



**ALLSEEN
ALLIANCE**

Certification Test Tool (CTT)

Amedment 4
D4.8.1: Training Material

AT4 wireless
15 May 2015





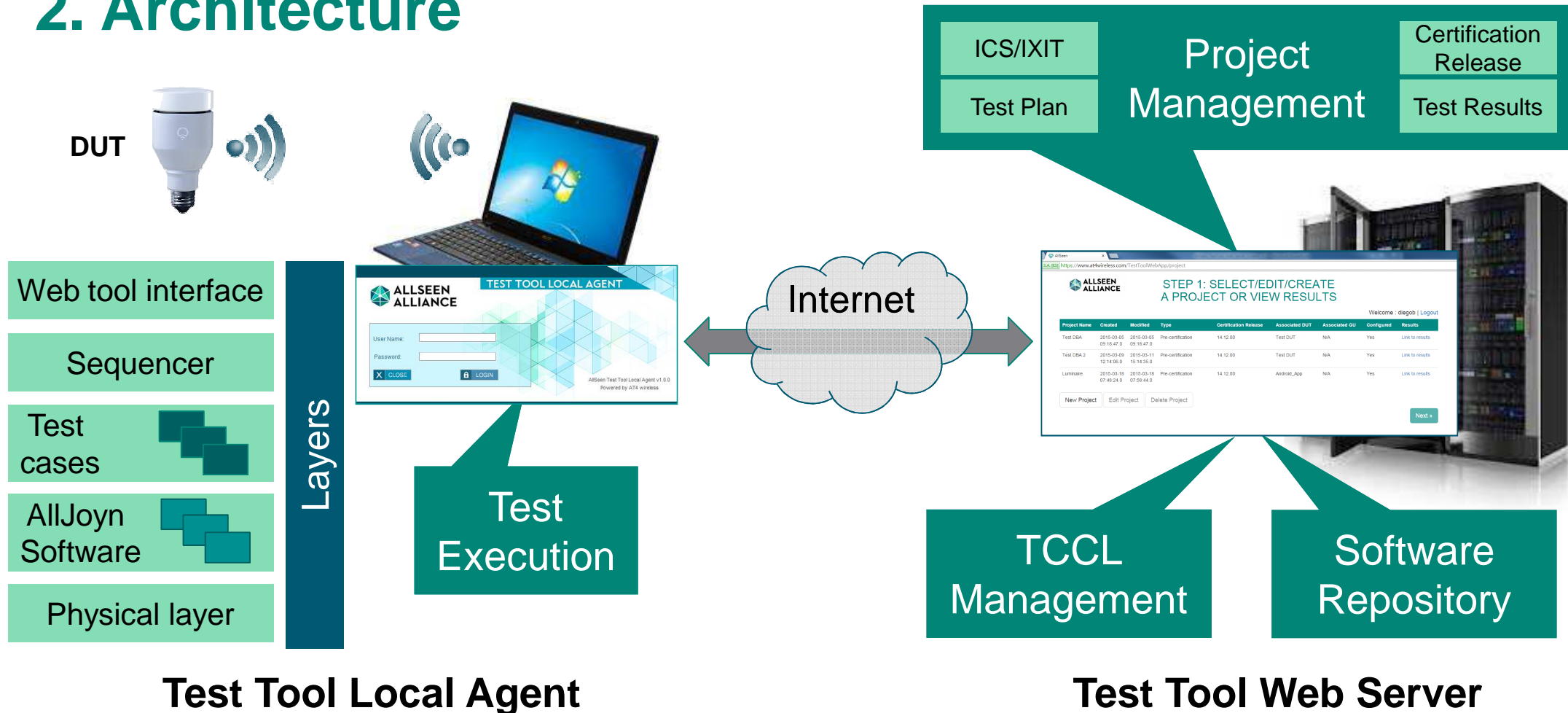
Summary

1. Overview
2. Architecture
3. Certification Test Tool Web Server
4. Certification Test Tool Local Agent
5. Related Links

1. Overview

- Scope:
 - **Conformance Testing:** performing test cases in an automatic way
 - **Interoperability Testing:** guiding user step by step to perform test cases
- Verifies the correct implementation of the AllJoyn features and Service Frameworks
- Private domain, access required
- Stores test results and testing evidences
- Created for Product Certification but also suitable for product development verification and pre-certification testing

2. Architecture



3. Test Tool Web Server

- Web application that provides the repository of information related to the Testing Process.
- Main functionalities:
 - **Project Management:** Creation and edition of testing projects, managing all the related information : DUT, Samples, ICS/IXIT, Test Plan, etc.
 - **Software repository:** It stores and manages downloading of all the software components needed to deploy the Test Tool Local Agent, including the updated test cases packages corresponding to the different Certification Releases.
 - **TCCL Management:** Management of the Test Case Control Lists used by AllSeen to define test cases certification scope within every Certification Release.


3. Test Tool Web Server. Project Management

- Project Identification, Versioning and Results.
- Device Under Test (DUT) description.
- Sample identification.
- Golden Unit identification (for Interoperability Projects).
- Fill in ICS, IXIT and General Parameters.
- Run Static Conformance Review (SCR) to check ICS integrity.
- Test Plan generation (Conformance and/or Interoperability Test Cases).
- Test Results management.

3. Test Tool Web Server. CAS Login


MEMBERS LOGIN

Connect to the Linux Foundation to continue



10

Connect

 **LINUX FOUNDATION**

LOG IN » RETURN TO 192.168.110.50

☒ I already have a Linux Foundation ID

☐ I need to create a Linux Foundation ID


20

Username

Password

Log in

[Request new password](#)

 **ALLSEEN ALLIANCE**

Generate CTT Local Agent Key


STEP 1: SELECT/EDIT/CREATE A PROJECT OR VIEW RESULTS

Welcome : diegob | Logout

Project Name	Created	Modified	Type	Certification Release	TCCL	Supported Services	DUT	GU	CRI	Configured	Results
<p>New Project Edit Project Delete Project</p>											

Next »

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 **ALLSEEN ALLIANCE**


Generate CTT Local Agent Key

Your CTT Local Agent Key is:

769251

Please copy it because it cannot be retrieved

Close

 **ALLSEEN ALLIANCE**

TEST TOOL LOCAL AGENT

40

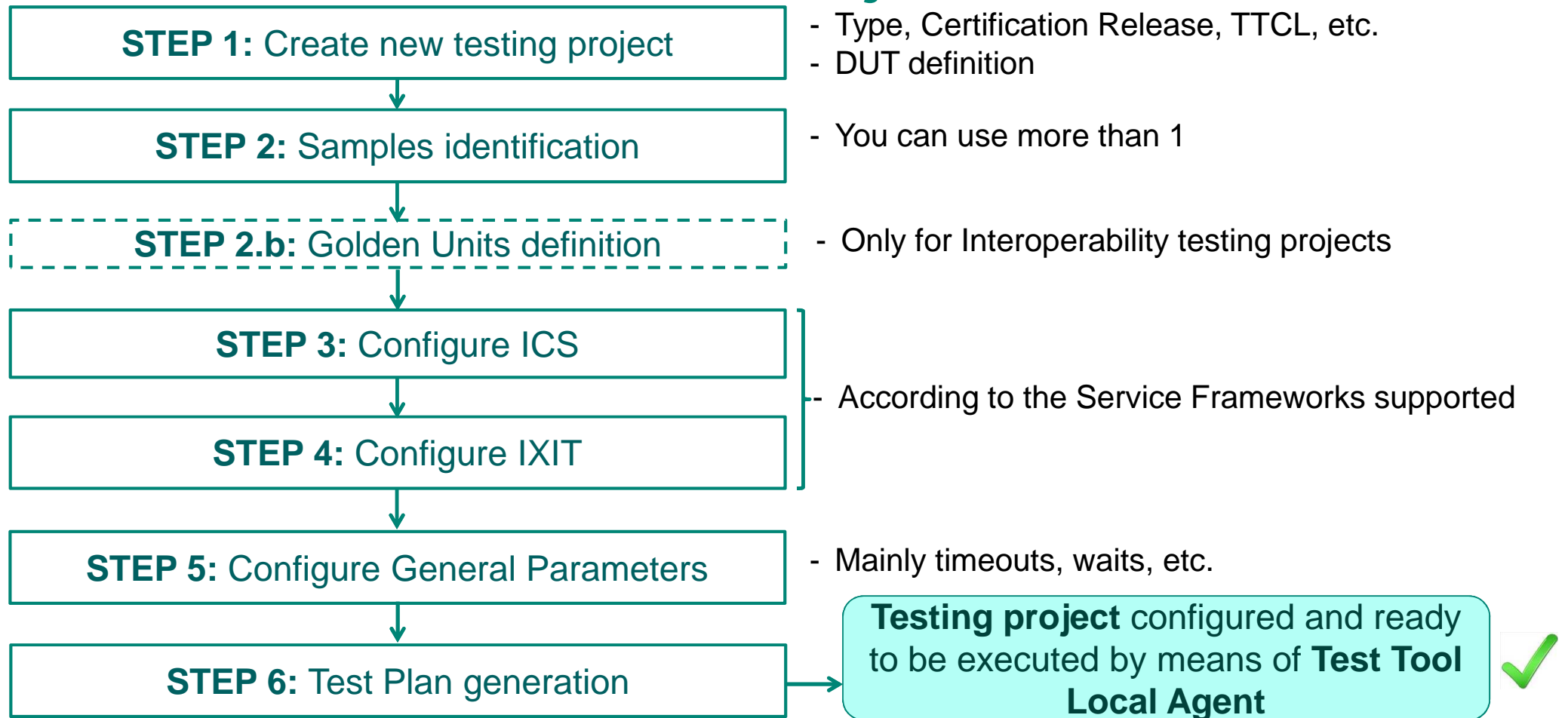
User Name: diegob

Password: *****

X CLOSE LOGIN

AllSeen Test Tool Local Agent v1.1.0
Powered by AT4 wireless

3. Test Tool Web Server. Project Creation Workflow



3. CTT Web Server. Project Management



STEP 1: SELECT/EDIT/CREATE A PROJECT OR VIEW RESULTS

Generate CTT Local Agent Key

Welcome : diegob | [Logout](#)

Project Name	Created	Modified	Type	Certification Release	TCCL	Supported Services	DUT	GU	CRI	Configured	Results
Test DBA	2015-05-14 12:12:22	2015-05-14 12:12:22	Conformance and Interoperability	v14.12.00b	TCCL_14.12.00b_v0.1	Core Interface, Lighting	Test_DUT	Test_GU1 , Test_GU2 , Test_GU3	001	Yes	No results

New Project

Edit Project

Delete Project

Next »

3. CTT Web Server. DUT Selection



STEP 2: SELECT/EDIT/CREATE A DEVICE UNDER TEST (DUT)

Project: Test DBA

Welcome : diegob | [Logout](#)

DUT Name	Created	Modified	OEM	Model	Description	Samples
Test_DUT	2015-05-14 12:24:20	2015-05-14 12:24:20	AT4 wireless	Test Model	DUT for testing purposes	Samples

New DUT

Edit DUT

Delete DUT

« Back

Next »

3. CTT Web Server. Sample Selection

The screenshot displays the CTT Web Server interface. At the top left is the ALLSEEN ALLIANCE logo. Below it, the project name 'Project: Test DBA' is shown. A table lists DUTs with columns 'DUT Name', 'Created', and 'Modified'. The first entry is 'Test_DUT' with creation and modification dates of '2015-05-14 12:24:20'. Below the table are buttons for 'New DUT', 'Edit DUT', and 'Delete DUT', along with a '« Back' button. On the right, a user is logged in as 'diegob' with a 'Logout' link. A 'Samples' section is also visible. A modal window is open in the center, titled 'STEP 3: SELECT/EDIT/CREATE', showing a table with columns 'Device ID', 'App ID', 'Sw Ver', and 'Hw Ver'. The table contains one row with values: '0001', '12345678-9abc-1def-8012-000000000000', '0.1', and '0.2'. Below the table are buttons for 'Back', 'Add Sample', 'Edit Sample', and 'Delete Sample'.

ALLSEEN ALLIANCE

Project: Test DBA

DUT Name	Created	Modified
Test_DUT	2015-05-14 12:24:20	2015-05-14 12:24:20

New DUT Edit DUT Delete DUT « Back

Welcome : diegob | Logout

Samples

Samples

STEP 3: SELECT/EDIT/CREATE

Device ID	App ID	Sw Ver	Hw Ver
0001	12345678-9abc-1def-8012-000000000000	0.1	0.2

Back Add Sample Edit Sample Delete Sample

Next »

3. CTT Web Server. Golden Unit Selection



STEP 3: SELECT/EDIT/CREATE A GOLDEN UNIT (GU)

Project: Test DBA / DUT: Test_DUT

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GU Name	Created	Modified	Category	OEM	Model	SW Ver	HW Ver	Description
Test_GU1	2015-05-14 12:26:10	2015-05-14 12:26:10	Category 1 AllJoyn Device (About)	AT4 wireless	test 3	0.2	0.1	Testing GU selection
Test_GU2	2015-05-14 12:26:41	2015-05-14 12:26:41	Category 4.2 AllJoyn Device (Control Panel)	AT4 wireless	Test Model	0.1	0011111	Testing GU selection
Test_GU3	2015-05-14 12:27:11	2015-05-14 12:27:11	Category 7.2 AllJoyn Device (Lamp Service)	AT4 wireless	Test Model	3.9	4.2	Testing GU selection

New GU

Edit GU

Delete GU

You need to select at least 3 Golden Units

« Back

Next »

For most of the IOP Test Cases, 3 GUs are needed

3. CTT Web Server. ICS Selection



STEP 4: CONFIGURE YOUR ICS

Project: Test DBA / DUT: Test_DUT / GUs: Test_GU1, Test_GU2, Test_GU3

Welcome : diegob | [Logout](#)


Core Interface Audio

Id	Name	Description	Value
1	ICSCO_DateOfManufacture	Support of About Interface GetAboutData method DateOfManufacture data field	true ▼
2	ICSCO_HardwareVersion	Support of About Interface GetAboutData method HardwareVersion data field	true ▼
3	ICSCO_SupportUrl	Support of About Interface GetAboutData method SupportUrl data field	true ▼
4	ICSCO_IconInterface	Support of Icon Interface	true ▼
87	ICSCO_DeviceName	Support of About Interface GetAboutData method DeviceName data field	true ▼

[« Back](#)[Change All Service ICS](#)[SCR](#)[Next »](#)

It is necessary to perform SCR prior to go to the next Step

3. CTT Web Server. IXIT Selection



STEP 5: CONFIGURE YOUR IXIT

Project: Test DBA / DUT: Test_DUT / GUs: Test_GU1, Test_GU2, Test_GU3

Welcome : diegob | [Logout](#)

Core Interface

Audio

Id	Name	Description	Value
1	IXITCO_AboutVersion	About Interface version number	<input type="text" value="1"/>
2	IXITCO_AppId	The globally unique identifier for the application	<input type="text" value="12345678-9abc-1def-80"/>
3	IXITCO_DefaultLanguage	The default language supported by the device. Specified as a IETF language tag listed in RFC 5646.	<input type="text"/>
4	IXITCO_DeviceName	Name of the device set by platform-specific means (such as Linux and Android).	<input type="text" value="Test_DUT"/>
5	IXITCO_DeviceId	Device identifier set by platform-specific means.	<input type="text" value="0001"/>
6	IXITCO_AppName	Application name assigned by the app manufacturer (developer or the OEM)	<input type="text"/>
7	IXITCO_Manufacturer	The manufacturer's name of the app.	<input type="text" value="AT4 wireless"/>
8	IXITCO_ModelNumber	The app model number.	<input type="text" value="Test Model"/>
9	IXITCO_SoftwareVersion	Software version of the app.	<input type="text" value="0.1"/>
10	IXITCO_AJSoftwareVersion	Current version of the AllJoyn SDK used by the application.	<input type="text"/>

« Back

Next »

Values provided in Step 2 are blocked here to avoid confusions

3. CTT Web Server. General Parameters



STEP 6: CONFIGURE YOUR GENERAL PARAMETERS

Project: Test DBA / DUT: Test_DUT / GUs: Test_GU1, Test_GU2, Test_GU3

Welcome : diegob | [Logout](#)

Id	Name	Description	Value
1	GPCO_AnnouncementTimeout	About announcement timeout in seconds	<input type="text" value="30"/>
2	GPON_WaitSoftAP	Onboarding Service Framework time to wait for Soft AP in ms	<input type="text" value="12000"/>
3	GPON_ConnectSoftAP	Onboarding Service Framework time to wait to connect to Soft AP in ms	<input type="text" value="60000"/>
4	GPON_WaitSoftAPAfterOffboard	Onboarding Service Framework time to wait for Soft AP after offboard in ms	<input type="text" value="15000"/>
5	GPON_ConnectPersonalAP	Onboarding Service Framework time to wait to connect to Personal AP in ms	<input type="text" value="60000"/>
6	GPON_Disconnect	Onboarding Service Framework time to wait for disconnect in ms	<input type="text" value="30000"/>
7	GPON_NextAnnouncement	Onboarding Service Framework time to wait for next device announcement in ms	<input type="text" value="180000"/>
8	GPCF_SessionLost	Configuration Service Framework session lost timeout in seconds	<input type="text" value="30"/>
9	GPCF_SessionClose	Configuration Service Framework session close timeout in seconds	<input type="text" value="5"/>
10	GPL_SessionClose	Lighting Service Framework session close timeout in seconds	<input type="text" value="30"/>

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Typically they are timers

3. CTT Web Server. Test Plan Generation



STEP 7: TEST PLAN GENERATION

Project: Test DBA / DUT: Test_DUT / GUs: Test_GU1, Test_GU2, Test_GU3

Welcome : diegob | [Logout](#)

Test Case	Description	Select
About-v1-01	About announcement received	<input checked="" type="checkbox"/>
About-v1-02	Version property consistent with the About announcement	<input checked="" type="checkbox"/>
About-v1-03	GetObjectDescription() consistent with the About announcement	<input checked="" type="checkbox"/>
About-v1-04	Bus objects consistent with the About announcement	<input checked="" type="checkbox"/>
About-v1-05	Standardized interfaces match definitions	<input checked="" type="checkbox"/>
About-v1-06	GetAboutData() with default language	<input checked="" type="checkbox"/>
About-v1-07	GetAboutData() with each supported language	<input checked="" type="checkbox"/>
About-v1-08	GetAboutData() without a specified language	<input checked="" type="checkbox"/>
About-v1-09	GetAboutData() for an unsupported language	<input checked="" type="checkbox"/>
About-v1-10	GetContent() on the About DeviceIcon	<input checked="" type="checkbox"/>
About-v1-11	GetUri() on the About DeviceIcon	<input checked="" type="checkbox"/>
EventsActions-v1-01	Description tag existence in introspection XML and identical XML across different description languages	<input checked="" type="checkbox"/>
IOP_About-v1-01	Device detected	<input checked="" type="checkbox"/>

Select All (*)

Deselect All

(*) Mandatory for Certification purpose

« Back

Next »

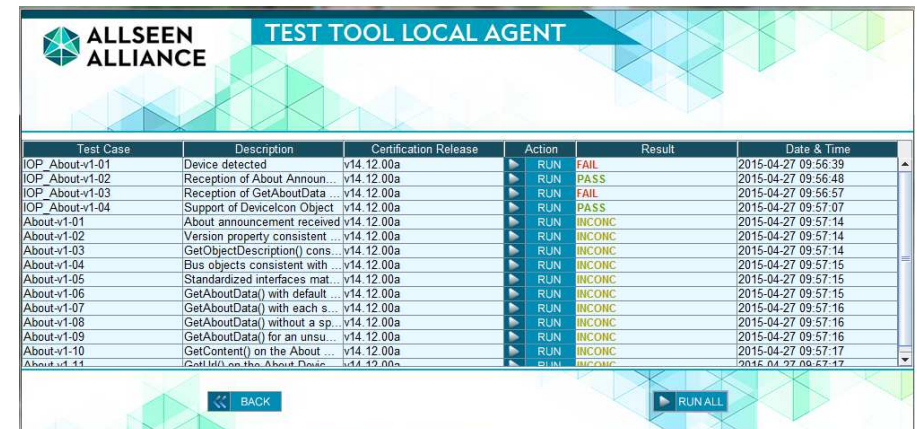
Applicable Test Cases are marked. User can change unless TCs blocked by TCCL

4. Test Tool Local Agent

- Downloaded from the Test Tool Web Server.
- Local application installed on a Windows computer.
- Launches the software modules responsible for executing the Test Cases.
- Executes test cases according to the Test Case Specifications.
- Communicates with the Test Tool Web Server to:
 - Download the testing project information (Test Plan, ICS/IXIT, etc.).
 - Uploads Test Results and logs.

4. Test Tool Local Agent

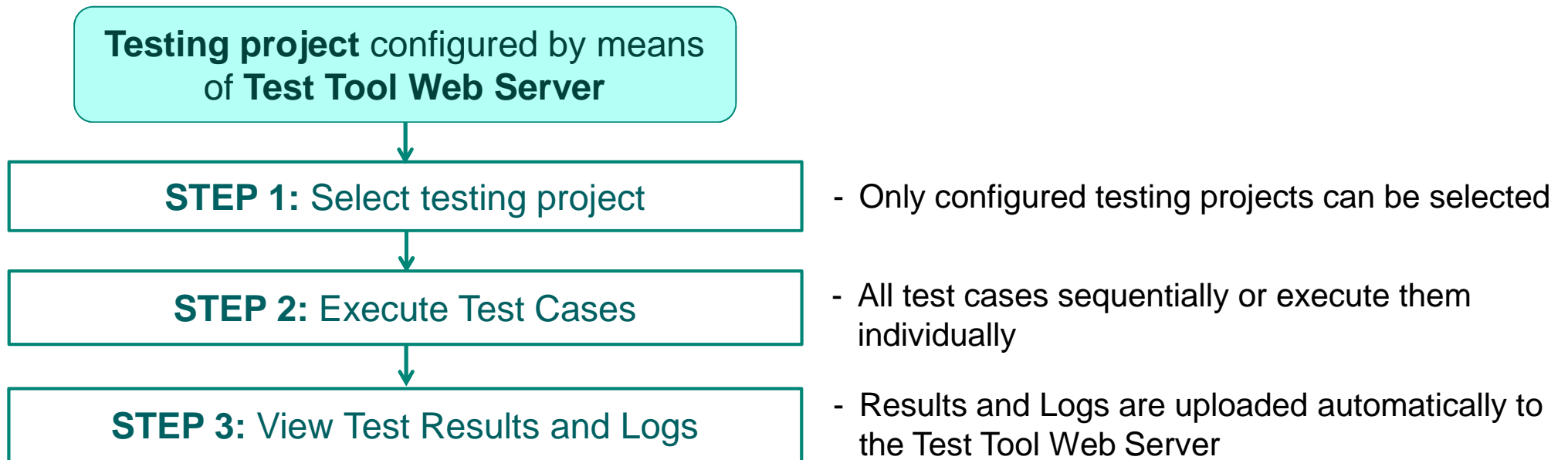
- Developed in JAVA 7.
- Fully verified under Windows 7. Will be verified under Windows 8.
- Wi-Fi is the physical layer for communicating with the DUT.
- Fully support of Conformance and IoP testing.
- Interoperability testing:
 - Step by step guide to support the test operator during the execution of the interoperability Test Plan.
 - Test Results management.



The screenshot displays the 'ALLSEEN ALLIANCE TEST TOOL LOCAL AGENT' window. It features a table with test results. The table has columns for Test Case, Description, Certification Release, Action, Result, and Date & Time. The results show various test cases with their corresponding descriptions, release versions, actions taken, and the resulting status (PASS, FAIL, INCONC).

Test Case	Description	Certification Release	Action	Result	Date & Time
IOP_About-v1-01	Device detected	v14.12.00a	RUN	FAIL	2015-04-27 09:56:39
IOP_About-v1-02	Reception of About Announ...	v14.12.00a	RUN	PASS	2015-04-27 09:56:48
IOP_About-v1-03	Reception of GetAboutData...	v14.12.00a	RUN	FAIL	2015-04-27 09:56:57
IOP_About-v1-04	Support of DeviceIcon Object	v14.12.00a	RUN	PASS	2015-04-27 09:57:07
About-v1-01	About announcement received	v14.12.00a	RUN	INCONC	2015-04-27 09:57:14
About-v1-02	Version property consistent	v14.12.00a	RUN	INCONC	2015-04-27 09:57:14
About-v1-03	GetObjectDescription() cons...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:14
About-v1-04	Bus objects consistent with	v14.12.00a	RUN	INCONC	2015-04-27 09:57:15
About-v1-05	Standardized interfaces mat...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:15
About-v1-06	GetAboutData() with default	v14.12.00a	RUN	INCONC	2015-04-27 09:57:15
About-v1-07	GetAboutData() with each s...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:16
About-v1-08	GetAboutData() without a sp...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:16
About-v1-09	GetAboutData() for an unsu...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:16
About-v1-10	GetContent() on the About ...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:17
About-v1-11	GetTitle() on the About De...	v14.12.00a	RUN	INCONC	2015-04-27 09:57:17

4. Test Tool Local Agent. Test Execution Workflow



4. CTT Local Agent. Login

A screenshot of the AllSeen Alliance Test Tool Local Agent login window. The window has a light blue header with the AllSeen Alliance logo on the left and the title "TEST TOOL LOCAL AGENT" on the right. Below the header, there are two input fields: "User Name:" and "Password:". Below the password field, there are two buttons: "X CLOSE" and "LOGIN". Two green arrows point from the right side of the image towards the "User Name:" and "Password:" input fields. The background of the slide features a geometric pattern of blue and green triangles.

ALLSEEN ALLIANCE

STEP 1: SELECT/EDIT/CREATE A PROJECT OR VIEW RESULTS

Welcome : diegob | [Logout](#)

Generate CTT Local Agent Key

Project Name Created Modified Type Certification Release TCCL Supported Services DUT GU CRI Configured Results

New Project Edit Project Delete Project

Next »

ALLSEEN ALLIANCE

Generate CTT Local Agent Key

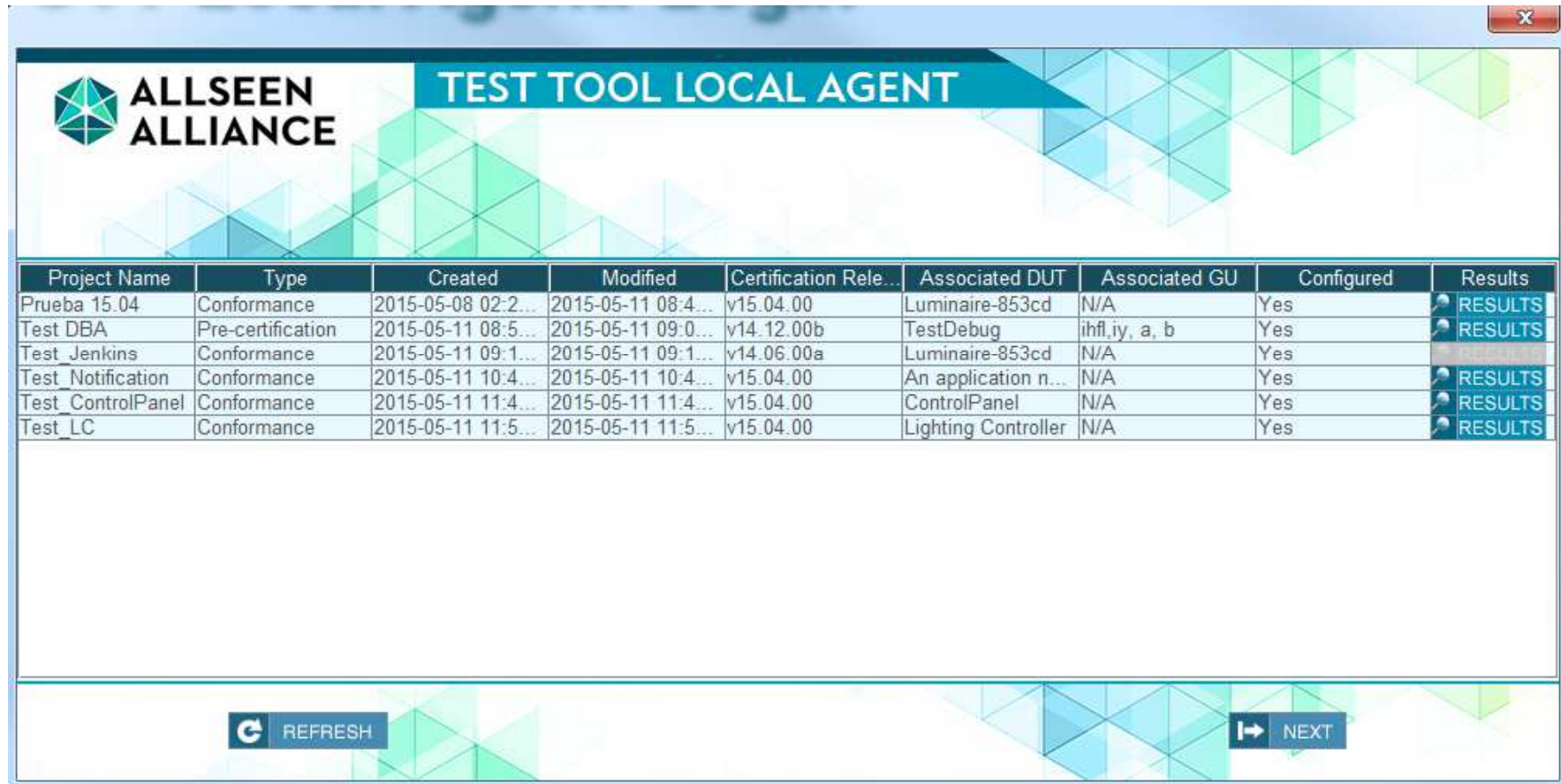
Project Name Created Modified

Test DBA 2015-05-14 12:12:22 2015-05-14 12:35:20 Interoperability 12.00b_v







Your CTT Local Agent Key is:
769251
Please copy it because it cannot be retrieved

Close

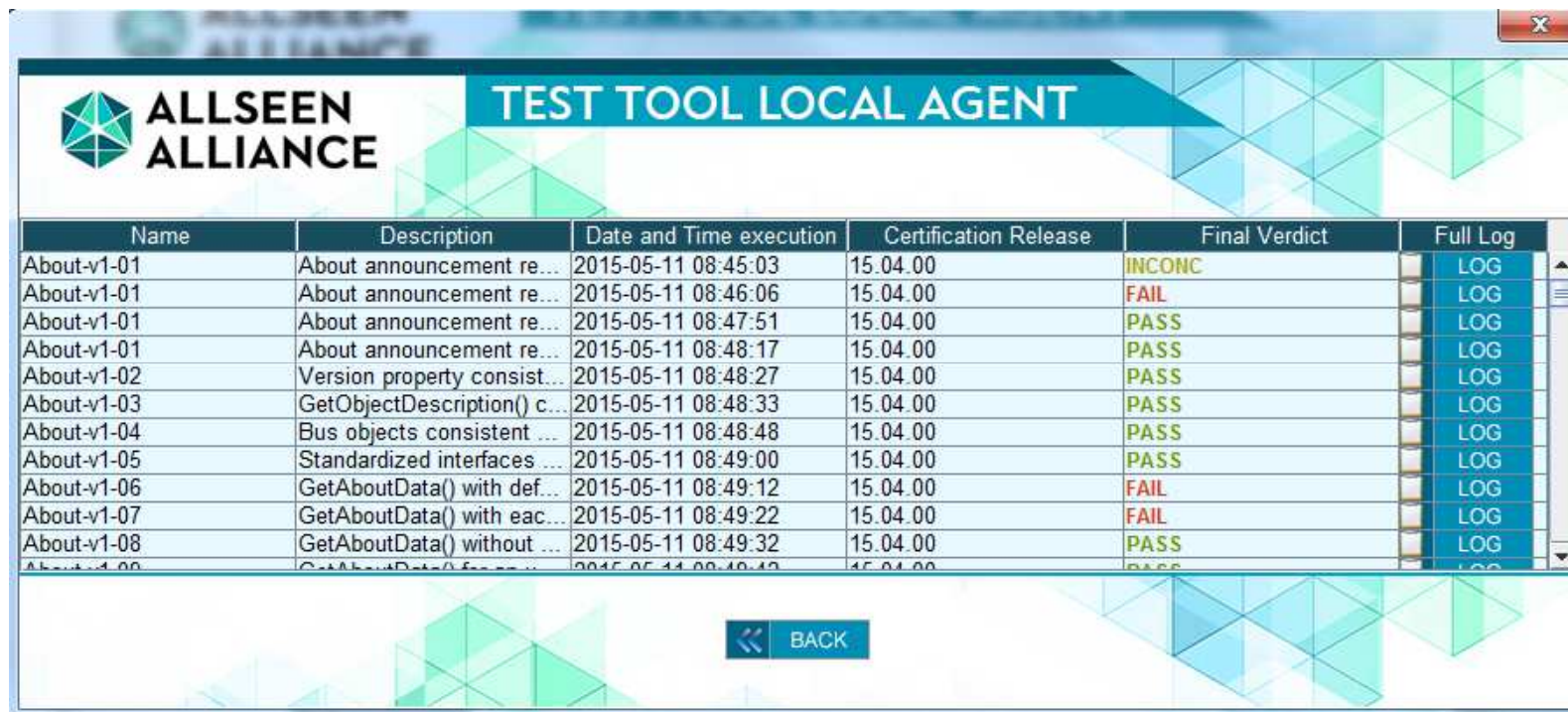
4. CTT Local Agent. Project List



The screenshot displays the 'TEST TOOL LOCAL AGENT' window. At the top left is the 'ALLSEEN ALLIANCE' logo. The main area contains a table with project details. The table has columns for Project Name, Type, Created, Modified, Certification Release, Associated DUT, Associated GU, Configured, and Results. Below the table is a large empty space, and at the bottom are 'REFRESH' and 'NEXT' buttons.

Project Name	Type	Created	Modified	Certification Release	Associated DUT	Associated GU	Configured	Results
Prueba 15.04	Conformance	2015-05-08 02:2...	2015-05-11 08:4...	v15.04.00	Luminaire-853cd	N/A	Yes	 RESULTS
Test DBA	Pre-certification	2015-05-11 08:5...	2015-05-11 09:0...	v14.12.00b	TestDebug	ihfl,y, a, b	Yes	 RESULTS
Test Jenkins	Conformance	2015-05-11 09:1...	2015-05-11 09:1...	v14.06.00a	Luminaire-853cd	N/A	Yes	 RESULTS
Test_Notification	Conformance	2015-05-11 10:4...	2015-05-11 10:4...	v15.04.00	An application n...	N/A	Yes	 RESULTS
Test_ControlPanel	Conformance	2015-05-11 11:4...	2015-05-11 11:4...	v15.04.00	ControlPanel	N/A	Yes	 RESULTS
Test_LC	Conformance	2015-05-11 11:5...	2015-05-11 11:5...	v15.04.00	Lighting Controller	N/A	Yes	 RESULTS

4. CTT Local Agent. Project Results

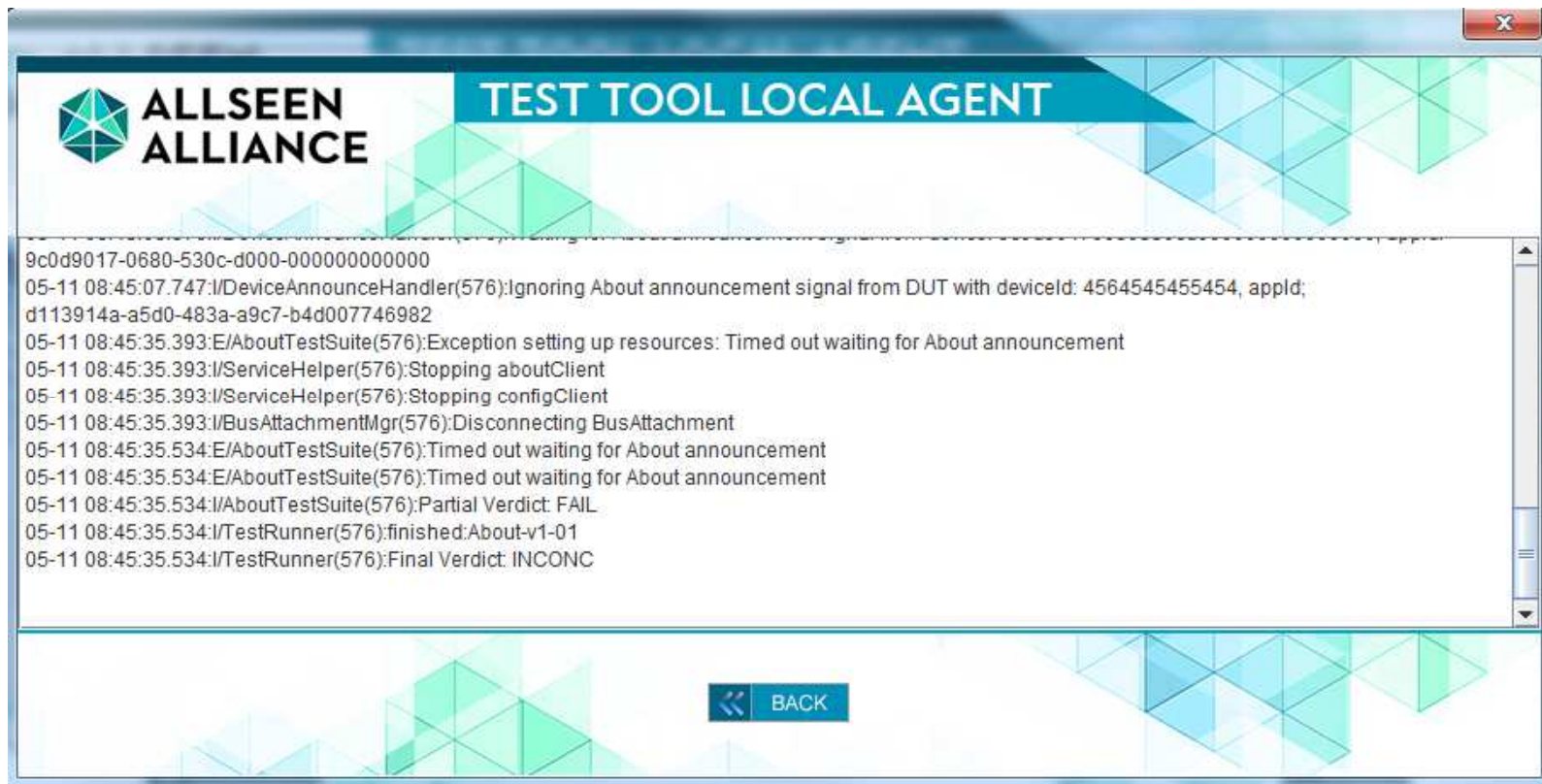


The screenshot displays the 'TEST TOOL LOCAL AGENT' window from the ALLSEEN ALLIANCE software. It features a table with test results, a 'BACK' button, and a 'Full Log' column with expandable log entries.

Name	Description	Date and Time execution	Certification Release	Final Verdict	Full Log
About-v1-01	About announcement re...	2015-05-11 08:45:03	15.04.00	INCONC	LOG
About-v1-01	About announcement re...	2015-05-11 08:46:06	15.04.00	FAIL	LOG
About-v1-01	About announcement re...	2015-05-11 08:47:51	15.04.00	PASS	LOG
About-v1-01	About announcement re...	2015-05-11 08:48:17	15.04.00	PASS	LOG
About-v1-02	Version property consist...	2015-05-11 08:48:27	15.04.00	PASS	LOG
About-v1-03	GetObjectDescription() c...	2015-05-11 08:48:33	15.04.00	PASS	LOG
About-v1-04	Bus objects consistent ...	2015-05-11 08:48:48	15.04.00	PASS	LOG
About-v1-05	Standardized interfaces ...	2015-05-11 08:49:00	15.04.00	PASS	LOG
About-v1-06	GetAboutData() with def...	2015-05-11 08:49:12	15.04.00	FAIL	LOG
About-v1-07	GetAboutData() with eac...	2015-05-11 08:49:22	15.04.00	FAIL	LOG
About-v1-08	GetAboutData() without ...	2015-05-11 08:49:32	15.04.00	PASS	LOG
About-v1-09	GetAboutData() with eac...	2015-05-11 08:49:42	15.04.00	PASS	LOG

BACK

4. CTT Local Agent. Logs



4. CTT Local Agent. Running Test Cases



The screenshot displays the 'ALLSEEN ALLIANCE TEST TOOL LOCAL AGENT' window. It features a table with columns for Test Case, Description, Certification Release, Action, Result, and Date & Time. The table lists 15 test cases, all of which have been executed with a 'RUN' action. The results for the first two cases are 'INCONC', while the remaining 13 cases are marked as 'Not executed'. The interface includes a 'BACK' button at the bottom left and a 'RUN ALL' button at the bottom right.

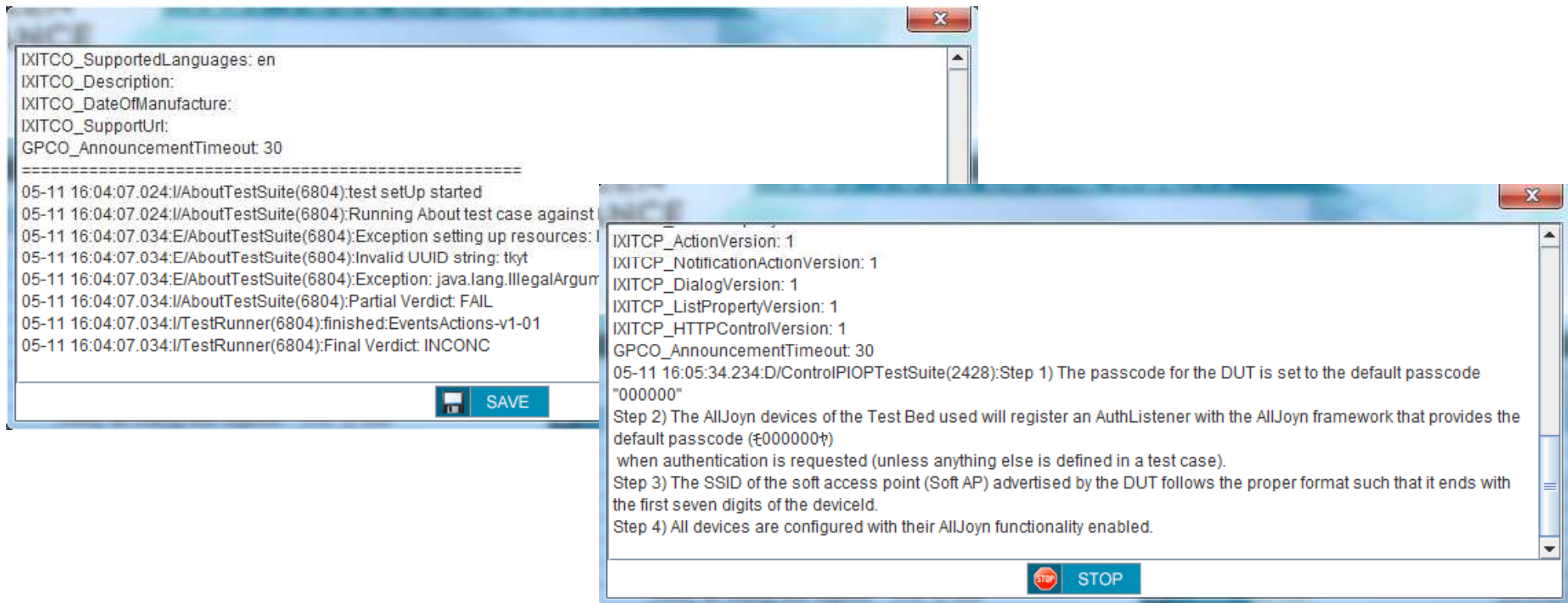
Test Case	Description	Certification Release	Action	Result	Date & Time
About-v1-11	GetUrl() on the About Devic...	v14.12.00b	RUN	INCONC	2015-05-11 09:07:01
EventsActions-v1-01	Description tag existence in...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:18
IOP_ControlPanel-v1-01	Control Panel interface anno...	v14.12.00b	RUN	Not executed	
IOP_ControlPanel-v1-02	Retrieving widgets paramete...	v14.12.00b	RUN	Not executed	
IOP_ControlPanel-v1-03	Control Panel interface use ...	v14.12.00b	RUN	Not executed	
ControlPanel-v1-01	Verify all ControlPanel bus o...	v14.12.00b	RUN	INCONC	2015-05-11 09:07:58
ControlPanel-v1-02	Verify all Container bus obje...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:00
ControlPanel-v1-03	Verify all Property bus objects	v14.12.00b	RUN	INCONC	2015-05-11 09:08:02
ControlPanel-v1-04	Verify all LabelProperty bus ...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:04
ControlPanel-v1-05	Verify all Action bus objects	v14.12.00b	RUN	INCONC	2015-05-11 09:08:06
ControlPanel-v1-06	Verify all Dialog bus objects	v14.12.00b	RUN	INCONC	2015-05-11 09:08:08
ControlPanel-v1-07	Verify all ListProperty bus o...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:10
ControlPanel-v1-08	Verify all NotificationAction ...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:12
ControlPanel-v1-09	Verify all HTTPControl bus o...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:14
ControlPanel-v1-10	Verify all secured ControlPa...	v14.12.00b	RUN	INCONC	2015-05-11 09:08:16

4. CTT Local Agent. Selecting a Sample

The screenshot displays the 'TEST TOOL LOCAL AGENT' window. A modal dialog titled 'Select a Sample' is open, showing a table with four columns: Device Id, App Id, Software Version, and Hardware Version. The dialog has a 'NEXT' button at the bottom. In the background, a table lists test cases with columns for Test Case, Description, and Date & Time. The 'Date & Time' column is currently selected. At the bottom of the main window, there are 'BACK', 'RUN', and 'RUN ALL' buttons. The 'RUN' button is highlighted in yellow and labeled 'INCONC'.

Test Case	Description	Date & Time
About-v1-11	GetUrl() on	2015-05-11 09:07:01
EventsActions-v1-01	Description	2015-05-11 09:08:18
IOP_ControlPanel-v1-01	Control Pa	
IOP_ControlPanel-v1-02	Retrieving	
IOP_ControlPanel-v1-03	Control Pa	
ControlPanel-v1-01	Verify all C	2015-05-11 09:07:58
ControlPanel-v1-02	Verify all C	2015-05-11 09:08:00
ControlPanel-v1-03	Verify all F	2015-05-11 09:08:02
ControlPanel-v1-04	Verify all L	2015-05-11 09:08:04
ControlPanel-v1-05	Verify all A	2015-05-11 09:08:06
ControlPanel-v1-06	Verify all D	2015-05-11 09:08:08
ControlPanel-v1-07	Verify all L	2015-05-11 09:08:10
ControlPanel-v1-08	Verify all N	2015-05-11 09:08:12
ControlPanel-v1-09	Verify all H	2015-05-11 09:08:14
ControlPanel-v1-10	Verify all secured ControlPa...	2015-05-11 09:08:16

4. CTT Local Agent. Save Results or Cancel the Test Case execution



5. Related Links

Test Tool Web Server:

- URL for evaluation (Pre-Production):
<https://www.at4wireless.com/TestToolWebApp>
- Create a Linux Foundation ID

Related documents in Causeway:

https://allseen.causewaynow.com/wg/CC_Committee/document/folder/120

JIRA Tickets:

<https://jira.allseenalliance.org/browse/ASACOMP#selectedTab=com.atlassian.jira.plugin.system.project%3Acomponents-panel>



Thank You

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