0/2/CPU0:Aug 9 23:26:47.609: ucp_lctrl_server[211]: LCTRL
SERVER:
STATE_DOWN Msg Rcvd for ifh 0x3000300
LC/0/2/CPU0:Aug 9 23:26:47.610: ucp_lctrl_server[211]: LCTRL SERVER:
LC/0/2/CPU0:Aug 9 23:26:47.611: ucp_lctrl_server[211]: LCTRL SERVER:
LC/0/2/CPU0:Aug 9 23:26:47.615: ucp_lctrl_server[211]: LCTRL SERVER:
LC/0/2/CPU0:Aug 9 23:26:47.616: ucp_lctrl_server[211]: LCTRL SERVER:
New Intf For This Client (IF handle 0x3000300) LC/0/2/CPU0:Aug 9 23:26:47.620:
ucp_lctrl_server[211]: LCTRL SERVER:
State Down Succeeded 0x3000300
LC/0/2/CPU0:Aug 9 23:26:47.624: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_show_if_db:Server IF DB after client request LC/0/2/CPU0:Aug 9
23:26:47.626: ucp_lctrl_server[211]: LCTRL SERVER:ucp_lctrl_if_db_walk_test_show_db Server
IF DB Record: IF handle:0x3000300, IF name:POS0_2_0_0, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.628: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.634: ucp_lctrl_server[211]: LCTRL SERVER:
IM handler start
LC/0/2/CPU0:Aug 9 23:26:47.634: ucp_lctrl_server[211]: LCTRL SERVER:
Rx: event=6
LC/0/2/CPU0:Aug 9 23:26:47.635: ucp_lctrl_server[211]: LCTRL SERVER:
LC/0/2/CPU0:Aug 9 23:26:47.636: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_show_if_db:Server IF DB before IM handler msg LC/0/2/CPU0:Aug 9
23:26:47.637: ucp_lctrl_server[211]: LCTRL SERVER:ucp_lctrl_if_db_walk_test_show_db Server
IF DB Record: IF handle:0x3000300, IF name:POS0_2_0_0, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.637: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
RP/0/RP0/CPU0:gmp1s1(config)#LC/0/2/CPU0:Aug 9 23:26:47.638:
ucp_lctrl_server[211]: LCTRL SERVER: Received initial state: 3000300 0 5f LC/0/2/CPU0:Aug
9 23:26:47.638: ucp_lctrl_server[211]: LCTRL SERVER:ucp_lctrl_show_if_db:Server IF DB
after IM handler msg LC/0/2/CPU0:Aug 9 23:26:47.639: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000300, IF
name:POS0_2_0_0, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.639: ucp_lctrl_server[211]: LCTRL
SERVER:ucp_lctrl_if_db_walk_test_show_db Server IF DB Record: IF handle:0x3000600, IF
name:POS0_2_0_1, IF forced down?:yes, IF node
exists?: yes, IF ref count:1
LC/0/2/CPU0:Aug 9 23:26:47.640: ucp_lctrl_server[211]: LCTRL SERVER:
IM handler start
LC/0/2/CPU0:Aug 9 23:26:47.640: ucp_lctrl_server[211]: LCTRL SERVER:
Rx: event=4

```

# debug mpls lmp

To display information about Link Management Protocol (LMP) and LMP clients, use the **debug mpls lmp** command in EXEC mode. To disable this feature, use the **no** form of this command.

```
debug mpls lmp { client-api-detailed | client-api-errors | client-api-general }
```

```
no debug mpls lmp { client-api-detailed | client-api-errors | client-api-general }
```

Syntax Description	client-api-detailed	Displays detailed LMP/OLM client API event information.
	client-api-errors	Displays LMP/OLM client API error messages.
	client-api-general	Displays general LMP/OLM client API information.
	client-api-trace	Displays OLM client API function call tracing.
	detailed	Displays detailed debug events.
	errors	Displays general OLM error messages.
	fsm	Displays LMP fsm finite state machine information.
	general	Displays general debug information.
	trace	Displays OLM internal function call tracing.

**Defaults** No default behavior or values

**Command Modes** EXEC

Command History	Release	Modification
	Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
	Release 3.3.0	No modification.
	Release 3.4.0	No modification.
	Release 3.5.0	No modification.
	Release 3.6.0	No modification.
	Release 3.7.0	No modification.
	Release 3.8.0	No modification.

**Usage Guidelines** To use this command, your Cisco IOS XR software system administrator must assign you to a user group associated with a task group that includes the corresponding command task IDs. If you need assistance with your task group assignment, contact your system administrator. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Debugging output is assigned high priority in the CPU process and, therefore, can affect system performance. For more information about the impact on system performance when using debug commands, refer to *Using Debug Commands on Cisco IOS XR Software*.

Use this command to display detailed and general information about LMP events and LMP API control and data-link channel information.

The **debug** command by itself does not produce output. After you enable a **debug** command, normal processing displays relevant messages until you enter a **no debug** command.

**Note**

Enabling debug messages can flood the console. This is especially true when using the **client-api-detailed** keyword; therefore, whenever possible, use the **client-api-general** keyword first.

**Task ID****Task ID**      **Operations**

mpls-te	read
ouni	read

**Examples**

The following example shows output during normal processing when you enable the **debug mpls lmp general** command:

```
RP/0/RP0/CPU0:router# debug mpls lmp general
```

```
RP/0/RP0/CPU0:Aug 9 02:20:40.967: ucp_olm[162]: olm_api_server_mh_reg_req-585:
mt=Registration Request
RP/0/RP0/CPU0:Aug 9 02:20:40.968: ucp_olm[162]: olm_api_server_mh_reg_req-606: Retrieved
local LMP node ID: 172.19.44.44
RP/0/RP0/CPU0:Aug 9 02:20:40.971: ucp_olm[162]: olm_api_server_mh_reg_req-667: Client
registered: clinfo=0x8069e78, client=ucp_ouni, jid=119
RP/0/RP0/CPU0:Aug 9 02:20:41.098: ucp_olm[162]: olm_api_server_client_add-247: Client
added: client=ucp_ouni
RP/0/RP0/CPU0:Aug 9 02:20:41.098: ucp_olm[162]: olm_api_server_mh_reg_req-710: Send Whole
DB: 1
RP/0/RP0/CPU0:Aug 9 02:20:41.107: ucp_olm[162]: olm_api_server_mh_reg_req-715: Number of
segments sent: 1
RP/0/RP0/CPU0:Aug 9 02:20:41.108: ucp_olm[162]: olm_api_server_mh_reg_req_reply-532:
Client registration request status
```

The following example shows output during normal processing when you enable the **debug mpls lmp client-api-general** command:

```
RP/0/RP0/CPU0:Router# debug mpls lmp client-api-general
```

```
RP/0/RP0/CPU0:Aug 9 02:25:09.580: ucp_ouni[119]: OLM_API: olm_api_connect-1633: Opened
outgoing server async. message queue
RP/0/RP0/CPU0:Aug 9 02:25:09.583: ucp_ouni[119]: OLM_API: olm_api_connect-1662: Opened
incoming server async. message queue
RP/0/RP0/CPU0:Aug 9 02:25:09.584: ucp_ouni[119]: OLM_API: olm_api_connect-1677: Finished
draining incoming message queue
RP/0/RP0/CPU0:Aug 9 02:25:09.588: ucp_ouni[119]: OLM_API: olm_api_connect-1691: Attached
handler for incoming message queue
RP/0/RP0/CPU0:Aug 9 02:25:09.589: ucp_ouni[119]: OLM_API: olm_api_connect-1713: Going to
send initial client sync. registration message
RP/0/RP0/CPU0:Aug 9 02:25:09.738: ucp_ouni[119]: OLM_API: olm_api_connect-1728: Sent sync
reg. message and received response code: 0x0
RP/0/RP0/CPU0:Aug 9 02:25:09.755: ucp_ouni[119]: OLM_API: olm_api_connect-1741: Local Node
IP Address = 172.19.44.44
```

```
RP/0/RP0/CPU0:Aug 9 02:25:09.769: ucp_ouni[119]: OLM_API: olm_api_connect-1757: Created  
OLM API DB
```

# debug mpls lmp fsm

To display LMP finite state machine (FSM) information, use the **debug mpls lmp fsm** command in EXEC mode. To disable this feature, use the **no** form of this command.

```
debug mpls lmp fsm {all | data-link | ipcc | te-link}
```

```
no debug mpls lmp fsm {all | data-link | ipcc | te-link}
```

## Syntax Description

<b>all</b>	Displays all LMP FSM debugging information.
<b>data-link</b>	Displays LMP data-link FSM debugging information.
<b>ipcc</b>	Displays LMP IP control channel FSM debugging information.
<b>te-link</b>	Displays LMP TE-link FSM debugging information.

## Defaults

No default behavior or values

## Command Modes

EXEC

## Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	This command variant was documented as a separate command.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.
Release 3.8.0	No modification.

## Usage Guidelines

To use this command, your Cisco IOS XR software system administrator must assign you to a user group associated with a task group that includes the corresponding command task IDs. If you need assistance with your task group assignment, contact your system administrator. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Debugging output is assigned high priority in the CPU process and, therefore, can affect system performance. For more information about the impact on system performance when using debug commands, refer to *Using Debug Commands on Cisco IOS XR Software*.



Task ID	Task ID	Operations
	mpls-te	read
	ouni	read

### Examples

The following example shows debug output for the **debug mpls lmp fsm** command using the **ipcc** keyword:

```
RP/0/RP0/CPU0:router# debug mpls lmp fsm ipcc
```

```
RP/0/RP0/CPU0:router# RP/0/RP0/CPU0:Dec 19 16:14:07.760: ucp_olm[345]: Proto=Hello,
obj=48305b3c, event=evHelloRet(16), cur_state=up, new_state=up, arg=482f8280
RP/0/RP0/CPU0:Dec 19 16:14:12.043: ucp_olm[345]: Proto=Hello, obj=48305b3c,
event=evHelloRcvd(11), cur_state=up, new_state=up, arg=482f8280
RP/0/RP0/CPU0:Dec 19 16:14:29.605: ucp_olm[345]: Proto=Hello, obj=48305b3c,
event=evHelloRet(16), cur_state=up, new_state=up, arg=482f8280
```

# debug mpls lmp packets

To display LMP packet information, use the **debug mpls lmp packets** command in EXEC mode. To disable this feature, use the **no** form of this command.

```
debug mpls lmp packets {all | config | general | hello | link-summary} [hex-dump]
```

```
no debug mpls lmp packets {all | config | general | hello | link-summary} [hex-dump]
```

## Syntax Description

<b>all</b>	LMP Send/Receive All Messages Packet Debugging
<b>config</b>	LMP Send/Receive Config Messages Packet Debugging
<b>general</b>	LMP Send/Receive General Messages Packet Debugging
<b>hello</b>	LMP Send/Receive Hello Messages Packet Debugging
<b>link-summary</b>	LMP Send/Receive Link summary Messages Packet Debugging

## Defaults

No default behavior or values

## Command Modes

EXEC

## Command History

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	This command variant was documented as a separate command.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.
Release 3.8.0	No modification.

## Usage Guidelines

To use this command, your Cisco IOS XR software system administrator must assign you to a user group associated with a task group that includes the corresponding command task IDs. If you need assistance with your task group assignment, contact your system administrator. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Debugging output is assigned high priority in the CPU process and, therefore, can affect system performance. For more information about the impact on system performance when using debug commands, refer to *Using Debug Commands on Cisco IOS XR Software*.

Task ID	Task ID	Operations
	mpls-te	read
	ouni	read

### Examples

The following example shows debug output for the **debug mpls lmp packets** command using the **link-summary** keyword:

```
RP/0/RP0/CPU0:router# debug mpls lmp packets link-summary
```

```
RP/0/RP0/CPU0:router# RP/0/RP0/CPU0: Dec 19 16:15:44.112: ucp_olm[345]: Link summary timer
expired for TE link GigabitEthernet0_4_0_0
RP/0/RP0/CPU0:Dec 19 16:15:44.112: ucp_olm[345]: LMP:Starting LSUM run time for 15000
ticks
RP/0/RP0/CPU0:Dec 19 16:15:44.113: ucp_olm[345]: LMP: Building TE link object: Local TE
Link ID=172.67.1.4, Remote TE Link ID=172.67.1.4
RP/0/RP0/CPU0:Dec 19 16:15:44.113: ucp_olm[345]: LMP: Building data link object: Local IF
ID=8, Remote IF ID=8
RP/0/RP0/CPU0:Dec 19 16:15:44.113: ucp_olm[345]: LMP Sending ctrl msg type:14(LinkSummary)
len 60 to gmpls4
RP/0/RP00/CPU0:Dec 19 16:15:44.113: ucp_olm[345]: LMP sending LinkSummary msg of length 60
to nbr_ip 123.44.45.46
RP/0/RP0/CPU0:Dec 19 16:15:44.114: ucp_olm[345]: Object Class: MESSAGE_ID; Length: 8;
C-Type: 1; Negotiable: FALSE
RP/0/RP00/CPU0:Dec 19 16:15:44.114: ucp_olm[345]: Message ID 11387
RP/0/RP0/CPU0:Dec 19 16:15:44.114: ucp_olm[345]: TE Link:
RP/0/RP00/CPU0:Dec 19 16:15:44.114: ucp_olm[345]: Local TE Link ID 172.67.1.3
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Remote TE Link ID 172.67.1.4
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Flags - Fault_Mgmt not supported,
Link_Ver not supported
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Data Link:
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Local Data Link ID 8
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Remote Data Link ID 8
RP/0/RP0/CPU0:Dec 19 16:15:44.115: ucp_olm[345]: Flags- Int_Type is data, Allocated is set
```

# debug mpls optical-uni

To display O-UNI process diagnostic information, use the **debug mpls optical-uni** command in EXEC mode. To disable debugging output, use the **no** form of this command.

```
debug mpls optical-uni {all | checkpoint | ds | edm | fsm | initialization | interface type number |
  lmp | rsvp | sonet | sysdb | timers}
```

```
no debug mpls optical-uni {all | checkpoint | ds | edm | fsm | initialization | interface type number |
  lmp | rsvp | sonet | sysdb | timers}
```

## Syntax Descriptions

<b>all</b>	Displays all diagnostic messages.
<b>checkpoint</b>	Displays O-UNI restart DB diagnostics.
<b>ds</b>	Displays O-UNI internal data structure diagnostics.
<b>edm</b>	Displays diagnostic information when O-UNI <b>show</b> commands are issued.
<b>fsm</b>	Displays finite state machine diagnostic information.
<b>initialization</b>	Displays startup diagnostics.
<b>interface</b>	Displays information on a specific interface.
<i>type</i>	Interface type. For more information, use the question mark (?) online help function.
<i>instance</i>	<p>Either a physical interface instance or a virtual interface instance as follows:</p> <ul style="list-style-type: none"> <li>Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation. <ul style="list-style-type: none"> <li><i>rack</i>: Chassis number of the rack.</li> <li><i>slot</i>: Physical slot number of the modular services card or line card.</li> <li><i>module</i>: Module number. A physical layer interface module (PLIM) is always 0.</li> <li><i>port</i>: Physical port number of the interface.</li> </ul> </li> </ul> <p><b>Note</b> In references to a Management Ethernet interface located on a route processor card, the physical slot number is alphanumeric (RP0 or RP1) and the module is CPU0. Example: interface MgmtEth0/RP1/CPU0/0.</p> <ul style="list-style-type: none"> <li>Virtual interface instance. Number range varies depending on interface type.</li> </ul> <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>
<b>lmp</b>	Displays information regarding the usage of the LMP.
<b>rsvp</b>	Displays O-UNI RSVP messaging information.
<b>sonet</b>	Display SONET/SDH Port controller(s) related events.
<b>sysdb</b>	Enables diagnostics related to the O-UNI usage of the system database.
<b>timers</b>	Displays events related to O-UNI timers.

**Defaults** No default behavior or values

**Command Modes** EXEC

Release	Modification
Release 3.2	This command was introduced on the Cisco CRS-1 and Cisco XR 12000 Series Router.
Release 3.3.0	No modification.
Release 3.4.0	No modification.
Release 3.5.0	No modification.
Release 3.6.0	No modification.
Release 3.7.0	No modification.
Release 3.8.0	No modification.

**Usage Guidelines** To use this command, your Cisco IOS XR software system administrator must assign you to a user group associated with a task group that includes the corresponding command task IDs. If you need assistance with your task group assignment, contact your system administrator. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Debugging output is assigned high priority in the CPU process and, therefore, can affect system performance. For more information about the impact on system performance when using debug commands, refer to *Using Debug Commands on Cisco IOS XR Software*.

Use this command to enable output of O-UNI process diagnostic information. The keywords specified enable diagnostic output for the various subsystems within the O-UNI process.

The **debug mpls optical-uni** command by itself does not produce output. After you enable a **debug** command, normal processing displays relevant messages until you enter a **no debug** command.



**Note**

Enabling debug messages can flood the console.

Task ID	Task ID	Operations
	mpls-te	read
	ouni	read

**Examples** The following example shows output during normal processing when you enable the **debug mpls optical-uni all** command:

```
RP/0/RP0/CPU0:router# debug mpls optical-uni all
```

```
RP/0/RP0/CPU0:router#RP/0/RP0/CPU0:Aug 9 09:00:02.733: ucp_ouni[165]: INIT:ucp_ouni_init:
Debug initialized
RP/0/RP0/CPU0:Aug 9 09:00:02.735: ucp_ouni[165]: INIT:ucp_ouni_io_im_connect
```

```
RP/0/RP0/CPU0:Aug 9 09:00:02.758: ucp_ouni[165]: DS:ouni_ds_init_global: Initialize
RP/0/RP0/CPU0:Aug 9 09:00:02.773: ucp_ouni[165]: SYSDB:ucp_ouni_config_sysdb_connect:
Sysdb connected
RP/0/RP0/CPU0:Aug 9 09:00:02.776: ucp_ouni[165]: OLM: REGISTERING WITH OLM
RP/0/RP0/CPU0:Aug 9 09:00:03.048: ucp_ouni[165]: OLM:ucp_ouni_olm_cb called. Event mask =
0x400
RP/0/RP0/CPU0:Aug 9 09:00:03.050: ucp_ouni[165]: OLM:ucp_ouni_olm_cb OLM_API_IPCC_CREATION
```