ARIA

Datasheet

Aria Crescendo
Features & Benefits

Aria Crescendo Features & Benefits
Speed and Agility Without Compromise

Aria Crescendo is the monetization platform for multi-dimensional customer choice. Aria Crescendo enables businesses to better serve and retain today's ever-demanding customers, including both individual consumers and business entities, who require offerings that meet their preferences. With Aria Omni-node™ technology, a hierarchical, n-tier product catalog and account management architecture, enterprises can create customer/business offerings and elegant account structures in real-world variations. Customers are afforded greater choice to match their purchasing and consumption experience—paying only how and when they want—versus conforming to constraints and frustrations imposed by the enterprises' outdated billing technologies.
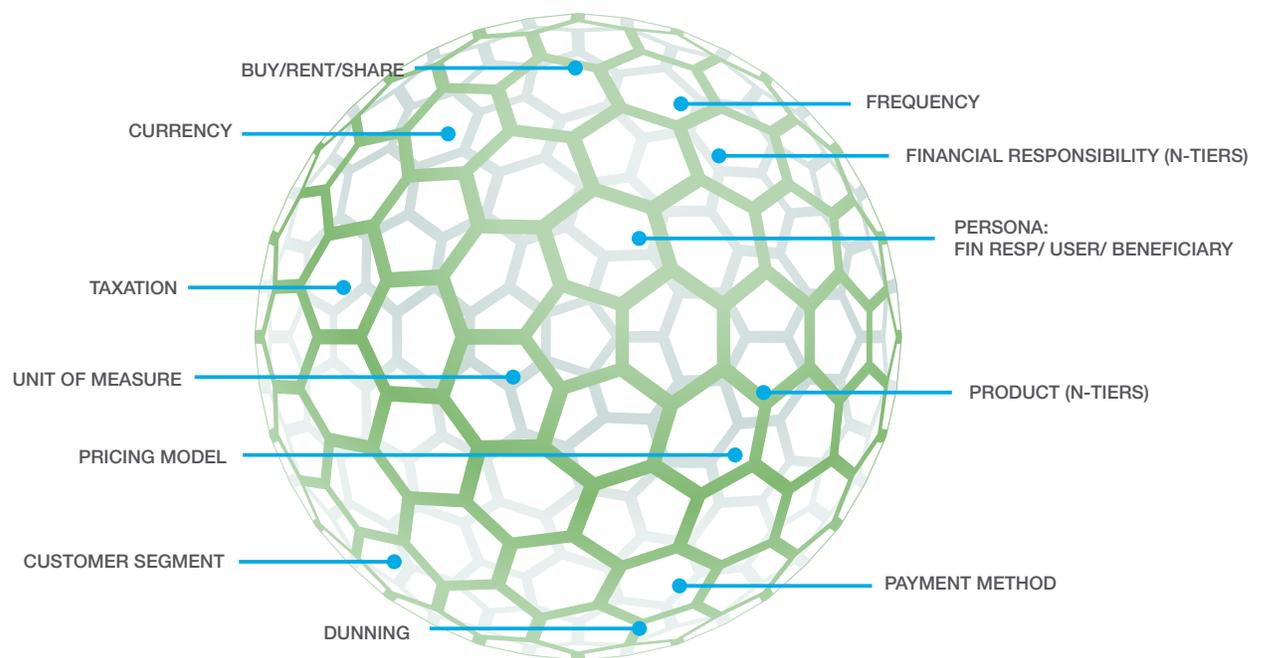
Fig.1: Multi-Dimensional Customer Choice

While other platforms are focused on how products are sold, Aria Crescendo is designed for how customers buy—which is increasingly recurring- and usage-based. The customer now calls the shots and enterprises serving them must adapt accordingly. Yet, the plethora of permutations required for success have hamstrung existing billing systems, spawning multiple inefficient and manual processes or forcing companies to abandon initiatives that capitalize on these market trends.

Aria Crescendo is the first monetization platform to provide multi-dimensional customer choice by enabling highly tailored product offerings that support the new customer business reality. User-friendly configurations define attributes including: pricing, promotions, consumption options, payment methods, dunning processes, product and account hierarchies, and business terms such as payers, channels, business units, geographies, entities.

Only Aria Systems provides speed and agility at scale in the cloud, delivers actionable customer insights, and empowers business users with direct control to better monetize their offerings. Aria Crescendo can deliver operating improvements with increased profitability while adhering to ever greater compliance requirements.

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Billing and Monetization Expertise

Top among considerations when evaluating a cloud monetization platform is experience. Aria's domain expertise in complex, subscription and usage-based billing has been cited as a core differentiator by analysts[1]. The DNA makeup of Aria's experienced team across leadership, product, and development is derived from a balanced combination of subject matter experts and thought leaders in billing, payments, security, and IOT. At Aria, exceptional value is placed on product development and quality, and on customer satisfaction; this is reflected in every dollar that is reinvested in the business.

Sophisticated implementations are Aria's specialty, as are Aria's dependable implementation timelines, no matter which of Aria's three deployment options are being provisioned. Aria's accomplished professional services organization and adept partner network boast the best scorecard for on-time, on-budget implementations.

MGI Research describes Aria customer success: "Faster time to implement, greater flexibility for the business, and often a better fit are among the major benefits." [2]

In every facet of the organization, through every step of sales, implementation, and ongoing customer success initiatives, Aria acknowledges and embraces the extreme complexity that is intrinsic at the enterprise level. Aria is filled with enterprise professionals who have extensive, proven billing and BSS/OSS expertise, and who carefully listen, analyze, and diagnose before they prescribe.
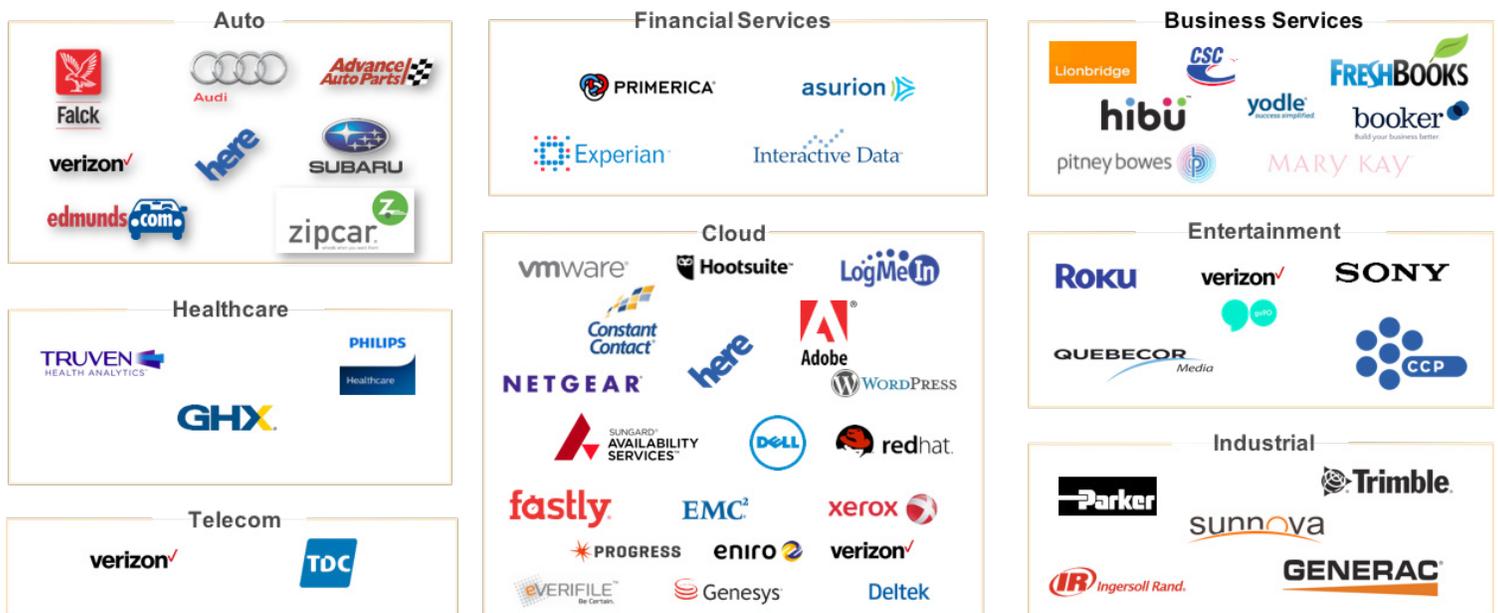

Fig.2: Aria Systems, Inc. Enterprise Portfolio

[1] Peter Sheldon and Lily Varon, "The Forrester Wave™: Subscription Billing Platforms, Q4 2015,"
https://www.forrester.com/report/The+Forrester+Wave+Subscription+Billing+Platforms+Q4+2015/-/E-RES116882, 11 November 2015.
[2] "MGI 360 Market Ratings Report, Agile Billing Solutions,"
http://www.mgiresearch.com/MGI-360-Ratings/mgi-360-ratings-agile-billing-market-rating-report-mrr-feb-25-2016.html, 25 February 2016.

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Product Management

Aria Crescendo supports a broad range of sophisticated monetization models from basic monthly subscription to complex hybrid offers that include subscriptions, usage, and intricate business rules. Aria enables flexible subscription lengths including any multiple of months (monthly, bi-monthly, quarterly annual etc.). This functionality is provided out of the box and is applied via configuration, not coding. Configuration is managed directly within the system using the platform's UI. It can also be accessed from 3rd party applications such as CRM or web site/front ends using the platform's standard APIs, which allow integration with all Aria's capabilities. The range of subscription models is facilitated via the system's product management function which include the system's powerful and flexible product catalog. Through configuration, multiple service types including one-time purchases, recurring, and usage based can be created. A product configured within Aria can have one or multiple services associated with it. Usage types can be set up within the application. These usage types can be configured to track and monetize anything that can be counted - including days, hours, users, gigabits of data, storage, usage count, miles, etc.

BASIC SUBSCRIPTION
- Monthly
- Quarterly
- Annually
- Custom

USAGE/ CONSUMPTION
- Minimum
- Flat Rate
- Standard tiered
- Volume tiered
- Flat rate tiered
- High water mark
- Accumulated pooling
- Threshold
- Rollover
- Family plans
- Overage
- Pay-as-you-go
- Time based
- Surcharge
- Rated/ mediated
- Combinations

ONE-TIME
- Binge consumption
- Activation fees
- Cancellation fees

BUSINESS/ PRACTICES AND POLICIES EMBEDDED WITH MONETIZATION MODELS

Geographies Currencies Markets

Contract Changes

Multiple Sales Models

Packaging, Promotions, Bundles

Discounts, Credits, Exemptions

Fig.3: Limitless Monetization Models

Whether there's a single rate card for services or hundreds for the same service, whether a company sells in one currency or many, even if every customer pays an entirely different rate for services under individually customized contract structures, Aria Crescendo is second-to-none in the flexibility of its features. New products can be built and rolled out in minutes with flexible pricing; bundles, promotions and discounts can be iterated quickly and applied automatically, and older offerings can be decommissioned on any schedule.

Dynamic Product Catalog

Product teams are empowered with direct control and a significantly superior product management experience with Aria Crescendo. With its intuitive rapid-launch capabilities and the industry's greatest array of monetization models, product managers can now price, bundle, promote, test, and iterate offerings with unparalleled speed and agility.

While other platforms are built for corporations focused on how products are sold, Aria Crescendo is built around how customers buy. And those customers demand choice. Aria's exclusive Omni-node™ technology supports infinite standard and customer-specific permutations of products, pricing, bundles, and promotions. Product managers benefit from the advanced engineering of the Omni-node™ technology that enables elegant product creation, iteration, and catalog utilization without bothersome proliferation of product SKUs.
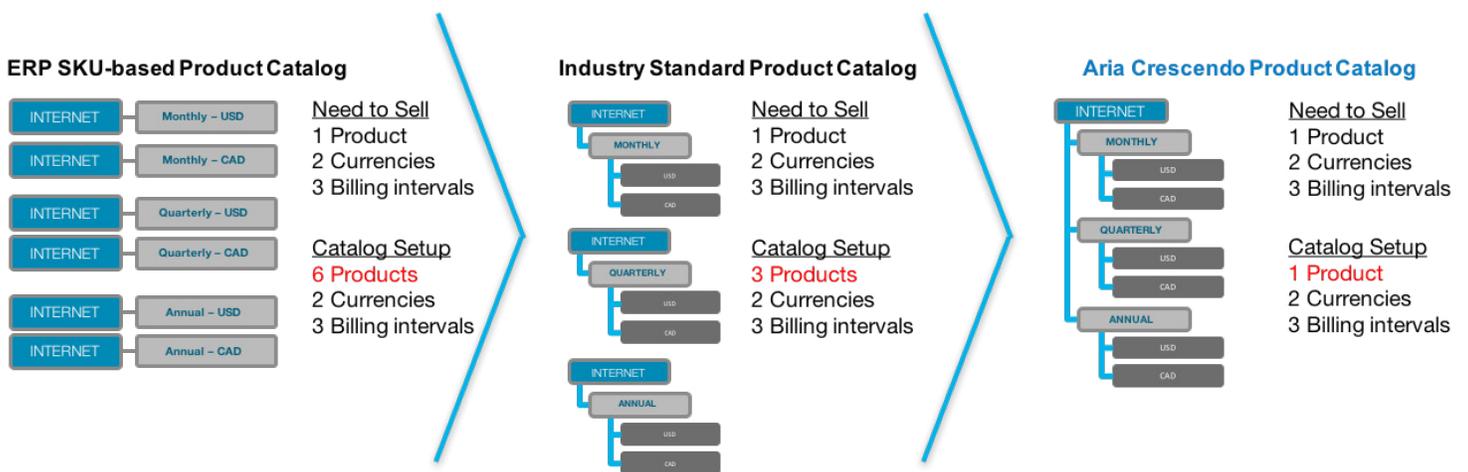

Fig.4: Omni-node™ Technology

Industry standard product catalogs are too flat and too rigid. The Aria product catalog is n-tier and hierarchical, enabling product subscriptions to be built as combinations of options called rate schedules instead of defining each unique combination as a separate subscription product. No development dependencies exist, and when a subscription becomes effective, e-commerce sites and self-service portals immediately pick up the subscription.

Aria's clients can outpace changes or competitive pressures on-demand and lead the competition with the ability to quickly create new, innovative offerings that meet customer-specific needs.

To do so, clients leverage the platform's flexible pricing features of recurring, one-time, trials, rollover, hybrids, future plans, overage, group plans—a nearly limitless array of product catalog agility to drive improved outcomes for the business segments.

Promotions and Discount Engine

Functional alignment with strategic business objectives makes the Aria Crescendo product management tools the analysts' choice.

Included as part of the Aria Crescendo platform is the patent-pending discounting engine, which allows for the creation of reusable objects that can apply discounting mechanisms from broad to granular levels, applicable to specified products or product types, based on time- or use-bound usability, and targeting specific accounts. The discounting engine also has capabilities for inline or offsetting general ledger and customer statement treatment. In short, Aria offers the most comprehensive and highly flexible array of tiered pricing options in the industry.

Promotions are 100% configurable. Catalog pricing constructs and components can be overridden in either value and/or structure on an individual account, or on a purchase-based promotion. Free trials are offered in many forms, and can be daisy-chained to offer time-bound, step-up or step-down pricing to infinite levels, leveraging the Omni-node™ architecture. Coupons can be defined for broad or narrow use, can be pre-configured to expire based on time, use boundaries, or both, and can be attached in many-to-many relationships with pre-defined, reusable discount rules. Additionally, sub-sections of the larger product catalog can be easily carved out and associated with one or many promotion codes. This allows front-end systems to maintain no internal logic when providing access to alternatively priced offerings.

All promotional bundles created in Aria Crescendo can either be made immediately available, or may be planned for availability at a set future effective date. Aria ensures proper treatment of the promotion, and the conversion to a non-promoted offer when the promotion expires. This is one of the capabilities unique to Aria Crescendo. Other subscription billing providers cannot yet support this level of sophistication.

Quote Simulation Support

In Aria, pricing simulations and quotes are managed through the Aria UI, Aria for Salesforce, Salesforce SDKs, any front-end integrated system or any other integrated system as desired by a client. Pricing capabilities are fully customizable both within the product catalog and tailored as specific rate schedules. Live quoting (with or without tax detail) is made possible on-demand with the Aria Crescendo do-not-write functionality. All of the detail of the order pricing and quotes can be presented to any system, and committed to Aria through an internal or external-to-Aria approval process, converting the Quote to Order/PO, etc.;

Multi-Channel Distribution

Uniquely, Aria's product catalog supports guided selling, cross-selling, up-selling, and add-ons to customers or direct sales channels without requiring logic to be built in front-end systems. A library of intuitive integration tools makes it possible to fit sophisticated multi-channel requirements of the enterprise - providing limitless opportunities for product reach.

Usage and Consumption Modeling

The Aria Crescendo cloud-based monetization platform is designed to serve the needs of IoT data monetization and the digital transformation era, supporting Monetization of Things™ (MoT) strategies.

Taking lessons learned from unbending monolithic platforms, with Aria Crescendo, emerging enterprise LOBs are fast-tracked to become agile disruptors. Securely in the Aria cloud and with no or minimum intervention from IT; configure, monitor and manage rich consumption-rich data down to the most granular individual service and the device level, while easily supporting multiple devices per account (and even beyond products per device), and the free movement of device assignment from one account to another. Usage is monetized through many available billing models: for example, flat-rate-per-unit, free with overage charges, tiered, volume discount, high-water-marked, and more.
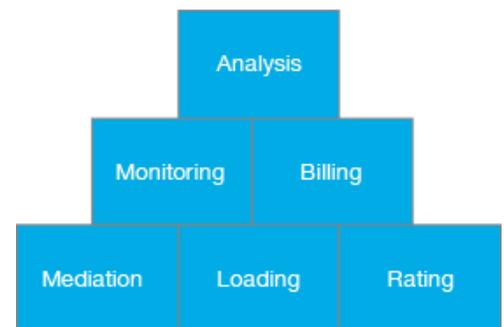
The Aria platform was cited by Forrester as a result of "domain expertise in complex, usage-based billing" and as a "core differentiator."

In fact, any and all types of consumption data can be monetized at the record level or aggregated to a parent with Aria Crescendo's hierarchical rollup capabilities.

Billing Mediation

The Aria platform ingests all consumption data which can be monetized and billed in arrears according to one of many available billing models. This includes those that are record-level or aggregated with hierarchical rollup capabilities.

Aria Crescendo supports business use cases that center around complex usage management requirements, including mediation.[3] For example, integrated seamlessly with an existing ERP, Aria Crescendo will pull raw data that it then correlates, aggregates, and analyzes based on pre-configured rules which ultimately determine the most appropriate rate to be applied.

Aria's platform is certified to load and rate usage in the millions per hour, in real-time, and handles a large volume of usage, both rated and unrated. Usage features also include loading, rating (and re-rating), taxation, monitoring, billing and analysis. Analytics supporting invoiced usage amounts are equipped with insights at the most granular level, for finance and customer care needs.

Customer Management

With Aria, go farther with digital capital; where customers are changing the game, insights are changing the rules. Aria Crescendo has state of the art real-time visibility across customer touch-points, which in turn improves the customer experience. On par with the improved customer experience is the most intelligent design for enabling sophisticated account hierarchies, in service of the many inter-dependent needs of enterprise clients and partners. The Omni-node™ architecture supports infinite permutations for accounts.

Omni-node™ Hierarchical Account Management

Aria's Omni-node™ technology supports n-levels deep account hierarchies which Aria's customers employ to support their individualized business models. Customer use cases include using the Aria account structure to represent not only true customers, but also departments, channels, companies, or even physical devices, and sub-groups within.

Aria accounts are designed to support deep detail. They support various sub-items of billing for responsibility levels, which can be designated at any level of the hierarchy for features such as charge calculation, usage accumulation, payment responsibility, and statement and invoice presentment.

Entitlement Management

Aria Crescendo is purpose-built to expand the definition of a subscriber account, allowing for an endless level of flexibility for agents to elegantly manage each plan purchased as well for each device, and other service-level products. There is a one-to-many relationship between an account and the services to which it subscribes, supporting unlimited combinations of billing rules: including a clean and simple amendment process, multiple service and billing addresses, pricing models, pay methods, and collection rules, all maintainable within a single account.

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[3] Large-scale usage mediations may demand a third-party integration.

Customer Renewal

A substantial part of agile billing is flexibility with contract management. Managing these challenges effectively can have a positive impact on renewal rates, churn, and revenue.[4]

Aria Crescendo contract management offers clients flexibility in defining how contracts are handled during use, as well as at renewal time. What is more, subscriptions in Aria may be attached to customers either without a contract structure or with overlaying contract structures. The platform's configurable considerations include contract scope, term, custom charge schedules, and penalties.

Leveraging Aria Crescendo's many customizable notification templates, users may define contract expiration notices to send to end users with customizable notification intervals prior to contract expiration, as well as machine-to-machine event notifications from the platform to any configured active listeners, alerting of any approaching contract expirations. Combined, the flexibility of Aria Crescendo's contract management capabilities cinches a customer retention edge for Aria's clients.

Multi-currency and Multi-language

Aria Crescendo is highly configurable and supports multi-currency requirements and it has been designed to support the report-based integration needs of general ledgers to this end. The Aria Crescendo transformative reporting faculties assist with conversion, re-evaluation and translation serving clients' proprietary and global requirements.

The platform supports any ISO country, any ISO currency, all currency, numerical, date formats, localization to any time zone, and storage of any data element within any language-including multi-byte character sets. This enables global enterprises to provide product offerings and messaging to any customer, anywhere. Moreover, clients may prescribe curated offers to customers in particular countries or geo-segments for a catalog of specific plans within a campaign.

Outbound customer-facing email messages generated within the platform are fully global. Messages are fully customizable and template-driven, including invoices and statements, in support of any language, invoice and memo numerical ordering, and currency.

Financial Customer Care

Essential to any enterprise's success is managing collections risk. Aria's capabilities for complete 360 view of customer account information, dunning and dispute hold support combine to ensure improved customer satisfaction, increased resolution rates, and reduced DSO.

Customer History

The long-term health of the customer relationship is directly benefitted by experiencing short-term and immediate value with on-demand customer insights. Aria is experienced in this domain, having enabled clients for over a decade with success in monetization and an activity-based view of customer value. A key enabler of this success is clean, accessible records on customer history, both in-view through the Aria UI, through reporting, or through any API-enabled call center and CRM integrations, such as the Aria for Salesforce connector. Purposefully and for the benefit of Aria clients, the platform process management tools are extremely strong. Full "click by click" audit history is tracked, retrievable, and never purged as is every interaction capture by the platform with end-users.

[4] Peter Sheldon and Lily Varon, "The Forrester Wave™: Subscription Billing Platforms, Q4 2015," https://www.forrester.com/report/The+Forrester+Wave+Subscription+Billing+Platforms+Q4+2015/-/E-RES116882, 11 November 2015.

Billing Management

In today's hyper-competitive environment, being first to market provides an unmistakable advantage. This is why enterprise-market success necessitates a flexible, configurable billing platform that can not only handle a wide variety of subscription and usage-based monetization models, but one that also has the ability to change these models quickly and without IT intervention. The agility Aria Crescendo provides enables quick and easy reactivity to new opportunities, and rapid response to competitive pressures, while minimizing churn. Traditional IT systems are designed for processing efficiency, not business agility. The Aria Crescendo billing management system is designed for both.

Agile Billing

An attractive outcome for any recurring billing system is to operate as a lights out automated process— automation with minimal manual intervention. With Aria Crescendo, there is no need to manually execute a billing process. Only on an exception basis.

Aria's automated and nightly batch processes identify all accounts that need some type of action taken on them, including:

- Processing expired contracts
- Managing plan and status rollovers
- Updating queued plan changes
- Generating all invoices for accounts with the current anniversary date (subject to lead/lag calculations)
- Generating electronic collections and managing exceptions
- Generating and sending account statements
- Evaluating and taking action on dunning steps based on the dunning plans and rules applied to the subscription

There are numerous system-wide behavioral options available that govern a multitude of behaviors (e.g., whether to charge a credit card immediately or not, whether to construct an initial invoice immediately or not, which status code to apply to newly created accounts such as active or pending, whether to push an account to a Universal Billing Day such as the 15th of the month, or to apply anniversary day billing, and many, many more). Additionally, and in order to support maximum flexibility, most of these behavioral options can be overridden at the time of any API call via optional input parameters.

Aria Crescendo provides several out-of-the-box features, both configurable/customizable and automated, to minimize churn and provide a more positive customer experience in the event of credit card declines and other processing failures. First, Aria automates the distillation and distribution of fully customizable, template-based email notifications to customers. Second, where offered by a given processor/gateway (e.g., Chase Paymentech, Authorize.Net, Vantiv, etc.), Aria automatically ingests and applies changes to credit cards such as re-issued card numbers, updated expiration dates, etc. Third, and most importantly, Aria offers an industry-leading, comprehensive and fully configurable dunning engine, which allows Aria clients to build dunning plans that dictate the series of actions to be automatically performed beginning at the moment a card is declined and/or an account enters a past-due state.

Invoicing

Aria Crescendo provides a robust set of invoicing functionality. Invoicing is managed on a nightly basis. The system automatically selects and invoices any account that is eligible for invoicing.

The platform supports multiple billing cycles including monthly, quarterly, semi-annual, annual and custom intervals. Each billing interval is set for the recurring charges and separately for usage-based charges. When a plan change is performed mid-cycle, as opposed to aligning with the end of the billing period (also supported of course), pro-ration is applied, or, if desired—not applied. Invoice timing is also configurable; immediately or on the next billing date.

Additionally, Aria enables options for review of invoicing prior to committing the results and transmitting to the customer and financials system(s) in two ways:

1. Pending Invoice: creates a pro forma invoice for review.

2. Invoice Posting: once an invoice has been created / committed it can be designated for review prior to posting to the financial system and transmission to the customer. If an Invoice is voided prior to posting, Aria voids and reverses all invoice line items, tracks this history / audit trail internally, but does not need to send reversing records to 3rd party systems, as the invoice was not yet posted.

Aria's clients go further with Aria Crescendo's invoice capabilities including flexible delivery and invoice format options. Custom client fields are available for invoice templates, tax and item detail presentment, and full statementization capabilities, among other advanced features. For fully-branded statements, combine charges, taxes, credits, payment, and balance information in one place.

An unlimited number of templates may be designed (including invoice/statement templates), and preferred invoice/statement templates are automatically assigned to individual accounts based on customer segmentation (such as geography, language, customer type, specific products purchased, etc.) and those automatic template assignments can be easily overridden at the individual customer level as needed via either Aria Administrative UI or API. Invoice/Statement templates can be designed in either human-readable (HTML, text, PDF) or machine-readable (XML) templates, and machine-readable templates can be routed using Aria Crescendo's workflow feature or any web-service-capable 3rd-party system for "final mile" distillation and distribution.

It is also typical, when working in the context of large service providers, that the invoice line item detail is transmitted to a 3rd party system for consolidation and inclusion in a statement for physical and /or digital distribution. The platform is integrated in this fashion for a number of clients, and has a configurable XML extract that can be reused and configured to meet requirements.

Branded Invoices and Statements

Deliver the experiences buyers want by going beyond the experiences that they would expect. A brand is a reputation, so why should any business have to forego brand at the important touchpoints of statements and invoices?

Aria's clients outrival the competition through the platform's invoice capabilities. These include flexible delivery and invoice format options, custom client fields available for invoice templates, tax and item detail presentment, and full statementization capabilities including credit and payment detail, among other advanced features.

Broad invoice design and customization capabilities are a specialty of Aria Crescendo, for delivering clients' sophisticated and often consumption-based business models that do their part to transform data into meaningful invoice and statement presentations.

Distributed and Split Billing

The design of Aria Crescendo permits massive flexibility for the support of complex, multi-layered business models of many types, including split billing and sponsored plans.

This also allows duplicate, unique, or custom invoices/statements to be sent to multiple parties based on the hierarchical relationship and the account settings, without restriction to terms, payment amounts, or percentage owed by party. Purposefully to the enterprise and its channels, the design of Aria Crescendo is to be the most highly extensible platforms for support of the most sophisticated distributed and split billing needs.

Change Management

Aria Crescendo change management features the ability to comprehensively support amendments to products and subscriptions with the expected and intended proration logic.

Powerful automation in the platform means that all transactional, taxation, entitlement, and financial reporting consequences are fully automated. Importantly, this includes all possible proration models and all possible effective date models.

There are three scenarios for proration models: charge-only proration, credit-only proration, or both. Effective-date models cover the gamut of immediate, on customer billing anniversary date, or on arbitrary past or future dates.

With Aria Crescendo, fully automated support is provided for handling amendments that result in "net negative" proration consequences, including application of credits for future consumption, automated refunds, or discarding of negative remainders. Because every enterprise has unique needs, all of these behaviors are governed by configurable system parameters.

The dexterity of the platform enables five proration solutions, governed either by configuration or case-by-case. Clients may apply Aria's replace-plan functionality to upgrade or downgrade a subscription product. Moreover, working with effective date, they can select the intended assignment: assign on anniversary, assign immediately, and assign in future.

Choices include the plan being queued for addition until the next account billing anniversary, or immediately, or any future date. Proration options include: no proration, all proration (credit old subscription plan and debit the new one), charge proration only will debit the new subscription plan only (and ride out the old one for the cycle), credit proration only will calculate and apply a prorated credit for the remainder of the billing period for the old plan being removed. Other assignment scopes include remove plan, de-assign immediately, on anniversary, or in future.

Aria Crescendo is exclusive in offering this many proration capabilities. Moreover, the presentment of this to client end-users is clear, as are account logs for client agents, as well as all of the downstream reporting in support of financial teams and their revenue reporting purposes.

Multiple, Secure Payment Service Providers

Aria Crescendo is pre-integrated to approximately 20 payment processors/gateways, adding new integrations at a rate of approximately 2-4 per calendar year. Aria's innovations in secure payment options align with what multi-national enterprises need to take advantage of the Internet of Things (IOT) to monetize them and collect against their breadth of services, devices, data, APIs, access and other assets.

Fig.5: Payment Integrations

These global payment integrations are reflective of the functionality provided through each merchant product, and bi-directional and batch-based support is provided for ingestion and application of mission-critical activities like delayed declines, chargebacks, and credit card updates. For added support to these integrations, the platform captures any error codes returned and maps these to messages associated with them, in Aria Crescendo, along with logging the raw error codes/messages.

Recovery

Authorizations can be declined for a variety of reasons, such as: account number replacement or expiration, insufficient funds or credit limit, bank system maintenance or temporary network problems, network rules that conflict with method of payment, card account expiration, and card number replacement. With Aria Crescendo's integrated support for the updater services with certain global merchants, clients may benefit by recovering as much as 40% of declined revenue. This capability is extended to multiple card types, including American Express, Visa, and Discover cards.
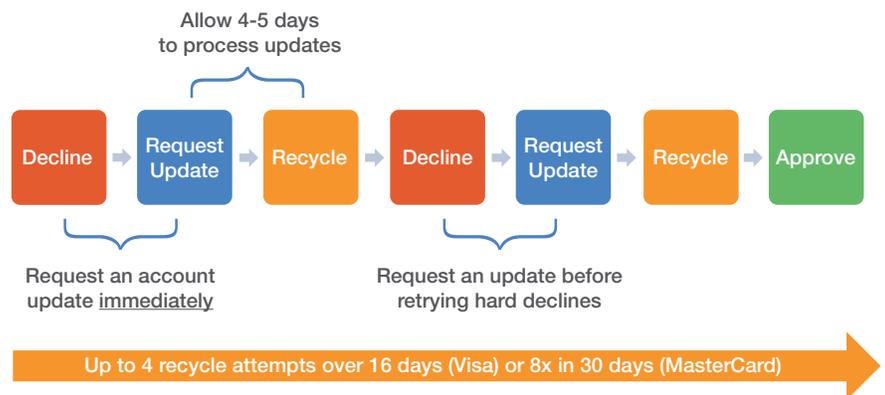

Fig.6: Example of Retry Logic

The diagram below is an example of one style of retry logic that the Aria platform supports. Furthermore, for clients with different needs, this logic is fully customizable and can be tailored:

Dunning

Most enterprise business lines have complex needs related to end-user notification, card retry attempts, grace periods, fees, and ultimate de-provisioning of non-paying accounts. Additionally, these needs differ greatly when the direct and indirect business models are compared against one another, and differ still within the indirect business model when end-customers and partners are compared against one another.

The Aria Crescendo dunning engine, flexible array of billing-behavior configuration settings, and the workflow feature combine to give the market a powerful and flexible set of capabilities to completely automate the dunning process, both today and as policies change over time:

- Send notifications and reminders to customers through their preferred communications channels (including mobile and IoT-enabled devices), configure orchestrated escalations in multiple stages, and differentiate escalation procedures based on product line, account group, or other factors.

- Manage service delivery based on a customer's payment status, and reduce potential revenue leakage by leveraging Aria's seamless service activation to suspend service automatically at any stage in the escalation process, or continue to deliver service as long as demanded by business need.

Aria's dunning process is ecosystem-aware. Even when collections are managed from an ERP platform, Aria Active Orchestration ensures automatic management of service delivery based on payment status. This is configurable by business users, providing the agility necessary to make decisions at the speed of business.

The platform's dunning plans support any number of steps, and within each step, any combination of customizable email notices to the customer, retries of credit cards, applications of flat or percentage-based late fees, and/or gradual degradations of service. Aria clients can construct as many distinct dunning plans as they desire, then apply those plans to specific segments of their account base, based on geography, customer segment, or payment method type.

Financial Management

Aria Crescendo considers the many enterprise business-need viewpoints and delivers synthesized processes and systems that increase automation while streamlining data and actionable insights for a full-flow monetization ecosystem.

Global Taxation

Aria offers a native tax engine that fully supports national and federal taxes and state and province taxes, including support for tax-on-tax and tax-dependent-taxes models. Clients can configure tax rates to perform VAT, GST, and other tax calculations in Aria Crescendo. For exceptions, tax settings can be configured so that the object, which has pricing associated and charges calculated, at the most granular level, can be flagged as globally non-taxable and therefore will not be included in any tax calculation. In addition, should a service item be potentially subject to tax in any jurisdiction, the item would be flagged as taxable and associated with the appropriate tax group (such as software, hardware, dial tone, etc.).

For more demanding n-levels deep of taxation, Aria Crescendo has fully-built integrations to the following global taxation platforms: Avalara, Vertex, Sovos Compliance, EZTax, and Thomson Reuters OneSource.

All options allow for real-time, integrated, best-in-class global taxation capabilities, including both pricing simulation and refund support.

Revenue Recognition Support

Aria's revenue recognition management solution provides the following capabilities and benefits.

- Full compliance with the revenue recognition accounting and reporting requirements of AICPA, EITF, FASB, SEC, GAAP, and SOX principles, standards, and regulations.
- Comprehensive support for the full spectrum of transactions possible with extremely flexible and agile recurring revenue business models.
- A single-source system of record for all recurring revenue recognition activities associated with accounting, reporting, and forecasting applications.

- Automated accounting and reporting processes, encompassing prepaid, postpaid, flat-rate, variable usage-based, progress-based, etc., with controlled data access and configurations.
- Seamless integration of the solution with the GL system, other financial systems, and all analytics applications, at summary and detail levels, with extensive built-in auditability.
- Task-focused, simple, and consistent user interfaces making the complexity of revenue recognition transparent across operations and the end-customer.

Aria is experienced with 3rd party revenue recognition integrations as well. Clients with particularly sophisticated recognition rules (e.g. arbitrary partial recognition, arbitrary calendar recognition, inter-product/multi-factor conditional recognition) opt for use of purpose-built 3rd party recognition systems, and Aria provides both pre-configured and customizable tools for integration to such systems.

General Ledger Integration

Seamless integration is possible with Aria Crescendo to the General Ledger system, other financial systems, and all analytics applications, at summary and detail levels, with extensive built-in auditability. All ERP General Ledger integrations are bi-directional, with inbound-to-Aria functionality typically a synchronous application of externally-sourced payments, credits and refunds, and outbound-from-Aria functionality typically batch-based and asynchronous.

As a cloud service specializing in enterprise monetization, and dealing with financial data whose controls affect a company's general ledger, the platform has been year-over-year audited since 2007 (formerly SSAE 16 or SAS 70 Certification) to ensure for the appropriate SOC 1 controls global organizations depend on.

Uniquely, the Aria Crescendo solution supports customers requiring multiple General Ledgers. All fully-customizable data extracts, including those in support of feeding downstream general ledgers, can be sent in any format to any number of destination systems, and each extract can be fully customized to contain only the product and/or account segments relevant to it.

Infrastructure

Security

Benefit from Aria Crescendo's unmatched security experience running a trusted enterprise cloud platform reaching users across six continents. Aria's deep investment in technology, processes, and experienced leadership quickly reduce security and compliance costs to clients. With premium security and extensible access, completely integrate Aria Crescendo into any SAML-enabled application.

In delivering compliant, independently-verified services, Aria will streamline clients' compliance for the infrastructure and application, and share detailed evidence in support of how specific regulatory standards are achieved.

Around-the-clock defense safeguards known and emerging threats through continuous monitoring and analysis of traffic, routine vulnerability and penetration tests, and regular patching.

Quarter over quarter, year over year, Aria's squeaky-clean report card has proven the platform as leader in data protection and data privacy. The analyst and market choice for the enterprise, Aria's steadfast processes enforce the industry's most secure policies.

Role-based access

Maximum flexibility with Aria Crescendo is possible with user roles.

The entirety of the Aria Crescendo user interface governs all functions surrounding behaviors of a given Aria implementation, the maintenance of a given client's product catalog, the administration of all of its customers, and the access to data is secured through highly granular role-based access. The product ships with 5 pre-defined roles. Client administrators can choose to customize the functional access, dataset access, transaction limits, and approvals within each role, as well as fully define and apply custom roles. Administrators can also customize refund limits for application users, enable or restrict payment capabilities, define report access, and show or hide account particulars. With Aria, nearly limitless role definitions are possible.

Delivery Model

Aria Crescendo is a multi-tenant cloud offering with multiple deployment options. Customers can choose standard service from a multi-tenant cloud or premium service via a Private Suite or Private Appliance. With the Aria Private Suite model, there is flexibility with release windows. With all deployment models, through Aria's exclusive LiveRelease™ technology, Aria rolls out new platform code releases and feature enhancements transparently (and always backward-compatible) without downtime. With the Aria PrivateSuite™ selection, data is placed onto a dedicated set of database servers including dedicated failover, backup, and disaster recovery systems.

Carrier-grade Infrastructure

Aria understands the gravity of product and customer lifecycles, and is acutely committed to the supporting demands of the enterprise to administer product and account development, testing and production deployment in environments of identical build.

High-volume usage and on-demand products command a cloud platform with substantial dynamic scale, with low-latency and high availability. Aria's enterprise customers cite rapid time-to-market and with these core requirements as being very strong.[5]

Application/Software Stack

The internal Aria Crescendo framework is built upon a massive Oracle Enterprise data store at its core. Aria's externally accessible interoperation points are built on a fully SOA/MVC standard model within a PHP/Symfony application framework. The platform's heavyweight batch operations and bulk data-interchange operations are built primarily using Perl.

Every communication between Aria and adjacent systems is performed with secure protocols. Moreover, externally accessible touch points are authenticated via two-factor authentication and filtered through client-driven IP whitelists and blacklists, from within the application. Additionally, all data within the Aria stack is encrypted both when at rest and when in transit intra-stack.

Hardware Stack

Built using top-tier hardware and software products from HP, Hitachi Data Systems, Cisco, Oracle, and Citrix, every component is backed up by 24x7 premium-level support contracts, and localized in secure, self-contained cabinets. This system's design allows for on-demand expansion via modular design, easily integrates into a client's enterprise ecosystem, and has built-in integrations with a wide array of external payment providers and banks. In addition, the Aria cloud infrastructure provides the following safeguards:

- Redundancy within individual system components: dual power supplies, controllers, drives, etc.
- Redundancy on the server level: N+1 clustering configuration for all databases and critical servers
- Hot spare modules for all system components
- Active real-time monitoring and alerting system with direct link to support personnel
- Real-time, impact-free failover procedures for databases and other customer-facing services
- For resilience, all data is stored independently and at least twice
- Offline backups and data duplication to a remote disaster recovery facility

Integrate and Tailor Processes with Active Orchestration

Aria Active Orchestration integrates Aria Crescendo with an enterprise's applications and systems to manage the many revenue moments that occur between the provider of a service and its customers over the lifetime of the relationship. A core capability of the platform, Active Orchestration leverages platform foundation APIs and enables seamless synchronization across enterprise systems, automating proprietary business processes and extending Aria Crescendo capabilities into the ecosystem.

Active Orchestration uses event payloads to synchronize data across ERP, provisioning, financial, and other platforms without the extensive coding or logic required by other systems. Active Orchestration works across the Aria platform to enable Aria customers to automatically manage customer relationships based on data-driven events important to the business.

Communicate   Act & React Automatically   Endless & Codeless Optimization   Automate Revenue Assurance   Every Touchpoir Managed

ARIA ACTIVE ORCHESTRATION

Platform APIs

Aria Platform APIs are REST and SOAP based, and provide access to all Aria functionality and data. In contrast to an application where APIs expose only a subset of functionality, Aria allows access to anything through a rich and robust set of over 360 APIs. With Aria APIs, access any piece of functionality exposed in the UI, and even enriched functionality not available in the UI.

The hundreds of APIs are both coarse and fine grained, which allows the appropriate detail level of data to be accessed. This avoids the pitfall of many APIs, which can be chatty due to the number of API calls required to complete business processes. Aria offers three types of APIs—configuration, service and reporting—with custom web services creatable using the platform's workflow feature.

Events and Notifications

Aria Active Orchestration takes changes to accounts, orders, payments, usage—any of over 170 events that matter to recurring revenue—and sends a data-rich payload to synchronize the data without custom coding or manual processes. Examples of these 170+ events include: adding a new customer, changing a service plan, changing an account or account relationship, paying an invoice, changing a payment method, or an expiring credit card. Event payloads are pushed in near real-time and include enough actionable data for external systems like CRM, GL, service provisioning, or payment processors to complete their task.

When subscribed events occur, Aria publishes that event into the asynchronous event bus and distills an XML document which fully describes the event and provides all naturally associated data elements to make that event fully understandable and actionable to external systems without the need for additional API-call-backs.

Clients can subscribe to any events in this library and provide fully configurable rules for one-or-more destinations of the XML payload, determination of successful (or unsuccessful) processing of the outbound event payload, number of retry attempts, and seconds between retries. Failed events are managed in a temporally-sensitive manner in order to guarantee that race conditions and "out of order" scenarios never occur. The history of all published events is permanently maintained in order to provide a way to easily re-publish any number of events within any historical time boundary in case a client ever has the need for data recovery.

Data Access

Aria provides full data access and export capabilities, as part of the feature-rich integration capabilities for a system purposefully designed to function in a loosely coupled environment.

Workflow

Workflow is a familiar concept in enterprise software. Typically, a separate offering with separate support, Aria Crescendo's workflow feature is supported by Aria and easily configured instead of coded. It comes preloaded with Aria's API library, in addition to any proprietary workflows designed as part of an enterprise implementation. This feature is used to codelessly define and automate custom business logic within Aria, between Aria and users, and between Aria and third-party systems.

The workflow feature offers complete business process automation capabilities with drag-and-drop form creation, flow modeling, and rules tables for making complex evaluations simple. It offers pre- and-post processing capabilities, captures approvals, has a flexible dashboard for status and analysis, and maintains a full audit trail. Aria Crescendo's workflow feature can also be called as a web service, effectively creating custom business APIs that do more than just add an account.

Aria for Salesforce

Proper integration is key to enterprise billing and revenue management. Aria provides a certified Salesforce connector for close collaboration with omni-channel customer engagement. Recently, Salesforce selected Aria Systems for billing and revenue management to complete the Salesforce for Communications Ecosystems, furthering support of Communication Service Providers (CSPs) and the IOT. Aria connects with Salesforce to maximize features and reach, through:

- Monetization Process Management – Aria Crescendo automates core billing and revenue management capabilities.
- Product Management – A dynamic and n-level hierarchical product catalog for sophisticated subscription and usage-based pricing, packaging and bundling, and promotions and discount management.
- Customer Management – Provides actionable customer insights to monitor and influence behavior.
- Cloud Billing Management – Provides lights-out billing with human intervention required only on an exception basis.
- Financial Management – Ties billing directly to the ERP system of record.

Bi-directional synchronization of all changes, a plan wizard for guided selling, and full customer account history mean the data teams need is at their fingertips in Salesforce. The resulting payoff is all the information centralized in either platform of choice—Salesforce or Aria—to provide informed intelligence for smarter, faster decision making.

Aria Revenue Analytics

Aria Revenue Analytics is a set of out-of-the-box analytic and operational reporting capabilities included in Aria Crescendo. Purpose-built for recurring revenue, Aria Revenue Analytics provides insight and context via dashboards and analytic, operational, and custom reports to accelerate growth while maximizing customer acquisition and retention. Built for enterprises, Aria Revenue Analytics runs in the Aria cloud on best-of-breed, enterprise-grade technology.

Aria Revenue Analytics is purpose-built for recurring revenue, providing the information necessary to design a high-performing recurring revenue business. Dashboards use time-based snapshots to show historical performance trends and include panels with customizable sections to display data that informs business decisions. Analytic reports focus on specific business process areas, like finance and marketing, and 70+ operational reports provide detailed or summary data in a variety of formats and distribution options. Customize reports with unique data elements and custom groupings to further extend reporting capabilities.

Deeper Insight from Context

Aria Revenue Analytics provides deeper insight into recurring revenue offerings through context. Compare current performance against historical trends or by customer decile. Overlay promotional data to find out what works and what doesn't. Include time-series trend data, complex calculations, custom attribute groupings, and conditional formatting that highlights out-of-range attributes and metrics in color. Share data using both grid and graphical visualizations. Drill down, across, and up to get the insights necessary to maximize customer acquisition and retention and grow business faster.

Enterprise-Grade, Hassle Free

Aria has done all the heavy lifting for immediate impact. There is no waiting for a data warehouse to be designed, configured, and deployed. No managing multiple solutions from different vendors.

Aria Revenue Analytics uses enterprise-grade components from Amazon Web Services and MicroStrategy for maximum performance, security, and scalability.
Managed by Aria, Revenue Analytics eliminates the hassle, delay, and overhead of accessing multiple systems with heterogeneous data metrics. Aria Revenue Analytics supports corporate compliance with customizable bulk export files for simple data integration into client corporate data warehouses or other systems.

Why Aria

The world's most demanding enterprises trust Aria, and this trust is enabled through a platform equipped with connectivity, speed, and stability with upside returns. Moreover, clients are provided with a support team whose experience in this domain is unrivaled.

Aria is enterprise grade - Aria recognizes that enterprise billing solutions can never be a success in a vacuum. The billing and monetization platform is purpose-built with the understanding that no two enterprise implementations are the same, but that all demand the highest possible levels of reliability, security, and scalability. Additionally, peaceful coexistence and tight integration with the surrounding ecosystem of related systems and processes is crucial to the success of any implementation.

Aria is uniquely architected - More than any competing solution on the market, Aria Crescendo delivers by far the widest range of functional capabilities, through a platform that enables business agility while mitigating—if not eliminating entirely—the need for expensive, time-consuming, custom, code-based solutions.
The highly extensible platform provides support for the most complex of product catalogs; the most advanced change management and proration logic; endless usage- and consumption-based billing models; the most sophisticated distributed and split billing needs; the most complex account hierarchies; a robust workflow engine for codeless support of any proprietary business processes; extremely automated billing, dunning, and collections processes; deep, intricate, integrations with related systems and processes; and a completely integrated world-class business intelligence capability.

Aria is experienced - In every facet of the organization, through every step of pre-sales, implementation, and ongoing customer success processes, Aria acknowledges and embraces the extreme complexity that accompanies problem solving at the enterprise level. Aria proudly maintain a company culture that is filled with enterprise professionals who have extensive, proven billing and BSS/OSS expertise, and who deeply analyze and diagnose before prescribing. As a result of this approach, Aria Systems enjoys a near-zero attrition rate among enterprise customers, and takes great pride in a track record of consistently on-time and on-budget implementations.

About Aria Systems

Aria Systems cloud-based monetization platform is the consensus analyst choice, top ranked by leading research firms. Innovative enterprises like Adobe, Roku, and Pitney Bowes depend on Aria to accelerate time to market and increase flexibility, enabling them to maximize customer value and grow recurring revenue through subscription and usage-based offerings.

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