Version 2.2.5

Release date: June 12, 2009

New in this version:

1. A command line option ("-t" or "--timeout") is added to specify the response timeout of all commands.

Bug Fixes:

This version contains a number of bug fixes over version 2.2.2. These bug fixes are detailed below.

Bug #	Description
3181	All tests that read SDR Repository fail if DUT implements OEM type of sensor.
3182	Tester shows wrong number of remaining days for Perpetual License.
3180	Test #19 wrongly assumes that all FRU implements BLUE LED.
3179	Test #13 wrongly expects events from IPMB-0 sensor after sending "Set Event Receiver" command even though IPMB-0 state never changed.
3177	Tester sometimes crashes if -P option is used.

Known Issues in this version:

This version contains the following known bugs.

Bug #	Description
423	Tester does not restore the custom fields of Chassis Info during Write FRU Data.
635	Re-insertion of the ATCA board (under test) is required for some state transition related test cases before the next run of the tester.

Version 2.2.2

Release date: November 12, 2008

New in this version:

This version incorporates the following changes based on discussions with CP-TA:

- **Test #612, Test #613**: The "Get AMC Port State" command will remain untested for an AMC or On-Carrier device channel if the channel descriptor count in the AMC Point-to-Point Connectivity record is more than three for that channel.
- **Test #201**: The 12th byte in the SDR of a sensor will be used for determining the sensor capabilities. The previous version of the tester used the 11th byte in the SDR for this purpose.
- **Test #609**: The Carrier Manager may or may not delete the FRU Hot Swap sensor of a subsidiary FRU when the FRU reaches the M0 state.

This release contains a beta version of the HPM test cases.

Bug Fixes:

This version contains a number of bug fixes over version 2.2.1. These bug fixes are detailed below.

Bug #	Description
1848	The ATCA tester does not ignore the sensors whose scanning bit is disabled.
1849	The Carrier Manager may or may not delete the FRU Hot Swap Sensor of a subsidiary FRU when the subsidiary FRU reaches the M0 state. The ATCA Tester should support both cases.
422	Test #600 intermittent internal errors.
131	The ATCA Tester wrongly uses "Init Scanning" bit in the SDR as "Sensor Capability" bit.

Known Issues in this version:

This version contains the following known bugs.

Bug #	Description
423	Tester does not restore the custom fields of Chassis Info during Write FRU Data.
635	Re-insertion of the ATCA board (under test) is required for some state transition related test cases before the next run of the tester.

Version 2.2.1

New in this version:

This is a maintenance version and does not contain any new feature over v2.2.1b. This release contains HPM beta test cases.

Bug Fixes:

This version contains a number of bug fixes over version 2.2.1b. These bug fixes are detailed below.

Bug #	Subject
1379	Test #613 and test #612 fail as Get AMC Port State command is unable to return more than 3 link information in a single response
1378	Test # 201 skips if the Init Scanning bit is equal to 0b
830	Test #101 displays wrong information for a non zero managed FRU

Known Issues in this version:

This version contains the following known bugs.

Bug #	Subject
422	Test #600 intermittent internal error
423	Tester does not restore the custom fields of Chassis Info during Write FRU Data.
130	Test #13: Shelf Manager filters some event – quick changing values for sensors makes the test fail.
131	Test #201: should not require a blade address, since it is applicable for ShMC only.

Version 2.2.1b

New in this version:

This is a maintenance version and does not contain any new feature over v2.2.0.

Bug Fixes:

This version contains a number of bug fixes over version 2.2.0. These bug fixes are detailed below.

Bug #	Subject
622	Wrong completion code returned by Get LED Color Capabilities for an inexistent LED in test #115
621	Test #3 fails when it sees a Telco Alarm Input sensor
620	Test #113 fails in lamp test mode only for AMC
619	Led 3 does not return to its previous state during testing on AMC in test #108
618	Test #14 fails for any managed FRU except FRU 0

Known Issues in this version:

This version contains the following known bugs.

Bug #	Subject
422	Test #600 intermittent internal error
423	Tester does not restore the custom fields of Chassis Info during Write FRU Data.
130	Test #13: Shelf Manager filters some event – quick changing values for sensors makes the test fail.
131	Test #201: should not require a blade address, since it is applicable for ShMC only.

Version 2.2.0

New in this version:

This version adds a new test category for **HPM.1** testing. This test category contains 5 IPMC test cases and 5 MMC Test cases. The HPM.1 MMC test cases are still experimental. Also this version implements some of the critical differences in **PICMG3.0 R3.0** manageability section.

Bug Fixes:

This version contains a number of bug fixes over version 2.1.1b. These bug fixes are detailed below.

Bug #	Subject
237	Test #315 always uses 0x00 as the IPMB address of the backup Shelf Manager
424	Test #315 aborts test due to spurious logs.
201	Issues in retransmitted messages

Known Issues in this version:

This version contains the following known bugs.

Bug #	Subject
422	Test #600 intermittent internal error
423	Tester does not restore the custom fields of Chassis Info during Write FRU Data.
130	Test #13: Shelf Manager filters some event – quick changing values for sensors makes the test fail.
131	Test #201: should not require a blade address, since it is applicable for ShMC only.

Version 2.1.1b

New in this version:

This is a maintenance version and does not contain any new feature over v2.1.0.

Bug Fixes:

This version contains a number of bug fixes over version 2.1.0. These bug fixes are detailed below.

Bug #	Subject
173	Incorrect sequence number in SendMessage command message
170	Does not process Anonymous Login status correctly.
167	Fedora systems show error if "atcatester –version" is run from non-superuser.
132	Test #611: Tester doesn't handle Unmanaged FRUs well

Known Issues in this version:

This version contains the following known bugs.

Bug #	Subject
168	If the FRU changes its state from M6 to M1 very fast, tester cannot process the event though the event seems to have been logged in SEL.
130	Test #13: Shelf Manager filters some event – quick changing values for sensors makes the test fail.
131	Test #201: should not require a blade address, since it is applicable for ShMC only.

Version 2.1.0

New in this version:

1. This version of ATCA Tester is compatible to ***PICMG 3.0 R2.0 AdvancedTCA Base Specification ECN-002 May 26, 2006.***
2. An equivalent command "**atcatester**" is added to replace the command "**esoatcatester**". The syntax of the command is unchanged. The "**esoatcatester**" command is deprecated and that will be removed in the next version.
3. An equivalent command "**atcatools**" is added to replace the command "**esoatcatools**". The syntax of the command is unchanged. The "**esoatcatools**" command is deprecated and that will be removed in the next version.
4. This version incorporates and includes a new licensing mechanism that mandates the user to have a valid license to run the tester successfully. The software will not run once the license for the software expires.
5. This version forwards all messages to **Polaris Network's Miniscope Packet Decoder/Analyzer** for a detailed view of the message exchange real-time.

Bug Fixes:

This version contains a number of bug fixes over version 1.8.3. These bug fixes are detailed below.

Bug #	Subject
1	#609: Erroneously reports "Duplicate sensor number"
2	#609: SDR Merging (w/ one AMC Module): Erroneously expects CBh instead of D3h.
3	#100: Erroneously report "AMC FRU unavailable"
4	#205: ATCA tester bails out on an exception of -1

Known Issues in this version:

This version contains no known bugs.

Version 1.8.3

This version contains a number of bug fixes over version 1.8.2. These bug fixes are detailed below.

Bug #	Subject
898	Test #506 fails because privilege level is not at least Operator
899	Test #322 crashes when Shelf FAN Geography records are present in Shelf FRU Information
900	Test #400 fails if IPMB topology is radial and Shelf Manager allows IPMB-A & IPMB-B isolation at the same time on a given link
901	Test #100 fails with AMC Modules because Carrier IPMC overrides Blue LED state

Version 1.8.2

This version contains a number of bug fixes over version 1.8.1. These bug fixes are detailed below.

Bug #	Subject
878	atcamon fails to bring some managed FRUs to a given hot swap state because timeout is too short (30 seconds)
884	Skip causes for tests #201, #202 & #203 are not documented in the User Manual
888	Test #19 crashes in evaluation version
891	atcamon crashes when scrolling through a large SEL
893	Tests #700, #701 & #702 crash if XML IPMC Description File is malformed
894	Tests #700, #701 & #702 crash if fields are missing in the XML IPMC Description File
895	Test #101 fails if Blue LED state cannot be restored to Local Control

Installation instructions for 2 new Linux distributions – Red Hat Linux Enterprise 5 and Suse Linux Enterprise Server 10 – have been added in FAQ.txt.

Version 1.8.1

This version contains a number of bug fixes over version 1.8.0. These bug fixes are detailed below.

Bug #	Subject
837	Tester wrongly reports "Transport error: Byte 4 "Local Control On-duration (Local Control LED Function is on or off)" uses reserved value 0xFF in GetFruLedState response" when running LED tests
838	Test #23 fails if M0->M1 or M1->M0 events are not sent (It should log an Info instead)
840	Tests #201 & #202 fail if sensors have an Initialization Agent that runs when transitioning from M1 to M4
855	esoatcatools pinger -i 0 ... exits with "Error: NULL result without error in PyObject_Call" when hitting Control-C
856	Tests 205 & 206 fail if sensor has hysteresis such that (upper threshold - (hysteresis + 1)) < reading or (lower threshold + (hysteresis + 1)) > reading
862	Tester should forbid using -i and -I options at the same time
863	Tester exits with "Internal error: ..." message when invalid number is specified for -a, -p, -k, -n and -s options
864	Tester and tools improperly use 3 as the value for straight authentication mode

Version 1.8.0

This version contains a number of enhancements and bug fixes over version 1.6.3. These enhancements and bug fixes are detailed below.

Tester general behavior

Pass number is now displayed at the beginning and end of each test (Customer Change Request #656).

The tester now verifies that AMC Module is present before starting MMC tests.

The tester now checks that reserved bits and fields of PICMG defined commands responses are properly set (Usually to 0 unless otherwise specified). This is turned on by default but can be turned off using option –k – see below.

Command line modifications

An option (-k hex_param) has been added that controls the checks that the tester performs on commands responses. The possible checks are the following:

- Check that PICMG defined commands responses length are exactly the same as defined in the specification (On if bit 0 of –k option parameter is 1, Off otherwise, default is On)
- Check that IPMI defined commands responses length are exactly the same as defined in the specification (On if bit 1 of –k option parameter is 1, Off otherwise, default is On)
- Check that reserved bits and fields of PICMG defined commands responses are properly set (On if bit 2 of –k option parameter is 1, Off otherwise, default is On)
- Check that reserved bits and fields of IPMI defined commands responses are properly set (On if bit 3 of –k option parameter is 1, Off otherwise, default is Off)

By default, the tester always checks that MMCs, IPMCs or FRUs that are specified on the command line are actually present before starting a test session and aborts if any of the devices to be tested is not present. An option (–o) has been added that allows bypassing this check. It can be convenient if the tester determines that a device that is actually present is not there because of a bug in the MMC or IPMC firmware (Be careful when using this option since if the device to be tested is actually not present you'll end up with errors in all test scenarios).

"esoatcatester list" command now supports –c and –C options that remove color coding in the test list.

Management Controller Description tests

The tester can now check that a given IPMC, MMC or Shelf Manager implements managed FRUs, entities, sensors and data transport interfaces as documented in an XML file. The format of this XML file is described in “XML IPMC Description file” chapter and a tool that creates such an XML file is delivered with the tester – see “IPMC Description XML dump” chapter for details. An XSLT file is also provided that allows viewing XML IPMC Description files in a Web browser.

AMC.0 R2.0 support

The tester now supports recently released AMC.0 R2.0:

- ATCA/IPMI library has been updated to support all the newly defined commands and FRU records.
- Several test scenarios have been modified to take AMC.0 R2.0 into account

Test scenarios modified for AMC.0 R2.0

Test #	Test Name	Category	Modification description
600	Explicit Message Bridging	Carrier IPMC	Add test for new completion code for "Send Message" command (0xD3) when module is not present
601	MMC Basic requirements	MMC	Add check for PICMG Extension Version = 4.1
604	Carrier Information Table and Get Address Info command	Carrier IPMC	Add check for AMC.0 Extension Version = 2.0
605	FRU Control	MMC	Add test for "FRU Control Capabilities" command introduced by AMC.0 R2.0
607	FRU Information	MMC	Add basic check of "Clock Configuration" record
609	SDR Merging (w/ one AMC Module)	Carrier IPMC	Add test of new completion code for "Get Device Locator Record ID" command (0xD3) when module is not present
610	Module Hot Swap sensor	MMC	Add check for new Hot Swap sensor bits defined by AMC.0 R2.0
611	FRU Information	Carrier IPMC	Add basic check of "Carrier Clock Point-to-Point Connectivity" and "Clock Configuration" records

Improved test coverage

Test coverage has been improved by creating new test scenarios and improving the existing ones. Details about new and improved test scenarios can be found in the next 2 sections.

New test scenarios

Test #	Test Name	Category	Scenario description
21	FRU Information write protection	FRU	Check that FRU information write protection if any is properly implemented
22	FRU communication lost/recovered	IPMC	Check that IPMC properly handles communication loss with its non-intelligent managed FRUs
23	Non-intelligent FRU insertion/extraction	IPMC	Check that IPMC properly handles SDR merging upon insertion/extraction of its non-intelligent managed FRUs (PICMG 3.0 R2.0 ECN-002 only test)
117	LED 1 powered from management power	FRU	Check that LED1 is powered by management power
318	Shelf Address update with hardware mechanism	Shelf	If Shelf Managers are non dedicated and Shelf provides a hardware mechanism to set Shelf Address, check that Shelf Address in Shelf FRU Information is properly updated when hardware mechanism changes Shelf Address
319	Non configured Shelf Address	Shelf	Check that non-configured Shelf Address is returned with length = 0
320	Shelf Reserved/Assigned IPMB Addresses	Shelf	Check that IPMB addresses are properly reserved and assigned in the Shelf
321	Fan Tray (Power Budget, Local Control Mode)	FRU	Check that Fan Tray reserves enough power for Maximum Speed Level and properly indicates its Local Control Mode support
322	Temperature Thresholds Crossing (communication lost)	Shelf Manager	Check that if Shelf Manager looses communication with a FRU that triggered a Fan Speed increase, it does not decrease the Fan Speed till it knows for sure that temperature alarm condition has disappeared
323	Temperature Thresholds Crossing (multiple power levels)	Shelf Manager	Check that if a FRU supporting several power levels triggers a temperature alarm and all attempts to increase cooling don't remove the alarm, the Shelf Manager decreases power of the FRU in question
324	FRU Inventory	Shelf	Check that Shelf Manager properly

	Device Lock/Write commands	Manager	implements a FRU Inventory Device lock for the Shelf FRU Information on FRU Device ID 254
325	Insufficient power budget	Shelf Manager	Check that if there is not enough power budget to power on an ATCA board, the Shelf Manager will leave it in M3 when the board is activated
326	Shelf Manager Controlled Activation	Shelf Manager	Check that Shelf Manager properly handles “Shelf Manager Controlled Activation” bit in “FRU Activation and Power Descriptor”
327	Shelf Manager Controlled Deactivation	Shelf Manager	Check that Shelf Manager properly handles “Shelf Manager Controlled Deactivation” bit in “FRU Activation and Power Descriptor”
509	Shelf Manager IP Address Availability	Network	Check that Shelf Manager IP Address is not unavailable more than 1 second during a Shelf Manager switchover
617	FRU Information write protection	MMC	Check that FRU information write protection if any is properly implemented
700	IPMC Description	IPMC	Verify that IPMC implements managed FRUs, entities, sensors and data transport interfaces as documented in an XML file
701	Shelf Manager Description	Shelf Manager	Verify that Shelf Manager implements managed FRUs, entities and sensors as documented in an XML file
702	MMC Description	MMC	Verify that MMC implements managed FRU, entities and sensors as documented in an XML file

Improved test scenarios

Test #	Test Name	Category	Improvement description
N/A	IPMI/ATCA Library	N/A	Check reserved bits and fields in PICMG defined commands responses (Controlled by –k option)
1	PICMG commands	IPMC	Check that PICMG Extension Version is >=2.0 and <= 2.2
3	SDR requirements	IPMC	Check that FRU Device ID in SDR type 11h is != 0 and that there is only one SDR type 11h with a given FRU Device ID Check the consistency of FRU Device ID in SDR type 11h and "Get Device Locator Record ID" command Check that there is only one Hot Swap sensor per manager FRU Check that Get Device SDR command only returns SDRs of sensors belonging to the given LUN
4	Entity Conformance	IPMC	Add check for "PICMG Alarm Panel" entity Check that entities reserved by PICMG are not used
5	FRU Device commands	FRU	Add test for "Write FRU" command
9	FRU Insertion	FRU	Add test of M2->M1 transition when opening handle Check Locked and Deactivation-Locked bits at all places where they are supposed to change If Blue LED is not in the expected state, display an error and continue instead of aborting the test Check Hot Swap sensor reading after receiving events
10	FRU Extraction	FRU	Check Locked and Deactivation-Locked bits at all places where they are supposed to change If Blue LED is not in the expected state, display an error and continue instead of aborting the test Check Hot Swap sensor reading after receiving events
11	FRU Insertion/Extraction	FRU	Check Locked and Deactivation-Locked bits at all places where they are supposed to change

			Check Hot Swap sensor reading after receiving events
12	FRU Extraction with Set Power Level	FRU	Check Locked and Deactivation-Locked bits at all places where they are supposed to change Check Hot Swap sensor reading after receiving events
16	E-Keying	IPMC	Check that IPMC disables all enabled ports when deactivated Check that multi-channel links don't mix channels from different point-to-point interfaces If board alone, check all links described in "Board Point-to-Point Connectivity" record by enabling & disabling them
17	IPMI Cold/Warm Resets commands	IPMC	If operational state of the FRU changes, check that enabled ports are disabled
205	Thresholds based sensors	Sensor	Use sensor thresholds a lot bigger (or smaller) than actual reading to avoid false errors with sensors that have a reading varying substantially
206	Abnormal Event Message	Sensor	Use sensor thresholds a lot bigger (or smaller) than actual reading to avoid false errors with sensors that have a reading varying substantially If a sensor is skipped, don't bring the FRU to M4 and wait 10 seconds again
301	Get/Set Shelf Address Info commands	Shelf Manager	Check that Shelf Addresses representation conform to the FRU Information definition of the Type/Length field
303	SDR Repository	Shelf Manager	Check that "Clear SDR Repository" and "Add SDR" or "Partial Add SDR" commands are supported
304	SDR Repository storage	Shelf Manager	Make sure that all FRUs managed by the IPMC used in this test are brought to the proper M states and add M2->M1 state transition test
311	Shelf FRU Devices	Shelf	Check that there is a "Feed-to-FRU Mapping" entry for each site described in the "Address Table"
312	Board communication lost/recovered	Shelf Manager	Check that Local Control of the Blue LED does not change after entering M7 state
314	E-Keying	Shelf	Modify the test scenario so that all boards start in M1, are brought to M4 one by one in Logical Slot order and brought back to M1 one by one in Logical Slot reverse order

			Check that when a board is de-activated, Shelf Manager disables all enabled ports on E-keying peer boards
402	IPMB reliability (w/ an ATCA board)	IPMC	Check that IPMC starts operating with both buses in Local Control Map IPMI traffic flow verification to an error
403	IPMB hang detection and recovery (IPMB errors on ATCA board)	IPMC	Map IPMI traffic flow verification to an error
404	IPMB hang detection and recovery (IPMB errors on bus)	Shelf Manager	Map IPMI traffic flow verification to an error
405	IPMB hang detection and recovery (IPMB errors on ATCA boards)	Shelf	Check that IPMB bus topology is radial before probing boards and not after (No need to probe boards if radial since this test is for bused topology) Map IPMI traffic flow verification to an error
604	Carrier Information Table and Get Address Info command	Carrier IPMC	Check that site numbers are >=1 and <=8
606	FRU Device commands	MMC	Add test for “Write FRU” command
607	FRU Information	MMC	Check that “AMC Point-to-Point Connectivity” record describes AMC Module resources

Tools

IPMC Description XML dump

This is a new tool that creates an XML IPMC Description file for a given controller (IPMC or MMC). This file can then be used as is or as a basis for test scenarios from Description test package – see Tools chapter in the User Manual for details.

ATCA Monitor

Error recovery is more robust: Failed commands shouldn't crash the tool anymore. A lot of new features have been added – see Tools chapter in the User Manual for details.

IPMI command

Two modes have been added – see Tools chapter in the User Manual for details:

- Interactive mode allowing to send commands interactively within the same RMCP session
- Batch mode allowing to send commands from a file within the same RMCP session

FRU dump

The command syntax has been modified: dump name is now optional and is actually a dump name suffix – see Tools chapter in the User Manual for details.

SDR dump

The command syntax has been modified: dump name is now optional and is actually a dump name suffix – see Tools chapter in the User Manual for details.

Bug Fixes

The following bugs from version 1.6.3 have been fixed.

Bug #	Subject
531	Test #307 should select boards cooled by the same fans
574	Test #304 does not fail if “Reserve SDR Repository” command is not supported
575	Test #303 should check "Operation Support" field from “Get SDR Repository Info” command
633	Tests #305, #306, #307 & #308 should not select a sensor already in alarm condition
697	Tests #305, #306, #307 & #308 fail if fan speed doesn't decrease when Shelf returns to normal operation (Should be a Warning only)
700	Test #308 fails if sensor de-asserts alarm event before board extraction
705	Test #16 fails because “Get Port State” command returns Link Info for a non defined Link and the tester tries to send a “Set Port State” command on this link
730	Tests #305, #306, #307 & #308 should select temperature sensors with threshold support
745	FRU #0 should be in M4 prior to launching tests on FRUs != 0
748	Test #609 hangs if Get Device Locator Record ID command extended form is broken
758	ATCA/IPMI library does not support Chassis Info Area, Board Info Area & Product Info Area bigger than 256 bytes
791	Test #205 fails if sensors that have event generation settable for entire sensor report a Sensor Event Mask != SDR (Should be a Warning only)
814	Test #107 asks question about non existent LEDs status
824	Tester does not properly wait for events with timeout if Shelf Manager implements Type 10h sensor that sends an event each time the SEL is cleared