CAPWAP Link Aggregation Support

Information About CAPWAP LAG Support

Link aggregation (LAG) simplifies controller configuration because you no longer require to configure primary and secondary ports for each interface. If any of the controller ports fail, traffic is automatically migrated to one of the other ports. As long as at least one controller port is functioning, the system continues to operate, access points remain connected to the network, and wireless clients continue to send and receive data.

The CAPWAP LAG support feature is applicable for access points that support multiple ethernet ports for CAPWAP.

The 11AC APs with dual ethernet ports require the CAPWAP AP LAG support for data channel.

Cisco Aironet 1850, 2800, and 3800 Series APs' second Ethernet port is used as a link aggregation port, by default. It is possible to use this LAG port as an RLAN port when LAG is disabled.

The following APs use LAG port as an RLAN port:

- 1852E
- 1852I
- 2802E
- 2802I
- 3802E

- 3802I

- 3802P

- 9136I

Restrictions for CAPWAP LAG Support

- APs must be specifically enabled for CAPWAP AP LAG support.

- CAPWAP data does not support IPv6.

- Data DTLS must not be enabled when LAG is enabled.

- APs behind NAT and PAT are not supported.

Enabling CAPWAP LAG Support on Controller (GUI)

Procedure

Step 1	Choose **Configuration** > **Wireless** > **Wireless Global**.
Step 2	Check the **AP LAG Mode** check box.
Step 3	Click **Apply**.

Enabling CAPWAP LAG Support on Controller

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**ap lag support** **Example:** `Device(config)# ap lag support`	Enables CAPWAP LAG support on the controller. **Note** After executing this command, you get to view the following warning statement: *Changing the lag support will cause all the APs to disconnect.*

	Command or Action	Purpose
		Thus, all APs with LAG capability reboots and joins the enabled CAPWAP LAG.
Step 3	**end** **Example:** `Device(config)# end`	Returns to privileged EXEC mode. Alternatively, you can also press **Ctrl-Z** to exit global configuration mode.

Enabling CAPWAP LAG Globally on Controller

If the CAPWAP LAG is enabled globally on the controller, the following occurs:

- AP joins the controller.
- AP exchanges its CAPWAP support.
- LAG mode starts, if LAG is enabled on AP.

Disabling CAPWAP LAG Globally on Controller

If the CAPWAP LAG is disabled globally on the controller, the following occurs:

- AP joins the controller.
- AP exchanges its CAPWAP support.
- AP LAG config is sent to AP, if LAG is already enabled on AP.
- AP reboots.
- AP joins back with the disabled LAG.

Enabling CAPWAP LAG for an AP Profile (GUI)

Procedure

Step 1	Choose **Configuration** > **Tags & Profiles** > **AP Join**.
Step 2	Click **Add**.
Step 3	Under the **General** tab, enter the **Name** of the AP Profile and check the **LAG Mode** check box to set the CAPWAP LAG for the AP profile.
Step 4	Click **Apply to Device**.

Enabling CAPWAP LAG for an AP Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**ap profile** *ap-profile* **Example:** `Device(config)# ap profile xyz-ap-profile`	Configures an AP profile and enters AP profile configuration mode. **Note** When you delete a named profile, the APs associated with that profile will not revert to the default profile.
Step 3	**lag** **Example:** `Device(config-ap-profile)# lag`	Enables CAPWAP LAG for an AP profile.
Step 4	**end** **Example:** `Device(config-ap-profile)# end`	Exits configuration mode and returns to privileged EXEC mode.

Disabling CAPWAP LAG for an AP Profile

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**ap profile** *ap-profile* **Example:** `Device(config)# ap profile xyz-ap-profile`	Configures an AP profile and enters AP profile configuration mode. **Note** When you delete a named profile, the APs associated with that profile will not revert to the default profile.

	Command or Action	Purpose
Step 3	**no lag** **Example:** `Device(config-ap-profile)# no lag`	Disables CAPWAP LAG for an AP profile.
Step 4	**end** **Example:** `Device(config-ap-profile)# end`	Exits configuration mode and returns to privileged EXEC mode.

Disabling CAPWAP LAG Support on Controller

Procedure

	Command or Action	Purpose
Step 1	**configure terminal** **Example:** `Device# configure terminal`	Enters global configuration mode.
Step 2	**no ap lag support** **Example:** `Device(config)# no ap lag support`	Disables CAPWAP LAG support on the controller . **Note** All APs with LAG capability reboots and joins the disabled CAPWAP LAG.
Step 3	**end** **Example:** `Device(config)# end`	Exits configuration mode and returns to privileged EXEC mode.

Verifying CAPWAP LAG Support Configurations

To verify the global LAG status for all Cisco APs, use the following command:

```
Device# show ap lag-mode
AP Lag-Mode Support Enabled
```

To verify the AP LAG configuration status, use the following command:

```
Device# show ap name <ap-name> config general
Cisco AP Identifier : 0008.3291.6360
Country Code : US
Regulatory Domain Allowed by Country : 802.11bg:-A 802.11a:-AB
AP Country Code : US - United States
::
AP Lag Configuration Status : Enabled/Disabled
Has AP negotiated lag based on AP capability and per AP config.
```