Acklio opens a free developer program to test, prototype and showcase efficient IP-based LoRaWAN® solutions

Rennes, France - May 18, 2022

The LoRa Alliance® has announced a specification update that officially adopts the support of the Internet protocols (IPv6) over LoRaWAN®. This new feature allows LoRaWAN to meet the demand for additional use cases in smart metering, industry 4.0, smart building and smart home among others. This milestone is made possible by the innovation and significant contributions of Acklio, pioneer of SCHC compression and fragmentation. Acklio marks the event by opening its developer program, offering all necessary resources for testing, prototyping and showcasing IP-based solutions over LoRaWAN.

The availability of the IPv6 Internet stack allows the rapid development of interoperable and secure services. A developer can now use any of the myriad existing IP/UDP-based services to deploy interoperable and end-to-end secure solutions over LoRaWAN with virtually no modification. Most of the services running the backbone of industry and enterprise solutions today include such IP/UDP versions and therefore become available “off the shelf”. For example, message queues with MQTT-SN, SCADA systems based on Modbus and DNP3, device management with LwM2M or CORECONF, building asset management with BACnet or KNX, or telemetry and secure smart meter management with DLMS. Such IP-based LoRaWAN solutions now integrate seamlessly with standard enterprise, industrial and cloud infrastructures. It brings significant benefits in reducing time-to-market and total cost of ownership, simply by leveraging the existing engineering skills, software components, servers and infrastructure.

Donna Moore, CEO LoRa Alliance: *"IPv6 support is a new milestone for LoRaWAN and the LoRa Alliance. It relies heavily on Acklio’s contributions to the IPv6 Task Force and is now proven on DLMS for smart metering. I want to thank Acklio for their support and contributions to driving the LoRaWAN standard forward. The Alliance is working closely with Acklio and our membership at large to expand the scope of LoRaWAN in many other market verticals.”*

The support of IPv6 over LoRaWAN leverages the new generation of compression and fragmentation mechanism defined by the IETF: SCHC, pronounced "chic" (RFC 8724, 9011). SCHC takes advantage of the predictable nature of IoT traffic and avoids synchronization between network entities. In this way, it considerably reduces the volume of data carried over networks, and thus enables the support for IPv6 and associated upper application layer communications over LoRaWAN. SCHC transforms a LoRaWAN end-device into a native IPv6 device, easily addressable from any Internet-based application. It maintains the legacy application environment, end-to-end, from the device to the application, which is ideal for multi-connectivity deployments, to densify or modernize existing M2M solutions with LoRaWAN. The first target market is smart metering, with the support of DLMS over LoRaWAN now fully standardized.

Pioneer and worldwide leader of SCHC, Acklio provides the reference SCHC implementation for any scalable project launched globally. It provides operators, device manufacturers and solution integrators with an industry-grade off-the-shelf modular software suite, approved by key market players and field-validated by utilities.

Olivier Hersent, CEO Actility: *"Actility has been involved in the definition and standardization of SCHC since the beginning. Support for IP and efficient fragmentation opens massive opportunities such as wireless control of underground EV car chargers, and brings an industrial-grade wireless option to many mature ecosystems based on lightweight IP protocols. Actility's Thingpark infrastructure and Acklio's SCHC solutions are a perfect match as both companies focus on large scale industrial use cases. Actility and Acklio are already actively engaged in several large opportunities for utilities, and we encourage manufacturers of OCCP compliant EV car chargers, KNX, ModBus, and other IP based systems to work with us to add a much-awaited wireless option for low-touch deployments and join the thriving LoRaWAN ecosystem."*

Matching the IPv6 over LoRaWAN specification, Acklio opens a developer program including a comprehensive set of tools to learn, prototype and showcase IP-based solutions, with access to:

- Acklio Cloud platform,
- Acklio SCHC embedded library with reference designs for varied target environments,
- Turnkey example applications for a smooth onboarding,
- And the full technical documentation.

Access will be free for up to 50 devices. To date, the kit includes reference designs for boards and shields from ST Microelectronics and Semtech. It offers pre-integrated LoRaWAN Network Server connectors for Actility, Chipstark and The Things Network. Additional target environments are available in the commercial version, with the free program soon providing access to cellular IoT developers for NB-IoT and LTE-M.

Alexander Pelov, CEO of Acklio: *"From its creation Acklio took the part of openness, offering the technology for IETF standardization. The opening of a developer portal means a lot to us. We have designed the kit in a didactic way, with examples of ready-to-use applications to help LoRaWAN developers."*

Willyan Hasenkamp, Chief Advanced Technology at HT Micron: *"Thanks to Acklio we enjoyed a fast learning curve on SCHC, and we can now provide IPv6 packets over LoRaWAN. The custom embedded firmware package for our new SiP (iMCP HTLRBL32L) was successfully developed in record time. Thus, Acklio SCHC will be offered pre-integrated to our customers at launch. Such solution is first targeting the smart metering market, and we are already thinking about its relevance for Matter initiative as our chipset has dual LoRa/Bluetooth connectivity."*

More information and registration on **https://www.ackl.io/developer**

Discover Acklio's solutions with demo showcases:

- Webinar "Augmenting LoRaWAN Devices with Internet Protocol Support" (June 14)
- at Embedded World (Nuremberg, June 21-23),
- and LoRaWAN World Expo (Paris, July 6-7).

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About Acklio: Expert in communication protocols, Acklio innovates on the Internet of Things market with a software suite bringing significant benefits for interoperability, security and energy efficiency of IoT deployments. Acklio's co-founders pioneered a technology that brings the ability to transport IP-based applications to the new constrained networks of the IoT. This mechanism, called SCHC for "Static Context Header Compression", was published as an IETF standard in 2020. As the international leader of SCHC, Acklio's software enhances the efficiency, accelerates the time to market and ensures the long-term sustainability of IoT solutions. www.ackl.io

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