



**ALLSEEN
ALLIANCE**

Secure Cloud and Remote Service Connections for AllJoyn Applications

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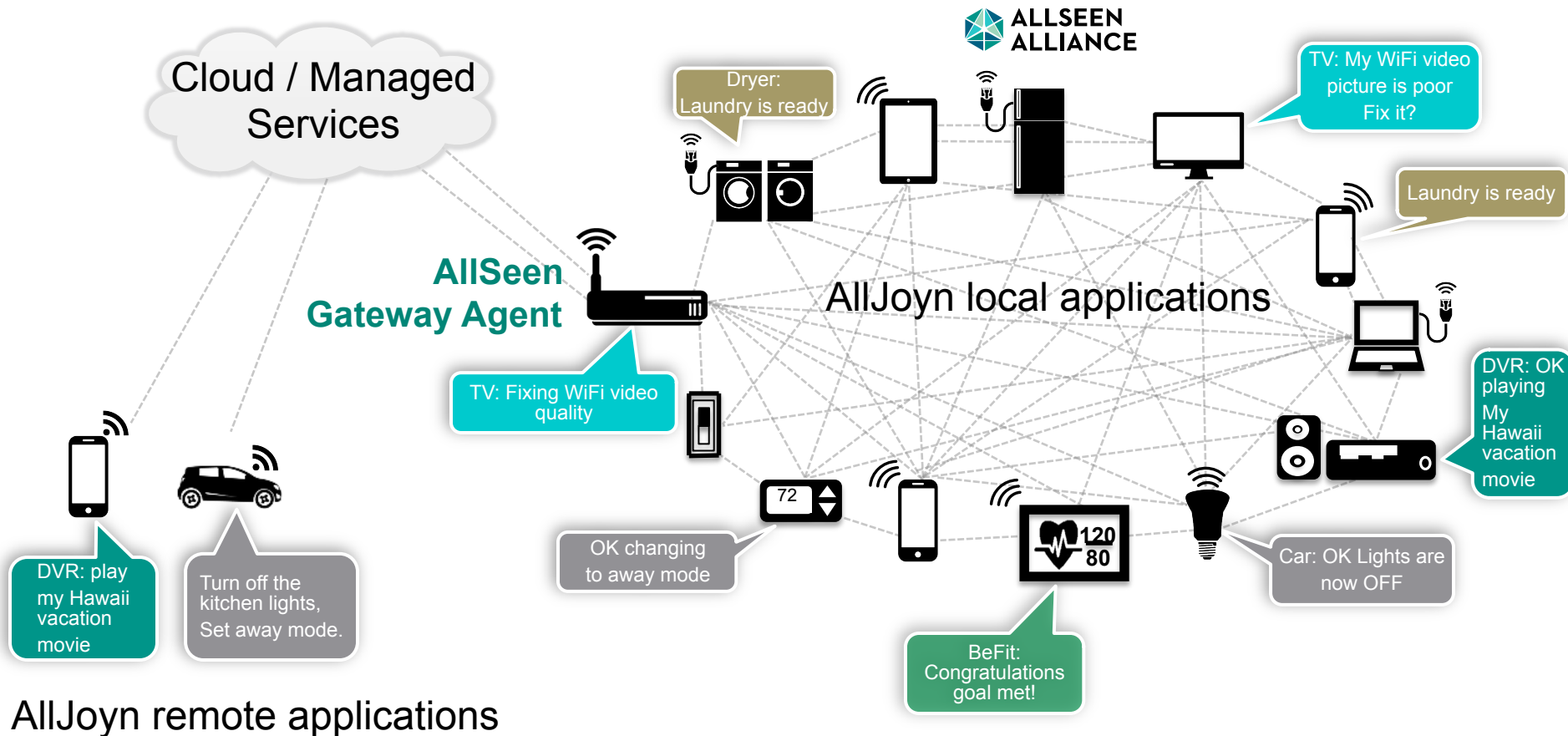
Chair, Gateway Agent Working Group



Agenda

1. Gateway Agent Working Group
2. Software components and usage
 - Consumer Mode
 - Service Provider Mode
3. Demonstrations
4. Affinegy CHARIoT Cloud solutions for AllJoyn and IOT
5. Gateway Agent developer information
6. Open Discussion Q&A

Gateway Agent Working Group – AllJoyn meets Cloud / Managed Services



AllSeen Gateway Agent Application

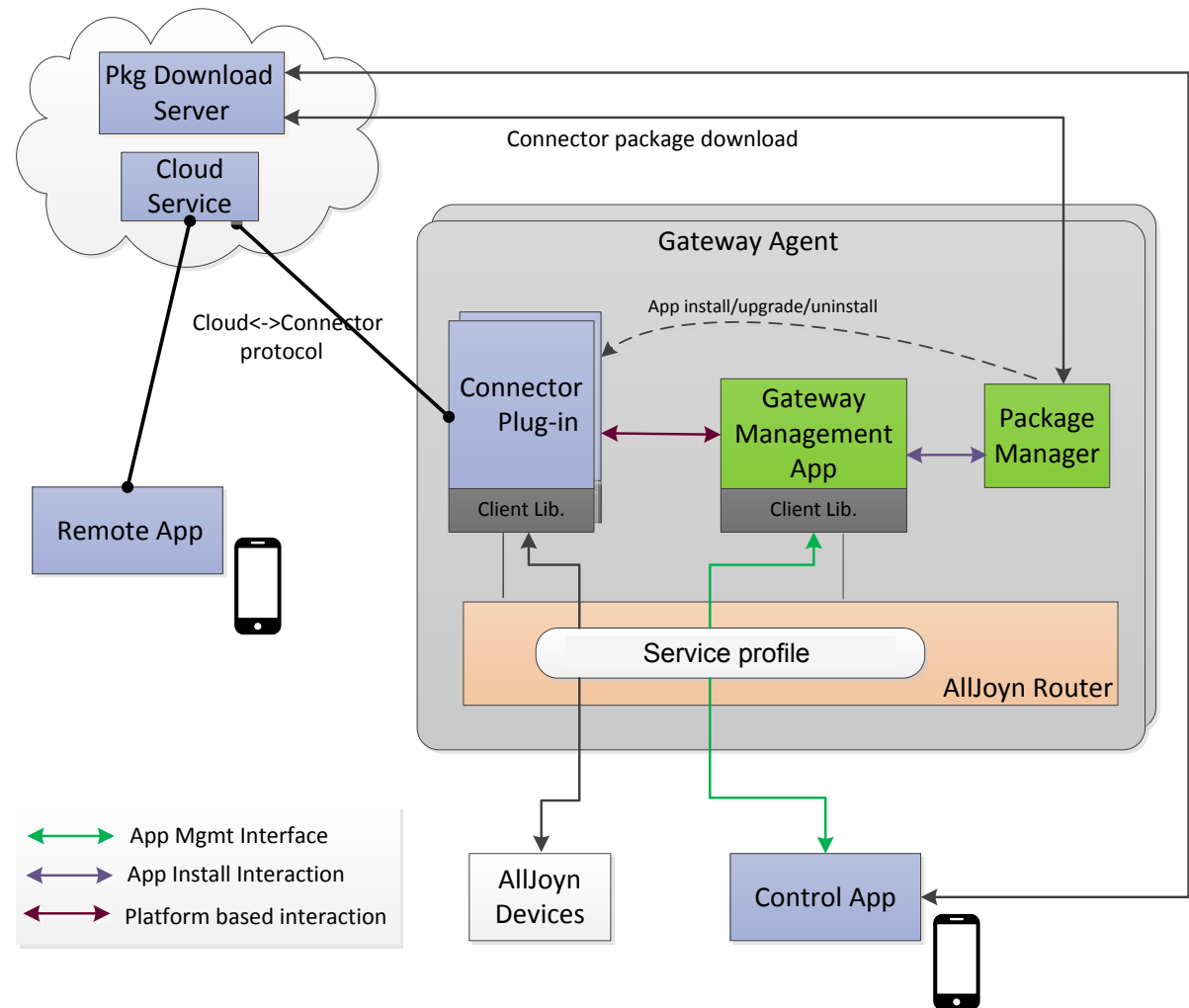
- Software application ideal for an always on, connected hardware device in the proximal network turning it into an AllJoyn to remote services gateway
- Provides a standard and secure method for connecting the local AllJoyn devices and applications to external services
 - Works with any Internet connection
 - Supports persistent remote connections without special firewall or port settings

Managed and Secure AllJoyn Remote Routing Node

- Filters LAN AllJoyn traffic from remote traffic – only traffic needed for the user's cloud or remote services are passed
- Which AllJoyn applications and traffic are determined by the Gateway Agent's remote Service Profiles – managed by the Gateway Agent Control API
 - Enhances the user's privacy and security
 - Enables managed service privacy policies
- Supports multiple independent cloud services in one device with modular, Connector plug-ins
- The Gateway Agent also can support Connector plug-ins to other PAN protocols with AllJoyn (6LowPAN, ZigBee, etc.)

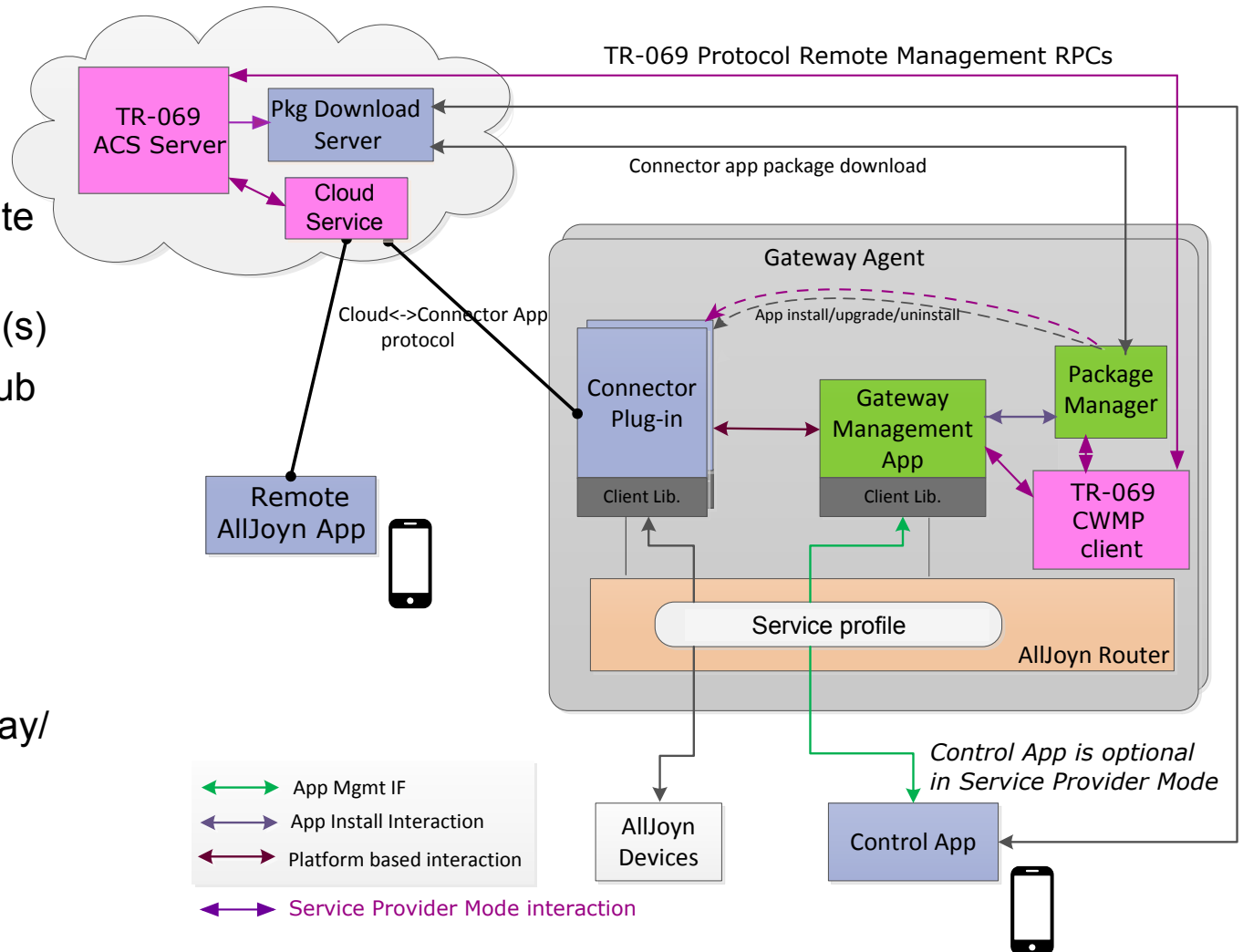
Consumer Mode Operation

- User self-manages their AllJoyn connections to external services
 - Connector Plug-in installed
 - Service Profile managed
- Services provisioned via a mobile app with the Gateway Control App component
 - Connector Plug-in installed
 - Service Profile managed
- Consumer must be at home when configuring their cloud service using Control App



Service Provider Mode Operation

- Ideal for Managed Services Providers
- Remote software installation and update management for
 - Connector Plug-in(s)
 - Firmware of the hub or gateway
- Full remote management of
 - AllJoyn Services Profile
 - The overall gateway/hub configuration
- Implemented with TR-069a5 enhanced with XMPP



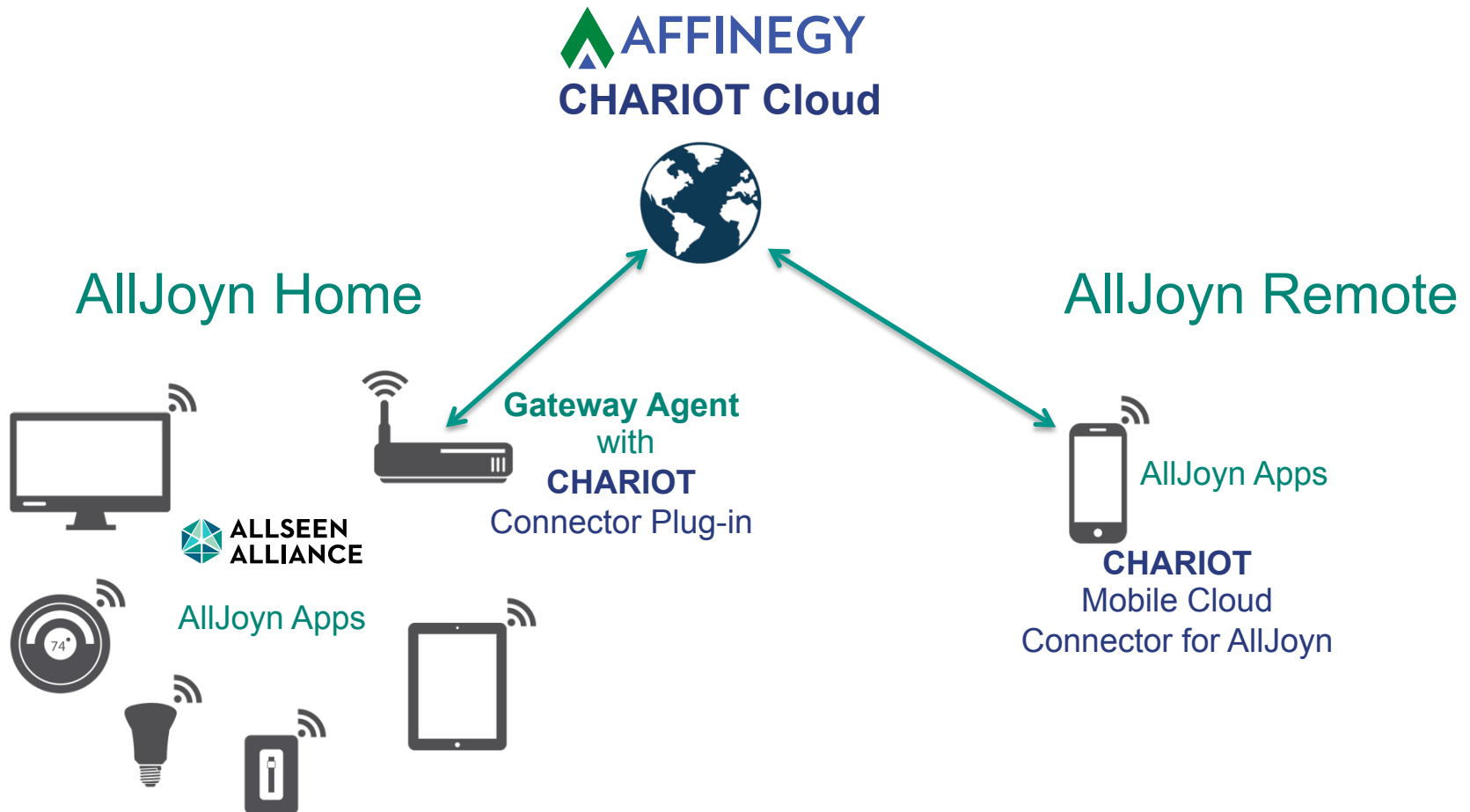
Remote Connector Plug-In for AllJoyn ↔ XMPP

- An XMPP Cloud Services Connector plug-in for the AllSeen Gateway Agent supporting its APIs and service profiles
- Relays local AllJoyn messages, to/from a remote AllJoyn application by wrapping these in XMPP sessions relayed via a standard XMPP server cloud service.
- Subscribers authenticate with their cloud service's XMPP ID – provides secure authentication and an encrypted channel for AllJoyn remote access.
- Affinegy is also providing an AllJoyn remote/mobile Android sample application that includes an XMPP client paired with the AllJoyn mobile app.
 - Normal case provides a remote UX only for the mobile device running this XMPP/AllJoyn mobile connector (non-routing AllJoyn app).
 - Joining two proximal networks – using two Gateway Agents in two separate locations to securely join the AllJoyn applications

Cloud Services for Gateway Agent available from Affinegy

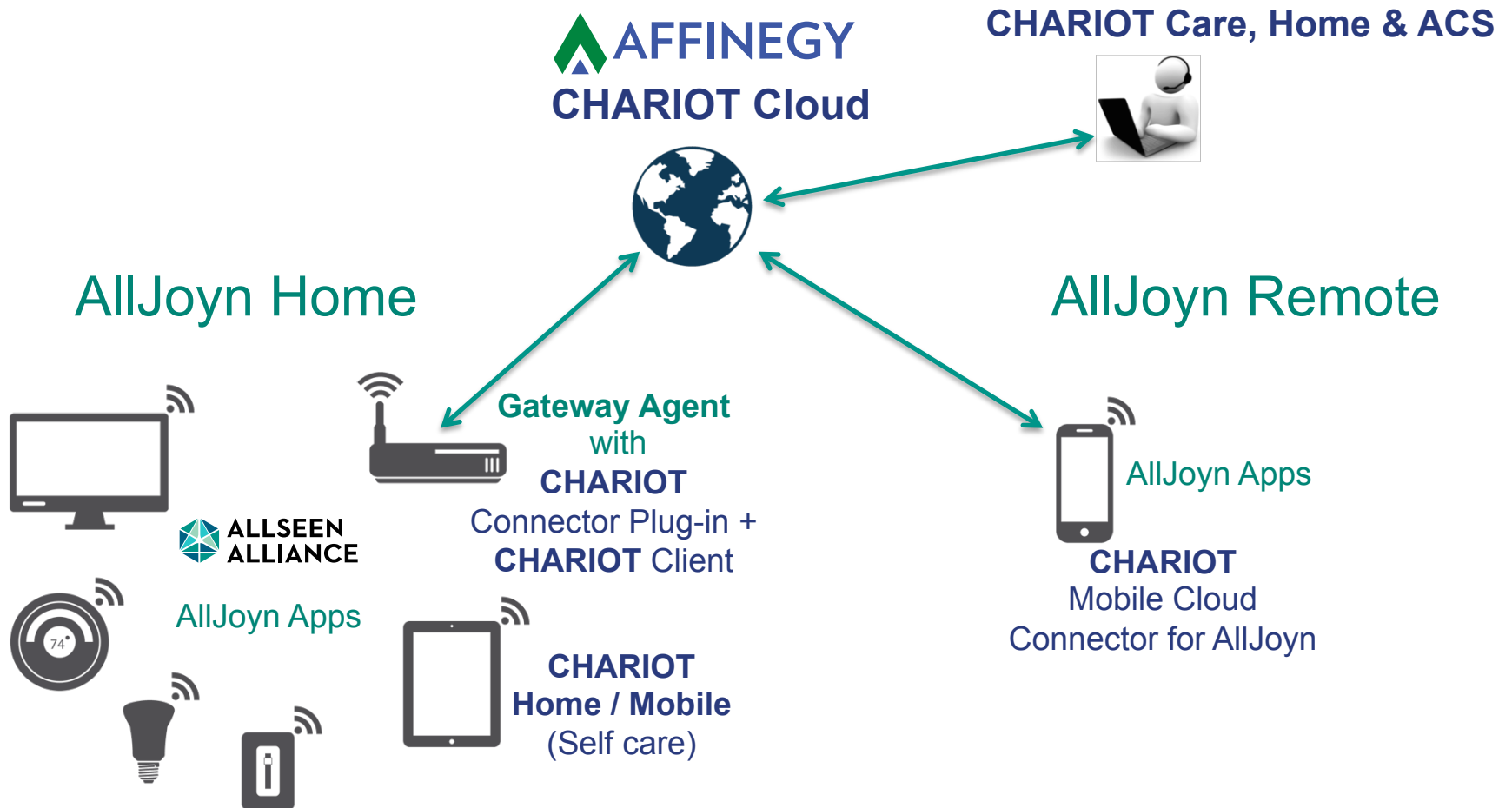
- Affinegy CHARLOT Server Platform
 - Provides IOT cloud services fully compatible with AllSeen Gateway Agent
 - XMPP server for high scale, persistent IOT services and management
 - For Service Provider Mode – Advanced TR-069 ACS remote management server deployed worldwide with millions of devices under management.
 - Provides full turn-key installation and support management for the hardware device running the Gateway Agent
- No cost developer hosted access available from Affinegy
- Commercial CHARLOT server licensing available from Affinegy, both hosted and installed options

Affinegy CHARIOT Cloud Services for AllJoyn with AllSeen Gateway Agent



Turn-key enables existing AllJoyn Apps for cloud services

Affinegy CHARIOT Cloud Services for AllJoyn with AllSeen Gateway Agent



CHARIOT - One Converged Managed Services Platform

New Self Care: Multiple Screens, Enhanced with Standards-based (AllJoyn) Notifications tied to CHARIOT Alerts

CHARIOT Mobile

Android/iOS notifications with
Local and remote diagnostics



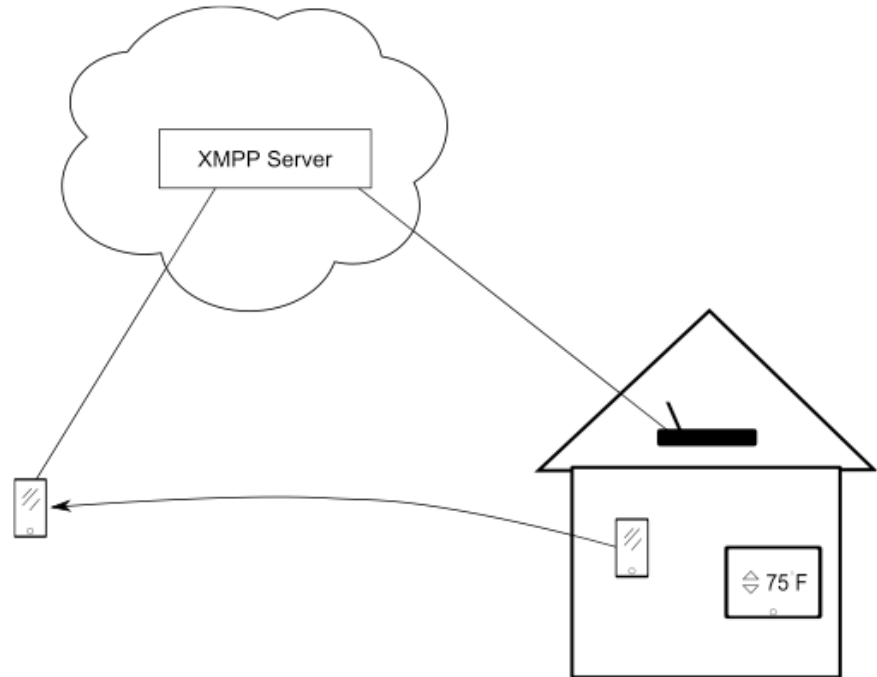
LG Smart TV with AllSeen Messaging Service

Local and remote diagnostics from CHARIOT Server
and Gateway with CHARIOT Client



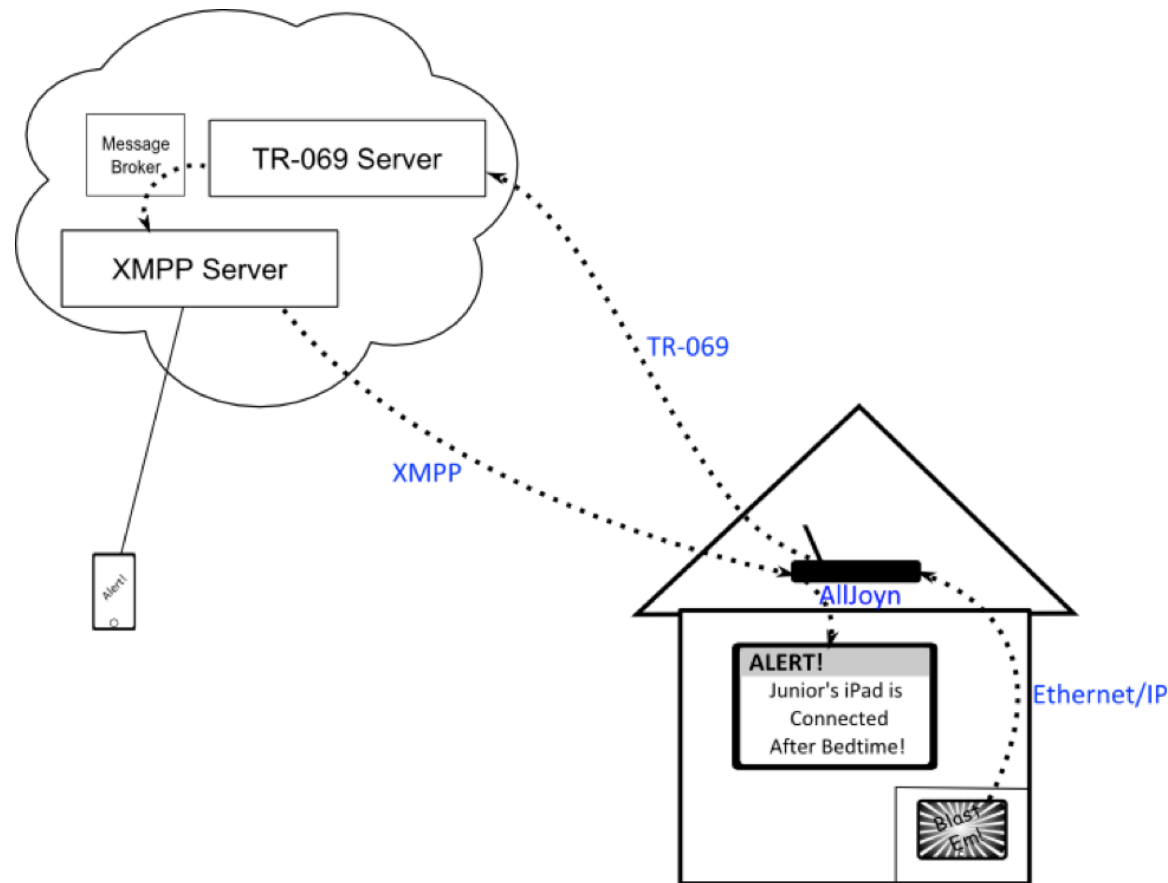
Demo 1 – remoting AllJoyn applications

- Demo includes
 - Gateway Agent embedded in a new generation WiFi router platform – Qualcomm IPQ development system
 - XMPP connector for AllJoyn from Affinegy
 - Affinegy's CHARIOT Cloud platform providing the XMPP support
 - The AllJoyn ON mobile app



Demo 2 – Integration of Service Provider Mode with AllJoyn notification

- Demo includes
 - Gateway Agent in the IPQ dev system
 - XMPP connector for AllJoyn from Affinegy
 - Embedded TR-069 client (Affinegy / AllSeen)
 - Affinegy's CHARIOT Cloud platform providing the TR-069 & XMPP support
 - LG Smart TV with AllJoyn
 - The AllJoyn ON mobile app



Gateway Agent Developer Information


- Gateway Working Group Wiki
 - <https://wiki.allseenalliance.org/gateway/gatewayagent>
 - Documentation and presentations
 - Open source GIT repository
 - Weekly working group meetings
 - **Inviting contributors now for Connector Plug-ins for remote and PAN protocols**
- Released code available now in AllSeen GIT:
 - Gateway Agent management app (embedded for Linux and OpenWRT)
 - Sample Connector Plug-in
 - Sample Android Control App for managing connectors and the service profile

AllSeen Gateway Working Group Contributors

- Affinegy
 - Art Lancaster, CTO – contributor and W.G. chair
 - Committers: Josh Spain, Kevin Sandifer, Jim Howard
- Qualcomm
 - Shane Dewing, Senior Director Product Management – contributor
 - Committers: Tsahi Asher, Tali Messing, Benita Gupta, Josh Hershberg



Thank you

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