Cisco Aironet Wave 2 Access Point Command Reference, Release 8.8

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Preface

This preface describes the audience, organization, and conventions of the Cisco Aironet Wave 2 Access Point Command Reference. It also provides information about how to obtain other documentation.

Note The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

Audience

This publication is for experienced network administrators who configure and maintain Cisco Aironet Wave 2 Access Points.

Note Usage of **test** commands may cause system disruption such as unexpected reboot of the Cisco AP. Therefore, we recommend that you use the **test** commands on Cisco APs for debugging purposes with the help of Cisco Technical Assistance Center (TAC) personnel.

Document Conventions

This document uses the following conventions:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.

Convention	Indication
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
[ ]	Elements in square brackets are optional.
{x | y | z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
`courier` font	Terminal sessions and information the system displays appear in `courier` font.
<>	Nonprinting characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Note Means reader take note. Notes contain helpful suggestions or references to material not covered in the manual.

Tip Means the following information will help you solve a problem.

Caution Means reader be careful. In this situation, you might perform an action that could result in equipment damage or loss of data.

Warning This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. (To see translations of the warnings that appear in this publication, refer to the appendix "Translated Safety Warnings.")

Warning Title	Description
Waarschuwing	Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van standaard maatregelen om ongelukken te voorkomen. (Voor vertalingen van de waarschuwingen die in deze publicatie verschijnen, kunt u het aanhangsel "Translated Safety Warnings" (Vertalingen van veiligheidsvoorschriften) raadplegen.)

Warning Title	Description
Varoitus	Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista. (Tässä julkaisussa esiintyvien varoitusten käännökset löydät liitteestä "Translated Safety Warnings" (käännetyt turvallisuutta koskevat varoitukset).)
Attention	Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures. Avant d'accéder à cet équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures courantes de prévention des accidents. Pour obtenir les traductions des mises en garde figurant dans cette publication, veuillez consulter l'annexe intitulée « Translated Safety Warnings » (Traduction des avis de sécurité).
Warnung	Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt. (Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise finden Sie im Anhang mit dem Titel "Translated Safety Warnings" (Übersetzung der Warnhinweise).)
Avvertenza	Questo simbolo di avvertenza indica un pericolo. Si è in una situazione che può causare infortuni. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti. La traduzione delle avvertenze riportate in questa pubblicazione si trova nell'appendice, "Translated Safety Warnings" (Traduzione delle avvertenze di sicurezza).
Advarsel	Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker. (Hvis du vil se oversettelser av de advarslene som finnes i denne publikasjonen, kan du se i vedlegget "Translated Safety Warnings" [Oversatte sikkerhetsadvarsler].)
Aviso	Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos fisicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes. (Para ver as traduções dos avisos que constam desta publicação, consulte o apêndice "Translated Safety Warnings" - "Traduções dos Avisos de Segurança").
¡Advertencia!	Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes. (Para ver traducciones de las advertencias que aparecen en esta publicación, consultar el apéndice titulado "Translated Safety Warnings.")

Warning Title	Description
Varning	Denna varningssymbol signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanligt förfarande för att förebygga skador. (Se förklaringar av de varningar som förekommer i denna publikation i appendix "Translated Safety Warnings" [Översatta säkerhetsvarningar].)

Related Documentation

- Cisco Access Points—https://www.cisco.com/c/en/us/products/wireless/access-points/index.html
- Cisco Wireless Controller Software Documentation—https://www.cisco.com/c/en/us/support/wireless/wireless-lan-controller-software/tsd-products-support-series-home.html

Obtaining Documentation and Submitting a Service Request

For information about obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.

Using the Command Line Interface

This chapter describes the Cisco Aironet Wave 2 AP command-line interface (CLI) and how to use it to configure your AP.

Understanding Command Modes

The Cisco Aironet Wave 2 AP command line interface is divided into the following two different modes:

- User EXEC mode—When you start a session on the AP, you begin in the User EXEC mode. Only a limited subset of the commands are available in this mode. Also, the **show** commands that are available in the User EXEC mode are a subset of the **show** commands that are available in the Privileged EXEC mode.

  The user EXEC commands are not saved when the AP is rebooted.

- Privileged EXEC mode—In this mode, you will have access to all commands. You are required to enter a password to enter the Privileged EXEC mode.

The commands available to you depend on which mode you are currently in. Enter a question mark (?) at the system prompt to obtain a list of commands available for the command mode you are in. For example, here are the list of User EXEC mode commands available:

```
cisco-wave2-ap>?
Exec mode commands
  enable  Turn on privileged commands
  logout  Logout out from CLI
  ping    Send echo messages
  show    Show running system information
```

Table 1: Command Mode Summary

Mode	Access Method	Prompt	Exit Method	About This Mode
User EXEC	Begin a session with your switch.	`cisco-wave2-ap>`	Enter **logout** or **quit**.	Use this mode to • Change terminal settings. • Perform basic tests. • Display system information.
Privileged EXEC	While in user EXEC mode, enter the **enable** command and enter the password when prompted.	`cisco-wave2-ap#`	Enter **disable** to exit.	Use this mode to verify commands that you have entered. Use a password to protect access to this mode.

Understanding Abbreviated Commands

You need to enter only enough characters for the AP to recognize the command as unique.

This example shows how to enter the **show configuration** privileged EXEC command in an abbreviated form:

```
cisco-ap# show conf
```

Understanding no Forms of Commands

While you need to use the **debug** command to enable debugs on many features, the prefix **no** disables debugs on those respective features. For example:

Command to enable debug:

```
cisco-ap# debug client ...
```

Command to disable debug:

```
cisco-ap# no debug client ...
```

Understanding CLI Error Messages

This table lists some error messages that you might encounter while using the CLI to configure your AP.

Table 2: Common CLI Error Messages

Error Message	Meaning	How to Get Help
`% Ambiguous command: "show con"`	You did not enter enough characters for your AP to recognize the command.	Enter the command again followed by a question mark (?) with a space between the command and the question mark. The possible keywords that you can enter with the command appear.
`% Incomplete command.`	You did not enter all the keywords or values required by this command.	Enter the command again followed by a question mark (?) with a space between the command and the question mark. The possible keywords that you can enter with the command appear.
`% Invalid input detected at '^' marker.`	You entered the command incorrectly. The caret (^) marks the point of the error.	Enter a question mark (?) to display all the commands that are available in this command mode. The possible keywords that you can enter with the command appear.

Configuring the Terminal

Before you begin

Enter the Privileged EXEC mode.

Procedure

- Configure the number of lines on the screen by entering this command:
  terminal length *number-of-lines*

  Valid range is 0 to 512. If you enter 0, there will be no pausing.

  Example:

  ```
  cisco-ap# terminal length 20
  ```

- Copy debug output to the current terminal line by entering this command:
  terminal monitor
- Disable logging to the current terminal line by entering this command:
  terminal monitor disable
- Specify the terminal type by entering this command:
  terminal type *type-name*
- Configure the number of characters that should be displayed on a screen line by entering this command:
  terminal width *number-of-characters*

  Valid range is 0 to 132.

  Example:

  ```
  cisco-ap# terminal width 30
  ```

Recalling Commands

To recall commands from the history buffer, perform one of the actions listed in this table. These actions are optional.

Note The arrow keys function only on ANSI-compatible terminals such as VT100s.

Table 3: Recalling Commands

Action	Result
Press the up arrow key	Recalls commands in the history buffer, beginning with the most recent command. Repeat the key sequence to recall successively older commands.
Press the down arrow key	Returns to more recent commands in the history buffer after recalling commands with the up arrow key. Repeat the key sequence to recall successively more recent commands.

Accessing the CLI

You can access the CLI through a console connection, through Telnet, or by using the browser. Commands you enter in one session are not displayed in the other sessions. Therefore, it is possible to lose track of the session from which you entered commands.

capwap Commands

capwap ap

To configure the primary, secondary and tertiary controllers for the AP, use the **capwap ap** command.

capwap ap {**primary-base** | **secondary-base** | **tertiary-base**}
controller-name controller-ip-address

Syntax Description

primary-base	Configure AP's primary controller
secondary-base	Configure AP's secondary controller
tertiary-base	Configure AP's tertiary controller
controller-name	Name of the controller
controller-ip-address	IP address of the controller.

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 primary controller for the AP:

```
cisco-ap# capwap ap primary-base wlc-5520 209.165.200.224
```

capwap ap auth-token

To configure authentication token, use the **capwap ap auth-token** command.

capwap ap auth-token *ssc-token*

Syntax Description

ssc-token	SSC token; valid range is 8 to 32 characters

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure authentication token,:

```
cisco-ap# capwap ap auth-token myauthtoken
```

capwap ap erase

To erase CAPWAP configuration, use the **capwap ap erase** command.

capwap ap erase {**all** | **static-ip**}

Syntax Description

all	Erases all CAPWAP configuration
	Note If the AP is in Bridge mode, then the same Bridge mode is retained after the factory reset of the AP; if the AP is in FlexConnect, Local, Sniffer, or any other mode, then the AP mode is set to Local mode after the factory reset of the AP. If you press the Reset button on the AP and perform a true factory reset, then the AP moves to a cookie configured mode.
static-ip	Erase static IP or DNS configuration

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to erase all the CAPWAP configuration on the AP:

```
cisco-ap# capwap ap erase all
```

capwap ap ethernet

To configure AP Ethernet parameters, use the **capwap ap ethernet** command.

capwap ap ethernet tag *ethernet-vlan-id*

Syntax Description

ethernet-vlan-id	Ethernet VLAN ID; valid range is 0 to 4094. If you enter the VLAN ID value as 0, the VLAN tagging is disabled.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure Ethernet VLAN tagging on the AP:

```
cisco-ap# capwap ap ethernet tag 2
```

capwap ap hostname

To configure AP hostname, use the **capwap ap hostname** command.

capwap ap hostname *ap-name*

Syntax Description

ap-name	AP name

Command Modes

Privileged EXEC (#)

Usage Guidelines

If the AP is already associated with a Cisco WLC, the new hostname is reflected on the Cisco WLC only after the AP dissociates and reassociates with the Cisco WLC.

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure a hostname for the AP:

```
cisco-ap# capwap ap hostname cisco-wave2-ap-2802
```

capwap ap ip

To configure static IP address and DNS for the CAPWAP AP, use the **capwap ap ip** command.

capwap ap ip *static-ip-addr static-netmask ip-addr-default-gateway* [*ip-addr-dns1* | *ip-addr-dns2*] [*domain-name*]

Syntax Description

static-ip-addr	Static IP address of the AP
static-netmask	Static netmask
ip-addr-default-gateway	IP address of the default gateway
[*ip-addr-dns1* | *ip-addr-dns2*]	(Optional parameters) IP address(es) of the DNS
[*domain-name*]	(Optional parameter) Domain name

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure static IP address and DNS for the CAPWAP AP:

```
cisco-ap# capwap ap ip 209.165.200.225 255.255.255.224 209.165.200.227 209.165.200.226
example.org
```

capwap ap lag

To configure CAPWAP lag, use the **capwap ap lag** command.

capwap ap lag {**enable** | **disable**}

Syntax Description

enable	Enables LAG
disable	Disables LAG

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable LAG on the AP:

```
cisco-ap# capwap ap lag enable
```

capwap ap mesh strict-wired-uplink

To configure the root access points (RAPs) to stay as persistent RAPs even if the wired uplink is lost, use the **capwap ap mesh strict-wired-uplink** command.

capwap ap mesh strict-wired-uplink {**enable** | **disable**}

Syntax Description

enable	Enables strict wired uplink on the Cisco AP.
disable	Disables strict wired uplink on the Cisco AP.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.9 Cisco IOS XE Gibraltar 16.11.1	This command was introduced.

Examples

The following example shows how to enable the root access points (RAPs) to stay as persistent RAPs even if the wired uplink is lost:

```
cisco-ap# capwap ap mesh strict-wired-uplink enable
```

capwap ap mode

To configure AP mode, use the **capwap ap mode** command.

capwap ap mode {**bridge | local**}

Syntax Description

bridge	Enables bridge mode
local	Enables local mode

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 AP to operate in local mode:

```
cisco-ap# capwap ap mode local
```

capwap ap restart

To restart the CAPWAP protocol, use the **capwap ap restart** command.

capwap ap restart

Syntax Description

restart	Restart the CAPWAP protocol

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to restart CAPWAP protocol:

```
cisco-ap# capwap ap restart
```

clear Commands

clear avc nbar

To clear AVC NBAR statistics, use the **clear avc nbar** command.

clear avc nbar statistics

Syntax Description

statistics	Clears AVC NBAR statistics

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to clear AVC NBAR statistics:

```
cisco-ap# clear avc nbar statistics
```

clear counters

To clear 802.11 radio statistics, use the **clear counters** command.

clear countersDot11Radio *interface-number* | **client** | **fast-path profinet** | **wired** *interface-number* **MIB-stats**

Syntax Description

Dot11Radio	(Optional) Clears the Dot11 interface statistics.
interface-number	Dot11Radio interface number; valid value is 0 or 1.
client	Clears the client statistics.
fast-path	Clears the controller fast-path statistics.
profinet	Clears the profinet statistics.
wired	Clears the wired interface statistics.
interface-number	Wired interface number, valid value is between 0 and 3.
MIB-stats	Clears the AP Internal-Switch MIB counters.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.
8.7	This command was enhanced by adding **client, fast-path, profinet, wired** parameters.

Examples

The following example shows how to clear 802.11 interface statistics for the interface number specified:

```
cisco-ap# clear counters Dot11Radio 1
```

clear cts

To clear the statistics of Cisco TrustSec Security, use the **clear cts** command.

clear cts role-based counters [**all** | **client** *mac-addr* | **from** *sgt* **to** *dgt*]

Syntax Description

counters	Clears Cisco TrustSec summary counters
all	Clears all Cisco TrustSec counters
client *mac-addr*	Clears the Cisco TrustSec counters for a client MAC address specified in xx:xx:xx:xx:xx:xx format
from	Specifies the source group tag for filtered traffic
sgt	Security Group Tag (SGT); valid values are 0 to 65535
to	Specifies the destination group tag for filtered traffic
dgt	Destination Group Tag (DGT); valid values are 0 to 65535

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

This example shows you how to clear all the statistics of Cisco TrustSec Security counters:

```
cisco-ap# clear cts role-based counters all
```

clear datapath

To clear the datapath counters or drops, use the **clear datapath** command.

clear datapath {**drops** | **statistics**}

Syntax Description

drops	Clears the datapath drop counters
statistics	Clears the datapath counters

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

This example shows you how to clear the datapath drop counters:

```
cisco-ap# clear datapath drops
```

clear dot11

To clear the 802.11 configuration, use the **clear dot11** command.

clear dot11 sensor

Syntax Description

sensor	Clears the sensor configuration and reboots

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

This example shows you how to clear the 802.11 configuration:

```
cisco-ap# clear dot11 sensor
```

clear logging

To clear the logging details, use the **clear logging** command.

clear logging [**capwap** | **message** | **warning**]

Syntax Description

capwap	(Optional) Clears CAPWAP logging details
message	(Optional) Clears message logging details
warning	(Optional) Clears warnings logging details

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

This example shows you how to clear the CAPWAP logging details:

```
cisco-ap# clear logging capwap
```

config Commands

config ap address

To configure the AP IPv4 or IPv6 address, use the **config ap address** command.

config ap address ipv4 { **dhcp** | **static** { *static-ip-addr static-netmask default-gateway-ip-addr* | **ipv6** { **auto-config** {**enable** | **disable**} | **dhcp** | **disable** | **link-local** *ipv6-addr* | **static** *ipv6-addr ipv6-prefix gateway-ipv6-addr*

Syntax Description

ipv4	Configure IPv4 address
ipv6	Configure IPv6 address
auto-config	Auto configure IPv6 address
dhcp	Configure IPv6 DHCP
auto-config	
auto-config	

Command Default

None.

Command History

Release	Modification
	This command was introduced.

Usage Guidelines

Examples

Related Commands

Command	Description

config ap client-trace

To configure client trace on the access point, use the **config ap client-trace** command.

config ap client-trace {**address** {**add** | **clear-all** | **delete**} | **all-clients** {**enable** | **disable**} | **filter** {**all** {**enable** | **disable**} | **arp** {**enable** | **disable**} | **assoc** {**enable** | **disable**} | **auth** {**enable** | **disable**} | **dhcp** {**enable** | **disable**} | **eap** {**enable** | **disable**} | **icmp** {**enable** | **disable**} | **ndp** {**enable** | **disable**} | **probe** {**enable** | **disable**}} | **inline-mon** {**enable** | **disable**} | **output** *console-log* | **start** | **stop**}

Syntax Description

addresses	Configure clients to trace. Specify the MAC address of the client
add	Specifies a client to trace
clear-all	Delete all client traces on this access point
delete	Deletes client address to be traced. Takes a client MAC address
all-clients	Trace all clients
enable	Enables trace for all clients
disable	Disables trace for all clients
filter	Sets filters for cleint tracing
all	Traces all filters
arp	Traces ARP packets Use the **enable** or **disable** keyword to enable or disable this filter.
assoc	Traces ASSOC packets
auth	Traces auth packets
dhcp	Traces DHCP packets
eap	Traces EAP packets
icmp	Traces ICMP packets
ndp	Traces NDP packets
probe	Trace probe packets.
inline-mon	Enables or disables inline monitoring
output	Enables or disables logging to the console or log file
console-log	Specifies console log keyword
start	Starts client tracing
stop	Stops client tracking

Command Modes Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to start client tracing on the AP:

```
cisco-ap# config ap client-trace start
```

config ap client-trace filter

To set filters for client trace, use the **config ap client-trace filter** command.

config ap client-trace filter {**all**[**disable** | **enable**] | **arp**[**disable** | **enable**] | **assoc**[**disable** | **enable**] | **auth**[**disable** | **enable**] | **dhcp**[**disable** | **enable**] | **eap**[**disable** | **enable**] | **icmp**[**disable** | **enable**] | **ndp**[**disable** | **enable**] | **probe**[**disable** | **enable**]}

Syntax Description

all	Trace all filters
arp	Trace ARP packets
assoc	Trace ASSOC packets
auth	Trace auth packets
dhcp	Trace DHCP packets
eap	Trace EAP packets
icmp	Trace ICMP packets
ndp	Trace NDP Packets
probe	Trace probe packets

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

To set filters for client trace, use this command:

```
cisco-ap# config ap client-trace filter
```

config ap client-trace output

To configure the trace output, use the **config ap client-trace output** command.

config ap client-trace output console-log {**disable** | **enable**}

Syntax Description

console-log	Displays trace output to console and log
disable	Disables trace output to console and log
enable	Enables trace output to console and log

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows you how to configure the trace output:

```
cisco-ap# config ap client-trace output
```

config boot baudrate

To set the baud rate, use the **config boot baudrate** command.

config boot baudrate {*115200* | *9600*}

Syntax Description

115200	Sets the baud rate to 115200
9600	Sets the baud rate to 9600

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 baud rate to 9600:

```
cisco-ap# config boot baudrate 9600
```

config boot break

To enable break, use the **config boot break** command.

config boot break {**enable** | **disable**}

Syntax Description

enable	Enables boot break
disable	Disables boot break

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable boot break:

```
cisco-ap# config boot break enable
```

config boot crashkernel

To enable or disable kernel crash, use the **config boot crashkernel** command.

config boot crashkernel {**enable** | **disable**}

Syntax Description

enable	Enables kernel crash
disable	Disables kernel crash

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable kernel crash:

```
cisco-ap# config boot crashkernel enable
```

config boot debug-memory

To enable memory debug, use the **config boot debug-memory** command.

config boot debug-memory {**enable** | **disable**}

Syntax Description

enable	Enables memory debug
disable	Disables memory debug

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

This example shows you how to enable memory debug:

```
cisco-ap# config boot debug-memory enable
```

config boot manual

To enable manual boot of the AP, use the **config boot manual** command.

config boot manual {**enable** | **disable**}

Syntax Description

enable	Enables manual boot
disable	Disables manual boot

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable manual boot:

```
cisco-ap# config boot manual enable
```

config boot path

To configure the boot path, use the **config boot path** command.

config boot path {*1* | *2*}

Syntax Description

{*1* | *2*}	Path to be specified as Part 1 or Part 2

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 booth path as 1:

```
cisco-ap# config boot path 1
```

config cts debug enforcement host_ip

To filter the SGACL enforcement debugs based on the host IP, use the **config cts debug enforcement host_ip** command.

config cts debug enforcement host_ip {**ipv4** *dst-ip* [*src-ip*] | **ipv6** *dst-ip* [*src-ip*]}

Syntax Description

ipv4 *dst-ip* [*src-ip*]	Displays only the IPv4 SGACL enforcement debugs based on the destination and, optionally, source IP addresses
ipv6 *dst-ip* [*src-ip*]	Displays only the IPv6 SGACL enforcement debugs based on the destination and, optionally, source IP addresses

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows you how to filter the IPv4 SGACL enforcement debugs based on the host IP:

```
cisco-ap# config cts debug enforcement host_ip ipv4 209.165.200.224 209.165.200.227
```

config cts debug enforcement rate

To configure the rate of printing of debug logs, use the **config cts debug enforcement rate** command.

config cts debug enforcement rate {*X Y*}

Command Modes

Privileged EXEC (#)

Syntax Description

rate	Configure the rate of printing debug logs
X	Number of packets whose debugs are to be displayed for every *Y* number of packets processed; valid range is between 0 to 10000
Y	Number of packets to be processed; valid range is between 0 to 10000

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to configure the rate of printing of debug logs such that debugs of 100 packets are displayed for every 500 packets processed:

```
cisco-ap# config cts debug enforcement rate 100 500
```

config cts debug enforcement permissions

To filter SGACL enforcement debugs based on source group tag (SGT) and destination group tag (DGT), use the **config cts debug enforcement permissions** command.

config cts debug enforcement permissions {**dgt** | **sgt**} *tag-id*

Syntax Description

dgt	Destination group tag
sgt	Source group tag
tag-id	Tag identifier; valid values are beteween 0 to 65535

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows you how to filter SGACL enforcement debugs for a destination group tag whose ID is 600:

```
cisco-ap# config cts debug enforcement permissions dgt 600
```

config cts debug enforcement protocol

To filter SGACL enforcement debugs based on protocol, use the **config cts debug enforcement protocol** command.

config cts debug enforcement protocol {*protocol-id* | **icmp** | **tcp** | **udp**}

Syntax Description

protocol-id	Protocol ID; valid values are between 0 to 65535
icmp	Filter SGACL enforcement for ICMP traffic
tcp	Filter SGACL enforcement for TCP traffic
udp	Filter SGACL enforcement for UDP traffic

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows you how to filter SGACL enforcement debugs based on protocol for UDP traffic:

```
cisco-ap# config cts debug enforcement protocol udp
```

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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-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-ap# undebug all
```

show Commands

show ap client-trace status

To view the AP client trace details, use the **show ap client-trace status** command.

show ap client-trace { **events** { **all | mac** *word* | **system** } | **skb** { **drop-list | stats** } | **status** }

Syntax Description

events	View client trace event information
all	Displays all client trace events
system	Displays all system events
mac	Displays client trace events for specific MAC address
word	Specific client MAC address
skb	Displays client trace SKB information
drop-list	Displays client trace SKB drop list information
stats	Displays client trace SKB statistics
status	Displays client trace configuration

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the AP client trace status:

```
cisco-ap# show ap client-trace status
```

show arp

To view the ARP table, use the **show arp** command.

show arp

Syntax Description

arp	Shows ARP table

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows a sample output of the command:

```
cisco-ap# show arp

Address Age (min)     Hardware Addr
   9.11.8.1         0 84:80:2D:A0:D2:E6
9.11.32.111         0 3C:77:E6:02:33:3F
```

show avc cft

To view the AVC client flow table information, use the **show avc cft** command.

show avc cft *word*

Syntax Description

word	Client MAC address

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the AVC client flow table:

```
cisco-ap# show avc cft 02:35:2E:03:E0:F2
```

show avc nbar

To view the AVC NBAR information, use the **show avc nbar** command.

show avc nbar {**statistics** | **build** | **version**}

Syntax Description

statistics	Displays NBAR build details
build	Displays NBAR statistics
version	Displays NBAR and PP version

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the AVC NBAR build information:

```
cisco-ap# show avc nbar build
```

show avc netflow flows

To list all the flows currently cached and to be sent to the Cisco WLC, use the **show avc netflow flows** command.

show avc netflow flows {**download** | **upload**}

Syntax Description

download	Lists currently cached download flows
upload	Lists currently cached upload flows

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view all the currently cached flows:

```
cisco-ap# show avc netflow flows
```

show avc status

To list the AVC provisioning status per WLAN/VAP, use the **show avc status** command.

show avc status

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view AVC provisioning status per WLAN/VAP:

```
cisco-ap# show avc status

VAP FNF-STATUS AVC-QOS-STATUS
  0   Disabled       Disabled
  1   Disabled       Disabled
  2   Disabled       Disabled
  3   Disabled       Disabled
  4   Disabled       Disabled
  5   Disabled       Disabled
  6   Disabled       Disabled
  7   Disabled       Disabled
  8   Disabled       Disabled
  9   Disabled       Disabled
 10   Disabled       Disabled
 11   Disabled       Disabled
 12   Disabled       Disabled
 13   Disabled       Disabled
 14   Disabled       Disabled
 15   Disabled       Disabled
```

show boot

To show boot attributes, use the **show boot** command.

show boot

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view boot attributes:

```
cisco-ap# show boot

BOOT path-list:      part2
Console Baudrate:    9600
Enable Break:        yes
Manual Boot:         no
Memory Debug:        no
Crashkernel:
```

show capwap

To disaply CAPWAP options, use the **show capwap** command.

show capwap [{**ip** | **mcast** | **traffic**}]

Syntax Description

client	CAPWAP client information
ids	CAPWAP ID information
ip	CAPWAP IP configuration
location	CAPWAP location information
mcast	CAPWAP multicast information
pnp	PNP information
traffic	CAPWAP traffic information

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the CAPWAP multicast information:

```
cisco-ap# show capwap mcast
```

show capwap client

To display CAPWAP client information, use the **show capwap client** command.

show capwap client {**callinfo** *info* | **detailrcb** | **rcb** | **config** | **ha** | **msginfo** | **timers** | **traffic**}

Syntax Description

callinfo *info*	CAPWAP client call information
detailrcb	CAPWAP client detailed RCB information
rcb	CAPWAP client RCB information
config	CAPWAP client config information
ha	CAPWAP client HA parameters
msginfo	CAPWAP client messages information
timers	CAPWAP client timers
traffic	CAPWAP client 802.11 traffic information

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view CAPWAP client traffic information:

```
cisco-ap# show capwap client traffic
```

show capwap client trace

To display CAPWAP trace, use the **show capwap client trace** command.

show capwap client trace {**clear** | **delete** | **disable** | **save** | **start** | **stop**}

Syntax Description

clear	Clears trace
delete	Deletes trace
disable	Disables trace at boot
enable	Enables trace at boot
save	Saves trace
start	Starts trace
stop	Stops trace

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view CAPWAP client trace:

```
cisco-ap# show capwap client trace
```

show capwap ids sig

To disaplay CAPWAP ID signatures, use the **show capwap ids sig** command.

show capwap ids sig [{**list** | **stats**}]

Syntax Description

list	Signature list entries
stats	Signature attack statistics

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example show how to view CAPWAP ID signature statistics:

```
cisco-ap# show capwap ids sig stats
```

show cdp

To display CDP options, use the **show cdp** command.

show cdp {**entry device** *device-name* | **inline_power** | **interface** | **neighbors** | **traffic**}

Syntax Description

entry device *device-name*	Information for specific neighbor entry whose name you must enter
inline_power	Inline power negotiation information
interface	CDP interface status and configuration
neighbors	CDP neighbor entries
traffic	CDP statistics

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view information for a specific neighbor entry:

```
cisco-ap# show cdp entry device mydevice
```

show class-map

To display CPL class map, use the **show class-map** command.

show class-map

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view CPL class map:

```
cisco-ap# show class-map
```

show cleanair debug

To display cleanair debug settings, use the **show cleanair debug** command.

show cleanair debug

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view CleanAir debug settings:

```
cisco-ap# show cleanair debug
```

show client statistics

To disaply client statistics, use the **show client statistics** command.

show client statistics *client-mac-address*

Syntax Description

client-mac-address	MAC address of the client

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view client statistics:

```
cisco-ap# show client statistics 70:DB:98:66:34:FA
```

show clock

To display the system clock, use the **show clock** command.

show clock

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the system clock:

```
cisco-ap# show clock
```

show configuration

To display the contents of the non-volatile memory, use the **show configuration** command.

show configuration

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.
8.10.112.0	The output of this command was enhanced to show the status of broken antenna detection.

The following example shows how to view the AP configuration details:

```
cisco-ap# show configuration

AP Name                     : AP58AC.78DC.C2F0
Admin State                 : Enabled
AP Mode                     : FlexConnect
AP Submode                  : Not Configured
Location                    : default location
Reboot Reason               : Reload command
.
.
AP Link LAG status          : Disabled
AP WSA Mode                 : Enabled
Vlan Interface              : Disabled

Broken antenna detection    : Enabled (Global)
RSSI Failure Threshold      : 40
Weak RSSI                   : 60
Detection Time              : 12
If any broken antenna?      : ALL
AP58AC.78DC.C2F0#
```

show controller ble

To view Bluetooth Low Energy radio interface parameter information, use the **show controller ble** command.

show controller ble *ble-interface-number* { {**broadcast** | **counters** | **floor-tag** *floor-beacon-mac-addr* | **interface** | **local** | **scan** {**brief** | **detail** *floor-beacon-mac-addr*} | **timers**}

Syntax Description

ble-interface-number	BLE interface number that you must enter; Valid value is 0
broadcast	Displays BLE broadcast summary information
counters	Displays BLE transport counters information
floor-tag *floor-beacon-mac-addr*	Displays sync data of the floor beacon whose MAC address you must specify
interface	Displays BLE interface summary information
local	Displays sync information of host BLE radio
scan brief	Displays brief BLE scan summary information
scan detail *floor-beacon-mac-addr*	Displays BLE scan summary information in detail; you must specify the floor beacon MAC address
timers	Displays BLE timers information

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.7	This command was introduced.

Examples

To view the BLE timers information, use this command:

```
cisco-ap# show controller ble 0 timers

Timers
------
Scan timer status       : Running
Scan timer interval     : 10 secs
Scan started at         : 0D:00H:04M:28S ago
Last scan done at       : 0D:00H:00M:06S ago
```

If scanning is working as expected, the 'Last scan done at' time should always be less than or equal to the scan interval set.

show controllers dot11Radio

To display dot11 interface information, use the **show controllers dot11Radio** command.

show controllers dot11Radio *dot11-interface-no* {**antenna** | { **atfconfiguration** | **statistics** } | **client** { *client-mac-addr* | } | **frequency** | **powercfg** | **powerreg** | **radiostats** | **rate** | **vlan** | **wlan** { *wlan-id* } }

Syntax Description

dot11-interface-no	Dot11Radio interface number.
atf configuration	Displays the AirTime Fairness configuration.
atf statistics	Displays the AirTime Fairness statistics.
antenna	Displays the antenna settings
frequency	Displays the frequency information.
powercfg	Displays the configured power information.
powerreg	Displays the transmit power information.
radio-stats	Displays the radio statistics.
rate	Displays the rate information.
vlan	Displays the VLAN summary.
wlan *wlan-id*	Displays the VLAN/WLAN details of the WLAN ID specified.

Command Modes

User EXEC (>)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view 802.11 interface information for interface number 1:

```
cisco-ap# show controllers dot11Radio 1
```

show controllers nss status

To display NSS information, use the **show controllers nss status** command.

show controllers nss status

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view NSS information:

```
cisco-ap# show controllers nss status
```

show controllers wired

To view the wired interface, use the **show controllers wired** command.

show controllers wired *wired-interface-number*

Syntax Description

wired-interface-number	Wired interface number from 0 to 3

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view information about the controllers' wired interface whose ID is 1:

```
cisco-ap# show controllers wired 1

wired1    Link encap:Ethernet  HWaddr C8:8B:6A:33:59 eMac Status: DOWN
          inet addr:9.11.8.104  Bcast:9.255.255.255  Mask:255.255.255.255
          DOWN BROADCAST RUNNING PROMISC MULTICAST  MTU:2400  Metric:1
          RX packets:38600 errors:0 dropped:1 overruns:0 frame:0
          TX packets:179018 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:80
          RX bytes:3812643 (3.6 MiB)  TX bytes:54721869 (52.1 MiB)

Gig Emac1 Counters
----------------------
0 Good octets rx, 0 Bad octets rx, 0 Unicast frames rx,
0 Broadcast frames rx, 0 Multicast frames rx, 0 64 byte frames rx,
0 65_TO_127 byte frames, 0 128_TO_255 byte frames, 0 256_TO_511 byte frames,
0 512_TO_1023 byte frames, 0 1024_TO_MAX byte frames, 0 Good octets tx,
0 Unicast frames tx, 0 Multicast frames tx, 0 Broadcast frames tx,
0 Crc errors sent, 0 Flow control rx, 0 Flow control tx,
0 Rx fifo overrun, 0 Undersized rx, 0 Fragments rx,
0 Oversize rx, 0 Jabber rx, 0 Mac rx error,
0 Bad crc event, 0 Collision, 0 Late collision,
```

show crypto

To view the crypto attributes, use the **show crypto** command.

show crypto

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the crypto attributes:

```
cisco-ap# show crypto
```

show debug

To view the debugs enabled, use the **show debug** command.

show debug

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the debugs that are in enabled state:

```
cisco-ap# show debug
```

show dhcp

To view the status of Dynamic Host Configuration Protocol (DHCP), use the **show dhcp** command.

show dhcp {**lease** | **servers**}

Syntax Description

lease	Displays the DHCP addresses leased from a server
servers	Displays the known DHCP servers

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the status of DHCP addresses leased from a server:

```
cisco-ap# show dhcp lease
```

show dot11 qos

To view the Quality of Service (QoS) parameters for 802.11 network, use the **show dot11 qos** command.

show dot11 qos

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the Quality of Service (QoS) parameters for 802.11 network:

```
cisco-ap# show dot11 qos
```

show filesystems

To view the filesystem information, use the **show filesystems** command.

show filesystems

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the filesystem information:

```
cisco-ap# show filesystems

Filesystem                Size      Used Available Use% Mounted on
/dev/ubivol/storage      57.5M      1.9M     52.6M   4% /storage
```

show flash

To view the flash contents, use the **show flash** command.

show flash [{**cores** [**detail** *core-file-name*] | **crash** | **syslogs**}]

Syntax Description

cores	Displays the core files in flash
detail	Displays the core file contents
core-file-name	The core file name
crash	Displays the crash files in flash
syslogs	Displays the syslogs files in flash

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the details of a core file in flash:

```
cisco-ap# show flash cores detail filename1
```

show flexconnect

To view the flexconnect information for an access point, use the **show flexconnect** command.

show flexconnect {**calea** | **cckm** | **client** [**aaa-override** | **counter** | **priority**] | **dot11r** | **mcast** | **oeap** | **pmk** | **status** | **vlan-acl** | **wlan**}

Syntax Description

calea	Displays the calea information
cckm	Displays the CCKM cache entry information
client	Displays the client information
aaa-override	Specifies the AAA override parameters
counter	Specifies the counter for all clients
priority	Specifies the client priority
dot11r	Displays the 802.11r cache entry information
mcast	Displays the multicast information
oeap	Displays the FlexConnect OEAP information
pmk	Displays the OKC or PMK cache entry information
status	Displays the standalone status
vlan-acl	Displays the VLAN ACL mapping
wlan	Displays the WLAN configuration

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the information about a client of a FlexConnect AP:

```
cisco-ap# show flexconnect client
```

show flexconnect oeap firewall

To view the OEAP firewall information, use the **show flexconnect oeap firewall** command.

show flexconnect oeap firewall [{**dmz** | **filtering** | **forwarding**}]

Syntax Description

dmz	Displays the OEAP firewall DMZ information
filtering	Displays the OEAP firewall filtering information
forwarding	Displays the OEAP firewall port forwarding information

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the OEAP firewall DMZ information:

```
cisco-ap# show flexconnect oeap firewall dmz
```

show flexconnect wlan

To view the WLAN configuration for Flexconnect AP mode, use the **show flexconnect wlan** command.

show flexconnect wlan [{**l2acl** | **qos** | **vlan**}]

Syntax Description

l2acl	Specifies the Layer 2 ACL mapping for WLAN
qos	Specifies the QoS parameters for WLAN
vlan	Specifies the VLAN mapping for WLAN

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the WLAN Layer 2 ACL mapping for the Flexconnect AP:

```
cisco-ap# show flexconnect wlan l2acl
```

show interfaces dot11Radio

To view the interface status and configuration for an 802.11 radio, use the **show interfaces dot11Radio** command.

show interfaces dot11Radio *radio-interface-number* {**dfs** | **memory** [*memory-address length* | **firmware**] | **mumimo** *wlan-number* | **sniffer** | **statistics** | **wlan***wlan-id* | **statistics** }

Syntax Description

radio-interface-number	Specifies the interface number for 802.11 radio. The valid range is from 0 to 1
dfs	Displays the DFS statistics
memory	Displays the dump radio memory
memory-address	Specifies the memory address. The valid range is between 0 and ffffffff
length	Specifies the length. The valid range is from 0 to 64
firmware	Dumps firmware logs
mumimo	Displays the multiuser MIMO statistics information
wlan-number	The 802.11-specific value whose valid range is from 0 to 15.
sniffer	Displays the sniffer mode statistics
statistics	Displays the statistics information for 802.11 radio
wlan *wlan-id*	Displays the specified WLAN information

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the DFS statistics for a 802.11 interface whose number is 1:

```
cisco-ap# show interfaces dot11Radio 1 dfs


DFS Data:
Radar Detected:          0
Inactive Radar Detected: 0
```

show interfaces network

To view the Linux network interfaces, use the **show interfaces network** command.

show interfaces network

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the Linux network interfaces:

```
cisco-ap# show interfaces network
```

show interfaces wired

To view the wired interface, use the **show interfaces wired** command.

show interfaces wired *wired-interface-number* {**MIB-stats**

Syntax Description

wired-interface-number	Wired interface number; valid range is between 0 to 3
MIB-stats	Displays the AP internal-Switch MIB counters.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the wired interface whose number is 1:

```
cisco-ap# show interfaces wired 1
```

show inventory

To view the physical inventory, use the **show inventory** command.

show inventory

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the physical inventory:

```
cisco-ap# show inventory

NAME: AP2800, DESCR: Cisco Aironet 2800 Series (IEEE 802.11ac) Access Point
PID: AIR-AP2802I-D-K9 , VID: V01, SN: XXXXXXXXXXX
```

show ip

To view the IP information, use the **show ip** command.

show ip {**access-lists** | **interface brief** | **route** | **tunnel** [**eogre** {**domain** | **forwarding-table** | **gateway**} | **fabric** | **summary**|]}

Syntax Description

access-lists	Lists the IP access lists
interface	Displays the IP interface status and configuration
brief	Displays the brief summary of IP status and configuration
route	Displays the IP routing table
tunnel	Displays the IP tunnel information
eogre	Displays the EoGRE tunnel information
domain	Displays the EoGRE tunnel domain information
forwarding-table	Displays the EoGRE tunnel encapsulation and decapsulation information
gateway	Displays the EoGRE tunnel gateway information
fabric	Displays the IP fabric tunnel information
summary	Displays the information for all tunnels

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view information about the lists the IP access lists:

```
cisco-ap# show ip access-lists
```

show lacp

To view the Link Aggregation Control Protocol (LACP) options, use the **show lacp** command.

show lacp {**counters** | **internal** | **neighbors**}

Syntax Description

counters	Displays traffic information
internal	Displays internal information
neighbors	Displays LACP neighbor entries

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the LACP traffic information:

```
cisco-ap# show lacp counters
```

show logging

To view the contents of logging buffers, use the **show logging** command.

show logging

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the contents of logging buffers:

```
cisco-ap# show logging
```

show memory

To display memory usage on an access point, use the **show memory** command.

show memory [{**detail** | **pool** | **summary**}]

Syntax Description

detail	Displays detailed system memory usage
pool	Displays system memory pool
summary	Display system memory usage statistics

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the system memory usage statistics:

```
cisco-ap# show memory
Memory summary:
MemTotal:        1030608 kB
MemFree:          713832 kB
MemAvailable:     710492 kB
Buffers:               0 kB
Cached:            88224 kB
SwapCached:            0 kB
Active:            28932 kB
Inactive:          82872 kB
Active(anon):      28900 kB
Inactive(anon):    82812 kB
Active(file):         32 kB
Inactive(file):       60 kB
Unevictable:           0 kB
Mlocked:               0 kB
SwapTotal:             0 kB
SwapFree:              0 kB
Dirty:                 0 kB
Writeback:             0 kB
AnonPages:         23580 kB
Mapped:            11380 kB
Shmem:             88132 kB
Slab:             132140 kB
SReclaimable:       3368 kB
SUnreclaim:       128772 kB
KernelStack:         864 kB
PageTables:          748 kB
NFS_Unstable:          0 kB
Bounce:                0 kB
WritebackTmp:          0 kB
CommitLimit:      515304 kB
Committed_AS:     193960 kB
VmallocTotal:    1024000 kB
VmallocUsed:       69808 kB
VmallocChunk:     915324 kB
```

```
System Memory:
             total         used         free       shared      buffers
Mem:       1030608       316848       713760            0            0
-/+ buffers:             316848       713760
Swap:            0            0            0
```

show policy-map

To view policy maps on access point, use the **show policy-map** command.

show policy-map

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the policy maps on the access point:

```
cisco-apshow policy-map
```

show processes

To view process utilization details, use the **show processes** command.

showprocesses {**cpu** *cpu-number* | **dmalloc** {**capwap** | **wcp**} | **status**}

Syntax Description

cpu *cpu-number*	Displays the specified CPU's utilization of the processes; valid range of values for the CPU number is between 0 to 3
dmalloc	Displays the process utilization of the dmalloc processes
capwap	Displays dmalloc statistics for CAPWAP
wcp	Displays dmalloc statistics for WCP
status	Displays watchdog process status

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the process watchdog status:

```
cisco-ap# show processes status
             Process               Alive          Monitored
             capwapd                True               True
          switchdrvr                True              False
                wcpd                True               True
              kclick                True               True
           cleanaird                True               True
             mrvlfwd                True               True
```

show processes memory

To display the processes on the access point, use the **show processes memory** command.

show processes memory {**maps** | **smaps**} **pid** *pid-number*

Syntax Description

maps	Displays maps for the processes
smaps	Displays smaps for the processes
pid *pid-number*	Process ID that you have to specify

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the list of processes utilizing the memory on the access point:

```
cisco-ap# show processes memory

Mem total:1030608 anon:23876 map:11424 free:712728
 slab:132748 buf:0 cache:88284 dirty:0 write:0
Swap total:0 free:0
  PID   VSZ^VSZRW   RSS (SHR) DIRTY (SHR) STACK COMMAND
 6227 56500 53464  1168   732  1144   732   132 /usr/sbin/mrvlfwd
 6283 27536 20668 13032  2400 13032  2400   132 /usr/sbin/capwapd
 6297 24880 10612 14536  1376 14536  1376   132 wcpd
 6255  9612  6600  1508  1052  1508  1052   132 /usr/sbin/cleanaird
 5122  9556  4144  2664  2012  2664  2012   132 /usr/bin/capwap_brain
29097  7148  1536  3560  2392  3556  2388   132 /usr/sbin/cisco_shell
 3142  6828  1216  2992  2264  2992  2264   132 /usr/sbin/cisco_shell
 5106  4588   404  1912  1644  1912  1644   132 /usr/bin/fastcgi -s /tmp/fcgi_sock
 5108  4588   404  1912  1644  1912  1644   132 /usr/bin/slowfcgi -s /tmp/slow_fcgi_sock
 6084  4544   452   928   360   928   360   132 /usr/sbin/lighttpd -f /etc/lighttpd.conf
 6214  3692   344  1420   960  1420   960   132 tamd_proc ap-tam 1 0 -debug err
 6213  3556   340  1460  1104  1460  1104   132 tams_proc -debug err
 6133  3396   400  1196   976  1196   976   132 /usr/bin/poder_agent
 4689  3176   336  1012   812  1012   812   132 /usr/bin/sync_log /storage/syslogs/13
 6143  3140   304  1428  1204  1428  1204   132 /usr/bin/failover
 4716  3136   284   616   436   616   436   132 watchdogd
 6121  3116   280   988   820   988   820   132 bigacl_d
 5084  3112   272   952   804   952   804   132 /usr/bin/led_core
 6181  1884   320  1044   260  1044   260   132 perl /usr/bin/drt.pl
    1  1596   196   492   412   492   412   132 init
30914  1596   196   428   344   428   344   132 top -m -b -n 1
 6145  1596   196   248   176   248   176   132 {S80cisco} /bin/sh /etc/init.d/S80cisco
start
30912  1592   192   424   356   424   356   132 {show_process_me} /bin/ash
/usr/bin/cli_scripts/show_process_memory.sh 0 0 0 0 0 0 0 0 0 0
30911  1592   192   400   336   400   336   132 /bin/sh -c
/usr/bin/cli_scripts/show_process_memory.sh 0 0 0 0 0 0 0 0 0 0 | more
```

```
 4684  1592   192   368   304   368   304   132 syslogd -S -s 100 -b 1 -L -R 255.255.255.255
30913  1592   192   332   264   332   264   132 more
 4688  1584   184   344   284   344   284   132 klogd
 4686  1584   184   320   264   320   264   132 printkd
30906  1584   184   284   228   284   228   132 sleep 10
29085  1452   332   640   416   640   416   132 /usr/sbin/dropbear -E -j -k -d
/storage/dropbear/dropbear_dss_host_key -r /storage/dropbear/dropbear_rsa_host_key
 6209  1384   264   416   364   416   364   132 /usr/sbin/dropbear -E -j -k -d
/storage/dropbear/dropbear_dss_host_key -r /storage/dropbear/dropbear_rsa_host_key
 8411  1096   212   444   336   444   336   132 dnsmasq -C /etc/dnsmasq.host.conf
 6115  1096   212   436   340   436   340   132 dnsmasq -C /etc/dnsmasq.vaperr.conf
```

show rrm

To view the Radio Resource Management (RRM) properties, use the **show rrm** command.

show rrm {**hyperlocation** [*level1-list*] | **neighbor-list** [**details**] | **receive** {**configuration** | **statistics**}}

Syntax Description

hyperlocation *level1-list*	Displays status of Cisco Hyperlocation on the AP
neighbor-list	Displays neighbor-list statistics
receive	Receive signal strength indicator (RSSI) of the AP
rogue	Displays rogue-related information

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Usage Guidelines

The following example shows how to view the level 1 channel scan list in Hyperlocation:

```
cisco-ap# show rrm hyperlocation level1-list
Level-1 List for 2.4GHz Band
====================================
Channel   Width         Serving MAC   Max Clients
-------   -----   -----------------   -----------


Level-1 List for 5GHz Band
====================================
Channel   Width         Serving MAC   Max Clients
-------   -----   -----------------   -----------
```

show rrm rogue containment

To view rogue containment information on an access point, use the **show rrm rogue containment** command.

show rrm rogue containment {**ignore** | **info**} **Dot11Radio** *radio-interface-number*

Syntax Description

ignore	Displays list of rogue APs that are configured to be ignored
info	Displays rogue contaimnent configuration and statistics for an AP
Dot11Radio	Specifies the **Dot11Radio** interface keyword.
radio-interface-number	Slot of the radio interface; valid values are 0 and 1

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the rogue containment and statistics for the 802.11 interface numbered 1:

```
cisco-ap# show rrm rogue containment info Dot11Radio 1
Rogue Containment Info and Stats for slot 1:
bssid client-addr contain-type channels

      Request Status count
              Submit     0
             Success     0
             Timeout     0
               Error     0
               Tuned     0
             Flushed     0
         Bad Channel     0
        Tail Dropped     0
           Cancelled     0
NDP DFS Tx Cancelled     0
            Tx Failed     0
              Created     0
```

show rrm rogue detection

To view RRM rogue detection configuration parameters, use the **show rrm rogue detection** command.

show rrm rogue detection {**adhoc** | **ap** | **clients** | **config** | **rx-stats**} **Dot11Radio** *radio-interface-number*

Syntax Description

adhoc	Displays the primary ad hoc rogue AP list for a 802.11 radio slot; valid values are 0 and 1
ap	Displays rogue detection parameters for the AP for a 802.11 radio slot; valid values are 0 and 1
clients	Displays primary list of rogue clients
config	Displays rogue detection configuration on the AP
rx-stats	Displays rogue detection receive statistics on the 802.11 interfaces of an AP
Dot11Radio	Specifies 802.11 radio intereface
radio-interface-number	The 802.11 radio interface number; valid values are 0 and 1

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the RRM rogue detection configuration details:

```
cisco-ap# show rrm rogue detection config

Rogue Detection Configuration for Slot 0:
Rogue Detection Mode : Enabled
Rogue Detection Report Interval : 10
Rogue Detection Minimum Rssi : -90
Rogue Detection Transient Interval : 0
Rogue Detection Flex Contain : Disabled
Rogue Detection Flex Contain Adhoc : Disabled
Rogue Detection Flex Contain SSID : Disabled
Rogue Containment Autorate : Disabled
Scan Duration : 180000
Channel Count : 11
Transient Threshold : 0

Rogue Detection Configuration for Slot 1:
Rogue Detection Mode : Enabled
Rogue Detection Report Interval : 10
Rogue Detection Minimum Rssi : -90
Rogue Detection Transient Interval : 0
Rogue Detection Flex Contain : Disabled
Rogue Detection Flex Contain Adhoc : Disabled
Rogue Detection Flex Contain SSID : Disabled
Rogue Containment Autorate : Disabled
```

```
Scan Duration : 180000
Channel Count : 25
Transient Threshold : 0
```

show running-config

To display the contents of the currently running configuration on the access point, use the **show running-config** command.

show running-config

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the contents of the currently running configuration on the access point:

```
cisco-ap# show running-config

AP Name                     : ap1540
Admin State                 : Enabled
AP Mode                     : Local
AP Submode                  : None
Location                    : default location
Reboot Reason               : Config Mwar
Primary controller name     : cisco_3504
Primary controller IP       : <controller-ip-address>
Secondary controller name   :
Secondary controller IP     :
Tertiary controller name    :
Tertiary controller IP      :
Controller from DHCP offer  : <controller-dhcp-server-address>
Controller from DNS server  : <controller-dns-server-address>
AP join priority            : 1
IP Prefer-mode              : IPv4
CAPWAP UDP-Lite             : Unconfigured
Last Joined Controller name: wlc3504
DTLS Encryption State       : Disabled
Discovery Timer             : 10
Heartbeat Timer             : 30
CDP State                   : Enabled
Watchdog monitoring         : Enabled
IOX                         : Disabled
RRM State                   : Enabled
LSC State                   : Disabled
SSH State                   : Enabled
AP Username                 : admin
Session Timeout             : 0
Extlog Host                 : 0.0.0.0
Extlog Flags                : 0
Extlog Status Interval      : 0
Syslog Host                 : <syslog-host-ip-address>
Syslog Facility             : 0
Syslog Level                : errors
Core Dump TFTP IP Addr      :
Core Dump File Compression  : Disabled
Core Dump Filename          :
Client Trace Status         : Enabled(All)
```

```
Client Trace All Clients   : Enabled
Client Trace Filter        : 0x0000000E
Client Trace Out ConsoleLog: Disabled
WLC Link LAG status        : Disabled
AP Link LAG status         : Disabled
AP WSA Mode                : Disabled
```

show security data-corruption

To view data inconsistency errors, use the **show security data-corruption** command.

show security data-corruption

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.7	This command was introduced.

Examples

The following example shows how to view data inconsistency errors:

```
cisco-ap# show security data-corruption
```

show security system state

To view the current state of system-level security, use the **show security system state** command.

show security system state

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.7	This command was introduced.

Examples

To view the current state of system-level security, use this command:

```
cisco-ap# show security system state

 XSPACE:
                Non-Executable stack:      Yes
                Non-Executable heap:       Yes
                Non-Writable text:         Yes
  OSC:
                Version:                1.1.0
  SafeC:
                Version:                3.1.1
```

The table below describes the significant fields shown in the display:

Table 4: show security system state Field Descriptions

Field	Description
Non-Executable stack	Indicates whether the system prevents execution from the stack
Non-Executable heap	Indicates whether the system prevents execution from the heap
Non-Writable text	Indicates whether the system prevents the text section from being writable
OSC version	Indicates the version of the OSC library used by the applications
SafeC version	Indicates the version of the SafeC library used by the applications

show spectrum

To view the show commands of the spectrum firmware, use the **show spectrum** command.

show spectrum {**list** | **recover** | **status** }

Syntax Description

list	Lists the spectrum FW data files
recover	Displays the spectrum FW recover count
status	Displays the spectrum FW status

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the spectrum firmware status:

```
cisco-ap# show spectrum status

Spectrum FW status slot 0:
  version:  1.15.4
  status:   up, crashes 0, resets 0, radio reloads 0
  load:     37.00  34.75  33.50  33.25
  NSI Key:  26c1bd25893a4b6dd3a00fe71735d067
  NSI:      not configured
  reg_wdog: 255 26309 0
  dfs_wdog: 0
  dfs_freq: 0
Spectrum FW status slot 1:
  version:  1.15.4
  status:   up, crashes 0, resets 0, radio reloads 0
  load:     37.25  38.00  38.75  39.00
  NSI Key:  26c1bd25893a4b6dd3a00fe71735d067
  NSI:      not configured
  reg_wdog: 255 26309 0
  dfs_wdog: 0
  dfs_freq: 0
```

show tech-support

To automatically run show commands that display system information, use the **show tech-support** command.

show tech-support

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to automatically run show commands that display system information:

```
cisco-ap# show tech-support
```

show version

To view the software version information of the AP, use the **show version** command.

show version

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the software version information of the AP:

```
cisco-ap# show version
```

show trace dot11_chn

To view off-channel events on 802.11 channel of an AP, use the **show trace dot11_chn** command.

show trace dot11_chn {**enable** | **disable** | **statistics**}

Syntax Description

enable	Enables displaying of off-channel events on the 802.11 radio 0 and 1
disable	Disables displaying of off-channel events on the 802.11 radios 0 and 1
statistics	Displays off-channel event statistics on 802.11 radios 0 and 1

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to view off-channel event statistics on 802.11 radios:

```
cisco-ap# show trace dot11_chn statistics

Dot11Radio0 Off-Channel Statistics:
total_count in_prog_count last-chan last-type last-dur
          0             0         0         0        0

Dot11Radio1 Off-Channel Statistics:
total_count in_prog_count last-chan last-type last-dur
          0             0         0         0        0
```

show trace

To view trace logs on the AP, use the **show trace** command.

```
show trace
```

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the trace logs on the AP:

```
cisco-ap# show trace
```

show wips

To view details of the AP that is configured in wIPS mode, use the **show wips** command.

show wips {**alarm** *alarm-id* | **analyzer** | **buffer** | **channel** *channelno* | **infrastructure-device** | **neighbors** | **node mac** *mac-address* | **node number** *number* | **object** | **policy** *policy-id* | **policy ssid** | **session** *mac-address* | **stats** | **violation node** *mac-address* | **violation channel** *channel-number*}

Syntax Description

alarm	Displays statistics of the configured alarm if the AP is configured in wIPS mode; valid values are between 0 and 255
alarm-id	Alarm ID; valid values are between 0 and 255
analyzer	Displays analyzer related statistics
buffer	Displays statistics of the buffer
channel	Displays channel related statistics
channelno	Channel number; valid values are between 0 and 255
infrastructure-device	Displays AP infrastructure information
neighbors	Displays statistics of neighbors.
node	Displays AP node information
mac *mac-address*	MAC address of the node.
node	Node.
number *number*	Node number; valid values are between 1 and 500
object	AP object store
policy {*policy-id* |**ssid**	AP policy; you must specify either a policy ID or the policy SSID.
session *mac-address*	Displays node session details; you must enter the MAC address of the node
stats	Displays AP statistics
violation	Tracks AP violations
node *mac-address*	Tracks node-based violations
channel *channel-number alarm-id*	Tracks channel-based violations; you must enter channel numbeer and alarm ID

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

The following example shows how to view the wIPS statistics information on the AP:

```
cisco-ap# show wips stats
```

System Management Commands

ap-type

To configure the AP type for an AP, use the **ap-type** command.

ap-type {**capwap** | **mobility-express** *word* | **workgroup-bridge**}

Syntax Description

capwap	Enable the AP as CAPWAP AP type
mobility-express	Enable the AP as Mobility Express AP type
word	Enter the TFTP transfer command details in following format: tftp://<tftp-server-ip-address>/<filename with path from root>
workgroup-bridge	Enable the Workgroup Bridge(WGB) AP type

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.
8.8.120.0	This command was enhanced by added **workgroup-bridge** parameter.

Examples

The following example shows how to configure the AP type to CAPWAP:

```
cisco-ap# ap-type capwap
```

archive

To download the AP image, use the **archive** command.

archive download-sw {**/no-reload** | **/reload** | **capwap** *word*}

Syntax Description

download-sw	Software download commands
/no-reload	No-reload after loading the image
/reload	Reload after loading the image
capwap	Download the image from the Cisco WLC
word	Enter the image details in the **ap image type ap3g3/ap1g4** format

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

copy

To copy a file, use the **copy** command.

copy {**cores** *filename* [**scp:** *scp-url* | **tftp:** *tftp-url*] | **flash** *filename* [**scp:** *scp-url* | **tftp:** *tftp-url*] | **support-bundle** [**scp:** *scp-url* | **tftp:** *tftp-url*] | **syslogs** [*filename* {**scp:** *scp-url* | **tftp:** *tftp-url*} | **scp:** *scp-url* | **tftp:** *tftp-url*]}

Syntax Description

cores	Applies the action on a core file
filename	Name of the file
scp:	Uses the SCP protocol
scp-url	Enter the SCP URL in the following format: username@A.B.C.D:[/dir]/filename
tftp:	Uses the TFTP protocol
tftp-url	Enter the TFTP URL in the following format: A.B.C.D[/dir]/filename
flash	Applies the action on a flash file
support-bundle	Copies the support bundle to the server
syslogs	Applies the action on the syslog file

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

delete

To delete a file, use the **delete** command.

delete { **/force** | **/recursive** | **/rf** } **cores** *filename*

Syntax Description

/force	Force delete
/recursive	Recursive delete
/rf	Recursive force delete
cores	Apply action on a core file
filename	Filename to delete

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to delete a file:

```
cisco-ap# delete /rf cores file-name
```

disable

To turn off privileged commands, use the **disable** command.

disable

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to turn off privileged commands:

```
cisco-ap# disable
```

enable

To turn on privileged commands, use the **enable** command.

enable

Command Modes

User EXEC (>)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to turn on privileged commands:

```
cisco-ap> enable
```

exec-timeout

To set the exec-timeout, use the **exec-timeout** command.

exec-timeout *timeout-value*

Syntax Description

timeout-value	Timeout value; valid values range between 0 to 2147483647

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to set the exec-timeout to 20 seconds:

```
cisco-ap# exec-timeout 20
```

logging

To log commands, use the **logging** command.

logging {**console** [**disable**] | **host** {**clear** | **disable** | **enable**}}

Syntax Description

console	Console logging
host	Configure syslog server
disable	Disable syslog host logging
enable	Enable syslog server
clear	Clear syslog server IP

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to enable console logging:

```
cisco-ap# logging console
```

more

To display a file, use the **more** command.

more {**flash** | **syslog**} *file-name*

Syntax Description

flash	Apply action on a flash file
syslog	Apply action on syslog file
name	File name

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to display a sylog file named test-log:

```
cisco-ap# more syslog test-log
```

reload

To halt the access point or perform a reboot, use the **reload** command.

reload [{**at** *hours minutes day-of-month year* | **cancel** | **in** *minutes* | **reason** *reason-string*}]

Syntax Description

at	Reload the AP at a specific date and time This keyword takes the hour, minute, day of the month, month, and year as parameters; valid values for the keywords are as follows: • *hour*: 0 to 23 • *minutes*: 0 to 59 • *day-of-the-month*: 1 to 31 • *month*: 1 to 12 • *year*: 2015-2099
cancel	Cancels the pending reload
in	Reload after a time interval, which you should specify in terms of minutes; valid values are between 1 to 1440 minutes
reason	A string specifying the reason for the reload

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
8.1.111.0	This command was introduced.

Examples

The following example shows how to reload the AP in 10 minutes:

```
cisco-ap# reload in 10
```

terminal

To configure terminal parameters, use the **terminal** command.

terminal {**length** | **monitor** [**disable**] | **type** *word* | **width** *no-of-characters*}

Syntax Description

length	Speficies the number of lines on the screen. Valid values are between 0 to 512. Enter 0 if you do not want the outputs to pause.
monitor	Specifies the debug output to the current terminal line. Press the enter key to enable monitoring. To disable monitoring, enter the keyword **disable**.
type	Specifies the terminal type
width	Specifies the width of the display terminal; valid values are between 0 to 132

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 terminal length to 50 lines:

```
cisco-ap# terminal length 50
```