



BigRating

turn Big Data
into Big Money



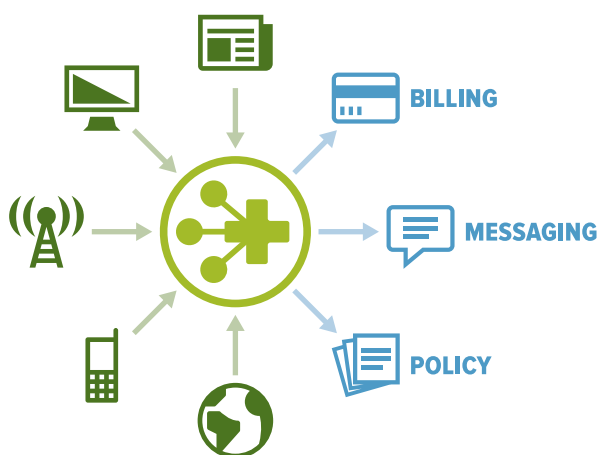
BigRating is a high performance processing engine for Big Data providing **real-time usage and recurring billing, policy management, usage alerts, analytics and revenue assurance** for any kind of bulk event data.

Introduction

BigRating provides a billing and policy oriented event stream processor for BigData applications across multiple industries. Process billions of events per month across millions of subscribers with a single BigRating server; or scale out to multiple servers for additional performance and redundancy.

Analytics and Reconciliation

BigRating provides real-time analytics for the current billing cycle, including customer, charging and reconciliation statistics. In a fully configured system, BigRating can provide gross profit estimates for every individual event in real-time - providing unparalleled revenue assurance granularity and timeliness.



Usage Billing

BigRating accepts usage events from any number of sources, calculates and logs the charge for each individual event, and aggregates the charges before forwarding them to the accounts receivable system for invoicing. The billing cycle can be configured on a per customer basis; BigRating supports monthly, day-of-month and custom billing cycles.

BigRating billing rules can be configured against multiple usage dimensions on a single event, such as uploads and downloads on an internet service, or energy consumed versus energy generated for solar energy services. Available rules include any combination of:

- Tiered usage charges
- Fixed price usage charges
- Monthly included value allowances
- Per day/session/month usage allowances
- Prepaid usage allowances
- Overage charges
- Peak & Off Peak Rates
- Day-of-week Rates
- Minimum event charges
- Minimum total monthly charges

BigRating can integrate with e-wallet solutions to provide pre-paid value services to multiple users simultaneously.

Recurring Billing with Automatic Pro-Rata

BigRating provides advanced, per-subscription recurring billing, which can be applied on any schedule (daily, weekly, monthly, quarterly, custom), and can be charged in arrears or in advance.

BigRating supports fully automatic pro-rating of all plan changes (including service onboarding and termination), based on change dates and subject to your business rules. The integrated goal-seeking pro-rata engine supports any change to an account's plans or settings, is fully automatic, and never requires operators to manually calculate a charge.

For example, if a customer changes plan mid-cycle, BigRating will automatically schedule a credit for the unused portion of the month, and a new charge for the remainder of the month. A customer may make any number of changes during their billing cycle, subject to your business rules, and the resulting invoice will be correct, to the cent.

Plan Changes and Re-Rating

BigRating makes change management easy. It automatically supports both post-dated and retrospective plan changes, including changes that affect usage charges. Post-dated plan changes can be made at any time in the future; recurring charges will be adjusted automatically at the date of the plan change, and any corresponding policy changes will be automatically applied. For retrospective plan changes, BigRating will automatically raise an adjustment to any invoice that's already been raised; this includes the automatic re-rating and adjustment of previous billing cycles to ensure that the resulting charges are always correct.

For example, if a backdated plan change increases the amount of free storage space provided to a customer in the past, BigRating will automatically check any billing cycles which have already been billed, apply the free rate to storage which was previously non-free, and issue a corrected set of charges, along with a reference to the old charges, to the

billing system. The billing system then collates the changes and presents them to the customer on their next invoice. All of this happens without any operator intervention at all.

In addition to customer plan changes, if a BigRating plan definition is modified for any reason, BigRating can identify and re-rate all affected customers in bulk. The bulk re-rating process, once requested, is also fully automatic.

Usage Aggregation

BigRating fully supports usage aggregation. One or more independent services can be combined and billed as a single service. Each individual service is also subject to its own policy and independent usage and billing rules. Usage aggregation is ideal for business and family accounts where services are allocated to multiple offices or individuals, but billed as a whole.

For example, if a business purchases multiple VoIP handsets for use in their office, each service might be charged a standard recurring rate, but the usage could be aggregated to allow the customer to take advantage of bulk calling rates. Alternatively, a single recurring charge and usage charges could be applied across all handsets. In all cases, policy settings could be applied to both the individual handsets and to the handsets as a group.

Multi Party Guidance

If events relate to a service provided by a third party to your customer (such as with VoIP and SMS), BigRating can automatically calculate the supplier cost of each event for reconciliation, revenue assurance and analytical purposes.

If some events relate to more than one customer, then all customers can be charged - and multiple suppliers can be reconciled - independently for those events. The reconciliation cycle for cost rating will be independent from the customer's billing cycle. All charges and reconciliation are linked back to the original event for later analysis.

Policy Management and Notifications

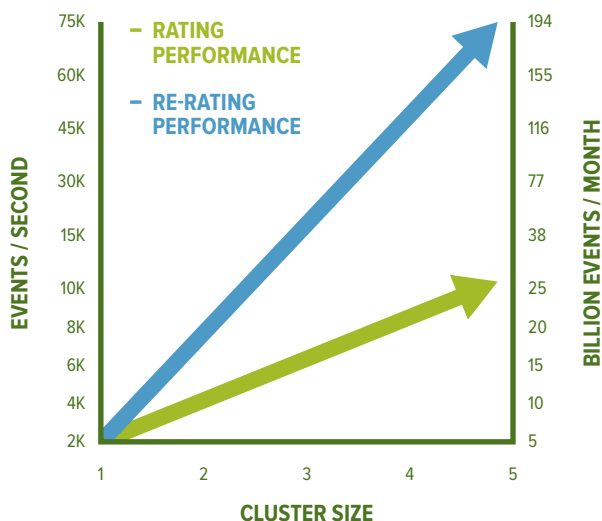
BigRating generates configurable policy management events based on the current plan, as well as daily, weekly, monthly or session usage limits; allowances, usage caps, spend limits; and other events triggered by usage.

Policy management events are issued in real-time, allowing shaping, service restriction or other policy actions to be taken as soon as customer limits are reached - and limiting the amount of unbillable service provided to users. Policy restrictions are automatically reversed at the start of a new customer billing cycle, ensuring that customers have automatic access to their entitlements as soon as they become available.

BigRating's vendor neutral policy management events are designed to be used as input to a policy enforcement system such as Inomial's Federadius server.

BigRating can provide notification to end-users for usage caps and spend limits. Notifications can be configured on a per-subscription basis, and can be set as a percentage of included usage or spend limit; for example, a customer entitled to download 10Gb of free data can be configured to receive a notification at 50%, 75%, 100% and 150% of usage.

Performance



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Data Sources

BigRating can be used to process any kind of billable event data stream in real time, and supports multiple charging dimensions per service (such as time, downloads and uploads for data services).

BigRating accepts data from your services in a standardised format. Inomial also provides developer support and professional development services to convert your data into BigRating's format.

Example data sources include:

- Telco CDRs (PSTN, MVNO)
- RADIUS accounting
- Content Views
- NetFlow
- SNMP Polling
- Video on demand / IPTV events
- Energy & Smart Meters
- Water / gas / utilities
- Data Center Usage (power, aircon)
- IaaS/PaaS/SaaS
- Public transport tolling
- Road tolling
- Microtransactions
- Bulk messaging
- Internet of Things transactions
- Event Cost Accounting
- Email send / receive
- CPU / RAM / Storage
- Generic Logfiles

Related Products

Smile: Automatic Accounts Receivable™ is a real-time, zero-touch solution for receivables, collections, commission and debtor policy management, with an emphasis on integration, automation and zero-touch operation.

Federadius: distributed fault tolerant RADIUS authentication, accounting and policy enforcement engine for carriers.

Flow Control: distributed NetFlow and SNMP polling and data aggregation for carriers.

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