

Getting to Market Faster with Over-the-Air Updates

INDUSTRY BRIEF



AT A GLANCE:

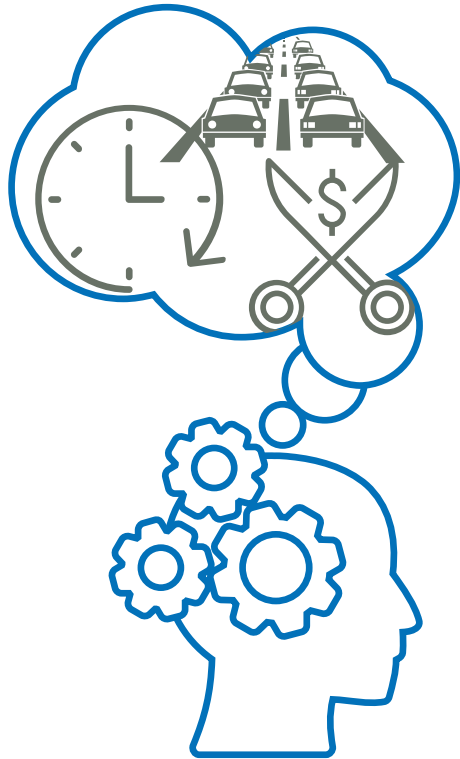
Remote, or over-the-air (OTA), updates today encompass a complete set of capabilities that enable cost-cutting, product enhancing solutions, enabling quick market entry and the ability to update devices as needed.

Launch early. Launch fast. Launch Successfully. For today's rapidly moving IoT deployments, businesses need to enter the marketplace fast—often before they are able to fine-tune their solutions. In the past, this would be a huge and costly path to take. But today, entering the marketplace with a minimally viable product, and then up-grading functionality and closing security gaps, is an easily accomplished task.

Remote, or over-the-air (OTA), updates today encompass a complete set of capabilities that enable cost-cutting, product enhancing solutions, as well as the ability to scale quickly, securely, and, if needed, meet all local, regional, or global compliance requirements. These capabilities include not only updating functions, but also connectivity awareness so as to be able to execute updates in minimal time, with minimal costs, while avoiding additional data transport costs due to devices not being able or ready to receive any updates.

This paper examines the need for agile remote device updates to resolve software bugs, close security gaps, and enable and test newly developed features—all on the fly.

Today's IoT solution deployers need to utilize tools, processes, and systems that enable this rapid update environment—while keeping operational costs low. And having an OTA framework in place before deployment is critical to launching fast and successfully as it allows you to learn and optimize your deployment, add features to expand value, and resolve issues without having to recall devices.



Over-the-Air Update Challenges

There are many connectivity solutions out there that are trying to solve the same set of fundamental challenges but, many times, they cannot match the secure, reliable, always-on connectivity needed for remote updates.

Overcoming Network Congestion

Increased percentage of congested or off-line devices escalate failure rates of remote updates. Newer low-power cellular technologies, such as LTE-M and NB-IoT, while providing benefits of improved battery life and lower device costs, are significantly constrained in relation to the network throughput and speed. These constraints primarily manifest as network congestion, adversely impacting the success rate of OTA updates.

Shortening Time for OTA Update Completion

Most OTA processes involve 'blind' updates, as in having no visibility into network status. And the manual tracking of failed or off-line devices takes far too many people and time so scaling of deployments are immediately impacted. Additionally, the manual process can take a long time to complete and still provide no insights as to why updates failed.

Controlling Costs

Aside from the potential errors and operational costs of manual update processes, many other elements to the remote update process can add to the final cost of a deployment. Without insights, retry costs, data transport charges, and overage costs all can hinder the scaling vision of a company.

Remote Updates that Work

Home-Grown Solutions

In-house, business-specific customized can be built but the high development effort and the costs associated with this process (people, teams, testing, etc.) may limit scalability. Other companies have less than optimal OTA capabilities in that there is a distinct lack of customization, potential incompatibilities (as in no connectivity awareness), and can end up being very costly.

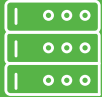
The Aeris solution was built specifically to help businesses grow. Aeris Connectivity-Aware OTA orchestration solution helps you increase remote update speeds and helps reduce the operational costs of completing large-scale, remote update campaigns.

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.

With the Aeris Connectivity-Aware OTA orchestration solution, you can leverage connectivity and network status to know which devices can successfully download the update. The solution increases efficiency and scalability while reducing re-try and manual operation costs. By integrating Aeris OTA orchestration APIs into your existing remote update campaign manager, you can track and automate re-tries; optimize connectivity rate plans to reduce overage charges; and overcome network congestion by scheduling OTA attempts only to devices ready to receive.

BENEFITS OF OVER-THE-AIR UPDATES



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



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



Significantly reduce
manual operations,
increase efficiencies.



Scale for large
deployments with ease.



Easily update devices
for compliance
requirements.

Aeris Connectivity-Aware OTA Orchestration APIs in Action

Following are three real-life scenarios where the Aeris solution aided companies to expand safely, securely, and quickly.

Use Case #1:

Cold chain / asset tracking

A large cold chain asset tracking conglomerate was developing a new solution that focused on the use of new hardware. The pilot program was key for fine-tuning the application but time was running out and the company needed to launch. It then wanted to fine-tune the application behavior, as well as fix some bugs in the program. And they wanted to do this post-deployment but could not afford physical updates on so many devices.



Use Case #2:

Global auto manufacturer

The connected car sector is moving ahead at unprecedented speeds. One company, lagging in development, needed to catch up to the competition and speed was paramount. The company had developed an after-market retro-fit for key functionality but they could not wait until all features had been tested and approved. The company needed a way to launch today, and then add additional features on the go.



Use Case #3:

OEM Compliance

Sometimes rules are such a nuisance. And sometimes they MUST be followed. Such is the case with device and data security compliance, as stated in regulatory bills such as with California's SB-327 (Information Privacy: Connected Devices). One company, planning to sell devices into the state had to have the ability to remotely update its devices to meet state and federal compliance regulations regarding security vulnerabilities against large-scale attacks. The company needed a way to launch a rapid response program should security holes be discovered.



OTA Updates for Fast, Secure Scaling

The Aeris OTA solution allow customers to schedule and execute remote update campaigns in an operationally efficient and cost-effective manner, with maximum predictability for time to completion.

Aeris' enhanced connectivity awareness capabilities provide the insights to know when remote updates are needed, as well as the best time to enact. Additionally, 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. So, if your deployment is about to grow, or you need to update devices already deployed, speak to Aeris for solutions that fit your business and your budget.

Contact Aeris Today to Get Started on Your IoT Journey!

ABOUT AERIS:

Aeris is a pioneer and a leader in the market of the Internet of Things with a proven history of helping companies unlock value through connected technologies. We strive to fundamentally improve business performance by dramatically reducing costs, accelerating time-to-market, and enabling new revenue streams. Built from the ground up for IoT and road tested at scale, the Aeris Fusion IoT Network™ and the Aeris Mobility Platform span the IoT technology stack—from global connectivity to application services. Visit www.aeris.com to learn how we can inspire you to create new business models and to participate in the revolution of the Internet of Things.

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

United States Contact:
info@aeris.net or +1 408 557 1993

Europe Contact:
eu_info@aeris.net or +44 118 315 0614

India Contact:
india_info@aeris.net or +91 01206156100

© 2019 Aeris Communications, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of Aeris Communications, Inc. Specifications are subject to change without notice. Aeris, the Aeris logo, Aeris Connection Lock, and Aeris AerPort are trademarks or registered trademarks of Aeris Communications, Inc. in the United States and/or other countries. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such. 1019