

Aeris Connectivity-Aware OTA APIs: Streamlining OTA Update Process

PRODUCT SHEET

With the click of a control-center button, over-the-air (OTA) updates can be deployed to thousands of IoT devices at once rather than requiring each device in the field to be manually modified. OTA updates eliminate the need to send technicians into the field, save owners time and money, and make IoT deployments vastly more scalable. The ability to make changes to many devices remotely is important especially for operators of large-scale IoT deployments where updating devices manually would be a nearly impossible task.

IoT Business Challenges

In today's IoT deployments, customers have several reasons to remotely update the software that is deployed on their devices. Some of the key drivers for remote updates include upgrading device software to add new features that enable additional revenue; software bugs that need fixing; security gaps that need to be closed; and updates to configuration files. In many cases, resolving security holes is time sensitive and requires device makers to develop and deploy immediate patches. Deployment of such patches also is deemed required by regulatory authorities in various regions around the world. For all the aforementioned reasons, device makers require a capability to remotely update their software or firmware via over the air updates in a scalable way.

BENEFITS OF AERIS CONNECTIVITY-AWARE™ OTA



Up to 50% reduction in time-to-completion for OTA campaigns.



Up to 50% reduction in OTA failure rates and data costs.



Scale for large deployments with ease.

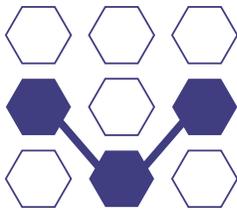


Significantly reduce manual operations.



Device makers use a combination of homegrown processes and tools to deliver the remote updates to field devices. A key challenge with homegrown processes and tools is the lack of visibility into the device's connectivity information, such as whether the device is on or off the network, or whether the device is situated near congested cellular towers, etc. Below are a few undesired outcomes resulting from the lack of connectivity information:

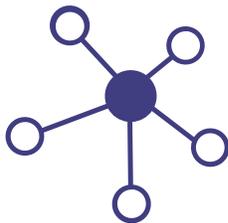
- High delivery failure rates, thereby significantly increasing the time and complexity for OTA campaigns.
- Multiple delivery failures (for the same device) require complicated retry handling mechanisms that increase operational cost and time to completion.
- Increase in data transport costs because of multiple delivery retries.



All these problems become bigger as the scale increases. Furthermore, these undesired outcomes are magnified significantly in low power cellular technologies, such as LTE-M and/or NB-IoT, due to its inherent technology limitations of low bandwidth and highly constrained networks. Homegrown tools and processes that could handle several thousand devices start to break down at scale of tens of thousands of devices. For all of these challenges, customers and/or the device makers need to have the capability to remotely update devices in ways that are efficient, scalable, and cost effective. That is what the Aeris Intelligent IoT Network does.

Reduction of Operational Complexity. And So Much More

To resolve many of these challenges, Aeris Intelligent IoT Network provides well-documented REST-based APIs that can be integrated into customer OTA management workflows (i.e., existing processes or tools). Aeris Connectivity-Aware OTA APIs provide relevant connectivity information, including if the device is in an active data-session or if the device is attached to the cellular network or which cell tower the device is attached to.



Part of the attraction of the Aeris OTA solution is that it lowers operational complexity and the associated operational costs for OTA management. It does so by streamlining OTA device targeting and reducing the number of retries. All of these play a big role in completion time for large-scale OTA updates. And to simplify the process even further, Aeris solution engineering teams always are available to help during the onboarding process.

Leveraging Connectivity-Aware OTA Information

Armed with cell tower information for devices, customers can group the devices to minimize the impact of network congestion on remote update campaigns. Furthermore, knowing if the device is in an active data session or if the device is registered to the network is critical, as it allows customers to send remote updates with the highest possibility of successful downloads and, hence, minimizing the number of retries. This, in turn, keeps cellular data costs in check.

In sum, all these allow customers to schedule and execute remote update campaigns in an operationally efficient and cost-effective manner, with maximum predictability for time to completion.

Additionally, customers can reduce data overage costs by switching to an optimal monthly rate plan in a flexible and scalable way.

For device manufacturers or IoT businesses, it is crucial to realize the importance of a strong, secure, reliable IoT network, as the network becomes the channel through which all OTA updates are made possible. Efficient OTA update processes increase the longevity of the IoT devices by enabling device makers to fix the bugs or introduce new functionality throughout its lifespan.

For more info, or to see a demo, contact Aeris

Visit www.aeris.com or follow us on Twitter @AerisM2M learn how we can inspire you to create new business models and to participate in the revolution of the Internet of Things.

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