debug Commands

debug arp

To enable debugging of ARP, use the **debug arp** command.

debug arp {**errors** | **events** | **packets**}

Syntax Description

errors	Enable debugging of ARP errors
events	Enable debugging of ARP events
packets	Enable debugging of ARP Tx and Rx packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of ARP errors:

```
cisco-wave2-ap# debug arp errors
```

debug ble

To enable debugging of Bluetooth Low Energy (BLE), use the **debug ble** command.

debug ble {**critical** |**error** |**events** |**fastpath** {**rssi** |**scan** |**sync**} |**receive** |**transmit**}

Syntax Description

critical	Enables debugging of BLE critical events
error	Enables debugging of BLE error events
events	Enables debugging of BLE events
fastpath {**rssi** | **scan** | **sync**}	Shows data exported to CMX. The following options are available: • RSSI data • Scan data • Sync data
receive	Enables debugging of BLE packet received from BLE radio
transmit	Enables debugging of BLE packet transmitted to BLE radio

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.7	This command was introduced.

Examples

The following example shows how to enable debugging of BLE critical events:

```
cisco-wave2-ap# debug ble critical
```

debug capwap client

To enable debugging of CAPWAP clients, use the **debug capwap client** command.

debug capwap client {**ble** | **detail** | **efficient-upgrade** | **error** | **events** | **flexconnect** | **info** | **keepalive** | **payload** | **pmtu** | **qos** | **reassembly** | **security**}

Syntax Description

ble	Enables debugging of CAPWAP BLE detail
detail	Enables debugging of CAPWAP detail
efficient-upgrade	Enables debugging of image predownload
error	Enables debugging of CAPWAP error
events	Enables debugging of CAPWAP events
flexconnect	Enables debugging of CAPWAP FlexConnect mode event
info	Enables debugging of CAPWAP information
keepalive	Enables debugging of CAPWAP keepalive
payload	Enables debugging of CAPWAP payload
pmtu	Enables debugging of CAPWAP path MTU
qos	Enables debugging of CAPWAP QoS
reassembly	Enables debugging of CAPWAP reassembly
security	Enables debugging of CAPWAP security

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of CAPWAP client detail:

```
cisco-wave2-ap# debug capwap client detail
```

debug capwap client avc

To enable debugging of CAPWAP client AVC, use the **debug capwap client avc** command.

debug capwap client avc {**all** | **detail** | **error** | **event** | **info** | **netflow** {**all** | **detail** | **error** | **event** | **packet**} | **numflows**}

Syntax Description

all	Enables debugging of all CAPWAP client AVC
detail	Enables debugging of CAPWAP AVC detail
error	Enables debugging of CAPWAP AVC error
event	Enables debugging of CAPWAP AVC event
info	Enables debugging of CAPWAP AVC information
netflow	Enables debugging of CAPWAP client AVC NetFlow
netflow all	Enables debugging of all CAPWAP client AVC NetFlow
netflow detail	Enables debugging of CAPWAP client AVC NetFlow detail
netflow error	Enables debugging of CAPWAP client AVC NetFlow error
netflow event	Enables debugging of CAPWAP client AVC NetFlow event
netflow packet	Enables debugging of CAPWAP client AVC NetFlow packet
numflows	Enables debugging of CAPWAP client AVC numflows

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of all CAPWAP client AVC:

```
cisco-wave2-ap# debug capwap client avc all
```

debug cdp

To enable debugging of controller discovery protocol (CDP), use the **debug cdp** command.

debug cdp {**adjacency** | **events** | **ilp** | **packets**}

Syntax Description

adjacency	Enables debugging of CDP neighbors
events	Enables debugging of CDP events
ilp	Enables debugging of inline power
packets	Enables debugging of CDP packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of CDP events:

```
cisco-wave2-ap# debug cdp events
```

debug cleanair

To configure debugging of CleanAir, use the **debug cleanair** command.

debug cleanair {**bringup** | **event** | **logdebuglow** | **major** | **nsi** | **offchan** {*0* | *1*}}

Syntax Description

bringup	Enables debugging of CleanAir port or bringups
events	Enables debugging of normal CleanAir events
logdebug	Logs CleanAir debug output to a logfile
low	Enables debugging of hex dump of some messages
major	Enbles debugging of major CleanAir events
nsi	Enables debugging of NSI messages
offchan *0* | *1*	Enables debugging of CleanAir MSMT requests. You have to specify the radio slot as either 0 or 1

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of major CleanAir events:

```
cisco-wave2-ap# debug cleanair major
```

debug dhcp

To configure debugging of DHCP, use the **debug dhcp** command.

debug dhcp {**errors** | **events** | **packets**}

Syntax Description

errors	Enables debugging of DHCP errors
events	Enables debugging of DHCP events
packets	Enables debugging of DHCP packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of DHCP errors:

```
cisco-wave2-ap# debug dhcp errors
```

debug dot11

To enable debugging of 802.11, use the **debug dot11** command.

debug dot11 {**critical** | **errors** | **events** | **info**}

Syntax Description

critical	Enables 802.11 critical level debugging
errors	Enables 802.11 error level debugging
events	Enables 802.11 event level debugging
info	Enables 802.11 information level debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of 802.11 error level:

```
cisco-wave2-ap# debug dot11 errors
```

debug dot11 client datapath

To enable debugging of 802.11 client datapath, use the **debug dot11 client datapath** command.

debug dot11 client datapath {{**arp** | **dhcp** | **eapol**} {**addr** {*mac-addr1* | *mac-addr2* | *mac-addr3* | *mac-addr4*} | **all**}} | **dns-acl**}

Syntax Description

arp	Enables client datapath ARP debugging
dhcp	Enables client datapath DHCP debugging
eapol	Enables client datapath EAPOL debugging
{**addr** | **all**}	Option to specify MAC address of specific clients or all clients
{*mac-addr1* | *mac-addr2* | *mac-addr3* | *mac-addr4*}	MAC addresses of clients that you have to enter
dns-acl	Enables client datapath DNS-ACL debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of client datapath ARP:

```
cisco-wave2-ap# debug dot11 client datapath arp
```

debug dot11 client level

To enable 802.11 client debugging level, use the **debug dot11 client level** command.

debug dot11 client level {**critical** | **errors** | **events** | **info**} {**addr** {*mac-addr1* | *mac-addr2* | *mac-addr3* | *mac-addr4*} | **all**}

Syntax Description

critical	Enables client critical level debugging
errors	Enables client error level debugging
events	Enables client event level debugging
info	Enables client information level debugging
{**addr** | **all**}	Option to specify MAC address of specific clients or all clients
{*mac-addr1* | *mac-addr2* | *mac-addr3* | *mac-addr4*}	MAC addresses of clients that you have to enter

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of all clients at the event level:

```
cisco-wave2-ap# debug dot11 client level events all
```

debug dot11 driver slot

To enable debugging of 802.11 drivers, use the **debug dot11 driver slot** command.

debug dot11 driver slot {*0* | *1*} {**all** | {**cac** {**info** | **metrics**}} | **chd** | **save-acnt-data** | **save-on-failure** [**extended**] | **stop-on-failure** | **tsm** | **vim**| **type** { **all** | **assoc** | **auth** | **dhcp** | **eap** | **icmp** | **probe** }

Syntax Description

slot {*0* | *1*}	Enables 802.11 driver debugs per radio
all	Enables all 802.11 driver debugs
cac	Enables 802.11 CAC debugs
cac info	Enables 802.11 CAC info level debugs
cac metrics	Enables debugging of 802.11 CAC metrics
chd	Enables 802.11 CHD debugs
save-acnt-data	Saves the radio accounting data
save-on-failure	Saves the radio crash information upon radio failure
save-on-failure extended	Saves extended information on radio failure
stop-on-failure	Stops the AP from reboot on radio failure
tsm	Enables 802.11 traffic stream metric debugs
vim	Enables 802.11 video metric debugs

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of CAC at the information level:

```
cisco-wave2-ap# debug dot11 driver slot cac info
```

debug dot11 sensor

To enable debugging of 802.11 sensors, use the **debug dot11 sensor** command.

debug dot11 sensor {**dns** | **file-transfer** | **mail-server** | **ping** | **radius** | **ssh** | **telnet** | **web-server**}

Syntax Description

dns	Enables debugging of 802.11 sensor DNS
file-transfer	Enables debugging of 802.11 sensor file transfer
mail-server	Enables debugging of 802.11 sensor mail server
ping	Enables debugging of 802.11 sensor ping
radius	Enables debugging of 802.11 sensor radius
ssh	Enables debugging of 802.11 sensor SSH
telnet	Enables debugging of 802.11 sensor Telnet.
web-server	Enables debugging of 802.11 sensor web server

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of 802.11 sensor file transfer:

```
cisco-wave2-ap# debug dot11 sensor file-transfer
```

debug dtls client

To configure DTLS client error and event debugging, use the **debug dtls client** command.

debug dtls client {**error** | **event** [**detail**]}

Syntax Description

error	Configures debugging of DTLS client errors
event [**detail**]	Configures debugging of DTLS client events

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of DTLS client events:

```
cisco-wave2-ap# debug dtls client event
```

debug ethernet

To configure Ethernet debugging, use the **debug ethernet** command.

debug ethernet *interface-number* {**both** | **rcv** | **xmt**}

Syntax Description

interface-number	Interface number that you have to enter as either 0 or 1
both	Enables debugging of both transmission and reception
rcv	Enables debugging of reception
xmt	Enables debugging of transmission

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of transmission for interface 0:

```
cisco-wave2-ap# debug ethernet 0 xmt
```

debug flexconnect

To debug FlexConnect features, use the **debug flexconnect** command.

debug flexconnect {**acl** | **cckm** | **dot11r** | **event** | **multicast** {**igmp** | **traffic**} | **pmk** | **proxy-arp** | **vsa** | **wlan-vlan** | **wsastats**}

Syntax Description

acl	Configures debugging of FlexConnect ACL
cckm	Configures debugging of CCKM
dot11r	Configures debugging of 802.11r
event	Configures debugging of wireless control protocol (WCP) events
multicast igmp	Configures debugging of Multicast IGMP
multicast traffic	Configures debugging of Multicast traffic
pmk	Configures debugging of opportunistic key caching (OKC) or pairwise master key caching
vsa	Configures debugging of AAA vendor specific attributes (VSA)
wlan-vlan	Configures debugging of WLAN-VLAN mapping
wsastats	Configures debugging of RADIUS or DHCP wireless service assurance statistics

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of FlexConnect ACL:

```
cisco-wave2-ap# debug flexconnect acl
```

debug lldp

To debug LLDP, use the **debug lldp** command.

debug lldp {**errors** | **events** | **packet**}

Syntax Description

errors	Debugs LLDP errors
events	Debugs LLDP events
packet	Debugs LLDP packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of LLDP errors:

```
cisco-wave2-ap# debug lldp errors
```

debug memory

To debug memory, use the **debug memory** command.

debug memory {**clear** | **save**}

Syntax Description

clear	Removes memory debug upon boot-up
save	Saves current debug level and applies it upon following boots

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to remove memory debug upon boot-up:

```
cisco-wave2-ap# debug memory clear
```

debug memory pool

To debug memory pool, use the **debug memory pool** command.

debug memory pool {**diff** | **realtime interval** *1-1000000-seconds* | **start**}

Syntax Description

diff	Shows memory pool debug difference in detail
realtime interval *1-1000000-seconds*	Configures realtime interval for the memory pool
start	Starts the debug for the memory pool

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure realtime interval of 180 seconds for the memory pool:

```
cisco-wave2-ap# debug memory pool realtime interval 180
```

debug memory pool alloc

To debug memory pool allocation calls, use the **debug memory pool alloc** command.

debug memory pool alloc {**all** | **name** *pool-name*} {**diff** | **realtime interval** *1-1000000-seconds* | **start**}

Syntax Description

all	Configures debug for all memory pool allocation calls
name *pool-name*	Configures debug for a specific memory pool's allocation call
diff	Shows memory pool debug allocation call difference in detail
realtime interval *1-1000000-seconds*	Configures realtime interval for the memory pool allocation calls
start	Starts the debug for the memory pool allocation calls

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure the start of the debug for all memory pool allocation calls:

```
cisco-wave2-ap# debug memory pool alloc all start
```

debug memory pool free

To debug memory pool free calls, use the **debug memory pool free** command.

debug memory pool free {**all** | **name** *pool-name*} {**diff** | **realtime interval** *1-1000000-seconds* | **start**}

Syntax Description

all	Configures debug for all memory pool free calls
name *pool-name*	Configures debug for a specific memory pool's free call
diff	Shows memory pool debug free call difference in detail
realtime interval *1-1000000-seconds*	Configures realtime interval for the memory pool free calls
start	Starts the debug for the memory pool free calls

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure the start of the debugging of all memory pool free calls:

```
cisco-wave2-ap# debug memory pool free all start
```

debug mesh

To configure debugging of mesh networks, use the **debug mesh** command.

debug mesh {**channel** |**clear** |**convergence** |**events** |**forward-mcast** |**forward-packet** |**forward-table** |**linktest** |**path-control** |**port-control** |**security** |**trace**}

Syntax Description

channel	Configures debugging of mesh channel
clear	Resets all mesh debugs
convergence	Configures debugging of mesh convergence
events	Configures debugging of mesh events
forward-mcast	Configures debugging of mesh forwarding Multicast
forward-packet	Configures debugging of mesh forwarding packets
forward-table	Configures debugging of mesh forwarding table
linktest	Configures debugging of mesh linktest
port-control	Configures debugging of mesh port control
security	Configures debugging of mesh security
trace	Configures debugging of mesh trace

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of mesh channel:

```
cisco-wave2-ap# debug mesh channel
```

debug mesh adjacency

To debug mesh adjacency, use the **debug mesh adjacency** command.

debug mesh adjacency {**child** |**clear** |**dfs** |**message** |**packet** |**parent** }

Syntax Description

adjacency	Debug mesh adjacency
child	Debug mesh adjacency child
clear	Debug clear mesh adjacency
dfs	Debug mesh DFS
message	Debug mesh adjacency messages
packet	Debug mesh adjacency packet
parent	Debug mesh adjacency parent

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of mesh adjacency parent:

```
cisco-wave2-ap# debug mesh adjacency parent
```

debug mesh path-control

To configure debugging of mesh path control, use the **debug mesh path-control** command.

debug mesh path-control {**error** |**events** |**packets** }

Syntax Description

error	Configures debugging of mesh path control errors
events	Configures debugging of mesh path control events
packets	Configures debugging of mesh path control packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of mesh path control errors:

```
cisco-wave2-ap# debug mesh path-control error
```

debug rrm neighbor

To enable RRM neighbor debugging, use the **debug rrm neighbor** command.

debug rrm neighbor {**tx** | **rx** | **detail** }

Syntax Description

tx	Enable RRM neighbor Tx debugging
rx	Enable RRM neighbor Rx debugging
detail	Enable RRM neighbor detail debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of RRM neighbor transmissions:

```
cisco-wave2-ap# debug rrm neighbor tx
```

debug rrm reports

To enable RRM reports debugging, use the **debug rrm reports** command.

debug rrm reports

Syntax Description

reports	Enables RRM report debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of RRM reports:

```
cisco-wave2-ap# debug rrm reports
```

debug sip

To enable session initiation protocol (SIP) debugging, use the **debug sip** command.

debug sip {**all** | **tx** | **rx**}

Syntax Description

all	Enabling SIP transmission and reception debugging
tx	Enabling SIP transmission debugging
rx	Enabling SIP reception debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of SIP transmissions and reception:

```
cisco-wave2-ap# debug sip all
```

debug wips

To enable wIPS debugging, use the **debug wips** command.

debug wips {**errors** | **events** | **critical**}

Syntax Description

errors	Enable wIPS error level debugging
events	Enable wIPS event level debugging
critical	Enable wIPS critical level debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable wIPS error level debugging:

```
cisco-wave2-ap# debug wips errors
```

debug authentication interface

To enable FlexConnect radio interface debugging, use the **debug authentication interface** command.

debug authentication interface *interface-name* {**all** | **dot11** | **dot1x** | **driver** | **others** | **radius** | **wpa**}

Syntax Description

interface-name	Name of the interface to debug
all	Enable all parts debugging
dot11	Enable 802.11 module debugging
dot1x	Enable 802.1x module debugging
driver	Enable driver module debugging
others	Enable other non-module parts debugging
radius	Enable RADIUS module debugging
wpa	Enable WPA module debugging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of WPA module:

```
cisco-wave2-ap# debug authentication interface management wpa
```

debug process memory

To process memory debugging, use the **debug process memory** command.

debug process memory {**diff** |**realtime** [**interval** *interval-in-seconds*] |**start**}

Syntax Description

diff	Process memory debug show diff
realtime	Process memory real time debug
interval	Update interval; valid range 1 to 1000000 seconds
start	Process memory debug start

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable the start of debugging of process memory:

```
cisco-wave2-ap# debug process memory start
```

debug traffic

To enable traffic debugging, use the **debug traffic** command.

debug traffic {**host** {**icmpv6** | **ip** | **ipv6** | **tcp** | **udp** { **verbose**}} | **wired** {**ip** | **tcp** | **udp** {**verbose**}}}

Syntax Description

host	Enabling host traffic debugging
wired	Enabling wired traffic debugging
verbose	Display verbose output
icmpv6	Enabling host ICMPv6 traffic dump
ip	Enabling host IP traffic dump
ipv6	Enabling host IPv6 traffic dump
tcp	Enabling TCP traffic dump
udp	Enabling UDP traffic dump

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of host IP traffic dump:

```
cisco-wave2-ap# debug traffic host ip
```

debug tunnel

To configure debugging of tunnel, use the **debug tunnel** command.

debug tunnel eogre

Syntax Description

eogre	Configures debugging of EoGRE tunnel

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable debugging of EoGRE tunnel:

```
cisco-wave2-ap# debug tunnel eogre
```

debug client trace

To enable client trace debugging, use the **debug client trace** command.

debug client trace {**all** |**address** *mac-address* |**enable** |**filter** {**assoc | auth | dhcp | eap | icmp | mgmt | probe | proto**}}

Syntax Description

all	Configure all clients tracing
address	Configure address(es) to trace
mac-address	MAC address to trace
enable	Enable tracing
filter	Configure trace filter
assoc	Trace Association packets
auth	Trace Authentication packets
dhcp	Trace DHCP packets
eap	Trace EAP packets
icmp	Trace ICMP packets
mgmt	Trace probe, assoc, auth, EAP packets
probe	Trace probe packets
proto	Trace DHCP, ICMP packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable tracing of all clients:

```
cisco-wave2-ap# debug client trace all
```

no

To negate a command or set to its defaults, use the **no** command.

no

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

To negate a command or set to its defaults, use this command:

```
cisco-wave2-ap# no debug
```

traceroute

To view the routes followed by packets traveling in the network, use the **traceroute** command.

traceroute *destination-address*

Syntax Description

destination-address	IP address of the destination of the packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to view the routes followed by packets traveling in the network, with a destination IP address specified:

```
cisco-wave2-ap# traceroute 209.165.200.224
```

undebug

To disable debugging on the access point, use the **undebug** command.

undebug **[all]**

Syntax Description

all	Disables all debugging messages.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to disable all debugging messages:

```
cisco-wave2-ap# undebug all
```