

Config Commands: 802.11

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config 802.11-abgn

To configure dual-band radio parameters on an access point, use the **config 802.11-abgn** command.

config 802.11-abgn {**cleanair** {**enable** | **disable**} {*cisco_ap* **band** *band*} | {**enable** | **disable**} {*cisco_ap*}}

Syntax Description

cleanair	Configures CleanAir on the dual-band radio.
enable	Enables CleanAir for both 2.4-GHz and 5-GHz radios.
disable	Disables CleanAir for both 2.4-GHz and 5-GHz radios.
cisco_ap	Name of the access point to which the command applies.
band	Configures the radio band.
band	Radio band that can be 2.4-GHz or 5-GHz.
enable	Enables the dual-band radio on an access point.
disable	Disables the dual-band radio on an access point.

Command Default

None

Command History

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

Usage Guidelines

Only Cisco CleanAir-enabled access point radios can be configured for Cisco CleanAir.

The following example shows how to enable Cisco CleanAir on an access point:

```
(Cisco Controller) >config 802.11-abgn cleanair enable AP3600 band 5
```

config 802.11-rx-abgn

To configure dual-band Rx only radio parameter on the Cisco Aironet 4800 Access Point, use the **config 802.11-rx-abgn** command.

config 802.11-rx-abgn {**cleanair** {**enable** | **disable**} | {**enable** | **disable**} {*cisco_ap*}}

Syntax Description

cleanair	Configures CleanAir on the dual-band radio.
enable	Enables cleanair management on 802.11 dual-band RX-only radio.
disable	Disable cleanair management on 802.11 dual-band RX-only radio.
cisco_ap	Name of the access point to which the command applies.
enable	Enables 802.11 dual-band RX-only
disable	Disables 802.11 dual-band RX-only

Command Default

None

Command History

Release	Modification
8.7.105.0	This command was introduced.

Usage Guidelines

Only Cisco CleanAir-enabled access point radios can be configured for Cisco CleanAir.

The following example shows how to enable 802.11 dual band Rx only on the Cisco 4800 AP:

```
(Cisco Controller) >config 802.11-rx-abgn enable
```

config 802.11a 11acsupport

To configure 802.11ac 5-GHz parameters, use the **config 802.11a 11acsupport**

config 802.11a 11acsupport {**enable** | **disable** | **mcs tx** *mcs_index* **ss** *spatial_stream* {**enable** | **disable**} }

Syntax Description

enable	Enables 802.11ac 5-GHz mode.
disable	Disables 802.11ac 5-GHz mode.
mcs tx	Configures 802.11ac 5-GHz Modulation and Coding Scheme (MCS) rates at which data can be transmitted between the access point and the client.
tx	Configures 802.11ac 5-GHz MCS transmit rates.
mcs_index	MCS index value of 8 or 9. MCS data rates with index 8 or 9 are specific to 802.11ac. When you enable an MCS data rate with index 9, the data rate with MCS index 8 is automatically enabled.
ss	Configures the 802.11ac 5-GHz MCS spatial stream (SS).
spatial_stream	Spatial stream within which you can enable or disable an MCS data rate. Signals transmitted by the various antennae are multiplexed by using different spaces within the same spectral channel. These spaces are known as spatial streams. Three spatial streams are available within which you can enable or disable a MCS rate. The range is from 1 to 3.

Command Default

None

Command History

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

Usage Guidelines

Disabling the 802.11n/ac mode applies only to access radios. Backhaul radios always have 802.11n/ac mode enabled if they are 802.11n capable.

The following example shows how to configure the MCS index for spatial stream 3:

```
(Cisco Controller) >config 802.11a 11acsupport mcs tx 9 ss 3
```

config 802.11 11axsupport

To configure 802.11ax 5-GHz parameters, use the **config 802.11 11axsupport**

config 802.11 {**a** | **b**} **11axsupport** {**enable** | **disable** | **mcs tx** *mcs_index* **ss** *spatial_stream* {**enable** | **disable**}}

Syntax Description

a	Enables 802.11a ax 5-GHz mode.
b	Enables 802.11b ax 5-GHz mode.
enable	Enables 802.11ax 5-GHz mode.
disable	Disables 802.11ax 5-GHz mode.
mcs tx	Configures 802.11ax 5-GHz Modulation and Coding Scheme (MCS) rates at which data can be transmitted between the access point and the client.
tx	Configures 802.11ax 5-GHz MCS transmit rates.
mcs_index	MCS index value of 7, 9 or 11.
ss	Configures the 802.11ax 5-GHz MCS spatial stream (SS).
spatial_stream	Spatial stream within which you can enable or disable an MCS data rate. Signals transmitted by the various antennae are multiplexed by using different spaces within the same spectral channel. These spaces are known as spatial streams. The range is from 1 to 8.

Command Default

None

Command History

Release	Modification
8.9	This command was introduced..

Usage Guidelines

Disabling the 802.11n/ac/ax mode applies only to access radios. Backhaul radios always have 802.11n/ac/ax mode enabled if they are 802.11n capable.

The following example shows how to configure the MCS index for spatial stream 3:

```
(Cisco Controller) >config 802.11a 11axsupport mcs tx 7 ss 3
```

config 802.11-a antenna extAntGain

To configure the external antenna gain for the 4.9-GHz and 5.8-GHz public safety channels on an access point, use the **config 802.11-a antenna extAntGain** commands.

config {**802.11-a49** | **802.11-a58**} **antenna extAntGain** *ant_gain cisco_ap* {**global** | *channel_no*}

Syntax Description

802.11-a49	Specifies the 4.9-GHz public safety channel.
802.11-a58	Specifies the 5.8-GHz public safety channel.
ant_gain	Value in .5-dBi units (for instance, 2.5 dBi = 5).
cisco_ap	Name of the access point to which the command applies.
global	Specifies the antenna gain value to all channels.
channel_no	Antenna gain value for a specific channel.

Command Default

Channel properties are disabled.

Command History

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

Usage Guidelines

Before you enter the **config 802.11-a antenna extAntGain** command, disable the 802.11 Cisco radio with the **config 802.11-a disable** command.

After you configure the external antenna gain, use the **config 802.11-a enable** command to reenable the 802.11 Cisco radio.

The following example shows how to configure an 802.11-a49 external antenna gain of 10 dBi for AP1:

```
(Cisco Controller) >config 802.11-a antenna extAntGain 10 AP1
```

config 802.11-a channel ap

To configure the channel properties for the 4.9-GHz and 5.8-GHz public safety channels on an access point, use the **config 802.11-a channel ap** command.

config {**802.11-a49** | **802.11-a58**} **channel ap** *cisco_ap* {**global** | *channel_no*}

Syntax Description

802.11-a49	Specifies the 4.9-GHz public safety channel.
802.11-a58	Specifies the 5.8-GHz public safety channel.
cisco_ap	Name of the access point to which the command applies.
global	Enables the Dynamic Channel Assignment (DCA) on all 4.9-GHz and 5.8-GHz subband radios.
channel_no	Custom channel for a specific mesh access point. The range is 1 through 26, inclusive, for a 4.9-GHz band and 149 through 165, inclusive, for a 5.8-GHz band.

Command Default

Channel properties are disabled.

Command History

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

The following example shows how to set the channel properties:

```
(Cisco Controller) >config 802.11-a channel ap
```

config 802.11-a txpower ap

To configure the transmission power properties for the 4.9-GHz and 5.8-GHz public safety channels on an access point, use the **config 802.11-a txpower ap** command.

config {**802.11-a49** | **802.11-a58**} **txpower ap** *cisco_ap* {**global** | *power_level*}

Syntax Description

802.11-a49	Specifies the 4.9-GHz public safety channel.
802.11-a58	Specifies the 5.8-GHz public safety channel.
txpower	Configures transmission power properties.
ap	Configures access point channel settings.
cisco_ap	Name of the access point to which the command applies.
global	Applies the transmission power value to all channels.
power_level	Transmission power value to the designated mesh access point. The range is from 1 to 5.

Command Default

The default transmission power properties for the 4.9-GHz and 5.8-GHz public safety channels on an access point is disabled.

Command History

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

The following example shows how to configure an 802.11-a49 transmission power level of 4 for AP1:

```
(Cisco Controller) >config 802.11-a txpower ap 4 AP1
```

config 802.11 antenna diversity

To configure the diversity option for 802.11 antennas, use the **config 802.11 antenna diversity** command.

config 802.11 {**a** | **b**} **antenna diversity** {**enable** | **sideA** | **sideB**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the diversity.
sideA	Specifies the diversity between the internal antennas and an external antenna connected to the Cisco lightweight access point left port.
sideB	Specifies the diversity between the internal antennas and an external antenna connected to the Cisco lightweight access point right port.
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 enable antenna diversity for AP01 on an 802.11b network:

```
(Cisco Controller) >config 802.11a antenna diversity enable AP01
```

The following example shows how to enable diversity for AP01 on an 802.11a network, using an external antenna connected to the Cisco lightweight access point left port (sideA):

```
(Cisco Controller) >config 802.11a antenna diversity sideA AP01
```

config 802.11 antenna extAntGain

To configure external antenna gain for an 802.11 network, use the **config 802.11 antenna extAntGain** command.

config 802.11{**a** | **b**} **antenna extAntGain** *antenna_gain cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
antenna_gain	Antenna gain in 0.5 dBm units (for example, 2.5 dBm = 5).
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.

Usage Guidelines

Before you enter the **config 802.11 antenna extAntGain** command, disable the 802.11 Cisco radio with the **config 802.11 disable** command.

After you configure the external antenna gain, use the **config 802.11 enable** command to enable the 802.11 Cisco radio.

The following example shows how to configure an *802.11a* external antenna gain of *0.5 dBm* for *AP1*:

```
(Cisco Controller) >config 802.11 antenna extAntGain 1 AP1
```

config 802.11 antenna mode

To configure the Cisco lightweight access point to use one internal antenna for an 802.11 sectorized 180-degree coverage pattern or both internal antennas for an 802.11 360-degree omnidirectional pattern, use the **config 802.11 antenna mode** command.

config 802.11 {**a** | **b**} **antenna mode** {**omni** | **sectorA** | **sectorB**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
omni	Specifies to use both internal antennas.
sectorA	Specifies to use only the side A internal antenna.
sectorB	Specifies to use only the side B internal antenna.
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 configure access point AP01 antennas for a 360-degree omnidirectional pattern on an 802.11b network:

```
(Cisco Controller) >config 802.11 antenna mode omni AP01
```

config 802.11 antenna selection

To select the internal or external antenna selection for a Cisco lightweight access point on an 802.11 network, use the **config 802.11 antenna selection** command.

config 802.11{**a** | **b**} **antenna selection** {**internal** | **external**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
internal	Specifies the internal antenna.
external	Specifies the external antenna.
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 configure access point AP02 on an 802.11b network to use the internal antenna:

```
(Cisco Controller) >config 802.11a antenna selection internal AP02
```

config 802.11b 11gSupport

To enable or disable the Cisco wireless LAN solution 802.11g network, use the **config 802.11b 11gSupport** command.

config 802.11b 11gSupport {**enable** | **disable**}

Syntax Description

enable	Enables the 802.11g network.
disable	Disables the 802.11g network.

Command Default

The default network for Cisco wireless LAN solution 802.11g is enabled.

Command History

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

Usage Guidelines

Before you enter the **config 802.11b 11gSupport** {**enable** | **disable**} command, disable the 802.11 Cisco radio with the **config 802.11 disable** command.

After you configure the support for the 802.11g network, use the **config 802.11 enable** command to enable the 802.11 radio.

Note To disable an 802.11a, 802.11b and/or 802.11g network for an individual wireless LAN, use the **config wlan radio** command.

The following example shows how to enable the 802.11g network:

```
(Cisco Controller) > config 802.11b 11gSupport enable
Changing the 11gSupport will cause all the APs to reboot when you enable
 802.11b network.
Are you sure you want to continue? (y/n) n
11gSupport not changed!
```

config 802.11b preamble

To change the 802.11b preamble as defined in subclause 18.2.2.2 to **long** (slower, but more reliable) or **short** (faster, but less reliable), use the **config 802.11b preamble** command.

config 802.11b preamble {**long** | **short**}

Syntax Description

long	Specifies the long 802.11b preamble.
short	Specifies the short 802.11b preamble.

Command Default

The default 802.11b preamble value is short.

Command History

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

Usage Guidelines



Note You must reboot the Cisco Wireless LAN Controller (reset system) with save to implement this command.

This parameter must be set to **long** to optimize this Cisco wireless LAN controller for some clients, including SpectraLink NetLink telephones.

This command can be used any time that the CLI interface is active.

The following example shows how to change the 802.11b preamble to short:

```
(Cisco Controller) >config 802.11b preamble short
(Cisco Controller) >(reset system with save)
```

config 802.11h channelswitch

To configure an 802.11h channel switch announcement, use the **config 802.11h channelswitch** command.

config 802.11h channelswitch {**enable** {**loud** | **quiet**} | **disable**}

Syntax Description

enable	Enables the 802.11h channel switch announcement.
loud	Enables the 802.11h channel switch announcement in the loud mode. The 802.11h-enabled clients can send packets while switching channe
quiet	Enables 802.11h-enabled clients to stop transmitting packets immediate because the AP has detected radar and client devices should also quit transmitting to reduce interference.
disable	Disables the 802.11h channel switch announcement.

Command Default

None

Command History

Release	Modification
7.6	• This command was introduced in a release earlier than Release 7.6. • The **loud** and **quiet** parameters were introduced.

The following example shows how to disable an 802.11h switch announcement:

```
(Cisco Controller) >config 802.11h channelswitch disable
```

config 802.11h powerconstraint

To configure the 802.11h power constraint value, use the **config 802.11h powerconstraint** command.

config 802.11h powerconstraint *value*

Syntax Description

value	802.11h power constraint value.

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 configure the 802.11h power constraint to 5:

```
(Cisco Controller) >config 802.11h powerconstraint 5
```

config 802.11h setchannel

To configure a new channel using 802.11h channel announcement, use the **config 802.11h setchannel** command.

config 802.11h setchannel *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 configure a new channel using the 802.11h channel:

```
(Cisco Controller) >config 802.11h setchannel ap02
```

config 802.11 11nsupport

To enable 802.11n support on the network, use the **config 802.11 11nsupport** command.

config 802.11 {**a** | **b**} **11nsupport** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network settings.
b	Specifies the 802.11b/g network settings.
enable	Enables the 802.11n support.
disable	Disables the 802.11n support.

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 enable the 802.11n support on an 802.11a network:

```
(Cisco Controller) >config 802.11a 11nsupport enable
```

config 802.11 11nsupport a-mpdu tx priority

To specify the aggregation method used for 802.11n packets, use the **config 802.11 11nsupport a-mpdu tx priority** command.

config 802.11 {**a** | **b**} **11nsupport a-mpdu tx priority** {**0-7** | **all**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
0-7	Specifies the aggregated MAC protocol data unit priority level between 0 through 7.
all	Configures all of the priority levels at once.
enable	Specifies the traffic associated with the priority level uses A-MPDU transmission.
disable	Specifies the traffic associated with the priority level uses A-MSDU transmission.

Command Default

Priority 0 is enabled.

Usage Guidelines

Aggregation is the process of grouping packet data frames together rather than transmitting them separately. Two aggregation methods are available: Aggregated MAC Protocol Data Unit (A-MPDU) and Aggregated MAC Service Data Unit (A-MSDU). A-MPDU is performed in the software whereas A-MSDU is performed in the hardware.

Aggregated MAC Protocol Data Unit priority levels assigned per traffic type are as follows:

- 1—Background
- 2—Spare
- 0—Best effort
- 3—Excellent effort
- 4—Controlled load
- 5—Video, less than 100-ms latency and jitter
- 6—Voice, less than 10-ms latency and jitter
- 7—Network control
- all—Configure all of the priority levels at once.



Note Configure the priority levels to match the aggregation method used by the clients.

Command History

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

The following example shows how to configure all the priority levels at once so that the traffic associated with the priority level uses A-MSDU transmission:

```
(Cisco Controller) >config 802.11a 11nsupport a-mpdu tx priority all enable
```

config 802.11 11nsupport a-mpdu tx scheduler

To configure the 802.11n-5 GHz A-MPDU transmit aggregation scheduler, use the **config 802.11 11nsupport a-mpdu tx scheduler** command.

config 802.11 {**a** | **b**} **11nsupport a-mpdu tx scheduler** {**enable** | **disable** | **timeout rt** *timeout-value*}

Syntax Description

enable	Enables the 802.11n-5 GHz A-MPDU transmit aggregation scheduler.
disable	Disables the 802.11n-5 GHz A-MPDU transmit aggregation scheduler.
timeout rt	Configures the A-MPDU transmit aggregation scheduler realtime traffic timeout.
timeout-value	Timeout value in milliseconds. The valid range is between 1 millisecond to 1000 milliseconds.

Command Default

None

Usage Guidelines

Ensure that the 802.11 network is disabled before you enter this command.

Command History

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

The following example shows how to configure the A-MPDU transmit aggregation scheduler realtime traffic timeout of 100 milliseconds:

```
(Cisco Controller) >config 802.11 11nsupport a-mpdu tx scheduler timeout rt 100
```

config 802.11 11nsupport antenna

To configure an access point to use a specific antenna, use the **config 802.11 11nsupport antenna** command.

config 802.11{**a** | **b**} **11nsupport antenna** *cisco_ap* {**A** | **B** | **C** | **D**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a/n network.
b	Specifies the 802.11b/g/n network.
cisco_ap	Access point.
A/B/C/D	Specifies an antenna port.
enable	Enables the configuration.
disable	Disables the configuration.

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 configure transmission to a single antenna for legacy orthogonal frequency-division multiplexing:

```
(Cisco Controller) >config 802.11 11nsupport antenna AP1 C enable
```

config 802.11 11nsupport guard-interval

To configure the guard interval, use the **config 802.11 11nsupport guard-interval** command.

config 802.11 {**a** | **b**} **11nsupport guard-interval** {**any** | **long**}

Syntax Description

any	Enables either a short or a long guard interval.
long	Enables only a long guard interval.

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 configure a long guard interval:

```
(Cisco Controller) >config 802.11 11nsupport guard-interval long
```

config 802.11 11nsupport mcs tx

To specify the modulation and coding scheme (MCS) rates at which data can be transmitted between the access point and the client, use the **config 802.11 11nsupport mcs tx** command.

config 802.11 {**a** | **b**} **11nsupport mcs tx** {**0-15**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
11nsupport	Specifies support for 802.11n devices.
mcs tx	Specifies the modulation and coding scheme data rates as follows: • 0 (7 Mbps) • 1 (14 Mbps) • 2 (21 Mbps) • 3 (29 Mbps) • 4 (43 Mbps) • 5 (58 Mbps) • 6 (65 Mbps) • 7 (72 Mbps) • 8 (14 Mbps) • 9 (29 Mbps) • 10 (43 Mbps) • 11 (58 Mbps) • 12 (87 Mbps) • 13 (116 Mbps) • 14 (130 Mbps) • 15 (144 Mbps)
enable	Enables this configuration.
disable	Disables this configuration.

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 specify MCS rates:

```
(Cisco Controller) >config 802.11a 11nsupport mcs tx 5 enable
```

config 802.11 11nsupport rifs

To configure the Reduced Interframe Space (RIFS) between data frames and its acknowledgment, use the **config 802.11 11nsupport rifs** command.

config 802.11 {**a** | **b**} **11nsupport rifs** {**enable** | **disable**}

Syntax Description

enable	Enables RIFS for the 802.11 network.
disable	Disables RIFS for the 802.11 network.

Command Default

None

Command History

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

This example shows how to enable RIFS:

```
(Cisco Controller) >config 802.11a 11nsupport rifs enable
```

config 802.11 antenna diversity

To configure the diversity option for 802.11 antennas, use the **config 802.11 antenna diversity** command.

config 802.11 {**a** | **b**} **antenna diversity** {**enable** | **sideA** | **sideB**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the diversity.
sideA	Specifies the diversity between the internal antennas and an external antenna connected to the Cisco lightweight access point left port.
sideB	Specifies the diversity between the internal antennas and an external antenna connected to the Cisco lightweight access point right port.
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 enable antenna diversity for AP01 on an 802.11b network:

```
(Cisco Controller) >config 802.11a antenna diversity enable AP01
```

The following example shows how to enable diversity for AP01 on an 802.11a network, using an external antenna connected to the Cisco lightweight access point left port (sideA):

```
(Cisco Controller) >config 802.11a antenna diversity sideA AP01
```

config 802.11 antenna extAntGain

To configure external antenna gain for an 802.11 network, use the **config 802.11 antenna extAntGain** command.

config 802.11{**a** | **b**} **antenna extAntGain** *antenna_gain cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
antenna_gain	Antenna gain in 0.5 dBm units (for example, 2.5 dBm = 5).
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.

Usage Guidelines

Before you enter the **config 802.11 antenna extAntGain** command, disable the 802.11 Cisco radio with the **config 802.11 disable** command.

After you configure the external antenna gain, use the **config 802.11 enable** command to enable the 802.11 Cisco radio.

The following example shows how to configure an *802.11a* external antenna gain of *0.5 dBm* for *AP1*:

```
(Cisco Controller) >config 802.11 antenna extAntGain 1 AP1
```

config 802.11 antenna mode

To configure the Cisco lightweight access point to use one internal antenna for an 802.11 sectorized 180-degree coverage pattern or both internal antennas for an 802.11 360-degree omnidirectional pattern, use the **config 802.11 antenna mode** command.

config 802.11 {**a** | **b**} **antenna mode** {**omni** | **sectorA** | **sectorB**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
omni	Specifies to use both internal antennas.
sectorA	Specifies to use only the side A internal antenna.
sectorB	Specifies to use only the side B internal antenna.
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 configure access point AP01 antennas for a 360-degree omnidirectional pattern on an 802.11b network:

```
(Cisco Controller) >config 802.11 antenna mode omni AP01
```

config 802.11 antenna selection

To select the internal or external antenna selection for a Cisco lightweight access point on an 802.11 network, use the **config 802.11 antenna selection** command.

config 802.11{**a** | **b**} **antenna selection** {**internal** | **external**} *cisco_ap*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
internal	Specifies the internal antenna.
external	Specifies the external antenna.
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 configure access point AP02 on an 802.11b network to use the internal antenna:

```
(Cisco Controller) >config 802.11a antenna selection internal AP02
```

config 802.11 channel

To configure an 802.11 network or a single access point for automatic or manual channel selection, use the **config 802.11 channel** command.

config 802.11 {**a** | **b**} **channel** {**global** [**auto** | **once** | **off** | **restart**]} | **ap** {*ap_name* [**global** | *channel*]}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
global	Specifies the 802.11a operating channel that is automatically set by RRM and overrides the existing configuration setting.
auto	(Optional) Specifies that the channel is automatically set by Radio Resource Management (RRM) for the 802.11a radio.
once	(Optional) Specifies that the channel is automatically set once by RRM.
off	(Optional) Specifies that the automatic channel selection by RRM is disabled.
restarts	(Optional) Restarts the aggressive DCA cycle.
ap_name	Access point name.
channel	Manual channel number to be used by the access point. The supported channels depend on the specific access point used and the regulatory region.

Command Default

None

Command History

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

Usage Guidelines

When configuring 802.11 channels for a single lightweight access point, enter the **config 802.11 disable** command to disable the 802.11 network. Enter the **config 802.11 channel** command to set automatic channel selection by Radio Resource Management (RRM) or manually set the channel for the 802.11 radio, and enter the **config 802.11 enable** command to enable the 802.11 network.



Note See the Channels and Maximum Power Settings for Cisco Aironet Lightweight Access Points document for the channels supported by your access point. The power levels and available channels are defined by the country code setting and are regulated on a country-by-country basis.

The following example shows how to have RRM automatically configure the 802.11a channels for automatic channel configuration based on the availability and interference:

```
(Cisco Controller) >config 802.11a channel global auto
```

The following example shows how to configure the 802.11b channels one time based on the availability and interference:

```
(Cisco Controller) >config 802.11b channel global once
```

The following example shows how to turn 802.11a automatic channel configuration off:

```
(Cisco Controller) >config 802.11a channel global off
```

The following example shows how to configure the 802.11b channels in access point AP01 for automatic channel configuration:

```
(Cisco Controller) >config 802.11b AP01 channel global
```

The following example shows how to configure the 802.11a channel 36 in access point AP01 as the default channel:

```
(Cisco Controller) >config 802.11a channel AP01 36
```

config 802.11 channel ap

To set the operating radio channel for an access point, use the **config 802.11 channel ap** command.

config 802.11 {**a** | **b**} **channel ap** *cisco_ap* {**global** | *channel_no*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
cisco_ap	Name of the Cisco access point.
global	Enables auto-RF on the designated access point.
channel_no	Default channel from 1 to 26, inclusive.

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 enable auto-RF for access point AP01 on an 802.11b network:

```
(Cisco Controller) >config 802.11b channel ap AP01 global
```

config 802.11 chan_width

To configure the channel width for a particular access point, use the **config 802.11 chan_width** command.

config 802.11{**a** | **b**} **chan_width** *cisco_ap* {**20** | **40** | **80** | **160** | **best**}

Syntax Description

a	Configures the 802.11a radio on slot 1 and 802.11ac/ax radio on slot 2.
b	Specifies the 802.11b/g radio.
cisco_ap	Access point.
20	Allows the radio to communicate using only 20-MHz channels. Choose this option for legacy 802.11a radios, 20-MHz 802.11n radios, or 40-MHz 802.11n radios that you want to operate using only 20-MHz channels.
40	Allows 40-MHz 802.11n radios to communicate using two adjacent 20-MHz channels bonded together.
80	Allows 80-MHz 802.11ac/ax radios to communicate using two adjacent 40-MHz channels bonded together.
160	Allows 160-MHz 802.11ac/ax radios to communicate.
best	In this mode, the device selects the optimum bandwidth channel.

Command Default

The default channel width is 20.

Command History

Release	Modification
7.6	This command was introduced in a release earlier than Release 7.6.
8.3	This command was enhanced in this release with the inclusion of 160 MHz and best channel bandwidth modes.
8.9	This command was enhanced to support 802.11ax.

Usage Guidelines

This parameter can be configured only if the primary channel is statically assigned.

Caution We recommend that you do not configure 40-MHz channels in the 2.4-GHz radio band because severe co-channel interference can occur.

Statically configuring an access point's radio for 20-MHz or 40-MHz mode overrides the globally configured DCA channel width setting (configured by using the **config advanced 802.11 channel dca chan-width** command). If you change the static configuration back to global on the access point radio, the global DCA configuration overrides the channel width configuration that the access point was previously using.

The following example shows how to configure the channel width for access point AP01 on an 802.11 network using 40-MHz channels:

```
(Cisco Controller) >config 802.11a chan_width AP01 40
```

config 802.11 rx-sop threshold

To configure the threshold values for Receiver Start of Packet Detection Threshold (RxSOP) for each 802.11 band, use the **config 802.11 rx-sop threshold** command.

config {**802.11a | 802.11b** } **rx-sop threshold** {**high | low | medium | default |***custom_value*}**ap** *ap_name*

Syntax Description

802.11a	Configures an RxSOP threshold value for the 802.11a network.
802.11b	Configures an RxSOP threshold value for the 802.11b network.
high	Configures the high RxSOP threshold value for 802.11a/b networks.
medium	Configures the medium RxSOP threshold value for 802.11a/b networks.
low	Configures the low RxSOP threshold value for 802.11a/b networks.
ap *ap_name*	Configures the RxSOP threshold value on an access point of an 802.11 network.
default	Configures the RxSOP threshold value on all access points of an 802.11 network.
custom_value	Custom configure the RxSOP threshold value on all access points of an 802.11 network. The range is between –85 dBm and –60 dBm.

Command Default

The default RxSOP threshold option is default.

Command History

Release	Modification
8.0	This command was introduced.
8.7	The RxSOP custom values can be set.

Usage Guidelines

RxSOP determines the Wi-Fi signal level in dBm at which an access point's radio demodulates and decodes a packet. Higher the level, less sensitive the radio is and smaller the receiver cell size. The table below shows the RxSOP threshold values for high, medium and low levels for each 802.11 band.

Table 1: RxSOP Thresholds

802.11 Band	High Threshold	Medium Threshold	Low Threshold	Custom Threshold Value
5 GHz	–76 dBm	–78 dBm	–80 dBm	–80 dBm to –65 dBm
2.4 GHz	–79 dBm	–82 dBm	–85 dBm	–80 dBm to –65 dBm

The following example shows how to configure a high RxSOP threshold value for all access points in the 802.11a band:

```
(Cisco Controller) > config 802.11a rx-sop threshold high
```

config 802.11 txPower

To configure the transmit power level for all access points or a single access point in an 802.11 network, use the **config 802.11 txPower** command.

config 802.11 {**a** | **b**} **txPower** {**global** {*power_level* | **auto** | **max** | **min** | **once** } | **ap** *cisco_ap*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
global	Configures the 802.11 transmit power level for all lightweight access points.
auto	(Optional) Specifies the power level is automatically set by Radio Resource Management (RRM) for the 802.11 Cisco radio.
once	(Optional) Specifies the power level is automatically set once by RRM.
power_level	(Optional) Manual Transmit power level number for the access point.
ap	Configures the 802.11 transmit power level for a specified lightweight access point.
ap_name	Access point name.

Command Default

The command default (**global**, **auto**) is for automatic configuration by RRM.

Command History

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

Usage Guidelines

The supported power levels depends on the specific access point used and the regulatory region. For example, the 1240 series access point supports eight levels and the 1200 series access point supports six levels. See the Channels and Maximum Power Settings for Cisco Aironet Lightweight Access Points document for the maximum transmit power limits for your access point. The power levels and available channels are defined by the country code setting and are regulated on a country-by-country basis.

The following example shows how to automatically set the 802.11a radio transmit power level in all lightweight access points:

```
(Cisco Controller) > config 802.11a txPower auto
```

The following example shows how to manually set the 802.11b radio transmit power to level 5 for all lightweight access points:

```
(Cisco Controller) > config 802.11b txPower global 5
```

The following example shows how to automatically set the 802.11b radio transmit power for access point AP1:

```
(Cisco Controller) > config 802.11b txPower AP1 global
```

The following example shows how to manually set the 802.11a radio transmit power to power level 2 for access point AP1:

```
(Cisco Controller) > config 802.11b txPower AP1 2
```

Related Commands

show ap config 802.11a

config 802.11b txPower

config 802.11 beamforming

To enable or disable Beamforming (ClientLink) on the network or on individual radios, enter the **config 802.11 beamforming** command.

config 802.11 {**a** | **b**} **beamforming** {**global** | **ap** *ap_name*} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
global	Specifies all lightweight access points.
ap *ap_name*	Specifies the Cisco access point name.
enable	Enables beamforming.
disable	Disables beamforming.

Command Default

None

Command History

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

Usage Guidelines

When you enable Beamforming on the network, it is automatically enabled for all the radios applicable to that network type.

Follow these guidelines for using Beamforming:

- Beamforming is supported only for legacy orthogonal frequency-division multiplexing (OFDM) data rates (6, 9, 12, 18, 24, 36, 48, and 54 mbps).

Note Beamforming is not supported for complementary-code keying (CCK) data rates (1, 2, 5.5, and 11 Mbps).

- Beamforming is supported only on access points that support 802.11n (AP1250 and AP1140).
- Two or more antennas must be enabled for transmission.
- All three antennas must be enabled for reception.
- OFDM rates must be enabled.

  If the antenna configuration restricts operation to a single transmit antenna, or if OFDM rates are disabled, Beamforming is not used.

The following example shows how to enable Beamforming on the 802.11a network:

```
(Cisco Controller) >config 802.11 beamforming global enable
```

config 802.11h channelswitch

To configure an 802.11h channel switch announcement, use the **config 802.11h channelswitch** command.

config 802.11h channelswitch {**enable** {**loud** | **quiet**} | **disable**}

Syntax Description

enable	Enables the 802.11h channel switch announcement.
loud	Enables the 802.11h channel switch announcement in the loud mode. The 802.11h-enabled clients can send packets while switching channel.
quiet	Enables 802.11h-enabled clients to stop transmitting packets immediately because the AP has detected radar and client devices should also quit transmitting to reduce interference.
disable	Disables the 802.11h channel switch announcement.

Command Default

None

Command History

Release	Modification
7.6	• This command was introduced in a release earlier than Release 7.6. • The **loud** and **quiet** parameters were introduced.

The following example shows how to disable an 802.11h switch announcement:

```
(Cisco Controller) >config 802.11h channelswitch disable
```

config 802.11h powerconstraint

To configure the 802.11h power constraint value, use the **config 802.11h powerconstraint** command.

config 802.11h powerconstraint *value*

Syntax Description

value	802.11h power constraint value.

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 configure the 802.11h power constraint to 5:

```
(Cisco Controller) >config 802.11h powerconstraint 5
```

config 802.11h setchannel

To configure a new channel using 802.11h channel announcement, use the **config 802.11h setchannel** command.

config 802.11h setchannel *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 configure a new channel using the 802.11h channel:

```
(Cisco Controller) >config 802.11h setchannel ap02
```

config 802.11h smart dfs

To enable or disable 802.11h smart-dfs feature, use the **config 802.11h smart-dfs** command.

config 802.11h smart-dfs {**enable** | **disable**}

Syntax Description

enable	Enables non occupancy time doubling for Radar interfere channel.
disable	Disables non occupancy time doubling and use legacy time (30 minutes) for Radar interference channel. Use disable to match legacy DFS behavior.

Command Default

Enabled

Command History

Release	Modification
8.2.141.0	This command was introduced.

The following example shows how to enable 802.11h smart-dfs:

```
(Cisco Controller) >config 802.11h smart-dfs enable
```

config 802.11 11nsupport

To enable 802.11n support on the network, use the **config 802.11 11nsupport** command.

config 802.11 {**a** | **b**} **11nsupport** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network settings.
b	Specifies the 802.11b/g network settings.
enable	Enables the 802.11n support.
disable	Disables the 802.11n support.

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 enable the 802.11n support on an 802.11a network:

```
(Cisco Controller) >config 802.11a 11nsupport enable
```

config 802.11 11nsupport a-mpdu tx priority

To specify the aggregation method used for 802.11n packets, use the **config 802.11 11nsupport a-mpdu tx priority** command.

config 802.11 {**a** | **b**} **11nsupport a-mpdu tx priority** {**0-7** | **all**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
0-7	Specifies the aggregated MAC protocol data unit priority level between 0 through 7.
all	Configures all of the priority levels at once.
enable	Specifies the traffic associated with the priority level uses A-MPDU transmission.
disable	Specifies the traffic associated with the priority level uses A-MSDU transmission.

Command Default

Priority 0 is enabled.

Usage Guidelines

Aggregation is the process of grouping packet data frames together rather than transmitting them separately. Two aggregation methods are available: Aggregated MAC Protocol Data Unit (A-MPDU) and Aggregated MAC Service Data Unit (A-MSDU). A-MPDU is performed in the software whereas A-MSDU is performed in the hardware.

Aggregated MAC Protocol Data Unit priority levels assigned per traffic type are as follows:

- 1—Background
- 2—Spare
- 0—Best effort
- 3—Excellent effort
- 4—Controlled load
- 5—Video, less than 100-ms latency and jitter
- 6—Voice, less than 10-ms latency and jitter
- 7—Network control
- all—Configure all of the priority levels at once.

Note Configure the priority levels to match the aggregation method used by the clients.

Command History

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

The following example shows how to configure all the priority levels at once so that the traffic associated with the priority level uses A-MSDU transmission:

```
(Cisco Controller) >config 802.11a 11nsupport a-mpdu tx priority all enable
```

config 802.11 11nsupport a-mpdu tx scheduler

To configure the 802.11n-5 GHz A-MPDU transmit aggregation scheduler, use the **config 802.11 11nsupport a-mpdu tx scheduler** command.

config 802.11 {**a** | **b**} **11nsupport a-mpdu tx scheduler** {**enable** | **disable** | **timeout rt** *timeout-value*}

Syntax Description

enable	Enables the 802.11n-5 GHz A-MPDU transmit aggregation scheduler.
disable	Disables the 802.11n-5 GHz A-MPDU transmit aggregation scheduler.
timeout rt	Configures the A-MPDU transmit aggregation scheduler realtime traffic timeout.
timeout-value	Timeout value in milliseconds. The valid range is between 1 millisecond to 1000 milliseconds.

Command Default

None

Usage Guidelines

Ensure that the 802.11 network is disabled before you enter this command.

Command History

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

The following example shows how to configure the A-MPDU transmit aggregation scheduler realtime traffic timeout of 100 milliseconds:

```
(Cisco Controller) >config 802.11 11nsupport a-mpdu tx scheduler timeout rt 100
```

config 802.11 11nsupport antenna

To configure an access point to use a specific antenna, use the **config 802.11 11nsupport antenna** command.

config 802.11{**a** | **b**} **11nsupport antenna** *cisco_ap* {**A** | **B** | **C** | **D**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a/n network.
b	Specifies the 802.11b/g/n network.
cisco_ap	Access point.
A/B/C/D	Specifies an antenna port.
enable	Enables the configuration.
disable	Disables the configuration.

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 configure transmission to a single antenna for legacy orthogonal frequency-division multiplexing:

```
(Cisco Controller) >config 802.11 11nsupport antenna AP1 C enable
```

config 802.11 11nsupport guard-interval

To configure the guard interval, use the **config 802.11 11nsupport guard-interval** command.

config 802.11 {**a** | **b**} **11nsupport guard-interval** {**any** | **long**}

Syntax Description

any	Enables either a short or a long guard interval.
long	Enables only a long guard interval.

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 configure a long guard interval:

```
(Cisco Controller) >config 802.11 11nsupport guard-interval long
```

config 802.11 11nsupport mcs tx

To specify the modulation and coding scheme (MCS) rates at which data can be transmitted between the access point and the client, use the **config 802.11 11nsupport mcs tx** command.

config 802.11 {**a** | **b**} **11nsupport mcs tx** {**0-15**} {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
11nsupport	Specifies support for 802.11n devices.
mcs tx	Specifies the modulation and coding scheme data rates as follows: • 0 (7 Mbps) • 1 (14 Mbps) • 2 (21 Mbps) • 3 (29 Mbps) • 4 (43 Mbps) • 5 (58 Mbps) • 6 (65 Mbps) • 7 (72 Mbps) • 8 (14 Mbps) • 9 (29 Mbps) • 10 (43 Mbps) • 11 (58 Mbps) • 12 (87 Mbps) • 13 (116 Mbps) • 14 (130 Mbps) • 15 (144 Mbps)
enable	Enables this configuration.
disable	Disables this configuration.

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 specify MCS rates:

```
(Cisco Controller) >config 802.11a 11nsupport mcs tx 5 enable
```

config 802.11 11nsupport rifs

To configure the Reduced Interframe Space (RIFS) between data frames and its acknowledgment, use the **config 802.11 11nsupport rifs** command.

config 802.11 {**a** | **b**} **11nsupport rifs** {**enable** | **disable**}

Syntax Description

enable	Enables RIFS for the 802.11 network.
disable	Disables RIFS for the 802.11 network.

Command Default

None

Command History

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

This example shows how to enable RIFS:

```
(Cisco Controller) >config 802.11a 11nsupport rifs enable
```

config 802.11 beacon period

To change the beacon period globally for an 802.11a, 802.11b, or other supported 802.11 network, use the **config 802.11 beacon period** command.

config 802.11 {**a** | **b**} **beacon period** *time_units*



Note Disable the 802.11 network before using this command. See the "Usage Guidelines" section.

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
time_units	Beacon interval in time units (TU). One TU is 1024 microseconds.

Command Default

None

Usage Guidelines

In Cisco wireless LAN solution 802.11 networks, all Cisco lightweight access point wireless LANs broadcast a beacon at regular intervals. This beacon notifies clients that the 802.11a service is available and allows the clients to synchronize with the lightweight access point.

Before you change the beacon period, make sure that you have disabled the 802.11 network by using the **config 802.11 disable** command. After changing the beacon period, enable the 802.11 network by using the **config 802.11 enable** command.

Command History

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

This example shows how to configure an 802.11a network for a beacon period of 120 time units:

```
(Cisco Controller) > config 802.11 beacon period 120
```

Related Commands

show 802.11a

config 802.11b beaconperiod

config 802.11a disable

config 802.11a enable

config 802.11 cac defaults

To configure the default Call Admission Control (CAC) parameters for the 802.11a and 802.11b/g network, use the **config 802.11 cac defaults** command.

config 802.11 {**a** | **b**} **cac defaults**

Syntax Description

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

Usage Guidelines

CAC commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

This example shows how to configure the default CAC parameters for the 802.11a network:

```
(Cisco Controller) > config 802.11 cac defaults
```

Related Commands

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video sip

config 802.11 cac video roam-bandwidth

config 802.11 cac load-based

config 802.11 cac media-stream

config 802.11 cac multimedia

config 802.11 cac video cac-method

debug cac

config 802.11 cac video acm

To enable or disable video Call Admission Control (CAC) for the 802.11a or 802.11b/g network, use the **config 802.11 cac video acm** command.

config 802.11 {**a** | **b**} **cac video acm** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables video CAC settings.
disable	Disables video CAC settings.

Command Default

The default video CAC settings for the 802.11a or 802.11b/g network is disabled.

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable**, or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to enable the video CAC for the 802.11a network:

```
(Cisco Controller) > config 802.11 cac video acm enable
```

The following example shows how to disable the video CAC for the 802.11b network:

```
(Cisco Controller) > config 802.11 cac video acm disable
```

Related Commands

config 802.11 cac video max-bandwidth

config 802.11 cac video roam-bandwidth

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video cac-method

To configure the Call Admission Control (CAC) method for video applications on the 802.11a or 802.11b/g network, use the **config 802.11 cac video cac-method** command.

config 802.11 {**a** | **b**} **cac video cac-method** {**static** | **load-based**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
static	Enables the static CAC method for video applications on the 802.11a or 802.11b/g network. Static or bandwidth-based CAC enables the client to specify how much bandwidth or shared medium time is required to accept a new video request and in turn enables the access point to determine whether it is capable of accommodating the request.
load-based	Enables the load-based CAC method for video applications on the 802.11a or 802.11b/g network. Load-based or dynamic CAC incorporates a measurement scheme that takes into account the bandwidth consumed by all traffic types from itself, from co-channel access points, and by collocated channel interference. Load-based CAC also covers the additional bandwidth consumption results from PHY and channel impairment. The access point admits a new call only if the channel has enough unused bandwidth to support that call. Load-based CAC is not supported if SIP-CAC is enabled.

Command Default

Static.

Usage Guidelines

CAC commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Video CAC consists of two parts: Unicast Video-CAC and MC2UC CAC. If you need only Unicast Video-CAC, you must configure only static mode. If you need only MC2UC CAC, you must configure Static or Load-based CAC. Load-based CAC is not supported if SIP-CAC is enabled.

Command History

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

This example shows how to enable the static CAC method for video applications on the 802.11a network:

```
(Cisco Controller) > config 802.11 cac video cac-method static
```

Related Commands

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video sip

config 802.11 cac video roam-bandwidth

config 802.11 cac load-based

config 802.11 cac defaults

config 802.11 cac media-stream

config 802.11 cac multimedia

debug cac

config 802.11 cac video load-based

To enable or disable load-based Call Admission Control (CAC) for video applications on the 802.11a or 802.11b/g network, use the **config 802.11 cac video load-based** command.

config 802.11 {**a** | **b**} **cac video load-based** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables load-based CAC for video applications on the 802.11a or 802.11b/g network. Load-based or dynamic CAC incorporates a measurement scheme that takes into account the bandwidth consumed by all traffic types from itself, from co-channel access points, and by collocated channel interference. Load-based CAC also covers the additional bandwidth consumption results from PHY and channel impairment. The access point admits a new call only if the channel has enough unused bandwidth to support that call.
disable	Disables load-based CAC method for video applications on the 802.11a or 802.11b/g network.

Command Default

Disabled.

Usage Guidelines

CAC commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Video CAC consists of two parts: Unicast Video-CAC and MC2UC CAC. If you need only Unicast Video-CAC, you must configure only static mode. If you need only MC2UC CAC, you must configure Static or Load-based CAC. Load-based CAC is not supported if SIP-CAC is enabled.

Note Load-based CAC is not supported if SIP-CAC is enabled.

Command History

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

This example shows how to enable load-based CAC method for video applications on the 802.11a network:

```
(Cisco Controller) > config 802.11 cac video load-based enable
```

Related Commands

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video sip

config 802.11 cac video roam-bandwidth

config 802.11 cac load-based

config 802.11 cac defaults

config 802.11 cac media-stream

config 802.11 cac multimedia

config 802.11 cac video cac-method

debug cac

config 802.11 cac video max-bandwidth

To set the percentage of the maximum bandwidth allocated to clients for video applications on the 802.11a or 802.11b/g network, use the **config 802.11 cac video max-bandwidth** command.

config 802.11{**a** | **b**} **cac video max-bandwidth** *bandwidth*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
bandwidth	Bandwidth percentage value from 5 to 85%.

Command Default

The default maximum bandwidth allocated to clients for video applications on the 802.11a or 802.11b/g network is 0%.

Usage Guidelines

The maximum radio frequency (RF) bandwidth cannot exceed 85% for voice and video. Once the client reaches the value specified, the access point rejects new calls on this network.

Note If this parameter is set to zero (0), the controller assumes that you do not want to allocate any bandwidth and allows all bandwidth requests.

Call Admission Control (CAC) commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable**, or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to specify the percentage of the maximum allocated bandwidth for video applications on the selected radio band:

```
(Cisco Controller) > config 802.11 cac video max-bandwidth 50
```

Related Commands

config 802.11 cac video acm

config 802.11 cac video roam-bandwidth

config 802.11 cac voice stream-size

config 802.11 cac voice roam-bandwidth

config 802.11 cac media-stream

To configure media stream Call Admission Control (CAC) voice and video quality parameters for 802.11a and 802.11b networks, use the **config 802.11 cac media-stream** command.

config 802.11 {**a** | **b**} **cac media-stream multicast-direct** {**max-retry-percent** *retry-percentage* | **min-client-rate** *dot11-rate*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
multicast-direct	Configures CAC parameters for multicast-direct media streams.
max-retry-percent	Configures the percentage of maximum retries that are allowed for multicast-direct media streams.
retry-percentage	Percentage of maximum retries that are allowed for multicast-direct media streams.
min-client-rate	Configures the minimum transmission data rate to the client for multicast-direct media streams.
dot11-rate	Minimum transmission data rate to the client for multicast-direct media streams. Rate in kbps at which the client can operate. If the transmission data rate is below this rate, either the video will not start or the client may be classified as a bad client. The bad client video can be demoted for better effort QoS or subject to denial. The available data rates are 6000, 9000, 12000, 18000, 24000, 36000, 48000, 54000, and 11n rates.

Command Default

The default value for the maximum retry percent is 80. If it exceeds 80, either the video will not start or the client might be classified as a bad client. The bad client video will be demoted for better effort QoS or is subject to denial.

Usage Guidelines

CAC commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the maximum retry percent for multicast-direct media streams as 90 on a 802.11a network:

```
(Cisco Controller) > config 802.11 cac media-stream multicast-direct max-retry-percent 90
```

Related Commands

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video sip

config 802.11 cac video roam-bandwidth

config 802.11 cac load-based

config 802.11 cac defaults

config 802.11 cac multimedia

debug cac

config 802.11 cac multimedia

To configure the CAC media voice and video quality parameters for 802.11a and 802.11b networks, use the **config 802.11 cac multimedia** command.

config 802.11 {**a** | **b**} **cac multimedia max-bandwidth** *bandwidth*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
max-bandwidth	Configures the percentage of maximum bandwidth allocated to Wi-Fi Multimedia (WMM) clients for voice and video applications on the 802.11a or 802.11b/g network.
bandwidth	Percentage of the maximum bandwidth allocated to WMM clients for voice and video applications on the 802.11a or 802.11b/g network. Once the client reaches the specified value, the access point rejects new calls on this radio band. The range is from 5 to 85%.

Command Default

The default maximum bandwidth allocated to Wi-Fi Multimedia (WMM) clients for voice and video applications on the 802.11a or 802.11b/g network is 85%.

Usage Guidelines

Call Admission Control (CAC) commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the percentage of the maximum bandwidth allocated to WMM clients for voice and video applications on the 802.11a network:

```
(Cisco Controller) > config 802.11 cac multimedia max-bandwidth 80
```

Related Commands

show cac voice stats

show cac voice summary

show cac video stats

show cac video summary

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video sip

config 802.11 cac video roam-bandwidth

config 802.11 cac load-based

config 802.11 cac defaults

debug cac

config 802.11 cac video roam-bandwidth

To configure the percentage of the maximum allocated bandwidth reserved for roaming video clients on the 802.11a or 802.11b/g network, use the **config 802.11 cac video roam-bandwidth** command.

config 802.11 {**a** | **b**} **cac video roam-bandwidth** *bandwidth*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
bandwidth	Bandwidth percentage value from 5 to 85%.

Command Default

The maximum allocated bandwidth reserved for roaming video clients on the 802.11a or 802.11b/g network is 0%.

Command History

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

Usage Guidelines

The controller reserves the specified bandwidth from the maximum allocated bandwidth for roaming video clients.

Note If this parameter is set to zero (0), the controller assumes that you do not want to do any bandwidth allocation and, therefore, allows all bandwidth requests.

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11** {**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11** {**a** | **b**} **cac voice acm enable** or **config 802.11** {**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

The following example shows how to specify the percentage of the maximum allocated bandwidth reserved for roaming video clients on the selected radio band:

```
(Cisco Controller) > config 802.11 cac video roam-bandwidth 10
```

Related Commands

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video cac-method

config 802.11 cac video sip

config 802.11 cac video load-based

config 802.11 cac video sip

To enable or disable video Call Admission Control (CAC) for nontraffic specifications (TSPEC) SIP clients using video applications on the 802.11a or 802.11b/g network, use the **config 802.11 cac video sip** command.

config 802.11 {**a** | **b**} **cac video sip** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables video CAC for non-TSPEC SIP clients using video applications on the 802.11a or 802.11b/g network. When you enable video CAC for non-TSPEC SIP clients, you can use applications like Facetime and CIUS video calls.
disable	Disables video CAC for non-TSPEC SIP clients using video applications on the 802.11a or 802.11b/g network.

Command Default

None

Usage Guidelines

CAC commands for video applications on the 802.11a or 802.11b/g network require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Gold.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11** {**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** command.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.
- Enable call snooping on the WLAN on which the SIP client is present by entering the **config wlan call-snoop enable** *wlan_id* command.

The following example shows how to enable video CAC for non-TSPEC SIP clients using video applications on the 802.11a network:

```
(Cisco Controller) > config 802.11 cac video sip enable
```

Related Commands

config 802.11 cac video tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac video cac-method

config 802.11 cac video load-based

config 802.11 cac video roam-bandwidth

config 802.11 cac video tspec-inactivity-timeout

To process or ignore the Call Admission Control (CAC) Wi-Fi Multimedia (WMM) traffic specifications (TSPEC) inactivity timeout received from an access point, use the **config 802.11 cac video tspec-inactivity-timeout** command.

config 802.11 {**a** | **b**} **cac video tspec-inactivity-timeout** {**enable** | **ignore**}

Syntax Description

a	Specifies the 802.11a network.
ab	Specifies the 802.11b/g network.
enable	Processes the TSPEC inactivity timeout messages.
ignore	Ignores the TSPEC inactivity timeout messages.

Command Default

The default CAC WMM TSPEC inactivity timeout received from an access point is disabled (ignore).

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11** {**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11** {**a** | **b**} **cac voice acm enable** or **config 802.11** {**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

This example shows how to process the response to TSPEC inactivity timeout messages received from an access point:

```
(Cisco Controller) > config 802.11a cac video tspec-inactivity-timeout enable
```

This example shows how to ignore the response to TSPEC inactivity timeout messages received from an access point:

```
(Cisco Controller) > config 802.11a cac video tspec-inactivity-timeout ignore
```

Related Commands

config 802.11 cac video acm

config 802.11 cac video max-bandwidth

config 802.11 cac video roam-bandwidth

config 802.11 cac voice acm

To enable or disable bandwidth-based voice Call Admission Control (CAC) for the 802.11a or 802.11b/g network, use the **config 802.11 cac voice acm** command.

config 802.11 {**a** | **b**} **cac voice acm** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the bandwidth-based CAC.
disable	Disables the bandwidth-based CAC.

Command Default

The default bandwidth-based voice CAC for the 802.11a or 802.11b/g network id disabled.

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

This example shows how to enable the bandwidth-based CAC:

```
(Cisco Controller) > config 802.11c cac voice acm enable
```

This example shows how to disable the bandwidth-based CAC:

```
(Cisco Controller) > config 802.11b cac voice acm disable
```

Related Commands

config 802.11 cac video acm

config 802.11 cac voice max-bandwidth

To set the percentage of the maximum bandwidth allocated to clients for voice applications on the 802.11a or 802.11b/g network, use the **config 802.11 cac voice max-bandwidth** command.

config 802.11{**a** | **b**} **cac voice max-bandwidth** *bandwidth*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
bandwidth	Bandwidth percentage value from 5 to 85%.

Command Default

The default maximum bandwidth allocated to clients for voice applications on the 802.11a or 802.11b/g network is 0%.

Usage Guidelines

The maximum radio frequency (RF) bandwidth cannot exceed 85% for voice and video. Once the client reaches the value specified, the access point rejects new calls on this network.

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to specify the percentage of the maximum allocated bandwidth for voice applications on the selected radio band:

```
(Cisco Controller) > config 802.11a cac voice max-bandwidth 50
```

Related Commands

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice stream-size

config 802.11 exp-bwreq

config 802.11 tsm

config wlan save

show wlan

show wlan summary

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 cac voice load-based

config 802.11 cac video acm

config 802.11 cac voice roam-bandwidth

To configure the percentage of the Call Admission Control (CAC) maximum allocated bandwidth reserved for roaming voice clients on the 802.11a or 802.11b/g network, use the **config 802.11 cac voice roam-bandwidth** command.

config 802.11{**a** | **b**} **cac voice roam-bandwidth** *bandwidth*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
bandwidth	Bandwidth percentage value from 0 to 85%.

Command Default

The default CAC maximum allocated bandwidth reserved for roaming voice clients on the 802.11a or 802.11b/g network is 85%.

Usage Guidelines

The maximum radio frequency (RF) bandwidth cannot exceed 85% for voice and video. The controller reserves the specified bandwidth from the maximum allocated bandwidth for roaming voice clients.

Note If this parameter is set to zero (0), the controller assumes you do not want to allocate any bandwidth and therefore allows all bandwidth requests.

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the percentage of the maximum allocated bandwidth reserved for roaming voice clients on the selected radio band:

```
(Cisco Controller) > config 802.11 cac voice roam-bandwidth 10
```

Related Commands

config 802.11 cac voice acm

config 802.11cac voice max-bandwidth

config 802.11 cac voice stream-size

config 802.11 cac voice tspec-inactivity-timeout

To process or ignore the Wi-Fi Multimedia (WMM) traffic specifications (TSPEC) inactivity timeout received from an access point, use the **config 802.11 cac voice tspec-inactivity-timeout** command.

config 802.11 {**a** | **b**} **cac voice tspec-inactivity-timeout** {**enable** | **ignore**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Processes the TSPEC inactivity timeout messages.
ignore	Ignores the TSPEC inactivity timeout messages.

Command Default

The default WMM TSPEC inactivity timeout received from an access point is disabled (ignore).

Usage Guidelines

Call Admission Control (CAC) commands require that the WLAN you are planning to modify is configured for Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to enable the voice TSPEC inactivity timeout messages received from an access point:

```
(Cisco Controller) > config 802.11 cac voice tspec-inactivity-timeout enable
```

Related Commands

config 802.11 cac voice load-based

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice acm

config 802.11cac voice max-bandwidth

config 802.11 cac voice stream-size

config 802.11 cac voice load-based

To enable or disable load-based Call Admission Control (CAC) for the 802.11a or 802.11b/g network, use the **config 802.11 cac voice load-based** command.

config 802.11 {**a** | **b**} **cac voice load-based** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables load-based CAC.
disable	Disables load-based CAC.

Command Default

The default load-based CAC for the 802.11a or 802.11b/g network is disabled.

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id command*.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to enable the voice load-based CAC parameters:

```
(Cisco Controller) > config 802.11a cac voice load-based enable
```

The following example shows how to disable the voice load-based CAC parameters:

```
(Cisco Controller) > config 802.11a cac voice load-based disable
```

Related Commands

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 cac video max-bandwidth

config 802.11 cac video acm

config 802.11 cac voice stream-size

config 802.11 cac voice max-calls



Note Do not use the **config 802.11 cac voice max-calls** command if the SIP call snooping feature is disabled and if the SIP based Call Admission Control (CAC) requirements are not met.

To configure the maximum number of voice call supported by the radio, use the **config 802.11 cac voice max-calls** command.

config 802.11{**a** | **b**} **cac voice max-calls** *number*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
number	Number of calls to be allowed per radio.

Command Default

The default maximum number of voice call supported by the radio is 0, which means that there is no maximum limit check for the number of calls.

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id command*.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable network** command.
- Save the new configuration by entering the **save config command.**
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the maximum number of voice calls supported by radio:

```
(Cisco Controller) > config 802.11 cac voice max-calls 10
```

Related Commands

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice stream-size

config 802.11 exp-bwreq

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 cac voice load-based

config 802.11 cac video acm

config 802.11 cac voice sip bandwidth



Note SIP bandwidth and sample intervals are used to compute per call bandwidth for the SIP-based Call Admission Control (CAC).

To configure the bandwidth that is required per call for the 802.11a or 802.11b/g network, use the **config 802.11 cac voice sip bandwidth** command.

config 802.11{**a** | **b**} **cac voice sip bandwidth** *bw_kbps* **sample-interval** *number_msecs*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
bw_kbps	Bandwidth in kbps.
sample-interval	Specifies the packetization interval for SIP codec.
number_msecs	Packetization sample interval in msecs. The sample interval for SIP codec is 20 seconds.

Command Default

None

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable** network command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the bandwidth and voice packetization interval for a SIP codec:

```
(Cisco Controller) > config 802.11 cac voice sip bandwidth 10 sample-interval 40
```

Related Commands

config 802.11 cac voice acm

config 802.11 cac voice load-based

config 802.11 cac voice max-bandwidth

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 exp-bwreq

config 802.11 cac voice sip codec

To configure the Call Admission Control (CAC) codec name and sample interval as parameters and to calculate the required bandwidth per call for the 802.11a or 802.11b/g network, use the **config 802.11 cac voice sip codec** command.

config 802.11 {**a** | **b**} **cac voice sip codec** {**g711** | **g729**} **sample-interval** *number_msecs*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
g711	Specifies CAC parameters for the SIP G711 codec.
g729	Specifies CAC parameters for the SIP G729 codec.
sample-interval	Specifies the packetization interval for SIP codec.
number_msecs	Packetization interval in msecs. The sample interval for SIP codec value is 20 seconds.

Command Default

The default CAC codec parameter is g711.

Usage Guidelines

CAC commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable** network command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the codec name and sample interval as parameters for SIP G711 codec:

```
(Cisco Controller) >  config 802.11a cac voice sip codec g711 sample-interval 40
```

This example shows how to configure the codec name and sample interval as parameters for SIP G729 codec:

```
(Cisco Controller) > config 802.11a cac voice sip codec g729 sample-interval 40
```

Related Commands

config 802.11 cac voice acm

config 802.11 cac voice load-based

config 802.11 cac voice max-bandwidth

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 exp-bwreq

config 802.11 cac voice stream-size

To configure the number of aggregated voice Wi-Fi Multimedia (WMM) traffic specification (TSPEC) streams at a specified data rate for the 802.11a or 802.11b/g network, use the **config 802.11 cac voice stream-size** command.

config 802.11{**a** | **b**} **cac voice stream-size** *stream_size number* **mean_datarate max-streams** *mean_datarate*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
stream-size	Configures the maximum data rate for the stream.
stream_size	Range of stream size is between 84000 and 92100.
number	Number (1 to 5) of voice streams.
mean_datarate	Configures the mean data rate.
max-streams	Configures the mean data rate of a voice stream.
mean_datarate	Mean data rate (84 to 91.2 kbps) of a voice stream.

Command Default

The default number of streams is 2 and the mean data rate of a stream is 84 kbps.

Usage Guidelines

Call Admission Control (CAC) commands require that the WLAN you are planning to modify is configured for the Wi-Fi Multimedia (WMM) protocol and the quality of service (QoS) level be set to Platinum.

Before you can configure CAC parameters on a network, you must complete the following prerequisites:

- Disable all WLANs with WMM enabled by entering the **config wlan disable** *wlan_id* command.
- Disable the radio network you want to configure by entering the **config 802.11**{**a** | **b**} **disable** network command.
- Save the new configuration by entering the **save config** command.
- Enable voice or video CAC for the network you want to configure by entering the **config 802.11**{**a** | **b**} **cac voice acm enable** or **config 802.11**{**a** | **b**} **cac video acm enable** commands.

  For complete instructions, see the "Configuring Voice and Video Parameters" section in the "Configuring Controller Settings" chapter of the *Cisco Wireless LAN Controller Configuration Guide* for your release.

Command History

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

The following example shows how to configure the number of aggregated voice traffic specifications stream with the stream size 5 and the mean data rate of 85000 kbps:

```
(Cisco Controller) > config 802.11 cac voice stream-size 5 max-streams size 85
```

Related Commands

config 802.11 cac voice acm

config 802.11 cac voice load-based

config 802.11 cac voice max-bandwidth

config 802.11 cac voice roam-bandwidth

config 802.11 cac voice tspec-inactivity-timeout

config 802.11 exp-bwreq

config 802.11 cleanair

To enable or disable CleanAir for the 802.11 a or 802.11 b/g network, use the **config 802.11 cleanair** command.

config 802.11 {**a** | **b**} **cleanair** {**alarm** {**air-quality** {**disable** | **enable** | **threshold** *alarm_threshold* } | **device** {**disable** *device_type* | **enable** *device_type* | **reporting** {**disable** | **enable**} | **unclassified** {**disable** | **enable** | **threshold** *alarm_threshold* } } | **device** {**disable** *device_type* | **enable** *device_type* | **reporting** {**disable** | **enable**} | **disable** {**network** | *cisco_ap*} | **enable** {**network** | *cisco_ap*} }

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
alarm	Configure 5-GHz cleanair alarms.
air-quality	Configures the 5-GHz air quality alarm.
enable	Enables the CleanAir settings.
disable	Disables the CleanAir settings.
threshold	Configure the 5-GHz air quality alarm threshold.
alarm_threshold	Air quality alarm threshold (1 is bad air quality, and 100 is good air quality).
device	Configures the 5-GHz cleanair interference devices alarm.

device_type	Device types. The device types are as follows: • 802.11-nonstd—Devices using nonstandard Wi-Fi channels. • 802.11-inv—Devices using spectrally inverted Wi-Fi signals. • superag—802.11 SuperAG devices. • all —All interference device types. • cont-tx—Continuous Transmitter. • dect-like—Digital Enhanced Cordless Communication (DECT) like phone. • tdd-tx—TDD Transmitter. • jammer—Jammer. • canopy—Canopy devices. • video—Video cameras. • wimax-mobile—WiMax Mobile. • wimax-fixed—WiMax Fixed.
reporting	Configures the 5-GHz CleanAir interference devices alarm reporting.
unclassified	Configures the 5-GHz air quality alarm on exceeding unclassified category severity.
network	5-GHz Cisco APs.
cisco_ap	Name of the access point to which the command applies.

Command Default

The default CleanAir settings for the 802.11 a or 802.11 b/g network is disabled.

Command History

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

The following example shows how to enable the CleanAir settings on access point ap_24:

```
(Cisco Controller) > config 802.11a cleanair enable ap_24
```

config 802.11 cleanair device

To configure CleanAir interference device types, use the **config 802.11 cleanair device** command.

config 802.11 {**a** | **b**} **cleanair device** {**enable** | **disable** | **reporting** {**enable** | **disable**}} *device_type*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the CleanAir reporting for the interference device type.
disable	Disables the CleanAir reporting for the interference device type.
reporting	Configures CleanAir interference device reporting.
enable	Enables the 5-GHz Cleanair interference devices reporting.
disable	Disables the 5-GHz Cleanair interference devices reporting.
device_type	Interference device type. The device type are as follows: • 802.11-nonstd—Devices using nonstandard WiFi channels. • 802.11-inv—Devices using spectrally inverted WiFi signals. • superag—802.11 SuperAG devices. • all —All interference device types. • cont-tx—Continuous Transmitter. • dect-like—Digital Enhanced Cordless Communication (DECT) like phone. • tdd-tx—TDD Transmitter. • jammer—Jammer. • canopy—Canopy devices. • video—Video cameras. • wimax-mobile—WiMax Mobile. • wimax-fixed—WiMax Fixed.

Command Default

The default setting CleanAir reporting for the interference device type is disabled.

Command History

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

The following example shows how to enable the CleanAir reporting for the device type jammer:

```
(Cisco Controller) > config 802.11a cleanair device enable jammer
```

The following example shows how to disable the CleanAir reporting for the device type video:

```
(Cisco Controller) > config 802.11a cleanair device disable video
```

The following example shows how to enable the CleanAir interference device reporting:

```
(Cisco Controller) > config 802.11a cleanair device reporting enable
```

config 802.11 cleanair alarm

To configure the triggering of the air quality alarms, use the **config 802.11 cleanair alarm** command.

config 802.11 {**a** | **b**} **cleanair alarm** {**air-quality** {**disable** | **enable** | **threshold** *alarm_threshold* } | **device** {**disable** *device_type* | **enable** *device_type* | **reporting** {**disable** | **enable** } | **unclassified** {**disable** | **enable** | **threshold** *alarm_threshold* } }

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
air-quality	Configures the 5-GHz air quality alarm.
disable	Disables the 5-GHz air quality alarm.
enable	Enables the 5-GHz air quality alarm.
threshold	Configures the 5-GHz air quality alarm threshold.
alarm_threshold	Air quality alarm threshold (1 is bad air quality, and 100 is good air quality).
device	Configures the 5-GHz cleanair interference devices alarm.
all	Configures all the device types at once.
reporting	Configures the 5-GHz CleanAir interference devices alarm reporting.
unclassified	Configures the 5-GHz air quality alarm on exceeding unclassified category severity.

device_type	Device types. The device types are as follows: • 802.11-nonstd—Devices using nonstandard Wi-Fi channels. • 802.11-inv—Devices using spectrally inverted Wi-Fi signals. • superag—802.11 SuperAG devices. • all —All interference device types. • cont-tx—Continuous Transmitter. • dect-like—Digital Enhanced Cordless Communication (DECT) like phone. • tdd-tx—TDD Transmitter. • jammer—Jammer. • canopy—Canopy devices. • video—Video cameras. • wimax-mobile—WiMax Mobile. • wimax-fixed—WiMax Fixed.

Command Default

The default setting for 5-GHz air quality alarm 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 enable the CleanAir alarm to monitor the air quality:

```
(Cisco Controller) > config 802.11a cleanair alarm air-quality enable
```

The following example shows how to enable the CleanAir alarm for the device type video:

```
(Cisco Controller) > config 802.11a cleanair alarm device enable video
```

The following example shows how to enable alarm reporting for the CleanAir interference devices:

```
(Cisco Controller) > config 802.11a cleanair alarm device reporting enable
```

config 802.11 disable

To disable radio transmission for an entire 802.11 network or for an individual Cisco radio, use the **config 802.11 disable** command.

config 802.11{**a** | **b**} **disable** {**network** | *cisco_ap*}

Syntax Description

a	Configures the 802.11a on slot 1 and 802.11ac/ax radio on slot 2. radio.
b	Specifies the 802.11b/g network.
network	Disables transmission for the entire 802.11a network.
cisco_ap	Individual Cisco lightweight access point radio.

Command Default

The transmission is enabled for the entire network by default.

Command History

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

Usage Guidelines

- You must use this command to disable the network before using many config 802.11 commands.
- This command can be used any time that the CLI interface is active.

The following example shows how to disable the entire 802.11a network:

```
(Cisco Controller) >config 802.11a disable network
```

The following example shows how to disable access point AP01 802.11b transmissions:

```
(Cisco Controller) >config 802.11b disable AP01
```

config 802.11 dtpc

To enable or disable the Dynamic Transmit Power Control (DTPC) setting for an 802.11 network, use the **config 802.11 dtpc** command.

config 802.11 {**a** | **b**} **dtpc** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the support for this command.
disable	Disables the support for this command.

Command Default

The default DTPC setting for an 802.11 network 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 disable DTPC for an 802.11a network:

```
(Cisco Controller) > config 802.11a dtpc disable
```

config 802.11 enable

To enable radio transmission for an entire 802.11 network or for an individual Cisco radio, use the **config 802.11 enable** command.

config 802.11 {**a** | **b**} **enable** {**network** | *cisco_ap*}

Syntax Description

a	Configures the 802.11a radioon slot 1 and 802.11ac/ax on slot 2.
b	Specifies the 802.11b/g network.
network	Disables transmission for the entire 802.11a network.
cisco_ap	Individual Cisco lightweight access point radio.

Command Default

The transmission is enabled for the entire network by default.

Usage Guidelines

Use this command with the **config 802.11 disable** command when configuring 802.11 settings.

This command can be used any time that the CLI interface is active.

Command History

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

The following example shows how to enable radio transmission for the entire 802.11a network:

```
(Cisco Controller) > config 802.11a enable network
```

The following example shows how to enable radio transmission for AP1 on an 802.11b network:

```
(Cisco Controller) > config 802.11b enable AP1
```

Related Commands

show sysinfo show 802.11a

config wlan radio

config 802.11a disable

config 802.11b disable

config 802.11b enable

config 802.11b 11gSupport enable

config 802.11b 11gSupport disable

config 802.11 exp-bwreq

To enable or disable the Cisco Client eXtension (CCX) version 5 expedited bandwidth request feature for an 802.11 radio, use the **config 802.11 exp-bwreq** command.

config 802.11 {**a** | **b**} **exp-bwreq** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the expedited bandwidth request feature.
disable	Disables the expedited bandwidth request feature.

Command Default

The expedited bandwidth request feature is disabled by default.

Usage Guidelines

When this command is enabled, the controller configures all joining access points for this feature.

Command History

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

The following example shows how to enable the CCX expedited bandwidth settings:

```
(Cisco Controller) > config 802.11a exp-bwreq enable
Cannot change Exp Bw Req mode while 802.11a network is operational.
```

The following example shows how to disable the CCX expedited bandwidth settings:

```
(Cisco Controller) > config 802.11a exp-bwreq disable
```

Related Commands

show 802.11a

show ap stats 802.11a

config 802.11 fragmentation

To configure the fragmentation threshold on an 802.11 network, use the **config 802.11 fragmentation** command.

config 802.11{**a** | **b**} **fragmentation** *threshold*

Note This command can only be used when the network is disabled using the **config 802.11 disable** command.

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
threshold	Number between 256 and 2346 bytes (inclusive).

Command Default

None.

Command History

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

This example shows how to configure the fragmentation threshold on an 802.11a network with the threshold number of 6500 bytes:

```
(Cisco Controller) > config 802.11a fragmentation 6500
```

Related Commands

config 802.11b fragmentation

show 802.11b

show ap auto-rtf

config 802.11 l2roam rf-params

To configure 802.11a or 802.11b/g Layer 2 client roaming parameters, use the **config 802.11 l2roam rf-params** command.

config 802.11 { **a** | **b** } **l2roam rf-params** { **default** | **custom** *min_rssi roam_hyst scan_thresh trans_time* }

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
default	Restores Layer 2 client roaming RF parameters to defa
custom	Configures custom Layer 2 client roaming RF paramet
min_rssi	Minimum received signal strength indicator (RSSI) tha associate to the access point. If the client's average rece threshold, reliable communication is usually impossible and roamed to another access point with a stronger signa is reached. The valid range is –80 to –90 dBm, and the
roam_hyst	How much greater the signal strength of a neighboring the client to roam to it. This parameter is intended to re between access points if the client is physically located two access points. The valid range is 2 to 4 dB, and the
scan_thresh	Minimum RSSI that is allowed before the client should When the RSSI drops below the specified value, the clie access point within the specified transition time. This para method to minimize the time that the client spends in a example, the client can scan slowly when the RSSI is al rapidly when the RSSI is below the threshold. The vali the default value is –72 dBm.
trans_time	Maximum time allowed for the client to detect a suitable to and to complete the roam, whenever the RSSI from th is below the scan threshold. The valid range is 1 to 10 s 5 seconds. **Note** For high-speed client roaming applications in outdoor me that you set the transition time to 1 second.

Command Default

The default minimum RSSI is -85 dBm. The default signal strength of a neighboring access point is 2 dB. The default scan threshold value is -72 dBm. The default time allowed for the client to detect a suitable neighboring access point to roam to and to complete the roam is 5 seconds.

Usage Guidelines

For high-speed client roaming applications in outdoor mesh environments, we recommend that you set the *trans_time* to 1 second.

Command History

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

The following example shows how to configure custom Layer 2 client roaming parameters on an 802.11a network:

```
(Cisco Controller) > config 802.11 l2roam rf-params custom –80 2 –70 7
```

Related Commands

show advanced 802.11 l2roam

show l2tp

config 802.11 max-clients

To configure the maximum number of clients per access point, use the **config 802.11 max-clients** command.

config 802.11 {**a** | **b**} **max-clients** *max-clients*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
max-clients	Configures the maximum number of client connections per access point.
max-clients	Maximum number of client connections per access point. The range is from 1 to 200.

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 set the maximum number of clients at 22:

```
(Cisco Controller) > config 802.11 max-clients 22
```

Related Commands

show ap config 802.11a

config 802.11b rate

config 802.11 media-stream multicast-direct

To configure the media stream multicast-direct parameters for the 802.11 networks, use the **config 802.11 media-stream multicast-direct** command.

config 802.11{**a** | **b**} **media-stream multicast-direct** {**admission-besteffort** {**enable** | **disable**} | {**client-maximum** | **radio-maximum**} {*value* | **no-limit** } | **enable** | **disable**}

Syntax Description

802.11a	Specifies the 802.11a network.
802.11b	Specifies the 802.11b/g network.
admission-besteffort	Admits media stream to best-effort queue.
enable	Enables multicast-direct on a 2.4-GHz or a 5-GHz band.
disable	Disables multicast-direct on a 2.4-GHz or a 5-GHz band.
client-maximum	Specifies the maximum number of streams allowed on a client.
radio-maximum	Specifies the maximum number of streams allowed on a 2.4-GHz or a 5-GHz band.
value	Number of streams allowed on a client or on a 2.4-GHz or a 5-GHz band, between 1 to 20.
no-limit	Specifies the unlimited number of streams allowed on a client or on a 2.4-GHz or a 5-GHz band.

Command Default

None

Command History

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

Usage Guidelines

Before you configure the media stream multicast-direct parameters on a 802.11 network, ensure that the network is nonoperational.

This example shows how to enable a media stream multicast-direct settings on an 802.11a network:

```
> config 802.11a media-stream multicast-direct enable
```

This example shows how to admit the media stream to the best-effort queue:

```
> config 802.11a media-stream multicast-direct admission-besteffort enable
```

This example shows how to set the maximum number of streams allowed on a client:

```
> config 802.11a media-stream multicast-direct client-maximum 10
```

Related Commands

config 802.11 media-stream video-redirect

show 802.11a media-stream name

show media-stream group summary

show media-stream group detail

config 802.11 media-stream video-redirect

To configure the media stream video-redirect for the 802.11 networks, use the **config 802.11 media-stream video-redirect** command.

config 802.11 {**a** | **b**} **media-stream video-redirect** {**enable** | **disable**}

Syntax Description

802.11a	Specifies the 802.11a network.
802.11b	Specifies the 802.11b/g network.
enable	Enables traffic redirection.
disable	Disables traffic redirection.

Command Default

None.

Usage Guidelines

Before you configure the media stream video-redirect on a 802.11 network, ensure that the network is nonoperational.

This example shows how to enable media stream traffic redirection on an 802.11a network:

```
> config 802.11a media-stream video-redirect enable
```

Related Commands

config 802.11 media-stream multicast-redirect

show 802.11a media-stream name

show media-stream group summary

show media-stream group detail

config 802.11 multicast data-rate

To configure the minimum multicast data rate, use the **config 802.11 multicast data-rate** command.

config 802.11 { **a** | **b** } **multicast data-rate** *data_rate* [**ap** *ap_name* | **default**]

Syntax Description

data_rate	Minimum multicast data rates. The options are 6, 9, 12, 18, 24, 36, 48, 54. Enter 0 to specify that APs will dynamically adjust the number of the buffer allocated for multicast.
ap_name	Specific AP radio in this data rate.
default	Configures all APs radio in this data rate.

Command Default

The default is 0 where the configuration is disabled and the multicast rate is the lowest mandatory data rate and unicast client data rate.

Usage Guidelines

When you configure the data rate without the AP name or **default** keyword, you globally reset all the APs to the new value and update the controller global default with this new data rate value. If you configure the data rate with **default** keyword, you only update the controller global default value and do not reset the value of the APs that are already joined to the controller. The APs that join the controller after the new data rate value is set receives the new data rate value.

Command History

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

The following example shows how to configure minimum multicast data rate settings:

```
(Cisco Controller) > config 802.11 multicast data-rate 12
```

config 802.11 rate

To set mandatory and supported operational data rates for an 802.11 network, use the **config 802.11 rate** command.

config 802.11{**a** | **b**} **rate** {**disabled** | **mandatory** | **supported**} *rate*

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
disabled	Disables a specific data rate.
mandatory	Specifies that a client supports the data rate in order to use the network.
supported	Specifies to allow any associated client that supports the data rate to use the network.
rate	Rate value of 6, 9, 12, 18, 24, 36, 48, or 54 Mbps.

Command Default

None

Usage Guidelines

The data rates set with this command are negotiated between the client and the Cisco wireless LAN controller. If the data rate is set to **mandatory**, the client must support it in order to use the network. If a data rate is set as **supported** by the Cisco wireless LAN controller, any associated client that also supports that rate may communicate with the Cisco lightweight access point using that rate. It is not required that a client is able to use all the rates marked **supported** in order to associate.

Command History

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

The following example shows how to set the 802.11b transmission at a mandatory rate at 12 Mbps:

```
(Cisco Controller) > config 802.11b rate mandatory 12
```

Related Commands

show ap config 802.11a

config 802.11b rate

config 802.11 rssi-check

To configure the 802.11 RSSI Low Check feature, use the **config 802.11 rssi-check** command.

config 802.11 {**a** | **b**}**rssi-check** {**enable** | **disable**}

Syntax Description

rssi-check	Configures the RSSI Low Check feature.
enable	Enables the RSSI Low Check feature.
disable	Disables the RSSI Low Check feature.

Command Default

None

Command History

Release	Modification
7.5	This command was introduced.

Usage Guidelines

config 802.11 rssi-threshold

To configure the 802.11 RSSI Low Check threshold, use the **config 802.11 rssi-threshold** command.

config 802.11 {**a** | **b**} **rssi-threshold** *value-in-dBm*

Syntax Description

rssi-threshold	Configures the RSSI Low Check threshold value.
value-in-dBm	RSSI threshold value in dBm. The default value is –80 dBm.

Command Default

The default value of the RSSI Low Check threshold is –80 dBm.

Command History

Release	Modification
7.5	This command was introduced.

Usage Guidelines

The following example shows how to configure the RSSI threshold value to –70 dBm for an 802.11a network:

```
(Cisco Controller) > config 802.11a rssi-threshold -70
```

config 802.11 SI

To configure System Intelligence (SI) on all or select SI supporting APs for the 802.11 a or 802.11 b/g network, use the **config 802.11 si** command.



Note APs with $ in the suffix of its name denotes support to Spectrum Intelligence feature.

config 802.11{**a** | **b**} **si** {**enable | disable**} {**network** | *ap-name*}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enable 5 GHz QCA Spectrum Intelligence.
disable	Disables 5 GHz QCA Spectrum Intelligence.
network	Configures all 5 GHz Cisco APs.
cisco_ap	Name of the access point to which the command applies.

Command Default

The default SI settings for the 802.11 a or 802.11 b/g network is disabled.

Command History

Release	Modification
8.6	This command was introduced.

The following example shows how to enable the SI settings on all supporting APs in the network:

```
(Cisco Controller) > config 802.11a si enable network
```

config 802.11 tsm

To enable or disable the video Traffic Stream Metric (TSM) option for the 802.11a or 802.11b/g network, use the **config 802.11 tsm** command.

config 802.11 {**a** | **b**} **tsm** {**enable** | **disable**}

Syntax Description

a	Specifies the 802.11a network.
b	Specifies the 802.11b/g network.
enable	Enables the video TSM settings.
disable	Disables the video TSM settings.

Command Default

By default, the TSM for the 802.11a or 802.11b/g network is disabled.

Command History

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

The following example shows how to enable the video TSM option for the 802.11b/g network:

```
(Cisco Controller) > config 802.11b tsm enable
```

The following example shows how to disable the video TSM option for the 802.11b/g network:

```
(Cisco Controller) > config 802.11b tsm disable
```

Related Commands

show ap stats

show client tsm

config 802.11b preamble

To change the 802.11b preamble as defined in subclause 18.2.2.2 to **long** (slower, but more reliable) or **short** (faster, but less reliable), use the **config 802.11b preamble** command.

config 802.11b preamble {**long** | **short**}

Syntax Description

long	Specifies the long 802.11b preamble.
short	Specifies the short 802.11b preamble.

Command Default

The default 802.11b preamble value is short.

Command History

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

Usage Guidelines



Note You must reboot the Cisco Wireless LAN Controller (reset system) with save to implement this command.

This parameter must be set to **long** to optimize this Cisco wireless LAN controller for some clients, including SpectraLink NetLink telephones.

This command can be used any time that the CLI interface is active.

The following example shows how to change the 802.11b preamble to short:

```
(Cisco Controller) >config 802.11b preamble short
(Cisco Controller) >(reset system with save)
```