Gateway Working Group Update & Roadmap

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Topics

- Status update for current Gateway Working Group projects
- Gateway Agent project status and release plan update
- AllJoyn XMPP Connector project status and release plan update
- Gateway Working Group 2016 Roadmap

Gateway Work Group – Projects Status Overview

Project	Description	Contributors	Release	Status
Gateway Agent	A manageable AllJoyn routing node for connections with external networks, segments, devices and services	Affinegy, Qualcomm	Released at v14.12 and part of the CBI	v15.04 release planned 2016-03 v15.09 planned for 2016-04 with new features See project status slide.
AllJoyn XMPP Connector	A managed services and secure remote access connector for AllJoyn via XMPP with support for Gateway Agent.	Affinegy		Has been available as a beta since 2015-09. Revised plan to moves the official release to 16.04 by 2016-04. See project status slide.
Device System Bridge	Bring non-AllJoyn devices to AllJoyn as virtual devices on the AllJoyn network	Microsoft	Released at v14.12 and updated to v15.04 supporting Windows 10.	Source is available in AllSeen GIT including support examples for Z-wave, BACNet, ZigBee. Extensive documentation and samples available at Microsoft Dev Center for IOT. Linux port underway by CableLabs in their GitHub – expected – see roadmap slides.
Update Service Project	Provide an AllJoyn standard update service.	Affinegy		Was planned for 16.04 but Redbend was unable to assign resources. Is in queue at Affinegy – see roadmap slides.
SIP End to End Connector	A managed services secure remote access connector for SIP end to endc services	SmartConn – Beijing Heng Sheng Dong Yang Tech. Co.		First release planned for March 2016

Gateway Agent Project - Status

- 15.04 release moved from January to March due to shift of some resources to Core project
  - Includes bug fixes and updated to core and base services 15.04
- 15.09 release moved from March to April due to shift of some resources to Core project
  - Updated to core and base services 15.09
  - Now includes a full AllJoyn routing node and daemon. Becomes the only AllJoyn routing node needed in the device.
  - Adds Package Manager for AllJoyn.JS applications
    - Install and manage any AllJoyn.JS Javascript application – general applications, or Gateway Agent JS connectors
- Status
  - In testing now - C++ code changes completed for 15.09 support, JavaScript Connectors, and Package Manager reviewed and merged into feature branch
  - IRB submission and review required for the new Package Manager feature – ready to submit by end of March
  - See release plan at https://wiki.allseenalliance.org/gateway/gateway_15.09_release_plan

AllJoyn XMPP Connector Project - Status

- XMPP Connector features summary
  - Enables standard AllJoyn applications in connected home products to connect with AllJoyn applications away from home, just like they were at home
  - AllJoyn becomes cloud native, and the need to add other cloud protocol APIs is eliminated. End to End connections and privacy retained through cloud service.
- Beta releases have been available and supported commercially by Affinegy since 2015-09. Stable, master branch at 15.04 in AllSeen GIT
- Revised release plan – first official AllSeen Alliance release moved to v16.04. Full AllJoyn compatibility for all functions required fix of https://jira.allseenalliance.org/browse/ASACORE-2592 which is completed in v16.04 (Introspection description handling)
  - Overview
    - Supports Core and Base Services 16.04
    - Supported on Linux (Ubuntu, OpenWrt BB & CC)
    - Is available now in AllSeen repository today for testing and development, use 16.04 branch
    - Schedule for release by end of 2016-04
  - Status
    - Completed code update for v16.04 – testing now with excellent results.
    - Enhancements now supports all of AllJoyn remotely including sessionless signals, events/actions, and with v16.04 supports Higgns
    - Affinegy's CHARIOT XMPP service is available for development and testing at http://community.chariot.global , including the mobile app connector.
    - Needs release and certification documentation.

Gateway Working Group – Roadmap for 2016

Project	Description	Contributors	Roadmap Planning
Gateway Agent	A manageable AllJoyn routing node for external networks and services	Affinegy, Qualcomm	• For 16.04 add Security 2.0 full support • For 16.10 we will propose integrating with Core Standard Router library and moving to core
AllJoyn XMPP Connector	Extending AllJoyn anywhere via XMPP	Affinegy	• 16.04 first release includes Security 2.0, and full remoting of all AllJoyn standard interfaces • For 16.10 will propose deeper XMPP integration to Core as we add IPv6 support. This is also a trend in other IOT standards organizations.

Device System Bridge	Bring non-AllJoyn devices to AllJoyn as virtual devices on the AllJoyn network	Microsoft	• 16.04 release and support for Security 2.0 – schedule needed from MS
			• Linux port completion and added protocol adapters needed. CableLabs leading Linux port see https://github.com/cablelabs/portabledsb
			• Add other protocols for Portable version
			  • ZigBee
			  • Bluetooth mesh
			  • Thread (note IPv6 for 6LoWPAN is needed in Core)

Update Service Project	Provide an AllJoyn standard update service.	Seeking supporters	• This project remains in back burner mode. Looking for others to join. Schedule dependent on interest.
AllJoyn Multi-protocol Gateway Service	New project proposal.	Affinegy	• Extends the DSB concept to a platform portable and fully bi-directional multi-protocol gateway service with AllJoyn • See next slide

AllJoyn Multi-protocol Gateway Service

- This will be proposed by Affinegy by the TSC F2F meeting
- Extends the DSB concept to a cross platform and fully bi-directional and secure multi-protocol gateway service with AllJoyn
- Borrows AllJoyn interface concepts from DSB and from XMPP connector projects
- Extensible protocol conversion through the use of NoSQL database technology for the mapping between protocols
  - Data modeling of interfaces to convert each protocol's unique interfaces into one common interface language
  - Target protocols include: ZigBee, Thread, Z-wave, Bluetooth mesh, UPNP, Enocean, REST, OCF/OIC, etc.
  - Some mappings would only be available to licensees of protocols which include restrictions
  - Plan to support an API to add, update and remove protocol mappings
- Interdependence on other projects
  - New standard controller proposal project – this proposal intersects with the database storage features for controllers, and with the use of data models for AllJoyn interfaces being mapped with other data models of other protocols
  - AllJoyn Core – protocols like Thread and OCF require IPv6 support which needs prioritization
- Target schedule for Q4 2016