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show aaa auth

To display the configuration settings for the AAA authentication server database, use the **show aaa auth** command.

show aaa auth

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the configuration settings for the AAA authentication server database:

```
(Cisco Controller) > show aaa auth
Management authentication server order:
    1............................................. local
    2............................................. tacacs
```

Related Commands

config aaa auth

config aaa auth mgmt

show acl

To display the access control lists (ACLs) that are configured on the controller, use the **show acl** command.

show acl { **cpu** | **detailed** *acl_name* | **summary** | **layer2** { **summary** | **detailed** *acl_name* } }

Syntax Description

cpu	Displays the ACLs configured on the Cisco WLC's central processing unit (CPU).
detailed	Displays detailed information about a specific ACL.
acl_name	ACL name. The name can be up to 32 alphanumeric characters.
summary	Displays a summary of all ACLs configured on the controller.
layer2	Displays the Layer 2 ACLs.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the access control lists on the CPU.

```
(Cisco Controller) >show acl cpu

CPU Acl Name..............................
Wireless Traffic........................... Disabled
Wired Traffic.............................. Disabled
Applied to NPU............................. No
```

The following example shows how to display a summary of the access control lists.

```
(Cisco Controller) > show acl summary

ACL Counter Status              Disabled
----------------------------------------
IPv4 ACL Name                    Applied
-------------------------------- -------
acl1                          Yes
acl2                          Yes
acl3                          Yes
----------------------------------------
IPv6 ACL Name                    Applied
```

```
-------------------------------- -------
acl6                             No
```

The following example shows how to display the detailed information of the access control lists.

```
(Cisco Controller) > show acl detailed acl_name

     Source              Destination        Source Port Dest Port
I Dir IP Address/Netmask IP Address/Netmask Prot   Range    Range     DSCP
 Action Counter
- --- ------------------ ------------------ ---- --------- --------- -----
 ------ -------
1
Any 0.0.0.0/0.0.0.0   0.0.0.0/0.0.0.0   Any  0-65535   0-65535    0    Deny       0
2
In  0.0.0.0/0.0.0.0   200.200.200.0/    6     80-80   0-65535   Any  Permit      0
                            255.255.255.0
DenyCounter :     0
```

Note The Counter field increments each time a packet matches an ACL rule, and the DenyCounter field increments each time a packet does not match any of the rules.

Related Commands

clear acl counters

config acl apply

config acl counter

config acl cpu

config acl create

config acl delete

config interface acl

config acl rule

show acl detailed

To display detailed DNS-based ACL information, use the **show acl detailed** command.

show acl detailed*acl_name*

Syntax Description

acl_name	Name of the access control list.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced.

The following is a sample output of the **show acl detailed** *acl_name* command.

```
(Cisco Controller) > show acl detailed android

No rules are configured for this ACL.
DenyCounter : 0
URLs configured in this ACL
---------------------------
*.play.google.com
*.store.google.com
```

show acl summary

To display DNS-based ACL information, use the **show acl summary** command.

show aclsummary

Syntax Description

summary	Displays DNS-based ACL information.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show acl summary** command.

```
(Cisco Controller) > show acl summary

 ACL Counter Status              Disabled
----------------------------------------
IPv4 ACL Name                    Applied
-------------------------------- -------
android                          No
StoreACL                         Yes
----------------------------------------
IPv6 ACL Name                    Applied
-------------------------------- -------
```

1

show advanced 802.11 channel

To display the automatic channel assignment configuration and statistics, use the **show advanced 802.11 channel** command.

show advanced 802.11{**a** | **b**} **channel**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the automatic channel assignment configuration and statistics:

```
(Cisco Controller) > show advanced 802.11a channel
Automatic Channel Assignment
  Channel Assignment Mode........................ AUTO
  Channel Update Interval........................ 600 seconds [startup]
  Anchor time (Hour of the day)................... 0
  Channel Update Contribution.................... SNI.
  Channel Assignment Leader...................... 00:1a:6d:dd:1e:40
  Last Run....................................... 129 seconds ago
  DCA Sensitivity Level: ...................... STARTUP (5 dB)
  DCA Minimum Energy Limit....................... -95 dBm
Channel Energy Levels
    Minimum...................................... unknown
    Average...................................... unknown
    Maximum...................................... unknown
  Channel Dwell Times
    Minimum...................................... unknown
    Average...................................... unknown
    Maximum...................................... unknown
  Auto-RF Allowed Channel List...................
36,40,44,48,52,56,60,64,149,
    ............................................ 153,157,161
  Auto-RF Unused Channel List....................
100,104,108,112,116,132,136,
    ............................................ 140,165,190,196
  DCA Outdoor AP option.......................... Enabled
```

show advanced 802.11 coverage

To display the configuration and statistics for coverage hole detection, use the **show advanced 802.11 coverage** command.

show advanced 802.11 {**a** | **b**} **coverage**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the statistics for coverage hole detection:

```
(Cisco Controller) > show advanced 802.11a coverage
Coverage Hole Detection
  802.11a Coverage Hole Detection Mode........... Enabled
  802.11a Coverage Voice Packet Count............ 100 packets
  802.11a Coverage Voice Packet Percentage....... 50%
  802.11a Coverage Voice RSSI Threshold.......... -80 dBm
  802.11a Coverage Data Packet Count............. 50 packets
  802.11a Coverage Data Packet Percentage........ 50%
  802.11a Coverage Data RSSI Threshold........... -80 dBm
  802.11a Global coverage exception level........ 25 %
  802.11a Global client minimum exception lev.... 3 clients
```

show advanced 802.11 group

To display 802.11a or 802.11b Cisco radio RF grouping, use the **show advanced 802.11 group** command.

show advanced 802.11 {**a** | **b**} **group**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display Cisco radio RF group settings:

```
(Cisco Controller) > show advanced 802.11a group
Radio RF Grouping
  802.11a Group Mode..................................... AUTO
  802.11a Group Update Interval.......................... 600 seconds
  802.11a Group Leader................................... xx:xx:xx:xx:xx:xx
    802.11a Group Member................................. xx:xx:xx:xx:xx:xx
  802.11a Last Run....................................... 133 seconds ago
```

show advanced 802.11 l2roam

To display 802.11a or 802.11b/g Layer 2 client roaming information, use the **show advanced 802.11 l2roam** command.

show advanced 802.11 {**a** | **b**} **l2roam** {**rf-param** | **statistics**} *mac_address*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
rf-param	Specifies the Layer 2 frequency parameters.
statistics	Specifies the Layer 2 client roaming statistics.
mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show advanced 802.11b l2roam rf-param** command:

```
(Cisco Controller) > show advanced 802.11b l2roam rf-param

L2Roam 802.11bg RF Parameters.....................
    Config Mode................................. Default
    Minimum RSSI................................ -85
    Roam Hysteresis............................. 2
    Scan Threshold.............................. -72
    Transition time............................. 5
```

show advanced 802.11 logging

To display 802.11a or 802.11b RF event and performance logging, use the **show advanced 802.11 logging** command.

show advanced 802.11 {**a** | **b**} **logging**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display 802.11b RF event and performance logging:

```
(Cisco Controller) > show advanced 802.11b logging
RF Event and Performance Logging
  Channel Update Logging..........................  Off
  Coverage Profile Logging........................  Off
  Foreign Profile Logging.........................  Off
  Load Profile Logging............................  Off
  Noise Profile Logging...........................  Off
  Performance Profile Logging.....................  Off
  TxPower Update Logging..........................  Off
```

show advanced 802.11 monitor

To display the 802.11a or 802.11b default Cisco radio monitoring, use the **show advanced 802.11 monitor** command.

show advanced 802.11 {**a** | **b**} **monitor**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the radio monitoring for the 802.11b network:

```
(Cisco Controller) > show advanced 802.11b monitor
Default 802.11b AP monitoring
  802.11b Monitor Mode........................... enable
  802.11b Monitor Channels....................... Country channels
  802.11b RRM Neighbor Discovery Type............ Transparent
  802.11b AP Coverage Interval................... 180 seconds
  802.11b AP Load Interval....................... 60 seconds
  802.11b AP Noise Interval...................... 180 seconds
  802.11b AP Signal Strength Interval............ 60 seconds
```

show advanced 802.11 optimized roaming

To display the optimized roaming configurations for 802.11a/b networks, use the **show advanced 802.11 optimized roaming** command.

show advanced 802.11 {**a** | **b**} **optimized roaming** [**stats**]

Syntax Description

stats	(Optional) Displays optimized roaming statistics for a 802.11a/b network.

Command Default

None

Command History

Release	Modification
8.0	This command was introduced.

The following example shows how to display the optimized roaming configurations for an 802.11a network:

```
(Cisco Controller) > show advanced 802.11a optimized roaming
OptimizedRoaming
  802.11a OptimizedRoaming Mode................... Enabled
  802.11a OptimizedRoaming Reporting Interval.... 20 seconds
  802.11a OptimizedRoaming Rate Threshold........ disabled
```

The following example shows how to display the optimized roaming statistics for an 802.11a network:

```
(Cisco Controller) > show advanced 802.11a optimized roaming stats
OptimizedRoaming Stats
802.11a OptimizedRoaming Disassociations....... 2
802.11a OptimizedRoaming Rejections............ 1
```

show advanced 802.11 profile

To display the 802.11a or 802.11b lightweight access point performance profiles, use the **show advanced 802.11 profile** command.

show advanced 802.11 {**a** | **b**} **profile** {**global** | *cisco_ap*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
global	Specifies all Cisco lightweight access points.
cisco_ap	Name of a specific Cisco lightweight access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the global configuration and statistics of an 802.11a profile:

```
(Cisco Controller) > show advanced 802.11 profile global
Default 802.11a AP performance profiles
  802.11a Global Interference threshold.............. 10%
  802.11a Global noise threshold..................... -70 dBm
  802.11a Global RF utilization threshold............ 80%
  802.11a Global throughput threshold................ 1000000 bps
  802.11a Global clients threshold................... 12 clients
  802.11a Global coverage threshold.................. 12 dB
  802.11a Global coverage exception level............ 80%
  802.11a Global client minimum exception lev........ 3 clients
```

The following example shows how to display the configuration and statistics of a specific access point profile:

```
(Cisco Controller) >  show advanced 802.11 profile AP1
Cisco AP performance profile not customized
```

This response indicates that the performance profile for this lightweight access point is using the global defaults and has not been individually configured.

show advanced 802.11 receiver

To display the configuration and statistics of the 802.11a or 802.11b receiver, use the **show advanced 802.11 receiver** command.

show advanced 802.11 {**a** | **b**} **receiver**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the configuration and statistics of the 802.11a network settings:

```
(Cisco Controller) > show advanced 802.11 receiver
802.11a Receiver Settings
  RxStart   : Signal Threshold........................... 15
  RxStart   : Signal Lamp Threshold...................... 5
  RxStart   : Preamble Power Threshold................... 2
  RxReStart : Signal Jump Status......................... Enabled
  RxReStart : Signal Jump Threshold...................... 10
  TxStomp : Low RSSI Status............................ Enabled
  TxStomp : Low RSSI Threshold......................... 30
  TxStomp : Wrong BSSID Status......................... Enabled
  TxStomp : Wrong BSSID Data Only Status................ Enabled
  RxAbort : Raw Power Drop Status...................... Disabled
  RxAbort : Raw Power Drop Threshold.................... 10
  RxAbort : Low RSSI Status............................ Disabled
  RxAbort : Low RSSI Threshold......................... 0
  RxAbort : Wrong BSSID Status......................... Disabled
  RxAbort : Wrong BSSID Data Only Status................ Disabled
```

show advanced 802.11 summary

To display the 802.11a or 802.11b Cisco lightweight access point name, channel, and transmit level summary, use the **show advanced 802.11 summary** command.

show advanced 802.11 {**a** | **b**} **summary**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a summary of the 802.11b access point settings:

```
(Cisco Controller) > show advanced 802.11b summary
AP Name      MAC Address        Admin State  Operation State   Channel
TxPower
------------ ------------------ ------------ ----------------- -------
--------
CJ-1240      00:21:1b:ea:36:60    ENABLED          UP           161
 1( )
CJ-1130      00:1f:ca:cf:b6:60    ENABLED          UP           56*
 1(*)
```

Note An asterisk (*) next to a channel number or power level indicates that it is being controlled by the global algorithm settings.

show advanced 802.11 txpower

To display the 802.11a or 802.11b automatic transmit power assignment, use the **show advanced 802.11 txpower** command.

show advanced 802.11 {**a** | **b**} **txpower**

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the configuration and statistics of the 802.11b transmit power cost:

```
(Cisco Controller) > show advanced 802.11b txpower
Automatic Transmit Power Assignment
  Transmit Power Assignment Mode................... AUTO
  Transmit Power Update Interval................... 600 seconds
  Transmit Power Threshold......................... -65 dBm
  Transmit Power Neighbor Count.................... 3 APs
  Transmit Power Update Contribution............... SN.
  Transmit Power Assignment Leader................. xx:xx:xx:xx:xx:xx
  Last Run......................................... 384 seconds ago
```

show advanced backup-controller

To display a list of primary and secondary backup WLCs, use the **show advanced backup-controller** command.

show advanced backup-controller

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the backup controller information:

```
(Cisco Controller) >
show advanced backup-controller
AP primary Backup Controller ....................  controller 10.10.10.10
AP secondary Backup Controller ..................  0.0.0.0
```

show advanced dot11-padding

To display the state of over-the-air frame padding on a wireless LAN controller, use the **show advanced dot11-padding** command.

show advanced dot11-padding

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to view the state of over-the-air frame padding:

```
(Cisco Controller) > show advanced dot11-padding
dot11-padding..................................... Disabled
```

show advanced hotspot

To display the advanced HotSpot parameters, use the **show advanced hotspot** command.

show advanced hotspot

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the advanced HotSpot parameters:

```
(Cisco Controller) >show advanced hotspot
ANQP 4-way state.............................. Disabled
GARP Broadcast state: ........................ Enabled
GAS request rate limit ....................... Disabled
ANQP comeback delay in TUs(TU=1024usec)....... 50
```

show advanced max-1x-sessions

To display the maximum number of simultaneous 802.1X sessions allowed per access point, use the **show advanced max-1x-sessions** command.

show advanced max-1x-sessions

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the maximum 802.1X sessions per access point:

```
(Cisco Controller) >show advanced max-1x-sessions
Max 802.1x session per AP at a given time........ 0
```

show advanced probe

To display the number of probes sent to the Cisco WLC per access point per client and the probe interval in milliseconds, use the **show advanced probe** command.

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the probe settings for the WLAN controller:

```
(Cisco Controller) >show advanced probe
Probe request filtering........................ Enabled
Probes fwd to controller per client per radio.... 12
Probe request rate-limiting interval............ 100 msec
```

show advanced rate

To display whether control path rate limiting is enabled or disabled, use the **show advanced rate** command.

show advanced rate

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the switch control path rate limiting mode:

```
(Cisco Controller) >show advanced rate
Control Path Rate Limiting.......................  Disabled
```

show advanced timers

To display the mobility anchor, authentication response, and rogue access point entry timers, use the **show advanced timers** command.

show advanced timers

Syntax Description

This command has no arguments or keywords.

Command Default

The defaults are shown in the “Examples” section.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the system timers setting:

```
(Cisco Controller) >show advanced timers
Authentication Response Timeout (seconds)........ 10
Rogue Entry Timeout (seconds)..................... 1200
AP Heart Beat Timeout (seconds)................... 30
AP Discovery Timeout (seconds)................... 10
AP Local mode Fast Heartbeat (seconds)........... disable
AP flexconnect mode Fast Heartbeat (seconds)........... disable
AP Primary Discovery Timeout (seconds)........... 120
```

show advanced client-handoff

To display the number of automatic client handoffs after retries, use the **show advanced client-handoff** command.

show advanced client-handoff

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the client auto handoff mode after excessive retries:

```
(Cisco Controller) >show advanced client-handoff
Client auto handoff after retries................  130
```

show advanced eap

To display Extensible Authentication Protocol (EAP) settings, use the **show advanced eap** command.

show advanced eap

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the EAP settings:

```
(Cisco Controller) > show advanced eap
EAP-Identity-Request Timeout (seconds)........... 1
EAP-Identity-Request Max Retries................. 20
EAP Key-Index for Dynamic WEP.................... 0
EAP Max-Login Ignore Identity Response........... enable
EAP-Request Timeout (seconds).................... 1
EAP-Request Max Retries.......................... 20
EAPOL-Key Timeout (milliseconds)................. 1000
EAPOL-Key Max Retries............................ 2
```

Related Commands

config advanced eap

config advanced timers eap-identity-request-delay

config advanced timers eap-timeout

show advanced send-disassoc-on-handoff

To display whether the WLAN controller disassociates clients after a handoff, use the **show advanced send-disassoc-on-handoff** command.

show advanced send-disassoc-on-handoff

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show advanced send-disassoc-on-handoff** command:

```
(Cisco Controller) > show advanced send-disassoc-on-handoff
Send Disassociate on Handoff..................... Disabled
```

show advanced sip-preferred-call-no

To display the list of preferred call numbers, use the **show advanced sip-preferred-call-no** command.

show advanced sip-preferred-call-no

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show advanced sip-preferred-call-no** command:

```
(Cisco Controller) > show advanced sip-preferred-call-no
Preferred Call Numbers List
Call Index            Preferred Call No
-----------           ------------------
1                      911
2                      100
3                      101
4                      102
5                      103
6                      104
```

show advanced sip-snooping-ports

To display the port range for call snooping, use the **show advanced sip-snooping-ports** command.

show advanced sip-snooping-ports

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show advanced sip-snooping-ports** command:

```
(Cisco Controller) > show advanced sip-snooping-ports
 SIP Call Snoop Ports: 1000 - 2000
```

show arp kernel

To display the kernel Address Resolution Protocol (ARP) cache information, use the **show arp kernel** command.

show arp kernel

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show arp kernel** command:

```
(Cisco Controller) > show arp kernel
IP address       HW type     Flags       HW address            Mask     Device
192.0.2.1        0x1         0x2         00:1A:6C:2A:09:C2     *        dtl0
192.0.2.8        0x1         0x6         00:1E:E5:E6:DB:56     *        dtl0
```

show arp switch

To display the Cisco wireless LAN controller MAC addresses, IP addresses, and port types, use the **show arp switch** command.

show arp switch

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show arp switch** command:

```
(Cisco Controller) > show arp switch
MAC Address          IP Address         Port      VLAN      Type
------------------- ---------------- ------------ ---- -------------------
xx:xx:xx:xx:xx:xx   xxx.xxx.xxx.xxx  service port    1
xx:xx:xx:xx:xx:xx   xxx.xxx.xxx.xxx  service port
xx:xx:xx:xx:xx:xx   xxx.xxx.xxx.xxx  service port
```

show ap auto-rf

To display the auto-RF settings for a Cisco lightweight access point, use the **show ap auto-rf** command.

show ap auto-rf 802.11 {**a** | **b**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
cisco_ap	Cisco lightweight access point name.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display auto-RF information for an access point:

```
(Cisco Controller) > show ap auto-rf 802.11a AP1
Number Of Slots................................ 2
AP Name........................................ AP03
MAC Address.................................... 00:0b:85:01:18:b7
  Radio Type................................... RADIO_TYPE_80211a
  Noise Information
    Noise Profile............................... PASSED
    Channel 36.................................  -88 dBm
    Channel 40.................................  -86 dBm
    Channel 44.................................  -87 dBm
    Channel 48.................................  -85 dBm
    Channel 52.................................  -84 dBm
    Channel 56.................................  -83 dBm
    Channel 60.................................  -84 dBm
    Channel 64.................................  -85 dBm
  Interference Information
    Interference Profile........................ PASSED
    Channel 36.................................  -66 dBm @  1% busy
    Channel 40................................. -128 dBm @  0% busy
    Channel 44................................. -128 dBm @  0% busy
    Channel 48................................. -128 dBm @  0% busy
    Channel 52................................. -128 dBm @  0% busy
    Channel 56.................................  -73 dBm @  1% busy
    Channel 60.................................  -55 dBm @  1% busy
    Channel 64.................................  -69 dBm @  1% busy
  Rogue Histogram (20/40_ABOVE/40_BELOW)
    Channel 36................................. 16/ 0/ 0
    Channel 40................................. 28/ 0/ 0
    Channel 44.................................  9/ 0/ 0
```

```
      Channel 48..................................  9/ 0/ 0
      Channel 52..................................  3/ 0/ 0
      Channel 56..................................  4/ 0/ 0
      Channel 60..................................  7/ 1/ 0
      Channel 64..................................  2/ 0/ 0
    Load Information
      Load Profile................................ PASSED
      Receive Utilization......................... 0%
      Transmit Utilization........................ 0%
      Channel Utilization......................... 1%
      Attached Clients............................ 1 clients
    Coverage Information
      Coverage Profile............................ PASSED
      Failed Clients.............................. 0 clients
    Client Signal Strengths
      RSSI -100 dBm............................... 0 clients
      RSSI  -92 dBm............................... 0 clients
      RSSI  -84 dBm............................... 0 clients
      RSSI  -76 dBm............................... 0 clients
      RSSI  -68 dBm............................... 0 clients
      RSSI  -60 dBm............................... 0 clients
      RSSI  -52 dBm............................... 0 clients
    Client Signal To Noise Ratios
      SNR    0 dBm................................ 0 clients
      SNR    5 dBm................................ 0 clients
      SNR   10 dBm................................ 0 clients
      SNR   15 dBm................................ 0 clients
      SNR   20 dBm................................ 0 clients
      SNR   25 dBm................................ 0 clients
      SNR   30 dBm................................ 0 clients
      SNR   35 dBm................................ 0 clients
      SNR   40 dBm................................ 0 clients
      SNR   45 dBm................................ 0 clients
    Nearby RADs
      RAD 00:0b:85:01:05:08 slot 0................  -46 dBm on 10.1.30.170
      RAD 00:0b:85:01:12:65 slot 0................  -24 dBm on 10.1.30.170
    Channel Assignment Information
      Current Channel Average Energy..............  -86 dBm
      Previous Channel Average Energy.............  -75 dBm
      Channel Change Count........................  109
      Last Channel Change Time.................... Wed Sep 29 12:53e:34
2004
      Recommended Best Channel.................... 44
    RF Parameter Recommendations
      Power Level................................. 1
      RTS/CTS Threshold........................... 2347
      Fragmentation Threshold..................... 2346
      Antenna Pattern............................. 0
```

show ap aid-audit-mode

To view the AP aid-audit mode status, use the **show ap aid-audit mode** command.

show ap aid-audit mode

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
8.6	This command was introduced.

The following example shows how to display the aid-audit mode status:

```
(Cisco Controller) > show ap aid-audit-mode
 Aid Audit Mode ................................ Disabled
```

show ap ccx rm

To display an access point's Cisco Client eXtensions (CCX) radio management status information, use the **show ap ccx rm** command.

show ap ccx rm *ap_name* **status**

Syntax Description

ap_name	Specified access point name.
status	Displays the CCX radio management status information for an access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the status of the CCX radio management:

```
(Cisco Controller) >show ap ccx rm AP1240-21ac status
A Radio
Channel Load Request ..................... Disabled
Noise Histogram Request .................. Disabled
Beacon Request ........................... Disabled
Frame Request ............................ Disabled
Interval ................................. 60
Iteration ................................ 10
G Radio
Channel Load Request ..................... Disabled
Noise Histogram Request .................. Disabled
Beacon Request ........................... Disabled
Frame Request ............................ Disabled
Interval ................................. 60
Iteration ................................ 10
```

show ap cdp

To display the Cisco Discovery Protocol (CDP) information for an access point, use the **show ap cdp** command.

show ap cdp {**all** | **ap-name** *cisco_ap* | **neighbors** {**all** | **ap-name** *cisco_ap* | **detail** *cisco_ap*}}

Syntax Description

all	Displays the CDP status on all access points.
ap-name	Displays the CDP status for a specified access point.
cisco_ap	Specified access point name.
neighbors	Displays neighbors using CDP.
detail	Displays details about a specific access point neighbor using CDP.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the CDP status of all access points:

```
(Cisco Controller) >show ap cdp all
AP CDP State
AP Name             AP CDP State
------------------  ----------
SB_RAP1              enable
SB_MAP1              enable
SB_MAP2              enable
SB_MAP3              enable
```

The following example shows how to display the CDP status of a specified access point:

```
(Cisco Controller) >show ap cdp ap-name SB_RAP1
AP CDP State
AP Name             AP CDP State
------------------  ----------
AP CDP State.......................Enabled
AP Interface-Based CDP state
 Ethernet 0.....................Enabled
 Slot 0........................Enabled
 Slot 1........................Enabled
```

The following example shows how to display details about all neighbors using CDP:

```
(Cisco Controller) >show ap cdp neighbor all
AP Name     AP IP            Neighbor Name       Neighbor IP      Neighbor Port
---------   ---------------  ------------------  ---------------  -------------
```

```
SB_RAP1     192.168.102.154  sjc14-41a-sw1       192.168.102.2    GigabitEthernet1/0/13
SB_RAP1     192.168.102.154  SB_MAP1             192.168.102.137  Virtual-Dot11Radio0
SB_MAP1     192.168.102.137  SB_RAP1             192.168.102.154  Virtual-Dot11Radio0
SB_MAP1     192.168.102.137  SB_MAP2             192.168.102.138  Virtual-Dot11Radio0
SB_MAP2     192.168.102.138  SB_MAP1             192.168.102.137  Virtual-Dot11Radio1
SB_MAP2     192.168.102.138  SB_MAP3             192.168.102.139  Virtual-Dot11Radio0
SB_MAP3     192.168.102.139  SB_MAP2             192.168.102.138  Virtual-Dot11Radio1
```

The following example shows how to display details about a specific neighbor with a specified access point using CDP:

```
(Cisco Controller) >show ap cdp neighbors ap-name SB_MAP2
AP Name      AP IP            Neighbor Name    Neighbor IP      Neighbor Port
-----------  ---------------  ---------------  --------------  -------------
SB_MAP2      192.168.102.138  SB_MAP1          192.168.102.137  Virtual-Dot11Radio1
SB_MAP2      192.168.102.138  SB_MAP3          192.168.102.139  Virtual-Dot11Radio0
```

The following example shows how to display details about neighbors using CDP:

```
(Cisco Controller) >show ap cdp neighbors detail SB_MAP2
AP Name:SB_MAP2
AP IP address:192.168.102.138
-------------------------
Device ID: SB_MAP1
Entry address(es): 192.168.102.137
Platform: cisco AIR-LAP1522AG-A-K9  ,  Cap
Interface: Virtual-Dot11Radio0,  Port ID (outgoing port): Virtual-Dot11Radio1
Holdtime : 180 sec
Version :
Cisco IOS Software, C1520 Software (C1520-K9W8-M), Experimental Version 12.4(200
81114:084420) [BLD-v124_18a_ja_throttle.20081114 208] Copyright (c) 1986-2008 by
 Cisco Systems, Inc. Compiled Fri 14-Nov-08 23:08 by
advertisement version: 2
-------------------------
Device ID: SB_MAP3
Entry address(es): 192.168.102.139
Platform: cisco AIR-LAP1522AG-A-K9  ,  Capabilities: Trans-Bridge
Interface: Virtual-Dot11Radio1,  Port ID (outgoing port): Virtual-Dot11Radio0
Holdtime : 180 sec
Version :
Cisco IOS Software, C1520 Software (C1520-K9W8-M), Experimental Version 12.4(200
81114:084420) [BLD-v124_18a_ja_throttle.20081114 208] Copyright (c) 1986-2008 by
 Cisco Systems, Inc. Compiled Fri 14-Nov-08 23:08 by
advertisement version: 2
```

show ap channel

To display the available channels for a specific mesh access point, use the **show ap channel** command.

show ap channel *ap_name*

Syntax Description

ap_name	Name of the mesh access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the available channels for a particular access point:

```
(Cisco Controller) >show ap channel AP47
 802.11b/g Current Channel ...........1
Allowed Channel List.....................1,2,3,4,5,6,7,8,9,10,11
802.11a Current Channel .................161
Allowed Channel List.....................36,40,44,48,52,56,60,64,100,
.......................................104,108,112,116,132,136,140,
.......................................149,153,157,161
```

show ap config

To display the detailed configuration for a lightweight access point, use the **show ap config** command.

show ap config 802.11{**a** | **b**} [**summary**] *cisco_ap*

Syntax Description

802.11a	Specifies the 802.11a or 802.11b/g network.
802.11b	Specifies the 802.11b/g network.
summary	(Optional) Displays radio summary of all APs
cisco_ap	Lightweight access point name.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the detailed configuration for an access point:

```
(Cisco Controller) >show ap config 802.11a AP02
Cisco AP Identifier............................. 0
Cisco AP Name................................... AP02
Country code.................................... US  - United States
Regulatory Domain allowed by Country............ 802.11bg:-A     802.11a:-A
AP Regulatory Domain............................ Unconfigured
Switch Port Number ............................. 1
MAC Address..................................... 00:0b:85:18:b6:50
IP Address Configuration........................ DHCP
IP Address...................................... 1.100.49.240
IP NetMask...................................... 255.255.255.0
Gateway IP Addr................................. 1.100.49.1
CAPWAP Path MTU................................. 1485
Telnet State.................................... Disabled
Ssh State....................................... Disabled
Cisco AP Location............................... default-location
Cisco AP Group Name............................. default-group
Primary Cisco Switch............................ Cisco_32:ab:63
Primary Cisco Switch IP Address................. Not Configured
Secondary Cisco Switch..........................
Secondary Cisco Switch IP Address............... Not Configured
Tertiary Cisco Switch...........................
Tertiary Cisco Switch IP Address................ Not Configured
Administrative State ........................... ADMIN_ENABLED
Operation State ................................ REGISTERED
Mirroring Mode ................................. Disabled
AP Mode ........................................ Sniffer
Public Safety .................................. Global: Disabled, Local: Disabled
AP SubMode ..................................... Not Configured
Remote AP Debug ................................ Disabled
Logging trap severity level .................... informational
Logging syslog facility ........................ kern
S/W  Version ................................... 7.0.110.6
```

```
Boot  Version ................................. 12.4.18.0
Mini IOS Version .............................. 3.0.51.0
Stats Reporting Period ......................... 180
Stats Re--More-- or (q)uit
LED State...................................... Enabled
PoE Pre-Standard Switch........................ Enabled
PoE Power Injector MAC Addr..................... Disabled
Power Type/Mode................................ Power injector / Normal mode
Number Of Slots................................ 2
AP Model....................................... AIR-LAP1142N-A-K9
AP Image....................................... C1140-K9W8-M
IOS Version.................................... 12.4(20100502:031212)
Reset Button................................... Enabled
AP Serial Number............................... FTX1305S180
AP Certificate Type............................ Manufacture Installed
AP User Mode................................... AUTOMATIC
AP User Name................................... Not Configured
AP Dot1x User Mode............................. Not Configured
AP Dot1x User Name............................. Not Configured
Cisco AP system logging host................... 255.255.255.255
AP Up Time..................................... 47 days, 23 h 47 m 47 s
AP LWAPP Up Time............................... 47 days, 23 h 10 m 37 s
Join Date and Time............................. Tue May  4 16:05:00 2010
Join Taken Time................................ 0 days, 00 h 01 m 37 s
Attributes for Slot  1
    Radio Type................................. RADIO_TYPE_80211n-5
    Radio Subband.............................. RADIO_SUBBAND_ALL
    Administrative State ...................... ADMIN_ENABLED
    Operation State ........................... UP
    Radio Role ................................ ACCESS
    CellId .................................... 0
Station Configuration
      Configuration ........................... AUTOMATIC
      Number Of WLANs ......................... 2
      Medium Occupancy Limit .................. 100
      CFP Period .............................. 4
      CFP MaxDuration ......................... 60
      BSSID ................................... 00:24:97:88:99:60
Operation Rate Set
        6000 Kilo Bits......................... MANDATORY
        9000 Kilo Bits......................... SUPPORTED
        12000 Kilo Bits........................ MANDATORY
        18000 Kilo Bits........................ SUPPORTED
        24000 Kilo Bits........................ MANDATORY
        36000 Kilo Bits........................ SUPPORTED
        48000 Kilo Bits........................ SUPPORTED
        54000 Kilo Bits........................ SUPPORTED
      MCS Set
        MCS 0.................................. SUPPORTED
        MCS 1.................................. SUPPORTED
        MCS 2.................................. SUPPORTED
        MCS 3.................................. SUPPORTED
        MCS 4.................................. SUPPORTED
        MCS 5.................................. SUPPORTED
        MCS 6.................................. SUPPORTED
        MCS 7.................................. SUPPORTED
        MCS 8.................................. SUPPORTED
        MCS 9.................................. SUPPORTED
        MCS 10................................. SUPPORTED
        MCS 11................................. SUPPORTED
        MCS 12................................. SUPPORTED
        MCS 13................................. SUPPORTED
        MCS 14................................. SUPPORTED
        MCS 15................................. SUPPORTED
```

```
      Beacon Period ............................ 100
      Fragmentation Threshold ................... 2346
      Multi Domain Capability Implemented ....... TRUE
      Multi Domain Capability Enabled ........... TRUE
      Country String ............................ US
Multi Domain Capability
      Configuration ............................ AUTOMATIC
      First Chan Num ........................... 36
      Number Of Channels ....................... 21
MAC Operation Parameters
      Configuration ............................ AUTOMATIC
      Fragmentation Threshold ................... 2346
      Packet Retry Limit ........................ 64
Tx Power
      Num Of Supported Power Levels ............. 6
      Tx Power Level 1 .......................... 14 dBm
      Tx Power Level 2 .......................... 11 dBm
      Tx Power Level 3 .......................... 8 dBm
      Tx Power Level 4 .......................... 5 dBm
      Tx Power Level 5 .......................... 2 dBm
      Tx Power Level 6 .......................... -1 dBm
      Tx Power Configuration .................... AUTOMATIC
      Current Tx Power Level .................... 0
Phy OFDM parameters
      Configuration ............................ AUTOMATIC
      Current Channel ........................... 36
      Extension Channel ......................... NONE
      Channel Width............................. 20 Mhz
      Allowed Channel List...................... 36,40,44,48,52,56,60,64,100,
        ........................................ 104,108,112,116,132,136,140,
        ........................................ 149,153,157,161,165
      TI Threshold ............................. -50
      Legacy Tx Beamforming Configuration ....... AUTOMATIC
      Legacy Tx Beamforming ..................... DISABLED
      Antenna Type............................... INTERNAL_ANTENNA
      Internal Antenna Gain (in .5 dBi units).... 6
      Diversity................................. DIVERSITY_ENABLED
      802.11n Antennas
        Tx
         A....................................... ENABLED
         B....................................... ENABLED
        Rx
         A....................................... ENABLED
         B....................................... ENABLED
         C....................................... ENABLED
Performance Profile Parameters
      Configuration ............................ AUTOMATIC
      Interference threshold.................... 10 %
      Noise threshold...........................  -70 dBm
      RF utilization threshold.................. 80 %
      Data-rate threshold....................... 1000000 bps
      Client threshold.......................... 12 clients
      Coverage SNR threshold.................... 16 dB
      Coverage exception level.................. 25 %
      Client minimum exception level............ 3 clients
Rogue Containment Information
    Containment Count........................... 0
CleanAir Management Information
        CleanAir Capable........................ No
Radio Extended Configurations:
        Buffer size ……————————————.30
        Data-rate————————————————————..0
        Beacon strt ————————————————————..90 ms
       Rx-Sensitivity SOP threshold ————————.. -80 dB
```

```
        CCA threshold ……................... -60 dB
```

The following example shows how to display the detailed configuration for another access point:

```
(Cisco Controller) >show ap config 802.11b AP02
Cisco AP Identifier.............................. 0
Cisco AP Name.................................... AP02
AP Regulatory Domain............................. Unconfigured
Switch Port Number .............................. 1
MAC Address...................................... 00:0b:85:18:b6:50
IP Address Configuration......................... DHCP
IP Address....................................... 1.100.49.240
IP NetMask....................................... 255.255.255.0
Gateway IP Addr.................................. 1.100.49.1
Cisco AP Location................................ default-location
Cisco AP Group Name.............................. default-group
Primary Cisco Switch............................. Cisco_32:ab:63
Secondary Cisco Switch...........................
Tertiary Cisco Switch............................
Administrative State ............................ ADMIN_ENABLED
Operation State ................................. REGISTERED
Mirroring Mode .................................. Disabled
AP Mode ......................................... Local
Remote AP Debug ................................. Disabled
S/W  Version .................................... 3.1.61.0
Boot  Version ................................... 1.2.59.6
Stats Reporting Period .......................... 180
LED State........................................ Enabled
ILP Pre Standard Switch.......................... Disabled
ILP Power Injector............................... Disabled
Number Of Slots.................................. 2
AP Model......................................... AS-1200
AP Serial Number................................. 044110223A
AP Certificate Type.............................. Manufacture Installed
Attributes for Slot  1
    Radio Type................................... RADIO_TYPE_80211g
    Administrative State ........................ ADMIN_ENABLED
    Operation State ............................. UP
    CellId ...................................... 0
    Station Configuration
      Configuration ............................. AUTOMATIC
      Number Of WLANs ........................... 1
      Medium Occupancy Limit .................... 100
      CFP Period ................................ 4
      CFP MaxDuration ........................... 60
      BSSID ..................................... 00:0b:85:18:b6:50
      Operation Rate Set
        1000 Kilo Bits........................... MANDATORY
        2000 Kilo Bits........................... MANDATORY
        5500 Kilo Bits........................... MANDATORY
        11000 Kilo Bits.......................... MANDATORY
        6000 Kilo Bits........................... SUPPORTED
        9000 Kilo Bits........................... SUPPORTED
        12000 Kilo Bits.......................... SUPPORTED
        18000 Kilo Bits.......................... SUPPORTED
        24000 Kilo Bits.......................... SUPPORTED
        36000 Kilo Bits.......................... SUPPORTED
        48000 Kilo Bits.......................... SUPPORTED
        54000 Kilo Bits.......................... SUPPORTED
      Beacon Period ............................. 100
      DTIM Period ............................... 1
      Fragmentation Threshold ................... 2346
      Multi Domain Capability Implemented ....... TRUE
```

```
    Multi Domain Capability Enabled ........... TRUE
    Country String ............................ US
  Multi Domain Capability
    Configuration ............................. AUTOMATIC
    First Chan Num ............................ 1
    Number Of Channels ........................ 11
  MAC Operation Parameters
    Configuration ............................. AUTOMATIC
    RTS Threshold ............................. 2347
    Short Retry Limit ......................... 7
    Long Retry Limit .......................... 4
    Fragmentation Threshold ................... 2346
    Maximum Tx MSDU Life Time ................. 512
    Maximum Rx Life Time....................... 512
  Tx Power
    Num Of Supported Power Levels.............. 5
    Tx Power Level 1 .......................... 17 dBm
    Tx Power Level 2........................... 14 dBm
    Tx Power Level 3........................... 11 dBm
    Tx Power Level 4........................... 8 dBm
    Tx Power Level 5........................... 5 dBm
    Tx Power Configuration..................... CUSTOMIZED
    Current Tx Power Level..................... 5
  Phy OFDM parameters
    Configuration.............................. CUSTOMIZED
    Current Channel............................ 1
    TI Threshold............................... -50
    Legacy Tx Beamforming Configuration ....... CUSTOMIZED
    Legacy Tx Beamforming ..................... ENABLED
    Antenna Type............................... INTERNAL_ANTENNA
    Internal Antenna Gain (in5 dBm units)...... 11
    Diversity.................................. DIVERSITY_ENABLED
  Performance Profile Parameters
    Configuration.............................. AUTOMATIC
    Interference threshold..................... 10%
    Noise threshold............................  -70 dBm
    RF utilization threshold................... 80%
    Data-rate threshold........................ 1000000 bps
    Client threshold........................... 12 clients
    Coverage SNR threshold..................... 12 dB
    Coverage exception level................... 25%
    Client minimum exception level............. 3 clients
  Rogue Containment Information
  Containment Count........................... 0
```

The following example shows how to display the general configuration of a Cisco access point:

```
(Cisco Controller) >show ap config general cisco-ap
Cisco AP Identifier............................ 9
Cisco AP Name.................................. cisco-ap
Country code................................... US - United States
Regulatory Domain allowed by Country............ 802.11bg:-A 802.11a:-A
AP Country code................................ US - United States
AP Regulatory Domain........................... 802.11bg:-A 802.11a:-A
Switch Port Number ............................ 1
MAC Address.................................... 12:12:12:12:12:12
IP Address Configuration....................... DHCP
IP Address..................................... 10.10.10.21
IP NetMask..................................... 255.255.255.0
CAPWAP Path MTU................................ 1485
Domain.........................................
Name Server....................................
Telnet State................................... Disabled
```

```
Ssh State..................................... Disabled
Cisco AP Location............................. default location
Cisco AP Group Name........................... default-group
Primary Cisco Switch Name..................... 4404
Primary Cisco Switch IP Address............... 10.10.10.32
Secondary Cisco Switch Name...................
Secondary Cisco Switch IP Address............... Not Configured
Tertiary Cisco Switch Name.................... 4404
Tertiary Cisco Switch IP Address............... 3.3.3.3
Administrative State ......................... ADMIN_ENABLED
Operation State .............................. REGISTERED
Mirroring Mode ............................... Disabled
AP Mode ...................................... Local
Public Safety ................................ Global: Disabled, Local: Disabled
AP subMode ................................... WIPS
Remote AP Debug .............................. Disabled
S/W  Version ................................. 5.1.0.0
Boot  Version ................................ 12.4.10.0
Mini IOS Version ............................. 0.0.0.0
Stats Reporting Period ....................... 180
LED State..................................... Enabled
PoE Pre-Standard Switch....................... Enabled
PoE Power Injector MAC Addr................... Disabled
Power Type/Mode............................... PoE/Low Power (degraded mode)
Number Of Slots............................... 2
AP Model...................................... AIR-LAP1252AG-A-K9
IOS Version................................... 12.4(10:0)
Reset Button.................................. Enabled
AP Serial Number.............................. serial_number
AP Certificate Type........................... Manufacture Installed
Management Frame Protection Validation........... Enabled (Global MFP Disabled)
AP User Mode.................................. CUSTOMIZED
AP username................................... maria
AP Dot1x User Mode............................ Not Configured
AP Dot1x username............................ Not Configured
Cisco AP system logging host.................. 255.255.255.255
AP Up Time.................................... 4 days, 06 h 17 m 22 s
AP LWAPP Up Time.............................. 4 days, 06 h 15 m 00 s
Join Date and Time............................ Mon Mar 3 06:19:47 2008
Ethernet Port Duplex.......................... Auto
Ethernet Port Speed........................... Auto
AP Link Latency............................... Enabled
 Current Delay................................ 0 ms
 Maximum Delay................................ 240 ms
 Minimum Delay................................ 0 ms
 Last updated (based on AP Up Time)........... 4 days, 06 h 17 m 20 s
Rogue Detection............................... Enabled
AP TCP MSS Adjust............................. Disabled
Mesh preferred parent......................... 00:24:13:0f:92:00
```

show ap config general

To display the access point specific syslog server settings for all access points, use the **show ap config general** command.

show ap config general *ap-name*

Syntax Description

ap-name	AP name

Command History

Release	Modification
8.0	This command was introduced
8.10.112.0	The output of the command is enhanced to show the status of AP antenna monitoring and failure detection for Cisco Wave 2 APs.

The following example shows how to display AP specific server settings:

```
(Cisco Controller) >show ap config general APc89c.1d53.6799
Cisco AP Identifier.............................. 76
Cisco AP Name.................................... APc89c.1d53.6799
Country code..................................... Multiple Countries:IN,JP,US
Regulatory Domain allowed by Country............. 802.11bg:-AJPU 802.11a:-AJN
AP Country code.................................. US - United States
AP Regulatory Domain............................. 802.11bg:-A 802.11a:-A
Switch Port Number .............................. 1
MAC Address...................................... c8:9c:1d:53:67:99
IP Address Configuration......................... DHCP
IP Address....................................... 10.8.77.103
IP NetMask....................................... 255.255.255.0
Gateway IP Addr.................................. 10.8.77.1
NAT External IP Address.......................... None
CAPWAP Path MTU.................................. 1485
Telnet State..................................... Globally Disabled
Ssh State........................................ Globally Disabled
Cisco AP Location................................ default location
Cisco AP Floor Label............................. 0
Cisco AP Group Name.............................. apGroup2
Primary Cisco Switch Name.......................
Primary Cisco Switch IP Address.................. Not Configured
Secondary Cisco Switch Name.....................
Secondary Cisco Switch IP Address................ Not Configured
Tertiary Cisco Switch Name......................
Tertiary Cisco Switch IP Address................. Not Configured
Administrative State ............................ ADMIN_ENABLED
Operation State ................................. REGISTERED
Mirroring Mode .................................. Disabled
AP Mode ......................................... Local
Public Safety ................................... Disabled
AP SubMode ...................................... Not Configured
Remote AP Debug ................................. Disabled
Logging trap severity level ..................... informational
Logging syslog facility ......................... system
S/W  Version .................................... 8.0.72.132
Boot  Version ................................... 12.4.23.0
Mini IOS Version ................................ 3.0.51.0
Stats Reporting Period .......................... 180
```

```
Stats Collection Mode ........................... normal
LED State....................................... Enabled
PoE Pre-Standard Switch......................... Disabled
PoE Power Injector MAC Addr..................... Disabled
Power Type/Mode................................. PoE/Full Power
Number Of Slots................................. 2
AP Model........................................ AIR-LAP1142N-A-K9
AP Image........................................ C1140-K9W8-M
IOS Version..................................... 15.3(20140302:180954)$
Reset Button.................................... Enabled
AP Serial Number................................ FGL1510S3VZ
AP Certificate Type............................. Manufacture Installed
AP User Mode.................................... AUTOMATIC
AP User Name.................................... cisco
AP Dot1x User Mode.............................. Not Configured
AP Dot1x User Name.............................. Not Configured
Cisco AP system logging host.................... 255.255.255.255
AP Up Time...................................... 0 days, 18 h 43 m 35 s
AP LWAPP Up Time................................ 0 days, 18 h 42 m 23 s
Join Date and Time.............................. Wed Mar  5 07:26:07 2014
Join Taken Time................................. 0 days, 00 h 01 m 11 s
Memory Type..................................... DDR3
Memory Size..................................... 98294 KBytes
CPU Type........................................ PowerPC405ex CPU at 586Mhz, revision
number 0x147E
Flash Type...................................... Onboard Flash
Flash Size...................................... 31374 KBytes
GPS Present..................................... NO
Ethernet Vlan Tag............................... Disabled
Ethernet Port Duplex............................ Auto
Ethernet Port Speed............................. Auto
AP Link Latency................................. Disabled
Rogue Detection................................. Enabled
AP TCP MSS Adjust............................... Disabled
Hotspot Venue Group............................. Unspecified
Hotspot Venue Type.............................. Unspecified
DNS server IP ........................... Not Available

AP broken antenna detection - Status ........... Enabled (Global)
RSSI Failure Threshold ......................... 40

--More-- or (q)uit
Weak RSSI ...................................... 60
Detection Time ................................. 12
If any broken antenna?.......................... ALL
Memory Type..................................... DDR3
Memory Size..................................... 1028096 KBytes
CPU Type.....................................  ARMv7 Processor rev 1 (v7l)
```

show ap config global

To display the global syslog server settings for all access points that join the controller, use the **show ap config global** command.

show ap config global

Syntax Description

This command has no arguments and keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display global syslog server settings:

```
(Cisco Controller) >show ap config global
AP global system logging host............................ 255.255.255.255
```

show ap core-dump

To display the memory core dump information for a lightweight access point, use the **show ap core-dump** command.

show ap core-dump *cisco_ap*

Syntax Description

cisco_ap	Cisco lightweight access point name.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display memory core dump information:

```
(Cisco Controller) >show ap core-dump AP02
Memory core dump is disabled.
```

show ap crash-file

To display the list of both crash and radio core dump files generated by lightweight access points, use the **show ap crash-file** command.

show ap crash-file

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the crash file generated by the access point:

```
(Cisco Controller) >show ap crash-file
```

show ap data-plane

To display the data plane status for all access points or a specific access point, use the **show ap data-plane** command.

show ap data-plane {**all** | *cisco_ap*}

Syntax Description

all	Specifies all Cisco lightweight access points.
cisco_ap	Name of a Cisco lightweight access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the data plane status of all access points:

```
(Cisco Controller) >show ap data-plane all
Min Data          Data          Max Data     Last
AP Name               Round Trip      Round Trip      Round Trip    Update
------------------  --------------  --------------  --------------  ------
1130                      0.000s          0.000s       0.002s     18:51:23
1240                      0.000s          0.000s       0.000s     18:50:45
```

show ap dtls-cipher-suite

To display the DTLS show cipher suite information, use the **show ap dtls-cipher-suite** command.

show ap dtls-cipher-suite

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
8.0	This command was introduced.

The following example shows how to display DTLS cipher suite information:

```
(Cisco Controller) > show ap dtls-cipher-suite
DTLS Cipher Suite.............................. RSA-AES256-SHA
```

show ap ethernet tag

To display the VLAN tagging information of an Ethernet interface, use the **show ap ethernet tag** command.

show ap ethernet tag {**summary** | *cisco_ap*}

Syntax Description

summary	Displays the VLAN tagging information for all access points associated to the controller.
cisco_ap	Name of the Cisco lightweight access point. Displays the VLAN tagging information for a specific access point associated to the controller.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

If the access point is unable to route traffic or reach the controller using the specified trunk VLAN, it falls back to the untagged configuration. If the access point joins the controller using this fallback configuration, the controller sends a trap to a trap server such as the WCS, which indicates the failure of the trunk VLAN. In this scenario, the "Failover to untagged" message appears in show command output.

The following example shows how to display the VLAN tagging information for all access points associated to the controller:

```
(Cisco Controller) >show ap ethernet tag summary

AP Name              Vlan Tag Configuration
------------------   -------
AP2                  7  (Failover to untagged)
charan.AP1140.II     disabled
```

show ap eventlog

To display the contents of the event log file for an access point that is joined to the controller, use the **show ap eventlog** command.

show ap eventlog *ap_name*

Syntax Description

ap_name	Event log for the specified access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the event log of an access point:

```
(Cisco Controller) >show ap eventlog ciscoAP
AP event log download has been initiated
Waiting for download to complete
AP event log download completed.
======================= AP Event log Contents =====================
*Feb 13 11:54:17.146: %CAPWAP-3-CLIENTEVENTLOG: AP event log has been cleared from the
contoller 'admin'
*Feb 13 11:54:32.874: *** Access point reloading. Reason: Reload Command ***
*Mar 1 00:00:39.134: %CDP_PD-4-POWER_OK: Full power - NEGOTIATED inline power source
*Mar 1 00:00:39.174: %LINK-3-UPDOWN: Interface Dot11Radio1, changed state to up
*Mar 1 00:00:39.211: %LINK-3-UPDOWN: Interface Dot11Radio0, changed state to up
*Mar 1 00:00:49.947: %CAPWAP-3-CLIENTEVENTLOG: Did not get vendor specific options from
DHCP.
...
```

show ap flexconnect

To view the details of APs in FlexConnect mode, use the **show ap flexconnect** command.

show ap flexconnect module-vlan *ap-name*

Syntax Description

module-vlan	Displays the status of FlexConnect local switching and VLAN ID value
ap-name	Cisco AP name

Command History

Release	Modification
8.1	This command was introduced

show ap image

To display the detailed information about the predownloaded image for specified access points, use the **show ap image** command.

show ap image {*cisco_ap* | **all**}

Syntax Description

cisco_ap	Name of the lightweight access point.
all	Specifies all access points.

Note If you have an AP that has the name *all*, it conflicts with the keyword **all** that specifies all access points. In this scenario, the keyword **all** takes precedence over the AP that is named *all*.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

show ap image status

To view download status on all APs, use the **show ap image status** command.

show ap image status

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
8.2	This command was introduced.

show ap inventory

To display inventory information for an access point, use the **show ap inventory** command.

show ap inventory {*ap-name* | **all**}

Syntax Description

ap-name	Inventory for the specified AP.
all	Inventory for all the APs.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the inventory of an access point:

```
(Cisco Controller) >show ap inventory test101
NAME: "test101"    , DESCR: "Cisco Wireless Access Point"
PID: AIR-LAP1131AG-A-K9  ,  VID: V01,  SN: FTX1123T2XX
```

show ap join stats detailed

To display all join-related statistics collected for a specific access point, use the **show ap join stats detailed** command.

show ap join stats detailed *ap_mac*

Syntax Description

ap_mac	Access point Ethernet MAC address or the MAC address of the 802.11 radio interface.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display join information for a specific access point trying to join the controller:

```
(Cisco Controller) >show ap join stats detailed 00:0b:85:02:0d:20
Discovery phase statistics
- Discovery requests received............................. 2
- Successful discovery responses sent..................... 2
- Unsuccessful discovery request processing............ 0
- Reason for last unsuccessful discovery attempt....... Not applicable
- Time at last successful discovery attempt........... Aug 21 12:50:23:335
- Time at last unsuccessful discovery attempt.......... Not applicable
Join phase statistics
- Join requests received.............................. 1
- Successful join responses sent....................... 1
- Unsuccessful join request processing................ 1
- Reason for last unsuccessful join attempt.............RADIUS authorization is pending for
 the AP
- Time at last successful join attempt................. Aug 21 12:50:34:481
- Time at last unsuccessful join attempt............... Aug 21 12:50:34:374
Configuration phase statistics
- Configuration requests received...................... 1
- Successful configuration responses sent.............. 1
- Unsuccessful configuration request processing........ 0
- Reason for last unsuccessful configuration attempt... Not applicable
- Time at last successful configuration attempt........ Aug 21 12:50:34:374
- Time at last unsuccessful configuration attempt...... Not applicable
Last AP message decryption failure details
- Reason for last message decryption failure........... Not applicable
Last AP disconnect details
- Reason for last AP connection failure................ Not applicable
Last join error summary
- Type of error that occurred last..................... Lwapp join request rejected
- Reason for error that occurred last................. RADIUS authorization is pending for
 the AP
- Time at which the last join error occurred........... Aug 21 12:50:34:374
```

show ap join stats summary

To display the last join error detail for a specific access point, use the **show ap join stats summary** command.

show ap join stats summary *ap_mac*

Syntax Description

ap_mac	Access point Ethernet MAC address or the MAC address of the 802.11 radio interface.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

To obtain the MAC address of the 802.11 radio interface, enter the **show interface** command on the access point.

The following example shows how to display specific join information for an access point:

```
(Cisco Controller) >show ap join stats summary 00:0b:85:02:0d:20
Is the AP currently connected to controller............................. No
Time at which the AP joined this controller last time................ Aug 21 12:50:36:061
Type of error that occurred last..................................... Lwapp join request
rejected
Reason for error that occurred last................................. RADIUS authorization
 is pending for the AP
Time at which the last join error occurred........................... Aug 21 12:50:34:374
```

show ap join stats summary all

To display the MAC addresses of all the access points that are joined to the controller or that have tried to join, use the **show ap join stats summary all** command.

show ap join stats summary all

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a summary of join information for all access points:

```
(Cisco Controller) >show ap join stats summary all
Number of APs.............................................. 4
Base Mac             AP EthernetMac         AP Name         IP Address         Status
00:0b:85:57:bc:c0     00:0b:85:57:bc:c0     AP1130         10.10.163.217     Joined
00:1c:0f:81:db:80     00:1c:63:23:ac:a0     AP1140         10.10.163.216     Not joined
00:1c:0f:81:fc:20     00:1b:d5:9f:7d:b2     AP1             10.10.163.215     Joined
00:21:1b:ea:36:60     00:0c:d4:8a:6b:c1     AP2             10.10.163.214     Not joined
```

show ap led-state

To view the LED state of all access points or a specific access point, use the **show ap led-state** command.

show ap led-state {**all** | *cisco_ap*}

Syntax Description

all	Shows the LED state for all access points.
cisco_ap	Name of the access point whose LED state is to be shown.

Command Default

The AP LED state is enabled.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to get the LED state of all access points:

```
(Cisco Controller) >show ap led-state all
Global LED State: Enabled (default)
```

show ap led-flash

To display the LED flash status of an access point, use the **show ap led-flash** command.

show ap led-flash *cisco_ap*

Syntax Description

cisco_ap	Enter the name of the Cisco AP.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the LED flash status of an access point:

```
(Cisco Controller) >show ap led-flash
```

show ap link-encryption

To display the MAC addresses of all the access points that are joined to the controller or that have tried to join, use the **show ap link-encryption** command.

show ap link-encryption {**all** | *cisco_ap*}

Syntax Description

all	Specifies all access points.
cisco_ap	Name of the lightweight access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the link encryption status of all access points:

```
(Cisco Controller) >show ap link-encryption all
             Encryption  Dnstream  Upstream    Last
AP Name           State     Count     Count  Update
------------------  ---  --------  --------  ------
1240                Dis      4406    237553   Never
1130                 En      2484    276308   19:31
```

show ap max-count summary

To display the maximum number of access points supported by the Cisco WLC, use the **show ap max-count summary**command.

show ap max-count summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.5	This command was introduced.

The following is a sample output of the **show ap max-count summary**command:

```
(Cisco Controller) >show ap max-count

The max number of AP's supported................. 500
```

show ap monitor-mode summary

To display the current channel-optimized monitor mode settings, use the **show ap monitor-mode summary** command.

show ap monitor-mode summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display current channel-optimized monitor mode settings:

```
(Cisco Controller) >show ap monitor-mode summary
AP Name            Ethernet MAC       Status     Scanning Channel List
---  -----------------  ---------- ---------------------
AP_004             xx:xx:xx:xx:xx:xx Tracking    1, 6, 11, 4
```

show ap module summary

To view detailed information about the external module, for a specific Cisco AP or for all Cisco APs, use the **show ap module summary** command.

show ap module summary {*ap-name* | **all**}

Syntax Description

ap-name	Cisco AP name that has the external module
all	All Cisco APs that have the external module

Command History

Release	Modification
8.1	This command was introduced.

show ap packet-dump status

To display access point Packet Capture configurations, use the **show ap packet-dump status** command.

show ap packet-dump status

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

Packet Capture does not work during intercontroller roaming.

The controller does not capture packets created in the radio firmware and sent out of the access point, such as the beacon or probe response. Only packets that flow through the Radio driver in the Tx path are captured.

The following example shows how to display the access point Packet Capture configurations:

```
(Cisco Controller) >show ap packet-dump status
Packet Capture Status........................... Stopped
FTP Server IP Address........................... 0.0.0.0
FTP Server Path.................................
FTP Server Username.............................
FTP Server Password............................. ********
Buffer Size for Capture......................... 2048 KB
Packet Capture Time............................. 45 Minutes
Packet Truncate Length.......................... Unspecified
Packet Capture Classifier....................... None
```

show ap prefer-mode stats

To view prefer-mode global and per AP group statistics, use the **show ap prefer-mode stats** command.

show ap prefer-mode stats

Syntax Description

stats	Displays prefer-mode global and per AP group statistics

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

show ap retransmit

To display access point control packet retransmission parameters, use the**show ap retransmit** command.

show ap retransmit {**all** | *cisco_ap*}

Syntax Description

all	Specifies all access points.
cisco_ap	Name of the access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the control packet retransmission parameters of all access points on a network:

```
(Cisco Controller) >show ap retransmit all
Global control packet retransmit interval: 3 (default)
Global control packet retransmit count: 5 (default)
AP Name             Retransmit Interval  Retransmit count
------------------  -------------------  -------------------
AP_004                   3 (default)      5 (WLC default),5 (AP default)
```

show ap stats

To display the statistics for a Cisco lightweight access point, use the **show ap stats** command.

show ap stats {**802.11**{**a** | **b**} | **wlan** | **ethernet summary**} *cisco_ap* [**tsm** {*client_mac* | **all**}]

Syntax Description

802.11a	Specifies the 802.11a network
802.11b	Specifies the 802.11b/g network.
wlan	Specifies WLAN statistics.
ethernet	Specifies AP ethernet interface statistics.
summary	Displays ethernet interface summary of all the connected Cisco access points.
cisco_ap	Name of the lightweight access point.
tsm	(Optional) Specifies the traffic stream metrics.
client_mac	(Optional) MAC address of the client.
all	(Optional) Specifies all access points.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.0	This command was modified. The OEAP WMM Counters were added to the output.

The following example shows how to display statistics of an access point for the 802.11b network:

```
(Cisco Controller) >show ap stats 802.11a Ibiza

Number Of Slots................................ 2
AP Name........................................ Ibiza
MAC Address.................................... 44:2b:03:9a:8a:73
Radio Type..................................... RADIO_TYPE_80211a
Stats Information
  Number of Users............................... 0
  TxFragmentCount............................... 84628
  MulticastTxFrameCnt........................... 84628
  FailedCount................................... 0
  RetryCount.................................... 0
  MultipleRetryCount............................ 0
  FrameDuplicateCount........................... 0
  RtsSuccessCount............................... 1
  RtsFailureCount............................... 0
  AckFailureCount............................... 0
```

```
  RxIncompleteFragment........................... 0
  MulticastRxFrameCnt............................ 0
  FcsErrorCount.................................. 20348857
  TxFrameCount................................... 84628
  WepUndecryptableCount.......................... 19907
  TxFramesDropped................................ 0
OEAP WMM Stats :
  Best Effort:
    Tx Frame Count............................... 0
    Tx Failed Frame Count........................ 0
    Tx Expired Count............................. 0
    Tx Overflow Count............................ 0
    Tx Queue Count............................... 0
    Tx Queue Max Count........................... 0
    Rx Frame Count............................... 0
    Rx Failed Frame Count........................ 0
  Background:
    Tx Frame Count............................... 0
    Tx Failed Frame Count........................ 0
    Tx Expired Count............................. 0
    Tx Overflow Count............................ 0
    Tx Queue Count............................... 0
    Tx Queue Max Count........................... 0
    Rx Frame Count............................... 0
    Rx Failed Frame Count........................ 0
  Video:
    Tx Frame Count............................... 0
    Tx Failed Frame Count........................ 0
    Tx Expired Count............................. 0
    Tx Overflow Count............................ 0
    Tx Queue Count............................... 0
    Tx Queue Max Count........................... 0
    Rx Frame Count............................... 0
    Rx Failed Frame Count........................ 0
  Voice:
    Tx Frame Count............................... 0
    Tx Failed Frame Count........................ 0
    Tx Expired Count............................. 0
    Tx Overflow Count............................ 0
    Tx Queue Count............................... 0
    Tx Queue Max Count........................... 0
    Rx Frame Count............................... 0
    Rx Failed Frame Count........................ 0

Rate Limiting Stats:
  Wlan 1:
    Number of Data Packets Received.............. 592
    Number of Data Rx Packets Dropped............ 160
    Number of Data Bytes Received................ 160783
    Number of Data Rx Bytes Dropped.............. 0
    Number of Realtime Packets Received.......... 592
    Number of Realtime Rx Packets Dropped........ 0
    Number of Realtime Bytes Received............ 160783
    Number of Realtime Rx Bytes Dropped.......... 0
    Number of Data Packets Sent.................. 131
    Number of Data Tx Packets Dropped............ 0
    Number of Data Bytes Sent.................... 23436
    Number of Data Tx Bytes Dropped.............. 0
    Number of Realtime Packets Sent.............. 131
    Number of Realtime Tx Packets Dropped........ 0
    Number of Realtime Bytes Sent................ 23436
    Number of Realtime Tx Bytes Dropped.......... 0
Call Admission Control (CAC) Stats
  Voice Bandwidth in use(% of config bw)......... 0
```

```
  Voice Roam Bandwidth in use(% of config bw).... 0
    Total channel MT free..................... 0
    Total voice MT free....................... 0
    Na Direct................................. 0
    Na Roam................................... 0
  Video Bandwidth in use(% of config bw)......... 0
  Video Roam Bandwidth in use(% of config bw).... 0
  Total BW in use for Voice(%)................... 0
  Total BW in use for SIP Preferred call(%)...... 0
WMM TSPEC CAC Call Stats
  Total num of voice calls in progress........... 0
  Num of roaming voice calls in progress......... 0
  Total Num of voice calls since AP joined....... 0
  Total Num of roaming calls since AP joined..... 0
  Total Num of exp bw requests received.......... 0
  Total Num of exp bw requests admitted.......... 0
  Num of voice calls rejected since AP joined.... 0
  Num of roam calls rejected since AP joined..... 0
  Num of calls rejected due to insufficent bw.... 0
  Num of calls rejected due to invalid params.... 0
  Num of calls rejected due to PHY rate.......... 0
  Num of calls rejected due to QoS policy........ 0
SIP CAC Call Stats
  Total Num of calls in progress................. 0
  Num of roaming calls in progress............... 0
  Total Num of calls since AP joined............. 0
  Total Num of roaming calls since AP joined..... 0
  Total Num of Preferred calls received.......... 0
  Total Num of Preferred calls accepted.......... 0
  Total Num of ongoing Preferred calls........... 0
  Total Num of calls rejected(Insuff BW)......... 0
  Total Num of roam calls rejected(Insuff BW).... 0
WMM Video TSPEC CAC Call Stats
  Total num of video calls in progress........... 0
  Num of roaming video calls in progress......... 0
  Total Num of video calls since AP joined....... 0
  Total Num of video roaming calls since AP j.... 0
  Num of video calls rejected since AP joined.... 0
  Num of video roam calls rejected since AP j.... 0
  Num of video calls rejected due to insuffic.... 0
  Num of video calls rejected due to invalid .... 0
  Num of video calls rejected due to PHY rate.... 0
  Num of video calls rejected due to QoS poli.... 0
SIP Video CAC Call Stats
  Total Num of video calls in progress........... 0
  Num of video roaming calls in progress......... 0
  Total Num of video calls since AP joined....... 0
  Total Num of video roaming calls since AP j.... 0
  Total Num of video calls rejected(Insuff BW.... 0
  Total Num of video roam calls rejected(Insu.... 0
Band Select Stats
  Num of dual band client ....................... 0
  Num of dual band client added.................. 0
  Num of dual band client expired ............... 0
  Num of dual band client replaced............... 0
  Num of dual band client detected .............. 0
  Num of suppressed client ...................... 0
  Num of suppressed client expired............... 0
  Num of suppressed client replaced.............. 0
```

show ap summary

To display a summary of all lightweight access points attached to the controller, use the **show ap summary** command.

show ap summary [*cisco_ap*]

Syntax Description

cisco_ap	(Optional) Type sequence of characters that make up the name of a specific AP or a group of APs, or enter a wild character search pattern.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

A list that contains each lightweight access point name, number of slots, manufacturer, MAC address, location, and the controller port number appears. When you specify

The following example shows how to display a summary of all connected access points:

```
(Cisco Controller) >show ap summary
Number of APs..................................... 2
Global AP username............................... user
Global AP Dot1x username........................ Not Configured
Number of APs..................................... 2
Global AP username............................... user
Global AP Dot1x username........................ Not Configured


 AP Name             Slots  AP Model              Ethernet MAC       Location
Country  IP Address       Clients
------------------  -----  --------------------  -----------------  ----------------  -------
  ---------------  -------
AP1140               2     AIR-LAP1142N-A-K9     f0:f7:55:75:f3:29                default
location         US   192.168.0.0         0
Access Points using IPv6 transport:
 AP Name    Slots   AP Model           Ethernet MAC       Location         Country     IPv6
 Address                 Clients
 ------------------ ----- ------------------------------------ ------------
------------------ ----- ---------------------------- ------
 AP1040      2    AIR-LAP1042N-A-K9   00:40:96:b9:4b:89   default location  US
2001:DB8:0:1::1                     0
```

show ap tcp-mss-adjust

To display the Basic Service Set Identifier (BSSID) value for each WLAN defined on an access point, use the **show ap tcp-mss-adjust** command.

show ap tcp-mss-adjust {*cisco_ap* | **all**}

Syntax Description

cisco_ap	Specified lightweight access point name.
all	Specifies all access points.

Note If an AP itself is configured with the keyword **all**, the all access points case takes precedence over the AP that is with the keyword **all**.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display Transmission Control Protocol (TCP) maximum segment size (MSS) information of all access points:

```
(Cisco Controller) >show ap tcp-mss-adjust all
AP Name            TCP State MSS Size
------------------ --------- -------
AP-1140            enabled   536
AP-1240            disabled  -
AP-1130            disabled  -
```

show ap wlan

To display the Basic Service Set Identifier (BSSID) value for each WLAN defined on an access point, use the **show ap wlan** command.

show ap wlan 802.11 {**a** | **b**} *cisco_ap*

Syntax Description

802.11a	Specifies the 802.11a network.
802.11b	Specifies the 802.11b/g network.
ap_name	Lightweight access point name.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display BSSIDs of an access point for the 802.11b network:

```
(Cisco Controller) >show ap wlan 802.11b AP01
Site Name..................................... MY_AP_GROUP1
Site Description.............................. MY_AP_GROUP1
WLAN ID          Interface          BSSID
-------         -----------        --------------------------
1               management           00:1c:0f:81:fc:20
2               dynamic              00:1c:0f:81:fc:21
```

show assisted-roaming

To display assisted roaming and 802.11k configurations, use the **show assisted-roaming** command.

show assisted-roaming

Syntax Description

This command has no arguments or keywords.

Command Default

None.

This example shows how to display assisted roaming and 802.11k configurations:

```
(Cisco Controller) >show assisted-roaming
Assisted Roaming and 80211k Information:
Floor RSSI Bias..................................... 15 dBm
Maximum Denial...................................... 2 counts
Minimium Optimized Neighbor Assigned............... 2 neighbors

Assisted Roaming Performance Chart:
Matching Assigned Neighbor....................... [0] = 0
Matching Assigned Neighbor....................... [1] = 0
Matching Assigned Neighbor....................... [2] = 0
Matching Assigned Neighbor....................... [3] = 0
Matching Assigned Neighbor....................... [4] = 0
Matching Assigned Neighbor....................... [5] = 0
Matching Assigned Neighbor....................... [6] = 0
Matching Assigned Neighbor....................... [7] = 0
No Matching Neighbor............................. [8] = 0
No Neighbor Assigned............................. [9] = 0
```

Related Commands

config assisted-roaming

config wlan assisted-roaming

debug 11k

show atf config

To monitor Cisco Airtime Fairness configuration, use the **show atf config** command.

show atf config {**all** | {**ap-name***ap-name*} | {**802.11**{**a** | **b**}} | **policy** | **wlan**}

Syntax Description

all	Shows Cisco ATF configuration of all radios
ap-name	Shows Cisco ATF configuration of an AP
ap-name	AP name that you must specify
802.11a	Shows Cisco ATF configuration of all 5-GHz radios
802.11b	Shows Cisco ATF configuration of all 2.4-GHz radios
policy	Shows configuration of all airtime policies
wlan	Shows Cisco ATF configuration of all WLANs

Command Default

None

Command History

Release	Modification
8.1	This command was introduced

This example shows how to monitor Cisco Airtime Fairness configuration:

```
(Cisco Controller) >show atf config all
```

show atf statistics ap

To monitor Cisco Airtime Fairness statistics, use the **show atf statistics** command.

show atf statistics ap *ap-name* **802.11** {**a** | **b**} {**summary** | *wlan-id* | *policy-id*}

Syntax Description

802.11a	Shows detailed statistics on all 5-GHz radios.
802.11b	Shows detailed statistics on all 2.4-GHz radios.
summary	Shows summary statistics for the AP.
wlan *wlan-id*	Shows detailed ATF statistics for the specified WLAN.
policy *policy-name*	Shows detailed ATF statistics for the specified policy name.

Command Default

None

Command History

Release	Modification
8.1	This command was introduced.

This example shows how to monitor Cisco Airtime Fairness statistics:

```
(Cisco Controller) >show atf statistics ap Ap01323 802.11a summary
```

show auth-list

To display the access point authorization list, use the **show auth-list** command.

show auth-list

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the access point authorization list:

```
(Cisco Controller) >show auth-list
Authorize APs against AAA..................... disabled
Allow APs with Self-signed Certificate (SSC)... disabled
Mac Addr                  Cert Type    Key Hash
-----------------------   ----------   ------------------------------------------
xx:xx:xx:xx:xx:xx         MIC
```

show avc applications

To display all the supported Application Visibility and Control (AVC) applications, use the **show avc applications** command.

show avc applications

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

Usage Guidelines

AVC uses the Network-Based Application Recognition (NBAR) deep packet inspection technology to classify applications based on the protocol they use. Using AVC, the controller can detect more than 1500 Layer 4 to Layer 7 protocols.

The following is a sample output of the **show avc applications** command:

```
(Cisco Controller) > show avc applications

Application-Name            App-ID  Engine-ID  Selector-ID   Application-Group-Name
 ================            ======  =========  ===========    ======================
 3com-amp3                     538        3        629        other
 3com-tsmux                    977        3        106        obsolete
 3pc                           788        1         34        layer3-over-ip
 914c/g                       1109        3        211        net-admin
 9pfs                          479        3        564        net-admin
 acap                          582        3        674        net-admin
 acas                          939        3         62        other
 accessbuilder                 662        3        888        other
 accessnetwork                 607        3        699        other
 acp                           513        3        599        other
 acr-nema                      975        3        104        industrial-protocols
 active-directory             1194       13        473        other
 activesync                   1419       13        490        business-and-productivity-tools

 adobe-connect                1441       13        505        other
 aed-512                       963        3        149        obsolete
 afpovertcp                   1327        3        548        business-and-productivity-tools

 agentx                        609        3        705        net-admin
 alpes                         377        3        463        net-admin
 aminet                        558        3       2639        file-sharing
 an                            861        1        107        layer3-over-ip
----                          ----      ---      -----       -------------
```

show avc engine

To display information about the Network-Based Application Recognition 2 (NBAR2) engine, use the **show avc engine** command.

show avc engine version

Syntax Description

version	Displays the version of the NBAR2 engine.

Command Default

None

Command History

Release	Modification
7.5	This command was introduced.

Usage Guidelines

The Application Visibility and Control (AVC) protocol pack is not supported in the Cisco 2500 Series Wireless Controllers.

The following is a sample output of the **show avc engine** command:

```
(Cisco Controller) > show avc engine version

AVC Engine Version: 13
```

show avc profile

To display Application Visibility and Control (AVC) profiles, use the **show avc profile** command.

show avc profile {**summary** | **detailed** *profile_name* }

Syntax Description

summary	Displays a summary of AVC profiles.
detailed	Displays the details of an AVC profile.
profile_name	Name of the AVC profile. The profile name can be up to 32 case-sensitive, alphanumeric characters.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc profile summary** command.

```
(Cisco Controller) > show avc profile summary

 Profile-Name                      Number of Rules
  ============                      ==============
  profile 1                                  3
  avc_profile2                               1
```

The following is a sample output of the **show avc profile detailed** command.

```
(Cisco Controller) > show avc profile detailed

  Application-Name          Application-Group-Name            Action  DSCP
  ================          ======================            ======  ====
  ftp                       file-sharing                       Drop      -
  flash-video               browsing                           Mark     10
  facebook                  browsing                           Mark     10

  Associated WLAN IDs       :
  Associated Remote LAN IDs :
  Associated Guest LAN IDs  :
```

show avc protocol-pack

To display information about the Application Visibility and Control (AVC) protocol pack in the Cisco Wireless LAN Controller (WLC), use the **show avc protocol-pack** command.

show avc protocol-pack version

Syntax Description

version	Displays the version of the AVC protocol pack.

Command Default

None

Command History

Release	Modification
7.5	This command was introduced.

Usage Guidelines

The AVC protocol pack is not supported in the Cisco 2500 Series Wireless Controllers.

The following is a sample output of the **show avc protocol-pack** command:

```
(Cisco Controller) > show avc protocol-pack version

AVC Protocol Pack Name: Advanced Protocol Pack
AVC Protocol Pack Version: 1.0
```

show avc statistics application

To display the statistics of an application, use the **show avc statistics application** command.

show avc statistics application *application_name* **top-users** [**downstream wlan** | **upstream wlan** | **wlan**] [*wlan_id*] }

Syntax Description

application_name	Name of the application. The application name can be up to 32 case-sensitive, alphanumeric characters.
top-users	Displays AVC statistics for top application users.
downstream	(Optional) Displays statistics of top downstream applications.
wlan	(Optional) Displays AVC statistics of a WLAN.
wlan_id	WLAN identifier from 1 to 512.
upstream	(Optional) Displays statistics of top upstream applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics application** command:

```
(Cisco Controller) > show avc statistics application ftp top-users downstream wlan 1

  Client MAC            Client IP        WLAN ID  Packets   Bytes   Avg Pkt  Packets
Bytes       DSCP
  (Up/Down)                                       (n secs) (n secs)  Size    (Total)
(Total)   In  Out
  ===========           =========        ======   =======  =======  ======   =======
=======   === ===
  00:0a:ab:15:00:9c(U) 172.16.31.156        1         16        91     5         43
  338     0   0
                   (D) 172.16.31.156        1         22      5911   268         48
 6409     0   0
  00:0a:ab:15:00:5a(U) 172.16.31.90         1          7        39     5         13
   84     0   0
                   (D) 172.16.31.90         1         12      5723   476         18
 5869     0   0
  00:0a:ab:15:00:60(U) 172.16.31.96         1         19       117     6         75
 8666     0   0
                   (D) 172.16.31.96         1         19      4433   233         83
 9595     0   0
  00:0a:ab:15:00:a4(U) 172.16.31.164        1         18       139     7         21
  161     0   0
                   (D) 172.16.31.164        1         23      4409   191         24
 4439     0   0
  00:0a:ab:15:00:48(U) 172.16.31.72         1         21      2738   130         21
 2738     0   0
                   (D) 172.16.31.72         1         22      4367   198         22
```

```
4367     0   0
 00:0a:ab:15:00:87(U) 172.16.31.135        1         11        47     4         49
 301     0   0
                  (D) 172.16.31.135        1         12      4208   350         48
7755     0   0
 00:0a:ab:15:00:92(U) 172.16.31.146        1         10        73     7         11
  84     0   0
                  (D) 172.16.31.146        1          9      4168   463         11
4201     0   0
 00:0a:ab:15:00:31(U) 172.16.31.49         1         11        95     8         34
 250     0   0
                  (D) 172.16.31.49         1         18      3201   177         43
3755     0   0
 00:0a:ab:15:00:46(U) 172.16.31.70         1          7        47     6         20
 175     0   0
                  (D) 172.16.31.70         1         10      3162   316         23
3448     0   0
 00:0a:ab:15:00:b3(U) 172.16.31.179        1         10        85     8         34
 241     0   0
```

show avc statistics client

To display the client Application Visibility and Control (AVC) statistics, use the **show avc statistics client** command.

show avc statistics client *client_MAC* {**application** *application_name* | **top-apps** [**upstream** | **downstream**] }

Syntax Description

client_MAC	MAC address of the client.
application	Displays AVC statistics for an application.
application_name	Name of the application. The application name can be up to 32 case-sensitive, alphanumeric characters.
top-apps	Displays AVC statistics for top applications.
upstream	(Optional) Displays statistics of top upstream applications.
downstream	(Optional) Displays statistics of top downstream applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics client** command:

```
(Cisco Controller) > show avc statistics client 00:0a:ab:15:00:01 application http

 Description                    Upstream      Downstream
  ===========                    ========      ==========
  Number of Packtes(n secs)          5059            6369
  Number of Bytes(n secs)          170144         8655115
  Average Packet size(n secs)          33            1358
  Total Number of Packtes          131878          150169
  Total Number of Bytes           6054464       205239972
  DSCP Incoming packet                 16               0
  DSCP Outgoing Packet                 16               0
```

The following is a sample output of the **show avc statistics client** command.

```
(Cisco Controller) > show avc statistics client 00:0a:ab:15:00:01 top-apps

  Application-Name            Packets   Bytes    Avg Pkt  Packets    Bytes    DSCP DSCP
      (Up/Down)               (n secs)  (n secs)  Size    (Total)   (Total)    In   Out
  ================            =======   ======   ======   =======   ======    ====  ====
  http                     (U)    6035   637728    105      6035    637728    16    16
                           (D)    5420  7218796   1331      5420   7218796     0     0
  ggp                      (U)    1331  1362944   1024      1331   1362944     0     0
                           (D)       0        0      0         0         0     0     0
  smp                      (U)    1046  1071104   1024      1046   1071104     0     0
                           (D)       0        0      0         0         0     0     0
  vrrp                     (U)     205   209920   1024       205    209920     0     0
```

```
                        (D)       0        0      0         0         0     0     0
bittorrent              (U)     117     1604     13       117      1604     0     0
                        (D)     121    70469    582       121     70469     0     0
icmp                    (U)       0        0      0         0         0     0     0
                        (D)      72    40032    556        72     40032    48    48
edonkey                 (U)     112     4620     41       112      4620     0     0
                        (D)     105    33076    315       105     33076     0     0
dns                     (U)      10      380     38        10       380     0     0
                        (D)       7     1743    249         7      1743     0     0
realmedia               (U)       2      158     79         2       158    24    24
                        (D)       2       65     32         2        65     0     0
```

show avc statistics guest-lan

To display the Application Visibility and Control (AVC) statistics of a guest LAN, use the **show avc statistics guest-lan** command.

show avc statistics guest-lan *guest-lan_id* {**application** *application_name* | **top-app-groups** [**upstream** | **downstream**] | **top-apps** [**upstream** | **downstream**]}

Syntax Description

guest-lan_id	Guest LAN identifier from 1 to 5.
application	Displays AVC statistics for an application.
application_name	Name of the application. The application name can be up to 32 case-sensitive, alphanumeric characters.
top-app-groups	Displays AVC statistics for top application groups.
upstream	(Optional) Displays statistics of top upstream applications.
downstream	(Optional) Displays statistics of top downstream applications.
top-apps	Displays AVC statistics for top applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics** command.

```
(Cisco Controller) > show avc statistics guest-lan 1

Application-Name            Packets   Bytes   Avg Pkt  Packets      Bytes
  (Up/Down)                 (n secs) (n secs)  Size    (Total)      (Total)
================            =======  ======    ======   ======      =======
unclassified            (U)  191464    208627     1    92208613  11138796586
                        (D)  63427  53440610   842    16295621   9657054635
ftp                     (U)    805     72880    90      172939     11206202
                        (D)    911     58143    63      190900     17418653
http                    (U)  264904  12508288    47    27493945   2837672192
                        (D)  319894  436915253  1365    29850934  36817587924
gre                     (U)      0         0     0    10158872  10402684928
                        (D)      0         0     0           0            0
icmp                    (U)      1        40    40         323        98476
                        (D)   7262   4034576   555     2888266   1605133372
ipinip                  (U)  62565  64066560  1024    11992305  12280120320
                        (D)      0         0     0           0            0
imap                    (U)   1430     16798    11      305161      3795766
                        (D)   1555    576371   370      332290    125799465
irc                     (U)      9        74     8        1736         9133
                        (D)     11       371    33        1972       173381
nntp                    (U)     22       158     7        1705         9612
                        (D)     22       372    16        2047       214391
```

show avc statistics remote-lan

To display the Application Visibility and Control (AVC) statistics of a remote LAN, use the **show avc statistics remote-lan** command.

show avc statistics remote-lan *remote-lan_id* { **application** *application_name* | **top-app-groups** [**upstream** | **downstream**] | **top-apps** [**upstream** | **downstream**] }

Syntax Description

remote-lan_id	Remote LAN identifier from 1 to 512.
application	Displays AVC statistics for an application.
application_name	Name of the application. The application name can be up to 32 case-sensitive, alphanumeric characters.
top-app-groups	Displays AVC statistics for top application groups.
upstream	(Optional) Displays statistics of top upstream applications.
downstream	(Optional) Displays statistics of top downstream applications.
top-apps	Displays AVC statistics for top applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics remote-lan** command.

```
(Cisco Controller) > show avc statistics remote-lan 1

Application-Name            Packets   Bytes   Avg Pkt  Packets      Bytes
  (Up/Down)                 (n secs) (n secs)  Size    (Total)      (Total)
================            ======== ======    ======   ======      =======
unclassified            (U)  191464    208627     1    92208613  11138796586
                        (D)  63427  53440610   842    16295621   9657054635
ftp                     (U)    805     72880    90      172939     11206202
                        (D)    911     58143    63      190900     17418653
http                    (U)  264904  12508288    47    27493945   2837672192
                        (D)  319894  436915253  1365    29850934  36817587924
gre                     (U)      0         0     0    10158872  10402684928
                        (D)      0         0     0           0            0
icmp                    (U)      1        40    40         323        98476
                        (D)   7262   4034576   555     2888266   1605133372
ipinip                  (U)  62565  64066560  1024    11992305  12280120320
                        (D)      0         0     0           0            0
imap                    (U)   1430     16798    11      305161      3795766
                        (D)   1555    576371   370      332290    125799465
irc                     (U)      9        74     8        1736         9133
                        (D)     11       371    33        1972       173381
nntp                    (U)     22       158     7        1705         9612
                        (D)     22       372    16        2047       214391
```

show avc statistics top-apps

To display the Application Visibility and Control (AVC) statistics for the most used applications, use the **show avc statistics top-apps** command.

show avc statistics top-apps [**upstream** | **downstream**]

Syntax Description

upstream	(Optional) Displays statistics of the most used upstream applications.
downstream	(Optional) Displays statistics of the most used downstream applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics top-aps** command:

```
(Cisco Controller) > show avc statistics top-apps

Application-Name             Packets     Bytes   Avg Pkt     Packets         Bytes
   (Up/Down)                 (n secs)   (n secs)  Size       (Total)        (Total)
================             =======    =======  =======     =======        ========
http                    (U)   204570   10610912     51      28272539      2882294016
                        (D)   240936  327624221   1359      30750570     38026889010
realmedia               (U)      908      62154     68        400698        26470359
                        (D)   166694  220522943   1322      35802836     47131836785
mpls-in-ip              (U)    77448   79306752   1024      10292787     10539813888
                        (D)        0          0      0             0               0
fire                    (U)    70890   72591360   1024      10242484     10488303616
                        (D)        0          0      0             0               0
pipe                    (U)    68296   69935104   1024      10224255     10469637120
                        (D)        0          0      0             0               0
gre                     (U)    60982   62445568   1024      10340221     10588386304
                        (D)        0          0      0             0               0
crudp                   (U)    26430   27064320   1024      10109812     10352447488
                        (D)        0          0      0             0               0
rtp                     (U)        0          0      0             0               0
                        (D)     7482    9936096   1328       2603923      3458009744
icmp                    (U)        0          0      0           323           98476
                        (D)    10155    5640504    555       2924693      1625363564
```

Related Commands

config avc profile delete

config avc profile create

config avc profile rule

config wlan avc

show avc profile

show avc applications

show avc statistics client

show avc statistics wlan

show avc statistics applications

show avc statistics guest-lan

show avc statistics remote-lan

debug avc error

debug avc events

show avc statistics wlan

To display the Application Visibility and Control (AVC) statistics of a WLAN, use the **show avc statistics wlan** command.

show avc statistics wlan *wlan_id* {**application** *application_name* | **top-app-groups** [**upstream** | **downstream**] | **top-apps** [**upstream** | **downstream**]}

Syntax Description

wlan_id	WLAN identifier from 1 to 512.
application	Displays AVC statistics for an application.
application_name	Name of the application. The application name can be up to 32 case-sensitive, alphanumeric characters.
top-app-groups	Displays AVC statistics for top application groups.
upstream	(Optional) Displays statistics of top upstream applications.
downstream	(Optional) Displays statistics of top downstream applications.
top-apps	Displays AVC statistics for top applications.

Command Default

None

Command History

Release	Modification
7.4	This command was introduced.

The following is a sample output of the **show avc statistics** command.

```
(Cisco Controller) >show avc statistics wlan 1

Application-Name            Packets   Bytes   Avg Pkt  Packets      Bytes
  (Up/Down)                 (n secs) (n secs)  Size    (Total)      (Total)
================            =======  ======    ======   ======      =======
unclassified            (U)  191464    208627     1    92208613  11138796586
                        (D)  63427  53440610   842    16295621   9657054635
ftp                     (U)    805     72880    90      172939     11206202
                        (D)    911     58143    63      190900     17418653
http                    (U)  264904  12508288    47    27493945   2837672192
                        (D)  319894  436915253  1365    29850934  36817587924
gre                     (U)      0         0     0    10158872  10402684928
                        (D)      0         0     0           0            0
icmp                    (U)      1        40    40         323        98476
                        (D)   7262   4034576   555     2888266   1605133372
ipinip                  (U)  62565  64066560  1024    11992305  12280120320
                        (D)      0         0     0           0            0
imap                    (U)   1430     16798    11      305161      3795766
                        (D)   1555    576371   370      332290    125799465
irc                     (U)      9        74     8        1736         9133
                        (D)     11       371    33        1972       173381
nntp                    (U)     22       158     7        1705         9612
                        (D)     22       372    16        2047       214391
```

The following is a sample output of the **show avc statistics wlan** command.

```
(Cisco Controller) >show avc statistics wlan 1 application ftp

 Description                      Upstream    Downstream
  ===========                      ========    ==========
  Number of Packtes(n secs)               0             0
  Number of Bytes(n secs)                 0             0
  Average Packet size(n secs)             0             0
  Total Number of Packtes             32459         64888
  Total Number of Bytes                 274      94673983
```

show boot

To display the primary and backup software build numbers with an indication of which is active, use the **show boot** command.

show boot

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

Each Cisco wireless LAN controller retains one primary and one backup operating system software load in nonvolatile RAM to allow controllers to boot off the primary load (default) or revert to the backup load when desired.

The following is a sample output of the **show boot** command:

```
(Cisco Controller) > show boot
Primary Boot Image............................. 3.2.13.0 (active)
Backup Boot Image............................... 3.2.15.0
```

Related Commands

config boot

show band-select

To display band selection information, use the **show band-select** command.

show band-select

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show band-select** command:

```
(Cisco Controller) > show band-select
Band Select Probe Response....................... per WLAN enabling
   Cycle Count.................................... 3 cycles
   Cycle Threshold............................... 200 milliseconds
   Age Out Suppression........................... 20 seconds
   Age Out Dual Band............................. 60 seconds
   Client RSSI................................... -80 dBm
```

Related Commands

config band-select

config wlan band-select

show buffers

To display buffer information of the controller, use the **show buffers** command.

show buffers

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show buffers** command:

```
(Cisco Controller) > show buffers
Pool[00]: 16 byte chunks
    chunks in pool:    50000
    chunks in use:     9196
    bytes in use:      147136
    bytes requested:   73218 (73918 overhead bytes)
Pool[01]: 64 byte chunks
    chunks in pool:    50100
    chunks in use:     19222
    bytes in use:      1230208
    bytes requested:   729199 (501009 overhead bytes)
Pool[02]: 128 byte chunks
    chunks in pool:    26200
    chunks in use:     9861
    bytes in use:      1262208
    bytes requested:   848732 (413476 overhead bytes)
Pool[03]: 256 byte chunks
    chunks in pool:    3000
    chunks in use:     596
    bytes in use:      152576
    bytes requested:   93145 (59431 overhead bytes)
Pool[04]: 384 byte chunks
    chunks in pool:    6000
    chunks in use:     258
    bytes in use:      99072
    bytes requested:   68235 (30837 overhead bytes)
Pool[05]: 512 byte chunks
    chunks in pool:    18700
    chunks in use:     18667
    bytes in use:      9557504
    bytes requested:   7933814 (1623690 overhead bytes)
Pool[06]: 1024 byte chunks
    chunks in pool:    3500
    chunks in use:     94
    bytes in use:      96256
    bytes requested:   75598 (20658 overhead bytes)
Pool[07]: 2048 byte chunks
    chunks in pool:    1000
    chunks in use:     54
    bytes in use:      110592
    bytes requested:   76153 (34439 overhead bytes)
Pool[08]: 4096 byte chunks
    chunks in pool:    1000
```

```
    chunks in use:     47
    bytes in use:      192512
    bytes requested:   128258 (64254 overhead bytes)
Raw Pool:
    chunks in use:     256
    bytes requested:   289575125
```

show cac voice stats

To view the detailed voice CAC statistics of the 802.11a or 802.11b radio, use the **show cac voice stats** command.

show cac voice stats {**802.11a** | **802.11b**}

Syntax Description

802.11a	Displays detailed voice CAC statistics for 802.11a.
802.11b	Displays detailed voice CAC statistics for 802.11b/g.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cac voice stats 802.11b** command:

```
(Cisco Controller) > show cac voice stats 802.11b

WLC Voice Call Statistics for 802.11b Radio

WMM TSPEC CAC Call Stats
  Total num of Calls in progress................. 0
  Num of Roam Calls in progress.................. 0
  Total Num of Calls Admitted.................... 0
  Total Num of Roam Calls Admitted............... 0
  Total Num of exp bw requests received.......... 0
  Total Num of exp bw requests Admitted.......... 0
  Total Num of Calls Rejected.................... 0
  Total Num of Roam Calls Rejected............... 0
  Num of Calls Rejected due to insufficent bw.... 0
  Num of Calls Rejected due to invalid params.... 0
  Num of Calls Rejected due to PHY rate.......... 0
  Num of Calls Rejected due to QoS policy........ 0
SIP CAC Call Stats
  Total Num of Calls in progress................. 0
  Num of Roam Calls in progress.................. 0
  Total Num of Calls Admitted.................... 0
  Total Num of Roam Calls Admitted............... 0
  Total Num of Preferred Calls Received.......... 0
  Total Num of Preferred Calls Admitted.......... 0
  Total Num of Ongoing Preferred Calls........... 0
  Total Num of Calls Rejected(Insuff BW)......... 0
  Total Num of Roam Calls Rejected(Insuff BW).... 0
KTS based CAC Call Stats
  Total Num of Calls in progress................. 0
  Num of Roam Calls in progress.................. 0
  Total Num of Calls Admitted.................... 0
  Total Num of Roam Calls Admitted............... 0
  Total Num of Calls Rejected(Insuff BW)......... 0
  Total Num of Roam Calls Rejected(Insuff BW).... 0
```

show cac voice summary

To view the list of all APs with brief voice statistics (includes bandwidth used, maximum bandwidth available, and the number of calls information), use the **show cac voice summary** command.

show cac voice summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cac voice summary** command:

```
(Cisco Controller) > show cac voice summary
    AP Name         Slot#   Radio  BW Used/Max  Calls
-----------------  -------  -----  -----------  -----
APc47d.4f3a.3547     0      11b/g     0/23437    0
      1      11a    1072/23437    1
```

show cac video stats

To view the detailed video CAC statistics of the 802.11a or 802.11b radio, use the **show cac video stats** command.

show cac video stats {**802.11a** | **802.11b**}

Syntax Description

802.11a	Displays detailed video CAC statistics for 802.11a.
802.11b	Displays detailed video CAC statistics for 802.11b/g.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cac video stats 802.11b** command:

```
(Cisco Controller) > show cac video stats 802.11b

WLC Video Call Statistics for 802.11b Radio

WMM TSPEC CAC Call Stats
  Total num of Calls in progress................. 0
  Num of Roam Calls in progress.................. 0
  Total Num of Calls Admitted.................... 0
  Total Num of Roam Calls Admitted............... 0
  Total Num of Calls Rejected.................... 0
  Total Num of Roam Calls Rejected............... 0
  Num of Calls Rejected due to insufficent bw.... 0
  Num of Calls Rejected due to invalid params.... 0
  Num of Calls Rejected due to PHY rate.......... 0
  Num of Calls Rejected due to QoS policy........ 0
SIP CAC Call Stats
  Total Num of Calls in progress................. 0
  Num of Roam Calls in progress.................. 0
  Total Num of Calls Admitted.................... 0
  Total Num of Roam Calls Admitted............... 0
  Total Num of Calls Rejected(Insuff BW)......... 0
  Total Num of Roam Calls Rejected(Insuff BW).... 0
```

Related Commands

config 802.11 cac voice

config 802.11 cac defaults

config 802.11 cac video

config 802.11 cac multimedia

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video load-based

config 802.11 cac video cac-method

config 802.11 cac video sip

show cac video summary

To view the list of all access points with brief video statistics (includes bandwidth used, maximum bandwidth available, and the number of calls information), use the **show cac video summary** command.

show cac video summary

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cac video summary** command:

```
(Cisco Controller) > show cac video summary

    AP Name          Slot#   Radio  BW Used/Max  Calls
-----------------  -------  -----  -----------  -----
AP001b.d571.88e0     0      11b/g     0/10937    0
                     1      11a       0/18750    0
AP5_1250             0      11b/g     0/10937    0
                     1      11a       0/18750    0
```

Related Commands

config 802.11 cac voice

config 802.11 cac defaults

config 802.11 cac video

config 802.11 cac multimedia

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video load-based

config 802.11 cac video cac-method

config 802.11 cac video sip

show call-control ap

Note The **show call-control ap** command is applicable only for SIP based calls.

To see the metrics for successful calls or the traps generated for failed calls, use the **show call-control ap** command.

show call-control ap {**802.11a** | **802.11b**} *cisco_ap* {**metrics** | **traps**}

Syntax Description

802.11a	Specifies the 802.11a network
802.11b	Specifies the 802.11b/g network.
cisco_ap	Cisco access point name.
metrics	Specifies the call metrics information.
traps	Specifies the trap information for call control.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

To aid in troubleshooting, the output of this command shows an error code for any failed calls. This table explains the possible error codes for failed calls.

Table 1: Error Codes for Failed VoIP Calls

Error Code	Integer	Description
1	unknown	Unknown error.
400	badRequest	The request could not be understood because of malformed syntax.
401	unauthorized	The request requires user authentication.
402	paymentRequired	Reserved for future use.
403	forbidden	The server understood the request but refuses to fulfill it.
404	notFound	The server has information that the user does not exist at the domain specified in the Request-URI.
405	methodNotallowed	The method specified in the Request-Line is understood but not allowed for the address identified by the Request-URI.

Error Code	Integer	Description
406	notAcceptable	The resource identified by the request is only capable of generating response entities with content characteristics that are not acceptable according to the Accept header field sent in the request.
407	proxyAuthenticationRequired	The client must first authenticate with the proxy.
408	requestTimeout	The server could not produce a response within a suitable amount of time.
409	conflict	The request could not be completed due to a conflict with the current state of the resource.
410	gone	The requested resource is no longer available at the server, and no forwarding address is known.
411	lengthRequired	The server is refusing to process a request because the request entity-body is larger than the server is willing or able to process.
413	requestEntityTooLarge	The server is refusing to process a request because the request entity-body is larger than the server is willing or able to process.
414	requestURITooLarge	The server is refusing to service the request because the Request-URI is longer than the server is willing to interpret.
415	unsupportedMediaType	The server is refusing to service the request because the message body of the request is in a format not supported by the server for the requested method.
420	badExtension	The server did not understand the protocol extension specified in a Proxy-Require or Require header field.
480	temporarilyNotAvailable	The callee's end system was contacted successfully, but the callee is currently unavailable.
481	callLegDoesNotExist	The UAS received a request that does not match any existing dialog or transaction.
482	loopDetected	The server has detected a loop.
483	tooManyHops	The server received a request that contains a Max-Forwards header field with the value zero.
484	addressIncomplete	The server received a request with a Request-URI that was incomplete.
485	ambiguous	The Request-URI was ambiguous.
486	busy	The callee's end system was contacted successfully, but the callee is currently not willing or able to take additional calls at this end system.

Error Code	Integer	Description
500	internalServerError	The server encountered an unexpected condition that prevented it from fulfilling the request.
501	notImplemented	The server does not support the functionality required to fulfill the request.
502	badGateway	The server, while acting as a gateway or proxy, received an invalid response from the downstream server it accessed in attempting to fulfill the request.
503	serviceUnavailable	The server is temporarily unable to process the request because of a temporary overloading or maintenance of the server.
504	serverTimeout	The server did not receive a timely response from an external server it accessed in attempting to process the request.
505	versionNotSupported	The server does not support or refuses to support the SIP protocol version that was used in the request.
600	busyEverywhere	The callee's end system was contacted successfully, but the callee is busy or does not want to take the call at this time.
603	decline	The callee's machine was contacted successfully, but the user does not want to or cannot participate.
604	doesNotExistAnywhere	The server has information that the user indicated in the Request-URI does not exist anywhere.
606	notAcceptable	The user's agent was contacted successfully, but some aspects of the session description (such as the requested media, bandwidth, or addressing style) were not acceptable.

The following is a sample output of the **show call-controller ap** command that displays successful calls generated for an access point:

```
(Cisco Controller) >show call-control ap 802.11a Cisco_AP metrics
Total Call Duration in Seconds................... 120
Number of Calls................................... 10
Number of calls for given client is................ 1
```

The following is a sample output of the **show call-control ap** command that displays metrics of traps generated for an AP.

```
(Cisco Controller) >show call-control ap 802.11a Cisco_AP traps
Number of traps sent in one min................... 2
Last SIP error code............................... 404
Last sent trap timestamp...................... Jun 20 10:05:06
```

show call-control client

To see call information for a call-aware client when Voice-over-IP (VoIP) snooping is enabled and the call is active, use the **show call-control client** command

show call-control client callInfo *client_MAC_address*

Syntax Description

callInfo	Specifies the call-control information.
client_MAC_address	Client MAC address.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example is a sample output of the **show call-controller client** command:

```
(Cisco Controller) > show call-control client callInfo 10.10.10.10.10.10
Uplink IP/port................................. 0.0.0.0 /   0
Downlink  IP/port.............................. 9.47.96.107 / 5006
UP.............................................   6
Calling Party.................................. sip:1021
Called Party................................... sip:1000
Call ID........................................ 38423970c3fca477
Call on hold: ................................. FALSE
Number of calls for given client is............ 1
```

show capwap reap association

To display the list of clients associated with an access point and their SSIDs, use the **show capwap reap association** command.

show capwap reap association

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display clients associated to an access point and their SSIDs:

```
(Cisco Controller) >show capwap reap association
```

show capwap reap status

To display the status of the FlexConnect access point (connected or standalone), use the **show capwap reap status** command.

show capwap reap status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

The command shows only the VLAN when configured as AP-specific.

The following example shows how to display the status of the FlexConnect access point:

```
(Cisco Controller) >show capwap reap status
```

show cdp

To display the status and details of the Cisco Discovery Protocol (CDP), use the **show cdp** command.

show cdp {**neighbors** [**detail**] | **entry all** | **traffic**}

Syntax Description

neighbors	Displays a list of all CDP neighbors on all interfaces.
detail	(Optional) Displays detailed information of the controller's CDP neighbors. This command shows only the CDP neighbors of the controller; it does not show the CDP neighbors of the controller's associated access points.
entry all	Displays all CDP entries in the database.
traffic	Displays CDP traffic information.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cdp** command:

```
(Cisco Controller) > show cdp
CDP counters :
Total packets output: 0, Input: 0
Chksum error: 0
No memory: 0, Invalid packet: 0,
```

Related Commands

config cdp

config ap cdp

show ap cdp

show certificate compatibility

To display whether or not certificates are verified as compatible in the Cisco wireless LAN controller, use the **show certificate compatibility** command.

show certificate compatibility

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show certificate compatibility** command:

```
(Cisco Controller) > show certificate compatibility
Certificate compatibility mode:................ off
```

show certificate lsc

To verify that the controller has generated a Locally Significant Certificate (LSC), use the **show certificate lsc summary** command.

show certificate lsc {**summary** | **ap-provision**}

Syntax Description

summary	Displays a summary of LSC certificate settings and certificates.
ap-provision	Displays details about the access points that are provisioned using the LSC.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show certificate lsc summary** command:

```
(Cisco Controller) > show certificate lsc summary
LSC Enabled..................................... Yes
LSC CA-Server................................... http://10.0.0.1:8080/caserver
LSC AP-Provisioning............................. Yes
Provision-List............................... Not Configured
LSC Revert Count in AP reboots............... 3
LSC Params:
Country..................................... 4
State....................................... ca
City........................................ ss
Orgn........................................ org
Dept........................................ dep
Email....................................... dep@co.com
KeySize..................................... 390
LSC Certs:
CA Cert..................................... Not Configured
RA Cert..................................... Not Configured
```

This example shows how to display the details about the access points that are provisioned using the LSC:

```
(Cisco Controller) > show certificate lsc ap-provision
LSC AP-Provisioning............................. Yes
Provision-List................................... Present
Idx Mac Address
--- -------------
1 00:18:74:c7:c0:90
```

show certificate ssc

To view the Self Signed Device Certificate (SSC) and hash key of the virtual controller, use the **show certificate ssc** command.

show certificate ssc

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show certificate ssc** command :

```
(Cisco Controller) > show certificate ssc
 SSC Hash validation............................ Enabled.

 SSC Device Certificate details:

        Subject Name :
                C=US, ST=California, L=San Jose, O=Cisco Virtual Wireless LAN Controller,
                CN=DEVICE-vWLC-AIR-CTVM-K9-000C297F2CF7, MAILTO=support@vwlc.com

        Validity :
                Start : 2012 Jul 23rd, 15:47:53 GMT
                End   : 2022 Jun  1st, 15:47:53 GMT

        Hash key : 5870ffabb15de2a617132bafcd73
```

show certificate summary

To verify that the controller has generated a certificate, use the **show certificate summary** command.

show certificate summary

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show certificate summary** command:

```
(Cisco Controller) > show certificate summary
Web Administration Certificate................. Locally Generated
Web Authentication Certificate................. Locally Generated
Certificate compatibility mode:................ off
```

show client ap

To display the clients on a Cisco lightweight access point, use the **show client ap** command.

show client ap 802.11 {**a** | **b**} *cisco_ap*

Syntax Description

802.11a	Specifies the 802.11a network.
802.11b	Specifies the 802.11b/g network.
cisco_ap	Cisco lightweight access point name.

Command Default

None

Usage Guidelines

The **show client ap** command may list the status of automatically disabled clients. Use the **show exclusionlist** command to view clients on the exclusion list.

This example shows how to display client information on an access point:

```
(Cisco Controller) >show client ap 802.11b AP1
MAC Address        AP Id   Status         WLAN Id    Authenticated
-----------------  ------  -------------  ---------  -------------
xx:xx:xx:xx:xx:xx      1   Associated     1          No
```

show client calls

To display the total number of active or rejected calls on the controller, use the **show client calls** command.

show client calls {**active** | **rejected**} {**802.11a** | **802.11bg** | **all**}

Syntax Description

active	Specifies active calls.
rejected	Specifies rejected calls.
802.11a	Specifies the 802.11a network.
802.11bg	Specifies the 802.11b/g network.
all	Specifies both the 802.11a and 802.11b/g network.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client calls active 802.11a** command :

```
(Cisco Controller) > show client calls active 802.11a
Client MAC              Username         Total Call            AP Name         Radio Type
                                        Duration (sec)
--------------------    ---------        ----------       ---------------      ----------
00:09: ef: 02:65:70        abc              45            VJ-1240C-ed45cc        802.11a
00:13: ce: cc: 51:39       xyz              45                AP1130-a416        802.11a
00:40:96: af: 15:15        def              45                AP1130-a416        802.11a
00:40:96:b2:69: df         def              45                AP1130-a416        802.11a
Number of Active Calls ------------------------------------ 4
```

show client ccx client-capability

To display the client's capability information, use the **show client ccx client-capability** command.

show client ccx client-capability *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

This command displays the client's available capabilities, not the current settings for the capabilities.

The following is a sample output of the **show client ccx client-capability** command:

```
(Cisco Controller) >show client ccx client-capability 00:40:96:a8:f7:98
Service Capability................................. Voice, Streaming(uni-directional)
Video, Interactive(bi-directional) Video
Radio Type......................................... DSSS OFDM(802.11a) HRDSSS(802.11b)
ERP(802.11g)
Radio Type......................................... DSSS
 Radio Channels................................ 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode................................. Automatic
 Rate List(MB)................................. 1.0 2.0
Radio Type......................................... HRDSSS(802.11b)
 Radio Channels................................ 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode................................. Automatic
 Rate List(MB)................................. 5.5 11.0
Radio Type......................................... ERP(802.11g)
 Radio Channels................................ 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode................................. Automatic
 Rate List(MB)................................. 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0
Are you sure you want to start? (y/N)y Are you sure you want to start? (y/N)
```

show client ccx frame-data

To display the data frames sent from the client for the last test, use the **show client ccx frame-data** command.

show client ccx frame-data *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx frame-data** command:

```
(Cisco Controller) >show client ccx frame-data
 xx:xx:xx:xx:xx:xx
```

show client ccx last-response-status

To display the status of the last test response, use the **show client ccx last-response-status** command.

show client ccx last-response-status *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx last-response-status** command:

```
(Cisco Controller) >show client ccx last-response-status
Test Status ........................ Success
Response Dialog Token............... 87
Response Status..................... Successful
Response Test Type.................. 802.1x Authentication Test
Response Time...................... 3476 seconds since system boot
```

show client ccx last-test-status

To display the status of the last test, use the **show client ccx last-test-status** command.

show client ccx last-test-status *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx last-test-status** command:

```
(Cisco Controller) >show client ccx last-test-status

Test Type ........................ Gateway Ping Test
Test Status ...................... Pending/Success/Timeout
Dialog Token ..................... 15
Timeout .......................... 15000 ms
Request Time ..................... 1329 seconds since system boot
```

show client ccx log-response

To display a log response, use the **show client ccx log-response** command.

show client ccx log-response {**roam** | **rsna** | **syslog**} *client_mac_address*

Syntax Description

roam	(Optional) Displays the CCX client roaming log response.
rsna	(Optional) Displays the CCX client RSNA log response.
syslog	(Optional) Displays the CCX client system log response.
client_mac_address	Inventory for the specified access point.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx log-response syslog** command:

```
(Cisco Controller) >show client ccx log-response syslog 00:40:96:a8:f7:98
Tue Jun 26 18:07:48 2007       Syslog Response LogID=131: Status=Successful
        Event Timestamp=0d 00h 19m 42s 278987us
       Client SysLog = '<11> Jun 19 11:49:47 unraval13777 Mandatory elements missing in the
 OID response'
       Event Timestamp=0d 00h 19m 42s 278990us
       Client SysLog = '<11> Jun 19 11:49:47 unraval13777 Mandatory elements missing in the
 OID response'
Tue Jun 26 18:07:48 2007       Syslog Response LogID=131: Status=Successful
        Event Timestamp=0d 00h 19m 42s 278987us
       Client SysLog = '<11> Jun 19 11:49:47 unraval13777 Mandatory elements missing in the
 OID response'
       Event Timestamp=0d 00h 19m 42s 278990us
       Client SysLog = '<11> Jun 19 11:49:47 unraval13777 Mandatory elements missing in the
 OID response'
```

The following example shows how to display the client roaming log response:

```
(Cisco Controller) >show client ccx log-response roam 00:40:96:a8:f7:98
Thu Jun 22 11:55:14 2007    Roaming Response LogID=20: Status=Successful
Event Timestamp=0d 00h 00m 13s 322396us      Source BSSID=00:40:96:a8:f7:98
Target BSSID=00:0b:85:23:26:70,      Transition Time=100(ms)
Transition Reason: Normal roam, poor link      Transition Result: Success
Thu Jun 22 11:55:14 2007    Roaming Response LogID=133: Status=Successful
Event Timestamp=0d 00h 00m 16s 599006us      Source BSSID=00:0b:85:81:06:c2
Target BSSID=00:0b:85:81:06:c2,      Transition Time=3235(ms)
Transition Reason: Normal roam, poor link      Transition Result: Success
Thu Jun 22 18:28:48 2007    Roaming Response LogID=133: Status=Successful
Event Timestamp=0d 00h 00m 08s 815477us      Source BSSID=00:0b:85:81:06:c2
Target BSSID=00:0b:85:81:06:d2,      Transition Time=3281(ms)
Transition Reason: First association to WLAN      Transition Result: Success
```

show client ccx manufacturer-info

To display the client manufacturing information, use the **show client ccx manufacturer-info** command.

show client ccx manufacturer-info *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx manufacturer-info** command:

```
(Cisco Controller) >show client ccx manufacturer-info 00:40:96:a8:f7:98
Manufacturer OUI ............................ 00:40:96
Manufacturer ID ............................. Cisco
Manufacturer Model .......................... Cisco Aironet 802.11a/b/g Wireless Adapter
Manufacturer Serial ......................... FOC1046N3SX
Mac Address ................................. 00:40:96:b2:8d:5e
Radio Type .................................. DSSS OFDM(802.11a) HRDSSS(802.11b)
  ERP(802.11g)
Antenna Type ................................ Omni-directional diversity
Antenna Gain ................................ 2 dBi
Rx Sensitivity:
Radio Type ..................................... DSSS
Rx Sensitivity ................................. Rate:1.0 Mbps, MinRssi:-95, MaxRss1:-30
Rx Sensitivity ................................. Rate:2.0 Mbps, MinRssi:-95, MaxRss1:-30
Radio Type ..................................... HRDSSS(802.11b)
Rx Sensitivity ................................. Rate:5.5 Mbps, MinRssi:-95, MaxRss1:-30
Rx Sensitivity ................................. Rate:11.0 Mbps, MinRssi:-95, MaxRss1:-30
Radio Type ..................................... ERP(802.11g)
Rx Sensitivity ................................. Rate:6.0 Mbps, MinRssi:-95, MaxRss1:-30
Rx Sensitivity ................................. Rate:9.0 Mbps, MinRssi:-95, MaxRss1:-30
Rx Sensitivity ................................. Rate:12.0 Mbps, MinRssi:-95, MaxRss1:-30
Rx Sensitivity ................................. Rate:18.0 Mbps, MinRss1:-95, MaxRss1:-30
```

show client ccx operating-parameters

To display the client operating-parameters, use the **show client ccx operating-parameters** command.

show client ccx operating-parameters *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx operating-parameters** command:

```
(Cisco Controller) >show client ccx operating-parameters 00:40:96:b2:8d:5e
Client Mac ..................................... 00:40:96:b2:8d:5e
Radio Type ..................................... OFDM(802.11a)
Radio Type ..................................... OFDM(802.11a)
 Radio Channels ............................... 36 40 44 48 52 56 60 64 100 104 108 112
116 120 124 128 132 136 140 149 153 157 161 165
 Tx Power Mode ............................... Automatic
 Rate List(MB)................................ 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0
Power Save Mode ............................... Normal Power Save
SSID ........................................... wifi
Security Parameters[EAP Method, Credential]......... None
Auth Method .................................... None
Key Management.................................. None
Encryption ..................................... None
Device Name .................................... Wireless Network Connection 15
Device Type .................................... 0
OS Id .......................................... Windows XP
OS Version ..................................... 5.1.6.2600 Service Pack 2
IP Type ........................................ DHCP address
IPv4 Address ................................... Available
IP Address ..................................... 70.0.4.66
Subnet Mask .................................... 255.0.0.0
Default Gateway ................................ 70.1.0.1
IPv6 Address ................................... Not Available
IPv6 Address ................................... 0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:
IPv6 Subnet Mask ............................... 0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:
DNS Servers .................................... 103.0.48.0
WINS Servers ...................................
System Name .................................... URAVAL3777
Firmware Version ............................... 4.0.0.187
Driver Version ................................. 4.0.0.187
```

show client ccx profiles

To display the client profiles, use the **show client ccx profiles** command.

show client ccx profiles *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx profiles** command:

```
(Cisco Controller) >show client ccx profiles 00:40:96:15:21:ac
Number of Profiles ................................ 1
Current Profile ................................... 1
Profile ID ........................................ 1
Profile Name ...................................... wifiEAP
SSID .............................................. wifiEAP
Security Parameters [EAP Method, Credential]......... EAP-TLS, Host OS Login Credentials
Auth Method ....................................... EAP
Key Management .................................... WPA2+CCKM
Encryption ........................................ AES-CCMP
Power Save Mode ................................... Constantly Awake
Radio Configuration:
Radio Type......................................... DSSS
 Preamble Type.................................... Long preamble
 CCA Method....................................... Energy Detect + Carrier
Detect/Correlation
 Data Retries..................................... 6
 Fragment Threshold............................... 2342
 Radio Channels................................... 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode.................................... Automatic
 Rate List (MB)................................... 1.0 2.0
Radio Type......................................... HRDSSS(802.11b)
 Preamble Type.................................... Long preamble
 CCA Method....................................... Energy Detect + Carrier
Detect/Correlation
 Data Retries..................................... 6
 Fragment Threshold............................... 2342
 Radio Channels................................... 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode.................................... Automatic
 Rate List(MB)....................................... 5.5 11.0
Radio Type......................................... ERP(802.11g)
 Preamble Type.................................... Long preamble
 CCA Method....................................... Energy Detect + Carrier
Detect/Correlation
 Data Retries..................................... 6
 Fragment Threshold............................... 2342
 Radio Channels................................... 1 2 3 4 5 6 7 8 9 10 11
 Tx Power Mode.................................... Automatic
 Rate List (MB)................................... 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0
Radio Type......................................... OFDM(802.11a)
 Preamble Type.................................... Long preamble
 CCA Method....................................... Energy Detect + Carrier
```

```
Detect/Correlation
 Data Retries..................................... 6
 Fragment Threshold............................... 2342
 Radio Channels................................... 36 40 44 48 52 56 60 64 149 153 157 161
 165
 Tx Power Mode.................................... Automatic
 Rate List (MB)................................... 6.0 9.0 12.0 18.0 24.0 36.0 48.0 54.0
```

show client ccx results

To display the results from the last successful diagnostic test, use the **show client ccx results** command.

show client ccx results *client_mac_address*

Syntax Description

client_mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx results** command:

```
(Cisco Controller) >show client ccx results xx.xx.xx.xx
dot1x Complete..................................... Success
EAP Method......................................... *1,Host OS Login Credentials
dot1x Status....................................... 255
```

show client ccx rm

To display Cisco Client eXtension (CCX) client radio management report information, use the **show client ccx rm** command.

show client ccx rm *client_MAC* {**status** | {**report** {**chan-load** | **noise-hist** | **frame** | **beacon** | **pathloss**} } }

Syntax Description

client_MAC	Client MAC address.
status	Displays the client CCX radio management status information.
report	Displays the client CCX radio management report.
chan-load	Displays radio management channel load reports.
noise-hist	Displays radio management noise histogram reports.
beacon	Displays radio management beacon load reports.
frame	Displays radio management frame reports.
pathloss	Displays radio management path loss reports.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the client radio management status information:

```
(Cisco Controller) >show client ccx rm 00:40:96:15:21:ac status

Client Mac Address............................... 00:40:96:15:21:ac
Channel Load Request............................. Enabled
Noise Histogram Request.......................... Enabled
Beacon Request................................... Enabled
Frame Request.................................... Enabled
Interval......................................... 30
Iteration........................................... 10
```

The following example shows how to display the client radio management load reports:

```
(Cisco Controller) >show client ccx rm 00:40:96:15:21:ac report chan-load

Channel Load Report
Client Mac Address............................... 00:40:96:ae:53:bc
Timestamp........................................ 788751121
Incapable Flag................................... On
Refused Flag..................................... On
Chan CCA Busy Fraction
-----------------------
1  194
```

```
2  86
3  103
4  0
5  178
6  82
7  103
8  95
9  13
10 222
11 75
```

The following example shows how to display the client radio management noise histogram reports:

```
(Cisco Controller) >show client ccx rm 00:40:96:15:21:ac report noise-hist

Noise Histogram Report
Client Mac Address............................. 00:40:96:15:21:ac
Timestamp...................................... 4294967295
Incapable Flag................................. Off
Refused Flag....................................... Off
Chan RPI0 RPI1 RPI2 RPI3 RPI4 RPI5 RPI6 RPI7
```

show client ccx stats-report

To display the Cisco Client eXtensions (CCX) statistics report from a specified client device, use the **show client ccx stats-report** command.

show client ccx stats-report *client_mac_address*

Syntax Description

client_mac_address	Client MAC address.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client ccx stats-report** command:

```
(Cisco Controller) > show client ccx stats-report 00:0c:41:07:33:a6
Measurement duration = 1
dot11TransmittedFragmentCount       = 1
dot11MulticastTransmittedFrameCount = 2
dot11FailedCount                    = 3
dot11RetryCount                     = 4
dot11MultipleRetryCount             = 5
dot11FrameDuplicateCount            = 6
dot11RTSSuccessCount                = 7
dot11RTSFailureCount                = 8
dot11ACKFailureCount                = 9
dot11ReceivedFragmentCount          = 10
dot11MulticastReceivedFrameCount    = 11
dot11FCSErrorCount                  = 12
dot11TransmittedFrameCount          = 13
```

show client detail

To display IP addresses per client learned through DNS snooping (DNS-based ACL), use the **show client detail** *mac_address* command.

show client detail *mac_address*

Syntax Description

mac_address	MAC address of the client.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced.

The following is a sample output of the **show client detail** *mac_address* command.

```
(Cisco Controller) > show client detail 01:35:6x:yy:21:00
 Client MAC Address............................... 01:35:6x:yy:21:00
Client Username ................................. test
AP MAC Address................................... 00:11:22:33:44:x0
AP Name.......................................... AP0011.2020.x111
AP radio slot Id................................. 1
Client State..................................... Associated
Client NAC OOB State............................. Access
Wireless LAN Id.................................. 7
Hotspot (802.11u)................................ Not Supported
BSSID............................................ 00:11:22:33:44:xx
Connected For ................................... 28 secs
Channel.......................................... 56
IP Address....................................... 10.0.0.1
Gateway Address.................................. Unknown
Netmask.......................................... Unknown
IPv6 Address..................................... xx20::222:6xyy:zeeb:2233
Association Id................................... 1
Authentication Algorithm......................... Open System
Reason Code...................................... 1
Status Code...................................... 0
Client CCX version............................... No CCX support
Re-Authentication Timeout........................ 1756
QoS Level........................................ Silver
Avg data Rate.................................... 0
Burst data Rate.................................. 0
Avg Real time data Rate.......................... 0
Burst Real Time data Rate........................ 0
802.1P Priority Tag.............................. disabled
CTS Security Group Tag........................... Not Applicable
KTS CAC Capability............................... No
WMM Support...................................... Enabled
```

```
  APSD ACs..................................  BK  BE  VI  VO
Power Save..................................... ON
Current Rate................................... m7
Supported Rates.................................
6.0,9.0,12.0,18.0,24.0,36.0,
    ............................................ 48.0,54.0
Mobility State................................. Local
Mobility Move Count............................ 0
Security Policy Completed...................... No
Policy Manager State........................... SUPPLICANT_PROVISIONING
Policy Manager Rule Created.................... Yes
AAA Override ACL Name.......................... android
AAA Override ACL Applied Status................ Yes
AAA Override Flex ACL Name..................... none
AAA Override Flex ACL Applied Status........... Unavailable
AAA URL redirect................................
https://10.0.0.3:8443/guestportal/gateway?sessionId=0a68aa72000000015272404e&action=nsp
Audit Session ID............................... 0a68aa72000000015272404e
AAA Role Type.................................. none
Local Policy Applied........................... p1
IPv4 ACL Name.................................. none
FlexConnect ACL Applied Status................. Unavailable
IPv4 ACL Applied Status........................ Unavailable
IPv6 ACL Name.................................. none
IPv6 ACL Applied Status........................ Unavailable
Layer2 ACL Name................................ none
Layer2 ACL Applied Status...................... Unavailable
Client Type.................................... SimpleIP
mDNS Status.................................... Enabled
mDNS Profile Name.............................. default-mdns-profile
No. of mDNS Services Advertised................ 0
Policy Type.................................... WPA2
Authentication Key Management.................. 802.1x
Encryption Cipher.............................. CCMP (AES)
Protected Management Frame ..................... No
Management Frame Protection.................... No
EAP Type....................................... PEAP
Interface.................................
.. management
VLAN........................................... 0
Quarantine VLAN................................ 0
Access VLAN.................................... 0
Client Capabilities:
      CF Pollable............................... Not implemented
      CF Poll Request........................... Not implemented
      Short Preamble............................ Not implemented
      PBCC...................................... Not implemented
      Channel Agility........................... Not implemented
      Listen Interval........................... 10
      Fast BSS Transition....................... Not implemented
Client Wifi Direct Capabilities:
```

```
      WFD capable................................. No
      Manged WFD capable.......................... No
      Cross Connection Capable.................... No
      Support Concurrent Operation............... No
Fast BSS Transition Details:
Client Statistics:
      Number of Bytes Received.................. 123659
      Number of Bytes Sent...................... 120564
      Number of Packets Received................ 1375
      Number of Packets Sent.................... 276
      Number of Interim-Update Sent............. 0
      Number of EAP Id Request Msg Timeouts...... 0
      Number of EAP Id Request Msg Failures...... 0
      Number of EAP Request Msg Timeouts......... 2
      Number of EAP Request Msg Failures......... 0
      Number of EAP Key Msg Timeouts............. 0
      Number of EAP Key Msg Failures............. 0
      Number of Data Retries..................... 82
      Number of RTS Retries...................... 0
      Number of Duplicate Received Packets....... 0
      Number of Decrypt Failed Packets........... 0
      Number of Mic Failured Packets............. 0
      Number of Mic Missing Packets.............. 0
      Number of RA Packets Dropped............... 0
      Number of Policy Errors.................... 0
      Radio Signal Strength Indicator............ -51 dBm
      Signal to Noise Ratio...................... 46 dB
Client Rate Limiting Statistics:
      Number of Data Packets Recieved............ 0
      Number of Data Rx Packets Dropped.......... 0
      Number of Data Bytes Recieved.............. 0
      Number of Data Rx Bytes Dropped............ 0
      Number of Realtime Packets Recieved........ 0
      Number of Realtime Rx Packets Dropped...... 0
      Number of Realtime Bytes Recieved.......... 0
      Number of Realtime Rx Bytes Dropped........ 0
      Number of Data Packets Sent................ 0
      Number of Data Tx Packets Dropped.......... 0
      Number of Data Bytes Sent.................. 0
      Number of Data Tx Bytes Dropped............ 0
      Number of Realtime Packets Sent............ 0
      Number of Realtime Tx Packets Dropped...... 0
      Number of Realtime Bytes Sent.............. 0
      Number of Realtime Tx Bytes Dropped........ 0
Nearby AP Statistics:
      AP0022.9090.c545(slot 0)
        antenna0: 26 secs ago.................... -33 dBm
        antenna1: 26 secs ago.................... -35 dBm
      AP0022.9090.c545(slot 1)
        antenna0: 25 secs ago.................... -41 dBm
        antenna1: 25 secs ago.................... -44 dBm
```

```
      APc47d.4f3a.35c2(slot 0)
        antenna0: 26 secs ago..................... -30 dBm
        antenna1: 26 secs ago..................... -36 dBm
      APc47d.4f3a.35c2(slot 1)
        antenna0: 24 secs ago..................... -43 dBm
        antenna1: 24 secs ago..................... -45 dBm
DNS Server details:
      DNS server IP ............................ 0.0.0.0
      DNS server IP ............................ 0.0.0.0

Client Dhcp Required:     False
Allowed (URL)IP Addresses
-------------------------
209.165.200.225
209.165.200.226
209.165.200.227
209.165.200.228
209.165.200.229
209.165.200.230
209.165.200.231
209.165.200.232
209.165.200.233
209.165.200.234
209.165.200.235
209.165.200.236
209.165.200.237
209.165.200.238
209.165.201.1
209.165.201.2
209.165.201.3
209.165.201.4
209.165.201.5
209.165.201.6
209.165.201.7
209.165.201.8
209.165.201.9
209.165.201.10
```

show client location-calibration summary

To display client location calibration summary information, use the **show client location-calibration summary** command.

show client location-calibration summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the location calibration summary information:

```
(Cisco Controller) >show client location-calibration summary
MAC Address Interval
----------- ----------
10:10:10:10:10:10 60
21:21:21:21:21:21 45
```

show client probing

To display the number of probing clients, use the **show client probing** command.

show client probing

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the number of probing clients:

```
(Cisco Controller) >show client probing
Number of Probing Clients..................... 0
```

show client roam-history

To display the roaming history of a specified client, use the **show client roam-history** command.

show client roam-history *mac_address*

Syntax Description

mac_address	Client MAC address.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

This command provides the following information:

- The time when the report was received
- The MAC address of the access point to which the client is currently associated
- The MAC address of the access point to which the client was previously associated
- The channel of the access point to which the client was previously associated
- The SSID of the access point to which the client was previously associated
- The time when the client disassociated from the previous access point
- The reason for the client roam

Note For non-CCXv4 clients, the Layer 2 roam reason is not displayed in the command output. For more information, see CSCvv85022.

Examples

The following is a sample output of the **show client roam-history** command:

```
(Cisco Controller) > show client roam-history 00:14:6c:0a:57:77
```

show client summary

To display a summary of clients associated with a Cisco lightweight access point, use the **show client summary** command.

show client summary [*ssid / ip / username / devicetype*]

Syntax Description

This command has no arguments or keywords up to Release 7.4.

Syntax Description

ssid / ip / username / devicetype	(Optional) Displays active clients selective details on any of the following parameters or all the parameters in any order: • SSID • IP addresss • Username • Device type (such as Samsung-Device or WindowsXP-Workstation)

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

Use **show client ap** command to list the status of automatically disabled clients. Use the **show exclusionlist** command to display clients on the exclusion list.

The following example shows how to display a summary of the active clients:

```
(Cisco Controller) > show client summary
Number of Clients............................... 24
Number of PMIPV6 Clients........................ 200
MAC Address       AP Name           Status        WLAN/GLAN/RLAN Auth Protocol         Port
 Wired  PMIPV6
----------------- ----------------- ------------- -------------- ---- ---------------- ----
 -----  ------

00:00:15:01:00:01 NMSP-TalwarSIM1-2 Associated    1              Yes  802.11a          13
  No      Yes
00:00:15:01:00:02 NMSP-TalwarSIM1-2 Associated    1              Yes  802.11a          13
  No      No
00:00:15:01:00:03 NMSP-TalwarSIM1-2 Associated    1              Yes  802.11a          13
  No      Yes
00:00:15:01:00:04 NMSP-TalwarSIM1-2 Associated    1              Yes  802.11a          13
  No      No
```

The following example shows how to display all clients that are WindowsXP-Workstation device type:

```
(Cisco Controller) >show client summary WindowsXP-Workstation
Number of Clients in WLAN....................... 0
```

```
MAC Address       AP Name    Status        Auth Protocol         Port Wired Mobility Role

----------------- -------- ------------- ----------------        ---------- --------------

Number of Clients with requested device type..... 0
```

show client summary guest-lan

To display the active wired guest LAN clients, use the **show client summary guest-lan** command.

show client summary guest-lan

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client summary guest-lan** command:

```
(Cisco Controller) > show client summary guest-lan
Number of Clients.............................. 1
MAC Address       AP Name      Status         WLAN  Auth   Protocol  Port Wired
-----------       ---------    ----------     ----  ----   --------  ---- -----
00:16:36:40:ac:58  N/A         Associated        1    No      802.3     1   Yes
```

Related Commands

show client summary

show client tsm

To display the client traffic stream metrics (TSM) statistics, use the **show client tsm** command.

show client tsm 802.11 {**a** | **b**} *client_mac* {*ap_mac* | **all**}

Syntax Description

802.11a	Specifies the 802.11a network.
802.11b	Specifies the 802.11 b/g network.
client_mac	MAC address of the client.
ap_mac	MAC address of the tsm access point.
all	Specifies the list of all access points to which the client has associations.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client tsm 802.11a** command:

```
(Cisco Controller) > show client tsm 802.11a xx:xx:xx:xx:xx:xx all
AP Interface MAC: 00:0b:85:01:02:03
Client Interface Mac:               00:01:02:03:04:05
Measurement Duration:               90 seconds
  Timestamp                           1st Jan 2006, 06:35:80
    UpLink Stats
    ================
       Average Delay (5sec intervals)............................35
       Delay less than 10 ms.....................................20
       Delay bet 10 - 20 ms......................................20
       Delay bet 20 - 40 ms......................................20
       Delay greater than 40 ms..................................20
      Total packet Count........................................80
      Total packet lost count (5sec)............................10
      Maximum Lost Packet count(5sec)............................5
      Average Lost Packet count(5secs)...........................2
    DownLink Stats
    ================
       Average Delay (5sec intervals)............................35
       Delay less than 10 ms.....................................20
       Delay bet 10 - 20 ms......................................20
       Delay bet 20 - 40 ms......................................20
       Delay greater than 40 ms..................................20
      Total packet Count........................................80
      Total packet lost count (5sec)............................10
      Maximum Lost Packet count(5sec)............................5
      Average Lost Packet count(5secs)...........................2
```

Related Commands

show client ap

show client detail

show client summary

show client username

To display the client data by the username, use the **show client username** command.

show client username *username*

Syntax Description

username	Client's username. You can view a list of the first eight clients that are in RUN state associated to controller's access points.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client username** command:

```
(Cisco Controller) > show client username local

MAC Address        AP Name            Status         WLAN  Auth  Protocol          Port
Device Type
-----------------  -----------------  -------------  ----  ----  ----------------  ----
-----------

12:22:64:64:00:01  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:02  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:03  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:04  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:05  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:06  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:07  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
12:22:64:64:00:08  WEB-AUTH-AP-1      Associated     1     Yes   802.11g            1
Unknown
```

show client voice-diag

To display voice diagnostics statistics, use the **show client voice-diag** command.

show client voice-diag {**quos-map** | **roam-history** | **rssi** | **status** | **tspec**}

Syntax Description

quos-map	Displays information about the QoS/DSCP mapping and packet statistics in each of the four queues: VO, VI, BE, BK. The different DSCP values are also displayed.
roam-history	Displays information about history of the last three roamings. The output contains the timestamp, access point associated with the roaming, the roaming reason, and if there is a roaming failure, the reason for the roaming failure.
rssi	Displays the client's RSSI values in the last 5 seconds when voice diagnostics are enabled.
status	Displays the status of voice diagnostics for clients.
tspec	Displays TSPEC for the voice diagnostic for clients.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show client voice-diag status** command:

```
(Cisco Controller) > show client voice-diag status
Voice Diagnostics Status: FALSE
```

Related Commands

show client ap

show client detail

show client summary

debug voice-diag

show client wlan

To display the summary of clients associated with a WLAN, use the **show client wlan** command.

show client wlan *wlan_id* [**devicetype** *device*]

Syntax Description

wlan_id	Wireless LAN identifier from 1 to 512.
devicetype	(Optional) Displays all clients with the specified device type.
device	Device type. For example, Samsung-Device or WindowsXP-Workstation.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following are sample outputs of the **show client wlan** command:

```
(Cisco Controller) > show client wlan 1

Number of Clients in WLAN....................... 0


(Cisco Controller) > show client devicetype WindowsXP-Workstation

Number of Clients in WLAN....................... 0

MAC Address       AP Name    Status        Auth Protocol         Port Wired Mobility Role

----------------- -------- ------------- ----------------        ---------- --------------

Number of Clients with requested device type..... 0
```

show cloud-services cmx summary

To view the cmx cloud services summary, use the **show cloud-services cmx summary** command.

show cloud-services cmx summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
8.3	This command was introduced.

This example shows the CMX Cloud Services summary:

```
(Cisco Controller) >show cloud-services cmx summary
```

show cloud-services cmx statistics

To view the cmx cloud services statistics, use the **show cloud-services cmx statistics** command.

show cloud-services cmx statistics

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
8.3	This command was introduced.

This example shows the CMX Cloud Services statistics:

```
(Cisco Controller) >show cloud-services cmx statistics
```

show coredump summary

To display a summary of the controller's core dump file, use the **show coredump summary** command.

show coredump summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show coredump summary** command:

```
(Cisco Controller) > show coredump summary
Core Dump is enabled
FTP Server IP..................................... 10.10.10.17
FTP Filename...................................... file1
FTP Username...................................... ftpuser
FTP Password................................... *********
```

Related Commands

config coredump

config coredump ftp

config coredump username

show country

To display the configured country and the radio types that are supported, use the **show country** command.

show country

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the configured countries and supported radio types:

```
(Cisco Controller) >show country
Configured Country............................ United States
Configured Country Codes
US  - United States........................... 802.11a / 802.11b / 802.11g
```

show country channels

To display the radio channels supported in the configured country, use the **show country channels** command.

show country channels

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the auto-RF channels for the configured countries:

```
(Cisco Controller) >show country channels
Configured Country............................ United States
      KEY: * = Channel is legal in this country and may be configured manually.
Configured Country............................ United States
      KEY: * = Channel is legal in this country and may be configured manually.
           A = Channel is the Auto-RF default in this country.
           . = Channel is not legal in this country.
           C = Channel has been configured for use by Auto-RF.
           x = Channel is available to be configured for use by Auto-RF.
---------:+-+-+-+-+-+-+-+-+-+-+-+-+-+-
802.11BG :
Channels :                   1 1 1 1 1
         : 1 2 3 4 5 6 7 8 9 0 1 2 3 4
---------:+-+-+-+-+-+-+-+-+-+-+-+-+-+-
     US  : A * * * * A * * * * A . . .
---------:+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
 802.11A :  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Channels : 3 3 3 4 4 4 4 4 5 5 6 6 0 0 0 1 1 2 2 2 3 3 4 4 5 5 6 6
         : 4 6 8 0 2 4 6 8 2 6 0 4 0 4 8 2 6 0 4 8 2 6 0 9 3 7 1 5
---------:+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
     US  : . A . A . A . A A A A A * * * * * . . . * * * A A A A *
---------:+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
```

show country supported

To display a list of the supported country options, use the **show country supported** command.

show country supported

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a list of all the supported countries:

```
(Cisco Controller) >show country supported
Configured Country............................ United States
Supported Country Codes
AR  - Argentina................................ 802.11a / 802.11b / 802.11g
AT  - Austria.................................. 802.11a / 802.11b / 802.11g
AU  - Australia................................ 802.11a / 802.11b / 802.11g
BR  - Brazil................................... 802.11a / 802.11b / 802.11g
BE  - Belgium.................................. 802.11a / 802.11b / 802.11g
BG  - Bulgaria................................. 802.11a / 802.11b / 802.11g
CA  - Canada................................... 802.11a / 802.11b / 802.11g
CH  - Switzerland.............................. 802.11a / 802.11b / 802.11g
CL  - Chile.................................           802.11b / 802.11g
CN  - China.................................... 802.11a / 802.11b / 802.11g
CO  - Colombia..............................           802.11b / 802.11g
CY  - Cyprus................................... 802.11a / 802.11b / 802.11g
CZ  - Czech Republic........................... 802.11a / 802.11b
DE  - Germany.................................. 802.11a / 802.11b / 802.11g
DK  - Denmark.................................. 802.11a / 802.11b / 802.11g
EE  - Estonia.................................. 802.11a / 802.11b / 802.11g
ES  - Spain.................................... 802.11a / 802.11b / 802.11g
FI  - Finland.................................. 802.11a / 802.11b / 802.11g
FR  - France................................... 802.11a / 802.11b / 802.11g
GB  - United Kingdom........................... 802.11a / 802.11b / 802.11g
GI  - Gibraltar................................ 802.11a / 802.11b / 802.11g
GR  - Greece................................... 802.11a / 802.11b / 802.11g
HK  - Hong Kong................................ 802.11a / 802.11b / 802.11g
HU  - Hungary.................................. 802.11a / 802.11b / 802.11g
ID  - Indonesia............................           802.11b / 802.11g
IE  - Ireland.................................. 802.11a / 802.11b / 802.11g
IN  - India.................................... 802.11a / 802.11b / 802.11g
IL  - Israel................................... 802.11a / 802.11b / 802.11g
ILO - Israel (outdoor)......................           802.11b / 802.11g
IS  - Iceland.................................. 802.11a / 802.11b / 802.11g
IT  - Italy.................................... 802.11a / 802.11b / 802.11g
JP  - Japan (J)................................ 802.11a / 802.11b / 802.11g
J2  - Japan 2(P)............................... 802.11a / 802.11b / 802.11g
J3  - Japan 3(U)............................... 802.11a / 802.11b / 802.11g
KR  - Korea Republic (C)....................... 802.11a / 802.11b / 802.11g
KE  - Korea Extended (K)....................... 802.11a / 802.11b / 802.11g
LI  - Liechtenstein............................ 802.11a / 802.11b / 802.11g
```

```
LT  - Lithuania................................ 802.11a / 802.11b / 802.11g
LU  - Luxembourg............................... 802.11a / 802.11b / 802.11g
LV  - Latvia................................... 802.11a / 802.11b / 802.11g
MC  - Monaco................................... 802.11a / 802.11b / 802.11g
MT  - Malta.................................... 802.11a / 802.11b / 802.11g
MX  - Mexico................................... 802.11a / 802.11b / 802.11g
MY  - Malaysia................................. 802.11a / 802.11b / 802.11g
NL  - Netherlands.............................. 802.11a / 802.11b / 802.11g
NZ  - New Zealand.............................. 802.11a / 802.11b / 802.11g
NO  - Norway................................... 802.11a / 802.11b / 802.11g
PA  - Panama...................................           802.11b / 802.11g
PE  - Peru.....................................           802.11b / 802.11g
PH  - Philippines.............................. 802.11a / 802.11b / 802.11g
PL  - Poland................................... 802.11a / 802.11b / 802.11g
PT  - Portugal................................. 802.11a / 802.11b / 802.11g
RU  - Russian Federation....................... 802.11a / 802.11b / 802.11g
RO  - Romania.................................. 802.11a / 802.11b / 802.11g
SA  - Saudi Arabia............................. 802.11a / 802.11b / 802.11g
SE  - Sweden................................... 802.11a / 802.11b / 802.11g
SG  - Singapore................................ 802.11a / 802.11b / 802.11g
SI  - Slovenia................................. 802.11a / 802.11b / 802.11g
SK  - Slovak Republic.......................... 802.11a / 802.11b / 802.11g
TH  - Thailand...................................           802.11b / 802.11g
TR  - Turkey...................................           802.11b / 802.11g
TW  - Taiwan................................... 802.11a / 802.11b / 802.11g
UA  - Ukraine.................................. 802.11a / 802.11b / 802.11g
US  - United States............................ 802.11a / 802.11b / 802.11g
USL - United States (Legacy)................... 802.11a / 802.11b / 802.11g
USX - United States (US + chan165)............. 802.11a / 802.11b / 802.11g
VE  - Venezuela................................           802.11b / 802.11g
ZA  - South Africa............................. 802.11a / 802.11b / 802.11g
```

show cpu

To display current WLAN controller CPU usage information, use the **show cpu** command.

show cpu

Syntax Description

This command has no arguments or keywords.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show cpu** command:

```
(Cisco Controller) > show cpu
Current CPU load: 2.50%
```

show custom-web

To display all the web authentication customization information, use the command.

Syntax Description

all	Display all Web-Auth customization information.
remote-lan	Display per WLAN Web-Auth customization information.
guest-lan	Display per Guest LAN Web-Auth customization information.
sleep-client	Display all Web-Auth Sleeping Client entries summary.
webauth-bundle	Display the content of Web-Auth Bundle.
wlan	Display per WLAN Web-Auth customization information.

Command History

Release	Modification
7.6	This command was introduced in the release earlier than 7.6.
8.2	This command was modified and the all, remote-lan, guest-lan, sleep-client, webauth-bundle, and wlan keywords are added.

The following is a sample output of the command:

```
(Cisco Controller) > show custom-web all
Radius Authentication Method..................... PAP
Cisco Logo....................................... Enabled
CustomLogo....................................... None
Custom Title..................................... None
Custom Message................................... None
Custom Redirect URL.............................. None
Web Authentication Type.......................... Internal Default
Logout-popup..................................... Enabled
External Web Authentication URL.................. None
```

show database summary

To display the maximum number of entries in the database, use the **show database summary** command.

show database summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

The following is a sample output of the **show database summary** command:

```
(Cisco Controller) > show database summary
Maximum Database Entries....................... 2048
Maximum Database Entries On Next Reboot........ 2048
Database Contents
    MAC Filter Entries......................... 2
    Exclusion List Entries..................... 0
    AP Authorization List Entries.............. 1
    Management Users........................... 1
    Local Network Users........................ 1
        Local Users............................ 1
        Guest Users............................ 0
    Total.................................... 5
```

Related Commands

config database size

show dhcp

To display the internal Dynamic Host Configuration Protocol (DHCP) server configuration, use the **show dhcp** command.

show dhcp {**leases** | **summary** | *scope*}

Syntax Description

leases	Displays allocated DHCP leases.
summary	Displays DHCP summary information.
scope	Name of a scope to display the DHCP information for that scope.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the allocated DHCP leases:

```
(Cisco Controller) >show dhcp leases
No leases allocated.
```

The following example shows how to display the DHCP summary information:

```
(Cisco Controller) >show dhcp summary
Scope Name           Enabled           Address Range
003                    No            0.0.0.0 -> 0.0.0.0
```

The following example shows how to display the DHCP information for the scope 003:

```
(Cisco Controller) >show dhcp 003
Enabled..................................... No
Lease Time.................................. 0
Pool Start.................................. 0.0.0.0
Pool End.................................... 0.0.0.0
Network..................................... 0.0.0.0
Netmask..................................... 0.0.0.0
Default Routers............................. 0.0.0.0 0.0.0.0 0.0.0.0
DNS Domain..................................
DNS......................................... 0.0.0.0 0.0.0.0 0.0.0.0
Netbios Name Servers........................ 0.0.0.0 0.0.0.0 0.0.0.0
```

show dhcp proxy

To display the status of DHCP proxy handling, use the **show dhcp proxy** command.

show dhcp proxy

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the status of DHCP proxy information:

```
(Cisco Controller) >show dhcp proxy

DHCP Proxy Behavior: enabled
```

show dhcp timeout

To display the DHCP timeout value, use the **show dhcp timeout** command.

show dhcp timeout

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the DHCP timeout value:

```
(Cisco Controller) >show dhcp timeout

DHCP Timeout (seconds)................. 10
```

show dtls connections

To display the Datagram Transport Layer Security (DTLS) server status, use the **show dtls connections** command.

show dtls connections

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show dtls connections** command.

```
Device > show dtls connections

AP Name         Local Port    Peer IP         Peer Port     Ciphersuite
--------------- ------------- --------------- ------------- -----------------------
1130            Capwap_Ctrl   1.100.163.210   23678         TLS_RSA _WITH_AES_128_CBC_SHA
1130            Capwap_Data   1.100.163.210   23678         TLS_RSA _WITH_AES_128_CBC_SHA
1240            Capwap_Ctrl   1.100.163.209   59674         TLS_RSA _WITH_AES_128_CBC_SHA
```

show exclusionlist

To display a summary of all clients on the manual exclusion list from associating with the controller, use the **show exclusionlist** command.

show exclusionlist

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

This command displays all manually excluded MAC addresses.

The following example shows how to display the exclusion list:

```
(Cisco Controller) > show exclusionlist
No manually disabled clients.
Dynamically Disabled Clients
----------------------------
  MAC Address             Exclusion Reason        Time Remaining (in secs)
  -----------             ----------------        ------------------------
00:40:96:b4:82:55         802.1X Failure           51
```

Related Commands

config exclusionlist

show flexconnect acl detailed

To display a detailed summary of FlexConnect access control lists, use the **show flexconnect acl detailed** command.

show flexconnect acl detailed *acl-name*

Syntax Description

acl-name	Name of the access control list.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the FlexConnect detailed ACLs:

```
(Cisco Controller) >show flexconnect acl detailed acl-2
```

show flexconnect acl summary

To display a summary of all access control lists on FlexConnect access points, use the **show flexconnect acl summary** command.

show flexconnect acl summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the FlexConnect ACL summary:

```
(Cisco Controller) >show flexconnect acl summary
ACL Name                          Status
-------------------------------- -------
acl1                             Modified
acl10                            Modified
acl100                           Modified
acl101                           Modified
acl102                           Modified
acl103                           Modified
acl104                           Modified
acl105                           Modified
acl106                           Modified
```

show flexconnect group detail

To display details of a FlexConnect group, use the **show flexconnect group detail** command.

show flexconnect group detail *group_name* [**module-vlan** | **aps**]

Syntax Description

group_name	Name of the FlexConnect group.
module-vlan	Displays status of the FlexConnect local switching and VLAN ID in the group
aps	Displays list of APs that are part of the FlexConnect group

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.1	The **module-vlan** and **aps** parameters were added.

The following example shows how to display the detailed information for a specific FlexConnect group:

```
(Cisco Controller) >show flexconnect group detail myflexgroup
Number of Ap's in Group:  1
00:0a:b8:3b:0b:c2   AP1200    Joined
Group Radius Auth Servers:
 Primary Server Index ..................... Disabled
 Secondary Server Index ................... Disabled
```

show flexconnect group summary

To display the current list of FlexConnect groups, use the **show flexconnect group summary** command.

show flexconnect group summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the current list of FlexConnect groups:

```
(Cisco Controller) >show flexconnect group summary
flexconnect Group Summary:  Count 1
Group Name        # APs
Group 1       1
```

show flexconnect office-extend

To view information about OfficeExtend access points that in FlexConnect mode, use the **show flexconnect office-extend** command.

show flexconnect office-extend {**summary** | **latency**}

Syntax Description

summary	Displays a list of all OfficeExtend access points.
latency	Displays the link delay for OfficeExtend access points.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display information about the list of FlexConnect OfficeExtend access points:

```
(Cisco Controller) >show flexconnect office-extend summary
Summary of OfficeExtend AP
AP Name            Ethernet MAC       Encryption  Join-Mode   Join-Time
------------------ -----------------  ----------  ----------- ----------
AP1130             00:22:90:e3:37:70   Enabled    Latency     Sun Jan 4 21:46:07 2009
AP1140             01:40:91:b5:31:70   Enabled    Latency     Sat Jan 3 19:30:25 2009
```

The following example shows how to display the FlexConnect OfficeExtend access point's link delay:

```
(Cisco Controller) >show flexconnect office-extend latency
Summary of OfficeExtend AP link latency
AP Name              Status  Current   Maximum   Minimum
-----------------------------------------------------------------------------
AP1130               Enabled 15 ms      45 ms     12 ms
AP1140               Enabled 14 ms     179 ms     12 ms
```

show flow exporter

To display the details or the statistics of the flow exporter, use the **show flow exporter** command.

show flow exporter {**summary** | **statistics**}

Syntax Description

summary	Displays a summary of the flow exporter.
statistics	Displays the statistics of flow exporters such as the number of records sent, or the time when the last record was sent.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following is a sample output of the **show flow exporter summary** command:

```
(Cisco Controller) > show flow exporter summary
 Exporter-Name            Exporter-IP     Port
  =============            ===========     =====
  expo1                    9.9.120.115       800
```

show flow monitor summary

To display the details of the NetFlow monitor, use the **show flow monitor summary** command.

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

Netflow record monitoring and export are used for integration with an NMS or any Netflow analysis tool.

The following is a sample output of the **show flow monitor summary**:

```
(Cisco Controller) > show flow monitor summary
Monitor-Name             Exporter-Name            Exporter-IP      Port  Record Name
============             =============            ===========      ====  ===========
 mon1                     expo1                   9.9.120.115     800
ipv4_client_app_flow_record
```

show guest-lan

To display the configuration of a specific wired guest LAN, use the **show guest-lan** command.

show guest-lan *guest_lan_id*

Syntax Description

guest_lan_id	ID of the selected wired guest LAN.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

To display all wired guest LANs configured on the controller, use the **show guest-lan summary** command.

The following is a sample output of the **show guest-lan** *guest_lan_id* command:

```
(Cisco Controller) >show guest-lan 2
Guest LAN Identifier.......................... 1
Profile Name.................................. guestlan
Network Name (SSID)........................... guestlan
Status........................................ Enabled
AAA Policy Override........................... Disabled
Number of Active Clients...................... 1
Exclusionlist Timeout......................... 60 seconds
Session Timeout............................... Infinity
Interface..................................... wired
Ingress Interface............................. wired-guest
WLAN ACL...................................... unconfigured
DHCP Server................................... 10.20.236.90
DHCP Address Assignment Required............... Disabled
Quality of Service............................ Silver (best effort)
Security
 Web Based Authentication.................. Enabled
 ACL....................................... Unconfigured
 Web-Passthrough........................... Disabled
 Conditional Web Redirect.................. Disabled
 Auto Anchor............................... Disabled
Mobility Anchor List
GLAN ID IP Address Status
```

show ike

To display active Internet Key Exchange (IKE) security associations (SAs), use the **show ike** command.

show ike {**brief** | **detailed**} *IP_or_MAC_address*

Syntax Description

brief	Displays a brief summary of all active IKE SAs.
detailed	Displays a detailed summary of all active IKE SAs.
IP_or_MAC_address	IP or MAC address of active IKE SA.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the active Internet Key Exchange security associations:

```
(Cisco Controller) > show ike brief 209.165.200.254
```

show interface summary

To display summary details of the system interfaces, use the **show interface summary** command.

show interface summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.0	This command was updated and displays IPv6 related details

The following example displays the summary of the local IPv4 interfaces:

```
(Cisco Controller) > show interface summary
Number of Interfaces..........................  6

Interface Name                   Port Vlan Id  IP Address      Type    Ap Mgr Guest
-------------------------------- ---- -------- --------------- ------- ------ -----
dyn59                            LAG  59       9.10.59.66      Dynamic No     No
management                       LAG  56       9.10.56.60      Static  Yes    No
redundancy-management            LAG  56       0.0.0.0         Static  No     No
redundancy-port                  -    untagged 0.0.0.0         Static  No     No
service-port                     N/A  N/A      2.2.2.2         Static  No     No
virtual                          N/A  N/A      1.2.3.4         Static  No     No
```

The following example displays the summary of the local IPv6 interfaces:

```
show ipv6 interface summary
Number of Interfaces..........................  2

Interface Name          Port Vlan Id  IPv6 Address/Prefix Length
----------------------- ---- -------- -------------------------------------------
management               LAG  56                     fe80::224:97ff:fe69:69af/64
                         LAG  56                             2001:9:10:56::60/64
service-port             N/A  N/A                    fe80::224:97ff:fe69:69a1/64
                         N/A  N/A                                          ::/128
```

show interface detailed

To display details of the system interfaces, use the **show interface** command.

show interfacedetailed {*interface_name* | **management** | **redundancy-management** | **redundancy-port** | **service-port** | **virtual**}

Syntax Description

detailed	Displays detailed interface information.
interface_name	Interface name for detailed display.
management	Displays detailed management interface information.
redundancy-management	Displays detailed redundancy management interface information.
redundancy-port	Displays detailed redundancy port information.
service-port	Displays detailed service port information.
virtual	Displays detailed virtual gateway interface information.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.0	This command was updated in Release 8.0 and displays IPv6 related details

The following example shows how to display the detailed interface information:

```
(Cisco Controller) > show interface detailed management

Interface Name..................................... management
MAC Address........................................ 00:24:97:69:69:af
IP Address......................................... 9.10.56.60
IP Netmask......................................... 255.255.255.0
IP Gateway......................................... 9.10.56.1
External NAT IP State............................ Disabled
External NAT IP Address......................... 0.0.0.0
Link Local IPv6 Address......................... fe80::224:97ff:fe69:69af/64
STATE ............................................ REACHABLE
Primary IPv6 Address............................ 2001:9:10:56::60/64
STATE ............................................ REACHABLE
Primary IPv6 Gateway............................ fe80::aea0:16ff:fe4f:2242
Primary IPv6 Gateway Mac Address................ ac:a0:16:4f:22:42
STATE ............................................ REACHABLE
VLAN............................................ 56
Quarantine-vlan................................. 0
NAS-Identifier.................................. Building1
```

```
Active Physical Port............................ LAG (13)
Primary Physical Port........................... LAG (13)
Backup Physical Port............................ Unconfigured
DHCP Proxy Mode................................. Global
Primary DHCP Server............................. 9.1.0.100
Secondary DHCP Server........................... Unconfigured
DHCP Option 82.................................. Disabled
DHCP Option 82 bridge mode insertion............ Disabled
IPv4 ACL........................................ Unconfigured
IPv6 ACL........................................ Unconfigured
mDNS Profile Name............................... Unconfigured
AP Manager...................................... Yes
Guest Interface................................. No
L2 Multicast.................................... Enabled
```

Note Some WLAN controllers may have only one physical port listed because they have only one physical port.

The following example shows how to display the detailed redundancy management interface information:

```
(Cisco Controller) > show interface detailed redundancy-management
Interface Name................................. redundancy-management
MAC Address.................................... 88:43:e1:7e:0b:20
IP Address..................................... 209.165.201.2
```

The following example shows how to display the detailed redundancy port information:

```
(Cisco Controller) > show interface detailed redundancy-port
Interface Name................................. redundancy-port
MAC Address.................................... 88:43:e1:7e:0b:22
IP Address..................................... 169.254.120.5
```

The following example shows how to display the detailed service port information:

```
(Cisco Controller) > show interface detailed service-port
Interface Name................................. redundancy-port
MAC Address.................................... 88:43:e1:7e:0b:22
IP Address..................................... 169.254.120.5
```

The following example shows how to display the detailed virtual gateway interface information:

```
(Cisco Controller) > show interface detailed virtual
Interface Name................................. virtual
MAC Address.................................... 88:43:e1:7e:0b:20
IP Address..................................... 192.0.2.1
Virtual DNS Host Name.......................... Disabled
AP Manager..................................... No
Guest Interface................................ No
```

show interface group

To display details of system interface groups, use the **show interface group** command.

show interface group {**summary** | **detailed** *interface_group_name*}

Syntax Description

summary	Displays a summary of the local interface groups.
detailed	Displays detailed interface group information.
interface_group_name	Interface group name for a detailed display.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a summary of local interface groups:

```
(Cisco Controller) > show interface group summary
Interface Group Name    Total Interfaces   Total WLANs     Total AP
Groups     Quarantine
--------------------   ----------------   ---------     --------------      ---------
mygroup1                   1              0                 0              No
mygroup2                   1              0                 0              No
mygroup3                   5              1                 0              No
```

The following example shows how to display the detailed interface group information:

```
(Cisco Controller) > show interface group detailed mygroup1
Interface Group Name............................ mygroup1
Quarantine ..................................... No
Number of Wlans using the Interface Group........ 0
Number of AP Groups using the Interface Group.... 0
Number of Interfaces Contained................... 1
mDNS Profile Name............................... NCS12Prof
Interface Group Description...................... My Interface Group
Next interface for allocation to client.......... testabc
Interfaces Contained in this group .............. testabc
Interface marked with * indicates DHCP dirty interface
Interface list sorted based on vlan:

Index  Vlan     Interface Name
-----  ----    --------------------------------
```

```
0        42       testabc
```

show invalid-config

To see any ignored commands or invalid configuration values in an edited configuration file, use the **show invalid-config** command.

show invalid-config

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

You can enter this command only before the **clear config** or **save config** command.

The following is a sample output of the **show invalid-config** command:

```
(Cisco Controller) > show invalid-config
config wlan peer-blocking drop 3
config wlan dhcp_server 3 192.168.0.44 required
```

show inventory

To display a physical inventory of the Cisco wireless LAN controller, use the **show inventory** command.

show inventory

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

Some wireless LAN controllers may have no crypto accelerator (VPN termination module) or power supplies listed because they have no provisions for VPN termination modules or power supplies.

The following is a sample output of the **show inventory** command:

```
(Cisco Controller) > show inventory
Burned-in MAC Address........................... 50:3D:E5:1A:31:A0
Power Supply 1................................. Present, OK
Power Supply 2................................. Absent
Maximum number of APs supported................. 500
NAME: "Chassis"    , DESCR: "Cisco 5500 Series Wireless LAN Controller"
PID: AIR-CT5508-K9,  VID: V01,  SN: XXXXXXXXXXX
```

show IPsec

To display active Internet Protocol Security (IPsec) security associations (SAs), use the **show IPsec** command.

show IPsec {**brief** | **detailed**} *IP_or_MAC_address*

Syntax Description

brief	Displays a brief summary of active IPsec SAs.
detailed	Displays a detailed summary of active IPsec SAs.
IP_or_MAC_address	IP address or MAC address of a device.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display brief information about the active Internet Protocol Security (IPsec) security associations (SAs):

```
(Cisco Controller) > show IPsec brief 209.165.200.254
```

Related Commands

config radius acct ipsec authentication

config radius acct ipsec disable

config radius acct ipsec enable

config radius acct ipsec encryption

config radius auth IPsec encryption

config radius auth IPsec authentication

config radius auth IPsec disable

config radius auth IPsec encryption

config radius auth IPsec ike

config trapflags IPsec

config wlan security IPsec disable

config wlan security IPsec enable

config wlan security IPsec authentication

config wlan security IPsec encryption

config wlan security IPsec config

config wlan security IPsec ike authentication

config wlan security IPsec ike dh-group

config wlan security IPsec ike lifetime

config wlan security IPsec ike phase1

config wlan security IPsec ike contivity

show ipv6 acl

To display the IPv6 access control lists (ACLs) that are configured on the controller, use the **show ipv6 acl** command.

show ipv6 acl detailed {*acl_name* | **summary**}

Syntax Description

acl_name	IPv6 ACL name. The name can be up to 32 alphanumeric characters.
detailed	Displays detailed information about a specific ACL.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the detailed information of the access control lists:

```
(Cisco Controller) >show ipv6 acl detailed acl6
Rule Index..................................... 1
Direction...................................... Any
IPv6 source prefix............................. ::/0
IPv6 destination prefix........................ ::/0
Protocol....................................... Any
Source Port Range.............................. 0-65535
Destination Port Range......................... 0-65535
DSCP........................................... Any
Flow label..................................... 0
Action......................................... Permit
Counter........................................ 0
Deny Counter................................ 0
```

show ipv6 summary

To display the IPv6 configuration settings, use the **show ipv6 summary** command.

show ipv6 summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example displays the output of the **show ipv6 summary** command:

```
(Cisco Controller) >show ipv6 summary
Global Config.............................. Enabled
Reachable-lifetime value.................... 30
Stale-lifetime value........................ 300
Down-lifetime value......................... 300
RA Throttling............................... Disabled
RA Throttling allow at-least................ 1
RA Throttling allow at-most................. no-limit
RA Throttling max-through................... 5
RA Throttling throttle-period............... 600
RA Throttling interval-option............... ignore
NS Mulitcast CacheMiss Forwarding........... Enabled
NA Mulitcast Forwarding..................... Enabled
IPv6 Capwap UDP Lite........................ Enabled
Operating System IPv6 state ................ Enabled
```

show guest-lan

To display the configuration of a specific wired guest LAN, use the **show guest-lan** command.

show guest-lan *guest_lan_id*

Syntax Description

guest_lan_id	ID of the selected wired guest LAN.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

To display all wired guest LANs configured on the controller, use the **show guest-lan summary** command.

The following is a sample output of the **show guest-lan** *guest_lan_id* command:

```
(Cisco Controller) >show guest-lan 2
Guest LAN Identifier..........................  1
Profile Name..................................  guestlan
Network Name (SSID)...........................  guestlan
Status........................................  Enabled
AAA Policy Override...........................  Disabled
Number of Active Clients......................  1
Exclusionlist Timeout.........................  60 seconds
Session Timeout...............................  Infinity
Interface.....................................  wired
Ingress Interface.............................  wired-guest
WLAN ACL......................................  unconfigured
DHCP Server...................................  10.20.236.90
DHCP Address Assignment Required..............  Disabled
Quality of Service............................  Silver (best effort)
Security
 Web Based Authentication...................  Enabled
 ACL........................................  Unconfigured
 Web-Passthrough............................  Disabled
 Conditional Web Redirect...................  Disabled
 Auto Anchor................................  Disabled
Mobility Anchor List
GLAN ID IP Address Status
```

show ipv6 acl

To display the IPv6 access control lists (ACLs) that are configured on the controller, use the **show ipv6 acl** command.

show ipv6 acl detailed {*acl_name* | **summary**}

Syntax Description

acl_name	IPv6 ACL name. The name can be up to 32 alphanumeric characters.
detailed	Displays detailed information about a specific ACL.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the detailed information of the access control lists:

```
(Cisco Controller) >show ipv6 acl detailed acl6
Rule Index..................................... 1
Direction...................................... Any
IPv6 source prefix............................. ::/0
IPv6 destination prefix........................ ::/0
Protocol....................................... Any
Source Port Range.............................. 0-65535
Destination Port Range......................... 0-65535
DSCP........................................... Any
Flow label..................................... 0
Action......................................... Permit
Counter........................................ 0
Deny Counter................................... 0
```

show ipv6 acl cpu

To display the IPv6 ACL CPU details, use the **show ipv6 acl cpu** command.

show ipv6 acl cpu

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.0	This command supports IPv6 address format.

The following is a sample output of the **show ipv6 acl cpu** command:

```
(Cisco Controller) > show ipv6 acl cpu

CPU Acl Name.............................. NOT CONFIGURED
Wireless Traffic........................... Disabled
Wired Traffic.............................. Disabled
```

show ipv6 acl detailed

To display the IPv6 ACL details, use the **show ipv6 acl detailed** command.

show ipv6 acl detailed

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.0	This command supports IPv6 address format.

The following is a sample output of the **show ipv6 acl detailed TestACL** command:

```
(Cisco Controller) > show ipv6 acl detailed ddd

Rule Index..................................... 1
Direction...................................... Any
IPv6 source prefix............................. 2001:9:5:90::115/128
IPv6 destination prefix........................ ::/0
Protocol....................................... 6
Source Port Range.............................. 0-65535
Destination Port Range......................... 0-65535
DSCP........................................... Any
Action......................................... Permit
Counter........................................ 0

Rule Index..................................... 2
Direction...................................... Any
IPv6 source prefix............................. ::/0
IPv6 destination prefix........................ 2001:9:5:90::115/128
Protocol....................................... 6
Source Port Range.............................. 0-65535
Destination Port Range......................... 0-65535
DSCP........................................... Any
Action......................................... Permit
Counter........................................ 0
```

show ipv6 neighbor-binding

To display the IPv6 neighbor binding data that are configured on the controller, use the **show ipv6 neighbor-binding** command.

show ipv6 neighbor-binding {**capture-policy** | **counters** | **detailed** {**mac** *mac_address* | **port** *port_number* | **vlan***vlan_id*} | **features** | **policies** | **ra-throttle** {**statistics** *vlan_id* | **routers** *vlan_id*} | **summary**}

Syntax Description

capture-policy	Displays IPv6 next-hop message capture policies.
counters	Displays IPv6 next-hop counters (Bridging mode only).
detailed	Displays the IPv6 neighbor binding table.
mac	Displays the IPv6 binding table entries for a specific MAC address.
mac_address	Displays the IPv6 binding table entries for a specific MAC address.
port	Displays the IPv6 binding table entries for a specific port.
port_number	Port Number. You can enter ap for an access point or LAG for a LAG port.
vlan	Displays the IPv6 neighbor binding table entries for a specific VLAN.
vlan_id	VLAN identifier.
features	Displays IPv6 next-hop registered features.
policies	Displays IPv6 next-hop policies.
ra-throttle	Displays RA throttle information.
statistics	Displays RA throttle statistics.
routers	Displays RA throttle routers.
summary	Displays the IPv6 neighbor binding table.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

Usage Guidelines

DHCPv6 counters are applicable only for IPv6 bridging mode.

The following is the output of the **show ipv6 neighbor-binding summary** command:

```
(Cisco Controller) >show ipv6 neighbor-binding summary
Binding Table has 6 entries, 5 dynamic
Codes: L - Local, S - Static, ND - Neighbor Discovery, DH - DDCP
```

```
Preflevel flags (prlvl):
0001:MAC and LLA match     0002:Orig trunk            0004:Orig access
0008:Orig trusted access   0010:Orig trusted trunk    0020:DHCP assigned
0040:Cga authenticated     0080:Cert authenticated    0100:Statically assigned
    IPv6 address                            MAC Address       Port VLAN Type     prlvl age
  state     Time left
-- ----------------------------------------  ----------------- ---- ---- -------- -----
---- --------- ----------
ND  fe80::216:46ff:fe43:eb01                 00:16:46:43:eb:01    1  980 wired     0005
 2 REACHABLE  157
ND  fe80::9cf9:b009:b1b4:1ed9                70:f1:a1:dd:cb:d4   AP  980 wireless  0005
 2 REACHABLE  157
ND  fe80::6233:4bff:fe05:25ef                60:33:4b:05:25:ef   AP  980 wireless  0005
 2 REACHABLE  203
ND  fe80::250:56ff:fe8b:4a8f                 00:50:56:8b:4a:8f   AP  980 wireless  0005
 2 REACHABLE  157
ND  2001:410:0:1:51be:2219:56c6:a8ad         70:f1:a1:dd:cb:d4   AP  980 wireless  0005
 5 REACHABLE  157
S   2001:410:0:1::9                          00:00:00:00:00:08   AP  980 wireless  0100
 1 REACHABLE  205
```

The following is the output of the **show ipv6 neighbor-binding detailed** command:

```
(Cisco Controller) >show ipv6 neighbor-binding detailed mac 60:33:4b:05:25:ef
macDB has 3 entries for mac 60:33:4b:05:25:ef, 3 dynamic
Codes: L - Local, S - Static, ND - Neighbor Discovery, DH - DDCP
Preflevel flags (prlvl):
0001:MAC and LLA match     0002:Orig trunk            0004:Orig access
0008:Orig trusted access   0010:Orig trusted trunk    0020:DHCP assigned
0040:Cga authenticated     0080:Cert authenticated    0100:Statically assigned
    IPv6 address                            MAC Address       Port VLAN Type     prlvl age
  state     Time left
-- ----------------------------------------  ----------------- ---- ---- -------- -----
---- --------- ----------
ND  fe80::6233:4bff:fe05:25ef                60:33:4b:05:25:ef   AP  980 wireless  0009
 0 REACHABLE  303
ND  2001:420:0:1:6233:4bff:fe05:25ef         60:33:4b:05:25:ef   AP  980 wireless  0009
 0 REACHABLE  300
ND  2001:410:0:1:6233:4bff:fe05:25ef         60:33:4b:05:25:ef   AP  980 wireless  0009
 0 REACHABLE  301
```

The following is the output of the **show ipv6 neighbor-binding counters** command:

```
(Cisco Controller) >show ipv6 neighbor-binding counters
Received Messages

NDP Router Solicitation                6
NDP Router Advertisement               19
NDP Neighbor Solicitation              557
NDP Neighbor Advertisement             48
NDP Redirect                           0
NDP Certificate Solicit                0
NDP Certificate Advert                 0
DHCPv6 Solicitation                    0
DHCPv6 Advertisement                   0
DHCPv6 Request                         0
DHCPv6 Reply                           0
DHCPv6 Inform                          0
DHCPv6 Confirm                         0
DHCPv6 Renew                           0
DHCPv6 Rebind                          0
DHCPv6 Release                         0
```

```
DHCPv6 Decline                          0
DHCPv6 Reconfigure                      0
DHCPv6 Relay Forward                    0
DHCPv6 Relay Rep                        0

Bridged Messages

NDP Router Solicitation                 6
NDP Router Advertisement                19
NDP Neighbor Solicitation               471
NDP Neighbor Advertisement              16
NDP Redirect                            0
NDP Certificate Solicit                 0
NDP Certificate Advert                  0
DHCPv6 Solicitation                     0
DHCPv6 Advertisement                    0
DHCPv6 Request                          0
DHCPv6 Reply                            0
DHCPv6 Inform                           0
DHCPv6 Confirm                          0
DHCPv6 Renew                            0
DHCPv6 Rebind                           0
DHCPv6 Release                          0
DHCPv6 Decline                          0
DHCPv6 Reconfigure                      0
DHCPv6 Relay Forward                    0
DHCPv6 Relay Rep                        0

NDSUPRRESS Drop counters

total   silent ns_in_out ns_dad unicast multicast internal
---------------------------------------------------------------------------
0       0       0       0       0       0       0

SNOOPING Drop counters

Dropped Msgs          total   silent  internal CGA_vfy  RSA_vfy  limit  martian  martian_mac
  no_trust  not_auth  stop
-----------------------------------------------------------------------------------------------------------
NDP RS                          0       0       0       0       0       0       0       0
      0       0       0
NDP RA                          0       0       0       0       0       0       0       0
      0       0       0
NDP NS                          0       0       0       0       0       0       0       0
      0       0       0
NDP NA                          0       0       0       0       0       0       0       0
      0       0       0
NDP Redirect                    0       0       0       0       0       0       0       0
      0       0       0
NDP CERT SOL                    0       0       0       0       0       0       0       0
      0       0       0
NDP CERT ADV                    0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Sol                      0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Adv                      0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Req                      0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Confirm                  0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Renew                    0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Rebind                   0       0       0       0       0       0       0       0
```

```
      0       0       0
DHCPv6 Reply                    0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Release                  0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Decline                  0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Recfg                    0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Infreq                   0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Relayfwd                 0       0       0       0       0       0       0       0
      0       0       0
DHCPv6 Relayreply               0       0       0       0       0       0       0       0
      0       0       0

CacheMiss Statistics
        Multicast NS Forwarded
                To STA  0
                To DS   0
        Multicast NS Dropped
                To STA  467
                To DS   467

Multicast NA Statistics
        Multicast NA Forwarded
                To STA  0
                To DS   0
        Multicast NA Dropped
                To STA  0
                To DS   0

(Cisco Controller) > >
```

show ipv6 ra-guard

To display the RA guard statistics, use the **show ipv6 ra-guard** command.

show ipv6 ra-guard {**ap** | **wlc**} **summary**

Syntax Description

ap	Displays Cisco access point details.
wlc	Displays Cisco controller details.
summary	Displays RA guard statistics.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example show the output of the **show ipv6 ra-guard ap summary** command:

```
(Cisco Controller) >show ipv6 ra-guard ap summary
IPv6 RA Guard on AP..................... Enabled
RA Dropped per client:
MAC Address       AP Name           WLAN/GLAN      Number of RA Dropped
----------------- ----------------- -------------- ---------------------
00:40:96:b9:4b:89 Bhavik_1130_1_p13 2              19
----------------- ----------------- -------------- ---------------------
Total RA Dropped on AP.....................      19
```

The following example shows how to display the RA guard statistics for a controller:

```
(Cisco Controller) >show ipv6 ra-guard wlc summary
IPv6 RA Guard on WLC.................... Enabled
```

show ipv6 route summary

To display configuration information for IPv6 route, use the **show ipv6 route summary** command.

show ipv6 route summary

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
8.0	This command was introduced in a Release 8.0.

The following is a sample output of the **show ipv6 route summary** command:

```
(Cisco Controller) > show ipv6 route summary
Number of Routes............................... 1

Destination Network PrefixLength Gateway
------------------- ------------- -------------------
2001:9:5:90::115 /128 2001:9:5:91::1
```

show ipv6 summary

To display the IPv6 configuration settings, use the **show ipv6 summary** command.

show ipv6 summary

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example displays the output of the **show ipv6 summary** command:

```
(Cisco Controller) >show ipv6 summary
Global Config.............................. Enabled
Reachable-lifetime value.................... 30
Stale-lifetime value........................ 300
Down-lifetime value......................... 300
RA Throttling............................... Disabled
RA Throttling allow at-least................ 1
RA Throttling allow at-most................. no-limit
RA Throttling max-through................... 5
RA Throttling throttle-period............... 600
RA Throttling interval-option............... ignore
NS Mulitcast CacheMiss Forwarding........... Enabled
NA Mulitcast Forwarding..................... Enabled
IPv6 Capwap UDP Lite........................ Enabled
Operating System IPv6 state ................ Enabled
```

show known ap

To display known Cisco lightweight access point information, use the **show known ap** command.

show known ap {**summary** | **detailed** *MAC*}

Syntax Description

summary	Displays a list of all known access points.
detailed	Provides detailed information for all known access points.
MAC	MAC address of the known AP.

Command Default

None

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a summary of all known access points:

```
(Cisco Controller) >show known ap summary
MAC Address         State        # APs  # Clients   Last Heard
-----------         -----------  -----   --------   -----------------
```