AllJoyn XMPP Connector Project Proposal
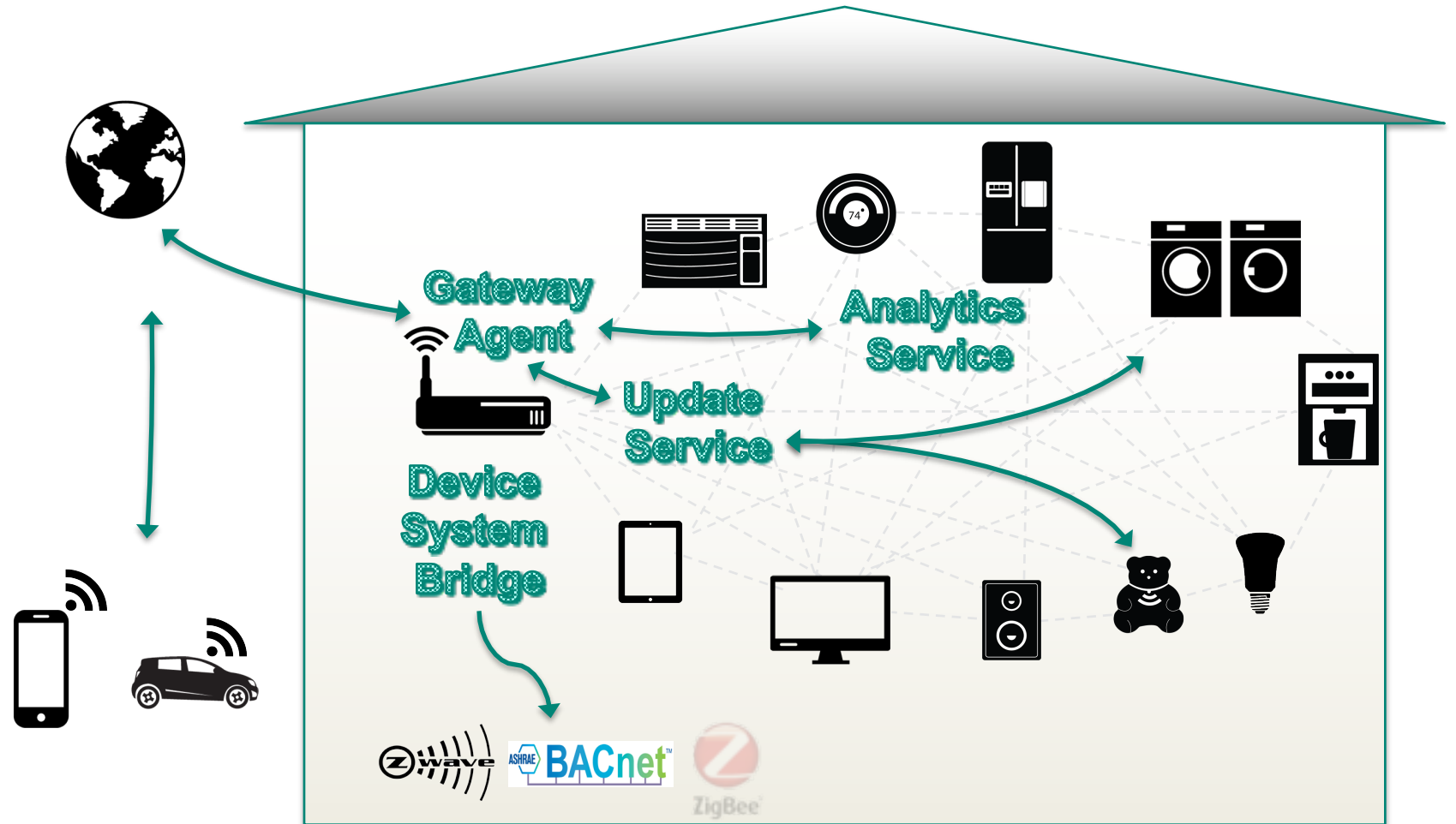
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Chair Gateway Working Group
August 10, 2015

Gateway Working Group - Overview

AllJoyn Connections for External Networks

- Remote access
- Update services
- Analytics services
- Other automation protocols
- More to come . . .
  - Connectors
  - Service Management

AllJoyn XMPP Connector for Gateway Agent Project Proposal

- Objectives:
  - Provide a standard connector for the AllJoyn Gateway Agent to enable existing AllJoyn Applications to work when away from the local network, just like they were at home.
  - Support joining two local AllJoyn networks as if they were one.
  - Support the AllJoyn Gateway Agent managed Service Profiles that determines which AllJoyn applications in the local network have remote access.
  - Enable remote services to connect to specific AllJoyn applications in the local network
  - Provide a complete and useful example external connector for the AllJoyn Gateway Agent in the AllSeen Alliance open source, that can help others create other protocol connectors.

- Remote access is provided with standard XMPP – enabling a fully open connector for external services that complies with official standards.
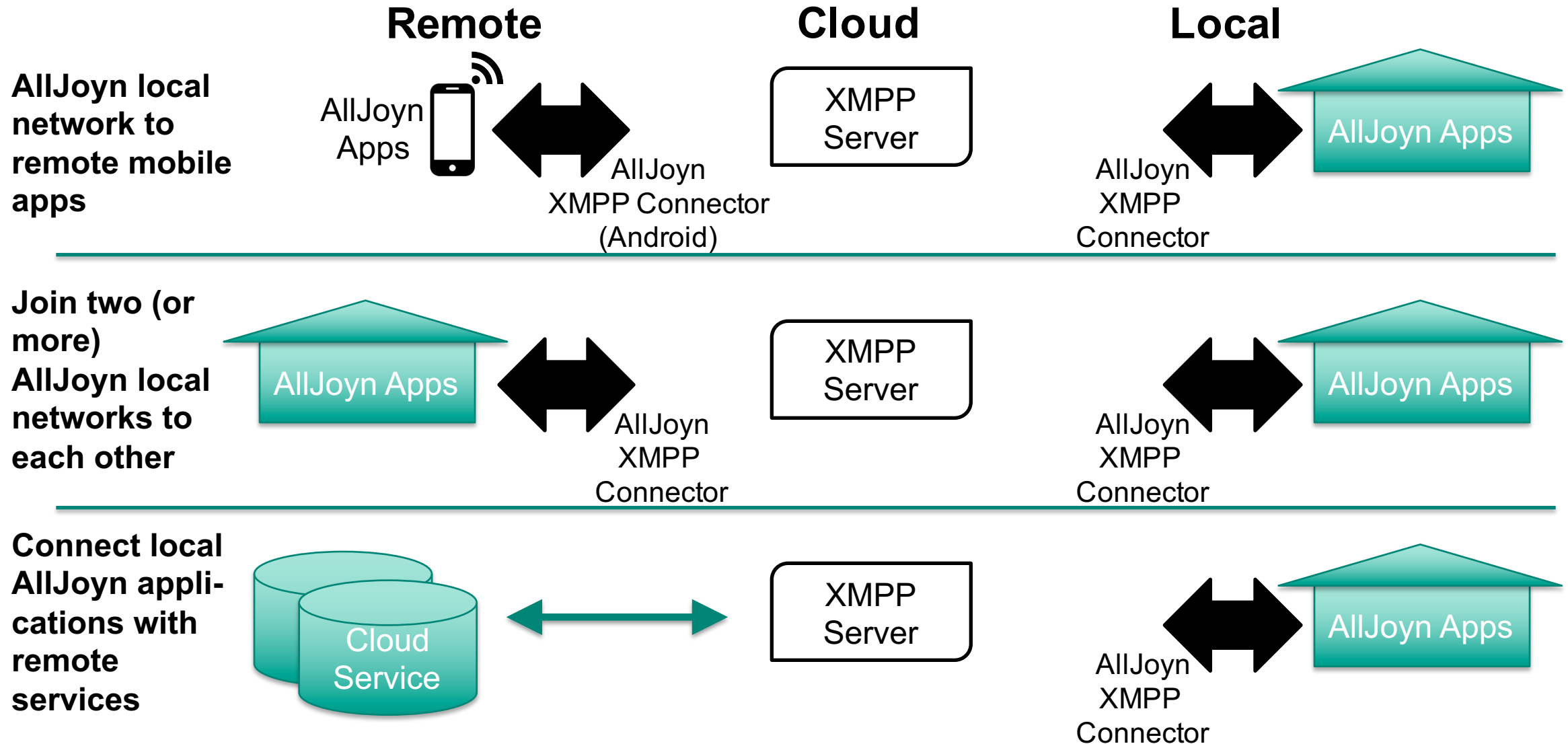
AllJoyn XMPP Connector Interfaces

Interface to Local AllJoyn bus

- Standard AllJoyn Bus connection to Gateway Agent routing node via its managed AllJoyn interface (for traffic and application management to the external network).

- Also can connect directly to the local AllJoyn bus if the traffic management with the Gateway Agent is not needed

Interface to the External Network

- Standard XMPP client interface to the external server

- Connector wraps each AllJoyn message in XMPP to relay via XMPP server to remote services or another AllJoyn XMPP Connector at a remote location.

- Each connector registers with the user's XMPP server account using standard XMPP user management and security through an encrypted tunnel.

AllJoyn XMPP Connector Application Examples

Remote **Cloud** **Local**

AllJoyn local network to remote mobile apps

AllJoyn Apps

AllJoyn XMPP Connector (Android)

XMPP Server

AllJoyn XMPP Connector

AllJoyn Apps

Join two (or more) AllJoyn local networks to each other

AllJoyn Apps

AllJoyn XMPP Connector

XMPP Server

AllJoyn XMPP Connector

AllJoyn Apps

Connect local AllJoyn applications with remote services

Cloud Service

XMPP Server

AllJoyn XMPP Connector

AllJoyn Apps

AllJoyn XMPP Project Proposal Information

- Working Group: Gateway Working Group

- Staff - from Affinegy
  – Project lead and Maintainer: Josh Spain
  – Committers: Andrey Krokhin, Art Lancaster
  – Contributors: Paul Sigurdson, Jim Howard

- Dependencies:
  – Gateway Agent 14.12 (and 15.09 when available), AllJoyn Core 14.12 and newer

- Supported platforms: Ubuntu Linux 14.04, Raspberry Pi: Debian Wheezy, OpenWRT Barrier Breaker

- GIT repository "ajxmpp", Mail list: share Gateway Working Group mail list.

- Status and schedule
  – Linux AJXMPP is completed and tested by Affinegy at core 14.12, ready to commit to AllSeen Open Source. Will release with 15.09 support at the same time as Gateway Agent 15.09 (Q4)
  – Plan to add Windows Universal version target (Q4)

- We ask support from the TSC for approval of this project.

External libraries dependencies

Dependency	Description	License	URL
Libstrophe	XMPP client library	MIT/GPLv3 Dual License	http://strophe.im/libstrophe
libexpat	XML library	MIT	http://www.libexpat.org
libz	Compression library	zlib License	http://www.zlib.net
rapidjson	JSON parser library	MIT	https://code.google.com/p/rapidjson/

Affinegy Cloud Service for AllJoyn Developers

- Affinegy's CHARIOT XMPP cloud service will be provided for development and non-commercial use at no cost.
  - Is configured and ready for use to support the AllJoyn XMPP Connector and the AllJoyn Gateway Agent

- Includes Affinegy's AllJoyn XMPP Connector for Android which provides
  - A remote access connector with any current AllJoyn Android app running in the same Android device
  - Developer tools for working with connected products using the embedded AllJoyn XMPP connector.

- Public beta available in September. See http://chariot.global for more information

Thank you! Art Lancaster, alancaster@affinegy.com