APPENDIX B

Cisco ME 3800X and ME 3600X Switch Debug Commands

This appendix describes the **debug** privileged EXEC commands that have been created or changed for use with the Cisco ME 3800X and ME 3600X switch. These commands are helpful in diagnosing and resolving internetworking problems and should be enabled only under the guidance of Cisco technical support staff.

Caution Because debugging output is assigned high priority in the CPU process, it can render the system unusable. For this reason, use the **debug** commands only to troubleshoot specific problems or during troubleshooting sessions with Cisco technical support staff. It is best to use the **debug** commands during periods of lower network traffic and fewer users. Debugging during these periods decreases the likelihood that increased **debug** command processing overhead will affect system use.

Although visible in the command-line help, the switch does not support the **debug platform** commands.

debug bridge-domain

To enable debugging of bridge domains, use the **debug bridge-domain** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug bridge-domain {*number* **mac** {**security** | **table**} {**errors** | **events**} | **configuration** | **errors** | **ipc**}

no debug bridge-domain {*number* **mac** {**security** | **table**} {**errors** | **events**} | **configuration** | **errors** | **ipc**}

Syntax Description

number	Enter the bridge domain number to debug. The range is 1 to 8000.
mac security	Displays MAC security debug messages.
mac table	Displays MAC address table debug messages.
errors	Displays MAC security or MAC address table error debug messages.
events	Displays MAC security or MAC address table event debug messages.
configuration	Displays bridge domain configuration event debug messages.
errors	Displays bridge domain error debug messages.
ipc	Displays bridge domain IPC error and event debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug bridge-domain** command is the same as the **no debug bridge-domain** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug etherchannel

To enable debugging of the EtherChannel/PAgP shim, use the **debug etherchannel** command in privileged EXEC mode. This shim is the software module that is the interface between the Port Aggregation Protocol (PAgP) software module and the port manager software module. To disable debugging, use the **no** form of this command.

debug etherchannel [**all** | **detail** | **error** | **event** | **idb**]

no debug etherchannel [**all** | **detail** | **error** | **event** | **idb**]

Syntax Description

all	(Optional) Displays all EtherChannel debug messages.
detail	(Optional) Displays detailed EtherChannel debug messages.
error	(Optional) Displays EtherChannel error debug messages.
event	(Optional) Displays major EtherChannel event messages.
idb	(Optional) Displays PAgP interface descriptor block debug messages.

Note Though visible in the command-line help strings, the **linecard** keyword is not supported.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

If you do not specify a keyword, all debug messages appear.

The **undebug etherchannel** command is the same as the **no debug etherchannel** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show etherchannel	Displays EtherChannel information for the channel.

debug ethernet service

To enable debugging of Ethernet customer service instances, use the **debug ethernet service** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug ethernet service {**all** | **api** | **error** | **evc** [**id** *evc-id*] | **instance** [**id** *id interface-id* | **interface** *interface-id*] | **interface** [*interface-id*] | **oam-mgr**}

no debug ethernet service {**all** | **api** | **error** | **evc [id** *evc-id*] | **instance** [**id** *id interface-id* | **interface** *interface-id*] | **interface** [*interface-id*] | **oam-mgr**}

Syntax Description

all	Displays all Ethernet customer-service debug messages.
api	Displays debug messages about the interaction between the Ethernet infrastructure and its clients.
error	Displays Ethernet customer-service error messages occurring in the Ethernet infrastructure subsystem.
evc	Displays Ethernet virtual connection (EVC) debug messages
id *evc-id*	(Optional) Displays EVC debug messages relevant to a specific EVC identifier. The EVC identifier can be a string of from 1 to 100 characters.
instance	Displays debug messages related to Ethernet customer-service instances.
id *id interface-id*	(Optional) Displays Ethernet service-instance debug messages for a specific Ethernet service instance ID and interface. The service identifier range is 1 to 4294967295. The interface is a physical interface.
interface *interface-id*	(Optional) When entered after the **instance** keyword, displays service-instance debug messages for the interface. You must enter an interface ID.
interface [*interface-id*]	Displays debugging for Ethernet services on all interfaces or the specified interface.
oam-mgr	Displays debug messages for the Ethernet operation, administration, and maintenance (OAM) manager component of the infrastructure.

Command Default

Ethernet service debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug ethernet service** command is the same as the **no debug ethernet service** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug interface

To enable debugging of interface-related activities, use the **debug interface** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug interface {*interface-id* | **null** *interface-number* | **port-channel** *port-channel-number* | **vlan** *vlan-id*}

no debug interface {*interface-id* | **null** *interface-number* | **port-channel** *port-channel-number* | **vlan** *vlan-id*}

Syntax Description

interface-id	Displays debug messages for the specified physical port, identified by type switch number/module number/ port, for example **gigabitethernet 0/2**.
null *interface-number*	Displays debug messages for null interfaces. The *interface-number* is always **0**.
port-channel *port-channel-number*	Displays debug messages for the specified EtherChannel port-channel interface. The *port-channel-number* range is 1 to 26.
vlan *vlan-id*	Displays debug messages for the specified VLAN. The *vlan-id* range is 1 to 4094.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

If you do not specify a keyword, all debug messages appear.

The **undebug interface** command is the same as the **no debug interface** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show interface	Displays interface status and configuration information.

debug ip igmp filter

To enable debugging of Internet Group Management Protocol (IGMP) filter events, use the **debug ip igmp filter** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug ip igmp filter

no debug ip igmp filter

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug ip igmp filter** command is the same as the **no debug ip igmp filter** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug ip igmp max-groups

To enable debugging of Internet Group Management Protocol (IGMP) maximum groups events, use the **debug ip igmp max-groups** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug ip igmp max-groups

no debug ip igmp max-groups

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug ip igmp max-groups** command is the same as the **no debug ip igmp max-groups** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug ip igmp snooping

To enable debugging of Internet Group Management Protocol (IGMP) snooping activity, use the **debug igmp snooping** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug ip igmp snooping [*ip_address* | **group** | **management** | **querier** | **redundancy** | **router** | **timer**]

no debug ip igmp snooping [*ip_address* | **group** | **management** | **querier** | **redundancy** | **router** | **timer**]

Syntax Description

ip_address	IPv4 group address
group	(Optional) Displays IGMP snooping group activity debug messages.
management	(Optional) Displays IGMP snooping management activity debug messages.
querier	(Optional) Displays IGMP snooping querier debug messages.
redundancy	(Optional) Displays IGMP snooping redundancy events.
router	(Optional) Displays IGMP snooping router activity debug messages.
timer	(Optional) Displays IGMP snooping timer event debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug ip igmp snooping** command is the same as the **no debug ip igmp snooping** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug lacp

To enable debugging of Link Aggregation Control Protocol (LACP) activity, use the **debug lacp** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug lacp [**all** | **event** | **fsm** | **misc** | **packet**]

no debug lacp [**all** | **event** | **fsm** | **misc** | **packet**]

Syntax Description

all	(Optional) Displays all LACP debug messages.
event	(Optional) Displays LACP event debug messages.
fsm	(Optional) Displays LACP finite state-machine debug messages.
misc	(Optional) Displays miscellaneous LACP debug messages.
packet	(Optional) Displays LACP packet debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug lacp** command is the same as the **no debug lacp** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show lacp	Displays LACP channel-group information.

debug mac-notification

To enable debugging of MAC notification events, use the **debug mac-notification** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug mac-notification

no debug mac-notification

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug mac-notification** command is the same as the **no debug mac-notification** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show mac address-table notification	Displays the MAC address notification information for all interfaces or the specified interface.

debug matm

To enable debugging of platform-independent MAC address management events, use the **debug matm** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug matm {**add** | **age** | **all** | **bulkdelete** | **create** | **delete** | **error** | **move** | **pm** | **remove** | **traceback**}

no debug matm {**add** | **age** | **all** | **bulkdelete** | **create** | **delete** | **error** | **move** | **pm** | **remove** | **traceback**}

Syntax Description

add	Displays MAC address add debug messages.
age	Displays MAC address aging debug messages.
all	Displays all MAC address debug messages.
bulkdelete	Displays MAC address bulk delete debug messages.
create	Displays MAC address creation debug messages.
delete	Displays MAC address deletion debug messages.
error	Displays MAC address creation debug messages.
move	Displays MAC address move debug messages.
pm	Displays MAC address port manager debug messages.
remove	Displays MAC address remove debug messages.
traceback	Displays MAC address traceback debug messages.

Note Although visible in the command-line help, the **pvlan** keyword is not supported.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug matm** command is the same as the **no debug matm** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug matm move

To enable debugging of MAC address-table move message processing, use the **debug matm move** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug matm move [**address | update**]

no debug matm move [**address | update**]

Syntax Description

address	Displays MAC address table move address debug messages.
move	Displays MAC address table move update debug messages.

Defaults

Debugging is disabled. update

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug matm move** command is the same as the **no debug matm move** command.

Related Commands

Command	Description
mac address-table move update	Configures the MAC address-table move update feature on the switch.
show debugging	Displays information about the types of debugging that are enabled.
show mac address-table move update	Displays the MAC address-table move update information on the switch.

debug network-clock

To enable debugging of a SyncE network clock, use the **debug network-clock** command in Privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug network-clock [**error**] [**event**] [**pal**] [**sm**]

no debug network-clock [**error**] [**event**] [**pal**] [**sm**]

Syntax Description

error	Network clock error debugging
event	Network clock event debugging
pal	Network clock PAL debugging
sm	Network clock state machine debugging

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
15.1(2)EY	This command was introduced.

Usage Guidelines

Examples

The following example shows how to enable SyncE network clock debugging:

```
Switch# deb network-clock ?
  error  Network clock error debugging
  event  Network clock event debugging
  pal    Network clock PAL debugging
  sm     Network clock state machine debugging

Switch# deb network-clock error
```

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug nvram

To enable debugging of NVRAM activity, use the **debug nvram** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug nvram

no debug nvram

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug nvram** command is the same as the **no debug nvram** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug pagp

To enable debugging of Port Aggregation Protocol (PAgP) activity, use the **debug pagp** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug pagp [**all** | **dual-active** | **event** | **fsm** | **misc** | **packet**]

no debug pagp [**all** | **dual-active** | **event** | **fsm** | **misc** | **packet**]

Syntax Description

all	(Optional) Displays all PAgP debug messages.
dual-active	(Optional) Displays PAgP dual-active debug messages.
event	(Optional) Displays PAgP event debug messages.
fsm	(Optional) Displays PAgP finite state-machine debug messages.
misc	(Optional) Displays miscellaneous PAgP debug messages.
packet	(Optional) Displays PAgP packet debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug pagp** command is the same as the **no debug pagp** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show pagp	Displays PAgP channel-group information.

debug pm

To enable debugging of port manager (PM) activity, use the **debug pm** command in privileged EXEC mode. The port manager is a state machine that controls all the logical and physical interfaces. All features, such as VLANs, UniDirectional Link Detection (UDLD), and so forth, work with the port manager to provide switch functions. To disable debugging, use the **no** form of this command.

debug pm {**all** | **assert** | **card** | **cookies** | **etherchnl** | **hatable** | **messages** | **port** | **redundancy** | **registry** | **sm** | **span** | **split** | **statistics**| **vlan** | **vp**}

no debug pm {**all** | **assert** | **card** | **cookies** | **etherchnl** | **hatable** | **messages** | **port** | **redundancy** | **registry** | **sm** | **span** | **split** | **statistics**| **vlan** | **vp**}

Syntax Description

all	Displays all PM debug messages.
assert	Displays assert debug messages.
card	Displays line-card related-events debug messages.
cookies	Displays internal PM cookie validation debug messages.
etherchnl	Displays EtherChannel related-events debug messages.
hatable	Displays Host Access Table events debug messages.
messages	Displays PM debug messages.
port	Displays port related-events debug messages.
redundancy	Displays PM redundancy event debug messages.
registry	Displays PM registry invocation debug messages.
sm	Displays state-machine related-events debug messages.
span	Displays spanning-tree related-events debug messages.
split	Displays split-processor debug messages.
statistics	Displays PM statistic event debug messages.
vlan	Displays VLAN related-events debug messages.
vp	Displays virtual port related-events debug messages.

Note Though visible in the command-line help strings, the **pvlan** and **scp** keywords are not supported.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug pm** command is the same as the **no debug pm** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug rep

To enable debugging of Resilient Ethernet Protocol (REP) functions, use the **debug rep** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug rep {**all** | **bpa-event** | **bpasm** | **database** | **epa-pkt** | **epasm** | **error** | **failure-recovery** | **lslsm** | **misc** | **packet** | **prsm** |**show cli**}

no debug rep {**all** | **bpa-event** | **bpasm** | **database** | **epa-pkt** | **epasm** | **error** | **failure-recovery** | **lslsm** | **misc** | **packet** | **prsm** |**show cli**}

Syntax Description

all	Display all REP debug messages.
bpa-event	Displays blocked port advertisement (BPA) debug messages.
bpasm	Displays BPA state machine debug messages.
database	Displays REP state machine debug messages.
epa-pkt	Displays end port advertisement (EPA) packet debug messages.
epasm	Displays EPA state machine debug messages.
error	Displays REP protocol error debug messages.
failure-recovery	Displays REP switchover event debug messages.
lslsm	Displays Link State Layer (LSL) state machine debug messages.
misc	Displays miscellaneous REP debug messages.
packet	Displays protocol PDU debug messages.
prsm	Displays REP port role state machine debug messages.
showcli	Displays show command line interface debug information.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug rep** command is the same as the **no debug rep** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show interfaces rep	Displays REP configuration and status for a specified interface or for all interfaces.

debug qos

To enable debugging of the quality of service (QoS) feature, use the **debug qos** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug qos {**capability** | **events** | **service-policy** {**global-lock** | **iteration** | **lifecycle** | **polling** | **stats trace**} | **set**}

no debug qos {**capability** | **events** | **service-policy** {**global-lock** | **iteration** | **lifecycle** | **polling** | **stats trace**} | **set**}

Syntax Description

capability	Displays all QoS capability debug messages.
events	Displays modular QoS command-line interface (MQC) event debug messages.
service-policy	Displays QoS service policy debug messages.
global-lock	Displays QoS service policy lock event debug messages.
iteration	Displays QoS service policy iteration debug messages.
lifecycle	Displays QoS service policy install and remove event debug messages.
polling	Displays QoS service policy statistics polling debug messages.
stats	Displays QoS service policy statistics update debug messages.
trace	Includes traceback information in the debug message output.
set	Displays QoS packet marking debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug qos** command is the same as the **no debug qos** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug spanning-tree

To enable debugging of spanning-tree activities, use the **debug spanning-tree** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree {**all** | **bpdu** | **bpdu-opt** | **config** | **etherchannel** | **events** | **exceptions** | **general** | **mstp** | **pvst+** | **root** | **snmp** | **switch** | **synchronization** | **vlan-shim**}

no debug spanning-tree {**all** | **bpdu** | **bpdu-opt** | **config** | **etherchannel** | **events** | **exceptions** | **general** | **mstp** | **pvst+** | **root** | **snmp** | **switch** | **synchronization** | **vlan-shim**}

Syntax Description

all	Displays all spanning-tree debug messages.
bpdu	Displays spanning-tree bridge protocol data unit (BPDU) debug messages. See the **debug spanning-tree bpdu** command.
bpdu-opt	Displays optimized BPDU handling debug messages. See the **debug spanning-tree bpdu-opt** command.
config	Displays spanning-tree configuration change debug messages.
etherchannel	Displays EtherChannel-support debug messages.
events	Displays spanning-tree topology event debug messages.
exceptions	Displays spanning-tree exception debug messages.
general	Displays general spanning-tree activity debug messages.
mstp	Debug Multiple Spanning Tree Protocol events. See the **debug spanning-tree mstp** command.
pvst+	Displays per-VLAN spanning-tree plus (PVST+) event debug messages.
root	Displays spanning-tree root-event debug messages.
snmp	Displays spanning-tree Simple Network Management Protocol (SNMP) handling debug messages.
switch	Displays switch shim command debug messages. This shim is the software module that is the interface between the generic Spanning Tree Protocol (STP) code and the platform-specific code of various switch platforms. See the **debug spanning-tree switch** command.
synchronization	Displays the spanning-tree synchronization event debug messages.
vlan-shim	Displays spanning-tree VLAN shim debug messages. See the **debug spanning-tree vlan-shim** command

Note Though visible in the command-line help strings, the **csuf/csrt** keyword is not supported.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree command is the** same as the **no debug spanning-tree** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug spanning-tree bpdu

To enable debugging of sent and received spanning-tree bridge protocol data units (BPDUs), use the **debug spanning-tree bpdu** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree bpdu [**receive | transmit**]

no debug spanning-tree bpdu [**receive | transmit**]

Syntax Description

receive	(Optional) Displays the nonoptimized path for received BPDU debug messages.
transmit	(Optional) Displays the nonoptimized path for sent BPDU debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree bpdu** command is the same as the **no debug spanning-tree bpdu** command**.**

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug spanning-tree bpdu-opt

To enable debugging of optimized spanning-tree bridge protocol data units (BPDUs) handling, use the **debug spanning-tree bpdu-opt** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree bpdu-opt [**detail | packet**]

no debug spanning-tree bpdu-opt [**detail | packet**]

Syntax Description

detail	(Optional) Displays detailed optimized BPDU-handling debug messages.
packet	(Optional) Displays packet-level optimized BPDU-handling debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree bpdu-opt** command is the same as the **no debug spanning-tree bpdu-opt** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug spanning-tree mstp

To enable debugging of the Multiple Spanning Tree Protocol (MSTP) feature, use the **debug spanning-tree mstp** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree mstp {**all** | **boundary** | **bpdu-rx** | **bpdu-tx** | **errors** | **flush** | **init** | **migration** | **pm** | **proposals** | **region** | **roles** | **sanity_check** | **sync** | **tc** | **timers**}

no debug spanning-tree mstp {**all** | **boundary** | **bpdu-rx** | **bpdu-tx** | **errors** | **flush** | **init** | **migration** | **pm** | **proposals** | **region** | **roles** | **sanity_check** | **sync** | **tc** | **timers**}

Syntax Description

all	Enables all the debugging messages.
boundary	Displays flag changes at these boundaries: • An multiple spanning-tree (MST) region and a single spanning-tree region running Rapid Spanning Tree Protocol (RSTP) • An MST region and a single spanning-tree region running IEEE 802.1D • An MST region and another MST region with a different configuration
bpdu-rx	Displays the received MST bridge protocol data units (BPDUs).
bpdu-tx	Displays the sent MST BPDUs.
errors	Displays MSTP errors.
flush	Displays the port flushing mechanism.
init	Displays the initialization of the MSTP data structures.
migration	Debug the protocol migration state machine.
pm	Displays MSTP port manager events.
proposals	Displays handshake messages between the designated switch and the root switch.
region	Displays the region synchronization between the switch processor (SP) and the route processor (RP).
roles	Displays MSTP roles.
sanity_check	Displays the received BPDU sanity check messages.
sync	Displays the port synchronization events.
tc	Displays topology change notification events.
timers	Displays the MSTP timers for start, stop, and expire events.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree mstp** command is the same as the **no debug spanning-tree mstp** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug spanning-tree switch

To enable debugging of the software interface between the Spanning Tree Protocol (STP) and the port manager, use the **debug spanning-tree switch** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree switch {**all** | **errors** | **flush** | **general** | **helper** | **pm** | **rx** {**decode** | **errors** | **interrupt** | **process**} | **state** | **tx** [**decode**]}

no debug spanning-tree switch {**all** | **errors** | **flush** | **general** | **helper** | **pm** | **rx** {**decode** | **errors** | **interrupt** | **process**} | **state** | **tx** [**decode**]}

Syntax Description

all	Displays all spanning-tree switch debug messages.
errors	Displays debug messages for the interface between the spanning-tree software module and the port manager software module.
flush	Displays debug messages for the shim flush operation.
general	Displays general event debug messages.
helper	Displays spanning-tree helper-task debug messages. Helper tasks handle bulk spanning-tree updates.
pm	Displays port-manager event debug messages.
rx	Displays received bridge protocol data unit (BPDU) handling debug messages. The keywords have these meanings: • **decode**—Display decoded received packets. • **errors**—Display receive error debug messages. • **interrupt**—Display interrupt service request (ISR) debug messages. • **process**—Display process receive BPDU debug messages.
state	Displays spanning-tree port state change debug messages;
tx [**decode**]	Displays sent BPDU handling debug messages. The keyword has this meaning: • **decode**—(Optional) Display decoded sent packets.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree switch** command is the same as the **no debug spanning-tree switch** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug spanning-tree vlan-shim

To enable debugging of the Spanning Tree Protocol (STP) VLAN shim, use the **debug spanning-tree switch** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug spanning-tree vlan-shim {**all** | **errors** | **flush** | **general** | **helper** | **pm** | **rx** {**decode** | **errors** | **interrupt** | **process**} | **state** | **tx** [**decode**]}

no debug spanning-tree vlan-shim {**all** | **errors** | **flush** | **general** | **helper** | **pm** | **rx** {**decode** | **errors** | **interrupt** | **process**} | **state** | **tx** [**decode**]}

Syntax Description

all	Displays all spanning-tree VLAN debug messages.
errors	Displays debug messages for STP VLAN errors.
flush	Displays debug messages for the VLAN shim flush operation.
general	Displays general VLAN event debug messages.
helper	Displays spanning-tree helper-task debug messages. Helper tasks handle bulk spanning-tree updates.
rx	Displays received bridge protocol data unit (BPDU) handling debug messages. The keywords have these meanings: • **decode**—Displays decoded received packets. • **errors**—Displays receive error debug messages. • **interrupt**—Displays interrupt service request (ISR) debug messages. • **process**—Displays process receive BPDU debug messages.
state	Displays spanning-tree port state change debug messages;
tx [**decode**]	Displays sent BPDU handling debug messages. The keyword has this meaning: • **decode**—(Optional) Display decoded sent packets.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug spanning-tree vlan-shim** command is the same as the **no debug spanning-tree vlan-shim** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show spanning-tree	Displays spanning-tree state information.

debug sw-vlan

To enable debugging of VLAN manager activities, use the **debug sw-vlan** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug sw-vlan {**badpmcookies** | **cfg-vlan** {**bootup** | **cli**} | **events** | **ifs** | **management** | **notification** | **packets** | **registries**}

no debug sw-vlan {**badpmcookies** | **cfg-vlan** {**bootup** | **cli**} | **events** | **ifs** | **management** | **notification** | **packets** | **registries**}

Syntax Description

badpmcookies	Displays debug messages for VLAN manager incidents of bad port manager cookies.
cfg-vlan {**bootup** | **cli**}	Displays config-vlan debug messages. The keywords have these meanings: • **bootup**—Display messages when the switch is booting up. • **cli**—Display messages when the command-line interface (CLI) is in config-vlan mode.
events	Displays debug messages for VLAN manager events.
ifs	See the **debug sw-vlan ifs** command.
management	Displays debug messages for VLAN manager management of internal VLANs.
notification	See the **debug sw-vlan notification** command.
packets	Displays debug messages for packet handling and encapsulation processes.
registries	Displays debug messages for VLAN manager registries.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug sw-vlan** command is the same as the **no debug sw-vlan** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show vlan	Displays the parameters for all configured VLANs or one VLAN (if the VLAN name or ID is specified) in the administrative domain.

debug sw-vlan ifs

To enable debugging of the VLAN manager IOS file system (IFS) error tests, use the **debug sw-vlan ifs** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug sw-vlan ifs {**open** {**read** | **write**} | **read** {**1** | **2** | **3** | **4**} | **write**}

no debug sw-vlan ifs {**open** {**read** | **write**} | **read** {**1** | **2** | **3** | **4**} | **write**}

Syntax Description

open {**read** | **write**}	Displays VLAN manager IFS file-open operation debug messages. The keywords have these meanings: • **read**—Display VLAN manager IFS file-read operation debug messages. • **write**—Display VLAN manager IFS file-write operation debug messages.
read {**1** | **2** | **3** | **4**}	Displays file-read operation debug messages for the specified error test (1, 2, 3, or 4).
write	Displays file-write operation debug messages.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug sw-vlan ifs** command is the same as the **no debug sw-vlan ifs** command.

When selecting the file read operation, Operation **1** reads the file header, which contains the header verification word and the file version number. Operation **2** reads the main body of the file, which contains most of the domain and VLAN information. Operation **3** reads type length version (TLV) descriptor structures. Operation **4** reads TLV data.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show vlan	Displays the parameters for all configured VLANs or one VLAN (if the VLAN name or ID is specified) in the administrative domain.

debug sw-vlan notification

To enable debugging of the activation and deactivation of VLAN IDs, use the **debug sw-vlan notification** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug sw-vlan notification {**accfwdchange** | **allowedvlancfgchange** | **fwdchange** | **linkchange** | **modechange** | **statechange**}

no debug sw-vlan notification {**accfwdchange** | **allowedvlancfgchange** | **fwdchange** | **linkchange** | **modechange** | **statechange**}

Syntax Description

accfwdchange	Displays debug messages for VLAN manager notification of aggregated access interface spanning-tree forward changes.
allowedvlancfgchange	Displays debug messages for VLAN manager notification of changes to the allowed VLAN configuration.
fwdchange	Displays debug messages for VLAN manager notification of spanning-tree forwarding changes.
linkchange	Displays debug messages for VLAN manager notification of interface link-state changes.
modechange	Displays debug messages for VLAN manager notification of interface mode changes.
statechange	Displays debug messages for VLAN manager notification of interface state changes.

Note Though visible in the command-line help strings, the **pruningcfgchange** keyword is not supported.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug sw-vlan notification** command is the same as the **no debug sw-vlan notification** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show vlan	Displays the parameters for all configured VLANs or one VLAN (if the VLAN name or ID is specified) in the administrative domain.

debug udld

To enable debugging of the UniDirectional Link Detection (UDLD) feature, use the **debug udld** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug udld {**events** | **packets** | **registries**}

no debug udld {**events** | **packets** | **registries**}

Syntax Description

events	Displays debug messages for UDLD process events as they occur.
packets	Displays debug messages for the UDLD process as it receives packets from the packet queue and tries to send them at the request of the UDLD protocol code.
registries	Displays debug messages for the UDLD process as it processes registry calls from the UDLD process-dependent module and other feature modules.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug udld** command is the same as the **no debug udld** command.

For **debug udld events**, these debugging messages appear:

- General UDLD program logic flow
- State machine state changes
- Program actions for the set and clear ErrDisable state
- Neighbor cache additions and deletions
- Processing of configuration commands
- Processing of link-up and link-down indications

For **debug udld packets**, these debugging messages appear:

- General packet processing program flow on receipt of an incoming packet
- Indications of the contents of the various pieces of packets received (such as type length versions [TLVs]) as they are examined by the packet reception code
- Packet transmission attempts and the outcome

For **debug udld registries**, these categories of debugging messages appear:

- Sub-block creation
- Fiber-port status changes

- State change indications from the port manager software
- MAC address registry calls

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show udld	Displays UDLD administrative and operational status for all ports or the specified port.

debug vfi

To enable debugging of the virtual forwarding infrastructure (VFI) feature, use the **debug vfi** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug vfi [**fsm**] {**error** | **event**}

no debug vfi [**fsm**] {**error** | **event**}

Syntax Description

fsm	(Optional) Displays VFI finite state-machine debug messages.
error	Displays debug messages for VFI errors or VFI finite state-machine errors.
events	Displays debug messages for VFI events or VFI finite state-machine events as they occur.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug vfi** command is the same as the **no debug vfi** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
show vfi	Displays VFI status for the switch.

debug vrrp

To enable debugging of the Virtual Router Redundancy Protocol (VRRP), use the **debug vrrp** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug vrrp {**all** | **errors** | **events** | **packets** | **process** | **registry** | **state** | **timer** | **track**}

no debug vrrp {**all** | **errors** | **events** | **packets** | **process** | **registry** | **state** | **timer** | **track**}

Syntax Description

all	Displays all VRRP debug messages.
errors	Displays debug messages for VRRP error reporting.
events	Displays debug messages for protocol and interface events.
packets	Displays debug messages. for VRRP packet details.
process	Displays debug messages for VRRP process activities.
registry	Displays debug messages for VRRP registry reporting.
state	Displays VRRP state change debug messages;
timer	Displays debug messages for VRRP timer reporting.
track	Displays debug messages VRRP monitor tracking.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug vrrp** command is the same as the **no debug vrrp** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.

debug xconnect

to enable debugging of the xconnect virtual connection or virtual connection infrastructure (VFI), use the **debug xconnect** command in privileged EXEC mode. To disable debugging, use the **no** form of this command.

debug xconnect {**error** | **event**}

no debug xconnect {**error** | **event**}

Syntax Description

error	Displays debug messages for xconnect authorization errors.
events	Displays debug messages for xconnect authorization events.

Defaults

Debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(52)EY	This command was introduced.

Usage Guidelines

The **undebug xconnect** command is the same as the **no debug xconnect** command.

Related Commands

Command	Description
show debugging	Displays information about the types of debugging that are enabled.
xconnect	Enable xconnect on an interface.