Data Analysis
Aeris IoT Analytics

ANALYZE, THEN ACT.

CONSOLIDATED DASHBOARD

The Aeris IoT Analytics dashboard provides a consolidated overview of all account information, including billing, usage, and devices under management.

DEPLOYMENT MANAGEMENT

Obtain an overall view of the IoT deployment over time, including billing, usage, and device status, on both a historical and real-time basis.

DATA ANALYSIS AND DIAGNOSTICS

Analyze billing and usage data to carefully manage costs, root cause, and fix issues through an intuitive graphical interface.

SMART ALERTS

Set thresholds, identify anomalous behavior, and take immediate steps through alerts or automated action. Identify the underlying reasons and manage data plans to optimize costs.

PERFORM DIAGNOSTICS

Enable proactive issues identification with a learning engine that develops baseline device behavior profiles. Identify and diagnose device-specific issues related to usage, costs, and device behavior, etc.

ANOMALY DETECTION

Use built-in anomaly detection functionality to efficiently manage devices. Make modifications to optimize device productivity for enhanced customer experience and lower costs.

Only when we analyze the vast amounts of data collected from connected devices can we truly gain the value of the Internet of Things (IoT). However, collecting, managing, and analyzing data on such a large scale presents a big challenge.

As the foundation of any IoT deployment, connectivity is the primary concern. Once secure, reliable connectivity has been established, then the acquired data empowers the analytics that apply to SIM and user management; operator dashboard; account cancellation / suspension; connectivity management platform (CMP) audits; application billing; online invoicing; compliance; and much, much more.

Aeris IoT Analytics transforms data into insights; visualizes historic data; and defines patterns, trends, and rankings in real-time reports. The analytics platform applies business rules to the data stored in the cloud and then, using business triggers and actions, provides insights, which can be presented immediately through the web, mobile apps, and APIs. This process allows organizations to fully understand and control their deployment, which then can lead to new revenue streams with new services.

Aeris IoT Analytics allows you to shift from analyzing the past to predicting the future by spotting actionable, real-time trends. It brings previously hidden insights to the fore, enabling new efficiencies, new business models, and a myriad of competitive advantages.

Proactively Manage IoT Connectivity

Aeris IoT Analytics enables you to identify devices with connectivity issues, allowing you to focus on a specific device, time, or usage activity, including data, SMS, voice, sessions, and registrations. This lets you find specific devices that are outliers or are behaving abnormally. Also, you can see a summary view of the device portfolio, including billing, usage, and status. With all this data, you can better understand aggregate and average connectivity usage over time, allowing for focused, business-specific deployments.

Device Monitoring and Management Portal

Aeris IoT Analytics optimizes IoT / M2M deployments by providing visibility, insight, alerts, and actionable information about device usage, performance, and costs. Aeris' connectivity analytics enables proactive identification of usage and billing issues; differential access to connectivity data; remote diagnosis and support; and a single dashboard for in-depth visibility.

Aeris IoT Analytics proactively monitors and manages your deployment in real time, quickly alerting to any failures, thereby minimizing expensive diagnostics or repairs. Additionally, proactive alerts can signal impending issues that have the potential to shut down single devices or entire deployments.

ISSUES	AERIS ACTIONS
Can't monitor devices in real time for more efficient deployment.	View devices deployed and track usage and billing well before you receive a monthly bill.
Planning ineffectively without understanding of deployment progression over time.	See the number of provisioned, billed, suspended, and canceled devices over time.
Surprised by unexpected bills and significant usage changes that leads to high bills.	Gain visibility into the billing history, current and projected usage based on latest data.
Have little visibility or ability to manage billing costs.	Set billing or usage alerts that enable user to take appropriate action to manage costs.
Troubleshooting erratic devices — e.g., frequent registration, multiple sessions, too high data usage by some devices, etc.	Set anomalies and specific alerts that enable user to be notified of device behavior changes. Ability to automate actions.
Don't know where the devices are deployed and if they are connected (in session) and behaving normally.	Map view of devices and summary status showing that devices are working properly.
Difficult to use raw data reports to extract key insights.	Simple interface shows the relevant data in a graphical format.

Rate Plan / Billing Behavior

Aeris IoT Analytics allows you to manage costs by revealing coverage, data, SMS, and roaming charges. You can view monthly costs in aggregate and over time, thereby gaining granular insights to trends in device behavior. And with Aeris' flexible rate plans, traditional 'one-size-fits-all' pricing becomes a thing of the past.

Set Smart Alerts

To effectively monitor an IoT deployment, you can set predefined alerts for when specific events occur instead of continuously reviewing all the accumulated data. For example, if a device makes too many registration attempts, there might be a hardware issue. These alerts enable you to institute actions to help fix or mitigate a problem before it evolves into a business-crippling event.

Detect Anomalies and Take Action

Aeris IoT Analytics has a built-in anomaly detection and machine learning engine that identifies anomalies, such as certain devices having higher-than-normal usage. It then presents this information in a simplified format and provides predefined actions to take based on specific behavior.

The Aeris Network

Today, Aeris owns and operates the largest North American cellular infrastructure built from the ground up exclusively for machines, and we are expanding globally, with carrier resources in more than 190 countries. Our connectivity solutions include both the network services and the tools necessary for the most demanding and mission-critical IoT / M2M communications. Because Aeris operates the underlying network infrastructure (including CDMA, GSM, and LTE), we are able to make rapid modifications to meet customers' ever-changing requirements.

Benefits of Connectivity Analytics

For connected devices, comprehensive reports and alerts, combined with operational data analytics, help identify corrective actions in real time. Sensors monitor not only the ongoing health of the system, but also environmental conditions that may affect the device or asset (cell tower or network). If issues arise, or if the software detects an anomaly, the system proactively issues pre-defined alerts. Aeris is the only provider that can offer a complete connectivity stack, with in-depth analytics, providing insights and issue resolutions in near real time.

Additionally, with Aeris IoT Analytics, companies can automate usage data sent to a central database; increase compliance and drive new revenue; gain better visibility on maintenance; receive real-time alerts; and reduce cost and TCO in relation to other solutions.

ABOUT AERIS:

Aeris is a technology partner with a proven history of helping companies unlock the value of IoT. For more than a decade, we've powered critical projects for some of the most demanding customers of IoT services. Aeris strives to fundamentally improve 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** 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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