

Multi-Tiered Account Management: An Aeris IoT Solution

INDUSTRY BRIEF



AT A GLANCE:

The Aeris Connectivity Platform offers a unified view, as well as multi-tiered management of devices for all carriers, from one flexible, secure platform. This hierarchical solution helps in the provisioning and maintenance of all devices from different carriers, which enables maximum efficiency, saves time and human effort, and lowers operational costs.

As ROI business justifications for the Internet of Things (IoT) becomes clearer, many OEMs are discovering that their expertise is on the products they produce, not on IoT issues such as connectivity, account management, troubleshooting, security, and support. More and more, OEMs, who are using the IoT for efficiencies, cost, and (sometimes) global expansion, realize that the IoT deployment process, from buying and activating SIM cards to billing for IoT services, is out of their business wheelhouse.

Research has shown that more than half of all Internet of Things implementations stall at the proof of concept stage. Why is that? Many companies entering the IoT universe are surprised by some of the complexities in dealing with deployments, management, billing, and support. Unfortunately for them, the entire solution just doesn't fall out of a box.

Challenges

Obviously, any IoT implementation comes with many concerns and challenges. For OEMs dealing with

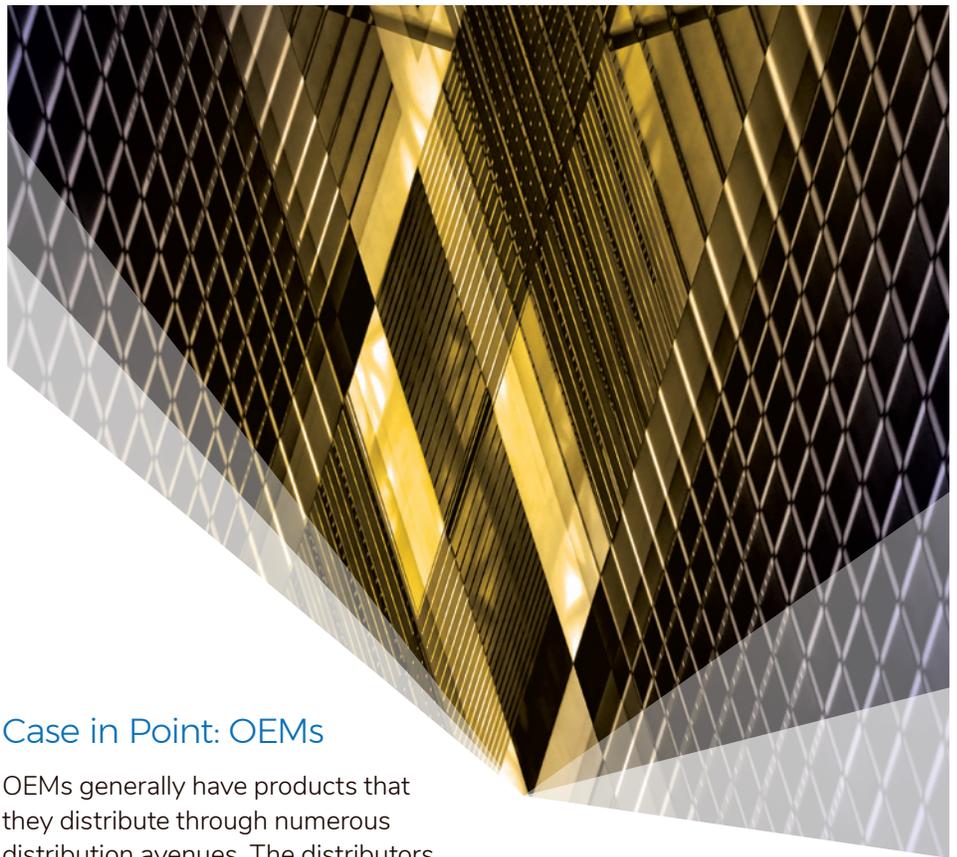
these deployments, the first issue they want addressed is managing connectivity costs. They need visibility, they want flexibility, they want the lowest costs possible, and they don't want to be locked into a single provider. OEMs want a connectivity solution in which they can manage multiple carriers, many times for global deployments, from one comprehensive platform. Through this platform, they also want to deal with device performance and operations costs. And they need a billing solution that addresses the multiple account levels that come with numerous distributors

and end customers. Additional concerns revolve around support and security, which rightfully need to be addressed before deployments begin.

For customers already employing IoT, they join the journey at different stages, have differing use cases, have varying provider preferences, and require customizable solutions that fit their company, their products, and their customers. That's not an easy order to fill. In the past, it meant connectivity with multiple carriers, with separate platforms, providing disparate services that took far too long to synchronize.

Today's solutions seek to consolidate multiple aspects of an IoT deployment onto a single, flexible platform, with multi-tiered account hierarchy and management capabilities, thereby solving complex billing and support issues while reducing the overall complexity of an IoT deployment. Billing requirements, cascading down from OEMs to distributors to customers, require flexibility and multiple account levels (retailer, reseller, etc.), with defined user roles and management, as well as visibility and control of each level. And when dealing with numerous companies and customers, a platform that could provide seamless API and third-party integration is essential.

As companies grow and expand, they do not want or need to deal with many disparate vendors and their platforms for connectivity services. Companies want simplicity and in-depth functionality at the same time, enabling them to combine SIM management, supported by different cellular carriers, into one integrated solution. Companies want a solution that is both carrier and technologically agnostic so as to diminish complexity while, at the same time, being cost-effective.



Case in Point: OEMs

OEMs generally have products that they distribute through numerous distribution avenues. The distributors themselves have multiple clients. This scenario may involve hundreds (or thousands) of accounts. In the IoT world, this means multiple technologies, with numerous connectivity protocols, need to be corralled into one highly flexible platform in order to simplify account management and billing.

Diving deeper into these issues, OEMs realize that, for their businesses, an IoT solution needs to include multiple account levels (tiers), have independent account management and visibility, allow others in the distribution stream to act as a micro-mobile virtual network operator (MVNO), and enable the merging and managing of multiple carriers (regional, national, global) and technologies (CDMA, GSM, LTE, cellular, Wi-Fi, low power wide area networks, and more) all from one platform. And as part of this solution, support and security are business critical.

The Aeris Solution

To address the IoT needs of OEMs, the Aeris Connectivity Platform (ACP) provides the oversight and cost controls needed for any deployment. Functionality includes multi-tiered account access and control—from project onset through device lifecycle. Additionally, the ability to use multiple carriers, with differing technologies, is one of the platform's differentiators. Support issues can be shifted downstream to distributors, who are closer and more in-tune with end customers. And as for security, Aeris provides network segmentation, with data never entering public networks, meaning that data is safe and secure for the entire IoT journey. Let's look at some details.

AERIS CONNECTIVITY PLATFORM

Powering this entire solution is the ACP, which provides one arena for all deployments, identifies problem devices faster, resolves issues proactively, and helps controls costs throughout the device lifecycle. ACP allows companies to combine their management of SIM cards, supported by different cellular carriers, into one integrated management platform. Additionally, the platform's dashboard provides in-depth insights into device provisioning and management; rate plan management; APIs; customer support; real-time usage reporting; and billing and cost information. Additional functionality of the platform includes:



Alerts and Reports Management

- ◇ Traffic monitoring and reporting in near real time
- ◇ Detailed session-level granularity
- ◇ Device transaction history



Data Usage Alerting

- ◇ Alerts based on thresholds
- ◇ Custom configuration alerting options
- ◇ Per hour, day, monthly reporting
- ◇ Per account, rate plan, device, or group



Device Performance Alerts

- ◇ Too many / too few registrations
- ◇ Switch-hopping anomalies



Connectivity Analytics

- ◇ Interactive graphs identify usage and cost trends over time



Additional Go-To-Market Channels (for dealers, distributors, etc.)

ACP consolidates all carriers and devices, thereby enabling provisioning and maintenance from one location so as to lower IoT management costs while improving operational efficiencies

Multi-Tiered Account Management: Simplification and Clarity

Aeris provides a comprehensive, multi-tiered account management solution (master / child accounts) that ensures effectiveness in the handling of different levels of enterprise resources, offering an optimal process for managing complex business structures. With this management structure in place on a single platform, OEMs can administer IoT devices separated and segmented by individual business units, or even within the same unit if there are multiple pricing structures in place.

Multi-Tiered Account Support and Security

In a tiered account scenario, OEMs can transfer support services to the distributors, who can deal with device or customer issues directly. And regardless of the platform the distributor employs, ACP functionality can be implemented through a company's APIs. Additionally, the Aeris connectivity management platform can be white labeled to match UI appearances of other platforms.

OEMs want a solution in which they can offload certain IoT activities (SIM management and support, for example) so as to streamline their operations, thereby further reducing operational complexities and cost.

So, for example, an OEM can pass along SIM management activities to individual distributors, allowing them to provision SIMs for their region and carrier. Support services, too, can be passed on to distributors, who are closer to the end customer.

And as security is vital in any deployment, user-level permission settings ensure that users have access only to data that is pertinent to their job function. This ability to restrict access at the user level promotes a more secure management platform and directly reduces the likelihood of inadvertent access leading to outages.

ADVANTAGES OF A MULTI-TIERED ACCOUNT MANAGEMENT SYSTEM

OEMs are requiring one-platform functionality, where all technologies, as well as connectivity from multiple carriers, could be implemented, viewed, and managed. The platform needs to provide API integration for visibility and management processes; seamless third-party integration; a simplified process that would reduce costs; and an overall reduction in operational complexities. Additional functionality of the Aeris multi-tiered account management system includes:



Distribution Billing and Support



Segment Connectivity
(wholesale / retail billing for lower tiers)



Micro-MVNOs Enablement



Automated, Fully Customizable Reports
(for each account level)



Flexibility in Managing End Customer and / or Accounts

- ◇ Reseller Tier — Account with a retail sub-account
- ◇ Retailer Tier — Account without a retail sub-account



Complete Visibility and Control (of each tier)

- ◇ User roles and management
- ◇ Rate plans and reports management
- ◇ SIM order and assignment management

Bring Your Own Carrier

The value add of the ACP is that even if OEMs already have managed devices on a platform, regardless of carrier, they can be shifted to the Aeris platform. This is a vital ingredient in the Aeris solution for companies that are international

in scope, or are about to expand globally. Bring Your Own Connectivity (BYOC) allows customers to simply bring their existing carrier relationships onto the Aeris Connectivity Platform. The Aeris solution includes:



Single Interface, Single Set of APIs
(for all carriers, all technologies)



Reduction in Operational Complexities and Costs



Simplified Support Processes



Holistic Reporting and Analytics
(complete insight into entire deployment)



Increased Scalability

Aeris provides a single platform to seamlessly manage current and future deployed devices, regardless of technology or carrier provider. This flexible and modular platform allows customers to reduce the operational

complexities of managing a multi-carrier deployment by enabling the management of cellular devices on the Aeris platform, alongside Aeris domestic and global deployments.

Hierarchical Approach to Enterprise Management Structure

The ACP offers a unified view, as well as management of devices for all carriers, from one flexible, secure platform.

This hierarchical solution helps in the provisioning and maintenance of all devices from different carriers, which enables maximum efficiency, saves

time and human effort, and lowers operational costs.

Specifically speaking, the Aeris Connectivity Platform provides the solution needed to manage IoT deployments (including billing,

security, and support) across multiple carriers and technologies. The added value comes in the form of device knowledge and the data created, leading to additional services, increased sales and revenues, and greater customer satisfaction levels.

ABOUT AERIS:

Aeris is a technology partner with a proven history of helping companies unlock value through IoT. For more than a decade, we've powered critical projects for some of the most demanding customers of IoT services today. We strive to fundamentally improve their businesses 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, Aeris IoT Services are based on the broadest technology stack in the industry, spanning connectivity up to vertical solutions. As veterans of the industry, we know that implementing an IoT solution can be complex, and we pride ourselves on making it simpler.

Visit www.aeris.com/india 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.

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