



## Show Commands: 802.11

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# show 802.11

To display basic 802.11a, 802.11b/g, or 802.11h network settings, use the **show 802.11** command.

**show 802.11**{a | b | h}

## Syntax Description

<b>a</b>	Specifies the 802.11a network.
<b>b</b>	Specifies the 802.11b/g network.
<b>h</b>	Specifies the 802.11h network.

## Command Default

None.

This example shows to display basic 802.11a network settings:

```
> show 802.11a
802.11a Network..... Enabled
11nSupport..... Enabled
    802.11a Low Band..... Enabled
    802.11a Mid Band..... Enabled
    802.11a High Band..... Enabled
802.11a Operational Rates
    802.11a 6M Rate..... Mandatory
    802.11a 9M Rate..... Supported
    802.11a 12M Rate..... Mandatory
    802.11a 18M Rate..... Supported
    802.11a 24M Rate..... Mandatory
    802.11a 36M Rate..... Supported
    802.11a 48M Rate..... Supported
    802.11a 54M Rate..... Supported
802.11n MCS Settings:
    MCS 0..... Supported
    MCS 1..... Supported
    MCS 2..... Supported
    MCS 3..... Supported
    MCS 4..... Supported
    MCS 5..... Supported
    MCS 6..... Supported
    MCS 7..... Supported
    MCS 8..... Supported
    MCS 9..... Supported
    MCS 10..... Supported
    MCS 11..... Supported
    MCS 12..... Supported
    MCS 13..... Supported
    MCS 14..... Supported
    MCS 15..... Supported
802.11n Status:
A-MPDU Tx:
    Priority 0..... Enabled
    Priority 1..... Disabled
    Priority 2..... Disabled
    Priority 3..... Disabled
    Priority 4..... Disabled
    Priority 5..... Disabled
    Priority 6..... Disabled
```

```

        Priority 7..... Disabled
Beacon Interval..... 100
CF Pollable mandatory..... Disabled
CF Poll Request mandatory..... Disabled
--More-- or (q)uit
CFP Period..... 4
CFP Maximum Duration..... 60
Default Channel..... 36
Default Tx Power Level..... 0
DTPC Status..... Enabled
Fragmentation Threshold..... 2346
TI Threshold..... -50
Legacy Tx Beamforming setting..... Disabled
Traffic Stream Metrics Status..... Enabled
Expedited BW Request Status..... Disabled
World Mode..... Enabled
EDCA profile type..... default-wmm
Voice MAC optimization status..... Disabled
Call Admission Control (CAC) configuration
Voice AC:
    Voice AC - Admission control (ACM)..... Disabled
    Voice max RF bandwidth..... 75
    Voice reserved roaming bandwidth..... 6
    Voice load-based CAC mode..... Disabled
    Voice tspec inactivity timeout..... Disabled
    Voice Stream-Size..... 84000
    Voice Max-Streams..... 2
Video AC:
    Video AC - Admission control (ACM)..... Disabled
    Video max RF bandwidth..... Infinite
    Video reserved roaming bandwidth..... 0

```

This example shows how to display basic 802.11h network settings:

```

> show 802.11h
802.11h ..... powerconstraint : 0
802.11h ..... channelswitch : Disable
802.11h ..... channelswitch mode : 0

```

#### Related Commands

```

show ap stats
show ap summary
show client summary
show network
show network summary
show port
show wlan

```

# show 802.11

To display basic 802.11a, 802.11b/g, or 802.11h network settings, use the **show 802.11** command.

**show 802.11**{a | b | h}

## Syntax Description

<b>a</b>	Specifies the 802.11a network.
<b>b</b>	Specifies the 802.11b/g network.
<b>h</b>	Specifies the 802.11h network.

## Command Default

None.

This example shows to display basic 802.11a network settings:

```
> show 802.11a
802.11a Network..... Enabled
11nSupport..... Enabled
    802.11a Low Band..... Enabled
    802.11a Mid Band..... Enabled
    802.11a High Band..... Enabled
802.11a Operational Rates
    802.11a 6M Rate..... Mandatory
    802.11a 9M Rate..... Supported
    802.11a 12M Rate..... Mandatory
    802.11a 18M Rate..... Supported
    802.11a 24M Rate..... Mandatory
    802.11a 36M Rate..... Supported
    802.11a 48M Rate..... Supported
    802.11a 54M Rate..... Supported
802.11n MCS Settings:
    MCS 0..... Supported
    MCS 1..... Supported
    MCS 2..... Supported
    MCS 3..... Supported
    MCS 4..... Supported
    MCS 5..... Supported
    MCS 6..... Supported
    MCS 7..... Supported
    MCS 8..... Supported
    MCS 9..... Supported
    MCS 10..... Supported
    MCS 11..... Supported
    MCS 12..... Supported
    MCS 13..... Supported
    MCS 14..... Supported
    MCS 15..... Supported
802.11n Status:
A-MPDU Tx:
    Priority 0..... Enabled
    Priority 1..... Disabled
    Priority 2..... Disabled
    Priority 3..... Disabled
    Priority 4..... Disabled
    Priority 5..... Disabled
    Priority 6..... Disabled
```

```

        Priority 7..... Disabled
Beacon Interval..... 100
CF Pollable mandatory..... Disabled
CF Poll Request mandatory..... Disabled
--More-- or (q)uit
CFP Period..... 4
CFP Maximum Duration..... 60
Default Channel..... 36
Default Tx Power Level..... 0
DTPC Status..... Enabled
Fragmentation Threshold..... 2346
TI Threshold..... -50
Legacy Tx Beamforming setting..... Disabled
Traffic Stream Metrics Status..... Enabled
Expedited BW Request Status..... Disabled
World Mode..... Enabled
EDCA profile type..... default-wmm
Voice MAC optimization status..... Disabled
Call Admission Control (CAC) configuration
Voice AC:
    Voice AC - Admission control (ACM)..... Disabled
    Voice max RF bandwidth..... 75
    Voice reserved roaming bandwidth..... 6
    Voice load-based CAC mode..... Disabled
    Voice tspec inactivity timeout..... Disabled
    Voice Stream-Size..... 84000
    Voice Max-Streams..... 2
Video AC:
    Video AC - Admission control (ACM)..... Disabled
    Video max RF bandwidth..... Infinite
    Video reserved roaming bandwidth..... 0

```

This example shows how to display basic 802.11h network settings:

```

> show 802.11h
802.11h ..... powerconstraint : 0
802.11h ..... channelswitch : Disable
802.11h ..... channelswitch mode : 0

```

## Related Commands

```

show ap stats
show ap summary
show client summary
show network
show network summary
show port
show wlan

```

## show 802.11 cleanair

To display the multicast-direct configuration state, use the **show 802.11 cleanair** command.

**show 802.11{a | b | h} cleanair config**

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<b>config</b>		Displays the network Cleanair 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 display the 802.11a cleanair configuration:

```
(Cisco Controller) > show 802.11a cleanair
Clean Air Solution..... Enabled
Air Quality Settings:
  Air Quality Reporting..... Enabled
  Air Quality Reporting Period (min)..... 15
  Air Quality Alarms..... Enabled
  Air Quality Alarm Threshold..... 35 Interference Device
Settings:
  Interference Device Reporting..... Enabled
  Interference Device Types:
    TDD Transmitter..... Disabled
    Jammer..... Disabled
    Continuous Transmitter..... Disabled
    DECT-like Phone..... Disabled
    Video Camera..... Disabled
    WiFi Inverted..... Disabled
    WiFi Invalid Channel..... Disabled
    SuperAG..... Disabled
    Radar..... Disabled
    Canopy..... Disabled
    WiMax Mobile..... Disabled
    WiMax Fixed..... Disabled
Interference Device Alarms..... Enabled
  Interference Device Types Triggering Alarms:
    TDD Transmitter..... Disabled
    Jammer..... Disabled
```

```
Continuous Transmitter..... Disabled
DECT-like Phone..... Disabled
Video Camera..... Disabled
WiFi Inverted..... Disabled
WiFi Invalid Channel..... Disabled
SuperAG..... Disabled
Radar..... Disabled
Canopy..... Disabled
WiMax Mobile..... Disabled
WiMax Fixed..... Disabled Additional
Clean Air Settings:
CleanAir Event-driven RRM State..... Enabled
CleanAir Driven RRM Sensitivity..... Medium
CleanAir Persistent Devices state..... Disabled
```

## show 802.11 cleanair air-quality summary

To display the air quality summary information for the 802.11 networks, use the **show 802.11 cleanair air-quality summary** command.

**show 802.11 {a | b | h} cleanair air-quality summary**

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<b>summary</b>		Displays a summary of 802.11 radio band air quality information.
Command Default	None	
Command History	Release	Modification
	7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display a summary of the air quality information for the 802.11a network:

```
(Cisco Controller) > show 802.11a cleanair air-quality summary
AQ = Air Quality
DFS = Dynamic Frequency Selection
AP Name           Channel  Avg AQ  Min AQ  Interferers  DFS
-----
CISCO_AP3500     36    95   70    0
CISCO_AP3500     40    93   75    0
```



## show 802.11 cleanair air-quality worst

To display the worst air quality information for the 802.11 networks, use the **show 802.11 cleanair air-quality worst** command.

**show 802.11 {a | b | h} cleanair air-quality worst**

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<b>worst</b>		Displays the worst air quality information for 802.11 networks.
Command Default	None	
Command History	Release	Modification
	7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display worst air quality information for the 802.11a network:

```
(Cisco Controller) > show 802.11 cleanair air-quality worst
AQ = Air Quality
DFS = Dynamic Frequency Selection
AP Name           Channel  Avg AQ  Min AQ  Interferers  DFS
-----
CISCO_AP3500     1    83   57    3    5
```

## show 802.11 cleanair device ap

To display the information of the device access point on the 802.11 radio band, use the **show 802.11 cleanair device ap** command.

**show 802.11** { **a** | **b** | **h** } **cleanair device ap** *cisco\_ap*

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<i>cisco_ap</i>		Specified access point name.
Command Default	None	
Command History	Release	Modification
	7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the device access point for the 802.11a network:

```
(Cisco Controller) > show 802.11a cleanair device ap AP_3500
```

```
DC = Duty Cycle (%)
```

```
ISI = Interference Severity Index (1-Low Interference, 100-High Interference)
```

```
RSSI = Received Signal Strength Index (dBm)
```

```
DevID = Device ID
```

No	ClusterID	DevID	Type	AP Name	ISI
RSSI	DC	Channel			
1	c2:f7:40:00:00:03	0x8001	DECT phone	CISCO_AP3500	3
	149,153,157,161				
2	c2:f7:40:00:00:51	0x8002	Radar	CISCO_AP3500	2
	153,157,161,165				
3	c2:f7:40:00:00:03	0x8005	Canopy	CISCO_AP3500	2
	153,157,161,165				

## show 802.11 cleanair device type

To display the information of all the interferers device type detected by a specific access point on the 802.11 radio band, use the **show 802.11 cleanair device type** command.

**show 802.11** { **a** | **b** | **h** } **cleanair device type** *device\_type*

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<i>device_type</i>		Interferer device type for a specified radio band. The device type is one of the following: <ul style="list-style-type: none"> <li>• <b>tdd-tx</b>—Tdd-transmitter device information.</li> <li>• <b>jammer</b>—Jammer device information.</li> <li>• <b>cont-tx</b>—Continuous-transmitter devices information.</li> <li>• <b>dect-like</b>—Dect-like phone devices information.</li> <li>• <b>video</b>—Video devices information.</li> <li>• <b>802.11-inv</b>—WiFi inverted devices information.</li> <li>• <b>802.11-nonstd</b>—Nonstandard WiFi devices information.</li> <li>• <b>superag</b>—Superag devices information.</li> <li>• <b>canopy</b>—Canopy devices information.</li> <li>• <b>wimax-mobile</b>—WiMax mobile devices information.</li> <li>• <b>wimax-fixed</b>—WiMax fixed devices information.</li> </ul>
<b>Command Default</b>		None
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.6	This command was introduced in a release earlier than Release 7.6.

The following example shows how to display the information of all the interferers detected by a specified access point for the 802.11a network:

```
(Cisco Controller) > show 802.11a cleanair device type canopy
DC = Duty Cycle (%)
```

ISI = Interference Severity Index (1-Low Interference, 100-High Interference)

RSSI = Received Signal Strength Index (dBm)

DevID = Device ID

No	ClusterID	DevID	Type	AP Name		ISI
RSSI	DC	Channel				
-----						
	-----					
	1c2:f7:40:00:00:03	0x8005	Canopy	CISCO_AP3500	2	-62
	153,157,161,165					2

# show 802.11 cu-metrics

To display access point channel utilization metrics, use the **show 802.11 cu-metrics** command.

**show 802.11** { **a** | **b** } **cu-metrics** *cisco\_ap*

Syntax Description		
<b>a</b>	Specifies the 802.11a network.	
<b>b</b>	Specifies the 802.11b/g network.	
<i>cisco_ap</i>	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 is a sample output of the **show 802.11a cu-metrics** command:

```
(Cisco Controller) > show 802.11a cu-metrics AP1
AP Interface Mac:          30:37:a6:c8:8a:50
Measurement Duration:     90sec
Timestamp                  Thu Jan 27 09:08:48 2011
Channel Utilization stats
=====
Picc (50th Percentile)..... 0
Pib (50th Percentile)..... 76
Picc (90th Percentile)..... 0
Pib (90th Percentile)..... 77
Timestamp                  Thu Jan 27 09:34:34 2011
```

## show 802.11 extended

To display access point radio extended configurations, use the **show 802.11 extended** command.

**show 802.11 {a | b} extended**

<b>Syntax Description</b>	<b>a</b>	Specifies the 802.11a network.
	<b>b</b>	Specifies the 802.11b/g network.
	<i>extended</i>	Displays the 802.11a/b radio extended configurations.
<b>Command Default</b>	None	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	7.6	This command was introduced in a release earlier than Release 7.6.
	8.0	The command output was expanded to include the Rx SOP threshold.

The following example shows how to display radio extended configurations:

```
(Cisco Controller) > show 802.11a extended
Default 802.11a band radio extended configurations:
    beacon period 300, range 60;
    multicast buffer 45, rate 200;
    RX SOP -80; CCA threshold -90;
AP0022.9090.b618 00:24:97:88:99:60
    beacon period 300, range 60; multicast buffer 45, rate 200;
    RX SOP -80; CCA threshold -77
AP0022.9090.bb3e 00:24:97:88:c5:d0
    beacon period 300, range 0; multicast buffer 0, rate 0;
    RX SOP -80; CCA threshold -0
ironRap.ddbf 00:17:df:36:dd:b0
    beacon period 300, range 0; multicast buffer 0, rate 0;
    RX SOP -80; CCA threshold -0
```

The following example shows how to display radio extended configurations and the Rx SOP threshold:

```
(Cisco Controller) > show 802.11a extended
Default 802.11a band Radio Extended Configurations:
    Beacon period: 100, range: 0 (AUTO);
    Multicast buffer: 0 (AUTO), rate: 0 (AUTO);
    RX SOP threshold: -76; CCA threshold: 0 (AUTO);

AP3600-XALE3 34:a8:4e:6a:7b:00
    Beacon period: 100, range: 0 (AUTO);
    Multicast buffer: 0 (AUTO), rate: 0 (AUTO);
    RX SOP threshold: -76; CCA threshold: 0 (AUTO);
```

# show 802.11 media-stream

To display the multicast-direct configuration state, use the **show 802.11 media-stream** command.

**show 802.11** { **a** | **b** | **h** } **media-stream** *media\_stream\_name*

Syntax Description		
<b>a</b>	Specifies the 802.11a network.	
<b>b</b>	Specifies the 802.11b/g network.	
<b>h</b>	Specifies the 802.11h network.	
<i>media_stream_name</i>	Specified media stream name.	

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 display the media-stream configuration:

```
> show 802.11a media-stream rrc
Multicast-direct..... Enabled
Best Effort..... Disabled
Video Re-Direct..... Enabled
Max Allowed Streams Per Radio..... Auto
Max Allowed Streams Per Client..... Auto
Max Video Bandwidth..... 0
Max Voice Bandwidth..... 75
Max Media Bandwidth..... 85
Min PHY Rate..... 6000
Max Retry Percentage..... 80
```

Related Commands	<b>show media-stream group summary</b>
------------------	--

# show 802.11 SI

To view the System Intelligence configuration, use the **show 802.11 SI** command.

**show 802.11 {a | b | h} si config**

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<b>config</b>		Displays the network QCA spectrum intelligence configuration.
<b>Command Default</b>	None	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	8.6	This command was introduced.

The following example shows how to display the 802.11a si configuration:

```
(Cisco Controller) > show 802.11a si SI
Solution..... Enabled
```



# show 802.11 si device ap

To display the information of the device access point on the 802.11 radio band, use the **show 802.11 si device ap** command.

**show 802.11** { **a** | **b** | **h** } **si device ap** *cisco\_ap*

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<i>cisco_ap</i>		Specified access point name.
Command Default	None	
Command History	Release	Modification
	8.6	This command was introduced.

The following example shows how to display the device access point for the 802.11a network:

```
(Cisco Controller) > show 802.11a si device ap AP_3500
DC = Duty Cycle (%)
ISI = Interference Severity Index (1-Low Interference, 100-High Interference)
RSSI = Received Signal Strength Index (dBm)
DevID = Device ID
No ClusterID DevID Type AP Name ISI
RSSI DC Channel
-----
-----
1 c2:f7:40:00:00:03 0x8001 DECT phone CISCO_AP3500 1 -43 3
 149,153,157,161
2 c2:f7:40:00:00:51 0x8002 Radar CISCO_AP3500 1 -81 2
 153,157,161,165
3 c2:f7:40:00:00:03 0x8005 Canopy CISCO_AP3500 2 -62 2
 153,157,161,165
```

## show 802.11 si device type

To display the information of all the interferers device type detected by a specific access point on the 802.11 radio band, use the **show 802.11 si device type** command.

**show 802.11 { a | b | h } si device type { cont-tx | si\_fhss }**

Syntax Description		
<b>a</b>		Specifies the 802.11a network.
<b>b</b>		Specifies the 802.11b/g network.
<b>h</b>		Specifies the 802.11h network.
<b>type</b>		Displays 802.11 interference information for the given device type in 5 GHz.
<b>cont-tx</b>		Display 802.11 continuous-transmitter devices information.
<b>si_fhss</b>		Displays QCA SI Display QCA SI FHSS devices information (FHSS) devices information
<b>Command Default</b>	None	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	8.6	This command was introduced.

The following example shows how to display the information of all the FHSS devices detected by a specified access point for the 802.11a network:

```
(Cisco Controller) > show 802.11a si device type si_fhss
DC = Duty Cycle (%)
ISI = Interference Severity Index (1-Low Interference, 100-High
Interference)
RSSI = Received Signal Strength Index (dBm)
DevID = Device ID
No ClusterID          DevID  Type          AP Name          ISI
RSSI  DC  Channel
-----
-----
1c2:f7:40:00:00:03  0x8005 si_fhss          CISCO_AP3500  2    -62
2      153,157,161,165
```