

15 SEPTEMBER 2021

AUTOMATED RISK MANAGEMENT SYSTEM

HUNTLI.IO

Huntli.io

AUTOMATED RISK MANAGEMENT

A Risk Management System That Detects And Blocks Any Fraudulent Activity That Fraudster Might Attempt With The Customer's Online Banking Account Or Payment Card In Real-Time. Our System Proactively Monitors Accounts And Enhances Your Bank's Fraud Prevention And Detection

We have been talking to dozens of risk analysts from banking, insurance and casino, and defined common problems and tried to solve them, as result we created an ecosystem which covers such things as: real-time transactions monitoring, AML-screening (also in real-time), case management, data from different sources in one place, TPP monitoring, relationships tracking, Machine Learning for behaviour screening.

Our system works super fast, in real-time and can be integrated within month into enterprise and could be moved to cloud as SAAS. We also can provide separated development team with Quality Assurance Specialist, Project Manager and Architect on demand.

What is secret sauce in regard to fraud detection?

We are using a combination of complementary tools - old-school rule engine and AI for behaviour tracking which allows us to create alerts or block transactions on the fly, as well as prevent money laundering activities faster and everything happens in real-time.

Our approach is not only provide tools for fraud detection/prevention but combine them for common good and get the most of them. It helps to automate huge part of daily routine of Risk Management and increase overall performance of the department up to 40%.

What is USP?

We are providing a real-time transaction monitoring system (a very small amount of completion works in real-time), which has a combination of different complementary tools, which includes:

Customer profiles with change-log, case management, relationships tracking, devices tracking, IP monitoring, authorisation attempts and TPP (third party payment providers) requests monitoring, the log of clients transactions - this number of tools and their combination makes it quite unique

Transaction monitoring happens in real-time and risk analysts can react to them faster by getting alerts in time. We made sure that the right person will be alerted, because of the customer-based access rights.

Visual Rule Engine - this is one of the killer features, cos we providing visual builder to create rules used for transaction monitoring when all our competition provides Specific Language for rule descriptions (we also support this).

Reports generation on the fly

TPP monitoring - we are tracking TPP and their request to client accounts, as well as tracking relationships between TPP and clients

AML-module - additional module allows us to run AML-check automatically in specific situations automatically, usually, it is triggered manually. We are using technic that allows us to run the screening process fast and with good accuracy.

Real-Time Transactions Monitor. Risk management system that detects and blocks any fraudulent activity that fraudster might attempt with the customer's online banking account or payment card in real-time.

Old-school Known Fraud Patterns. Rules are a key part of the fraud detection systems. It is a mistake not to use rules in situations where they have over 90% detection rate and where there's no need for a 'grey area' in the answer – for example always flagging a payment from an extremely high-risk country or region.

Anti-Money Laundering. Anti-Money Laundering Service which analyses all transactions and marks AML-like ones or declining really suspicious transactions

SANCTIONS AND PEP SCREENING, ADVERSE MEDIA

We offer a simple way of being compliant with the latest AML Laws and Regulations.

The process is tailored to your exact line of business. In order to create highly satisfying solutions, our company has adopted the latest technology and equipment in the field into practicality

Our KYC Screening tool helps to identify if your Clients are:

- Politically exposed persons (PEPs)
- In any of the global regulatory and law enforcement lists
- Subject to national and international sanctions
- State owned and state invested enterprises
- Convicted or suspected criminals
- Mentioned in any negative media
- A reputational risk to your Company, for any other reason

Included Lists:

◆ **Criminal:**

- ◆ Interpol Red Notices
- ◆ Europol - Europe's Most Wanted Fugitives

◆ **Sanctions:**

- ◆ Financial Intelligence Unit of Latvia (FIU Latvia) Sanctions
- ◆ Office of Foreign Assets Control (OFAC) sanctions
- ◆ United Nations Security Council sanctions
- ◆ EU consolidated electronic list concerning persons and entities subject to EU financial sanctions
- ◆ Interpol sanctions
- ◆ UK, Her Majesty's Treasury, Office of Financial Sanctions Implementation
- ◆ U.S. Treasury Department Sanctions

◆ **Offshore:**

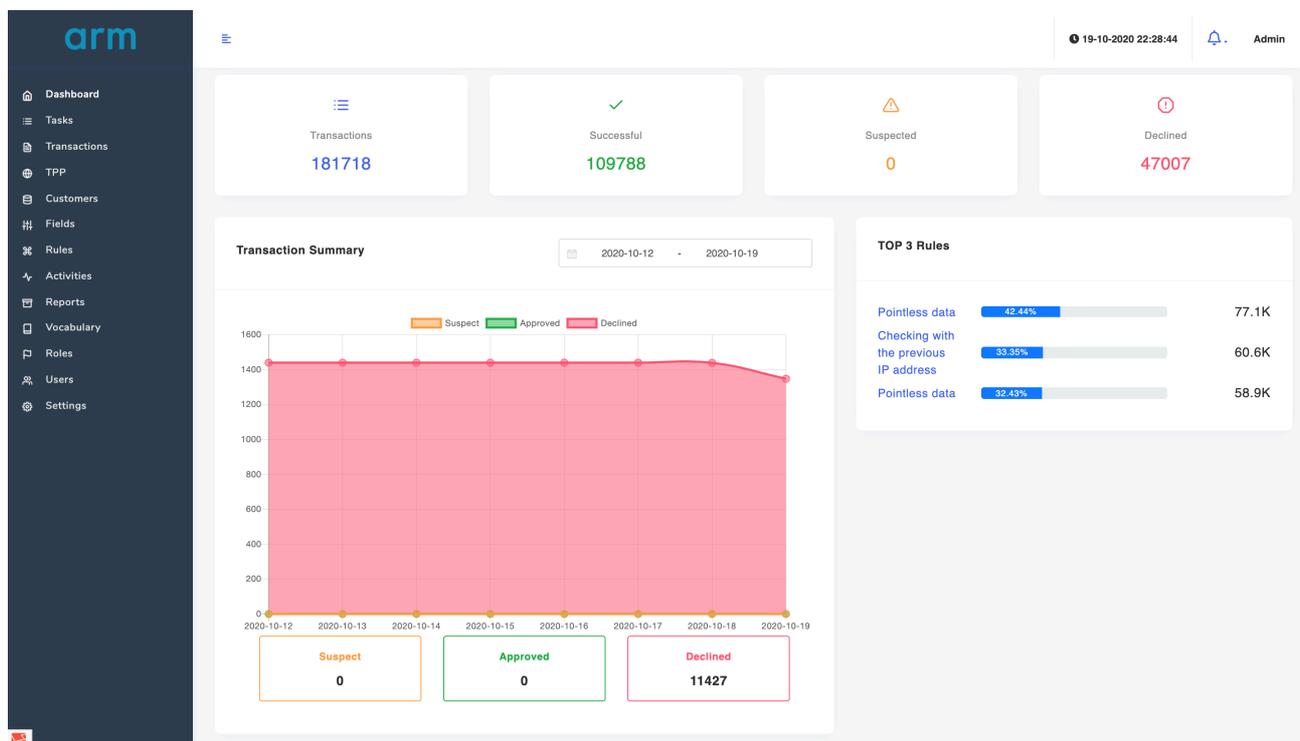
- ◆ Panama papers
- ◆ Paradise papers
- ◆ Bahama leaks
- ◆ Offshore leaks

◆ **PEP:**

- ◆ Latvian Saeima and Regional Politicians
- ◆ World Leaders
- ◆ European politicians

NOTE: Additional (custom or from different providers, for instance, Accuity, Worldcheck, Dow Johns etc.) lists and databases could be added on demand.

DASHBOARD



On the Dashboard you can see the amount of all transactions in the system, amount of successful transactions, Suspected and Declined. Another metrics such as amount of customers, TPP, Vocabulary data, Information about reports etc could be shown on that screen.

The graphic represents transactions and their statuses. By clicking on the status under the graphic you can filter it out and display only type you need.

Another block on the Dashboard is a statistics. We are showing TOP 3 Rules and how much entries they have, and it is also possible to show another statistics such as most popular rules, least popular, transactions types, user devices, locations, vocabulary data etc.

And the last block on the Dashboard is displaying the list of last transactions filtered by Status to show Suspected and Declined Transactions in the list (the filtering can be changed any time).

Last day transactions

Filter by Keyword... Filter by Customers Suspect Declined Filter by Types 2020-10-19 - 2020-10-19

#	Transaction	Status	Customer	Show
181719	[Internetbanka] #81566214 Amount: 113650.00 EUR Created at: 2020-10-19 22:28:04	Declined	Test Customer	Show
181718	[Internetbanka] #65753238 Amount: 6063.00 EUR Created at: 2020-10-19 22:27:04	Declined	Test Customer	Show
181717	[Internetbanka] #16262159 Amount: 18891.00 EUR Created at: 2020-10-19 22:26:04	Declined	Test Customer	Show
181716	[Internetbanka] #89438448 Amount: 171698.00 EUR Created at: 2020-10-19 22:25:04	Declined	Test Customer	Show
181715	[Internetbanka] #96114354 Amount: 87246.00 EUR Created at: 2020-10-19 22:24:04	Declined	Test Customer	Show
181714	[Internetbanka] #56909006 Amount: 191299.00 EUR Created at: 2020-10-19 22:23:04	Declined	Test Customer	Show

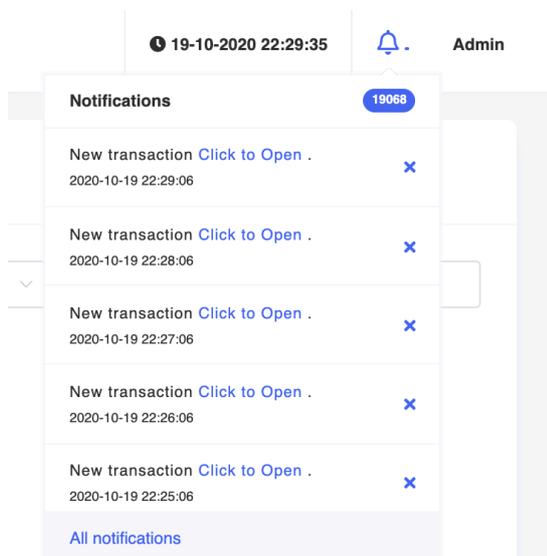
When new transaction is coming it appears in the latest transactions list on the Dashboard:

The screenshot shows the ARM dashboard interface. On the left is a dark sidebar with navigation options: Dashboard, Tasks, Transactions, TPP, Customers, Fields, Rules, Activities, Reports, Vocabulary, Roles, Users, and Settings. The main content area is titled 'Last day transactions' and includes the same filter controls as the previous image. A blue notification bubble in the top right corner says 'New transaction Click to Open'. The table below shows a new transaction highlighted in green:

#	Transaction	Status	Customer	Show
181723	[Internetbanka] #70615327 Amount: 209761.00 EUR Created at: 2020-10-19 22:32:04	Declined	Test Customer	Show
181722	[Internetbanka] #479125 Amount: 225770.00 EUR Created at: 2020-10-19 22:31:04	Declined	Test Customer	Show
181721	[Internetbanka] #38424168 Amount: 127683.00 EUR Created at: 2020-10-19 22:30:04	Declined	Test Customer	Show
181720	[Internetbanka] #92036612 Amount: 29367.00 EUR Created at: 2020-10-19 22:29:04	Declined	Test Customer	Show

NOTE: Dashboard is first place for customisation. Any additional blocks with statistics, fast actions, numbers, graphics could be added on demand. For Instance, geographical position of customer and transactions, amounts of different types of transactions etc. Please contact technical support for customisation order.

USER PROFILE



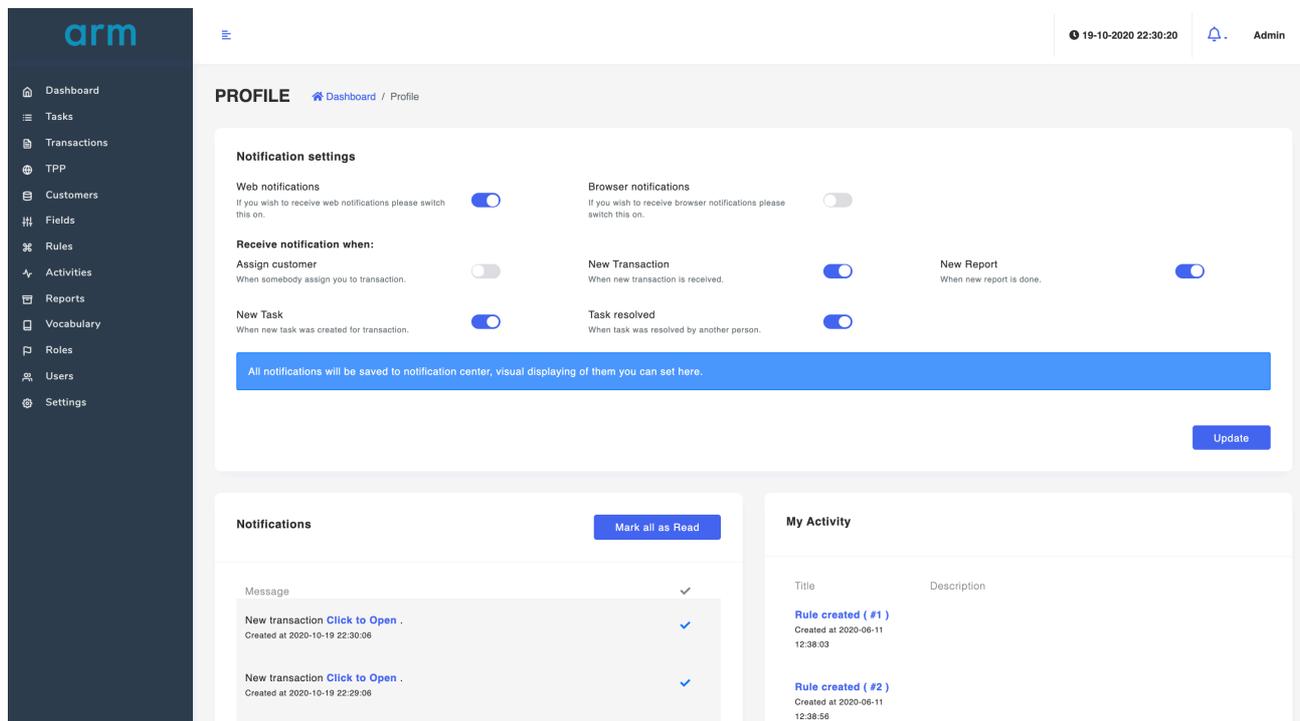
In the top right corner you can find server time, list of latest notifications and link to the profile.

In the user profile you can find:

- ◆ Notification Settings:
 - ◆ Web Notifications;
 - ◆ Browser Notifications;
 - ◆ Settings for notifications types you want to receive: Assign Customer, New transaction, New Report ready to be downloaded, New Task created or specific task was resolved;
- ◆ List of all notifications user ever received with ability to mark as read any specific or all of them;
- ◆ User activity block displays all events created by current user, such as rule creation, assign transaction or customer, comments in case management etc.

It is also possible to check the source of shown activity by clicking on it's

name - you will be redirected to the specific entity (rule, transaction, customer, report etc);



TRANSACTIONS

On the transactions screen all transactions can be found. It is a simple page with a list of all transactions and with a few additional features, the main is a filtering. Filters allow user to filter transactions by parameters, such as:

- ◆ Filter using Keywords;
- ◆ Filter by specific Customer;
- ◆ Use date range to show transactions for specific term (last month, last 3 months or custom);
- ◆ Filter by rules applied to the transaction;
- ◆ Filter transactions by its status (Accepted, Suspected or Declined out of the box, any specific status can be added in integration process);

- ◆ Filter by transaction type (type is defined by amount of sources - internet bank, core banking services, card payments etc.);
- ◆ Use transaction amount range for filtering
- ◆ Filter transactions by specific user (all transactions are assigned to specific manager - user who works with particular customer or group of customers)

The screenshot shows the ARM Transactions dashboard. On the left is a dark sidebar with navigation items: Dashboard, Tasks, Transactions, TPP, Customers, Fields, Rules, Activities, Reports, Vocabulary, Roles, Users, and Settings. The main content area is titled 'TRANSACTIONS' and includes a breadcrumb 'Dashboard / Transactions'. At the top right, it shows the date '19-10-2020 22:32:39' and the user 'Admin'.

Below the header are several filter controls:

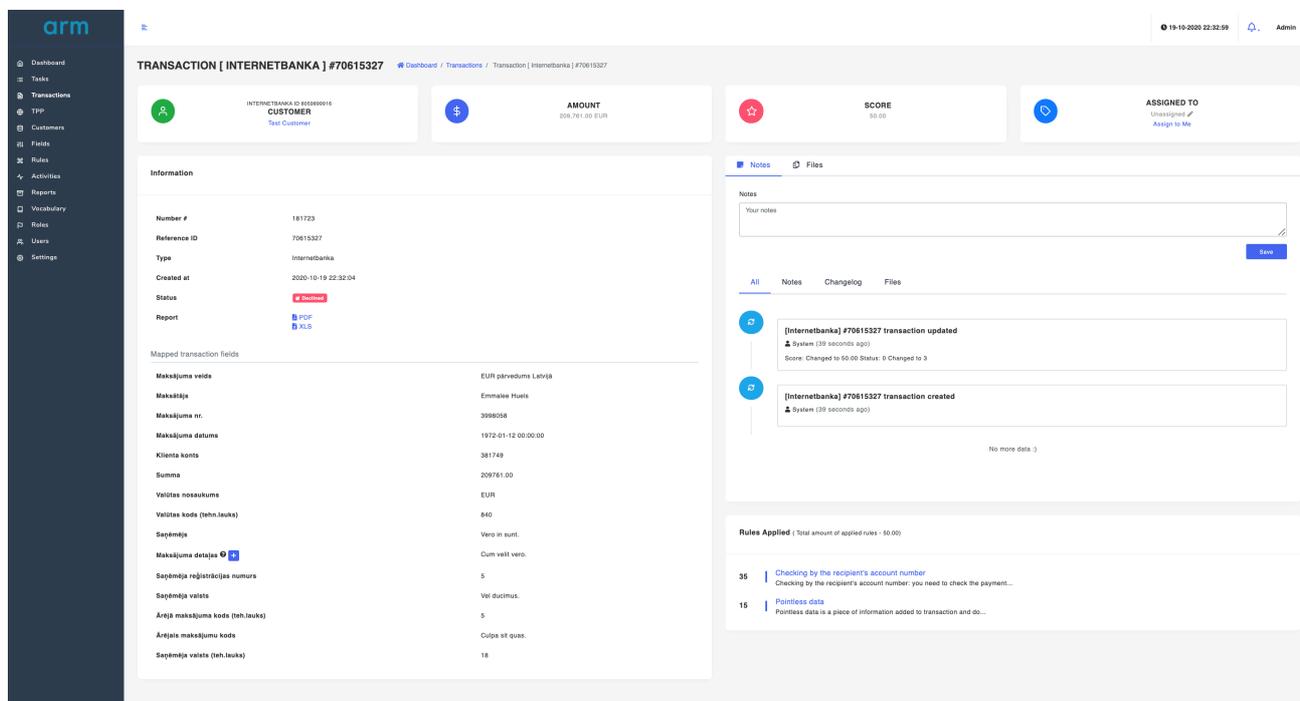
- Filter by Keyword...
- Filter by Customers
- Start date - End date
- Filter by Rules
- Filter by Statuses
- Filter by Types
- \$ From - To
- Filter by Assigned to
- Unassigned TPP

An 'Export' button is located below the filters. The main data area shows 'Transactions 1 - 15 from 181723' with a '15 per page' dropdown. Below this is a table with the following columns: #, Transaction, Customer, Rules Applied, Score, Status, Assigned To, and Show.

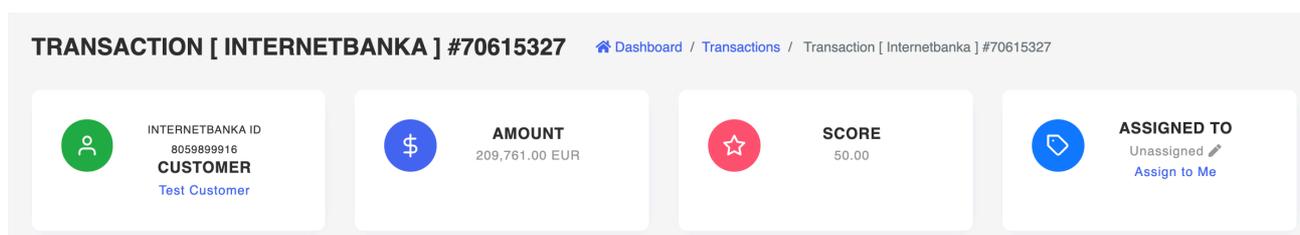
#	Transaction	Customer	Rules Applied	Score	Status	Assigned To	Show
181723	[Internetbanka] #70615327 Amount: 209761.00 EUR Created at: 2020-10-19 22:32:04	Test Customer	Checking by the recipient's account number Pointless data	50 / 100	Declined	Unassigned	Show
181722	[Internetbanka] #478125 Amount: 225770.00 EUR Created at: 2020-10-19 22:31:04	Test Customer	Checking by the recipient's account number Pointless data	50 / 100	Declined	Unassigned	Show
181721	[Internetbanka] #38424168 Amount: 127663.00 EUR Created at: 2020-10-19 22:30:04	Test Customer	Checking by the recipient's account number Pointless data	50 / 100	Declined	Unassigned	Show
181720	[Internetbanka] #82036612 Amount: 28367.00 EUR Created at: 2020-10-19 22:29:04	Test Customer	Checking by the recipient's account number Pointless data	50 / 100	Declined	Unassigned	Show

SPECIFIC TRANSACTION

If you want to get an information about specific transaction, you have to open it on the list of transactions screen and you will be redirected to the transaction detailed view:



On the top of the page you can find basic information about the transaction such as: source of transaction, transaction ID in that specific source, Customer (who generated the transaction) Name and ID with link to that customer profile, transaction amount, its risk score calculated by rule engine and information about manager who is assigned to that particular transaction. Transaction assignee could be changed here, which means that only person this transaction assigned to will see it (and supervisor of that manager). NOTE: this setting could be changed on integration stage.



In the **Information** block you can find all transaction information, its number in the system, source of transaction, ID in that specific source, date of creation, transaction status (***in case manual status update is enabled it is editable***), links to PDF and XLS reports for that particular transaction.

In the same block you can find Mapped transaction fields - which is all the data gathered about specific transaction from the source which generated that transaction.

It is also possible to add new entries to the vocabulary (earthier global or customer specific)

Information

Number #	181723
Reference ID	70615327
Type	Internetbanka
Created at	2020-10-19 22:32:04
Status	Declined
Report	PDF XLS

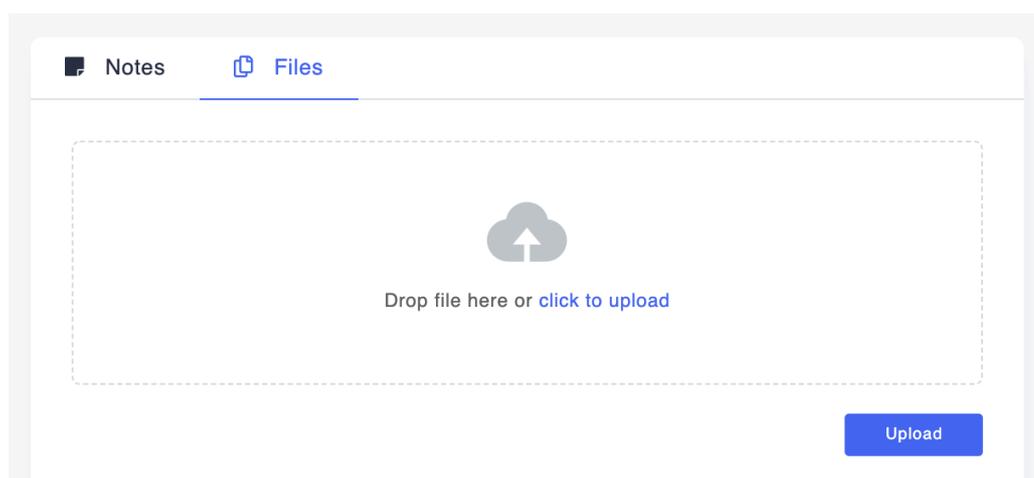
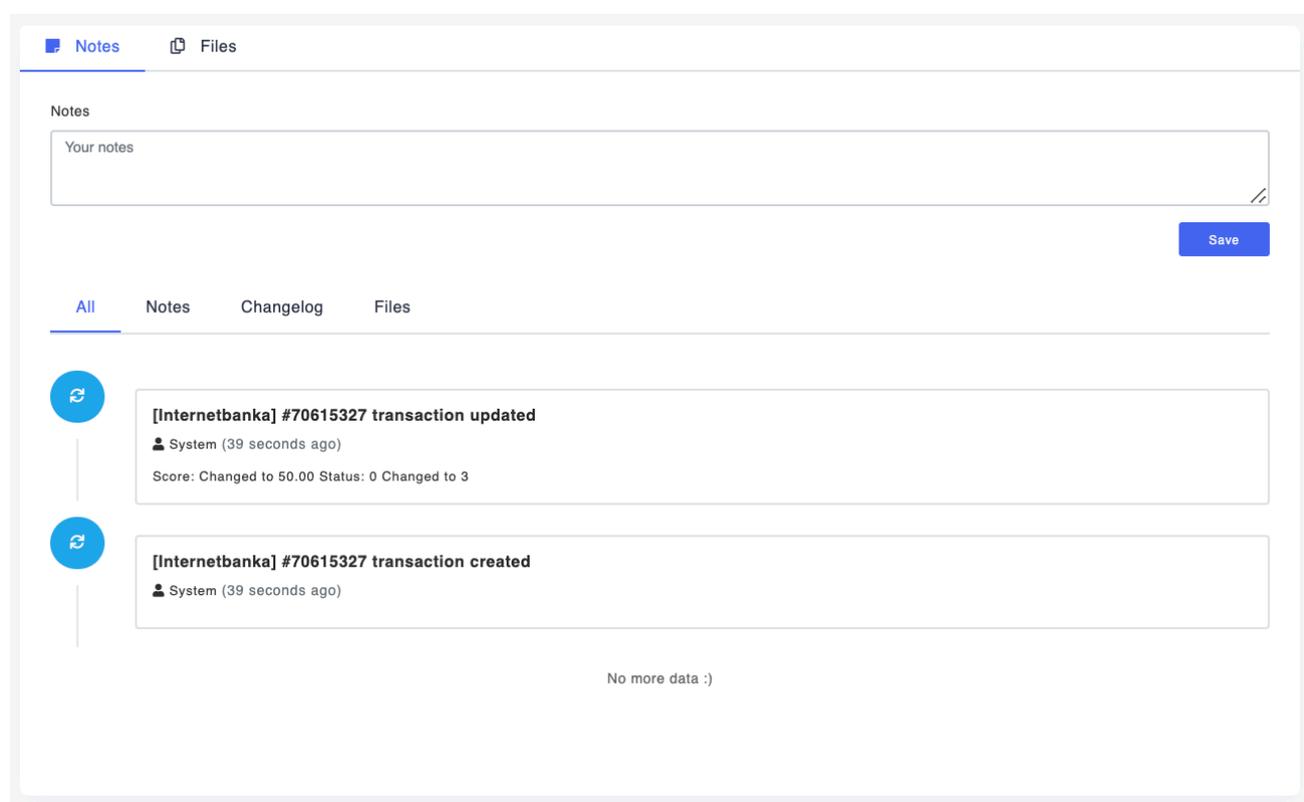
Mapped transaction fields

Maksājuma veids	EUR pārvedums Latvijā
Maksātājs	Emmalee Huels
Maksājuma nr.	3998058
Maksājuma datums	1972-01-12 00:00:00
Klienta konts	381749
Summa	209761.00
Valūtas nosaukums	EUR
Valūtas kods (teh.lauks)	840
Saņēmējs	Vero in sunt.
Maksājuma detaļas	Cum velit vero.
Saņēmēja reģistrācijas numurs	5
Saņēmēja valsts	Vel ducimus.
Ārējā maksājuma kods (teh.lauks)	5
Ārējais maksājumu kods	Culpa sit quas.
Saņēmēja valsts (teh.lauks)	18

On each transaction **Case Management block** is present. Users of the system has ability to leave comments to entities such as Transactions, Customers or TPP.

On Case Manager user has few abilities:

- ◆ Leave a comment which will placed with a information about author
- ◆ Attach files of any time (configured on integration)
- ◆ To see all changes which were made by users
- ◆ Filter by Notes, Change-log or Files



Next block on the specific transaction screen display **Rules Applied** with a score and list of the rules applied to the transaction. This block displays name of each rule, Description, amount of points each rule adds to the transaction and total amount of points assigned.

Rules Applied (Total amount of applied rules - 100.00)

- 35

Checking by the recipient's account number
 Checking by the recipient's account number: you need to check the payment...
- 50

Payment details check
 If the payment details contain less than (A) words and the payment...
- 15

Pointless data
 Pointless data is a piece of information added to transaction and do...

CUSTOMERS

arm

- Dashboard
- Tasks
- Transactions
- TPP
- Customers**
- Fields
- Rules
- Activities
- Reports
- Vocabulary
- Roles
- Users
- Settings

☰
🕒 19-10-2020 22:34:29
🔔 Admin

CUSTOMERS + [Dashboard](#) / [Customers](#)

Unassigned

#	Customer	Assigned To	Show
102025	Test Customer (#8059899916) <small>Created at 2020-10-06 16:42:01</small>	Unassigned	👁
102024	Wilburn Lowe (#40485274656627) <small>Created at 2020-10-06 16:27:42</small>	Admin Employee	👁
102023	Mr. Chet Crona III (#3445002500) <small>Created at 2020-10-06 16:26:38</small>	Unassigned	👁
102022	Lance Anderson (#3425020559) <small>Created at 2020-10-06 16:25:40</small>	Admin Employee	👁
102021	Mr. Theron Schamberger DDS (#4881048) <small>Created at 2020-10-06 16:24:41</small>	Unassigned	👁
102020	Alexie Turner (#512769142295421) <small>Created at 2020-10-06 16:23:39</small>	Unassigned	👁

The Customers Screen displays the list of all customers we have in the system. Customers profiles are gathered from different data sources provided on integration and the data is consolidated into one profile.

In the customer profile you can find a few different blocks, where the first one contains all the information about customer we have in the system, such ID, Reference, Data Source, Name, creation date and Assigned To field.

Assigned To field displays the list of managers (system users) who can access customer profile and see all his transactions and entities.

WILBURN LOWE

[Dashboard](#) / [Customers](#) / Wilburn Lowe

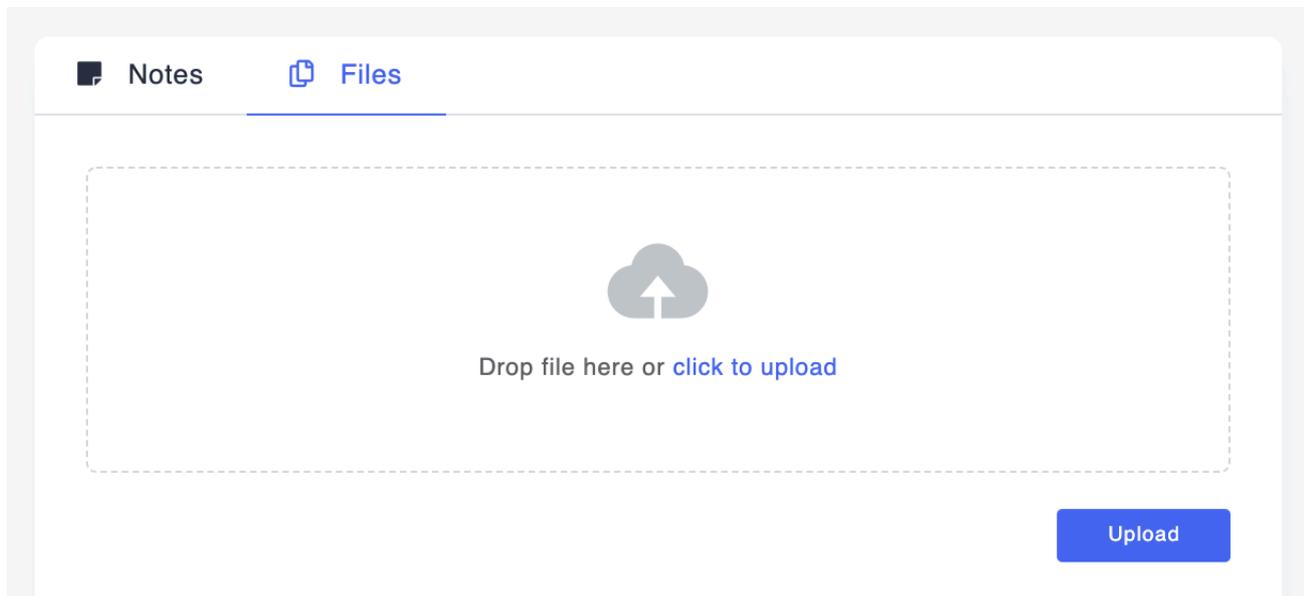
Information

Number #	102024
Reference ID	40485274656627
Name	Wilburn Lowe
Assigned To	<div style="display: flex; gap: 5px;"> Admin Employee ✎ </div>
Created at	2020-10-06 16:27:42

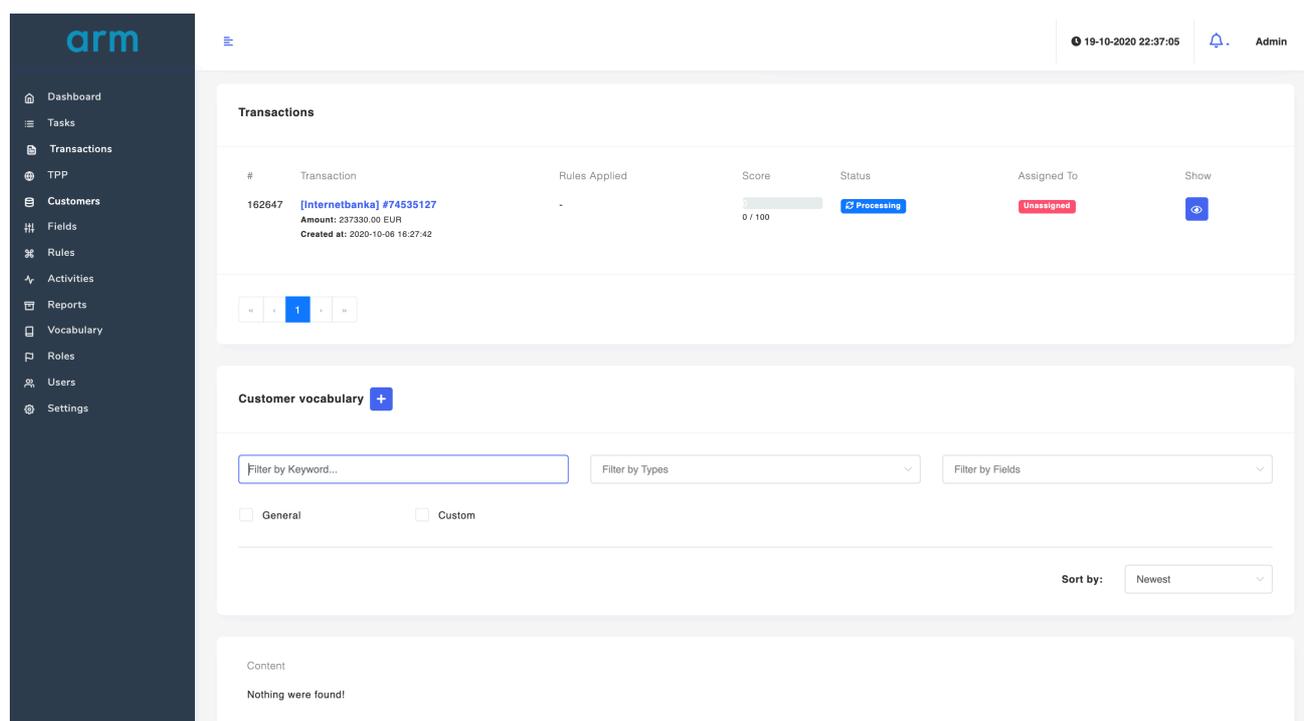
Another block on customer profile is a “**Case Manager**” on customer level, which allows to track changes to customer profile, leave comments, files etc.

The screenshot shows a user interface for managing customer profiles. At the top, there are two tabs: 'Notes' (active) and 'Files'. Below the 'Notes' tab is a text input field labeled 'Your notes' and a blue 'Save' button. Underneath is a horizontal menu with four items: 'All' (active), 'Notes', 'Changelog', and 'Files'. The main content area displays a vertical timeline of events. Each event is preceded by a blue circular icon containing a refresh symbol. The first event is titled 'Assign users' and is attributed to 'Admin (1 week ago)'. The text below the title reads 'Assigned To: Changed to Admin, Employee'. The second event is titled 'Customer created' and is attributed to 'System (1 week ago)'. At the bottom of the timeline, the text 'No more data :)' is displayed.

It is also possible to add files to customer profile, and these files will be attached and visible to all assigned managers:

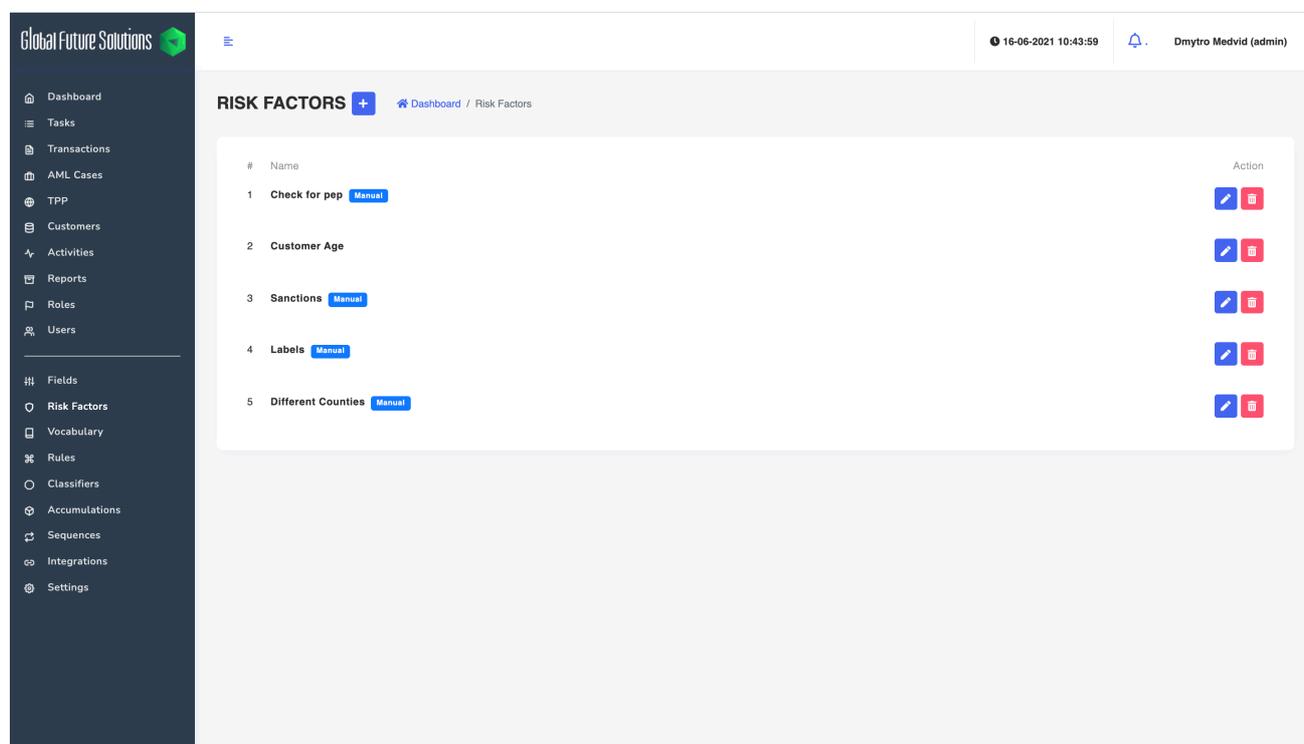


For each customer system collects a separated **vocabulary** (as well as global vocabulary applied for all customers) used to detect pointless payments (rule engine features). Users of the system can see and edit customers vocabulary.



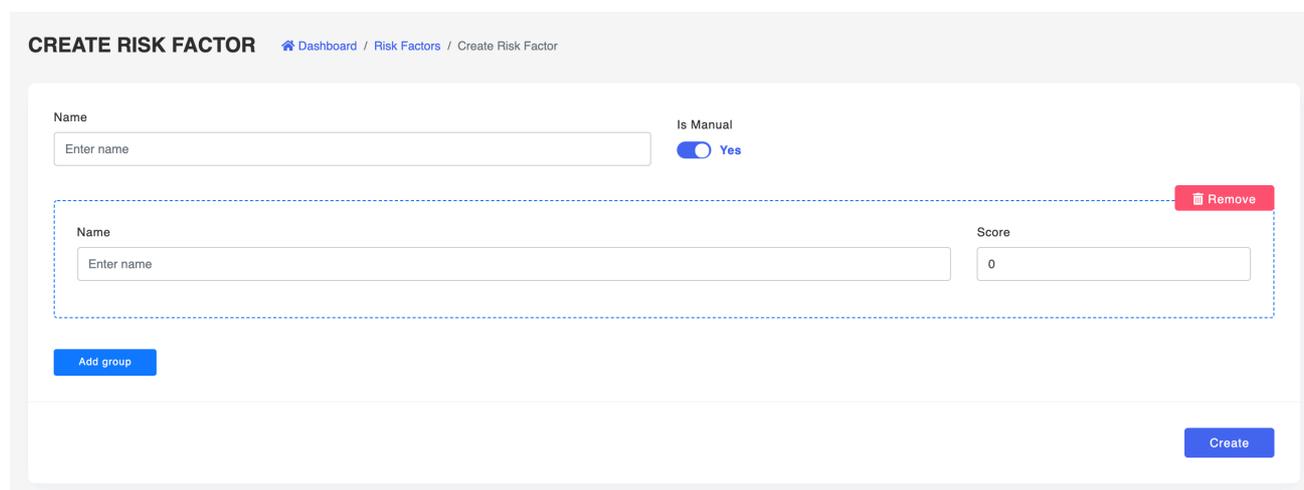
RISK FACTORS

Risk Factors are a set of rules that allow to change customers risk score automatically or manually on the profile.



System supports two types of risk factors: **manual** and **automatic**. When you creating a new risk factor you can specify that by checking a checkbox Is Manual in the interface.

Manual Risk Factors allows you to add these risk factors to the customer manually using interface on customer profile. Manual Risk Factors could be used as labels. For more details see CUSTOMER RISK SCORING block.



Automatic Risk Factors allow you to add specific rules for risk score calculation. For example - Customer Age Risk Factor:

In example above you can see Customer Age Risk Factor. It will check the field Customer Age in the customer profile and assign appropriate risk score based on the data provided. For example, given customer profile:

Mapped fields

Customer name	ZHANOV, Najmiddin Kamilididovich
Customer address	Rokossovskogo Ul., bld. 13, appt. 26, Pskov, Russia
CI Code	316
CI Name	ZHANOV, Najmiddin Kamilididovich
CI RegDate	2021-02-17 06:58:05
CI Status	Active
CI Country	rus
CI City	Pskov
Phone	+76788543
E-Mail	zhanov.najmiddin@gmail.com
Language	ru
CI BirthDate	1986-12-07
Gender	male
Customer Type	Person
Customer Age	34
Verification level	Level 1
Verification status	Identified

When customer profile will be created, or updated or risk scoring for customer will be triggered manually, he could get the next set of risk factors:

Risk factors

20 | **Customer Age**
Customer Age more than 22

100 | **Sanctions**
Sanctioned

In this example Customer Age is more than 22 and he gets 20 points for that and he also got assigned Sanctions Risk Factor Manually that adds 100 point more and in total customer risk score is 120 points.

Risk Factors could be extended and adjusted at any time. Re-calculation of risk score for all customers available in the terminal (console mode on the server, triggered programatically).

Examples of automatic risk factors: age risk factor, country risk factor, citizenship risk factor, business segment risk factor, income risk factor etc.

Another examples for risk factors and scoring model:

Age

Customer age	18-22	23-27	28-31	32 and over
Point change	+50 points	+25 points	+10 points	0 points

Email address - manual check

Criteria	No warning signs	One warning sign	Two warning signs	Three warning signs
Point change	-20 points	+20 points	+50 points	+90 points

Demographic fit - Manual profiling check

Yes	Maybe	No
-25 points	+10 points	+70 points

Name / last name - starts and ends with vowels?

No	Yes
0 points	+25 points

Additional Question - What is your gross yearly income?

Yearly Income	£0-9,999	£10,000-19,999	£20,000-54,999	£55,000 - £79,999	£80,000
Point change	+30 points	+10 points	-10 points	0 points	+30 points

CUSTOMER RISK SCORING

Customer Risk Scoring is a process of assigning risk score to the client. This process is based on Risk Factors described above.

Risk score calculation is triggered in a few ways: when customer profile is getting created, when customer profile updated and by manual trigger.

When customer profile created or updated risk score calculation is triggered. When this happens the system will check customer data and set new risk score. If there wasn't any changes risk score will remain the same.

Client Risk Score is displayed on the customer profile and highlighted with appropriate color (based on the bank risk assessment model). For example:

Risk Score	Status	Restrictions	Actions
< 30	Green account	Minimal	Generic rules
31 - 65	Yellow account	Moderate	Enhanced TM rules
66-100	Orange account	High	Additional verification + Enhanced TM rules
100 <	Black account	Very High	Offboard

Customer Information

Number #	274
Reference ID	316
Name	ZHANOV, Najmiddin Kamilidinovich
Assigned To	Dmytro Medvid (Admin) 
Risk score	120 
Created at	2021-03-10 15:55:47
Last IP Address	-
Last User Agent	-
Usual IP Address	-
Usual User Agent	-
AML Checker	Trigger AML Check
Adverse Media Checker	Trigger Adverse Check
Report	 PDF

You can edit Customer Risk Score at any time by clicking on pencil icon near the risk score label. It will open a popup where you can adjust risk factors and risk score, for example:

Risk factors [X]

Score

120 [Refresh]

Manual risk factor

Select manual factor [v]

Customer Age	Customer Age more than 22	(+20 points)	[Delete]
Sanctions	Sanctioned	(+100 points)	[Delete]
Different Counties	High Risk Countries	(+50 points)	[Delete]
Labels	good	(-50 points)	[Delete]
Check for pep	Not pep	(+0 points)	[Delete]

[Cancel] [Save]

To calculate automatic risk score click on Refresh button near the score field.

To add manual risk factors or labels use appropriate dropdown where all manual risk factors are listed.

Manually assigned risk factors are not override when customer profile updated, they remain on the client while it is not changed manually.

CUSTOMERS SCREENING

Customers screening works in a few different ways and on a different level.

Scenarios to trigger AML check on customer profile:

1. The newly created customer getting checked against the lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
2. Trigger manual customer screening. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
3. Daily screening - schedule screening on daily basis. For instance, every night customers are getting screened against sanctions lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
4. Updated customer profile getting checked against the lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).

Customer transactions screening happening all the time (**if AML module is connected**) in real time. Transactions screening is configured on the rules level where we can specify what kind of checks we want to do, what data to check and what data to use for the checks.

For example (the screen is taken from rules order page):

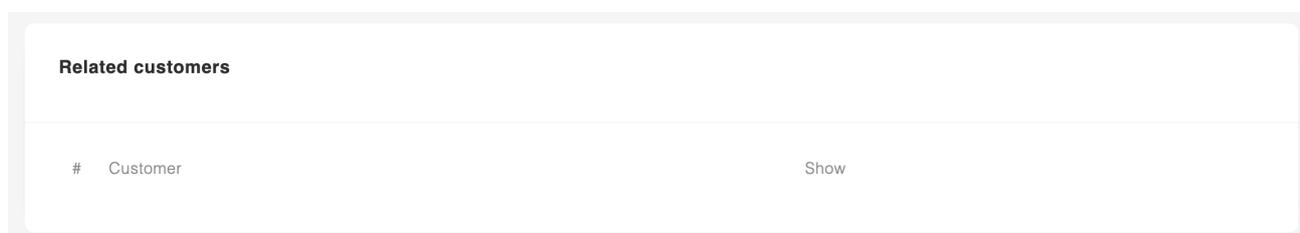
The screenshot displays the 'RULES' configuration page. At the top, there is a breadcrumb 'Dashboard / Rules' and a 'Back' button. The main content area lists several rules, each with a status indicator (disabled or active), a name, a score, and an API type. The rules are as follows:

Status	Rule Name	Score	API Type	Action
Disabled	#38 [AML] In/Out - Check Beneficiary/Remitter - recordType...	0	JSON API	Stop rule
Disabled	#70 [AML] Outbound - Payment Details Check	0	JSON API	Stop rule
Disabled	#67 [AML] Inbound - Payment Details Check	0	JSON API	Stop rule
Disabled	#76 [AML] Inbound - PEP Check	0	JSON API	Stop rule
Disabled	#73 [AML] Outbound - PEP Check	0	JSON API	Stop rule
Active	#90 [AML] Outbound - Criminals and Interpol Check	0	JSON API	Stop rule
Active	#88 [AML] Inbound - Criminals and Interpol Check	0	JSON API	Stop rule

RELATED CUSTOMERS

Related customers block is displayed on the customer profile. It shows with whom current customer has common transactions.

In order connect customers, on transaction level we should pass reference ID for both remitter and beneficiary. On transactions, where reference ID for both remitter and beneficiary are present you will see blocks with a link to their profiles right away from transaction and in their profiles they will be linked and displayed in appropriate block:

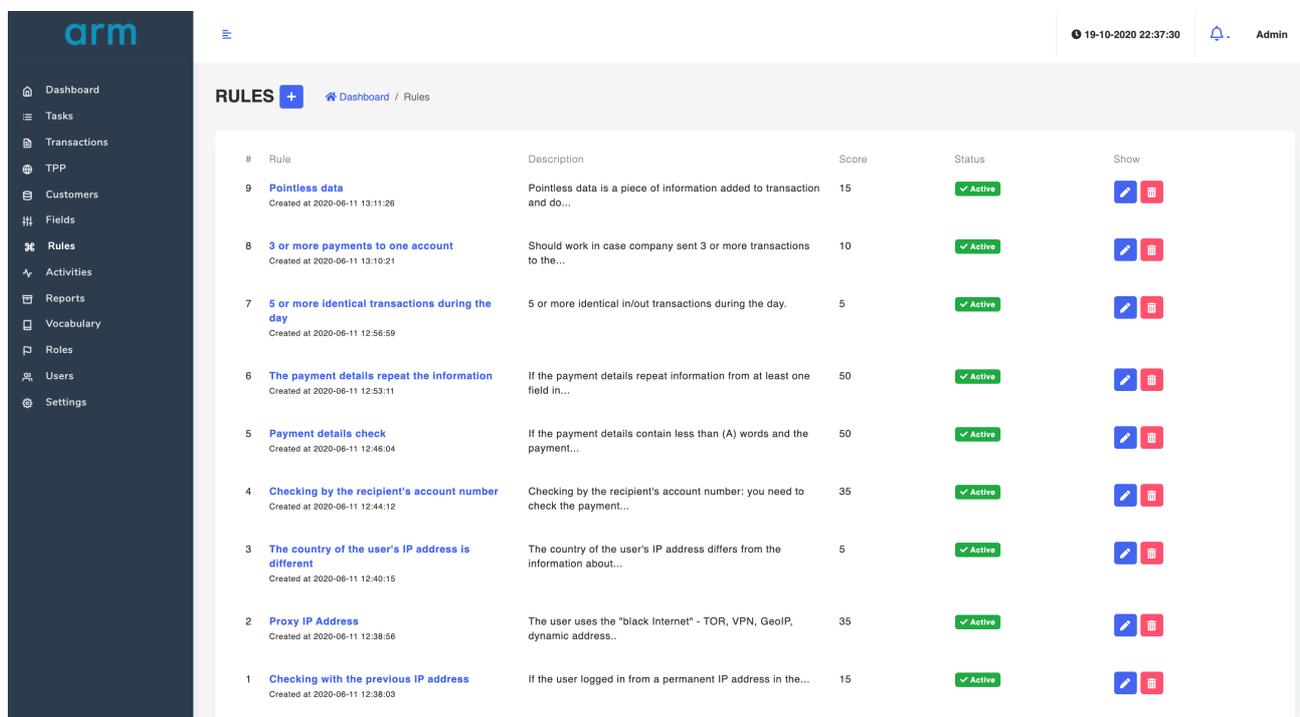


BENEFICIALS AND COMPANIES

This block will help to link persons and companies. For example, on person you can link company profiles where this person is a beneficiary and for the company profile you can link all beneficiary profiles.

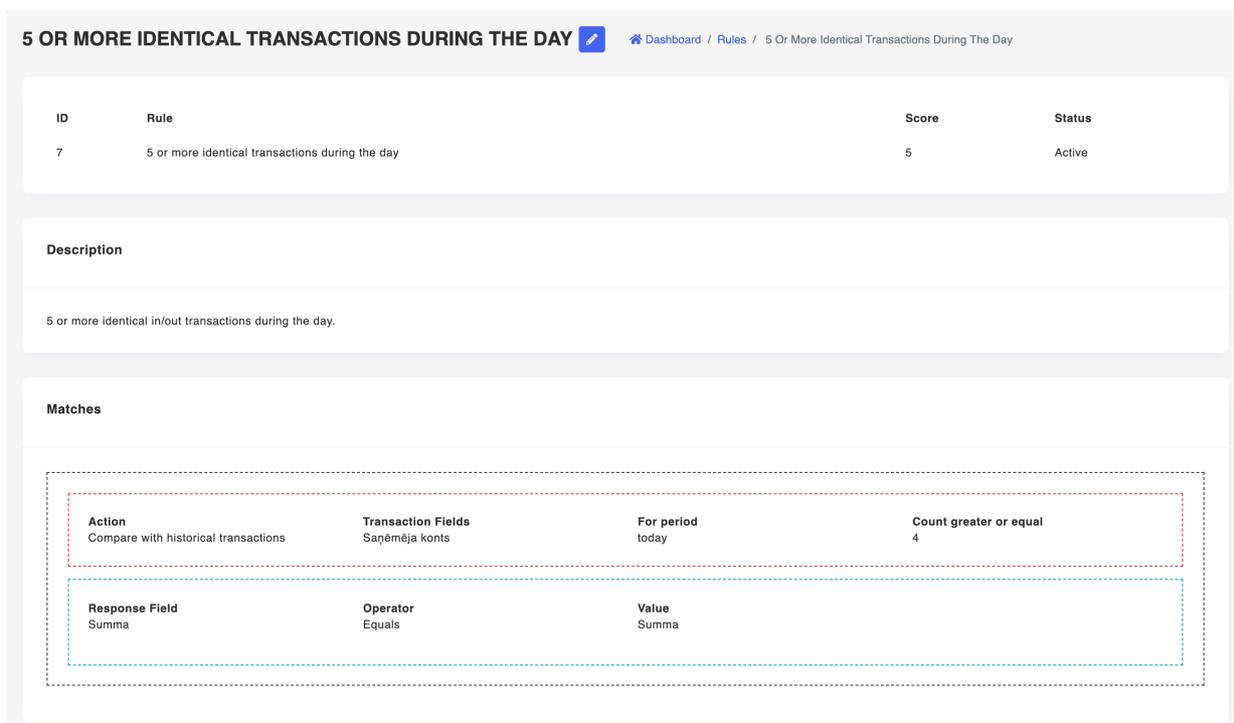
Current status: in testing testing stage.

RULES FOR TRANSACTION MONITORING AND PAYMENTS SCREENING



Rule Engine is a heart of the system. On the Rules Screen you can find a list of available rules in the system with its name, description, status and action buttons.

The Rule overview screen is shown if user click on specific rule. On that screen you can see information on the rule, the parts its created of and description with points and status. Below you can find a few rules overview for example:



PROXY IP ADDRESS  [Dashboard](#) / [Rules](#) / Proxy IP Address

ID	Rule	Score	Status
2	Proxy IP Address	35	Active

Description

The user uses the "black Internet" - TOR, VPN, GeoIP, dynamic address..

Matches

Action
Check current transaction

Function	Response Field	Operator
Check for Proxy	Sign In Ip Address	Is True

CHECKING BY THE RECIPIENT'S ACCOUNT NUMBER  [Dashboard](#) / [Rules](#) / Checking By The Recipient's Account Number

ID	Rule	Score	Status
4	Checking by the recipient's account number	35	Active

Description

Checking by the recipient's account number: you need to check the payment history (12 months), whether such a payment was made to the specified recipient's account number, and if it was, then you need to check two more fields – "recipient's Name" and "recipient's Bank swift code". If these fields do not match = alert..

Matches

Action	Transaction Fields	For period	Count greater or equal
Compare with historical transactions	Saņēmēja kods	12 months	1

Response Field	Operator	Value
Saņēmējs	Does Not Equal	Saņēmējs
Saņēmējbankas SWIFT kods	Does Not Equal	Saņēmējbankas SWIFT kods

As soon as you need to edit or create new rule you will open Add/Edit Rule Screen. It is available by clicking on Edit Icon opposite to rule name:

<p>9 Pointless data Created at 2020-06-11 13:11:26</p>	<p>Pointless data is a piece of information added to transaction and do...</p>	<p>12</p> <p>✓ Active</p>	 
---	--	---------------------------	---

or Add new Rule Button:



Rule edition screen:

CREATE RULE [Dashboard](#) / [Rules](#) / Create Rule

Name

Score

Integration

Description

Status

#1
Remove

Function

Field

Take a part

Operator

+ Add match

On this screen you can set basic rule settings: **Rule Name**; **Score** - amount of points assigned to the transaction as soon as this rule applied; **Rule Status** (Active/Inactive). Inactive rules are applied to the transactions, but its score not added; **Rule Description**; **Integration** - we can specify for which data source this rule will be used.

On the rule body you can set specific conditions for that rule to be applied. You can work with specific transaction, set of historical transactions or use accumulators (values calculated from specific data-fields, average, sum etc).

Each rules consists of groups and matches and could be grouped/matched using logical OR or AND operators.

To start the work you have to create a group (first one created automatically), then you can start creating matches and conditions for the rule.

Below, you can see a few example of different matches (check if Amount is Greater or Equals 1000; check if IP address used for signing in is a proxy; take 30 days incoming turnover from accumulation and check that is is Greater or Equals to 10000; check if customer has Risk Factor - Blacklisted countries in FATF):

The screenshot displays a rule configuration interface with four match conditions, each enclosed in a dashed box and labeled #1 through #4. At the top left, there is a toggle for logical operators, currently set to 'AND'. Each match has a 'Remove' button in the top right corner.

- Match #1:**
 - Function: None
 - Field: [Transaction] Amount
 - Take a part: Start, Length
 - Operator: Greater Or Equal
 - Comparator Type: Value
 - Comparator Value: 1000
- Match #2:**
 - Function: Check for Proxy
 - Field: [Transaction] Sign In Ip Address
 - Take a part: Start, Length
 - Operator: Is True
- Match #3:**
 - Function: Get accumulative value
 - Accumulation: 30 days turnover (incoming)
 - Operator: Greater Or Equal
 - Comparator Type: Value
 - Comparator Value: 10000
- Match #4:**
 - Function: Has risk factor
 - Risk factor: Black listed countries in FATF
 - Operator: Is True

At the bottom left of the interface, there is a button labeled '+ Add match'.

On each match created you can do a simple comparison of one the fields from customer profile or from transaction (when we saying about checking value in transaction - we taking data from the latest transaction where this rule applied) with a

simple value using different operators (Equals, Does Not Equals, Is Blank, Greater, Less,

The screenshot shows a configuration panel for a match rule. At the top left is a red tab labeled '#1'. At the top right is a red button with a trash icon and the text 'Remove'. The main area contains several form fields: 'Function' with a dropdown menu showing 'None'; 'Field' with a dropdown menu showing '[Transaction] Amount'; 'Take a part' with two input fields labeled 'Start' and 'Length'; 'Operator' with a dropdown menu showing 'Greater Or Equal'; 'Comparator Type' with a dropdown menu showing 'Value'; and 'Comparator Value' with an input field containing '1000'. At the bottom left is an orange button with a plus sign and the text '+ Add match'.

Greater or Equals, Less or Equals):

The system provides a set of different functions which could be used in each condition created:

- ◆ **GeoIP: Extract the country code** - extracts country code from GeoIP database using provided IP address
- ◆ **GeoIP: Check for Proxy** - checks provided IP address against the database of known Proxy and VPN servers
- ◆ **Text: Get text length**
- ◆ **Customer: Get customer data** - allows to extract customer data from his profile, for example: Last IP address, Last User-Agent, Usual IP address, Usual User-Agent, Risk Score
- ◆ **Customer: Has risk factor** - allows to check whether customer has specific risk factor or not, for example, we can check if customer has a Sanctions risk factor manually assigned to his profile.
- ◆ **Beneficiary: Get beneficiary data** - returns beneficiary account data (if beneficiary account ID passed to within transaction)

- ◆ **Vocabulary: Exists in the white list**
- ◆ **Vocabulary: Exists in the black list**
- ◆ **Classifier: Exists in Classifier** - allows to check specific field from the transaction or customer profile on existence in specific classifier. For example: we can get country code from transaction and check if it exists in FATF Countries Black List classifier
- ◆ **Accumulation: Get accumulative value** - Returns a statistics calculated in specific accumulation function, for example, it could be incoming/outgoing turnover, amount of transactions to the same beneficiary etc.
- ◆ **Sequences: In Sequence transaction** - returns true, if current transaction is in the described sequence.
- ◆ **Date: Extract days count from date** - returns amount of days that passed from specific date, for example, we can check client registration date and check how much days passed from his registration.

It is possible to change logical operator at any time (OR || AND).

For testing purposes system has testing environment for rules creation, which allows to test created rule on specific transaction or the list of transactions:

Draft Test

Transaction ID(s)

Use a comma to check multiple transactions.

Run Test

A transaction fell under this rule.

Transaction details <small>(view full)</small>				
Number	Reference ID	Amount	Type	TPP ID
181731	42021533	236742.00	Internetbanka	1

Mapped Fields

Maksājuma veids	SEPA	Valūtas nosaukums	EUR
Maksātājs	Hudson Carroll II	Sapēmeja reģistrācijas numurs	587997389
Maksājuma nr.	56636	Sapēmeja valsts	Expedita.
Maksājuma datums	1979-01-21 00:00:00	Ārējā maksājuma kods (teh.lauks)	90568
Klienta konts	75732956	Ārējais maksājumu kods	Minus autem.
Summa	236742.00	Sapēmeja valsts (teh.lauks)	717
Valūtas kods (teh.lauks)	840	TPP_ID	PSDLV-FGMC-NO170
Sapēmejs	Eligendi.	TPP_ROLE	PIISP
Maksājuma detaļas	Labore.		

Action
Check current transaction

Maksājuma detaļas Labore.	Function Exists in the white vocabulary	Operator Is False
-------------------------------------	---	-----------------------------

For safety and convenience the system tracks all the changes made to the rules and creates revisions and there is a tool to switch between revisions and see all the changes made to the rule.

Below you can see rule with only one Revision, so there is no other versions we can switch to:

Revisions (1)

[Restore This Revision](#)

<p>Revision ID 10</p> <p>Name Pointless data</p> <p>Score 14</p> <p>Status Active</p> <p>Description Pointless data is a piece of information added to transaction and do not provides a clear understanding of the reason transaction was created.</p> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <p>Action Check current transaction</p> </div> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Function Exists in the white vocabulary</td> <td style="width: 33%;">Response Field Maksājuma detaļas</td> <td style="width: 33%;">Operator Is False</td> </tr> </table> </div>	Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False	<p>Revision ID 11</p> <p>Name Pointless data</p> <p>Score 15</p> <p>Status Active</p> <p>Description Pointless data is a piece of information added to transaction and do not provides a clear understanding of the reason transaction was created.</p> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <p>Action Check current transaction</p> </div> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Function Exists in the white vocabulary</td> <td style="width: 33%;">Response Field Maksājuma detaļas</td> <td style="width: 33%;">Operator Is False</td> </tr> </table> </div>	Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False
Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False					
Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False					

And on the next picture you can see rule with 7 revisions and you can switch to any of them:

Revisions (7)

[Restore This Revision](#)

<p>Revision ID 10</p> <p>Name Pointless data</p> <p>Score 14</p> <p>Status Active</p> <p>Description Pointless data is a piece of information added to transaction and do not provides a clear understanding of the reason transaction was created.</p> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <p>Action Check current transaction</p> </div> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Function Exists in the white vocabulary</td> <td style="width: 33%;">Response Field Maksājuma detaļas</td> <td style="width: 33%;">Operator Is False</td> </tr> </table> </div>	Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False	<p>Revision ID 11</p> <p>Name Pointless data</p> <p>Score 15</p> <p>Status Active</p> <p>Description Pointless data is a piece of information added to transaction and do not provides a clear understanding of the reason transaction was created.</p> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <p>Action Check current transaction</p> </div> <div style="border: 1px dashed #ccc; padding: 5px; margin-top: 10px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Function Exists in the white vocabulary</td> <td style="width: 33%;">Response Field Maksājuma detaļas</td> <td style="width: 33%;">Operator Is False</td> </tr> </table> </div>	Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False
Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False					
Function Exists in the white vocabulary	Response Field Maksājuma detaļas	Operator Is False					

RULE ACTIONS

Rule actions are events that are triggered after rule was applied to the transaction. We have a few different types of actions: send request, send to AML Checker, Set customer risk score.

You can see all actions of the specific rule on the rule overview page:

Or if you open Rule for the editing, you will see all actions with the settings just below the rule matches:

Send Request Action allows you to send requests to the external systems. It accepts a JSON object that you can set in appropriate field.

Remove

Type *

Ping endpoint

Asynchronously

Yes

Method *

POST

Timeout *

8

Endpoint *

http://178.62.255.126:8080/aml/api/verify/data/exact

Payload

```
{
  "uid": "@transactionId",
  "threshold": "0.8",
  "content": "@field_9",
  "recordType": [
    "Sanctioned",
    "Sanctions"
  ]
}
```

Send to AML Checker Action allows you to specify the data and parameters you want to send to the AML Module. It accepts a JSON object that you can set in appropriate field.

Remove

Type *

Send to AML Checker

Asynchronously

Yes

Method *

POST

Timeout *

8

Endpoint *

http://178.62.255.126:8080/aml/api/verify/data/exact

Payload

```
{
  "uid": "@transactionId",
  "threshold": "0.8",
  "content": "@field_9",
  "recordType": [
    "Sanctioned",
    "Sanctions"
  ]
}
```

Set customer risk score action allows you to update customer risk score (who owns the transaction). This can be used to update customer risk score as a response on his actions.

Remove

Type *

Set customer risk factor
v

Asynchronously

Yes

Manual risk factor

Select manual factor
^

Check for pep

IS PEP	(+10 points)
Not pep	(+0 points)

Sanctions

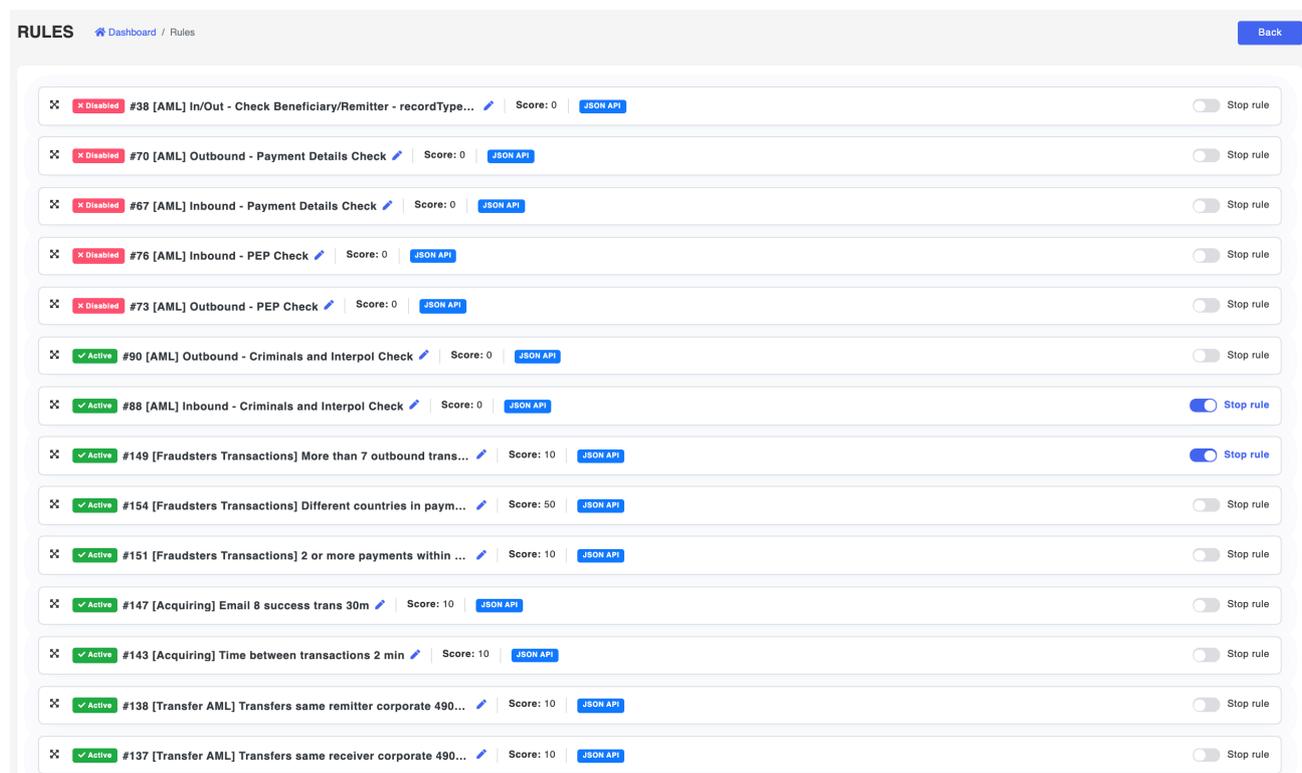
Sanctioned	(+100 points)
------------	---------------

Labels

bad	(+50 points)
-----	--------------

RULES ORDER AND STOP RULES

Rules Ordering feature allow you to set a specific order for the rules. To set an order for rules you need to open Rules screen and click on the button "Set Orders", it will open the screen displayed below:



To set an order for the rules, simply drag and drop them to specific place in the chain.

Stop Rule option allows to brake chains of the rules. For example, above you can see ordered list of rules and two of them are marked as a "stop rule". It means, that if rule #88 or #149 will be applied to the transaction, it will immediately break the chain and all rules that below #88 or #149 won't be triggered. This allow you to configure business logic and use resources more efficiently.

ACCUMULATIONS

Accumulation system is a big part of the rules engine. It allow to create reusable components, that could be used in different rules.

ACCUMULATIONS + [Dashboard](#) / [Accumulations](#)

#	Name	Function	Field	Period	Limit	Action
1	Outbound transactions with same beneficiary in 1 week	Count	Amount	monday this week → sunday this week 23:59:59 2021-06-28 00:00:00 → 2021-07-04 23:59:59	8	 
2	Transactions SUM for customers aged less than 22 within 48 h	Sum	Amount	- 48 hours → now 2021-06-26 10:52:33 → 2021-06-28 10:52:33		 
3	Inbound transactions within 3 hours period	Count	Amount	-3 hours → now 2021-06-28 07:52:33 → 2021-06-28 10:52:33	10	 
4	Inbound transactions per day from 3rd parties	Count	Amount	today → now 2021-06-28 00:00:00 → 2021-06-28 10:52:33	10	 
5	Outbound transactions with same beneficiary per 1 day	Count	Amount	today → now 2021-06-28 00:00:00 → 2021-06-28 10:52:33	10	 
6	Transactions SUM for customers aged less than 22 within 24 h	Sum	Amount	-24 hours → now 2021-06-27 10:52:33 → 2021-06-28 10:52:33		 
7	30 days turnover (incoming)	Sum	Amount	-30 days → now 2021-05-29 10:52:33 → 2021-06-28 10:52:33		 
8	30 days turnover (outgoing)	Sum	Amount	-30 days → now 2021-05-29 10:52:33 → 2021-06-28 10:52:33		 

On the picture above you can see an examples of accumulations. In a nutshell it is a small pieces that gradually gathering a value. It could be a SUM or AVG, or count.

Full list of possible accumulations:

- Count
- SUM
- Min
- Max
- AVG
- Percentage of SUM
- Unique Count

Accumulation example (Outbound transactions with same beneficiary in 1 week):

Name	Function	Field
Outbound transactions with same beneficiary in 1 week	Count	[Transaction] Amount
Start date	End Date	Limit
monday this week <small>2021-06-28 00:00:00</small>	sunday this week 23:59:59 <small>2021-07-04 23:59:59</small>	8
		<input checked="" type="checkbox"/> By customer account <small>(By default, it will be related to the Customer account)</small>

#1	Field	Operator	Comparator Type	Field	Remove
	[Transaction] Beneficiary	Equals	Incoming Field	[Transaction] Beneficiary	
#2	Field	Operator	Comparator Type	Value	Remove
	[Transaction] Sub-Type	Equals	Value	0	

On example above you can see accumulation that counts outbound transactions with the same beneficiary during this week. You can see a set of controls on top of the page and a couple of conditions just below the controls.

Controls:

- **Name** - accumulation name
- **Function** - specifies the type of accumulation (count, sum, average etc)
- **Field** - specifies the field that will be used for calculations. In that example it is doesn't make any difference what field will be used, but if you want to calculate the sum of transactions, you will need to pick an appropriate field which contains transaction amount.
- **Start Date** & **End Date** - this two fields specifies a date-range for accumulation. In that particular example start date is set as a dynamic value - from **Monday this week** to **Sunday this week 23:59:59**.
- **Limit** - limitation for the count. In the example above we set limit to 8 and it means that this accumulation will count as max as 8 transactions.
- **By customer account** checkbox means that calculation will be connected to specific customer, so we will count not all the transactions in the system, but amount of transactions for each customer separately.

Conditions allow you to specify filters for the accumulation. In example above you can see two different conditions:

1. Count all the transactions where Beneficiary equals Beneficiary (so, we are filtering transactions with the same beneficiary).
2. Count all transactions where Sub-Type equals 0 (which stands for outbound, so filter transactions by the type - only outbound payments).

CLASSIFIERS

Classifiers are the way to create lists that also could be used in the rules and integrations.

For example, few types of classifiers we have in the system out of the box:

#	Name	Table	Action
5	High-Risk References Key high_risk_references Created at 2021-03-02 20:39:02	cs_high_risk_references	  
6	Countries: Internal Payment Stop-List Key internal_payment_stop_list Created at 2021-03-03 00:27:29	cs_internal_payment_stop_list	  
10	Countries: EU Tax Haven Black List Key eu_tax_haven_black Created at 2021-03-03 00:40:59	cs_eu_tax_haven_black	  
9	Countries: EU High Risk Third Countries Key eu_hr_third Created at 2021-03-03 00:37:49	cs_eu_hr_third	  
8	Countries: FATF Grey List Key fatt_grey Created at 2021-03-03 00:35:01	cs_fatt_grey	  
7	Countries: FATF Black List Key fatt_black Created at 2021-03-03 00:32:48	cs_fatt_black	  
11	Countries: Global Terrorism Index - Very High (GTI>8) Key global_terrorism_index Created at 2021-03-10 10:43:29	cs_global_terrorism_index	  
12	Blacklisted Persons Key blacklist Created at 2021-03-18 18:36:12	cs_blacklist	  

Classifier could be used in the rules, for example: we can check whether user account was added to the blacklisted persons list; we can check if the transaction made from

the country listed in the Internal Payment Stop-List (for countries); we can check if the transaction destination country listed in the FATF Countries Black List etc.

To use classifiers in the rules, you need to open rule existing rule for edit or create a new one. The next step will be to add a condition into the group, then pick the function **Exists in the Classifier**, and then specify which classifier you want to use for the check. Just after that you will be able to chose what field in the classifier and in the transaction you want to use for comparison. Then, *Operator* option will be available and for classifiers there is only one option - **Similarity** (finding similar strings with PostgreSQL).

The screenshot shows a rule configuration interface with two conditions, #1 and #2, separated by a dashed line. At the top left, there are 'AND' and 'OR' radio buttons. Each condition has a 'Remove' button in a red box. Condition #1 is configured as follows: Function: 'Exists in the classifier'; Classifier: 'Countries: Global Terrorism Index - Very High'; Field: 'Country Code'; Transaction Field: '[Transaction] Beneficiary Bank Country Code'; Take a part: Start and Length; Operator: 'Similarity'; Comparator Type: 'Value'; Comparator Value: '1'. Condition #2 is configured as follows: Function: 'Exists in the classifier'; Classifier: 'Countries: Global Terrorism Index - Very High'; Field: 'Country Code'; Transaction Field: '[Transaction] Destination Country Code'; Take a part: Start and Length; Operator: 'Similarity'; Comparator Type: 'Value'; Comparator Value: '1'. Both conditions have a small 'E.g. 0,7' note at the bottom.

In the example above we chose function **Exists in the Classifier**, picked up **“Countries: Global Terrorism Index - Very High”** classifier, we want to compare **Beneficiary Bank Country Code** and **Destination Country Code** from the transaction with the **Country Code** field from the classifier. In case **Beneficiary Bank Country Code** or **Destination Country Code** from the transaction will be listed in the chosen classifier the rule will be applied to the transactions.

SEQUENCES

Sequences are reusable components that could be used in Rule Engine to detect transactions sequences, for example, user doing three transactions online where each transaction reduces its amount (1st - 50 EUR, 2nd - 40 EUR, 3rd - 30 EUR). It could be a sign of stolen credit card and someone trying to steal money issuing low-risk payment (up to 50 EUR) and don't know the amount that left on the account.

ACTIVITIES

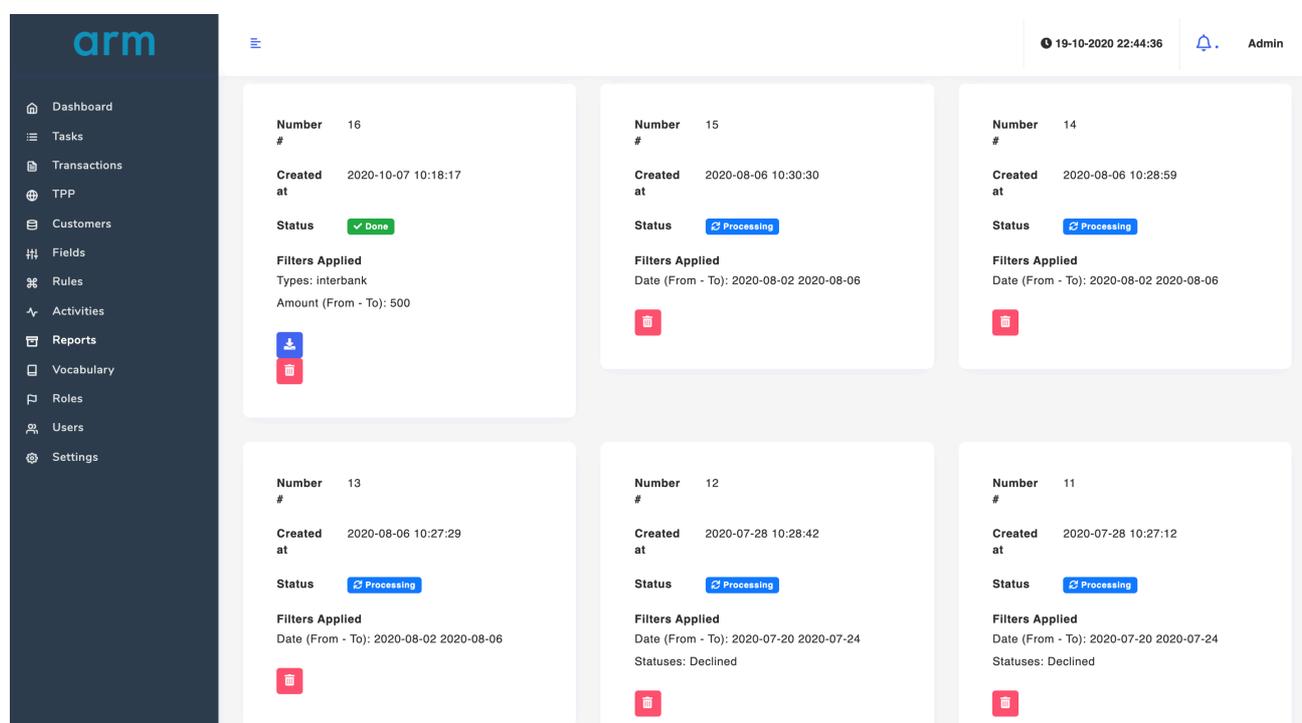
In order to help supervisors see what happens in the system, who doing what and what kind of work was done by specific manager we introduced an activity logger, which tracks all the activity in the system generated by different entities, such as transactions, customers, users, comments, assignee, statuses, rule updates, applied rules etc. On the Activities screen user can find a few filters to help searching.

The screenshot shows the 'arm' system interface. On the left is a dark sidebar with the 'arm' logo and a list of navigation items: Dashboard, Tasks, Transactions, TPP, Customers, Fields, Rules, Activities, Reports, Vocabulary, Roles, Users, and Settings. The main area is titled 'ACTIVITIES' and includes a breadcrumb 'Dashboard / Activities'. Below the title are three filter boxes: 'Filter by Subject Type' (a dropdown), 'Filter by Subject ID', and 'Filter by Causer'. A table of activities is displayed below the filters.

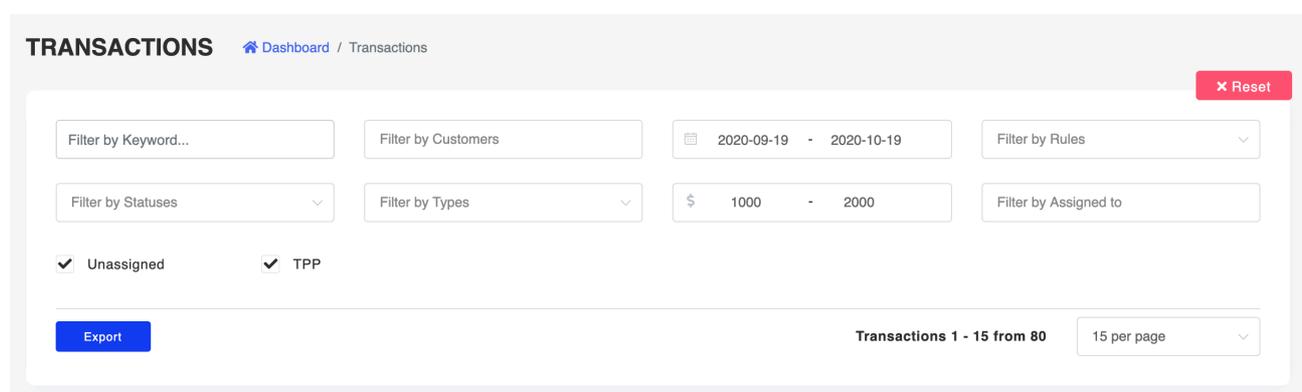
#	Title	Causer	Description
440652	[Internetbanka] #45710384 transaction updated <small>Created at 2020-10-19 22:43:04</small>	System	Score: Changed to 32.00 Status: 0 Changed to 2
440651	[Internetbanka] #45710384 transaction created <small>Created at 2020-10-19 22:43:04</small>	System	
440650	Pointless data rule created <small>Created at 2020-10-19 22:42:48</small>	Admin	
440649	Pointless data rule created <small>Created at 2020-10-19 22:42:45</small>	Admin	
440648	Checking by the recipient's account number rule created <small>Created at 2020-10-19 22:42:21</small>	Admin	

REPORTING

System help users to automate their daily routine. For that matter we introduced automated reporting system which could be configured to create scheduled reports by specific filter or create a reports manually. All reports are available on the Reports screen where you can find all current reports generation status and links to download the file with reports.



In order to **create a reports files for a batch of transactions**, user can go to the transactions screen and use filters to chose transaction he wants to see in the report file and then clicks Export button. System will create new report which will be available for download on Reports Page:



Report for customer

You can get a report for the specific customer which will contain information on the customer, comments to his files, change-log, client risk factors and list of AML created for the customer with status, assigned person and when it was created.

To get this report, you can go to specific customer and click on the link across Report Section:

Customer Information

Number #	6
Account type	Personal
Reference ID	f0499c94-1748-4b80-ad28-72e44
Name	John Day
Assigned To	Dmytro Medvid (Admin) 
Risk score	350 
Created at	2021-06-21 13:19:07
Last IP Address	-
Last User Agent	-
Usual IP Address	-
Usual User Agent	-
AML Checker	Trigger AML Check
Adverse Media Checker	Trigger Adverse Check
Report	 PDF

Report for AML Case

You can get a report for a specific AML case, which will contain all the information about the case.

To get this report, you can go to specific AML Case page and click on the link Download Report:

Date sent ( [Download Report](#))

```
{
  "uid": 1,
  "name": "name",
  "content": "John Day",
  "threshold": "0.8"
}
```

Report for transaction

You can get a report for the specific transaction which will contain all the information about this particular transaction.

To get this report, you can go the specific transaction screen and click on the link across Report section:

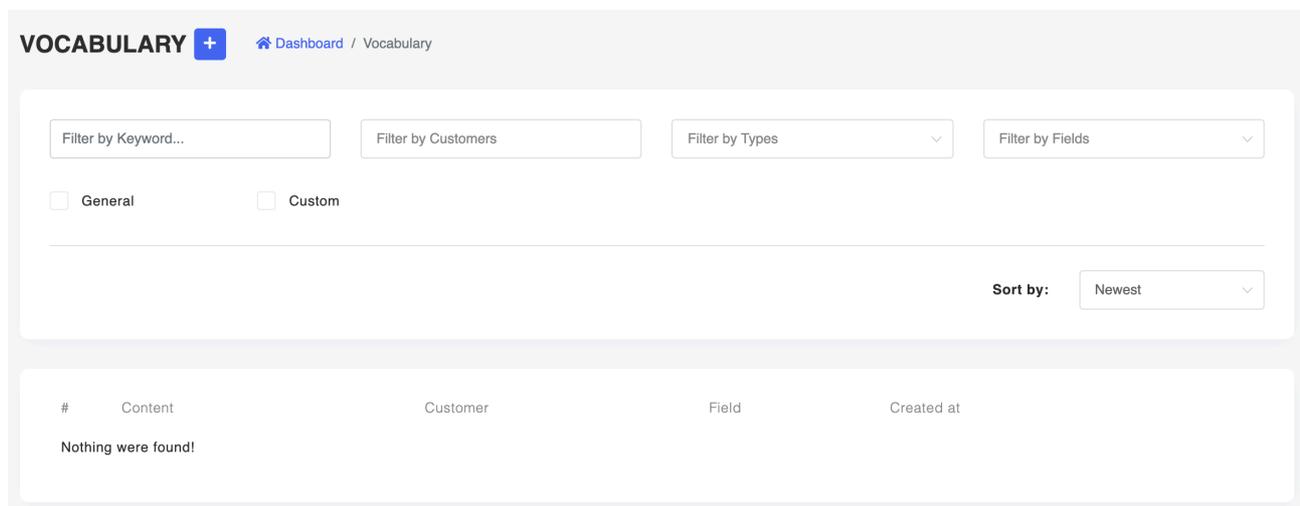
Transaction Information

Number #	198
Reference ID	e8608acb-2693-434a-a32f-9c1bf965c52a
Type	JSON API
Created at	2021-08-05 14:50:34

Report  [PDF](#)
 [XLS](#)

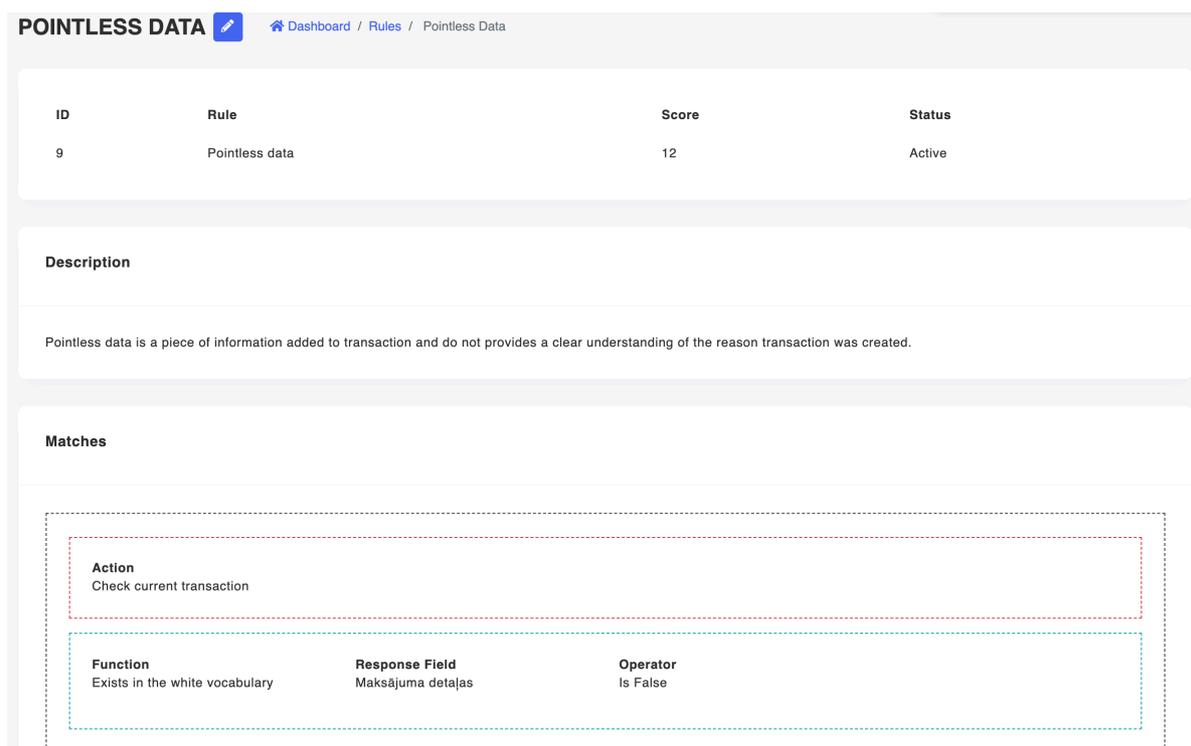
VOCABULARY

The system uses two main vocabulary lists: one on the **customer level** which is accessible from specific customer page and **global** vocabulary.



Vocabularies are used as a black/white lists and we have them on two level - global and separated vocabulary for each customer which allows us to use them for exceptions creations.

Vocabulary are also used for specific rules - Pointless Data in payment details - which is available out of the box:



Each data-field mapped to the platform using mapping system can be marked as available for vocabulary. And on transition level you can add any field to user vocabulary or to the global one by clicking on “+” icon:

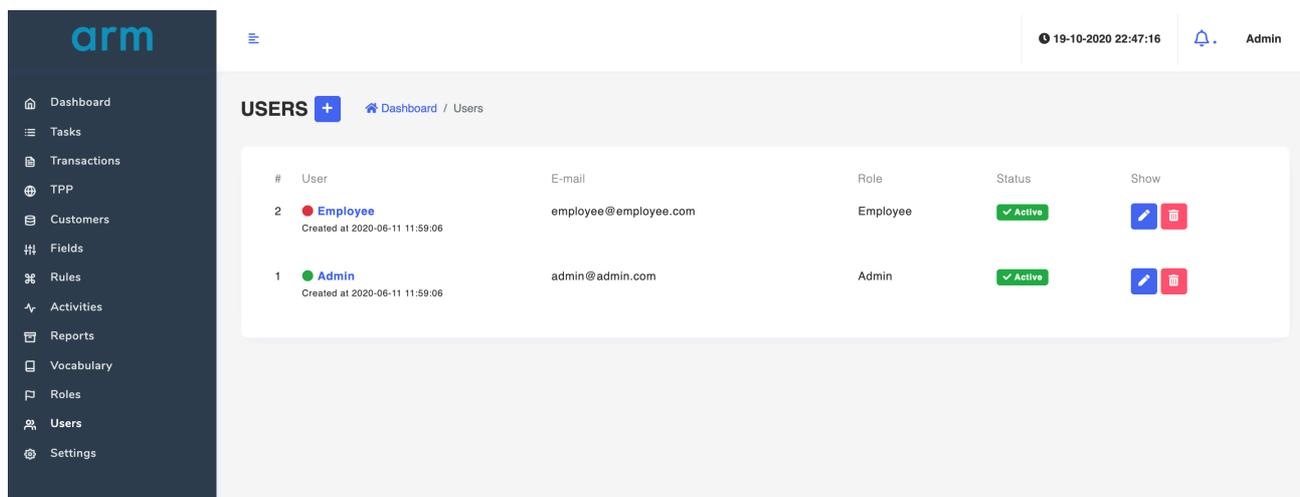
Maksājuma detaļas  

Voluptatem.

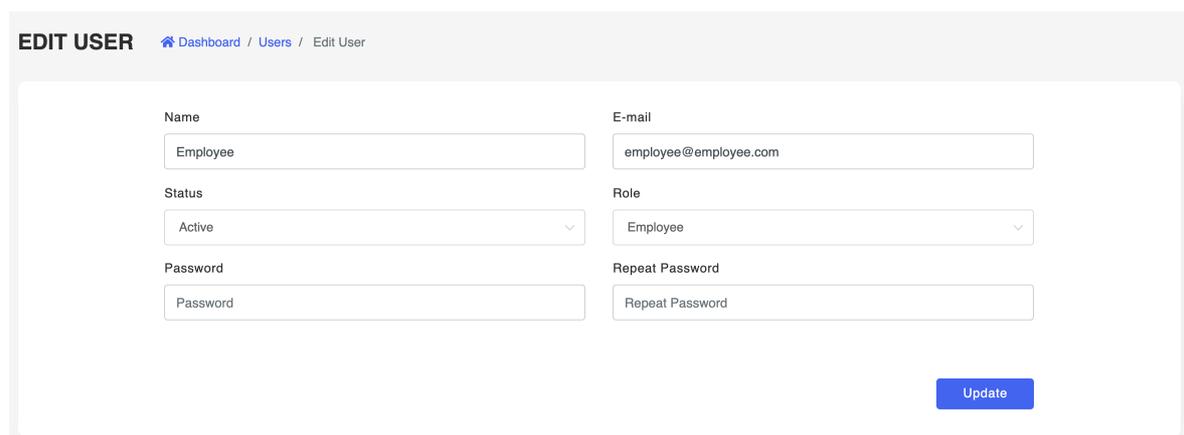
Additional setting for vocabulary are available on System Settings section.

USERS AND ROLES

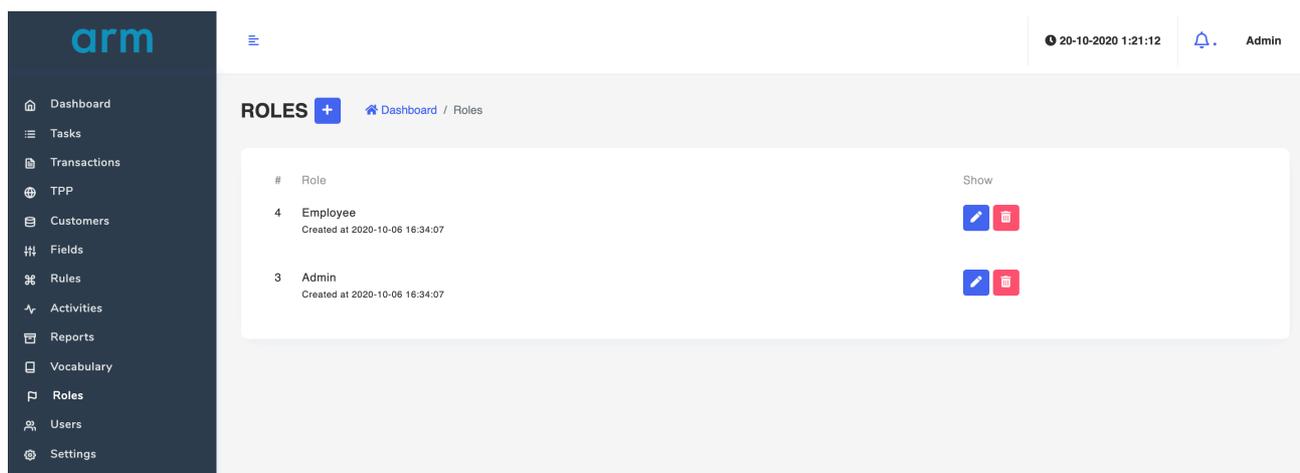
The Platform has flexible RBAC system out of the box as well as users management system.



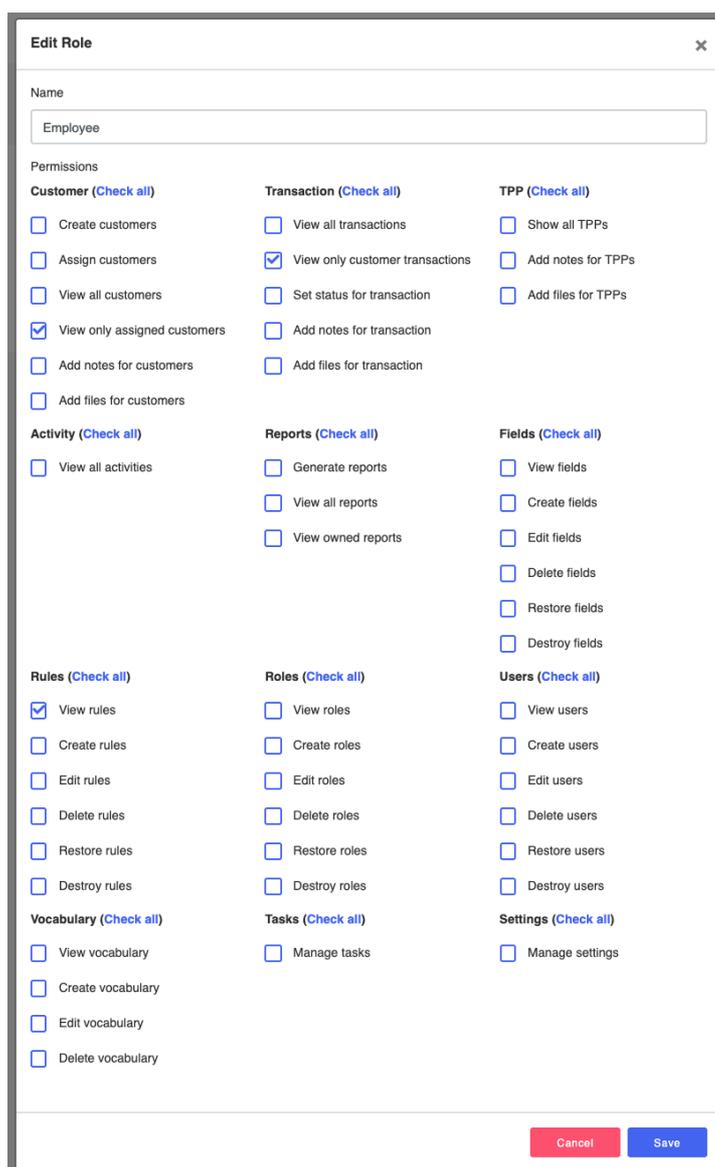
Specific user settings allows to change user name, email, status, roles and password.



Users roles are available on the Roles screen and can be edited, deleted or created.



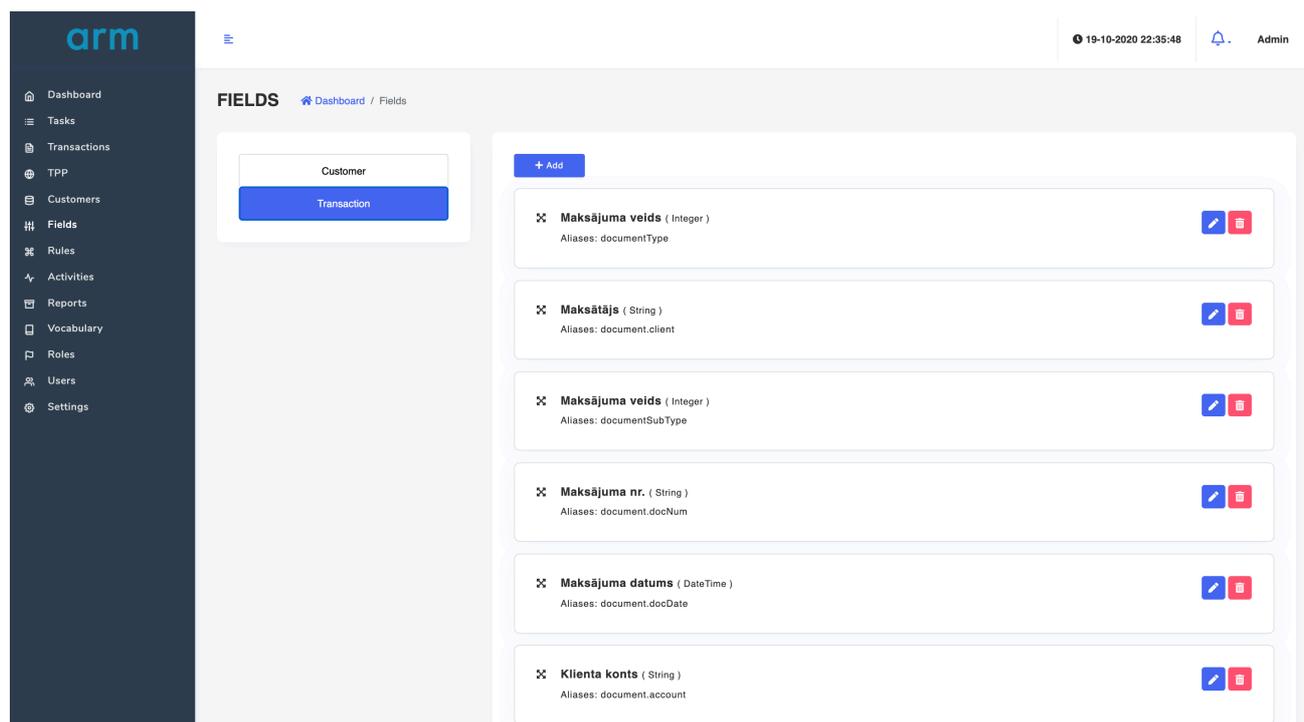
Flexible roles configuration allows to set strict restrictions and permissions for each role:



FIELDS FOR INTEGRATION

Integration of the system is simple because of universal API and mapper functionality which allows to map all the fields data-sources are sending to the system, add aliases for them and add human-readable names/description.

All mapped fields automatically pulled to entities such as Transactions and Customers.



Mapped transaction fields

Maksājuma veids	Starptautiskais maksājums
Maksātājs	Tommie Tromp I
Maksājuma nr.	879
Maksājuma datums	2019-11-25 00:00:00
Klienta kots	1581784674
Summa	44987.00
Valūtas nosaukums	EUR
Valūtas kods (tehn.lauks)	840
Saņēmējs	Unde animi ut.
Maksājuma detaļas	Voluptatem.
Saņēmēja reģistrācijas numurs	3
Saņēmēja valsts	Voluptatum.
Ārējā maksājuma kods (teh.lauks)	371725409
Ārējais maksājumu kods	Suscipit.
Saņēmēja valsts (teh.lauks)	526025997
TPP_ID	PSDLV-FCMC-NO170
TPP_ROLE	PIISP

All the data fields are mapped using simple UI interface understandable for non-technical people.

Edit Field
✕

Name

This is just an virtual name.

Type

Integer
▼

You can't change type after creation, it can affect data values!

Aliases

+
✖

Classifications

1	Bankas ietvaros
2	EUR pārvedums Latvijā
3	Starptautiskais maksājums
4	Konvertācija
33	SEPA
29	Budžeta maksājumus

+
✖
✖
✖
✖
✖

Properties

Make Hidden

Use for vocabulary

Contains

Contains login IP

Contains User Agent

Cancel

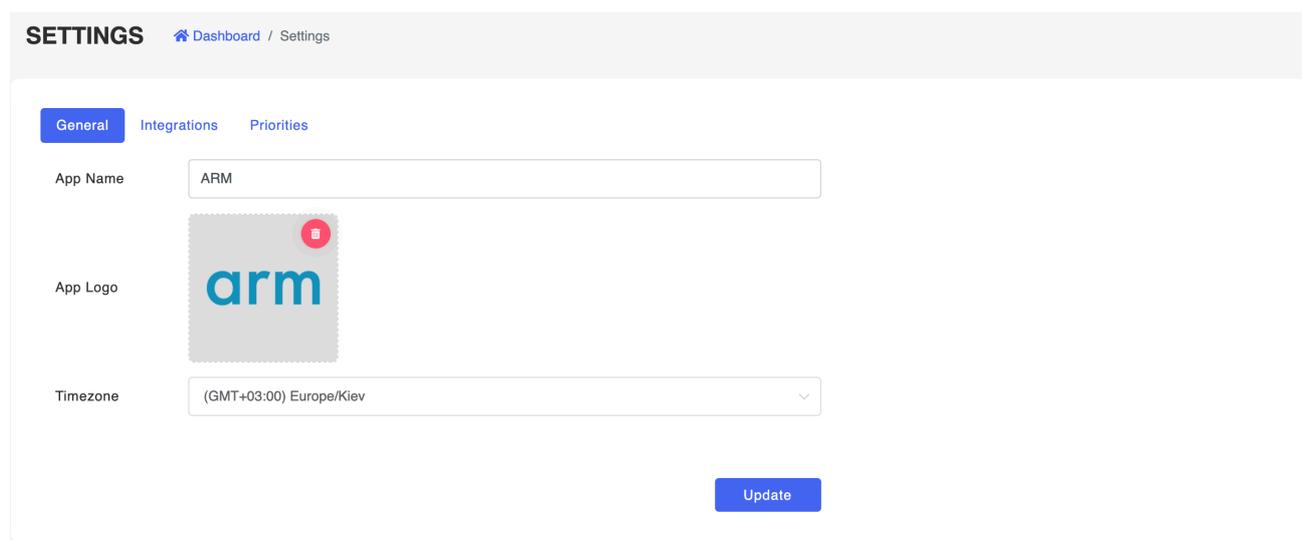
Save

It is also possible to mark any field as a field with IP address, or user agent. Fields can be technical - which means they are used for rules, but not visible on entities level (transaction or customer profile). And of course any field may be used for vocabularies.

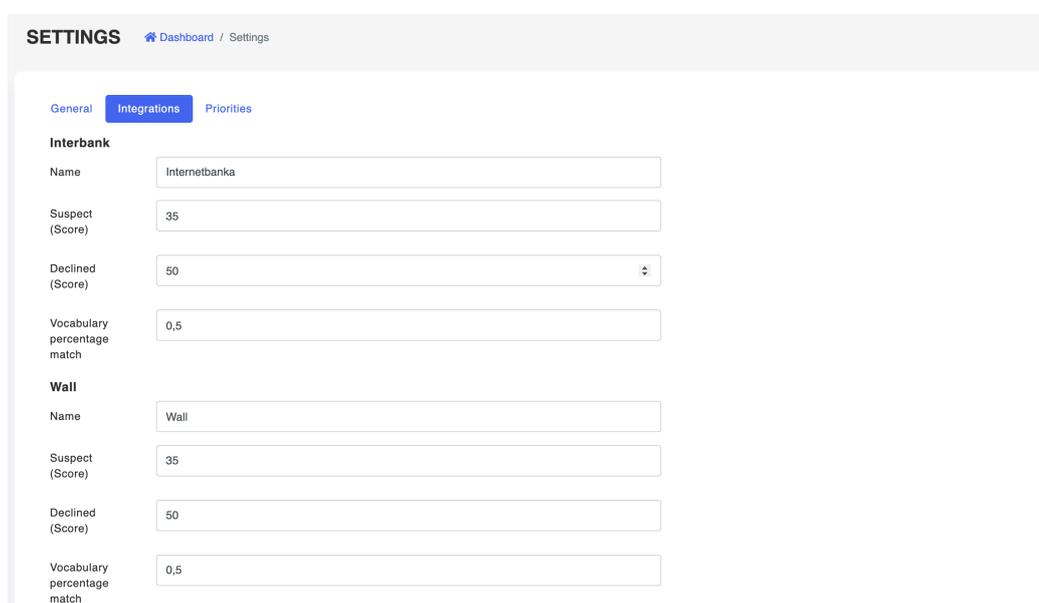
SYSTEM SETTINGS

System settings are used for global settings of the platform. In the main view you can find at least three sections (depends on integration): General, Integrations, Priorities.

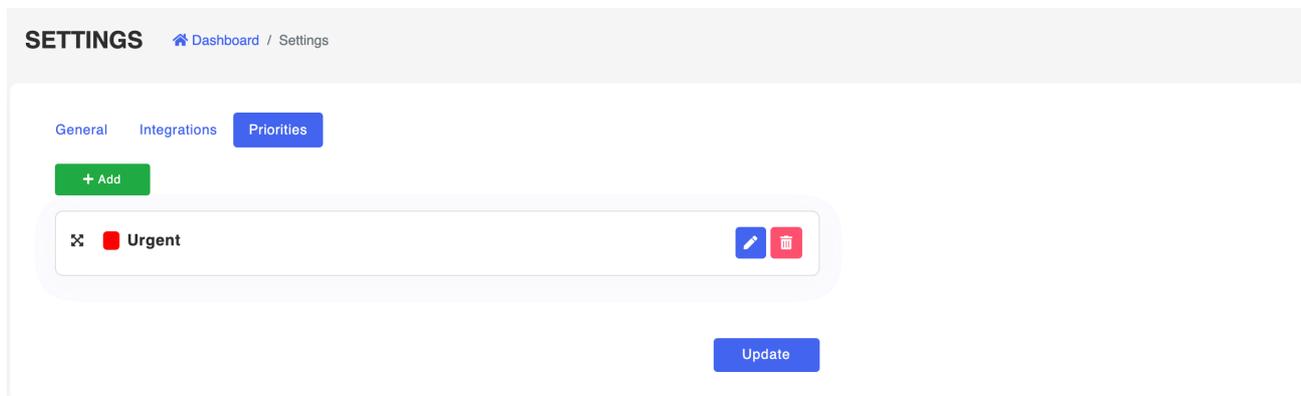
In General sections there are settings such as a system name, logo to display and timezone you use.



Integrations section contains settings related to specific data sources - you can set name for it and separated score settings for each data source, as well as vocabulary match percentage - which means how similar match should be.



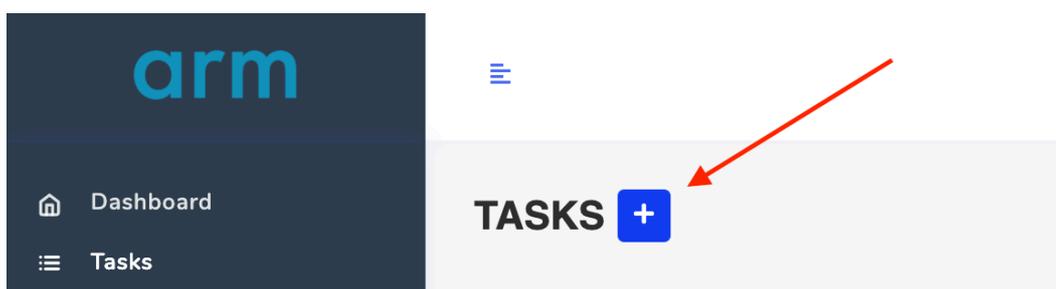
Priorities section is used to create specific alerts priorities for **Tasks Module**, which allows to create alert and to-do lists for managers on the fly. The priorities allows to create custom priorities with meaningful names.



TODO-LISTS / TASKS

This module allow to create tasks and todo-lists for each manager automatically. On the Tasks screen you can see all todo-lists with data about entity who generated the task, when, why and current status (done/to be done).

On that screen each user can create specific listener for tasks generation, for instance, we want to have separated list with name "Test Listener":



Create listener
✕

Name

Test Listener

Rules

Rules ▼

Priority

Urgent ▼

Cancel

Save

Then we want to listen for the transactions with specific rules combination applied to it (Proxy IP address, Checking by the recipient's account number, Payment details check):

Create listener ✕

Name

Test Listener

Rules

Proxy IP Address ✕
Checking by the recipient's account number ✕
^

Payment details check ✕

Checking with the previous IP address

Proxy IP Address ✓

The country of the user's IP address is different

Checking by the recipient's account number ✓

Payment details check ✓

The payment details repeat the information

5 or more identical transactions during the day

3 or more payments to one account

and all tasks created by that listener should be marked with priority "Urgent":

Create listener ✕

Name

Test Listener

Rules

Proxy IP Address ✕ Checking by the recipient's account number ✕ ∨

Payment details check ✕

Priority

Urgent ∧

Urgent

Cancel Save

AML CASES

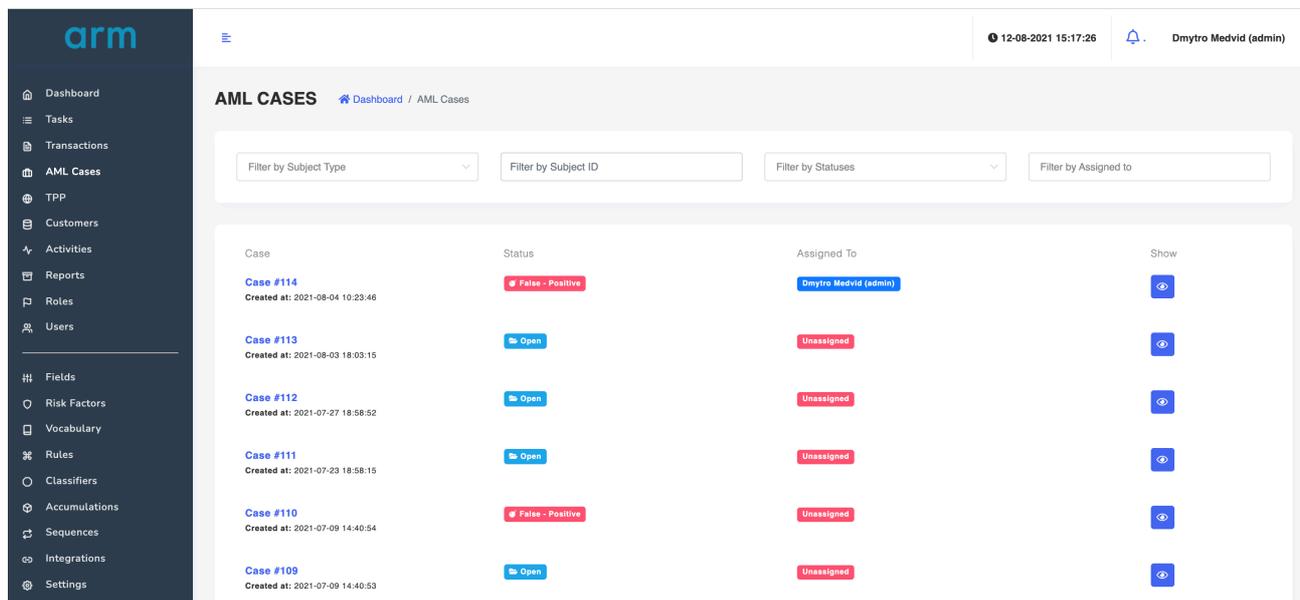
This module allow you to process AML Cases created for customers or out of their transactions.

There are a few scenarios that trigger AML check on customer profile, AML Case creation could a result of any of these scenarios in case of hit:

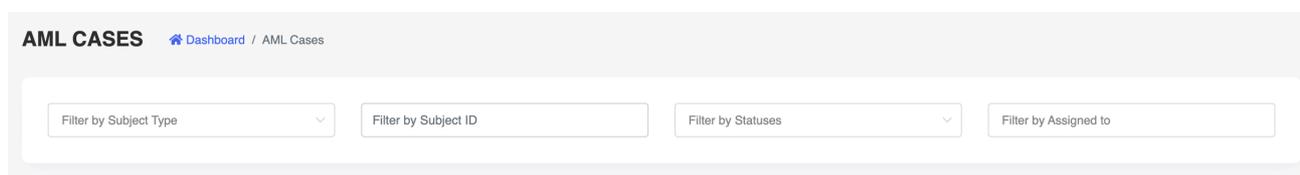
5. The newly created customer getting checked against the lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
6. Trigger manually customer screening. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
7. Daily screening - schedule screening on daily basis. For instance, every night customers are getting screened against sanctions lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).
8. Updated customer profile getting checked against the lists. If we have a hit - an AML case created. After the case resolved - the customer could get new risk factors assigned (manually).

AML Check also could be triggered as a result of transaction processing, for example, for each transaction we check Beneficiary name, Remitter name and payment details against connected database (sanctions, offshores, PEP, criminals, Interpol). If there will be a hit - the case will be created (if there will be three different hits (for beneficiary, remitter and payment details) - three different cases will be created).

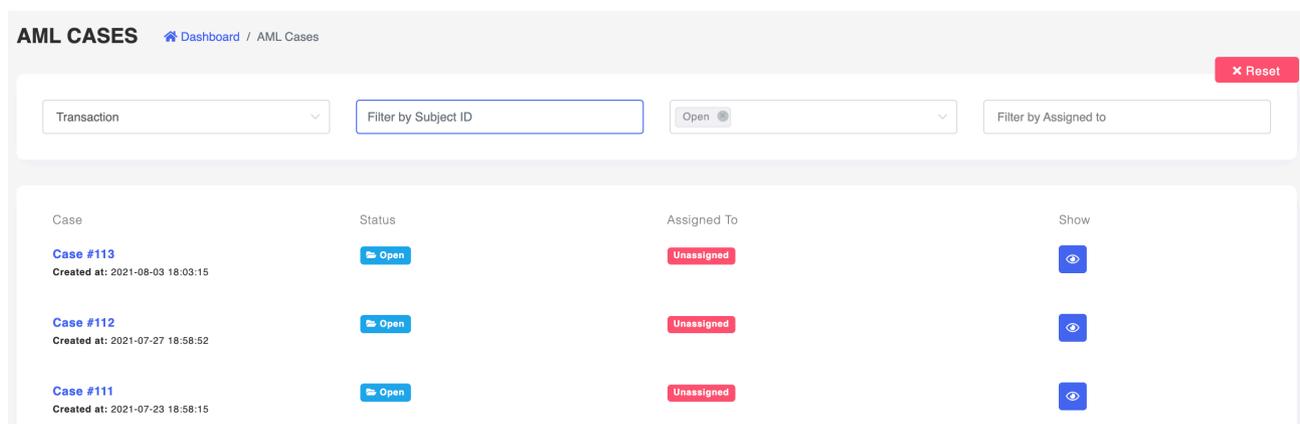
The list of all AML cases could be found under AML Cases section in the system.



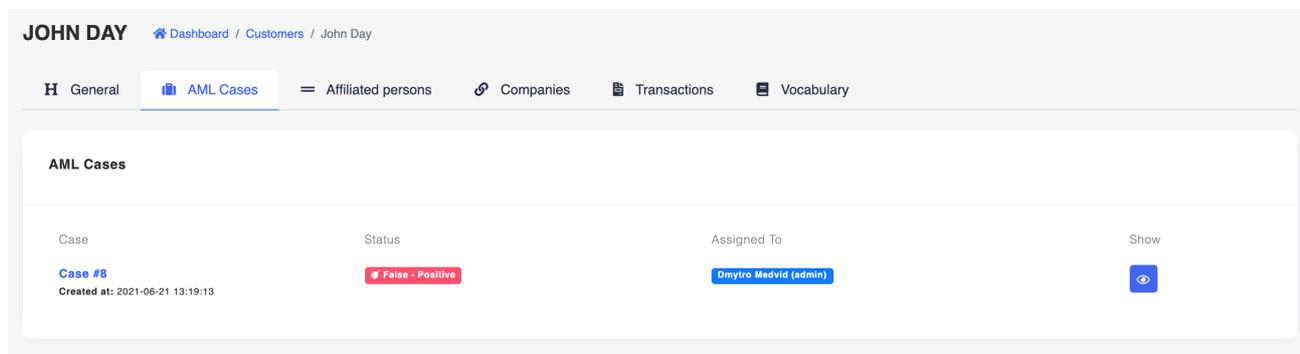
If you want to see AML cases related to specific customer, you can use a filters on top of the list of all AML Cases:



You can search by Subject Type (transaction or customer), by Subject ID, by case Status and by the person to whom cases are assigned:

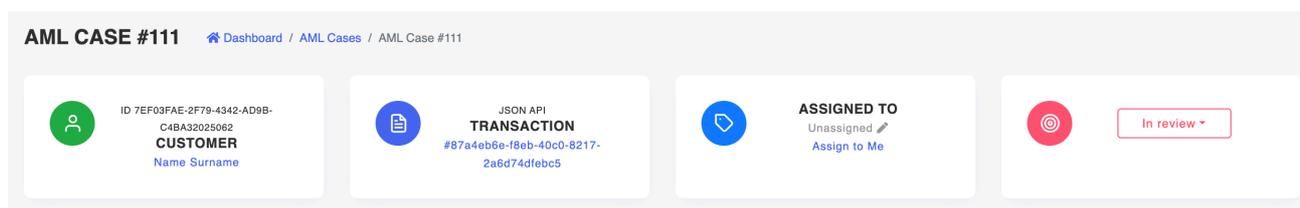


In case you want to see all the cases that are related to specific customer - you can open that customer profile and find the list of all related cases under the AML Cases tab:



Each case contains plenty of useful information. On the top of specific AML Case you can see a few different controls:

- Customer to whom this case belongs to;
- if case was created as a result of transaction check you will see link to that transaction;
- Assigned To block shows who currently works on that case
- Status block shows current case status and allows to change it by clicking on the button with current status name



Currently, each case could be in of the following statuses: Open, Rejected, False-Positive, In Review, Closed. **This could be customised, please contact us and we will help with that.**

On each case we are showing an information about the data that was sent to AML Module to be checked and list of hits. You also can get a report for that AML Case by clicking on the link "Download Report":

Date sent ([Download Report](#))

```
{
  "uid": "87a4eb6e-f8eb-40c0-8217-2a6d74dfebc5",
  "threshold": "0.8",
  "content": "John Doe",
  "recordType": [
    "PEP"
  ]
}
```

Results found in the list

Name	List	Threshold	Type	Action
Joe John	g2persons	0.804	PEP	Lookup

Block **Results found in the lists** shows you hits that we got during this check. If you need details on any of entry in the list you can click on the **Lookup** button.

For each AML Case that created in the system you will see the block with customers details. You also can do some changes to the customer profile here, all the changes will be logged on the customer profile level (to keep audit trail):

Customer Information

Number #	7
Account type	Personal
Reference ID	7ef03fae-2179-4342-ad9b-c4ba32025062
Name	Name Surname
Assigned To	Unassigned
Risk score	0
Created at	2021-06-29 01:13:14
Last IP Address	172.18.0.2
Last User Agent	Unknown
Usual IP Address	172.18.0.2
Usual User Agent	Unknown
AML Checker	Trigger AML Check
Adverse Media Checker	Trigger Adverse Check
Report	 PDF

Mapped fields

CI Code	7ef03fae-2179-4342-ad9b-c4ba32025062
CI Name	Name Surname
CI RegDate	2018-01-29T10:16:39
CI Status	Identified
CI CounCode	LV
CI Country	LV
PersonInd	0
PersonIndText	Person
CI Addr	Hello World St. 55
Phone	37112345678
E-Mail	client@crassula.io
Language	en
Customer Age	31
CustomerAge (calculated)	0

For cases that are created as a result of transaction check you will also see a transactions details:

Transaction Information

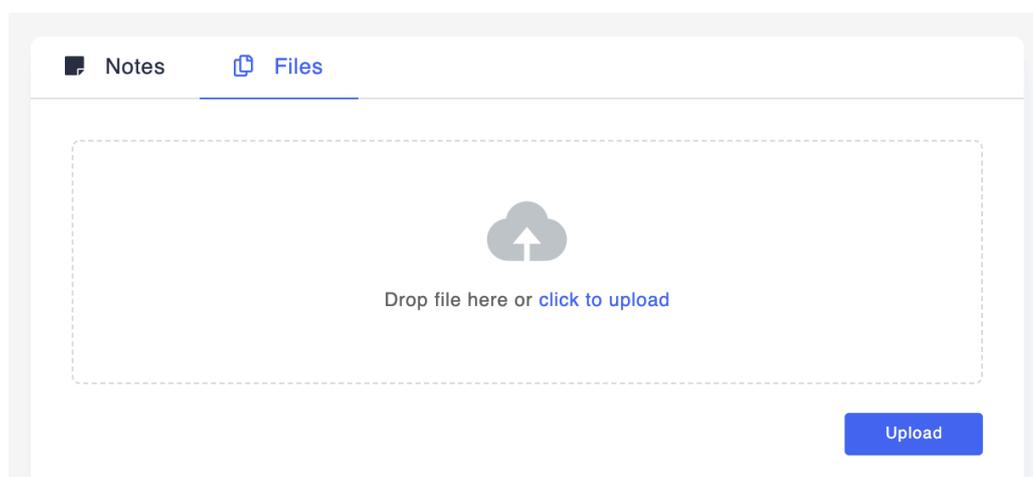
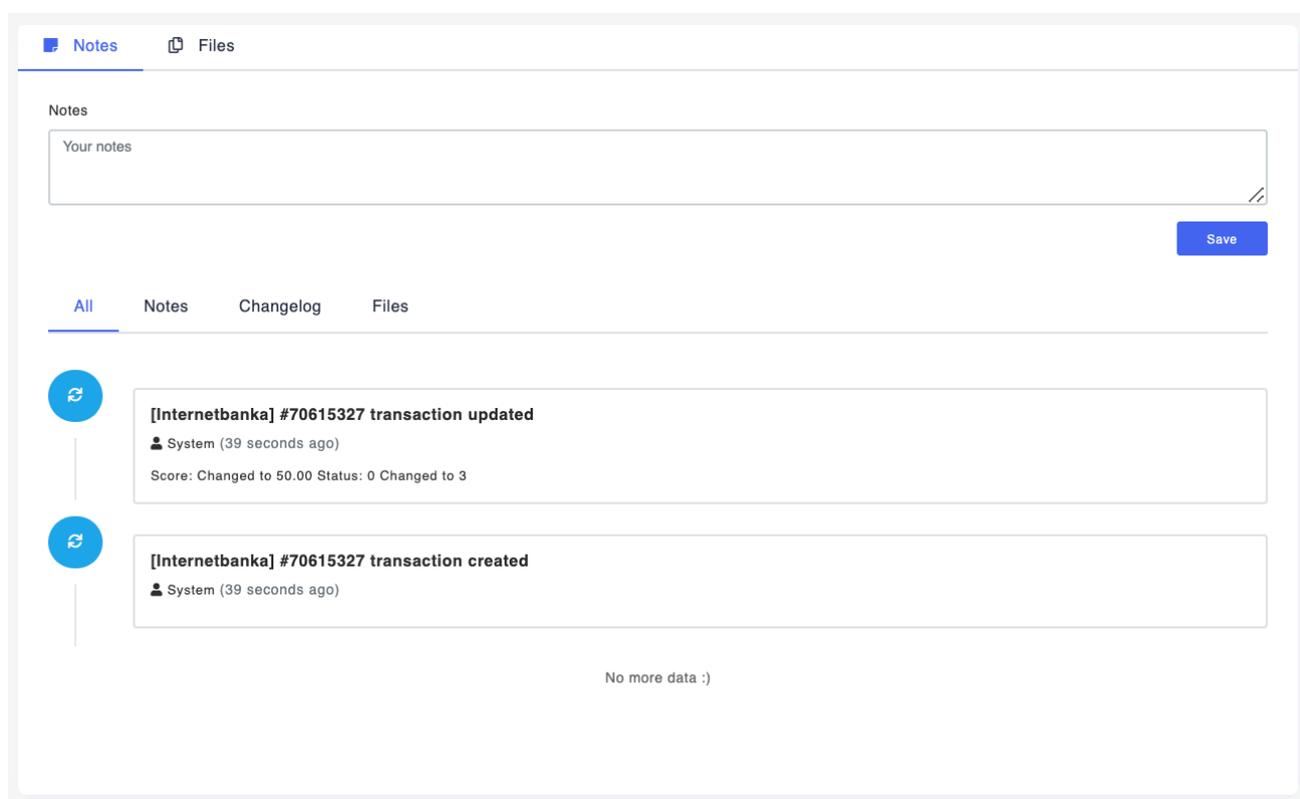
Number #	147
Reference ID	87a4eb6e-f8eb-40c0-8217-2a6d74dfbc5
Type	JSON API
Created at	2021-07-23 18:58:14
Status	✔ Accepted
Report	PDF XLS

Mapped transaction fields

Type	33
Sub-Type	Outbound (OUT)
Client	Name Surname
Transaction Number	87a4eb6e-f8eb-40c0-8217-2a6d74dfbc5
Date	2021-07-23T13:47:34
Client Account	50469728302
Amount	1.01
Beneficiary	John Doe
Beneficiary Account	GB51LOYD30130512345676
Payment Details	Transfer to a friend
Beneficiary Type	Person
Beneficiary Bank Code Type	15
Beneficiary Bank Code Name	LLTPGB21XXX
Sign In Ip Address	172.18.0.2
Country code	0
Current Balance	1076.38
Next Balance	1075.37
Remitter Name	Name Surname
Remitter Account	LT223980050469728302
Country Code (hardcode)	GB

For each case in the system we also have a Case Manager block, which has a few abilities:

- ◆ Leave a comment which will be placed with a information about author
- ◆ Attach files of any time (configured on integration)
- ◆ To see all changes which were made by users
- ◆ Filter by Notes, Change-log or Files



On each page in the footer you also can find a block with current status of AML Module. It shows not only status, but the list of connected databases, the date when it was updated last time and current version of the system:

AML Module ● IN_SERVICE

g2persons - /dblists/g2/persons.json (2021/08/12 00:20:50.000+0000)

g2organizations - /dblists/g2/organizations.json (2021/08/12 00:23:02.000+0000)

Version: 2.2.2

By default we are using next databases for customer and transactions screening:

◆ **Criminal:**

- ◆ Interpol Red Notices
- ◆ Europol - Europe's Most Wanted Fugitives

◆ **Sanctions:**

- ◆ Financial Intelligence Unit of Latvia (FIU Latvia) Sanctions
- ◆ Office of Foreign Assets Control (OFAC) sanctions
- ◆ United Nations Security Council sanctions
- ◆ EU consolidated electronic list concerning persons and entities subject to EU financial sanctions
- ◆ Interpol sanctions
- ◆ UK, Her Majesty's Treasury, Office of Financial Sanctions Implementation
- ◆ U.S. Treasury Department Sanctions

◆ Offshore:

- ◆ Panama papers
- ◆ Paradise papers
- ◆ Bahama leaks
- ◆ Offshore leaks

◆ PEP:

- ◆ Latvian Saeima and Regional Politicians
- ◆ World Leaders
- ◆ European politicians

NOTE: Additional (custom or from different providers, for instance, Accuity, Worldcheck, Dow Johns etc.) lists and databases could be added on demand.