Cisco Wireless Wi-Fi 7 Access Point Serviceability Command Reference, Release 17.15.2

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Preface

This preface describes the audience, organization, and conventions of the Cisco Wireless Wi-Fi 7 Access Point Command Reference. It also provides information about how to obtain other documentation.

Audience

This publication is for experienced network administrators who configure and maintain Cisco Wireless Wi-Fi 7 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.
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.

Convention	Indication
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.)
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).)

Warning Title	Description
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 físicos. 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.")
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

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Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a gateway to the Cisco bug-tracking system, which maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. The BST provides you with detailed defect information about your products and software.

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Using the Command Line Interface

This chapter describes the Cisco Wireless Wi-Fi 7 Access Points command-line interface (CLI) and how to use it to configure your AP.

Understanding Command Modes

The Cisco Wireless Wi-Fi 7 Access Points 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-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-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-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 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.

Supported Cisco Access Points

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Supported Cisco Access Points

This book describes commands that are supported by the Cisco Wireless Wi-Fi 7 Access Points.

Cisco Wireless Wi-Fi 7 Access Point Serviceability Commands

copy logs driver radio

To copy radio log files to Trivial File Transfer Protocol (TFTP) server or Secure Copy Protocol (SCP) server, use the **copy logs driver radio** command.

copy logs driver radio *file-name* { **scp:** *scp-url* | **tftp:** *tftp-url* | **http:** *http-url* }

Syntax Description

filename	Name of the file
tftp:	Uses the TFTP protocol
tftp-url	Enter the TFTP URL in the following format: username@A.B.C.D[:port]:/dir[/filename]
sftp:	Uses the SFTP protocol
scp-url	Enter the SFTP URL in the following format: username@A.B.C.D[:port]:/dir[/filename]
http:	Uses the HTTP protocol
http-url	Enter the HTTP URL in the following format: username@A.B.C.D[:port]:/dir[/filename]

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to copy logs to TFTP, SFTP, or HTTP server:

```
cisco-ap#copy logs driver radio
```

debug aid

To enable debug aids, use the **debug aid** command.

debug aid { **all** | **driver** | **wcp** }

Syntax Description

all	Enables WCP and driver aid debugs
driver	Enables driver aid debugs
wcp	Enables WCP aid debugs

Command Modes Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples The following example shows how to enable debug aid:

```
cisco-ap#debug aid
```

debug client

To enable client debugs, use the **debug client** *client-mac-address* command.

debug client   *client-mac-address*

Syntax Description

client-mac-address	MAC address of the client for which you want to enable debugging.

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to enable client debug:

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

debug dot11 dot11Radio

To enable 802.11 radio debugs, use the **debug dot11 dot11Radio** command.

debug dot11 dot11Radio *dot11-radio-interface-number* **wlan** *wlan-id*

Syntax Description

dot11-radio-interface-number	Radio interface number, values values are 0 to 3
wlan*wlan-id*	Enter WLAN ID

Command Modes Privileged EXEC (#)

Command History

Release	**Modification**
Cisco IOS XE 17.15.2	This command was introduced.

The following example shows how to enable dot11 radio debugs:

```
cisco-ap# debug dot11 dot11Radio 1 wlan 8 iteration <number of iterations> delay <interval
 between interations>
```

show controller dot11Radio aid-list

To show 802.11 client information, use the **show controller dot11Radio <radio-id> aid-list** command.

show controller dot11Radio *radio-id* **aid-list** { *aid-list* | **driver** }

Syntax Description

aid-list	Numbers of aid list to show; valid values are 0 to 420
driver	Shows aid list driver

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view dot11 client aid information:

```
cisco-ap# show controller dot11Radio 1 aid-list
```

show dot11 clients

To show dot11 client information, use the **show dot11 clients** command.

show dot11 clients { **data-store** | **deauthenticated** | **dhcp** | **dns** | **event-log** | **limit** | **onboarding** | **security** | **webauth** }

Syntax Description

data-store	Shows the client details and server replicas saved in the datastore.
deauthenticated	Displays the last 100 deauthentications.
dhcp	Lists DHCP statistics per VLAN.
dns	Lists DNS statistics per VLAN.
event-log	Shows client onboarding event-log
limit	Shows the client limit per AP and Radio
onboarding	Shows the client onboarding statistics per BSSID.
security	Shows the client AKM and Cipher.
webauth	Shows the client AKM and Cipher.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view dot11 client information:

```
cisco-ap#show dot11 clients
```

show dot11 ml-clients

To show dot11 multi-link clients, use the **show dot11 ml-clients** command.

show dot11 ml-clients

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view dot11 multi-link clients:

```
cisco-ap# show dot11 ml-clients
```

show dot11 mlo configuration

To show multi-link operation configuration, use the **show dot11 mlo configuration** command.

show dot11 mlo configuration

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view multi-link operation configuration:

```
cisco-ap# show dot11 mlo configuration
```

show dot11 mlo driver

To show multi-link operation driver information, use the **show dot11 mlo driver** command.

show dot11 mlo driver [**client** *client-mac-address* | **dot11Radio** *radio-interface-number* | **wlan** *wlan-id*]

Syntax Description		
client *client-mac-address*	Displays the details of the client whose MAC address is specified.
dot11Radio *radio-interface-number*	Specifies 802.11 radio interface and the interface number. The valid values are 0 to 3.
wlan *wlan-id*	Displays the WLAN details of the WLAN ID specified.

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view multi-link operation driver information:

```
cisco-ap#show dot11 mlo driver
```

show dot11 mlo status

To show multi-link operation status, use the **show dot11 mlo status** command.

show dot11 mlo status

Command Modes　Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view multi-link operation status:

```
cisco-ap#show dot11 mlo status
```

show flash logs driver radio

To show radio log files, use the **show flash logs driver radio** command.

show flash logs driver radio

Command Modes
Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to view radio log files:

```
cisco-ap#show flash logs driver radio
```

test crash radiofw recovery-mode

To change radio firmware recovery mode, use the **test crash radiofw recovery-mode** command.

test crash radiofw recovery-mode   { *radio-interface-number* }

Syntax Description

radio-interface-number	The radio interface number; valid values are 0 and 3

Command Modes   Privileged EXEC (#)

Command History

Release	Modification
IOS XE 17.15.2	This command was introduced.

Examples

The following example shows how to change radio firmware recovery mode:

```
cisco-ap# test crash radiofw recovery-mode
```

test crash radiofw recovery-mode