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Coinfirm AML Oracle Integration

28th April 2022

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Introduction

The document below was created to help integrate Solidity based Smart Contract with Coinfirm AML Oracle.

Integration

Initial assumptions

Addresses

All addresses stored in AtomicOracle are as a string in upper case and without leading 0x.

Eg: valid Ethereum/RSK account address can be used in a lowercase format, like:

```
0xca0e7269600d353f70b14ad118a49575455c0f2f
```

or in case sensitive one (with checksum)

```
0xCA0e7269600d353F70b14Ad118A49575455C0f2f
```

In request to AtomicOracle caller will need to use its uppercase form without leading 0x

```
CA0E7269600D353F70B14AD118A49575455C0F2F
```

Status Flags and C-Score

Status Flags and C-Score are returned as a single bytes32 value, where:

- flags binary mask

```
0xffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffffff00ff
```
- c-score binary mask

```
0x000000000000000000000000000000000000000000000000000000000000000000ff
```

ETHAtomicOracle interface

Interface of ETHAtomicOracle is as below.

```
interface IETHAtomicOracle is IBaseAtomicOracle {  
    /**  
     * @dev Setting a fee for a specific Client Smart Contract.  
     *  
     * @param addr Address of the Client Smart Contract  
     * @param fee Fee for this specific smart contract, use 0 to use the  
     * default fee  
     */  
    function setFee(address addr, uint256 fee) external;
```

```
/**
 * @dev Setting the default fee for queries.
 *
 * @param defaultFee_ New default fee for Client Smart Contracts
without
 * their own personal fee in wei
 */
function setDefaultFee(uint256 defaultFee_) external;

/**
 * @dev Withdraw fees from this contract to the calling account
 *
 * Withdraw all the paid fees.
 */
function withdrawFees() external;

/**
 * @dev Status getter, see {BaseAtomicOracle-_getStatus}. Accepts
ether.
 */
function getStatusForETH(string calldata target) external payable
returns (bytes32 status);

/**
 * @dev Get the current fee for a specific Client Smart Contract.
 *
 * Use this to determine what your contract would pay.
 *
 * @param addr The Client Smart Contract whose fee would like to have
 * @return fee Current fee at the moment for `addr` in wei
 */
function getFee(address addr) external view returns (uint256 fee);

/**
 * @dev Emitted when a new fee for an address is set.
 *
 * @param addr Ethereum account address whose fee was set
 * @param fee The current fee in wei
 */
event FeeSet(address addr, uint256 fee);

/**
 * @dev Emitted when an authorized user withdraws paid fees from this
 * contract.
 *
 * @param destination Ethereum account address where the fees were
 * withdrawn to
 * @param amount Amount of fees withdrawn in wei
 */
event FeesWithdrawn(address destination, uint256 amount);

/**
 * @dev Emitted when default fee for account without a personal fee is
set
 *

```

```
    * @param fee Current fee in wei for accounts without a personal fee
    */
    event DefaultFeeSet(uint256 fee);
}
```

Usage scenarios

Client's Smart Contract using this Oracle should always query the current fee via `ETHAtomicOracle::getFee`, so the Client Smart Contract would be ready for sudden price changes by the admin of this contract.

Getting the default fee is not needed: `ETHAtomicOracle::getFee` should be used instead.

Sample integration

The smart contract below is an example to demonstrate communication between Oracle and the Client.

In this sample, the client relies only on validating a single flag - `StatusLibrary.SANCTIONED_FLAG`

```
// SPDX-License-Identifier: UNLICENSED
pragma solidity ^0.7.4; // See "Solidity version" of README.md

import "https://github.com/OpenZeppelin/openzeppelin-
contracts/blob/v3.4.0/contracts/utils/Address.sol";
import "https://github.com/OpenZeppelin/openzeppelin-
contracts/blob/v3.4.0/contracts/math/SafeMath.sol";
import "./IETHAtomicOracle.sol";
import "./AddressLibrary.sol";
import "./StatusLibrary.sol";

/**
 * @title An Example Client Smart Contract: a simple vault
 * @author Ville Sundell <development@solarius.fi>
 * @dev This is an example implementation of a client smart contract.
 *
 * This is just to demonstrate Oracle <-> Client communication.
 * The business logic presented here is not viable.
 *
 * THIS IS SIMPLIFIED INTENTIONALLY, AND NOT USABLE IN PRODUCTION AS-IS!
 */

contract ExampleVault {
    using Address for address payable;
```

```

        using SafeMath for uint256; // Applicable only for
uint256 // These are AML Oracle specific, copy these to
your implementation:
        using AddressLibrary for address;
        using StatusLibrary for bytes32;

        IETHAtomicOracle private _oracle;

        mapping(address => uint256) private _balances;

        constructor(IETHAtomicOracle oracle_) {
            _oracle = oracle_;
        }

        receive() external payable {
            _balances[msg.sender] = _balances[msg.sender].add(msg.value);
            _verifyUser(msg.sender);
        }

        function withdraw() external {
            uint256 balance = _balances[msg.sender];
            _balances[msg.sender] = 0;
            _verifyUser(msg.sender);
            msg.sender.sendValue(balance);
        }

        function _verifyUser(address user) internal {
            string memory target = user.toString();
            uint256 fee = _oracle.getFee(address(this));
            bytes32 result = _oracle.getStatusForETH{value: fee}(target);

            require(!result.isFlag(StatusLibrary.sanctioned_country),
"ExampleVault: User is flagged as sanctioned");
        }
    }

```

Deployed AtomicOracle

ETHAtomicOracle deployed smart contracts can be found at the following addresses.

Variant	Address
RSK Mainnet	0x2431a94e685d1f214e8ccfd6909d52ec618f7b1e https://explorer.rsk.co/address/0x2431a94e685d1f214e8ccfd6909d52ec618f7b1e
RSK Testnet	0xC2eBb4e0F43096e8681f8bFEAf03916bF7CA79A8 https://explorer.testnet.rsk.co/address/0xc2ebb4e0f43096e8681f8bfeaf03916bf7ca79a8

Appendix

RSK Mainnet sample addresses

Clean addresses:

- call AtomicOracle for
2431A94E685D1F214E8CCFD6909D52EC618F7B1E (uppercase variant)
- <https://explorer.rsk.co/address/0x2431a94e685d1f214e8ccfd6909d52ec618f7b1e>

Sanctioned address:

- call AtomicOracle for
CFAEC8361541EDE1AC3847566B0B13A96CB9E39C (uppercase variant)
- <https://explorer.rsk.co/address/0xcfaec8361541ede1ac3847566b0b13a96cb9e39c>

Flags

List of flags stored in AtomicOracle for each address.

The number represents bit number related to the given flag. Bit set to 1 means that the flag is active.

Code below can be used to check flag value

```
/**
 * @dev Check if a certain flag of the returned status is set.
 *
 * @param status The returned status from an Oracle Smart Contract
 * @param flag Flag number to check, 0-255
 * @return isSet Returns `true` if the flag in question is set,
`false`
 * otherwise
 */
function isFlag(bytes32 status, uint8 flag) internal pure returns
(bool isSet) {
    return (status & bytes32(2**flag)) > 0;
}
```

The full list of the risk indicators – flags

The flags can be defined in smart contract code as samples below and used with function `isFlag(bytes32 status, uint8 flag)` defined above.

uint8 internal constant sanctioned_country =16 Address contains the name of sanctioned country

uint8 internal constant name_illicit_activity =17 Address contains the name of an illicit activity

Bit; flag; description

16; sanctioned_country; Address contains the name of sanctioned country

17; name_illicit_activity; Address contains the name of an illicit activity

18; hacked_funds_layering; Address being a part of funds layering/mixing scheme related to hacked or misappropriated address

19; ico_owner; Address belongs to an Initial Coin Offerings issuer

20; quickly_released_incomes; Address with at least one transaction of quickly released incomes

21; deep_market; Address directly related to darknet market

22; drug_rlttd; Address directly related to drugs trade

23; exchange; Address belongs to cryptocurrencies exchange

24; gambling; Address belongs to gambling service

25; local_exchange; Address belongs to over-the-counter exchange

26; marketplace;

27; mining_pool;

28; mixer; Address belongs to mixer or tumbler

29; no_kyc; Address belongs to obliged service with no KYC process

30; online_wallet;

31; lending_service; Address belongs to lending service

32; remittance_company; Address belongs to remittance service

33; scam_service; Address directly related to scam or investment fraud

34; tip_service; Address belongs to tipping service

35; fiat_currency; Address belongs to entity that allows fiat deposits and withdrawals

36; usd_incoming_below_value; Address with significant part of single incoming transactions just below 10k USD

37; anonymous_coin; Address belongs to entity that allows anonymous coins trading

38; usd_outgoing_below_value; Address with significant part of single outgoing transactions just below 10k USD

39; new_address_incoming_value1; Address with significant part of incoming transactions executed from new addresses

40; new_address_outgoing_value1; Address with significant part of outgoing transactions executed to new addresses

41; drug_trade_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to drugs trade

42; drug_trade_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to drugs trade

43; drug_trade_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to drugs trade

44; drug_trade_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to drugs trade

45; deep_web_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses found on deep web

46; deep_web_incoming_value2; Address with part of incoming transactions in close proximity to addresses found on deep web

47; deep_web_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses found on deep web

48; deep_web_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses found on deep web

49; deep_web; Address found on deep web

50; terrorist_financing; Address directly related to terrorism financing

51; weapon_trade; Address directly related to weapon trade or weapon trafficking

52; crime_against_person; Address directly related to crime against the person

53; ransomware; Address belongs to ransomware

54; ransom; Address directly related to ransom payment (other than ransomware)

55; hacker; Address belongs to hacker

56; hacked; Address which was hacked or misappropriated

57; tax_evasion; Address directly related to tax evasion

58; high_risk_connected_parties; Address posses high risk connected parties

59; terrorist_financing_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to terrorism financing

60; terrorist_financing_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to terrorism financing

61; terrorist_financing_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to terrorism financing

62; terrorist_financing_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to terrorism financing

63; weapon_trade_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to weapon trade or weapon trafficking

64; weapon_trade_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to weapon trade or weapon trafficking

65; weapon_trade_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to weapon trade or weapon trafficking

66; weapon_trade_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to weapon trade or weapon trafficking

67; crime_against_person_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to crime against the person

68; crime_against_person_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to crime against the person

69; crime_against_person_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to crime against the person

70; crime_against_person_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to crime against the person

71; ransomware_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to ransomware

72; ransomware_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to ransomware

73; ransom_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to ransom payment (other than ransomware)

- 74; ransom_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to ransom payment (other than ransomware)
- 75; hacker_incoming_value1; Address with significant part of incoming transactions in close proximity to hacker's addresses
- 76; hacker_incoming_value2; Address with part of incoming transactions in close proximity to hacker's addresses
- 77; hacked_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses which were hacked or misappropriated
- 78; hacked_incoming_value2; Address with part of incoming transactions in close proximity to addresses which were hacked or misappropriated
- 79; scam_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to scam or investment frauds
- 80; scam_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to scam or investment frauds
- 81; tax_evasion_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to tax evasion
- 82; tax_evasion_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to tax evasion
- 83; significant_fee_miner_incoming_value; Address with significant part of incoming transactions passing significant fees to miners
- 84; significant_fee_miner_outgoing; Address with at least one outgoing transactions passing significant fees to miners
- 85; significant_fee_miner_outgoing_value; Address with significant part of outgoing transactions passing significant fees to miners
- 86; transactions_value_peak_incoming; Address with value peaks of incoming transactions
- 87; transactions_value_peak_outgoing; Address with value peaks of outgoing transactions
- 88; transactions_tx_value_incoming_value2; Address with significant part of incoming transactions the value of which is significantly higher than network average
- 89; new_address_incoming_value2; Address with significant part of incoming transactions executed from new addresses
- 90; new_address_outgoing_value2; Address with significant part of outgoing transactions executed to new addresses
- 91; accumulating_funds; Address accumulating funds for a long period of time
- 92; single_incoming_outgoing; Address with single incoming - outgoing transaction
- 93; quickly_released_incomes_value1; Address with significant part of transactions constituting quickly released incomes
- 94; quickly_released_incomes_value2; Address with significant part of transactions constituting quickly released incomes
- 95; round_amount_incoming_value1; Address with significant part of incoming transactions executed in round digital currencies amounts
- 96; round_amount_incoming_value2; Address with significant part of incoming transactions executed in round digital currencies amounts
- 97; round_amount_outgoing_value1; Address with significant part of outgoing transactions executed in round digital currencies amounts
- 98; round_amount_outgoing_value2; Address with significant part of outgoing transactions executed in round digital currencies amounts
- 99; hot_wallet;
- 100; medium_risk_country; Address belongs to entity registered in a medium risk country
- 101; ico_token_address; Address releasing tokens during an Initial Coin Offering
- 102; sanctioned_country_sub; Address directly related to subject from a country subject to comprehensive sanctions
- 103; cloud_mining_pool; Address belongs to cloud mining pool
- 104; high_risk_country; Address belongs to entity registered in high risk country/prohibited country

105; terrorist_financing_layering; Address being a part of funds layering/mixing scheme related to terrorism financing

106; weapon_trade_layering; Address being a part of funds layering/mixing scheme related to weapon trade or weapon trafficking

107; crime_against_person_layering; Address being a part of funds layering/mixing scheme related to crime against person

108; drug_layering; Address being a part of funds layering/mixing scheme related to drugs trade

109; deep_market_layering; Address being a part of funds layering/mixing scheme related to darknet markets

110; blackmail_layering; Address being a part of funds layering/mixing scheme related to blackmail

111; blackmail_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to blackmail

112; deep_market_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to darknet markets

113; card_skimming; Address directly related to credit card skimming or cloning

114; deep_market_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to darknet markets

115; scam_service_layering; Address being a part of funds layering/mixing scheme related to scam or investment frauds

116; piracy; Address directly related to intellectual property piracy

117; blackmail_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to blackmail

118; ponzi_service_layering; Address being a part of funds layering/mixing scheme related to Ponzi schemes

119; pump_dump_layering; Address being a part of funds layering/mixing scheme related to pump and dump fraud

120; pump_dump_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to pump and dump fraud

121; pump_dump_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to pump and dump fraud

122; piracy_layering; Address being a part of funds layering/mixing scheme related to intellectual property piracy

123; piracy_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to intellectual property piracy

124; piracy_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to intellectual property piracy

125; card_skimming_layering; Address being a part of funds layering/mixing scheme related to credit card skimming or cloning

126; card_skimming_value1; Address with significant part of incoming transactions in close proximity to addresses related to credit card skimming or cloning

127; card_skimming_value2; Address with part of incoming transactions in close proximity to addresses related to credit card skimming or cloning

128; tax_evasion_layering; Address being a part of funds layering/mixing scheme related to tax evasion

129; sanctioned_country_incoming_taint;

130; ransom_layering; Address being a part of funds layering/mixing scheme related to ransom payment (other than ransomware)

131; blackmail; Address directly related to blackmail

132; company;

133; individual_user;

134; merchant;

135; seized_by_authorities;

136; non_profit; Address belongs to nonprofit organization
137; foundation; Address belongs to foundation
138; charity; Address belongs to charity
139; government_political;
140; pump_dump; Address directly related to pump and dump fraud
141; non_blockchain_anonymity_service; Address belongs to anonymity service
142; gaming_service; Address belongs to gaming service
143; ponzi_service; Address belongs to Ponzi scheme
144; media;
145; community;
146; entertainment;
147; data_vendor;
148; it;
149; healthcare;
150; travel;
151; gift_cards;
152; online_forum;
153; digital_assets;
154; no_to_limited_kyc; Address belongs to obliged service which had no KYC and currently has limited KYC process
155; cryptocurrency_enterprise;
156; blockchain_exploring_service;
157; sanctioned_country_sub_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to subject from sanctioned country
158; limited_to_full_kyc; Address belongs to obliged service which had limited KYC and has implemented full KYC process
159; sanctioned_country_sub_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to subject from sanctioned country
160; no_to_full_kyc; Address belongs to obliged service which had no KYC and has implemented full KYC process
161; ponzi_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to Ponzi schemes
162; ponzi_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to Ponzi schemes
163; mixer_incoming_value1; Address with significant part of incoming transactions in close proximity to mixers or tumblers addresses
164; mixer_incoming_value2; Address with part of incoming transactions in close proximity to mixers or tumblers addresses
165; mixer_outgoing_value1; Address with significant part of outgoing transactions in close proximity to mixers or tumblers addresses
166; mixer_outgoing_value2; Address with part of outgoing transactions in close proximity to mixers or tumblers addresses
167; local_exchange_incoming_value1; Address with significant part of incoming transactions in close proximity to over-the-counter exchange
168; sanctioned_country_sub_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to subject from sanctioned country
169; local_exchange_incoming_value2; Address with part of incoming transactions in close proximity to over-the-counter exchange addresses
170; sanctioned_country_sub_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to subject from sanctioned country
171; local_exchange_outgoing_value1; Address with significant part of outgoing transactions in close proximity to over-the-counter exchange addresses
172; ico_payment_address; Address is Initial Coin Offering payment address

173; local_exchange_outgoing_value2; Address with part of outgoing transactions in close proximity to over-the-counter exchange addresses

174; no_kyc_incoming_value1; Address with significant part of incoming transactions in close proximity to obliged service with no KYC process

175; no_kyc_incoming_value2; Address with part of incoming transactions in close proximity to obliged service with no KYC process

176; no_kyc_outgoing_value1; Address with significant part of outgoing transactions in close proximity to obliged service with no KYC process

177; no_kyc_outgoing_value2; Address with part of outgoing transactions in close proximity to obliged service with no KYC process

178; limited_KYC; Address belongs to obliged service with limited KYC process

179; terrorist_financing_incoming_taint;

180; limited_kyc_incoming_value1; Address with significant part of incoming transactions in close proximity to obliged service with limited KYC process

181; limited_kyc_incoming_value2; Address with part of incoming transactions in close proximity to obliged service with limited KYC process

182; rec_from_ico; Address receiving funds from Initial Coin Offering payment address

183; limited_kyc_outgoing_value1; Address with significant part of outgoing transactions in close proximity to obliged service with limited KYC process

184; limited_kyc_outgoing_value2; Address with part of outgoing transactions in close proximity to obliged service with limited KYC process

185; ico_contract_creator; Address creating Initial Coin Offering smart contract

186; not_functioning_service; Address belongs to shutdown or inactive service

187; ransomware_layering; Address being a part of funds layering/mixing scheme related to ransomware

188; payment_processor; Address belongs to payment processor

189; deep_market_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to darknet markets

190; hacker_outgoing_value1; Address with significant part of outgoing transactions in close proximity to hacker's addresses

191; deep_market_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to darknet markets

192; hacker_outgoing_value2; Address with part of outgoing transactions in close proximity to hacker's addresses

193; card_provider; Address belongs to payment cards provider

194; inactive_user; Inactive address

195; active_inactive_user; Active-inactive address

196; proof_of_burn_address; Address is proof of burn address

197; sanctioned_country_sub_incoming_taint;

198; sanctioned_subject_incoming_taint;

199; dex_user; Decentralized Exchange User

200; negative_news; Negative news

201; charged_with_ml; Owner charged with Money Laundering

202; licensed_owner;

203; atm_chain_owner; Address belongs to an ATM chain

204; atm_settlement_address; Address is a cryptocurrency ATM settlement address

205; forum_user;

206; unauthorized_withdrawal;

207; unauthorized_withdrawal_layering; Address being a part of funds layering/mixing scheme related to unauthorized withdrawal

208; unauthorized_withdrawal_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to unauthorized withdrawal

209; unauthorized_withdrawal_incoming_value2; Address with significant part of incoming transactions in close proximity to addresses related to unauthorized withdrawal

210; cold_wallet;
211; settlement;
212; user_deposit;
213; user_withdrawal;
214; donation;
215; payment_acceptance;
216; sanctioned_subject; Address related to subject appearing in sanctions lists
217; sanctioned_subject_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to subject appearing in sanctions lists
218; sanctioned_subject_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to subject appearing in sanctions lists
219; sanctioned_subject_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to subject appearing in sanctions lists
220; sanctioned_subject_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to subject appearing in sanctions lists
221; geo_restr_outgoing; Address with outgoing transactions initiated from IP address located in sanctioned country
222; geo_restr_incoming_value; Address with significant part of incoming transactions initiated from IP address located in sanctioned country
223; tor_outgoing; Address with outgoing transactions initiated from anonymous network exit node
224; tor_incoming_value; Address with significant part of incoming transactions initiated from anonymous network exit node
225; pol_person; Address related to politically exposed person (PEP)
226; pol_person_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to politically exposed persons (PEPs)
227; pol_person_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to politically exposed persons (PEPs)
228; pol_person_outgoing_value1; Address with significant part of outgoing transactions in close proximity to addresses related to politically exposed persons (PEPs)
229; pol_person_outgoing_value2; Address with part of outgoing transactions in close proximity to addresses related to politically exposed persons (PEPs)
230; banks_financial;
231; manufacturing;
232; geo_restr_outgoing_value; Address with significant part of outgoing transactions initiated from IP address located in sanctioned country
233; tor_outgoing_value; Address with significant part of outgoing transactions initiated from anonymous network exit node
234; identity_theft; Address directly related to identity theft
235; identity_theft_layering; Address being a part of funds layering/mixing scheme related to identity theft
236; id_theft_incoming_value1; Address with significant part of incoming transactions in close proximity to addresses related to identity theft
237; id_theft_incoming_value2; Address with part of incoming transactions in close proximity to addresses related to identity theft
238; fiat_crypto_swap_gateway; Address belongs to entity that allows instant crypto to fiat currency on ramp swaps
239; dex_exchange; Address belongs to decentralized exchange
240; dex_exchange_incoming_value1; Address with significant part of incoming transactions in close proximity to decentralized exchange
241; dex_exchange_incoming_value2; Address with part of incoming transactions in close proximity to decentralized exchange addresses
242; dex_exchange_outgoing_value1; Address with significant part of outgoing transactions in close proximity to decentralized exchange addresses

243; dex_exchange_outgoing_value2; Address with part of outgoing transactions in close proximity to over the decentralized exchange addresses
244; defi; Address belongs to decentralized finance service
245; sanctioned_subject_layering; Address being a part of funds layering scheme related to sanctioned subjects
246; cashback; Address belongs to cashback service
247; sanctioned_country_sub_targeted; Address directly related to subject from a country subject to targeted sanctions
248; sanctioned_country_sub_incoming_direct; Address with transactions directly incoming from the subject from a sanctioned country
249; sanctioned_country_sub_outgoing_direct; Address with transactions directly outgoing to the subject from a sanctioned country
250; sanctioned_subject_incoming_direct; Address with transactions directly incoming from addresses related to subject appearing in sanctions lists
251; sanctioned_subject_outgoing_direct; Address with transactions directly outgoing to addresses related to subject appearing in sanctions lists
252; full_kyc;
253; no_legal_entity; Financial service with no legal entity
254; nft_smart_contract; Address is a smart contract for non-fungible tokens
255; trusted_member;

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