Using Cisco Workgroup Bridges

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Finding Feature Information

Your software release may not support all of the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Information About Cisco Workgroup Bridges and non-Cisco Workgroup bridges

A WGB is a mode that can be configured on an autonomous Cisco IOS access point to provide wireless connectivity to a lightweight access point on behalf of clients that are connected by Ethernet to the WGB access point. A WGB connects a wired network over a single wireless segment by learning the MAC addresses of its wired clients on the Ethernet interface and reporting them to the lightweight access point using Internet Access Point Protocol (IAPP) messaging. The WGB provides wireless access connectivity to wired clients by establishing a single wireless connection to the lightweight access point.

When a Cisco WGB is used, the WGB informs the access points of all the clients that it is associated with. The switch is aware of the clients that are associated with the access point. When non-Cisco WGBs are used, the switch has no information about the IP address of the clients on the wired segment behind the WGB. Without this information, the switch drops the following types of messages:

- ARP REQ from the distribution system for the WGB client.

- ARP RPLY from the WGB client.
- DHCP REQ from the WGB client.
- DHCP RPLY for the WGB client.

Monitoring the Status of Workgroup Bridges

Note The procedure to perform this task using the switch GUI is not currently available.

SUMMARY STEPS

1. **enable**
2. **show wireless wgb summary**
3. **show wireless wgb mac-address** *wgb_mac_address* **detail**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Switch# enable`	Enters privileged EXEC mode.
Step 2	**show wireless wgb summary** **Example:** `Switch# show wireless wgb summary`	Displays the WGBs on your network.
Step 3	**show wireless wgb mac-address** *wgb_mac_address* **detail** **Example:** `Switch# show wireless wgb mac-address 00:0d:ed:dd:25:82 detail`	Displays the details of any wired clients that are connected to a particular WGB.

Debugging WGB Issues (CLI)

Note The procedure to perform this task using the switch GUI is not currently available.

SUMMARY STEPS

1. **enable**
2. **debug iapp all**
3. **debug iapp error**
4. **debug iapp packet**
5. **debug mobility handoff** [**switch** *switch_number*]
6. **debug dhcp**
7. **debug dot11 mobile**
8. **debug dot11 state**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** `Switch# enable`	Enters privileged EXEC mode.
Step 2	**debug iapp all** **Example:** `Switch# debug iapp all`	Enables debugging for IAPP messages.
Step 3	**debug iapp error** **Example:** `Switch# debug iapp error`	Enables debugging for IAPP error events.
Step 4	**debug iapp packet** **Example:** `Switch# debug iapp packet`	Enables debugging for IAPP packets.
Step 5	**debug mobility handoff** [**switch** *switch_number*] **Example:** `Switch# debug mobility handoff`	Enables debugging for any roaming issues.
Step 6	**debug dhcp** **Example:** `Switch# debug dhcp`	Debug an IP assignment issue when DHCP is used.
Step 7	**debug dot11 mobile** **Example:** `Switch# debug dot11 mobile`	Enables dot11/mobile debugging. Debug an IP assignment issue when static IP is used.

	Command or Action	Purpose
Step 8	**debug dot11 state** **Example:** `Switch# debug dot11 state`	Enables dot11/state debugging. Debug an IP assignment issue when static IP is used.

Configuration Examples for Configuring Workgroup Bridges

WGB Configuration: Example

This example shows how to configure a WGB access point using static WEP with a 40-bit WEP key:

```
Switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)# dot11 ssid WGB_with_static_WEP
Switch(config-ssid)# authentication open
Switch(config-ssid)# guest-mode
Switch(config-ssid)# exit
Switch(config)# interface  dot11Radio 0
Switch(config)# station-role workgroup-bridge
Switch(config-if)# encry mode wep 40
Switch(config-if)# encry key 1 size 40 0 1234567890
Switch(config-if)# ssid WGB_with_static_WEP
Switch(config-if)# end
```

Verify that the WGB is associated to an access point by entering this command on the WGB:

show dot11 association

Information similar to the following appears:

```
Switch# show dot11 associations
802.11 Client Stations on Dot11Radio0:
SSID [FCVTESTING] :
MAC Address    IP address      Device        Name            Parent         State
000b.8581.6aee 10.11.12.1      WGB-client    map1            -              Assoc
ap#
```