AirDefense 10.4.0-20 Release Notes

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1. New Features in AirDefense 10.4.0-20

The AirDefense 10.4.0-20 (service module) release introduces the following key features and functionalities:

- HTML5 UI Updates
- Bluetooth (BT)/Bluetooth Low Energy (BLE) Enhancements
- Termination of rogue clients operating in PMF environment using ExtremeCloud Appliance (XCA)
- Improved device Import from XCA
- Support X590 series switch support

HTML5 UI Updates

- The following components available in Flex UI have been enhanced so support newer and faster HTML5 UI
  - Device Action Manager
  - Alarm Action Manager
  - Alarm Configurations
  - Appliance Settings
  - Redundancy Settings
  - Client types
  - Language Settings
  - Wired network monitoring
  - Backup/Restore
  - Config Backup/clear
  - Forensics and Log Backup
  - Performance Profiles
  - Environment Monitoring
  - Relay server settings
  - Device Age-outs
  - Action Control (Toolkit) (Further enhancements are planned on this screen. This is one of the sample screen migrated from toolkit to HTML5 UI)

All Major UI features are now in HTML5 UI. Since Flex is going to be out of support, it is required customers to move to new UI. The official announcement on this from Adobe is available at https://theblog.adobe.com/adobe-flash-update

BT/BLE Enhancements

The following enhancements done in AD server.

- **Signatures**
  - **MAC Observed On Bluetooth and WLAN Devices**
    Bluetooth devices and the Wi-Fi devices like: stations and access points (APs) exists in the same wireless network. Any device is built to act as either one of these 3

types. Additionally, a station can behave as a software access point if designed to act as a Hotspot. This forms the mutually exclusive types of either being a Bluetooth device or a Wi-Fi device.
This alarm is raised when a device is found to be both a Bluetooth device and a Wi-Fi device at the same time.

- **Geographically different location for BLE devices Rogue BLE Beacons**
  Wireless Devices such as BT has limited range and is impacted by several factors. The primary ones are the transmit powers and any path loss that exist between receiver and transmitter. Packets dont travel more than few feets. A wireless device observed simultaneously in multiple distinct locations indicates that an attempt has been made to impersonate sanctioned infrastructure. Sensors physical locations will provide you with the two possible locations that the device spoofing was being observed.
- **Location change Detected**
  BLE Beacons can be easily as physical locations of these devices is easily accessible. AirDefense will trigger Location Change Detected event if any managed BLE beacon is misplaced and moved to other location. This is applicable if device is moved to different floor/area or another network tree hierarchy.
- **Rogue BLE Beacon beaconing authorized URL**
  A BLE Beacon is configured to advertise an URL. A list of valid URLs is maintained in the server. A BLE beacon is valid if it is in authorized state.
  A beacon, in unauthorized or neighboring state, beaconing any one of these valid URLs is identified as a Rogue BLE Beacon.

- **Locationing** - On Demand BT/BLE Locationing support is provided. This is similar to what exists today in AD for locating Station and BSS
- **Device Action Manager (DAM) Rule** – DAM Rules for BT/BLE is added. This is a third ruleset separately created for BT BLE devices specifically. The special filters specifically for BT/BLE available as follows apart from other regular device filters :
  - BLE Type
  - UUID
  - URL (Beaconing URL)

  The actions can be configured for BT/BLE devices as below
  - Classifications
  - Clear Active Alarms
  - Set Client Type
  - Delete Device
  - Email

Termination of PMF Clients using XCA

- With tight integration between AD and XCA, AD will leverage XCA's blacklisting feature to terminate the PMF enabled rogue client devices
  - Based on the XCA imported on AD server it will send a request to XCA to blacklist the client when termination is triggered (both for manual and policy based)
  - The termination request is retained for 5 minutes in XCA. Post that AD will send a request to clear the entry to XCA

Device Import from XCA

- AD server imports devices from XCA to local server
  - User should create a discovery profile for XCA Import.
  - XCA import user need to provide the XCA credentials (Username/Password)
  - AD will pull all the APs configured in their environment along with BSS and the associated Wireless clients. Also it creates the switch object
  - As part of import, the AD creates tree structure similar to XCA based on where the devices placed.
  - AD will create a tree structure in the following order
    - ADSP >> XCA >> "Hostsite where XCA having the device" >> Floor
    - If there is no hostsite for the device in XCA, it will be placed under ADSP >> XCA >> Unknown Area >> Floor
      - The XCA switch object will be created and placed under this folder.

Support X590 series switch support

- Extend support for X590 series to enable AirDefense system to perform:
  - Port lookup
  - Port suppression

2. Version Compatibility

The 10.4.0-20 SM version is upgradable from 10.3.0-05.

10.4.0-20 is available in ISO which will help customer to do direct upgrade. The ISO will be posted in support central 2 weeks post GA of 10.4 release.

For existing customers who would like to upgrade to 10.4.0-20, AirDefense is an entitled Product and requires an active support contract.

Firmware Version Compatibility

AirDefense 10.4.0-20 SM has been tested for compatibility against

- WiNG 7.3.1
- WiNG 7.3.1.1 (with XCA)
- Identify 10.51.12
- XCA 4.76.03

Supported Sensor Model and Interop Build version validated

Sensor Model	WING Interop build
AP 7522, AP 7532, AP 7562	WING 7.3.1.0/7.3.1.1
AP 8533	WING 7.3.1.0/7.3.1.1
AP 8432	WING 7.3.1.0/7.3.1.1
AP 7602/AP 7622	WING 5.9.5.0
AP 7612, AP 7632, AP 7662	WING 7.3.1.0/7.3.1.1
AP 505	WING 7.3.1.0/7.3.1.1
AP 510, AP 560	WING 7.3.1.0/7.3.1.1
AP 650/AP6532	WING 5.9.1.6/5.9.1.7
AP 7131	WING 5.9.3.3
AP 6522/AP 6562	WING 5.9.4.1
AP 7161	WING 5.9.3.3
AP 8132	WING 5.8.6.0
AP 8163	WING 5.9.6.0

Sensor Model	Identifi Interop build
AP 3915, AP3917	10.51.12
AP 3935, AP3965	10.51.12
AP 3912, AP3916	10.51.12

Please see the section titled “DFS Tables, Sensor and Radio Share” in the corresponding WiNG release notes for a detailed matrix of sensor features supported for each access point in that WiNG release.

Extreme Wireless Version Compatibility

AirDefense 10.4.0-20 SM has been tested for compatibility against

- Extreme Wireless 10.51.12

ExtremeCloud Appliance Version Compatibility

AirDefense 10.4.0-20 SM has been tested for compatibility against

- Extreme Cloud Appliance 4.76.03

Hardware Appliances

- Model NX-9500
- Model NX-9600

Virtual Platforms

- VMWare EXSi Hypervisor 5.5, 6.0, 6.5

Supported WiNG Wireless Access Points

- AP 6522, AP 6562
- AP 7161
- AP 7522, AP 7532, AP 7562
- AP 8163
- AP 8533
- AP 8432
- AP 7602
- AP 7622
- AP 7612, AP 7632, AP 7662
- AP 505, AP 510, AP 560
- AP 410, AP 460

For feature support by WiNG release, please refer to the section titled “DFS Tables, Sensor and Radio Share” in the WiNG release notes.

Supported Extreme Wireless Access Points

- AP 3915
- AP 3916
- AP 3917
- AP 3912
- AP 3935
- AP 3965

Extreme Switch Compatibility

- X440
- X590 (Firmware 30.5.1.15)

Supported Browsers

Browser	Flex UI (Legacy UI)	HTML5
Chrome	83.04.4103.97	83.04.4103.97
Firefox	77.0.1	77.0.1
IE	**Not supported**	11.0
IE Edge	83.0.478.45	83.0.478.45

Supported OS

- Windows 7 Enterprise
- Windows 10 Enterprise
- Linux
- Mac (Thin Client Applications Only)

3. Installation

Please follow the steps below to upgrade an AirDefense system that is currently running AirDefense 10.3.0-05 firmware. **Direct upgrade from any other version is not supported.**

- Copy the file *AD-service-SM1-10.4.0-20.tar* file to the */usr/local/tmp* folder on the AirDefense server using the *smxmgr* account. You can use any tool like *scp*, *ssh secure file transfer client*, *putty* etc. for this.
- Login to AirDefense as *smxmgr*. From the menu select **Software** and then **Servmod** and enter the location of the patch file */usr/local/tmp/*
- The menu now shows available files. Enter the number corresponding to *AD-service-SM9-10.4.0-20* and press [Enter]. AirDefense will now install 10.4.0-20.

For full instructions on how to upload the AirDefense image onto an NX and install it successfully please see the *Extreme AirDefense Users Guide*.

AD 10.4 ISO will be released post GA, and it can be used for direct upgrade.

4. Important Notes

1. Backup all config and forensics files prior to upgrade
2. Toolkit will need to be re-installed. Toolkits installed in prior versions should not be reused.
3. *Anomalous Behavior Detection* thresholds are lost when the system reboots or when services are restarted. Also, Live and Threshold values are shown in the Alarm Details page while the

alarm is in the active state; when the alarm becomes inactive, these values are changed to "unknown".

4. AirDefense VM – Note that the minimum virtual disk size must be 50GB for the VM solution.
5. With AirDefense 9.4.0 (and higher) SSLv3 (and TLS 1.0, TLS 1.1) communication for sensor to server communication can be turned off completely. For all other communications, (for example, UI/ Toolkit etc.) SSLv3 was disabled in the previous releases. By default, SSLv3 communication is left enabled in AirDefense 9.4 to permit communication with legacy sensors. To disable the SSLv3 communication entirely, please follow the steps below. Note that WiNG version 5.8.3 or higher firmware must be used on sensors when SSLv3 is turned off as only those releases support TLS v1.2
   - Login to AirDefense with *smxmgr* credentials
   - Select the "Config option" (type C) item.
   - At the end of the menu options, a "(SSLv3) Enable/Disable SSLv3 for Sensor-Server Communication" item is shown.
   - Type "**SSLv3".**
   - The system will display current status of SSLv3 in the system. If it is currently disabled, this option will allow the user to enable it.
   - Type [E] to enable/ [D] to disable.
   - Type [Q] to quit.
   - System will now warn that AirDefense services will need to restart.
   - Type **Yes** to continue.
   - Once you exit out of the WIPSadmin login, AirDefense service will be restarted.
6. From AirDefense version 9.2.0, the communication between sensors and AirDefense server is switched to use 2048-bit key length and TLS 1.2. By default, AirDefense will use 2048 key length certificate. In order to fall back to 1024-bit key length (not recommended), please follow the following steps.
   - Login to AirDefense as *root* (contact support for assistance)
   - Touch file */usr/local/smx/.k/key1024*
   - Restart AirDefense services.

   Upon restarting, AirDefense will fall back to 1024 bit certificate for sensor to server communication.

   To switch back to 2048 bit certificates:
   - Login to AirDefense as *root* (contact support for assistance)
   - Delete the */usr/local/smx/.k/key1024* file
   - Restart AirDefense services.
7. Upgrade from AirDefense v 9.0.3 to v 9.1.0 (and higher) is not seamless. AirDefense architecture was significantly revised in v 9.1 to improve scalability requiring changes to *config* file. Some manual changes may be required to the *config* to upgrade successfully. It is recommended that upgrades from v 9.0.3 be performed via v 9.2.0 release – which has enhancements to ease the upgrade.
8. When upgrading firmware to v 9.2.0 (from v 9.0.3), a *config restore* MUST be performed using the 9.0.3 backup config file. In several cases, this will help restore config items that might be lost during the upgrade.
9. Alarm action manager profiles – exception option has been removed from GUI in 9.1.2 and added to the advanced filter.
10. By default, notification emails are sent once every 5 minutes. E.g. To increase this to one day emails - change the repetition periods as follows:
    In file */usr/local/smx/notification/lib/notification.properties*,

email.repetitionPeriod = 86400 // In seconds; Default = 300 seconds
syslog.repetitionPeriod = 86400 // In seconds; Default = 300 seconds
Restart AirDefense after the file is modified for the changes to take effect.

11. Bluetooth Beacon using unauthorized URL: EddyStone URLs are validated against the configured URLs *in /usr/local/smx/etc/adbleurl.conf* file. Advertised URLs from EddyStone BLE beacons are validated against these allowed URL list for checking whether authorized or not. AirDefense will check the sensed URL from beacons against the configured URLs and trigger an alarm if any violation is detected. There are two types of configurations allowed.
    a. List of allowed URLs
    b. Allowed URLs for a specific BLE beacon mac address [Note: there is no short mac address and tiny URLs are not allowed]

Instructions to configure the URLs in a file:

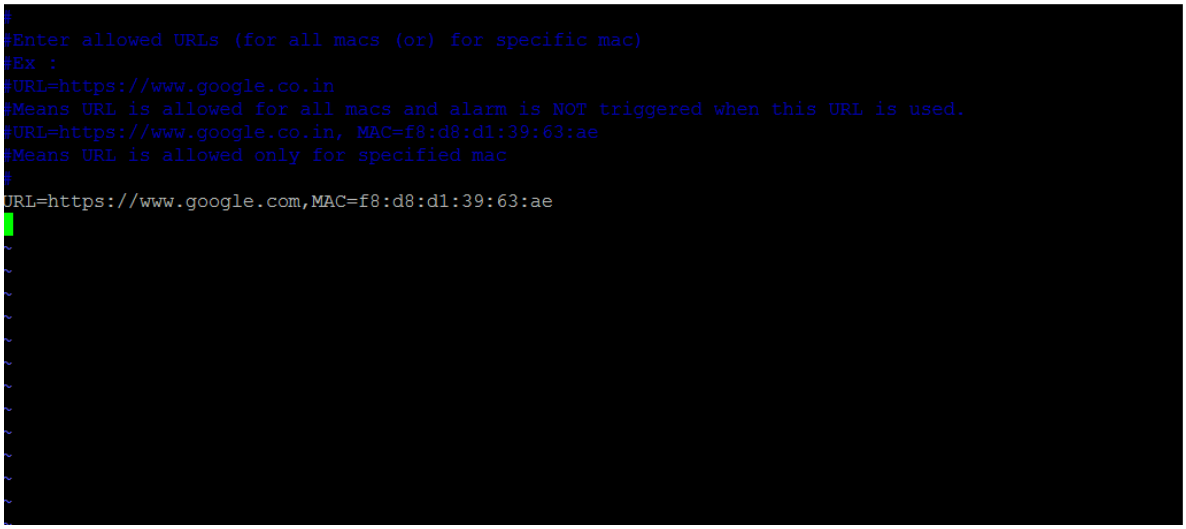
In AirDefense 10.0, this configuration is done via the CLI. Login to the AirDefense CLI using the *smxmgr* credentials

On the menu item, type *letmeout* and get the prompt **smxmgr#localhost ~]$**

Edit the file using vi */usr/local/smx/etc/adbleurl.conf*

#Enter allowed URLs (for all macs (or) for specific mac)
#URL=https://www.google.co.in
#Means URL is allowed for all macs and alarm is NOT triggered when this URL is used.
#URL=https://www.google.co.in, MAC=f8:d8:d1:39:63:ae
#Means URL is allowed only for specified mac

Users can add/edit the URL and MAC address as required.


#
#Enter allowed URLs (for all macs (or) for specific mac)
#Ex :
#URL=https://www.google.co.in
#Means URL is allowed for all macs and alarm is NOT triggered when this URL is used.
#URL=https://www.google.co.in, MAC=f8:d8:d1:39:63:ae
#Means URL is allowed only for specified mac
#
URL=https://www.google.com,MAC=f8:d8:d1:39:63:ae

5. SPR/Issues Fixed

The following SPRs/ CQs have been fixed in this release.

SPR/ CQ	Description
AD-11086	Termination not occur when AAM Advanced Filter put Associate Equal to True
AD-10461	Duplicated BSS shown as Sanctioned and another as Unsanctioned
AD-10531	ADSP10.1.0-13 Protocol Analysis Process crash when using live View
AD-10532	First & Last time seen Timezone incorrect after Exported out to CSV
AD-10237	GUI password changed after process restart
AD-11022	ADSP 9.4 with Fast Termination enabled, a device sanctioned with security profile occur application error
AD-11202	XSLT stylesheet error when running report
AD-11088	Neighbor Report Station Table Filter not working for unsanctioned and neighbor devices

6. Vulnerabilities Fixed

Vulnerabilities Fixed in AirDefense 10.4

AirDefense 10.4 includes upgrades to internal packages (including kernel to: 2.6.32-754.28.1) to provide fixes for the vulnerabilities including:

- CVE-2019-17055
- CVE-2019-17133

Vulnerabilities Fixed in AirDefense 10.3

AirDefense 10.3 includes upgrades to internal packages (including kernel to: 2.6.32-754.25.1 and openssl: 1.0.1e-58) to provide fixes for several vulnerabilities including:

- CVE-2019-14821
- CVE-2018-12207
- CVE-2019-11135
- CVE-2019-0155
- CVE-2019-0154
- CVE-2019-1559

Vulnerabilities Fixed in AirDefense 10.2

AirDefense 10.2 includes upgrades to several internal packages (including kernel to: 2.6.32-754.18.2, openssh: 5.3p1-124.el6_10 and etc.) to provide fixes for several vulnerabilities including:

- CVE-2018-10902
- CVE-2018-12126
- CVE-2018-12127
- CVE-2018-12130
- CVE-2018-13405
- CVE-2018-17972
- CVE-2019-1125
- CVE-2019-11477
- CVE-2019-11478
- CVE-2019-11479
- CVE-2019-3896
- CVE-2019-5489
- CVE-2018-15473

Vulnerabilities Fixed in AirDefense 10.1

AirDefense 10.1 includes upgrades to several internal packages (including kernel to: 2.6.32-754.10.1, openssh: 5.3p1-123.el6_9 and etc.) to provide fixes for several vulnerabilities including:

- CVE-2018-14634
- CVE-2018-5391
- CVE-2018-5390
- CVE-2018-3693
- CVE-2018-10901
- CVE-2018-3620
- CVE-2018-7566
- CVE-2018-1000004
- CVE-2016-6210

Vulnerabilities Fixed in AirDefense 10.0

AirDefense 10.0 includes upgrades to several internal packages (including kernel to: 2.6.32-754.2.1, microcode_ctl: 1.17-33.1 and Java) to provide fixes for several vulnerabilities including:

- CVE-2018-10675
- CVE-2018-10872
- CVE-2018-1130
- CVE-2018-3639
- CVE-2018-3665
- CVE-2018-5803
- CVE-2017-1000111
- CVE-2017-1000112
- CVE-2017-1000251
- CVE-2017-1000253
- CVE-2017-1000364
- CVE-2017-1000410
- CVE-2017-11176
- CVE-2017-5715
- CVE-2017-5753
- CVE-2017-5754
- CVE-2017-6001
- CVE-2017-6214
- CVE-2017-7308
- CVE-2017-7541
- CVE-2017-7542
- CVE-2017-7616
- CVE-2017-7889
- CVE-2017-7895
- CVE-2017-8824
- CVE-2017-8890

- CVE-2017-12190
- CVE-2017-13166
- CVE-2017-14106
- CVE-2017-15121
- CVE-2017-18017
- CVE-2017-18203
- CVE-2017-2636
- CVE-2017-2671
- CVE-2017-9074
- CVE-2017-9075
- CVE-2017-9076
- CVE-2017-9077
- CVE-2016-7910
- CVE-2016-8650
- CVE-2015-8830
- CVE-2012-6701

Vulnerabilities Fixed in AirDefense 9.5

AirDefense 9.5 includes upgrades to several internal packages to provide vulnerability fixes (including kernel to 2.6.32-696.10.1, nss, bind, ca-certificates, glibc, jasper, openldap, rpcbind and sudo)

Vulnerabilities Fixed in AirDefense 9.4

AirDefense 9.4 includes upgrades to several packages (including bindlibs, bindutils, kernel, openssh, openssl) and fixes the vulnerabilities below.

- CVE-2017-6074
- CVE-2017-3136
- CVE-2017-3137
- CVE-2016-7545
- CVE-2015-8325
- CVE-2010-5107

Vulnerabilities Fixed in AirDefense 9.3

AirDefense 9.3 includes upgrades to several packages (including kernel, openssh, openssl, nss, ntp, glibc, perl etc.) and additionally fixes the vulnerability below.

- CVE-2016-2107

Vulnerabilities Fixed in AirDefense 9.2

AirDefense 9.2 includes upgrades to several packages (including openssh, openssl, Java and Tomcat) – fixing the vulnerabilities below:

- NTP Vulnerability CVE-2015-7871
- OpenSSL vulnerabilities - CVE-2015-3194, CVE-2015-3195, CVE-2015-3196, CVE-2015-3197
- OpenSSH vulnerability - CVE-2016-3115 (X11 forwarding)

Vulnerabilities Fixed in AirDefense 9.1.3-10b6

- glibc: getaddrinfo stack-based buffer overflow CVE-2015-7547

Vulnerabilities Fixed in AirDefense 9.1.3-10a8

- OpenSSL vulnerability – LOGJAM - CVE-2015-4000

Vulnerabilities Fixed in AirDefense 9.1.3-10

- GHOST CVE-2015-0235
- Unzip Multiple Heap Buffer Overflows Vulnerabilities - Zero Day CVE-2014-8139, CVE-2014-8140, CVE-2014-8141

- OpenSSL vulnerabilities security advisory dated - 11 Jun 2015 (see http://openssl.org/news/secadv_20150611.txt), CVE-2014-8176, CVE-2015-1789, CVE-2015-1790, CVE-2015-1791, CVE-2015-1792, CVE-2015-3216
- OpenSSH vulnerabilities - CVE-2014-2532, CVE-2014-2653

Vulnerabilities Fixed in AirDefense 9.1.2-17a6

- NTP vulnerabilities 2014-9293, 2014-9294, 2014-9295, 2014-9296
- Bash shellshock CVE-2014-6271, CVE-2014-7169, CVE-2014-7186, CVE-2014-7187, CVE-2014-6277 and CVE 2014-6278
- Poodle SSLv3 CVE 2014-3566

7. Known Issues and Recommendations

General Note

- AP5XX sensors do not show supported protocols as "ax" even though these access points are capable of supporting the protocol.

General note for EW 39XX series access points:

- Support for Extreme Wireless Access Points has been added beginning with the AirDefense 9.5 release. Therefore, any upgrade issues from prior releases documented in the "Upgrade Related" section are not applicable.
- As features supported for EW 39xx access points are WIPS, Advanced Forensics and Liveview. Known issues in the Network Assurance, Proximity and Bluetooth sections below are not applicable to these access points.
- Any WING sensor specific issues documented below are not applicable to Extreme Wireless access points.

Pre-requisites for multicore configuration

- All the floors in the same building should be created under one area of network tree structure
  - This is mandatory as not doing so will result in devices being seen multiple times and may result in undefined WIPS behavior
- Auto-placement rules are mandatory for network devices placement
  - Messages from sensors in unplaced folder will not be processed
  - Polled devices in unplaced folder will not be considered for any WIPS processing
  - Do not manually move Sensor/AP within your network tree if these devices were placed using auto-placement rules.
-

Issues specific to EW access points

- The following alarms do not trigger on EW AP 39XX –Fake AP flood attack, AirSnarf (3912, 3915)

Upgrade related

- In 9.1.x Device/Alarm action manager, *None(Any)* filter and *None(All)* filters were reversed compared to 9.0.3. This is fixed in 9.2.
    - If upgrading from 9.0.3 – this conversion happens automatically when restoring the 9.0.3 config
    - If upgrading from 9.1.x - Any rules that were deliberately reversed by the administrator after upgrading from 9.0.3 to work around such configs need to be reversed manually on upgrading to 9.2 (after restoring the config)
- Alarm action Manager: In AirDefense 9.1 and higher releases, a maximum of 25 filters are supported in the filter list as well as in the expression filter list.
- Alarm Action Manager rule descriptions may not be preserved on upgrade to 9.1 and higher releases.
- Alarm Action Manager: In some cases, on upgrade from 9.0.3 to 9.2 you may see special characters in expression filers (e.g.' %' or ')') in the advanced filter expression editor. These characters are needed for internal operation. They do not impact end user functionality and can be ignored from an administrator perspective.
- Device and Alarm Action Managers: On upgrading from 9.0.3 to 9.2, an AAM profile that was left disabled at the global scope appears to be enabled. However, with 9.1 and higher releases, there is a separate "Enable Profile" checkbox to really enable the profile.

Platform

- Rogue Locationing did not work consistently as devices sometimes placed in the corner of the floor.
- BSS/WC termination is not happening on DFS channels using AP410 sensor
- AP Test is failing with WPA2 security mode using AP410 sensor
- Those sanctioned wireless clients not seen in your network for more than 10 days will not be shown in the UI till they sensed or polled again. This duration can be configured via *airids.conf* parameter.
- Import devices via CLI will not be able to place the devices based on firmware version filter in Auto placement rule.
- Moving BT_Sensor between floors will not move the respective BT/BLE devices.
- Custom dashboards created in the old Flex UI will not show up in the new UI.
- The following alarms do not trigger on AP 7612/ 7632/ 7662 - Airsnarf.
- The following alarms do not trigger on AP 7662 - Honeypot, Multipot, Hotspotter and Hunter-Killer.
- AirDefense Toolkit is only supported on Windows. It is not supported on Linux.
- "DeviceVendorprefix,AssociatedVendorPrefix and DeviceManufacturer should be used with the full name when used with =,!=,IN and NOT IN operators"". It is recommended that operators LIKE/ ILKE be used for DeviceVendorprefix,AssociatedVendorPrefix and DeviceManufacturer filters.
- WSP-8561 : CMC Server Unreachable message in tooltip - After adding the CMC appliance to Master AirDefense, it says "Server Unreachable" even though the server is reachable. After some time the "Server Unreachable" message disappears and "login failed" appears. Ignore the unreachable message - go ahead and share the certificate and restart the appliance to get the CMC working.
- NOT IN operator is not supported in AirDefense Alarm Action Manager.
- AirDefense does not generate the alarm "Frequency hopping interference detected" when using AP 7532 as a sensor.
- WIPS-OCS: LiveView does not display frames on channel 1 configured in OCS channel list.

- WIPS: Wipsd (on the AP) sometimes restarts when radio is changed from radio share to dedicated sensor.
- WIPS – Rogue AP Detection – In select cases like enterprise class rogue AP that is set up as a router (not an AP) and the BSSID of the wireless interface is completely unrelated to the MAC address of the wired interface, AirDefense uses a data pattern matching technique to classify the device as a rogue. For the sensor to see the wired side data from the AP, the port on the L2 switch should be configured as a SPAN port. If this is not done, the rogue AP will be marked as an unsanctioned device but AirDefense will not be able to classify it as a rogue.
- Forensics does not show the all of the data when the date range is long (15 days or longer). Workaround is to run multiple reports each of duration less than 15 days.
- Scheduled Configuration or Forensic Backup using TFTP protocol is not supported. Please use FTP or SFTP.
- "Wireless devices overload observed" alarm is only generated on NX 9500 in Standalone AirDefense (not supported on other appliances nor in Unified mode)
- Action Rules on demand discrepancy in Job Status, rules are not applied –Recommendation is - Admin needs to apply the Action Manager rule before running "Action Manager Rules on Demand" option. Action Manager Rule runs every minute by default.
- Job list in job status does not age out after 7 days
- Backup and Restore does not work when the profile name has a space at the end. Edit the profile to remove the extra "space" character.
- When Korean language is selected, the following do not work correctly
    - Cannot delete some SNMP Community settings when others are in use.
    - Unable to display "device name" correctly when number of characters exceeds 10.
- Port suppression fails on an RFS6000
- Backslash in LDAP authenticated user name causes loss of all user permissions on restart of services.
- The CMC slave authentication mechanism has been changed significantly in AirDefense 9.1.0. It is recommended that the user review the on-line help for CMC for a description of how to configure slave servers.
- After adding a Slave Server on a CMC Master Server, the user is not able to view configuration or other pages on the Slave Server from the Master Server because of a permission error. The workaround is to click the Reset button, log out of master server, and restart browser.
- 'Copy settings to all appliances' action in CMC results in GUI application error with numeric value as prefix in profile name.
- Data collection on WiNG 5.2.x devices was changed to occur over SNMP vs HTTPs. Data collection and configuration management requires the communication profile settings for SNMP timeout interval and retry to be set to 9999 milliseconds and 3 retries to avoid excessive timeouts which might disrupt connection resulting in incomplete data collection and device showing as offline when it is not actually offline to the network.
- Data collection set to a short interval may result in devices going offline; it is recommended to set the time between data collections to an interval longer than the time a complete data collection takes.
- SFTP is not supported with the internal relay server, it is only supported with an external relay server.
- The format of the folder for CLI variables must be:
  /<serverName>/<country>/<region>/<city>/<campus>/<building>/<floor>
  For example, /AirDefense/USA/South/Atlanta/Alpharetta/Atlanta_main/Floor_2

All other profiles accept the following folder format:
<country>/<region>/<city>/<campus>/<building>/<floor>

- CQ 201328 – AP 7532 device icons displayed incorrectly when device goes offline

Network Assurance

- Live view is not showing any 5Ghz channel frames if we enable Background SA Scan.
- Campus Mode - 5ghz scanning is not happening when we enable background scan
    - For both the above issues, background SA to be disabled in ADSP to scan 5GHz. This is Fixed in Wing 7.3.1.2.
- In AP505, liveview is not showing any data when it is enabled in radioshare mode
- Clearing configuration in Appliance Manager may prevent edits to Live-RF application configuration. If the system gets into this state, please contact the support team or re-install AirDefense.
- Changes to duty cycle field in the Advanced Spectrum Analysis window will cause all channel extensions to be set to 0 on the sensor. A manual stop and start of ASA fixes the issue.
- Cannot schedule Advanced Spectrum Analysis dedicated scan with default values – change atleast one value from default to turn on the OK button.
- The Advanced Spectrum Analysis on AP 6522 displays spurs when the frequency range is extended to cover Channel 14. These spurs cause the Advance Spectrum Analysis alarm "Utilization Exceeded Threshold" to be triggered.
- Spectrum Analysis – On changing chart options Duty cycle, Device count, Spectral density and Real time FFT data is lost. Do not change chart options to preserve existing data.
- AP Test – AP Test with Captive Portal is not supported. It requires a custom plugin to be created for the specific captive portal. Workaround: Use the ping test to verify reachability to the captive portal.
- AP Test – WEP keys entered in ASCII characters prevent successful testing of WEP networks when using M5x0 sensors. WEP keys entered as hex code work fine.
- AP Test – Due to hardware limitations AP testing using EAP-TLS or PEAP-TLS is not supported on the M5x0 sensor platforms.
- AP Test – The AP Test supplicant does not support certificates which are protected with a passphrase, only certificates which do not require a passphrase to access the key are supported.
- AP Test - AP Test scheduled using alarm action manager does not run according to the chosen profile
- AP Test - AP Test license does not get automatically applied when Auto Licensing is selected
- AP Test and Wireless Vulnerability assessment – works at a BSS level only and not at a floor/ scope level.
- AP Test – Scheduled AP Test disappears from menu despite the presence of a radio-share AP Test license. Support can issue an AP test license which will re-enable this functionality.
- AP Test – SPR 27984 - AP-Test with EAP-TLS fails with error message "Network
- AP Test – AP Test Downlink test fails for AP 7522 and AP 7532 with WiNG 5.8.4
- AP Test – AP 8432 and AP 6522 Uplink test fails while running AP test with WiNG 5.8.4
- AP Test – When using TKIP-CCMP , AP 622 acting as a client does not get an IP address via DHCP with WiNG 5.8.4
- Authentication: EAP authentication failed" – has been fixed in WiNG 5.8.1 & higher releases.
- Multiple Vlan IDs cannot be removed – they can only be removed one at a time.
- Live view: SSID and RSSI value do not appear in devices tab occasionally.
- Live RF with AP 75xx is only supported at 11n rates

Bluetooth Monitoring

- BT/BLE devices are always placed on the sensor while locating on demand
- The actions are not carried out with filter as device client type for BLE devices
- Bluetooth Devices imported via a csv file and with a selected folder are placed in unplaced devices folder. They are moved to the correct folder when the device is seen
- Some Eddystone tags have non-standard fields and may not be correctly recognized by the AP. Some tags do not advertise a URL in the beacon – such tags cannot be protected with the BT 4.0/ BLE security feature. The following tags have been tested against AirDefense:
    - Kartographer eddystone beacons – UFOBeacon Odyssey
    - Ibeacons – used Wing Devices as advertisers. Apple ibeacons were also sensed.
    - BLE simulator app – TxEddystone
    - BLE Scanning app -- Beacon simulator
- Some tags advertise additional ".com"'s in the URL field. This does not impact URL matching, however, they will show up in the alarm description text.

HTML5 UI

- Override and Inherit options across new UI are inconsistent. It requires to save multiple times.
- Networks/Dashboard/Alarm tabs appear even though the licenses are removed
- In Network page, polled device count mismatch, neighboring bss/wireless client are not computed properly.
- In user management, custom profile permissions do not get updated in user associated with that custom template. The workaround for this issue to modify at individual user level
- In License management page, Delete Devices in License Assignment screen does not delete these devices as expected. The UI shows these devices as being deleted successfully. However, these devices are not deleted and their license will not get released. To work around this issue, use the legacy UI for releasing these licenses.
- In the new user work flow, creation of Discovery Profile with SNMP fails. Use the *Advanced Configurations* option to overcome this issue.
- The image is broken in Mozilla Firefox in the toolkit download page.
- The new UI is supported for the *admin* user in this release. Support for other user roles will be added in a future release.
- New UI - Unknown devices turned into rogue devices widget does not show data. Will be addressed in a future release.
- New UI – In the network snapshot grid, the total BT device count does not match the old UI. Sensor details are missing. Will be addressed in a future release.
- New UI - Radio Bands on WLAN do not show the correct count of WLANs.
- NEW UI: Search filter for the "polled devices" column does not work.
- New UI: BLE device classification widget doesn't show correct counts.

WIPSADMIN CLI

- In CLI, execution of some commands throws some exceptions as file not found error for logs. This can be ignored, and the requested function will be executed and provide the results as expected.

8. AirDefense Feature Matrix

This section defines features supported by access point/ sensor module.

AP Model Using Dedicated Sensor Mode	Firmware Version	WIPS and Advanced Forensics	Spectrum Analysis	Advanced Spectrum Analysis	Live View	APTest	Connectivity Troubleshooting	Wireless Vulnerability Testing (WVA)	BT/BLE Security
AP650/6532	**WING5.9.1.7**	✓	✓	✗	✓	✓	✓	✓	✗
AP6522/6562	**WING5.9.4.1**	✓	✗	✓	✓	✓	✓	✓	✗
AP7532/7522/7562[1]	**WING7.3.1.0**	✓	✗	✓	✓	✓	✓	✓	✗
AP7161	**WING5.9.3.3**	✓	✓	✗	✓	✓	✓	✓	✗
AP8163	**WING5.9.6.0**	✓	✗	✓	✓	✓	✓	✓	✗
AP8533[2]	**WING7.3.1.0**	✓	✗	✓	✓	✓	✓	✓	✓
AP8432[2]	**WING7.3.1.0**	✓	✗	✓	✓	✓	✓	✓	✓
AP7602/7622	**WING5.9.5.0**	✓	✗	✗	✗	✗	✗	✗	✓
AP7632/7662/7612[1]	**WING7.3.1.0**	✓	✗	✗	✓	✗	✗	✗	✓
AP505/510/560	**WING7.3.1.0**	✓	✗	✓	✓	✓	✗	✓	✓
AP410ie/460	**WING7.3.1.0**	✓	✗	✓	✓	✓	✗	✓	✓
XCA 04.76.03– Distributed Mode									
AP8432[2]	**WING7.3.1.1**	✓	✗	✓	✓	✓	✓	✓	✗
AP7632/7662/7612[1]	**WING7.3.1.1**	✓	✗	✗	✓	✗	✗	✗	✗
AP505/510/560	**WING7.3.1.1**	✓	✗	✓	✓	✓	✗	✓	✗
AP410ie/460[7]	**WING7.3.0.1**	✓	✗	✓	✓	✓	✗	✓	✗
XCA 04.76.03 – Campus Mode									
AP505/510/560[6]	**WING7.3.1.1**	✓	✗	✓	✓	✓	✗	✓	✗
AP410ie/460	**WING7.3.1.1**	✓	✗	✓	✓	✓	✗	✓	✗
Extreme Wireless(Identifi)									
AP3912/3915/3916/ 3917/3935/3965[1]	**10.51.12**	✓	✗	✗	✓	✗	✗	✗	✗

Notes:
[1]AP 7522, AP 7532, AP 7562, AP 7632, AP 7662, AP 7612,AP39XX radios are band-locked, entire AP needs to be dedicated as sensor

[2]Support is limited to the dedicated sensor (Radio 3) for AP 8533. For AP 8432 – either Radio 1 can be used as a dedicated sensor and Radio 2 for data or the entire AP can be dedicated as sensor.

3. Radio Share functionality (allows for enabling the Network Assurance toolkit in AirDefense, without dedicating a radio as a sensor) is available on the 802.11n/802.11ac/802.11ax APs with some caveats

– please see details below:

AP Model Using Radio Share Mode	Firmware Version	WIPS and Advanced Forensics	Spectrum Analysis[2]	Advanced Spectrum Analysis [3]	Live View	APTest[5]	Connectivity Troubleshooting	BT/BLE Security
AP650/6532	**WING5.9.1.7**	✓	×	×	✓	✓	✓	×
AP6522/6562[1]	**WING5.9.4.1**	×	×	✓	✓	✓	✓	×
AP7532/7522/7562[4]	**WING7.3.1.0**	✓	×	×	✓	✓	✓	×
AP7161	**WING5.9.3.3**	✓	×	×	✓	✓	✓	×
AP8163	**WING5.9.6.0**	×	×	×	×	×	×	×
AP8533	**WING7.3.1.0**	×	×	×	×	×	×	×
AP8432	**WING7.3.1.0**	✓	×	×	✓	✓	✓	✓
AP7602/7622	**WING5.9.5.0**	×	×	×	×	×	×	✓
AP7632/7662/7612	**WING7.3.1.0**	✓	×	×	✓	×	×	✓
AP505/510/560	**WING7.3.1.0**	✓	×	×	✓	✓	×	✓
AP410ie/460	**WING7.3.1.0**	×	×	×	×	×	×	×
XCA 04.76.03– Distributed Mode								
AP8432	**WING7.3.1.1**	✓	×	×	✓	×	×	×
AP7632/7662/7612	**WING7.3.1.1**	✓	×	×	✓	×	×	×
AP505/510/560	**WING7.3.1.1**	✓	×	×	✓	×	×	×
AP410ie/460[7]	**WING7.3.0.1**	×	×	×	×	×	×	×
XCA 04.76.03 – Campus Mode								
AP505/510/560	**WING7.3.1.1**	✓	×	×	✓	×	×	×
AP410ie/460	**WING7.3.1.1**	×	×	×	×	×	×	×
Extreme Wireless(Identifi)								
AP3912/3915/3916/ 3917/3935/3965	**10.51.12**	✓	×	×	✓	×	×	×

Notes:

[1]AP 6522, 6562 – The first radio is band-locked to 2.4Ghz. The second radio is capable of ABGN sensor operation.

- In Radio 1 = Sensor, Radio 2 = Wlan configuration, the sensor will only scan 2.4Ghz channels on Radio 1.
- In Radio 1 = Wlan, Radio 2 = Sensor configuration, the sensor will scan both bands on Radio 2
- In Radio 1 = Sensor, Radio 2 = Sensor configuration, the sensor will scan 2.4GHz on Radio 1 and 5GHz on Radio 2

[2]Spectrum Analysis is not supported with Radio share enabled.

[3]Advanced Spectrum Analysis in RadioShare mode may impact WLAN performance.

[4]AP 7522, AP 7532, AP 7562, AP 7632, AP 7662, AP 7612, AP39XX radios are band-locked, both radios are required for sensing

[5]AP Testing in radio share mode - only single-cell/internal BSS AP testing is supported. AP Testing on remote BSS is not supported.

[6]WIPS, Advanced Forensics, Liveview and Advanced Spectrum Analysis are only supported in centralized mode with AP5XX

[7]AP410ie,460 are not supported in distributed mode in XCA-4.76.03

9. AirDefense Extreme Wireless Feature Matrix

For the EW 39xx series access points operating as dedicated sensors, AirDefense supports the following features:

- WIPS
- Advanced Forensics
- Liveview

AirDefense also supports the following features for AP 39xx operating as radio-share sensors.

- WIPS
- Advanced Forensics
- Liveview