Release Notes
Polaris 802.11n Test Suite V-5.2.4

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About these Release Notes

These release notes contain valuable information regarding the specified product(s). This document provides a list of new features and known anomalies regarding the specific code release. This release note should be used only for specified products and should always be used in conjunction with the formal documentation provided with that product.

New Features in version 5.2.4

The following features are added/changed to this release of the Polaris Networks Wi-Fi 802.11n Certification Test Suite:

- ECN157 for Servers and Supplicant changes with EAP-FAST and EAP-AKA
  - Host APD RADIUS Server support
  - Radiator RADIUS Server support
  - WPA_Supplicant support
  - Open 1X Supplicant support

Note: ECNs 168 and 169 for Test Plan 1.6 not supported for Beta-5.2.4. These ECNs will be supported in the final release of 5.2.4.

Product covered by Release notes

This release note pertains to the following specific products:

1 Support for Polaris 802.11n Test Suite V-5.2.4

2 Azimuth WSC version v5.5.0 or higher (installed as part of Azimuth DIRECTOR-II p-5.5.0 or higher)

Important Notes on Upgrading Software

1. Ensure that the Azimuth WSC software is upgraded to version 5.5.0.6 or higher by installing the Azimuth Director-II software version 5.5.0 or higher

2. The upgradation of the Omnipeek WSC has to be done by first uninstalling the old WSC version and then installing the WSC from the Director-II software (version 5.5.0.6 or higher) by following steps given in the 'Installing WSC Software' section in the Polaris 802.11n Test Suite Users Guide (AN_11n_Cert_App.pdf).

Important Notes about Polaris 802.11n Test Suite

Polaris 802.11n Test Suite automates the entire Wi-Fi Alliance 802.11n Draft 2.0 v1.5.7 Test Plan. This includes twenty-four new 11n-specific test cases as well as nearly one hundred WPA2/WMM test. ECN 157 changes of Servers and Supplicants, with the new EAP type test cases are also part of this release now in addition to the WPA2/WMM test cases.

Ensure that the screen resolution of the system that has Marvell and Ralink test bed stations are set to 1024x768. This is necessary for the automation macros to work correctly. The Marvell and Ralink GUI configuration macros will not work with any other screen setting.

Validation of Tests

Polaris is unable to find a DUT that passes the following test cases:

1. APUT Test 4.2.11: This test fails as an EAPOL packet is detected. The expected behavior is that no EAPOL packet should be observed. The test script has been validated for proper execution of the test plan. Polaris continues to look into this test case.

Issues Resolved in this release

1. For 4.2.23 and 5.2.30, throughput values are corrected.
2. Extra steps deleted from 5.2.17 and 5.2.18 Countermeasures test cases.

Issues Resolved in Previous release 5.2.3

Exception ID	Anomaly / Fix Description
1	**Anomaly :** For Test 4.2.26 'Basic Association in 802.11n Environment', the protection check in step 7 used to fail with the following error; “Unexpectedly APUT is not using protection (RTS/CTS or CTS-to-Self)”. **Fix:** Protection check removed as checking of Operation Mode field of the HT information element is sufficient as per the test plan.
2	**Anomaly:** Install relay option doesn't work from CD image. **Fix:** Install relay option works from CD image.

Issues Resolved in Prior release 5.2.1

Exception ID	Anomaly / Fix Description
1	**Anomaly**: For Test 5.3.2.B SI2 - Passive Scan (2GHz) incorrect SSID was being passed **Fix**: The correct SSID is being used for the test now
2	**Anomaly**: For Test 4.2.26.1 'Basic Association (2GHz)' script was unable to properly parse capture for HT information element **Fix**: Modified the script to ensure that HT information is not being looked up for legacy station

3	**Anomaly**: For Test 4.2.28 'MIMO Power Save, the log file does not show where the test fails with the ping rate **Fix**: Added relevant log files to indicate step by step execution of the test cases and cause of failure, if any.
4	**Anomaly**: For Test 4.2.26.1 'Basic Association (2GHz)' | 4.2.26.2 'Basic Association (5GHz)', Different HT Capabilities were required for test automation to succeed **Fix**: Added two different GUI optional features 'MCS32' and 'HT Duplicate' instead of the combined selection.
5	**Anomaly**: For Test 4.2.21 'Differentiation - Two 11n Stations' - Unable to run the test **Fix:** Copy policy files (Registry-default.pol and Registry-wmm-s3-step6.pol) into the chariot console. These files are located in the 'data' directory on the PC with AzCert 11n Software installed. From the "data/tests/wifi/wmm/tools" directory, copy these files to the following location on the machine with the Chariot console installed "C:/Program Files/IxChariot/Scripts/ AzCert". If any of the sub-directories do not exist, create them. 11n script can not copy policy files(*.pol) into the Chariot console machine at the location "C:/WINDOWS/system32/GroupPolicy/Machine",ensure that this directory on the Chariot Console machine has "Write" permissions enabled.
6	**Anomaly**: For Test 4.2.34 'Short GI Operation' - Passing 36h as the channel causing the script to fail **Fix**: Modified the source code to use the correct numerical value for the test.
7	**Anomaly**: For Test 4.2.34 the script was incorrectly checking Greenfield for ShortGI test **Fix**: Modified the source code to remove the incorrect validation of Greenfield.
8	**Anomaly**: The non participating stations sometimes interfere with the running tests. **Fix**: Added new fields in the GUI to disable the non-participating test bed stations. If the test script fails or gets interrupted the test bed stations will remain disabled. The user has to manually re-enable all the stations before starting any test again.
9	**Anomaly**: The API for ap_set_radio_mode included only N20 and N40a parameters leading to lack of options in executing various test cases using automation libraries. **Fix**: Modified source code to use the proper 11N mode parameters like N_2.4, N_5.0_40. This should enable better automation solution.
10	**Anomaly**: The 11n script cannot run with Chariot Console Server set to local. **Fix**: Modified source code to use local Chariot Console server correctly.
11	**Anomaly:** For test 5.2.5: Mixed 11b/g – OPEN test, Marvell AP is wrongly configured for 11g instead of 11b mode. **Fix Description:** Added new macro and modified source code to configure the test bed Marvell client for B-mode properly. Note that the PC/laptop with the Marvell station installed must be configured for a screen resolution of 1024 x 768.
12	**Anomaly:** For test 5.2.13 'Pure Throughput - WPA2 with Fragmentation', the Broadcom 11N AP not set to B-only mode. **Fix Description:** Modified Broadcom AP automation library to configure legacy radio modes properly.
13	**Anomaly:** While using Meeting House Radius server the Aegis Server Service is stopped but not restarted for EAP-PEAP1 tests(ex:5.2.24.8-ExS8) resulting in test failures. **Fix Description:** Modified source code to restart Meetinghouse RADIUS server process i.e., Aegis Service properly.
14	**Anomaly:** IBSS test cases were using wrong parameters for Ralink test bed station: both FRAG and RTS should be OFF for the Ralink STA. **Fix Description:** Modified 'IBSSB3'(5.3.3.B) and 'IBSSB3'(5.3.4.B) test entries to use right RTS and FRAG threshold value as OFF.

15	**Anomaly:** For 5.2.38: "A-MSDU Aggregation" test Marvell AP is not configured channel bandwidth properly. **Fix Description:** Modified Marvell AP library source code to configure the Channel Bandwidth properly.

Polaris 802.11n Test Suite Anomalies

Identified Polaris 802.11n Test Suite anomalies, with appropriate resolutions or work-arounds are listed in the following table.

Issue	Description	Workaround
1.	Atheros 11n Test Bed AP requires extra initial setup.	See the 'Testbed AP Setup' section of the Polaris 11n User's Guide for detailed instructions on how to setup the Atheros 11n AP for automation.
2.	Omnipeek Capture PC must be initially setup through *Setup Wizard*. The Setup Wizard 'Validation' code for Omnipeek contains initialization code to setup the Omnipeek Capture PC.	When setting up the Omnipeek Capture PC for the first time, use 'Setup Wizard' to validate the Omnipeek Capture PC. During Validation, Setup Wizard will automatically configure the Omnipeek PC to prepare it for automation.
3.	Broadcom 11n Test Bed Station connectivity goes up and down. You may observe the Broadcom STA only stays connected for 10 seconds at a time, then continues to disconnect / reconnect, but cannot maintain a connection.	This behavior may be caused by the Broadcom Wireless Utility interfering with the station configuration. Open the Broadcom Wireless Utility from the System Tray, and uncheck the 'Let this tool manage your wireless networks' box.
4.	ZeroConfig authentication fails with PEAPv0 in Test ExS15. The ZeroConfig supplicant uses the currently logged in user's 'Username' and 'Password' to authenticate with the RADIUS server when using PEAPv0 authentication.	Ensure that the 'console' user with a password of 'azimuth' is configured on Windows 2003 IAS for RADIUS authentication to succeed. Check the Windows 2003 Server Event Log for more details on diagnosing PEAPv0 authentication failures.
5.	Ralink Test bed station does not support enabling SGI and Greenfield at the same time	There is no known workaround. However, this limitation does not impact the ability to use Ralink as test bed station
6.	User may experience intermittent problems while configuring APC power settings	Ensure that SNMP Access Control under "Network->SNMP" has the "Access" flag set to "Enabled". Also, the Access Control Community name of "private" must be configured for "write+?" access.
7.	11n Features of the APs cannot be modified and configured by Director-II Test bed manager	There is no known workaround and this will be fixed in future releases.
8.	11n Test case 5.2.35.1 Basic Association may fail	Ensure that the SSID in the wpa2-psk.conf file must be changed to "ssid=wifi' from 'ssid=11n_Atheros". Also ensure that the 'passphrase', 'wpa' and 'wpa_pairwise' fields

Issue	Description	Workaround
		are correct as well.
9.	Setup Wizard Fails with an error message “Discovery command returned unexpected error”	This occurs when the Azimuth DIRECTOR-II console is re-started. After the Close the Setup Wizard GUI and re-start it after the console is running again.
10.	The DHCP server IP address and reservations therein are not validated	There is no workaround. Ensure that the DHCP server is configured correctly with the proper settings for reservations.
11.	When running WPA2 and/or WMM scripts, the results table will show multiple entries for the same test cases. Further, all the test steps for a particular test may not be shown sequentially in the results table	It is recommended that the Results table to cleared using the ‘Clear’ button before running tests if the test parameters or test selection has changed.
12.	Using the “Disable non-participating Test bed stations” may leave the test bed stations disabled. The auto discovery will not show the disabled test bed stations	If the test is interrupted or fails with an error after the test bed stations have been disabled, the stations will remain disabled. This will cause the test script to skip the test cased when the test bed stations need to participate. Users have to manually enables each test bed station prior to running any test.
13.	In the APUT tests (4.2.1, 4.2.2 and 4.2.4) the supplicant used is Juniper rather than Marvell supplicant.	There is no known workaround. This bug will be fixed in future releases
14.	There is an error message within the Setupwizard test validation or while running the test that indicates “IxChariot API initialization failed”	The Ixia Chariot endpoint should have a valid license. If the Chariot endpoint is not being used locally, it should be uninstalled.
15.	Errors are observed for the test cases that involve automating the Marvell station card.	For configuring wireless parameters on the Marvell test bed station, Marvell's Client Card Configuration GUI utility is programmed using macros. For these macros to work, the screen resolution of the machine (containing Marvell Station) should be 1024x768 pixels. Otherwise these configuration using macros will not work properly.
16.	If the Chariot Console license on the local machine expires, the following error message will be displayed at the end of the test run or while importing the “Azimuth-Sdk” package. IxChariot API initialization failed, rc = 108 Error was detected at Fri Sep 5 09:07:56 2008 Error was detected by the Console. The return code was 1. CHR0315: The license operation failed because a valid license could not be found. The reason code was 1. Unable to find a license for this product. Verify that you have a valid license or	If the Chariot is being used locally, obtain a valid license. If a remote Chariot console is being used, uninstall the unused Chariot Console from the local machine.

Issue	Description	Workaround
	contact Ixia's Technical Support for assistance.	
17.	Test 4.2.1 (STA1 HT Capabilities Channel Width) sub-test case fails due to HT Capabilities IE (contains SGI 40 and MCS 32) missing in Association Request from the Test-bed Station.	Un-check the SGI 40 and MCS 32 optional feature in the Test GUI (under Device Under Test) tab to make this test pass.
18.	Test 4.2.26.1 (HT Capabilities) sub-test case fails due to HT Capabilities IE (contains 40Mhz Bandwidth and MCS 32) missing in Association Request from the Test-bed Station.	Un-check the Greenfield, 40Mhz Bandwidth, MCS 32 & HT duplicate optional features from the GUI to make this step pass.
19.	Studio Reports are not generated correctly	Copy over Polaris 11n php files from \data\tests\Wifi\php folder (Polaris11n.compare.php, Polaris11n.report.php and Polaris11n.search.php) to the Studio Server machine in directory ~WWW\Studio\TestReporter\test-specific
20	CiscoSSC version change from 4.1.2 to 5.1.0.39 not implemented. WPA_Supplicant used instead.	There is no known workaround. This bug will be fixed in future releases
21	For IBSS test, Channel 1/36 is used for all the tests.	While configuring testbed station with WPA_Supplicant, we found that this supplicant configure stations only with channel number 1/36.
22	ADDBA not disabled in some of the Testbed Stations and APs.	None. This bug will be fixed in future releases
23	The Shared Secret in the Radius Server tab cannot be more than 50 characters long	Use Shared Secret less than 50 characters. This bug will be fixed in future releases