AllJoyn™ Gateway Framework Test Case Specifications

Version 14.06

November 14, 2014

Contents

1 Introduction

1.1 Purpose

These test cases evaluate and verify the Configuration Manager component functionality related to the AllJoyn™ Gateway framework.

1.2 Scope

These test cases are designed to determine if an implementation of a Configuration Manager application conforms to the Gateway interface specifications. Successful completion of all test cases in this document does not guarantee that the tested device will interoperate with other devices.

1.3 Release history

Release version	Date	What changed in this document
14.06	11/14/2014	Initiate release

1.4 References

- *AllJoyn™ Gateway Framework Interface Definition*
- *AllJoyn™ Gateway Agent HLD*
- *Package Manager Addendum*

2 Gateway framework: Gateway Configuration Manager

2.1 Environment setup

2.1.1 Requirements

The following are required in order to execute these test cases:

- An AllJoyn-enabled device (the device under test or DUT) that has an installed component that supports the Gateway framework in the role of a ConfigurationManager Application (the Application under test or AUT). Additionally, one or more installed components that support the Gateway framework in the role of Connector Applications.
- An AllJoyn-enabled device that has the tester app installed which will act the role of the GatewayControllerApp.
- A Wi-Fi access point (referred to as the personal AP).

2.1.2 Preconditions

Before running these test cases, it is assumed that:

- The DUT is connected to the personal AP.
- Any Connector Applications that were installed satisfy the requirements for connector applications found in the *AllJoyn™ Gateway Agent HLD* and the *Package Manager* addendum. Those include, but are not limited to, the following:
  - If not preinstalled, the Connector Application should have a signature that was verified by the Package Manager.
  - The Connector Application must include a Manifest file that passed the XSD validation included as part of the GatewayManagementApp.
  - The Connector Application should be installed in the proper directory structure. This means the binary goes under /opt/alljoyn/apps/connectorId/bin and libraries under /opt/alljoyn/apps/connectorId/lib.
  - The Connector Application should request the well-known name org.alljoyn.GWAgent.Connector.*connectorId*.
- The Connector Application is an application that connects to the cloud so that it can be used to access the proximal network remotely.
- The tester application is connected to the personal AP.

2.2 ConfigurationManager test cases

2.2.1 GWAgent-v1-01: Interfaces Match Definition

Objective

Verify the AUT introspection results contain the defined object path tree and each object defines the correct interfaces.

Procedure

1. The AUT is started on the DUT.
2. The tester app is started.
3. The tester app discovers the AUT.
4. The tester app performs introspection of the '/' object path.
5. The tester app performs introspection of the '/gw' object path.
6. The tester app performs introspection of each of the child objects under '/gw'.
7. The tester app performs introspection of each of the child objects under '/gw'.

Expected results

- The tester app discovers the AUT.
- The result of the introspecting the '/' object path of the AUT returns a child object with path '/gw' with the verified interface 'org.alljoyn.gwagent.ctrl.AppMgmt'.
- The result of the introspecting the '/gw' object path of the AUT returns as many child objects with path '/gw/<connector-id>' as there are connector application configured on the DUT, (where <connector-id> is a place holder for the unique connector application identifier) and each with the verified interfaces 'org.alljoyn.gwagent.ctrl.App' and 'org.alljoyn.gwagent.ctrl.AclMgmt'.
- The result of the introspecting each of the '/gw/<connector-d>' object paths of the AUT returns as many child objects with path '/gw/<connector-id>/<acl-id>' as there are access control lists application configured on the DUT per connector application, (where <acl-id> is a place holder for the unique acl identifier) and each with the verified interface 'org.alljoyn.gwagent.ctrl.Acl'.