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False Positive Management Strategies and Best Practices

Firco Compliance Link

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Fircosoft



In this session, you will learn best practices in managing False Positives

What are some existing strategies our customers have used to help reduce the burden of false positives? What are some of the changes to our application and data that help tailor your screening process to your policy?

What are some efficiencies that can be made to this process to make reporting easier?

What are matches?

- A stop descriptor hit upon in a field is a match
- Entities may have multiple, different stop descriptors
- Different entities can share the same stop descriptor
- Stop descriptors are created for names (individuals, companies, banks, vessels, etc.), cities, countries, and identification numbers
- Address fields are not usually screened, however, there may be cases in which the address is not parsed, requiring screening



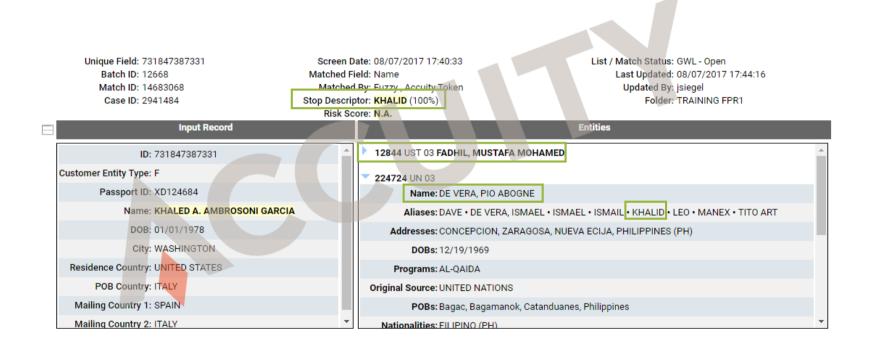
Entity with multiple stop descriptors

Search Criteria: Unique Field: ILS20190413055012

Match ID	<u>Folder</u> <u>Name</u>	<u>Overdue</u>	<u>Unique Field</u>	Batch ID	<u>Screen Date</u>	Stop Descriptor	Record Sample	Match Status	Match Type	<u>Risk</u> <u>Score</u>
29296979	ILS Open		ILS20190413055012	17070	04/13/2019 17:50:13	ALBANIAN ARMY	ILS20190413055012–Ana Smith Albanian National Arm	Passed by Rules	GWL	N.A.
29296980	ILS Open		ILS20190413055012	17070	04/13/2019 17:50:13	ANA	ILS20190413055012Ana Smith Albanian National Arm	Passed by Rules	GWL	N.A.
29296981	ILS Open		ILS20190413055012	17070	04/13/2019 17:50:13	ALBANIAN NATIONAL ARMY	ILS20190413055012Ana Smith Albanian National Arm	Passed by Rules	GWL	N.A.
29296982	ILS Open		ILS20190413055012	17070	04/13/2019 17:50:13	ALBANIAN NATIONAL	ILS20190413055012Ana Smith Albanian National Arm	Passed by Rules	GWL	N.A.
						tches 1 to 4 of 4 Total Ma	tches			



Different Entities with Shared Stop Descriptor





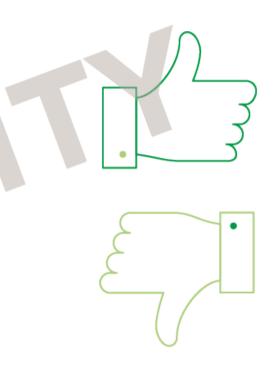
What are false positives?

A false positive is a match generated by the Firco Filter that, after further review, is determined to not be the entity on the Global WatchList.

The goal in watch list matching should be to keep the rate of false positives low without excessive increasing the risk of missing a true match.

False positives can occur and reoccur at any time for a variety of reasons.

Some recurring false positives contain recognizable patterns. Once identified, these patterns can help to eliminate or reduce false positive rates.





Your screening data processes ultimately determine the volume of false positive matches

Relying on rules after the fact can be challenging to manage and is always necessary, but this burden can be reduced if more work and effort is undertaken to ensure screening processes are set-up correctly.

"Is my organization screening data efficiently"

"Do we have processes in place to ensure success"





False Positive Rules are condition-based and some of these conditions can be fulfilled through more granular configurations

Below are some best practices around set-up and screening processes:

- **Segregating business streams** can ensure that data is segregated correctly so that only the relevant fields are screened against the necessary watch list data mandated for that stream. This helps avoid excessive screening.
- Ensuring that the data provided is clean and you have processes around which aspects of a record are mandatory. This will ensure that there are less matches on bad data and features like risk score will allow rules to take effect.
- Setting up screening instructions and only screening the required fields at fuzzy levels that are appropriate will avoid large volume of false positives.
- Adapting as your business changes and as the industry changes will help ensure that your processes and your rules do not become stagnant.



Data Quality – Do's

Data Quality – Don'ts

Unique ID:

This should be totally "Unique" and in most cases, persistent

Full Client Name: Whole name in single field

Address information: Try to avoid 'Address Blocks'

Additional Data Elements: Helpful for Rules building, Helpful for Match Comparison, and Helpful in data organization **Duplicate Unique ID** Can be confusing when multiple records have the same ID

Incomplete Names Increase review difficulty / time or can miss matches

Date of Birth Format Keep Standard

Missing Data Typically Leave Blank



Data Quality – Do's

Data Quality – Don'ts

Version: 05/04/2018 13:05:22 Claim Number: 314159 Policy: 8675309 Payment Number: 2 Policy Holder: James Duffy Claimant: Ana Gomez Claimant Bank Name: First National Bank Claimant Bank Routing: 5882300 Amount: 1000.00

Version: 05/04/2018 15:16:19 Policy Number: 34601 Full Name: Joshua Sean Siegel SSN: 555-55-5555 Date of Birth: 07/02/2001 Address 1: 123 Eastern Ave Address 2: City: Havana State: FL Zip / Postal: +0024-6665 Country: US Other Parties: Sam Holt Version: 05/04/2018 15:21:43 Claim Number: 31415 Policy: 963741 Payment Number: 1 Policy Holder: James D Claimant: A Gomez Claimant Bank Name: First National Bank Claimant Bank Routing: NULL Amount: 100

Version: 05/04/2018 13:09:50 Policy Number: 24601 Full Name: J S Siegel SSN: BLANK Date of Birth: 020701 Address 1: C/O Sam Holt Address 2: 123 Eastern Ave Havana FL USA City: NA State: NA Zip / Postal: Country: United States



Other available false positive reduction techniques

- PEP micro-categorization
- Fuzzy
- Risk scorecard
- Good File and Good File migration (for ASM)
- False Positive Reduction rules



About PEP Micro-categorization

- Only available through PFC
- Allows clients to remove portions of the PEP list in order to reduce matches and screening time
- Elements that can be used to remove entities:
 - Country
 - PEP Level (Local, State, National, International)
 - Term (Date from which PEP Left office)

PEP Lists changing in 2020, possibly new options in the future

About Fuzzy Matching

- Tuning / results usually analyzed during configuration & training
 - Analyze data at the threshold selected by the client
- Typically there will be matches that are "only" fuzzy and will require rules



About Risk Scorecard

- Elements
- Full name, year of birth, country
- Each element is scored separately
- Full name uses fuzzy logic
- Year of birth can be exact, one year off, two years off, or more than two years off
- Country can match or not
- Final score is the average of all scores combined

About Good File and Good File migration (for ASM)

- Good File is a limited 'Decision Reapplication' for CL batch or CLWS screening
- Remembers the Match + Unique ID and returns a status 'Passed by Good File' or 'True Match' when the same match is screened again
- Gives matches a status of 'Changed' if either the input data or watchlist data is different
- A batch of known good records can be pre-loaded
- Good File can be migrated when a client upgrades
- The CL Good File can be used during the first import to ASM

False Positive Reduction Rules

- Rules are an additional layer of logic that can be used by clients to cause Firco Compliance Link automatically assign a status of 'Passed by Rules' to matches that fulfil specific criteria.
- Rules do not check for any updates and will continue to work as long as they are in the system. It is highly recommended to review rules on a regular basis as OFAC data changes and Client data changes over time.
- Rules can contain clauses that reference both the Client Data and the Watchlist Data

The following must haves are necessary:

- Must have File Specification in order to determine screening fields and file format
- Must have screening options/profile
- Screening algorithms
- Screening options
- Watchlists



Example of complex file specification

Te	Format: [xt Qualifier:]				Delimiter: Account ID Field:
• = Required Field One Unique Field and at least o	one Screening	g Field is required.	. 1		
Field Name	Sort Orde	r Screening Field	Unique Field	Data Type	
DS_ID	1		×	Customer Unique ID	EDIT
DS_NAME	2	x		Unspecified	EDIT
ADDRESS	3			Unspecified	EDIT
CITY	4	x		Unspecified	EDIT
STATE	5	x		Unspecified	EDIT
COUNTRY_NAME	6	x		Unspecified	EDIT
POSTAL_CODE	7			Unspecified	EDIT
PERMANENTADDRESS	8			Unspecified	EDIT
PERMANENTCITY	9	x		Unspecified	EDIT
PERMANENTSTATE	10	x		Unspecified	EDIT
PERMANENTCOUNTRY	11	x		Unspecified	EDIT
PERMANENTPOSTALCODE	12			Unspecified	EDIT
DOB	13			Unspecified	EDIT
CITIZENSHIP	14	x		Unspecified	EDIT
TAXID	15	x		Unspecified	EDIT
TAXREGISTRATIONNUMBER	16	x		Unspecified	EDIT

Building a plan for false positive rules

- False positive rules are currently group into rules packs and can be added by users with the feature role "False Positive Reduction Rules Management"
- These can be accessed through the left navigation

Applications	•	Manage Rules P	acks			
Q Case Manageme	ent⊧	• = Required Field				
Screening	•	Name	Status	# of Rules	Last Update	
		Polifically Exposed Persons (APAC)	Active	1	03/10/2018 09:39:11	EDIT
Good File		OFAC (APAC)	Active	4	10/29/2018 12:29:12	EDIT
False Positive Rules	•	Polifically Exposed Persons (EMEA)	Active	1	03/04/2019 09:37:32	EDIT
Manage Rules Packs		OFAC (EMEA)	Active	173	12/16/2014 17:25:10	EDIT
Manage Rules		RISK SCORE Based	Active	1	09/17/2016 12:44:36	EDIT
Search Rules		DISTANCE Between Based	Active	1	06/30/2016 12:41:58	EDIT
		Single word Based	Active	2	10/17/2018 14:09:55	EDIT
Admin Function	s 🕨	Alias (WEAK)	Active	63	03/03/2018 12:03:25	EDIT
			Active	2	03/03/2018 12:10:08	EDIT

At the moment, rules are segregated into 'Rules Packs' which can later be used in targeted screening instructions against the appropriate lists and applicable datasets.

Rules Packs

Separate rules packs can be created for different screening situations

- PEP
- GWL
- Payments vs Accounts
- Different data feeds

	Name	Status	\sim	# of Rules	Last Update	
BPC		Active	72		10/28/2015 11:38:32	EDIT
DEFAULT		Active	8		07/10/2015 13:59:48	EDIT
FircoSoft		Active	2		07/16/2015 15:19:06	EDIT
Inter National Bank		Active	11		11/19/2015 10:43:41	EDIT
Schwab Incorrect Rules 1	Testing	Active	124		02/19/2016 12:17:06	EDIT
Testing Rules		Inactive	124		02/22/2016 14:44:53	EDIT

ADD RULES PACK



Creating rules in Firco Compliance Link

Matched Field: Enter the name of the field in which the SD must be found in order for the rule to apply. Providing "ANY" will cause the rule to apply to all data fields.

There are four different types of clauses based on Input Data

- Input String Clause
- Simple Text Clause
- Intermediate Text Clause

ACCUITY

Complex Text Clause

											1
Rule	es Pack:	DEFAULT	•								
De	escriptor:				• (* = any St	op Descr	riptor)		Match Type	ANY Y	×
atch	ed Field: A	NY						latch Score is les	s than or equal to	»: 🚺 % (l	Max 99%)
	t one of the f ses Based on			fields w	ithin the sele	ected cla	use are marked with				
laus	es Based on			fields w	ithin the sele	ected cla	use are marked with				
aus E	es Based on	Entity Data		l fields w	ithin the sele	ected cla	use are marked with				
laus El	es Based on	Entity Data Is T	- Select	fields w		ected cla • • (Max 9)					
laus E S R	es Based on Intity Type	Entity Data Is T	Select equal to:	fields w		•	9%)	· · ·			
laus E R E	es Based on Intity Type Source Code Risk Score is	Entity Data Is Is less than o Entity Nat	- Select			6 (Max 9	9%)				
laus S R E laus	ees Based on Intity Type Source Code Risk Score is	Entity Data Is Is Iess than o Entity National Customer	- Select			6 (Max 9	9%)				
laus E R laus Ir	es Based on Entity Type Source Code Risk Score is Entity Field Les Based on	Entity Data Is Is Iess than o Entity National Customer	- Select	Cont	· · · · · · · · · · · · · · · · · · ·	6 (Max 9	9%)				
laus S R E laus	es Based on Entity Type Source Code Risk Score is Entity Field Les Based on	Entity Data Is Is Iess than o Entity National Customer	- Select v equal to:	Cont	ins Contains	6 (Max 9'	9%)		• in Field		

Match Type: Choose GWL, PEP, CWL or ANY. When provided, the False Positive Reduction Rule will only apply to those types of matches.

Match Score: set the threshold for the Match Score for the rule to apply to. This is the fuzzy score calculated by the filter.

There are four different types of Clauses Based on Customer Data

- Entity Type Clause
- Source Code Clause
- Risk Score Clause
- Entity Field Clause

Every rule can have up to ten different clauses.

Writing rules on entity data

Writing rules on entities can have a dramatic effect on all matches the are associated with the criteria.

Entity Type: The Accuity list data will categorize each entity by type. The following values are provided: Governments, Countries, Principle Cities, Individuals, Vessels, Banks, Ministers, Government Officials, Companies, Political or Religious Organizations, Commodity Goods, and Other.

Source Code: Each Accuity list may have one or multiple source codes that can be added here to eliminate an entire set of matches from one particular list.

Risk Score: This will allow users to eliminate matches based off of the risk score associate with the match.

Entity Field: Values from specific entity fields can be considered. The following values are provided: Name, Country, Date of Birth, PEP Level and Subcategory.



Writing rules on input record (customer) data

Writing rules on input record data can have an effect on certain individual records or records with similar values.

Input String: These clauses use the entire data string that is entered and can contain more than a single token, different than Simple, Intermediate, and Complex Text Clauses.

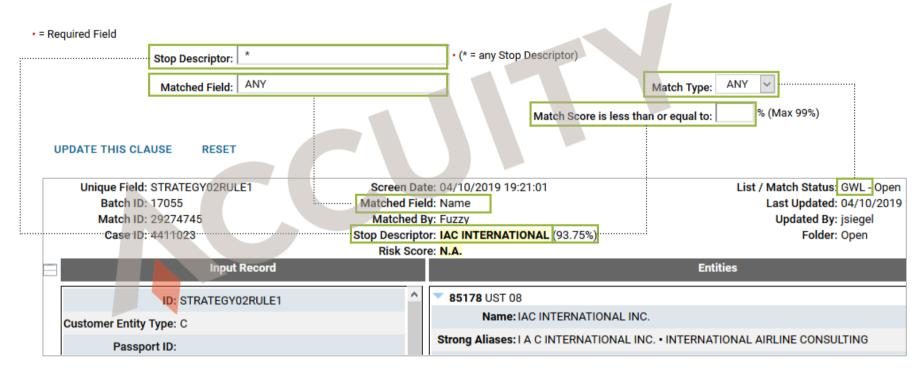
Simple Text: These clauses follow a basic "if-statement". If "Text" occurs (or does not occur) in "X" field.

Intermediate Text: These clauses allow you to search for words in relation to other words.

Complex Text: These clauses exist for input records that may contain multiple fields with the same Field Name. Although the creation of File Specifications with duplicate field names is not allowed, certain payment messages, like SWIFT, permit the use of duplicate field names. With these clauses, you can specify which of the multiple instances of a field name you would like added to your rules clause.



Match Clause



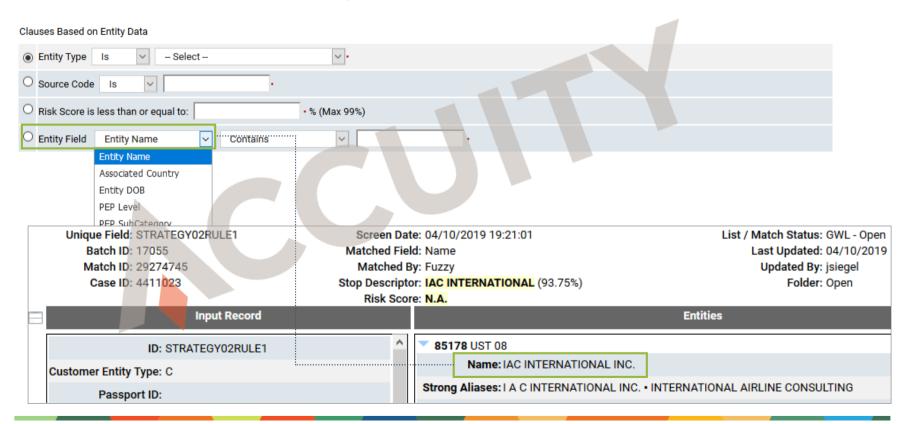
Clauses Based on Entity Data

Clauses Based on Entity Data - Select --Entity Type Is -- Select --Source Code Is Government/Country (01) Risk Score is less than or e Principal City (02) 99%) Individual (03) Entity Field Entity Name Vessel (04) Bank (05) Other (06) Minister/Government Official (07) Company (08) Political/Religious Organization (00) Unique Field: STRATEGY02RULE1 Screen Date: 04/10/2019 19:21:01 List / Match Status: GWL - Open Batch ID: 17055 Matched Field: Name Last Updated: 04/10/2019 Match ID: 29274745 Updated By: jsiegel Matched By: Fuzzy Stop Descriptor: IAC INTERNATIONAL (93.75%) Case ID: 4411023 Folder: Open Risk Score: N.A. Entities Input Record ~ 85178 UST 08 ID: STRATEGY02RULE1 Name: IAC INTERNATIONAL INC. Customer Entity Type: C Strong Aliases: I A C INTERNATIONAL INC. • INTERNATIONAL AIRLINE CONSULTING Passport ID:

Clauses Based on Entity Data

Clauses Based on Entity Data			
Entity Type Is - Select -	· ·		
O Source Code Is 🗸			
O Risk Score is less than or equal to:	• % (Max 99%)		
O Entity Field Entity Name 🗸 Contains			
Unique Field: STRATEGY02RULE1	Screen Date: 04/10/	2019 19:21:01	List / Match Status: GWL - Open
Batch ID: 17055	Matched Field: Name		Last Updated: 04/10/2019
Match ID: 29274745	Matched By: Fuzzy		Updated By: jsiegel
Case ID: 4411023	Stop Descriptor: IAC IN	FERNATIONAL (93.75%)	Folder: Open
	Risk Score: N.A.		
Input Record			Entities
ID: STRATEGY02RULE1	<u>^</u> 8517	8 UST 08	
Customer Entity Type: C		Name: IAC INTERNATIONAL INC.	
Passport ID:	Strong	Aliases: I A C INTERNATIONAL INC.	INTERNATIONAL AIRLINE CONSULTING

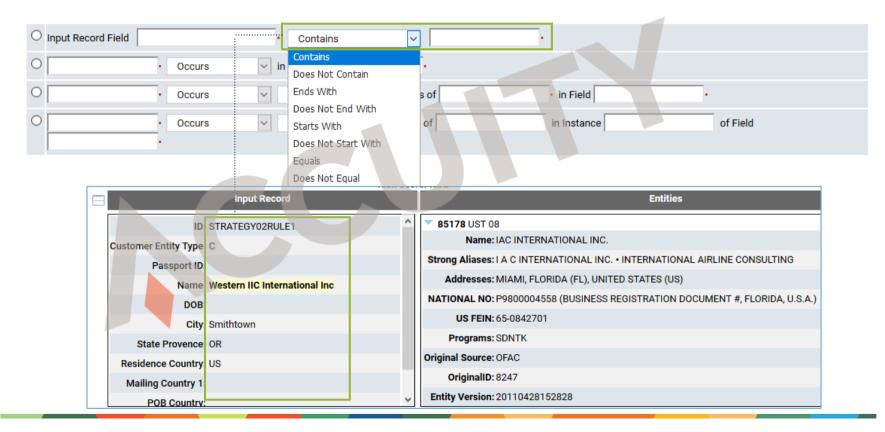
Clauses Based on Entity Data



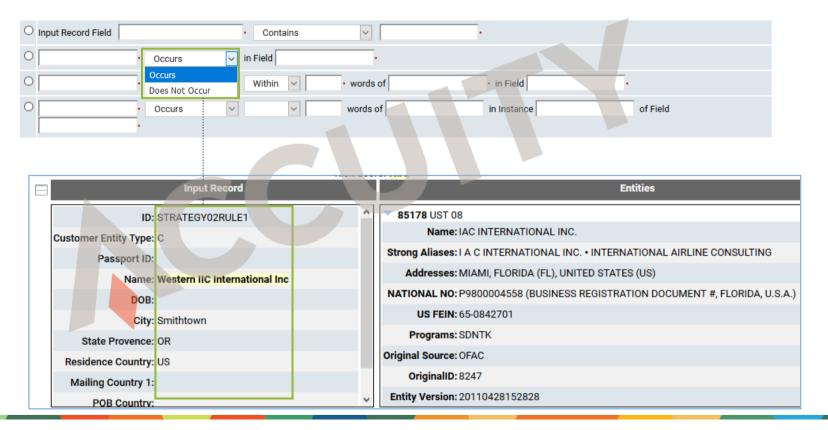
Clauses Based on Customer Data

○ Inp	• Contains	\sim	· ·
0	Occurs In Field		
0	Occurs Within · v	vords	of in Field
0	Occurs V W	ords	of in Instance of Field
	Input Record	Δ.	Entities
	ID: STRATEGY02RULE1	^	85178 UST 08
	Customer Entity Type: C		Name: IAC INTERNATIONAL INC.
	Passport ID:		Strong Aliases: I A C INTERNATIONAL INC. • INTERNATIONAL AIRLINE CONSULTING
	Name: Western IIC International Inc		Addresses: MIAMI, FLORIDA (FL), UNITED STATES (US)
	DOB:		NATIONAL NO: P9800004558 (BUSINESS REGISTRATION DOCUMENT #, FLORIDA, U.S.A.)
	City: Smithtown		US FEIN: 65-0842701
	State Provence: OR		Programs: SDNTK
	Residence Country: US		Original Source: OFAC
	Mailing Country 1:		OriginalID: 8247
	POB Country:	~	Entity Version: 20110428152828

Clauses Based on Customer Data



Clauses Based on Customer Data



Important to Note

- Each rule is a collection of clauses (or Conditions) that are connected with the 'logical AND'. All clauses must be true in order for a match to be marked 'Passed by Rules'.
- Any single rule cause a match to be 'Passed by Rules'. (The system *will not* check if multiple rules reference the same Stop Descriptor and compare it to each one to make a decision.)
- A rule must have at least one clause.
- Only ten clauses can be added to a single rule.



Example of an intermediate text clause

The "ANA" Stop Descriptor is represents the "Albanian National Army". Any input data containing the Californian city "Santa Ana" will match "ANA". An Intermediate Text Clause could be used to ignore matches to the Stop Descriptor "ANA" when the word "SANTA" occurs within one word of "ANA" in the field "City".

- 1. Click on the button found on the image
- 2. Enter "SANTA" word in the first text box
- 3. Select "Occurs" or "Does Not Occur".
- 4. Choose whether the word must occur (or not occur) Before, After, or Within x amount of words.
- 5. Enter a number for the amount of words that can separate the two selected words.
- 6. Enter the second word "ANA".
- 7. Enter the name of the field (City) where the two words must occur (or not occur).
- 8. Click on **Add Selected Clause** to add this clause to your rule.

Rules Pack: DEF	AULT V								CANCI
- Required Field									
	Stop Descriptor			• (* = any S	top Descriptor)				
	Matched Field	City				Match			
					Match Sco	re is less than or eq	ual to:	% (Max 99%)	
UPDATE THIS C	CLAUSE RESE	r							
Select one of the foli	owing clauses. Requ	ired fields within t	the selected claus	e are marked with					
		ired fields within f	the selected claus	e are marked with					
Clauses Based on Er	ntity Data		the selected claus	e are marked with					
	ntity Data			e are marked with					
Clauses Based on Er Entity Type Is Source Code I	ntity Data		* }						
Clauses Based on Er Entity Type Is Source Code I	ntity Data								
Clauses Based on Er Entity Type Is Source Code I	ntity Data		* }						
Clauses Based on Er Entity Type Is Source Code I Risk Score is less Entity Field Er	ntity Data	••)•	▼ • • % (Max 99						
Clauses Based on Er Entity Type Is Source Code I Risk Score is les Entity Field Er Clauses Based on C	Is Is Is Is Is Is Is Is Is Is		▼ • •% (Max 99						
Clauses Based on Er Entity Type Is Source Code I Risk Score is less		•• • Contains	▼ • (Max 99' ▼ ↓ Contains	%)].				
Clauses Based on Er Entity Type Is Source Code I Risk Score is les Entity Field Er Clauses Based on C	Is Is Is Is Is Is Is Is Is Is		▼ • (Max 99' ▼ ↓ Contains	%)					
Clauses Based on Er Entity Type Is Source Code I Risk Score is les Entity Field Er Clauses Based on C		Contains in Fi	▼ • (Max 99' ▼ Contains	%)		r Field City			

In Summary

- Managing false positives is about precision, the more precise your screening processes are, the more relevant matches you will obtain.
- When it comes to rules and false positive reduction, we have to be able to prove to internal and external stakeholders that the rule conditions are acceptable.
- Some rules are risk score threshold based, others are "distance between 'token' based" and yet others are weak aliases/single word alias based.
- Ensuring that you have a process in place that can help bring down the volume of false positives and allow you to report on them when needed is extremely important and a necessity.



Thank you for your attention

