

Release 3: a whole new world for mobile operators

oneM2M discusses momentum behind LPWAN solutions

The growing momentum behind LPWAN solutions, including NB-IoT and LTE-M, is expected to fuel large volumes of low price-point connected devices in the future. However, their commercial success will solely depend on finding efficient approaches for gathering and sharing Internet of Things (IoT) data, both at scale and across heterogeneous device populations.

And with operators worldwide considering cellular technology to be key to their IoT offerings – according to Mobile World Live’s latest survey – the need to find a standardised way to reap the benefits of IoT data sharing has never been greater.

This need has been the main driver behind the release of oneM2M’s latest specifications, Release 3 – which will not only meet this demand but ultimately, will empower mobile operators to enhance and expand their offerings.

New capabilities

For the first time, oneM2M’s Release 3 enables seamless interworking with underlying 3GPP network services, in particular NB-IoT and LTE-M, via the 3GPP Service Capability Exposure Function (SCEF).

3GPP, the world’s global standards-setting organisation for cellular wireless, has been adding IoT-centric features, including capabilities to avoid network congestion, use networks more effectively, enhance security and, crucially,

enable IoT devices to manage power resources efficiently.

Building upon the foundations of 3GPP’s underlying network, the combination of oneM2M’s standardised platform creates an abstraction layer which can simplify the exchange of cross-silo data. This allows oneM2M’s service layer to interwork with 3GPP’s core network IoT features across industrial, smart home and mobile segments – opening up new revenue streams for mobile operators to unlock value in industrial and smart home applications.

Furthermore, by supporting a set of 3GPP-defined APIs, Release 3 can create new capabilities, while also lowering the cost of deployments.

New features

The delivery of a high-quality of service to all subscribers is at the heart of Release 3, with new features implemented to avoid network congestion caused by the massive numbers of IoT devices on networks. Network communication pattern configuration is also playing a part in this, by helping operators proactively manage network resources by anticipating the communication patterns of IoT devices based on input from IoT apps.

For operators looking to ensure efficient use of network resources by IoT devices, this enables them to minimize network deployment and management costs. With these new enhanced features, IoT devices can also be put to





sleep for long periods of time so that the network can help maximize the battery life of these devices.

The location of these devices can also be tracked to support current location tracking, while storing past device locations - enabling timely and relevant notifications to be sent to IoT apps. As a result of this, the delivery of data can be managed based on a schedule and priority of requests.

Last, but certainly not least, security has also been a core element in the development of Release 3, with additional features to help keep operators' networks secure from the increased threats of IoT devices. This includes IoT device enrolment, which provides cellular IoT devices connected to an operator's network with proper security credentials, authentication and registration. While oneM2M's service layer can connect to 3GPP notifications to monitor these devices to see if they are susceptible to tampering. For example, if a device has been tampered with, it can block these IoT apps from sending or receiving new requests to or from the device and block access to stored data from the device which may have been compromised.

New revenues

By enabling interworking with LPWAN technologies - such as NB-IoT and LTE-M - from 3GPP, Release 3 exposes a multitude of possibilities for the IoT industry and cellular ecosystem, including how to monetise NB-IoT and LTE-M.

Release 3 further supports operators in deploying cellular IoT services and tapping into new revenue opportunities higher up the value chain. For instance, it allows communication amongst a group of devices to

efficiently gather and share data amongst these devices. These devices can also support different application data delivery methods over a 3GPP network such as delivery over SGi, NIDD or SMS.

Operators can also enhance their revenues through the IoT roaming device services feature by allowing IoT apps to make requests that target a roaming cellular device. In addition to this, operators can offer time windows during off peak hours that have cheaper message delivery costs.

A new era

By enabling the effective gathering and sharing of IoT data, Release 3 will free up the IoT ecosystem, to enhance the business case for players looking to launch new services.

This presents a great leap forward for operators looking to expand their IoT deployment capabilities and monetize IoT services in turn, empowering the commercial success of cellular IoT technologies across the entire IoT ecosystem.

For more information visit: www.onem2m.org