ATIOnet Rules, Restrictions and Balances

About: *This document discusses the available rules types and their interaction with sub-account balances and contract balance processing configuration at transaction authorization time. ATIOnet supports different ways to implement restrictions and limits; this information should be useful to plan ahead the best suited alternative for each case.*

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Contents

Overview

ATIOnet Authorization Engine evaluates authorization requests using a three-step process:

- Validations: First, transaction requests are inspected against formatting defects, attack intents, and data integrity issues.
- Rules processing: Following, the engine checks whether the transaction can happen based on restrictions configured directly to the sub-account or inherited from the location, the contract, the classification or the groups to which the sub-account belongs to. These set of rules might restrict the execution of the transaction but also the amount and product to be served.
- Finally, if the transaction can happen, the amount or volume resulting after rules processing is sent to the current accounts sub-system, to check if it can be approved based on the contract's or the sub-account's balance.

As a result of the evaluation process, a transaction can be *declined*, *approved*, or *partially approved*. Depending on the Terminal's and protocol's capabilities a partial approval could be converted on a decline response. Also, there is a special decline situation called **Re-prompt**. Some Terminals can understand a re-prompt decline and just have the user enter an addtional piece of data, instead of completely rejecting the sale, whith this new prompt the transaction is re-sent to the host to be re-evaluated.

> *ATIOnet always approves using the most restricting criteria*

Restrictions

Let's define *Restriction* as any system behavior that limits some dimension of a transaction.

The *dimensions* of the restrictions are:

- Location: **Where** a transaction can be performed
- Temporal: **When**, certain days, days/time, fixed from/to dates.
- Value: **How much** money or product volume can be authorized
- Object: **What** product(s) and services can be charged
- Cualification: complementary **data** included during transaction capture (prompting) plus the operative **condition** (for example: offline or contingency entry method)

Restrictions can be derived from or affected by:

Rules

   Rules are the main way to set restrictions and conditions for the transaction authorization

Vehicle Class

The Vehicle class enforces fuel quantity limit and fuel product restriction to every vehicle belonging to that class without the need to set a quota or product rule.

Program

A Program is a set of attributes that can be selected for a given Identification type. Programs can be used to easily manage a very broad group of Identifications beyond particular sub-account conditions (for example: A Gold Card that has no restrictions)

Site configuration

Site's product configuration may indirectly impose a product restriction due to product availability configuration.

Terminal / Controller configuration

Terminal's configuration affects the authorization in three ways:
- Sets the Max Cutoff Amount or Volume
- Sets the Default product, to be used when a money preauthorization is received but the account is set on product instead of money
- Flags the site as AVI-installed (automatic vehicle identification). Depending on Program's configuration, a transaction using an identification technology other than AVI (i.e: magnetic cards) might be flagged as a Contingency transaction.

Contracts

The terms of Merchant and Company contracts define the behavior of the current account subsystem, but also product and location restrictions, and both are subjects for rules application by themselves.

Rules

A Rule in ATIOnet is a user-defined condition that must be met by a transaction to be approved, or a user-value that will be used during the calculation of the amount or volume to be authorized.
Rules are user configured and given a name when created, so they can be reused or modified affected all related subject with a single user action.

Types of Rules

1. **Quota**: Restricts the number of transactions or total consumption (volume or amount) on each given period of time. The parameters are the Periodicity (daily, weekly, bi-weekly, etc) and the possible quota values (Transactions count, Money or Volume quota, Contingency quota, Offline quota and Security Limit)
2. **Fixed time**: Limit the operation to a certain period of time, after which the subject is not allowed to operate
3. **Location**: A list of Sites where the subject will be allowed to initiate a transaction
4. **Fuel Product**: Product(s) allowed to be included in the transaction
5. **Transaction Limits**: Maximum value for each transaction

6. **Days/Time**: Restriction to purchase only on certain days of the week and/or at certain times of the day
7. **Prompting**: Additional data required to be included in the authorization request. Options available:
   - Vehicle ID, Driver ID
   - Vehicle PIN, Driver PIN
   - Odometer and Engine hours, both with Min/Max variation from last transaction
   - Trailer Number
   - Miscellaneous prompt

Subjects for Rules

Rules can be applied to:

- Vehicles
- Drivers
- Fleets
- Classifications (user-defined groups of Vehicles or Drivers)
- Sites

Balances

The Balance is the available purchase limit of a Contract or sub-account (Vehicle or Driver).
A Company contract can be Credit or Debit, but also may have three possible ways to maintain the balance.

- **Balance Dispersion Mode**: In this mode, the effective balance is maintained at the sub-account level (each Vehicle or each Driver); meaning that no matter the balance of the Contract, the authorization request will be evaluated against the sub-account balance. This implies that after depositing values on the Contract -or renewing the period credit allowance- the Contract balance must be distributed to the sub-accounts by the Company via an automatic or manual Balance Dispersion transaction.
- **Contract Balance**: Is the opposite of the Dispersion Mode. In this mode, the balance is maintained at the Contract level, all sub-accounts consume from the global balance and no dispersion operation is needed.
- **Autofill**: This is a special mode, only available for Homebase subscription. In this mode, the current accounts sub-system is virtually nullified. Each time a transaction authorizaiton is requested the subsystem triggers an automatic deposit to the Contract or sub-account to compensate for the consumption. This mode is not available on Retail and Network subscribers.

Please refer to the document AN-Company_Contract-TechGuide.en for further information on Balances and Contracts.