



# Samsung AP/APC Release Notes

For V3.1.8.T2

*This manual is the software release notes for Samsung AP and APC Release V3.1.8.T2*

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Samsung AP/APC

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This manual should be read and used as a guideline for properly installing and/or operating the product. Owing to product variations across the range, any illustrations and photographs used in this manual may not be a wholly accurate depiction of the actual products you are using. This manual may be changed for system improvement, standardization and other technical reasons without prior notice.

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# Preface

These release notes contain a list of new/changed functions, a list of fixes for major issues, and upgrade instructions for Samsung Access Point (AP)/AP Controller (APC) Software Package V3.1.8.T2.

## Relevance







This manual applies to the following products/software.

Name	Type
V3.1.8.T2	Software

## Conventions in this Document

Samsung Networks product documentation uses the following conventions.

### Symbols

Symbol	Description
	Indicates a task.
	Indicates a shortcut or an alternative method.
	Provides additional information.
	Provides information or instructions that you should follow to avoid service failure or damage to equipment.
	Provides information or instructions that you should follow to avoid personal injury or fatality.
	Provides antistatic precautions that you should observe.

### Menu Commands

**menu | command**

This indicates that you must select a command on a menu, where **menu** is the name of the menu, and **command** is the name of the command on that menu.

### File Names and Paths

These are indicated by a bold typeface. For example:

Copy **filename.ext** into the **/home/folder1/folder2/bin/** folder.

### User Input and Console Screen Output Text

Input and output text is presented in the Courier font. For example,

```
context <designated epc-context-name>
```

CLI commands are presented in bold small caps. For example,  
Type the **RTRV-NE-STs** command in the input field.

## New and Changed Information

This section describes information that has been added/changed since the previous publication of this manual.

## Revision History

The following table lists all versions of this document.

Document Version	Publication Date	Remarks
1.0	August 2015	First Edition

# Supported AP/APC Models

## Supported APC Models

- WEC8500
- WEC8050

## Supported AP Models

- 802.11n models: WEA302i, WEA303i/e, WEA312i, WEA313i
- 802.11ac models: WEA403i/e, WEA412i, WEA413i, WEA453e

## Unsupported AP/APC Models

※ Applicable to all Samsung AP/APC products currently released.

# What's New in This Release

These release notes provide a description of newly added or changed functions in the AP/APC V3.1.8.T2 version.

## New/Changed Functions

### **802.11w/r/k/v Standard Support**

- 802.11w: Protected Management Frame Support  
: IEEE 802.11w is an IEEE 802.11 standard featuring WLAN Management Frames applied with the MAC layer security method which was previously used on WLAN Data Frames. The Wi-Fi CERTIFIED WPA2 with Protect Management Frames certification program is a test procedure used to verify interoperability for providing WPA2-level protection for WLAN Management Frames based on IEEE 802.11w. This version provides support in accordance with this standard.
- 802.11r Fast Basic Service Set (BSS) Transition Standard Support  
: This version now supports operations and compatibility service with user devices based on the 802.11r standard.
- Voice Enterprise Certification Support  
: This version provides services according to the procedure based on the interoperability test criteria as well as services for enhanced voice quality, mobility, security and management function services based on the IEEE 802.11k, IEEE 802.11v and Wi-Fi CERTIFIED Voice-Enterprise certification program.

※ Constraints: 802.11w and 802.11r cannot be used simultaneously. Only supported by WEA4xx APs.

### **Bonjour Gateway Support**

- The Bonjour protocol is a zero-configuration networking technology developed by Apple Inc. for the convenience of providing service through automatic device scanning. This version supports Bonjour Gateway for exchanging protocol messages and interoperability with other devices.
- For sharing services with Bonjour devices, the Bonjour Gateway supports the following functions.
  - Bonjour Gateway forwards mDNS packets between Bonjour devices in different VLANs
    - ◆ Bridge mode: The APC relays mDNS request/response packets to another VLAN (interface).
    - ◆ Proxy mode: The APC receives and caches mDNS response packets, then transmits mDNS responses to mDNS request on behalf of the device.

- Supports mDNS service allowance/inhibition filtering by WLAN and VLAN interfaces
- Both of the following functions must be enabled to support Bonjour service between wired/wireless devices not only in the same VLAN but also across different VLANs. APC support functions for Bonjour operation scenarios are as follows.
  - Bonjour service support in the same VLAN: Bonjour service mDNS multicast packet forwarding using “Broadcast/Multicast Filtering setting”
  - Bonjour service support across different VLANs: Bonjour Gateway
- Limitations
  - Not supported in Local Bridge WLAN
  - Not supported in Inter-APC Handover environment

### ***APC Configuration Synchronization***

For convenience of redundancy service configuration using two APCs, service configuration synchronization is supported between master/slave (primary/secondary) APCs. Two APCs in redundancy configuration must have the same service-related settings (with the exception of their own network settings) in order to provide the same WLAN services. Configuration synchronization allows configuration information of the master APC to be applied on the slave APC automatically for such purposes.

### ***Samsung Smart Service Link Support***

- When the Samsung AP/APC is serviced along with a Samsung smartphone, the smart service link function is supported through interworking with the user device.
  - Through interworking with the Connection Manager software on the user device, the following functions are provided.
    - Load balancing based on handover method
    - Location tracking based on device scan information
    - Wi-Fi connection control using Connection Manager
  - “Samsung Smart Service Link” collectively refers to a set of distinct services provided through interworking with a Samsung smartphone.
- ※ Requires Wi-Fi Agent App to be installed on a Samsung device.

### ***User Notification before License Expiry***

A new function allows a warning event to be triggered 30 days before the license expires.



### **Rate Limiting by WLAN (SSID)**

A new function allows the wireless service rate to be limited for devices by specifying a maximum available capacity for each SSID. (Rate limiting is based on the capacity of each SSID, not each device.)

- **Default Mode:** The maximum bandwidth set for the SSID is shared among the connected devices at different rates as specified.
- **Fairness Mode:** Bandwidth of all devices connected to the SSID is automatically set equally.

E.g. If the rate limit of an SSID is set to 1024 Kbps and the number of devices connected is N, the rate of each device is automatically set at  $1024/N$  Kbps. The difference is that if only 1 device out of N devices is using traffic, it can use up to 1024Kbps in default mode, while it can use only up to  $1024/N$  Kbps in fairness mode.

### **TDLS Blocking Function**

- **Tunneled Direct Link Setup (TDLS)** allows WLAN devices connected to the same AP to exchange data frames directly with each other. When using TDLS, data frames do not need to pass through the AP, increasing WLAN channel usage efficiency by double or more.
- When using tunnel mode in an enterprise environment, TDLS can be blocked so that the devices cannot communicate directly with each other without passing through the AP/APC.

: In the Hotspot 2.0 standard, TDLS is blocked when using the hotspot function.

### **DHCP Service Using AP in Branch Office**

- When there is no dedicated DHCP server in a small branch office environment, one of the APs can be designated as the master AP in order to act as a DHCP server.
- All other APs acts as slave APs, supporting DHCP address allocation to WLAN devices using the DHCP relay function.

※ DHCP pool constraints: C Class 1 unit (can be used as both AP and station simultaneously.)

### **Added Radio Setting to AP Group Configuration**

- Added radio setting by AP group.  
: Radio parameter settings related to 802.11b/g/n and 802.11a/n/ac can be applied for each AP group.

※ Constraints: Only the APs belonging to the selected AP group at the time of radio configuration are applied with the new setting.

Any subsequent APs added to the AP group are not affected.

---

### ***Enhanced Captive Portal Features***

Web authentication setting, guest self-registration, https setting support by WLAN

### ***Enhanced DPI Service Features***

- Deep Packet Inspection (DPI) provides inspection of the network traffic, bandwidth limiting or blocking by high-level application type, and marking (TOS).
- Monitoring and statistics are provided by Application/WLAN/Station/Device-OS type/Group.
- WEC configuration and monitoring are provided.
- Number of applications monitored: 120
- DPI configuration by RBAC.

### ***Enhanced RBAC Features***

- RBAC allows distinct services to be provided to each user based on the roles defined by the operator.
- Unique ACL/QoS/VLAN/URL/DPI services can be provided by setting the role profile.
- Conditional Role Derivation, which provides operator-defined services only to users meeting certain conditions (MAC Address, BSSID, SSID, WLAN-ID, AP Name, Device-Type, Reply Message, External Radius Server), is supported.

### ***Enhanced ACL Function***

- Domain names, as well as IP addresses, can be used in ACL rules.
- Limitations
  - Each domain name can be mapped to 16 IP addresses at the most.
  - Not supported in RBAC ACL Profile.
  - Not supported in Local Bridge WLAN Mode.

### ***Changed Tx Power Range by Country***

The Tx power range managed for each country is changed according to specification regulations.

### ***Enhanced Group Configuration for Default AP Group***

- Default group now supports AP Group configuration for some parameters.
- Default group now supports the Profile Overwrite function.

---

### ***Changed FTP/SFTP Password Policy***

For improved security of the password used in FTP/SFTP, the new policy requires a combination of 8-16 alphanumeric and special characters.



When upgrading to V3.1, the FTP/SFTP service will automatically be disabled for any site using the existing default password. A new password must be set according to the improved security policy before the service can be enabled again.

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### ***Improved Statistics Information***

Supports CPU and memory usage statistics by AP and traffic usage statistics by SSID.

### ***Enhanced MAC Authentication***

A new function allows the MAC information to be registered in the MAC filter when using the MAC information registered in the authentication server as an inhibition list.

### ***Application of Patch for Multiple NTP Security Vulnerabilities***

Applied NTP v4.2.8 (patching the issue of DDoS attack using NTP amplification).

### ***OpenSSL Library Update***

Updated OpenSSL library to version 1.0.2a.

### ***Changed Default AP-APC DTLS Setting***

The default DTLS setting for CAPWAP Control Channel has changed from Off to On.

※ When upgrading to V3.1, any site with DTLS disabled will have the DTLS setting automatically changed to Control-Only.

### ***Uplink Bandwidth Limitation***

A new function allows the AP uplink bandwidth to be controlled from the APC.

### ***AP Cable Checker Function***

When link-up is detected during booting, the cable condition is tested. If abnormal, the red LED flashes rapidly.

While the cable checker is checking the link condition, the blue green LED flashes rapidly.

- Normal condition
  - 1G link connected, 4 pairs normal
  - 100M link connected, 2 pairs normal



This function can be configured for each AP using the APC CLI. Changes are applied at the next boot (default: Disable).

※ Constraints: When checked as cable error, there is no alarm on the APC.

### ***AP Glibc Ghost Vulnerability Bug Fix Patch (WEA4xx AP Only)***

### ***Added Wired Bridge Service to AP (WEA4xx AP Only)***

This function provides wired network services by activating the Ethernet port of the repeater AP.

### ***Changed WEC8050 Capacity (WEC8050 Only)***

- Max APs per APC in Distributed Mode: 75 → 200
- Max APs per Cluster in Distributed Mode: 150 → 200
- Max AP Groups, Max Remote AP Groups: 75 → 200
- Max APs per AP Group, Max APs per Remote AP Group: 150 → 200

### ***Default IP Address Support in WEC8050***

- Default VLAN is set in ge1 thru ge4.
- IP address of the default VLAN is set to 192.168.1.2 by default.

### ***Support for Allocation of VLAN not Mapped to Port as User VLAN***

Any VLAN not mapped to the port but belonging to Interface-Group can be used as a user VLAN.

### ***Changed Default AP Password***

Contact Technical Support for information.

## New/Changed MIBs/Traps

### Summary of Changes

- New MIBs: 43 tables
- Changed MIBs: 21 tables

### New MIBs

Table Name	Description of MIB
sweSiteProfilingObjects (7342642)	New site profiling function added
sweAuditNSyncStatusObjects (7342640)	Configuration synchronization audit function
sweConfigSyncRoleInfoObjects (7342641)	Configuration synchronization role status stored
sweConfigSyncControlObjects (7342643)	Configuration synchronization role setup function
sweApGroupDhcpConfigObjects (7537167)	New function (Remote AP Group DHCP) added
sweApGroupDhcpStaticIpObjects (7537168)	New function (Remote AP Group DHCP) added
sweApGroupDhcpPoolObjects (7537169)	New function (Remote AP Group DHCP) added
sweApGroupInterfaceObjects (7537171)	New function (Remote AP Group VLAN Multibinding) added
sweApGroupIfGroupObjects (7537172)	New function (Remote AP Group VLAN Multibinding) added
sweApRadioInfoObjects (7537163)	Presentation Radio Capability
sweWlan80211kMeasurementObjects (7537164)	New function (802.11k configuration) added
sweWlanGeneralParameterObjects (7537170)	New function (TDLS Blocking) added
sweWlanPreferredVlanInfoObjects (7471109)	Preferred VLAN allocation to WLAN
sweStalwParamApObjects (7474061)	New SSL function added-AP configuration
sweStalwParamGroupObjects (7474062)	New SSL function added-AP group configuration
sweCountryCodeConfigGroupObjects (7471379)	Country code configuration by AP group
sweCallEdcaConfigGroupObjects (7471889)	CVO configuration by AP group
sweCapSecWlanWtpRadioGroupObjects (7473014)	WLAN radio information stored by AP group
sweCapSecWlanHtConfigGroupObjects (7473015)	WLAN HT Config information stored by AP group
sweMaxStaOnApConfigGroupObjects (7471380)	Max allowed device count by AP group
sweEnergySavingStateInfoObjects (7472947)	Energy Saving status stored. Added to distinguish Radio Off by

Table Name	Description of MIB
	Admin and Radio Off by Energy Saving.
sweRFSGStaDetectedAPInfoObjects (7473675)	Storing AP information detected by the device through device interworking
sweBSConfigRequestObjects (7474063)	New Proportional Band Steering function. Not applied to apc24&30.
sweWipsDataCollectionListObjects (7602697)	MIB added due to separation of the data list to upload to the Samsung WIPS server for simultaneous uploading to AD WIPS and Samsung WIPS servers
sweByodUserCacheListObjects (7602694)	Stores successful web authentication results
sweWebPageDownloadedListObjects (7602695)	Stores paths of web pages downloaded from the Captive Portal
sweWebServerPortObjects (7602696)	Used for informing the APM of the web service port so that it can be relayed to the final AP
sweDpiProfileGroupContractObjects (7342635)	DPI Application Group configuration
sweDpiRequestClearStatObjects (7342636)	DPI Stat clear status (for WEC event)
sweDpiStatWlanObjects (7342637)	DPI WLAN statistics (WEC)
sweDpiStatDeviceObjects (7342639)	DPI Device statistics (WEC)
sweDpiStaticOsTypeObjects (7342644)	DPI WLAN statistics type information (WEC)
sweDpiStatWlanTypeObjects (7342645)	DPI Device statistics type information (WEC)
sweAclDnsIpAddressObjects (7342646)	IP address information in Named ACL
sweAclDnsConfigObjects (7342647)	Named ACL DNS Refresh configuration
sweBmgWlanRateLimitObjects (7342648)	WLAN Rate-Limit configuration
sweMDNSSnoopingConfigInfoObjects (7406143)	Bonjour Gateway Global configuration
sweMDNSProfileObjects (7406150)	Bonjour Gateway Profile object definition
sweMDNSCacheObjects (7406151)	Bonjour Gateway mDNS Cache information
sweMDNSServiceObjects (7406152)	Bonjour Gateway mDNS Service object definition
sweMDNSProfileServiceObjects (7406153)	Bonjour Gateway Service-Profile Mapping definition
sweMDNSProfileWlanObjects (7406154)	Bonjour Gateway WLAN Profile configuration
sweMDNSProfileInterfaceObjects (7406155)	Bonjour Gateway Interface Profile configuration

## Changed MIBs

Table Name	Object Name	Change	Description of MIB
sweApcGlobalListObjects (7537031)			Added fields related to configuration synchronization
	sweApcgloballistConfigSyncFlag (13)	Added	
	sweApcgloballistConfigSyncIndex (14)	Added	
	sweApcgloballistConfigSyncIpV4Addr (15)	Added	
sweApGroupProfileObjects (7536914)			New function (UplinkDSCP) added Default DTLS value/setting fields changed
	sweApgroupprofileApModeOptions (7)	Added	
	sweApgroupprofileUplinkBandwidthDSCP (47)	Added	
sweApConfigObjects (7536929)			New function (UplinkDSCP) added Default DTLS value/setting fields changed
	sweApconfigApModeOptions (60)	Added	
	sweApconfigUplinkBandwidthDSCP (61)	Added	
	sweApconfigLinkTest (62)	Added	
sweStationInfoEMObjects (7342585)			MIB for station-related functions • SSL function added • Additional 802.11r development
	sweStationinfoemDpiProfileIndex (50)	Added	
	sweStationinfoemDpiProfileName (51)	Added	
	sweStationinfoemSslLevel (53)	Added	
	sweStationinfoemSslIw (64)	Added	
sweLocationApInfoObjects (7472643)			Changes related to Edge AP
	sweLocationapinfoEdge (7)	Added	Added for Edge-Located AP Feature
sweLocTrackingConfigInfoObjects (7472920)			Changes related to device interworking and Edge-AP
	sweLoctrackingconfiginfoScanResultType (11)	Added	Added for device interworking feature
	sweLoctrackingconfiginfoNumReqAPList (12)	Added	Added for device interworking feature
	sweLoctrackingconfiginfoScanReportIntv (13)	Added	Added for device interworking feature
	sweLoctrackingconfiginfoNumReportCnt (14)	Added	Added for device interworking feature
	sweLoctrackingconfiginfoOffsetEdge1 (15)	Added	Added for Edge-Located AP Feature
	sweLoctrackingconfiginfoOffsetEdge2 (16)	Added	Added for Edge-Located AP Feature
	sweLoctrackingconfiginfoLtEdgeEnable (17)	Added	Added for Edge-Located AP Feature
sweEnergySavingGroupObjects (7472945)			Added whether to turn on 3 neighbor AP radios near the AP connected to the device in Energy Saving Group
	sweEnergysavinggroupNeighborApOn (12)	Added	
sweEnergySavingAutoClassObjects (7472946)			Added whether to turn on 3 neighbor AP radios near the AP connected to the device in Energy Saving automatic classification
	sweEnergysavingautoclassNeighborApOn (10)	Added	
sweStationRelFunctionObjects (7474059)			New SSL function added

Table Name	Object Name	Change	Description of MIB
	sweStationrelfunctionStationlwFunc (6)	Added	
	sweStationrelfunctionStationlwRoamParamStatus (7)	Added	
	sweLoadBalancingConfigInfoObjects (7474056)		Added for SSL function implementation. Currently not in use.
	sweLoadbalancingconfiginfoLbOptionSslScan (13)	Added	
	sweLoadbalancingconfiginfoLbOptionSslHo (14)	Added	
	sweSecurityBssConfObjects (7602180)		Changes related to 802.11w/r
	sweSecuritybssconfPmf (30)	Added	802.11w (PMF) function
	sweSecuritybssconfFt (31)	Added	802.11r (FT) function
	sweGuestUserDetailsObjects (7602204)		Web Authentication User configuration information of Local Net Users
	sweGuestuserdetailsMaxDeviceCount (30)	Added	
	sweCaptivePortalWebAuthConfigObjects (7602242)		Web Page configuration information of Captive Portal
	sweCaptiveportalwebauthconfigCpWebAuthRedirect Type (3)	Deleted	
	sweCaptiveportalwebauthconfigCpWebAuthRedirect Url (4)	Deleted	
	sweCaptiveportalwebauthconfigCpWebAuthExternal Url (6)	Deleted	
	sweCaptiveportalwebauthconfigCpWebAuthSelectedUrl (7)	Deleted	
	sweCaptiveportalwebauthconfigCpSelfRegistrationFlag (12)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationNameFlag (13)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationPhoneFlag (14)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationCompanyFlag (15)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationLabelFlag (16)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationMailFlag (17)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationLifetime (18)	Added	
	sweCaptiveportalwebauthconfigCpSelfRegistrationLabelStr (23)	Added	
	sweCaptivePortalConfigInfoObjects (7602243)		Web Page configuration information of Captive Portal added
	sweCaptiveportalconfiginfoApchostName (12)	Added	
	sweSecurityWebAuthProfileTableObjects (7602202)		L3 security configuration information by WLAN added
	sweSecuritywebauthprofiletableWebPageType (9)	Added	
	sweSecuritywebauthprofiletableWebGuestSelfAuthType (10)	Added	



Table Name	Object Name	Change	Description of MIB
	sweSecuritywebauthprofiletableWebAuthServerType (11)	Added	
	sweSecuritywebauthprofiletableWebPrimaryRadiusId (12)	Added	
	sweSecuritywebauthprofiletableWebSecondaryRadiusId (13)	Added	
	sweSecuritywebauthprofiletableWebAfterAuthRedirectType (14)	Added	
	sweSecuritywebauthprofiletableWebCacheDuration (15)	Added	
	sweSecuritywebauthprofiletableWebAfterAuthRedirectUrl (16)	Added	
	sweSecuritywebauthprofiletableWebAuthRedirectForwarder (17)	Added	
sweRbacProfileObjects (7602560)			RBAC Role Profile setting fields added
	sweRbacprofileAcIType (3)	Added	Flag for distinguishing remote ACL
	sweRbacprofileDpiProfileIndex (8)	Added	Added support for DPI Profile
sweNwQoSACLTable (200.1)			URL (Named ACL) field added in ACL
	sweNwQoSACLSrcUrl (25)	Added	
	sweNwQoSACLDstUrl (26)	Added	
sweDpiAppGroupObjects (7342615)			DPI Application Group information
	sweDpiappgroupAppList2 (5)	Added	
sweDpiAppListObjects (7342617)			DPI Application information
	sweDpiapplistGroupId (4)	Added	
sweDpiOsDeviceTypeObjects (7342618)			DPI Device Type information
	sweDpiosdevicetypeCount (2)	Deleted	
	sweDpiosdevicetypeKey (3)	Deleted	
	sweDpiosdevicetypeType (2)	Added	
sweApMacAcI1EntryListObjects (7473707) ~sweApMacAcI20EntryListObjects (7473726)			Deleted due to disuse.
	sweApmacacI1entrylistType (9)~sweApmacacI20entrylistType (9)	Deleted	
	sweApmacacI1entrylistStatus (10)~sweApmacacI20entrylistStatus (10)	Deleted	

## Regulatory Changes

No changes.

## Fixes for Major Issues

***Fixed an issue where there is no communication between wireless devices on Local-Bridge WLAN.***

### [Symptom]

When the AP is recovered within 60 seconds of entering Survival Mode, wireless devices on the Local-Bridge WLAN cannot communicate with each other (Internet is accessible from the wireless devices.).

### [Reason]

The group key, which is newly generated by the APC during AP survival mode recovery, is not applied to the AP.

### [Solution]

Fixed so that the group key value is updated every time during AP survival mode recovery.

***Fixed an issue where the device should be updated with a new IP address for the new VLAN when VLAN information changes during device re-authentication, but maintains the previous IP address instead.***

### [Fix]

Fixed so that the device is disassociated when the VLAN information [Fix] during re-authentication in order to obtain the new IP address. Routing table of the AP is also updated with the new IP information.

***Fixed an issue where the APC is not updated with the changed IP information when the device's IP address is changed by DHCP during operation.***

### [Fix]

Fixed so that the AP uses the DHCP snoop function to check DHCP packets transmitted from the device (DHCP snooping) and when the device's IP is changed, the APC is updated with the changed IP information.

***[WEA4xx AP] Fixed GARP transmission error.***

### [Symptom]

When connecting to the station, native VLAN ID information is always included in GARP transmission.

### [Solution]

When the AAA override setting is:

- 1 Disable, if vlan-wlan mapping setting exists, GARP packets are transmitted to the VLAN ID; if the setting does not exist, GARP packets are transmitted by including the native VLAN ID information.
- 2 Enable, if VLAN ID is received from the APC, GARP packets are transmitted by including the VLAN ID information; if VLAN ID information is not received from the APC, GARP packets are not transmitted.



WEA3xx AP is temporarily fixed not to perform GARP transmissions. Additional improvements are planned for the future.

#### **[WEA4xx AP] Fixed Broadcast Packet Flooding error.**

##### **[Symptom]**

When a broadcast packet is received, only the interfaces belonging to the same VLAN should be flooded, but the packet is transmitted to all interfaces.

##### **[Solution]**

When the AAA override setting is:

- 1 Disable, the broadcast packets received are forwarded to the BSS of the VLAN ID.
- 2 Enable, the broadcast packets are forwarded regardless of the VLAN ID.

#### **[WEA4xx AP] Improved delayed channel analysis on WIPS Web GUI.**

##### **[Reason]**

The UCC incorrectly manages the channel list in WIPS mode.

##### **[Analysis]**

The update is delayed because the channel information relayed by the UCC is incorrect.

##### **[Fix]**

Fixed so that the WSA manages and reports a list of channels for which spectrum analysis is carried out during channel analysis.

#### **Fixed an issue where max login session setting of web authentication users cannot be changed.**

##### **[Reason]**

Max Login Session count could not be set.

##### **[Fix]**

Fixed so that Max Login Session count can be set (Default Login Session count: 1).

---

***Fixed an issue where Usernames of Web Authentication Users is hidden in station information.***

**[Reason]**

Usernames of Web Authentication Users are missing.

**[Fix]**

Fixed so that username is output in station information during web authentication.

***Fixed an issue that guest user authentication fails when using external web server***

**[Reason]**

Message-id is not forwarded to captive portal module when an external web server is used.

**[Fix]**

Fixed so that message-id is forwarded to captive portal module when an external web server is used.

***Fixed an issue that stations cannot be connected after upgrade***

**[Reason]**

Many http session files have been created abnormally.

**[Fix]**

Fixed so that stations can be connected after upgrade.

***Fixed an issue that guest information is not shown by lobby administrator***

**[Reason]**

Guest information is not shown by lobby administrator.

**[Fix]**

Guest information is shown by lobby administrator.

***Fixed an issue that CAPWAP keepalive is transmitted on client VLAN***

**[Reason]**

CAPWAP keepalive packet may be transmitted on client VLAN, so CAPWAP connection is unstable in remote AP when WLAN-VLAN is mapped in remote AP.

**[Fix]**

CAPWAP keepalive timer adjust.

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## Persisting Issues and Constraints

### *Linux Ghost Vulnerability*

#### [Background]

US-CERT (USA) reported the discovery of a vulnerability (CVE-2015-0235) where arbitrary code can be executed in the Linux GNU C library (glibc).

#### [Reason]

CVE-2015-0235 is a buffer overflow vulnerability which occurs while processing the `gethostbyname ( )` function in the library.

#### [Vulnerability Info]

Incorrect memory usage of a certain function (`__nss_hostname_digits_dots ( )`) in the library causes an overflow, making it possible to change the execution flow of the program.

#### [Affected Systems]

WEC8500, WEC8050

### *AP Package Upgrade Limitation*

1) If the following characters are included in APC ftp password, AP package cannot be upgraded via ftp.

` @ # \$ % & ( ) | \ ; " ' < > ? / space tab

2) If the following characters are included in APC sftp password, AP package cannot be upgraded via sftp.

` & ( ) | \ ; " ' < > space tab

## Compatibility Matrix of Interoperating Solutions

Category	Version
APC/AP	V3.1.8.T2
WEM	V3.1.8.T2
WIPS	V1.0.13
BYOD Solution	No cross-version compatibility issues.

# Upgrading AP/APC

## AP/APC Upgrading Procedure

### Applying APC Package

- APC Package Download

Save the new package on the SSD card of the APC system. As the package file is large, ensure there is enough free space on the SSD card.

```
WEC8500/file# download steak qwe123 90.90.90.149
/home2/apcbuild/relimages/wec8500/wec8500_0.8.0.R.bin package/wec8500_0.8.0.R.bin
Progress 100.00%
Got File:: /home2/apcbuild/relimages/wec8500/wec8500_0.8.0.R.bin, Host=90.90.90.149
Filename changed:: /user/package/wec8500_0.8.0.R.bin -->
/user/package/wec8500_0.8.0.R.bin
WEC8500/file#
```

- APC Package Upgrade

Select one of the packages stored on the SSD card and perform the upgrade. The system will reboot automatically.

```
WEC8500/configure# package upgrade wec8500_0.8.0.R.bin
Notice: The system will reboot after upgrading with the file.

Do you want to save the configuration? (y/n): y

Do you want to upgrade the system? (y/n):y
Success
WEC8500/configure#
```

- Verifying Updated Version

Once the system has rebooted, verify the updated version.

```
WEC8500# show version
Samsung package version information
Primary (currently running)
  ver      : 0.8.0.R
  buildTime : Tue Aug 28 06:15:59 2012
  builder   : apcbuild
  buildDir  : /home2/apcbuild/release/apc
Backup
  ver      : 0.7.6.R
  buildTime : Mon Aug 27 15:25:41 2012
  builder   : steak
  buildDir  : /home/steak/pa
Boot rom version information
  ver      : FH18
```

## Applying AP Package

- Package Download

Save the new package on the SSD card of the APC system. As the package file is large, ensure there is enough free space on the SSD card.

```
WEC8500/file# download <login id> <passwd> <server ip> path/weafama_1.2.3.R.bin
package/ap/weafama_1.2.3.R.bin
Progress 100.00%

Got File:: package/ap/weafama_1.2.3.R.bin, Host= <server ip>
Filename changed:: path/weafama_1.2.3.R.bin --> package/ap/weafama_1.2.3.R.bin
WEC8500/file#
```

- AP Package Upgrade

Select one of the AP packages stored on the SSD card, and perform the upgrade by selecting an upgrade method.

Upgrade Type	Upgrade Method
Default	WEC8500/configure# ap-all WEC8500/configure/ap-all# upgrade select-package default weafama_1.2.3.R.bin AP upgrade Type: default, FileName: weafama_1.2.3.R.bin
Quick	WEC8500/configure/ap-all# upgrade select-package quick-upgrade weafama_1.2.3.R.bin AP upgrade Type: quick-upgrade, FileName: weafama_1.2.3.R.bin WEC8500/configure/ap-all# upgrade start quick-upgrade
Predownload	WEC8500/configure/ap-all# upgrade select-package predownload weafama_1.2.3.R.bin AP upgrade Type: predownload, FileName: weafama_1.2.3.R.bin WEC8500/configure/ap-all# upgrade start predownload-upgrade

Check the AP upgrade configuration.

```
WEC8500/configure# show ap upgrade summary

===== ap upgrade config summary =====
Type           : Default
Mode           : FTP
Path           : package/ap
IpAddress      : <APC IP>
PortNum       : 22
MAXretries     : 3
MAXdownload    : 10
currentDownload: 0
waitApCount    : 0
Target         : All

PKG_Name      Version      FileName      Type
weafama       1.2.3.R    weafama_1.2.3.R.bin Default
weafama       1.2.3.R    weafama_1.2.3.R.bin Quick Upgrade
weafama       1.2.3.R    weafama_1.2.3.R.bin Predownload
weafamb       1.2.3.R    weafamb_1.2.3.R.bin Default
weafamb       1.2.3.R    weafamb_1.2.3.R.bin Quick Upgrade
weafamb       1.2.3.R    weafamb_1.2.3.R.bin Predownload
```



## Verifying Upgrade

### Verifying APC Upgrade

Once the system has rebooted, the upgraded APC must act as the primary.

```
WEC8500# show version
Samsung package version information
Primary (currently running)
  ver      : 1.2.3.R
  buildTime : Tue Aug 28 06:15:59 2014
  builder   : apcbuild
  buildDir  : /home2/apcbuild/release/apc
Backup
  ver      : 1.0.0.R
  buildTime : Mon Aug 27 15:25:41 2012
  builder   : steak
  buildDir  : /home/steak/pa
Boot rom version information
  ver      : FH18
```

### Verifying AP Upgrade

After performing the AP upgrade, verify the upgrade status and version.

```
WEC8500# show ap upgrade list
/* (RC/FR/RC): RetryCount/FailReason/RebootCause
/* Pri: VersionPriority (MD-model,A-AP config)
AP_ID  Model      Version (config/current)  Status (RC/FR/RC)  MasterAP
  1     N/A        Global/  N/A             None (0/ 0/ 0)    -
  2     WEA302i    Global/ 1.2.3.R          Success(0/ 0/146) -
  3     WEA302i    Global/ 1.2.3.R          Success(0/ 0/146) -
```

# Cross-Version Upgrade Information

Upgrade Case	Notes
V1.0/1.1 → V1.2 or later	<p>The upgrade procedure below must be followed.</p> <ol style="list-style-type: none"> <li>1 Enter to debugging shell from CLI</li> <li>2 debug_shell:/user&gt; rm -f /user/etc/.db/user/*</li> <li>3 debug_shell:/user&gt; upgrade /user/package/&lt;package-filename&gt;</li> <li>4 debug_shell:/user&gt; sync</li> <li>5 debug_shell:/user&gt; exit</li> <li>6 WEC8500# factory-reset</li> </ol>
V1.2 → V1.3 or later	<p>When using redundancy/clustering features, the following items must be reset.</p> <ul style="list-style-type: none"> <li>• Backup APC List: index, apc-name, ip-address</li> <li>• Clustering Information: keep-alive interval, retry-count</li> <li>• Clustering Members: index, apc-name, ip-address, db-refresh-interval</li> </ul>
V1.4.8 → Later version	The Radius setting in Remote AP Group must be reset.
V2.2 → V2.3 or later	If a WEA4xx AP is providing repeater service, the repeater AP must be upgraded before the root AP.
Earlier version → V2.4 or later	Remote AP Group must be reset as it is deleted.
Earlier version → V3.1 or later	<p>When using the APC as an FTP/SFTP server with the default password, the FTP/SFTP server will be disabled. The password must be reset and the FTP/SFTP server must be enabled again.</p>
	The Max-Allowed-Station value for Web Authentication Users accounts must be reset.
	<p>The default AP password used in the previous version will be changed to the new default AP password when upgraded to V3.1 or later.</p> <ul style="list-style-type: none"> <li>• New default AP password after V3.1 : Contact Technical Support for information.</li> </ul>

# License Information and Constraints

## *License Types*

- 1 Legacy License: Issued as a 53-byte license key
- 2 SLM License: Issued as an activation key file containing a 25-byte license key

## *Supported Versions*

- 1 Legacy License: from V1.0
- 2 SLM License: from V1.5
- 3 SLM Redundant License: from V2.4

## *Constraints*

- 1 Installation/deletion of legacy license on the GUI is not supported from v1.5.
- 2 The SLM license key is deleted when downgrading to V1.4 or earlier.
- 3 The SLM license key is deleted when downgrading from V2.0 or later→ to V1.6 or earlier.
- 4 The SLM Redundant License cannot be deleted in V2.3 or earlier.
- 5 The SLM Standalone License and the SLM Redundant License cannot be installed simultaneously.
- 6 SLM Redundant License Constraints:
  - a New license issue is required when changing APC configuration (Active-Standby ↔ Standalone).
  - b New license issue is required when replacing APC system in Active-Standby configuration.
  - c License in the standby system is automatically deleted if the Active-Standby system cluster remains disconnected for over 60 days. (License in the standby system is automatically activated when the Active-Standby system cluster connection is restored.)

### *Note (V2.3 and earlier)*

After installing/deleting a license, the change is applied when the system reboots.

### *Note (V2.4 and later)*

- 1 Any installation/deletion of a license takes immediate effect.
- 2 When the license is deleted, the AP is disconnected immediately.
- 3 If the VQM license is enabled during operation, call-related functions may not work correctly.



**Samsung AP/APC  
Release Notes For V3.1.8.T2**

**Document Version 1.0**

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