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Matching Guide

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Contents

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About this Guide

This guide provides information on webservices matching, individual matching, vessel matching, aircraft matching, and entity matching.

This chapter focuses on the following topics:

- Who Should Use this Guide
- How this Guide is Organized
- Where to Find More Information
- Conventions Used in this Guide

1.1 Who Should Use this Guide

The *Transaction Filtering Matching Guide* is designed for the following users:

- **Analyst**: This user works on the transactions within the application frequently. This user's specific role determines what they can view and perform within the application
- **Supervisor**: This user works on the transactions within the application on a daily basis and is typically a higher level Analyst or Compliance Officer
- **Admin**: This user performs the activities related to administration.

1.2 How this Guide is Organized

The *Transaction Filtering Matching Guide* includes the following chapters:

- About Transaction Filtering, provides an overview of Oracle Financial Services Transaction Filtering, how it works, and what it does.
- Introduction to Matching, provides a brief introduction to Matching and how it is used in Transaction Filtering .
- Matching Webservices, explains how to match webservices such as name and address, country and city, Identifier, and narrative fields.
- SWIFT Message Tags Screening, explains how to match SWIFT message tags for different SWIFT message types.
- Name and Address Matching, explains how to match individuals to different watch lists.
- Identifier Matching, explains how to match vessels to different watch lists.
- Country and City Matching, explains how to match aircrafts to different watch lists.
- Narrative Matching, explains how to match entities to different watch lists.
- Trade Goods Matching,This chapter discusses This matching webservice is used to extract the trade goods name and match the name against the prohibited goods list.
- Trade Port Matching, This chapter discusses the matching webservice that is used to extract the trade port name and match it to the country while screening.

1.3 Where to Find More Information

For more information about Oracle Financial Services Transaction Filtering, refer to the following documents:

- Oracle Financial Services Sanctions Installation Guide
- Oracle Financial Services Transaction Filtering Administration Guide
- Oracle Financial Services Transaction Filtering User Guide
- Oracle Financial Services Transaction Filtering Reporting Guide
- Oracle Financial Services Transaction Filtering Release Notes
- Oracle Financial Services Technical Integration Guide

These documents are available at the following link: http://docs.oracle.com/cd/E60570_01/homepage.htm

To find more information about Oracle Financial Services Transaction Filtering and our complete product line, visit our Web site www.oracle.com/financialservices.

1.4 Conventions Used in this Guide

Table 1 provides the conventions used in this guide.

Conventions	Description
Italics	• Names of books, chapters, and sections as references • Emphasis
Bold	• The object of an action (menu names, field names, options, button names) in a step-by-step procedure • Commands typed at a prompt • User input
Monospace	• Directories and subdirectories • File names and extensions • Process names • Code sample, including keywords and variables within the text and as separate paragraphs, and user-defined program elements within the text.
Asterisk	Mandatory fields in User Interface
<Variable>	Substitute input value

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About Transaction Filtering

This chapter gives an overview of Transaction Filtering. For any information related to features, workflow, matching logic, SWIFT message formats, and user roles and actions, see Oracle Financial Services Transaction Filtering User Guide

2.1 Overview of Transaction Filtering

Oracle Financial Services Transaction Filtering is a real-time blacklist filtering system that identifies blacklisted, restricted and sanctioned individuals, entities, cities and countries in a financial transaction processed through the Solution. The solution can interface with any clearing systems, payment system or any source system. The solution accepts messages from the source systems in real time and scans them against different watch lists maintained within the system to identify existence of any blacklisted data present within the message.

3
Introduction to Matching

Oracle Financial Services Transaction Filtering provides a flexible and customizable strategy for matching customer records to watch list records. **Sanctions screening** typically requires the business to employ tightly-defined, zero tolerance matching policies which will identify every possible match against a sanctions list.

Oracle Financial Services Transaction Filtering therefore employs a range of clustering strategies and matching rules. These can be enabled and disabled as needed, to tune the behavior of Oracle Financial Services Transaction Filtering to your requirements.

In general, the looser the match rule, the more likely it is to raise false positives. It is not possible to eliminate all false positives, especially if there is a requirement to identify **all** true matches. Tuning the matching strategy is therefore a trade-off between the proportion of true matches which are not detected and the work required to manually eliminate false positives. This will be evident in the examples in this document.

3.1 General Matching Strategy

This section provides a brief description of the general strategy used in Oracle Financial Services Transaction Filtering. It consists of three main components: identifier preparation, clustering and matching.

3.1.1 Identifier Preparation

There are some differences between the structure of data sets that always need to be normalized before clustering and matching, so that the matching process does not need to repeat the configuration of transformations on each comparison.

Identifier preparation is used to ensure that the records conform to a pre-defined data structure which can be used by the rest of the matching process, and also to eliminate common forms of variance between the records (such as spelling variants of given names and abbreviations of frequently-used tokens).

3.1.2 Clustering

Clustering is used to minimize the work that must be performed by the final stage of matching. It works by splitting the working and reference data into wide tranches (clusters), based on similarities in significant data fields. Only subsets of the data which share similar characteristics, and will therefore be placed in the same cluster, will be compared on a record-by-record basis later in the matching process.

If very wide clusters are used, there will be a large number of records in each cluster. This means that there is a reduced risk that true matches will be missed, but also that a greater amount of processing power is required to compare all the clustered records by brute force. A tighter clustering strategy will result in smaller clusters, with fewer records per cluster. This results in reduced processing requirements for row-by-row comparisons, but increases the likelihood that some true matches will not be detected.

3.1.3 Matching

Once the working and watch list records have been divided into clusters, the rows within each cluster are compared to one another according to the match rules defined for the matching processor. Each match rule defines a set of criteria, specified as comparisons, that the pair of records must satisfy in order to qualify as a match under that rule. The rules are applied as a decision table, so if a pair of records qualifies as a match under a rule higher in the table, it will not be compared using any rules below that. All rules are configured to operate on a case-insensitive basis. Unless stated otherwise, all noise and whitespace characters are removed or normalized before matching.

3.2 Configuring Oracle Financial Services TF for different scenarios

As previously mentioned, Oracle Financial Services Transaction Filtering includes clusters and matching rules that are suited to various screening requirements. Tuning Oracle Financial Services Transaction Filtering to match your policies should be undertaken carefully and under the supervision of a risk and compliance expert, with knowledge of your business requirements and the relevant legislation.

The following general points may be useful when tuning the behavior of Oracle Financial Services Transaction Filtering:

- Some organizations use a zero-tolerance policy for individual name matches. Such a policy typically requires that all potential name matches must be manually reviewed, irrespective of the rest of the data associated with the record. If such a policy is in place, you must enable the conflict rules in individual matching
- In general, using a loose clustering strategy will result in relatively few clusters, each containing many records. This reduces the potential for missing true matches, and increases the chance of false positives. It is also expensive in terms of processing requirements, as every record in the cluster must be directly compared with every other record in that cluster.
- Conversely, a tight clustering strategy will result in a relatively large number of clusters, each containing fewer records. This increases the potential for missing true matches, and decreases the chance of false positives. It also reduces the overall cost of the processing requirements, as relatively few direct comparisons are required.

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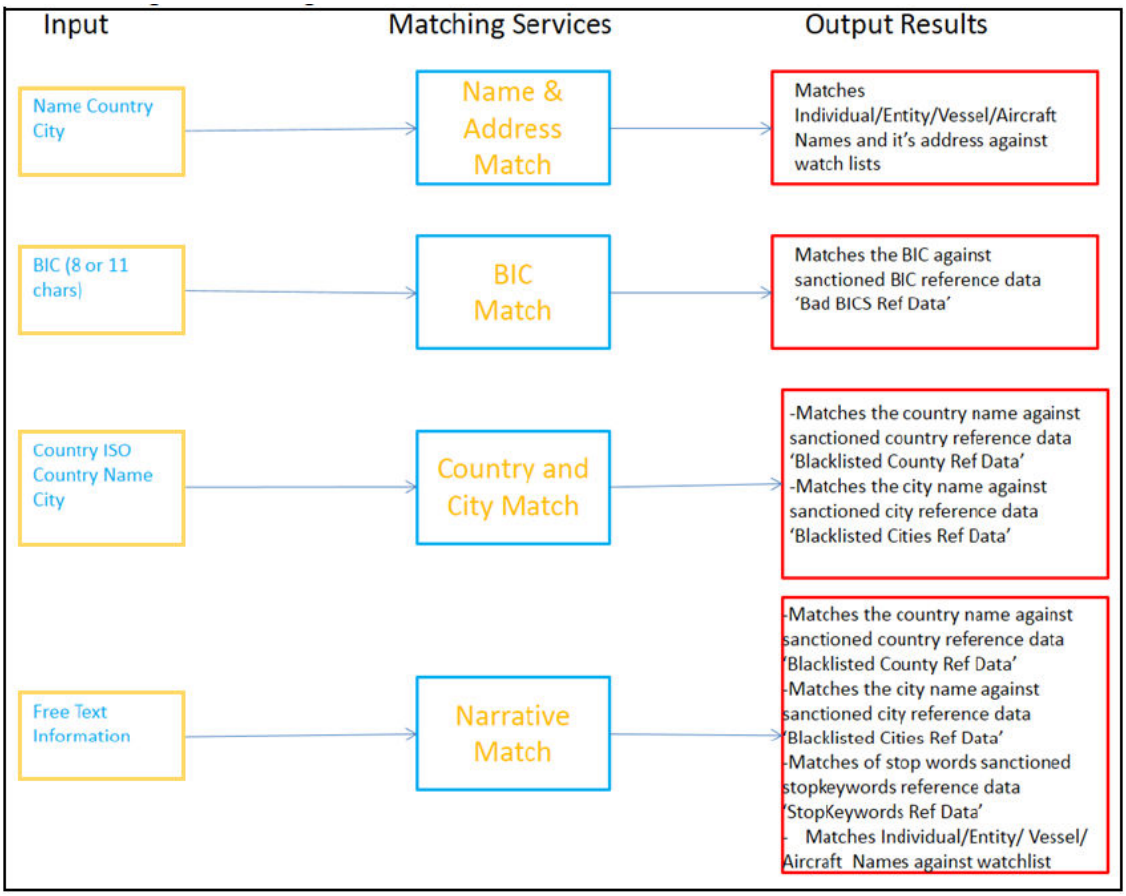
Matching Webservices

This chapter gives an overview of Matching Webservices for Transaction Filtering. This chapter discusses the following topics:

4.1 Overview

This section explains the various Matching Webservices that are used for Transaction Filtering. The following diagram depicts the input and output for these Webservices.

Figure 4-1 Matching Webservices



4.2 Name and Address Matching

This matching webservice is used for the party name and address matching, such as orderer and beneficiary. Party can be an individual, entity, vessel, or aircraft. The webservice takes the party name, country (if available in the message) and city (if available in the message) as an input and matches them against the watchlist records.

For information on the reference data for watchlists, see Oracle Financial Services Transaction FilteringAdministration Guide

4.3 Country and City Matching

This matching webservice is used for country and city matching against the sanctioned country and city list. The sanctioned country and city reference data names are *Blacklisted Country Ref Data* and *Blacklisted Cities Ref Data* respectiveIdentifierly. The blacklisted city information is extracted from the party address field of the input message and the blacklisted country extraction happens from different fields such as *Country from party address, Country ISO code from BIC, Country ISO from IBAN,* and *Country confirmation from party location*.

For information on the reference data for watchlists, see Oracle Financial Services Transaction FilteringAdministration Guide

4.4 Identifier Matching

This matching webservice is used for Identifier matching against the sanctioned Identifier list such as Bad BICs Ref Data. This solution supports more legal identifiers matching. For example, LEI, passport, and so on.

For information on the reference data for watchlists, see Oracle Financial Services Transaction Filtering Administration Guide

4.5 Narrative Matching

This matching webservice is used for free text or narrative field screening such as remittance information, reference fields, and sender to receiver information. This particular webservice screens individual, entity, vessel and aircarft names (if present) against different records such as watchlist records, country against sanctioned country reference data, city against sanctioned city reference data, BIC against sanctioned BIC reference data and key words against Stop keywords reference data or Stop Keywords Ref Data.

For information on the reference data for watchlists, see Oracle Financial Services Transaction Filtering Administration Guide.

4.6 Trade Goods Matching

This matching webservice is used to extract the trade goods name and match it name against the prohibited goods list. This list provides country-wise data.

For information on the reference data for watchlists, see Oracle Financial Services Transaction Filtering Administration Guide.

4.7 Trade Port Matching

This matching webservice is used to extract the trade port name and match it to the country while screening. This is done because two countries may not have the same port name, so this avoids duplication. The port name is also matched against the sanctioned port reference data.

For information on the reference data for watchlists, see Oracle Financial Services Transaction Filtering Administration Guide.

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SWIFT Message Tags Screening

This chapter gives an overview of SWIFT tags used for screening under each matching webservices. This section covers four SWIFT message types: MT101, MT103, MT202, MT202COV.

This configuration is only given for reference purposes. You can configure other message types in a similar manner.

This chapter discusses the following topics:

5.1 Name and Address Screening

This section explains the Name and Address SWIFT tags that are screened for various Message Types. The following table describes the Name and Address Screening details.

Table 5-1 Name and Address Screening

Message Type	Tags/ Fields
MT101	50F, 50H,56D,57D, 59-No letter option, 59F
MT103	50F, 50K, 53D, 52D, 54D, 55D,56D, ,57D,59-No letter option, 59F
MT202	52D,53D,54D,56D,57D,58D
MT202COV	52D,53D,54D,56D,57D,58D,50F, 50K,59-No letter option, 59F

5.2 Country and City Screening

This section explains the Country and City SWIFT tags that are screened for various Message Types. The following table describes the Country and City Screening details.

Table 5-2 Country and City Screening

Message Type	Tags/ Fields	Tags/ Fields	Tags/ Fields
MT101	Extract ISO country code from BICpresent in the following tag: 50C(4!a2!a2!c[3!c]), Block1 BIC, Block 2 BIC, 50G,52A,51A,56A,57A, 59A	50F, 50H,56D,57D,59-No letter option, 59F	Extract country code from IBAN which might be present in the following tags. 50F, 50H, 50G, 59-No letter option, 59F, 59A,,25A

Table 5-2 (Cont.) Country and City Screening

Message Type	Tags/ Fields	Tags/ Fields	Tags/ Fields
MT103	Extract ISO country code from BIC present in the following tag: Block1 BIC, Block 2 BIC, 50A, 51A , 52A,53A,55A, 54A,56A,57A,59A	50F, 50K, 53D, 52D, 54D, 55D,56D,57D,59-No letter option, 59F, 53B, 54B, 55B,57B	50A, 50F, 50K, 59-No letter option, 59F, 59A
MT202	Extract ISO country code from BIC present in the following tag: Block1 BIC, Block 2 BIC, 52A,53A, 54A,56A,57A,58A	52D,53D,54D,56D,57D, 58D, 53B, 54B, 57B	N/A
MT202COV	Extract ISO country code from BIC present in the following tag: Block1 BIC, Block 2 BIC, 52A,53A, 54A,56A,57A,58A,50A, 59A	52D,53D,54D,56D,57D, 58D,50F, 50K,59-No letter option, 59F, 53B, 54B, 57B	50A, 50F, 50K, 59-No letter option, 59F, 59A

Block 1 and Block 2 of SWIFT messages are included by default. They can be enabled or disabled based on your requirement. For information on how to enable or disable a tag for screening, see Oracle Financial Services Transaction Filtering Administration Guide.

5.3 Identifier Screening

This section explains the BIC SWIFT tags that are screened for various Message Types. The following table describes the BIC Screening details.

Table 5-3 BIC Screening

Message Type	Tags/ Fields
MT101	50C (4!a2!a2!c[3!c]), Block1 BIC, Block 2 BIC, 50G,52A,51A,56A,57A,59A
MT103	Block1 BIC, Block 2 BIC, 50A, 51A , 52A,53A,55A, 54A,56A,57A,59A
MT202	Block1 BIC, Block 2 BIC, 52A,53A, 54A,56A,57A,58A
MT202COV	Block1 BIC, Block 2 BIC, 50A, 51A , 52A,53A, 54A,56A,57A,59A

Block 1 and Block 2 of SWIFT messages are included by default. They can be enabled or disabled based on your requirement. For information on how to enable or disable a tag for screening, see Oracle Financial Services Transaction Filtering Administration Guide.

5.4 Narrative Screening

This section explains the BIC SWIFT tags that are screened for various Message Types. The following table describes the Narrative Screening details.

Message Type	Tags/ Fields
MT101	20, 21R, 21,25,21F, 70, 77B
MT103	20,23E, 70,72, 77B
MT202	72,20, 21
MT202COV	20,21,72,70

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Name and Address Matching

This section details the default configuration of Name and Address screening against sanctions lists or watch lists.

The matching strategy for entities in Oracle Watchlist Screening raises a possible match if there is an exact match or a fuzzy name match to a normal (non-acronym) entity name, or if there is an exact match to an acronym entity name.

The fuzzy entity name matching algorithms include some of the following techniques:

- Standardizing entity names (for example, different forms of company name suffixes are standardized to a common form)
- Ignoring insignificant name tokens
- Typo tolerance
- Allowance for missing name tokens
- Allowance for different tokenization of the name

Table 6-1 OOB rules

S.no	Configuration	Exact/ Fuzzy Match
Rule 1	Given Name , Last Name vs watchlist given name and family	Exact Matching
Rule 2	Full Name vs watchlist Full name	Exact Matching
Rule 3	RAW Customer.aliases vs RAW Watchlist.Original Script Name	Exact Matching
Rule 4	Translitered Customer.aliases vs Translitered Watchlist.Original Script Name	Exact Matching
Rule 5	RAW Customer.aliases vs RAW Watchlist.Original Script Name	Fuzzy Matching
Rule 6	Translitered Customer.aliases vs Translitered Watchlist.Original Script Name	Fuzzy Matching

6.1 Identifier preparation

The following identifiers are prepared for use in the individual and Entity matching process: For Identifier preparation, Vessel and Aircraft come under Entity.

Table 6-2 Individual and Entity Identifier Preparation

Identifier Description	Standard prepared attribute name	Summary of preparation logic
Individual Given Names	dnGivenNames	A space-separated list of the first and middle names of the individual, after normalization (see the name normalization section, below).
Individual Family Name	dnFamilyName	A normalized version of the family name (see the name normalization section, below).
Individual Full Name	dnFullName	A concatenation of the given names and family name, separated using spaces.
Original Script Name	dnOriginalScriptName	A whitespace normalized version of the original script name.
dnCity	dnCity	A pipe-separated list of cities associated with the individual data.
dnAddressCountryCode	dnAddressCountryCode	A space separated list of standard 2- character country codes.
dnEntityName	dnEntityName	The original entity name, after Name Normalization.

The following sections describe the data preparation strategy for each of these identifiers.

6.1.1 Name Normalization

The Individual, entity, vessel, and aircraft names are normalized using the following logic:

1. Standardization of accented characters.
2. Replacement of non-alpha (A-Z or a-z) characters with spaces.

If data is matched in the original language against original script names in the watch lists, then the appropriate character ranges must be removed from the Name Noise Characters Reference Data so that they are not replaced.

If transliteration of data is done before matching, then transliteration must also be done before name normalization.

1. Normalization of whitespace.
2. Conversion to upper case.

Note that the purpose of these transformations is not to create the most ‘correct’ name. For example, hyphens may be used in names in a number of ways, such as in a double-barreled surname, or as an alternative for a space when a surname has a qualifier (common in the World-Check data file).

In the former case, one might ideally want to preserve the hyphen, and in the latter case replace it with a space. In general, however, additional spaces in names will not cause names to miss matching, whereas different characters could.

The following table describes the Name Normalization example.

Table 6-3 Name Normalization

Input data Forename	Input data Sur name	Identifiers dnGivenNames	Identifiers dnFamilyName	Identifiers dnFullName
Carmelo	Raschellà	CARMELO	RASCHELLA	CARMELO RASCHELLA
Darwen	MANN`A	DARWEN	MANN A	DARWEN MANN A
Badr bin Saud bin Harib	AL-BUSAIDI	BADR BIN SAUD BIN HARIB	AL BUSAIDI	BADR BIN SAUD BIN HARIB AL BUSAIDI
A. Arnaldo G.	TAVEIRA	A ARNALDO G	TAVEIRA	A ARNALDO G TAVEIRA
Jose Mardônio	DA COSTA**	JOSE MARDONIO	DA COSTA	JOSE MARDONIO DA COSTA

6.1.2 City and country identifiers

City and country values are derived from the source data wherever possible. There may be multiple possible cities or countries associated with an individual, perhaps because an individual resides in more than one country, has dual nationality, or resides in a different country from his/her nationality.

Country values are prepared as a space-separated list of two-character country codes in the dnAllCountryCodes attribute.

City values (which may contain spaces, for example, ‘New York’) are prepared as a pipe-separated list of cities in the dnCity attribute.

6.2 Clustering

Oracle Financial Services Transaction Filtering provides clusters for matching individuals and entities to watch lists during Sanctions screening. These clusters can be activated or deactivated, as required, and different cluster limits can be configured.

Table 6-4 Clustering

Cluster Method
Individual Family Name
Individual Full Name Metaphone
Individual Given Names
Individual Full Name Trim
Individual Initials
Original Script Name
Entity Name Tokens
Entity Name Meta
Entity Name Trim
Entity Start End Name Tokens

This table shows the default configuration of Real-Time screening processes, but these may be customized independently of one another.

The data used to create the clusters is created before matching by the preparation process. In all cases, the clusters use the prepared and normalized name attributes dnGivenNames, dnFamilyName , dnFullName, dnEntityName, and dnOriginalScriptName. For further information see Name Normalization.

6.2.1 Family Name Cluster (dnClusterFamilyName)

The **Family Name** cluster provides a backup to the full name clusters. This is especially important where the given name data is incomplete, making it difficult to form a complete cluster key for two names. For example, the following three example records do not share any Full Name cluster keys, due to the initials in the second record and the spacing and spelling variations seen throughout:

Table 6-5 Family Name Cluster details

dnFullName	Name tokens and trimmed values	Name tokens and trimmed values	Identifiers dnFamilyName	dnClusterFullNameTrim
STEPHEN JEQE NKOMO	JEQE	JEQ	JEQNKO JEQSTE NKOSTE	JEQNKO|JEQSTE|NKOSTE
-	NKOMO	NKO	-	-
-	STEPHEN	STE	-	-
S J NKOMO	S	S	NKO	NKO
-	NKOMO	NKO	-	-
-	J	J	-	-
STEPHEN JEKE N KOMO	JEKE	JEK	JEKKOM JEKSTE KOMSTE	JEKKOM|JEKSTE|KOMSTE
-	KOMO	KOM	-	-
-	N	N	-	-
-	STEPHEN	STE	-	-

Clustering only on the family name circumvents this issue, but results in large clusters and a concomitant increase in the processing required to cross-check all the records.

The **Family Name** cluster builder counters spacing and punctuation differences by generating Metaphone keys for all tokens of the family name, AND the whole of the family name after all white space is trimmed. This is to ensure that family names such as those in the last two records in the example table below are all clustered together despite the spacing differences.

The default logic of the cluster builder is as follows:

1. Trim all white space from the normalized family name
2. Apply the **Metaphone** transformation to the result, outputting a key with a length of up to 4 characters.
3. Strip common name qualifiers from the normalized family name, e.g. Abd, Al.
4. Split the family name into several name tokens, using a space delimiter.
   Many other punctuation and noise characters are normalized to spaces before generating the cluster. For further information see Name Normalization.
5. Apply the Metaphone transformation to each name token, outputting a key with a length of up to 4 characters. If there were no tokens remaining after stripping common name qualifiers then apply the Metaphone transformation to the each name token of the original normalized family name.
6. Concatenate all the generated Metaphone keys

7. Deduplicate the list of keys

Table 6-6 Metaphone Transormations for Family Name Cluster

dnFamilyName	Tokens derived from dnFamilyName	Metaphone transformations	dnClusterFamilyName
ZHONG	ZHONG	JNK	JNK
XIAOJIAN	XIAOJIAN	SJN	SJN
ABACHE	ABACHE	APX	APX
ABANDA	ABANDA	APNT	APNT
ABD AL HAFIZ	HAFIZ ABDALHAFIZ	HFS APTL	HFS APTL
AL BUTHE	BUTHE ALBUTHE	P0 ALP0	P0|ALP0
AL	AL	AL	AL
SOLEIMAN HAMAD	SOLEIMAN HAMAD SOLEIMANHAMAD	SLMN HMT SLMN	SLMN|HMT
GOODRIDGE	GOODRIDGE	KTRJ	KTRJ
GOODRICH SR	GOODRICH SR GOODRICHSR	KTRX SR KTRK	KTRX|SR|KTRK
NKOMO	NKOMO	NKM	NKM
N KOMO	N KOMO NKOMO	N KM NKM	N|KM|NKM

6.2.2 Individual Full Name Metaphone Pairs Cluster(dnClusterFull-NameMeta)

The**FullName Metaphone Pairs** cluster uses the normalized full name for the individual to generate a cluster key for every pair of names within the full name. The default logic of this is as follows:

1. Split the normalized full name into several name tokens, using space as a delimiter. Many other punctuation and noise characters are normalized to spaces before generating the cluster. For further information see Name Normalization.
2. Sort the name tokens alphabetically.
3. Apply the **Metaphone**transformation (the standard double-metaphone algorithm) to each name token, outputting a key with a length of up to three characters.
4. Concatenate the Metaphone values, generating a final key value for each distinct pair of tokens.
5. Deduplicate the list of keys.
The following table describes the Full Name Metaphone Pairs Cluster example.

Table 6-7 Full Name Metaphone Pairs Cluster

dnFullName	Name tokens and Metaphone values	Name tokens and Metaphone values	Distinct Cluster Keys	dnClusterFull-NameMeta
XIAO JIAN ZHONG	JIAN	JN	JNS JNJNK SJNK	JNS|JNJNK|SJNK
	XIAO	S		
	ZHONG	JNK		
ZHONG XIAOJIAN	XIAOJIAN	SJN	SJNJNK	SJNJNK
	ZHONG	JNK		

Table 6-7 (Cont.) Full Name Metaphone Pairs Cluster

dnFullName	Name tokens and Metaphone values	Name tokens and Metaphone values	Distinct Cluster Keys	dnClusterFull-NameMeta
MOHAMMED SANI ABACHE	ABACHE MOHAMMED SANI	ABX MHMT SN	APXMHM APXSN MHMSN	APXMHM|APXSN | MHMSN
JOSEPH TSANGA ABANDA	ABANDA JOSEPH TSANGA	APNT JSF TSNK	APNJSF APNTSN JSFTSN	APNJSF|APNTSN |JSFTSN
ABD AL WAHAB ABD AL HAFIZ	ABD ABD AL AL HAFIZ WAHAB	APT APT AL AL HFS AHP	APTAPT APTAL APTHFS APTAHP ALAL ALHFS ALAHP HFSAHP	APTAPT|APTAL|APTHFS |APTAHP|ALAL|ALHFS |ALAHP|HFSAHP
SULIMAN HAMD SULEIMAN AL BUTHE	AL BUTHE HAMD SULEIMAN SULIMAN	AL P0 HMT SLMN SLMN	ALP0 ALHMT ALSLM P0HMT P0SLM HMTSLM SLMSLM	ALP0|ALHMT|ALSLM| P0HMT| P0SLM| HMTSLM |SLMSLM
AL BUTHE SOLEIMAN HAMAD	AL BUTHE HAMAD SOLEIMAN	AL P0 HMT SLMN	ALP0 ALHMT ALSLM P0HMT P0SLM HMTSLM	ALP0|ALHMT|ALSLM| P0HMT| P0SLM| HMTSLM
REGINALD B GOODRIDGE	B GOODRIDGE REGINALD	P KTRJ RJNLT	KTRRJN **NOTE:** Initials are ignored by default when generating cluster keys	KTRRJN
REGINALD B SR GOODRICH	B GOODRIDGE REGINALD SR	P KTRJ RJNLT SR	KTRRJN KTRSR RJNSR **NOTE:** Initials are ignored by default when generating cluster keys	KTRRJN|KTRSR|RJNSR
STEPHEN JEQE NKOMO	JEQE NKOMO STEPHEN	JK NKM STFN	JKNKM JKSTF NKMSTF	JKNKM|JKSTF|NKMSTF
S J NKOMO	J NKOMO S	J NKM S	NKM Initials are ignored by default when generatingcluster keys	NKM
STEPHEN JEKE N KOMO	JEKE KOMO N STEPHEN	JK KM N STFN	JKKM JKSTF KMSTF	JKKM|JKSTF|KMSTF

6.2.3 Individual Given Names Cluster(dnClusterGivenNames)

The **Given Names** cluster provides a further backup to the remaining clusters, especially to deal with cases where names are not necessarily well-structured into family and given names.

Depending on the quality and culture of the name information, this cluster will often not be required. You can test the number of additional alerts identified by the cluster by running matching with this cluster disabled, and then running with it enabled. Comparing the new relationships against the old will highlight the relationships identified by using this cluster.

The default logic of the cluster builder is as follows:

1. Split the normalized full name into several name tokens, using space as a delimiter. Many other punctuation and noise characters are normalized to spaces before generating the cluster. For further information see Name Normalization.
2. Standardize the normalized given names before clustering. This ensures, for example, that names such as 'William' and 'Bill' will be clustered together, although their raw Metaphone values are not the same. A space delimiter is used to split the name before standardizing.
3. Apply the **Metaphone**transformation to the whole of the given names value after token standardization, outputting a key with a length of up to 4 characters.
The following table describes the Given Names Cluster example.

Table 6-8 Given Names Cluster

dnGivenNames	Metaphone values	dnClusterGivenNames
XIAO JIAN	SJN	SJN
ZHONG	JNK	JNK
MOHAMMED SANI	MHMT	MHMT
JOSEPH TSANGA	JSFT	JSFT
ABD AL WAHAB	APTL	APTL
SULIMAN HAMD SULEIMAN	SLMN	SLMN
AL BUTHE	ALP0	ALP0
REGINALD B	RJNL	RJNL
STEPHEN JEQE	STFN	STFN
S J	SJ	SJ
STEPHEN JEKE	STFN	STFN

6.2.4 Individual Full Name Trim Pairs Cluster(dnClusterFullNameTrim)

On occasion, two names which are close matches may not generate a common cluster key using the **Full Name Metaphone Pairs** cluster.

The following table describes the Full Name Trim Pairs Cluster.

Table 6-9 Full Name Trim Pairs Cluster

dnFullName	Name tokens and Metaphone values	Name tokens and Metaphone values	Distinct Cluster Keys	dnClusterFull-NameMeta
XIAO JIAN ZHONG	JIAN	JN	JNS JNJNK SJNK	JNS|JNJNK|SJNK
	XIAO	S		
	ZHONG	JNK		

Table 6-9 (Cont.) Full Name Trim Pairs Cluster

dnFullName	Name tokens and Metaphone values	Name tokens and Metaphone values	Distinct Cluster Keys	dnClusterFull-NameMeta
ZHONG XIAOJIAN	XIAOJIAN	SJN	SJNJNK	SJNJNK
	ZHONG	JNK		

These two records are a possible name match. However, the **Full Name Metaphone Pairs** cluster does not produce a common cluster key for the pair because the tokens ‘Xiao’ and ‘Xiaojian’ yield different three character Metaphone keys.

In order to match these cases efficiently, a **Full Name Trim Pairs** cluster is prepared in a similar way to the primary cluster, but without applying a Metaphone transformation. This allows for typos and spacing differences in the names, but is ‘left-biased’; that is, it demands that the first few characters of the names match.

The logic of the cluster is as follows:

1. Split the normalized full name into name tokens, using space as adelimiter.
2. Sort the name tokens alphabetically.
3. Apply the **Trim Characters** transformation to each name token, outputting a key with a length of (up to) 3 characters.
4. Concatenate the trimmed values, generating a final key value for each distinct pair of tokens.
5. Deduplicate the list of keys.
The following table describes the Trim Characters for Full Name Trim Pairs Cluster.

Table 6-10 Trim Characters for Full Name Trim Pairs Cluster

dnFullName	Name tokens and trimmed values	Name tokens and trimmed values	Cluster Keys	dnClusterFullNameTrim
XIAO JIAN ZHONG	JIAN	JIA	JIAXIA JIAZHO XIAZHO	JIAXIA|JIAZHO|XIAZHO
	XIAO	XIA		
	ZHONG	ZHO		
ZHONG XIAOJIAN	XIAOJIAN	XIA	XIAZHO	XIAZHO
	ZHONG	ZHO		
MOHAMMED SANI ABACHE	ABACHE	ABA	ABAMOH ABASAN MOHSAN	ABAMOH|ABASAN|MOHSAN
	MOHAMMED	MOH		
	SANI	SAN		
JOSEPH TSANGA ABANDA	ABANDA	ABA	ABAJOS ABATSA JOSTSA	ABAJOS|ABATSA|JOSTSA
	JOSEPH	JOS		
	TSANGA	TSA		
ABD AL WAHAB ABD AL HAFIZ	ABD	ABD	ABDABD ABDAL ABDHAF ABDWAH ALAL ALHAF ALWAH HAFWAH	ABDABD|ABDAL|ABDHAF|ABDWAH|ALAL|ALHAF|ALWAH|HAFWAH
	ABD	ABD		
	AL	AL		
	AL	AL		
	HAFIZ	HAF		
	WAHAB	WAH		

Table 6-10 (Cont.) Trim Characters for Full Name Trim Pairs Cluster

dnFullName	Name tokens and trimmed values	Name tokens and trimmed values	Cluster Keys	dnClusterFullNameTrim
SULIMAN HAMD SULEIMAN AL BUTHE	AL BUTHE HAMD SULEIMAN SULIMAN	AL BUT HAM SUL SUL	ALBUT ALHAM ALSUL ALSUL BUTHAM BUTSUL HAMSUL SULSUL	ALBUT|ALHAM|ALSUL| BUTHAM|BUTSUL| HAMSUL|SULSUL
AL BUTHE SOLEIMAN HAMAD	AL BUTHE HAMAD SOLEIMAN	AL BUT HAM -	ALBUT ALHAM ALSOL BUTHAM BUTSOL HAMSOL	ALBUT|ALHAM|ALSOL| BUTHAM|BUTSOL |HAMSOL
REGINALD B GOODRIDGE	B GOODRIDGE REGINALD	B GOO REG	GOOREG **NOTE:** Initials are ignored by default when generating cluster keys	GOOREG
REGINALD B SR GOODRICH	B GOODRICH REGINALD SR	B GOO REG SR	GOOREG GOOSR REGSR	GOOREG|GOOSR |REGSR
STEPHEN JEQE NKOMO	JEQE NKOMO STEPHEN	JEQ NKO STE	JEQNKO JEQSTE NKOSTE	JEQNKO|JEQSTE |NKOSTE
S J NKOMO	S NKOMO J	S NKO J	NKO Initials are ignored by default when generating cluster keys	NKO
STEPHEN JEKE N KOMO	JEKE KOMO N STEPHE	JEK KOM N STE	JEKKOM JEKSTE KOMSTE Initials are ignored by default when generating cluster keys	JEKKOM|JEKSTE |KOMSTE

6.2.5 Individual Initials(dnClusterInitials)

The **First Initial Last Name** cluster provides a clustering method to group together names that share the same first name initial and last name, and allows some variation for transposed names. The default logic of the cluster builder is as follows:

1. Split the normalized given names into several name tokens, using a space character as the delimiter.
2. Split the normalized family name into several name tokens, using a space character as the delimiter.
3. Generate the cluster key value as follows:
   - If there are two or more characters in the last token of the family name, then concatenate the first character of the given name with the last token of the family name.

- If the last token of the family name is a single initial, then concatenate that character with the first token of the given name

4. Trim the cluster key to a maximum of 12 characters.
The following table describes the First and Last NameCluster.

Table 6-11 First and Last Name Cluster

dnGivenNames	dnFamilyName	dnClusterFirstLast
MARTIN	JONES	MJONES
MARTIN PETER	JONES	MJONES
MARTIN	MORGAN JONES	MJONES
JONES	M	MJONES

6.2.6 Original Script Name(dnClusterOriginalScript)

The **Original Script Name** cluster provides a clustering method for matching names represented in non-Latin writing systems. The cluster builder generates a key for each token in the name.

A single cluster value of "Myanmar" is generated for original script names written in the Burmese alphabet irrespective of the name. This is needed because token splitting is not possible for the Myanmar writing system as it does not use a space character between words. As a result, all original script names in Burmese script will be compared during matching. This should not cause performance issues during screening providing there are a low number of customer records using this writing system.

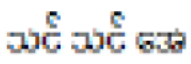
The default logic of the cluster builder is as follows:

1. Split the original script name into several name tokens, using a space character as the delimiter.
2. Trim each name token to a maximum of 5 characters.
3. Concatenate all of the trimmed token values with a pipe separator
4. Deduplicate the list of keys.
The following table describes the Original Script Name Cluster.

Table 6-12 Original Script Name Cluster

dnOriginalScriptName	dnClusterOriginalScript
Іван Антонавіч Шчурок	Іван|Антон|Шчуро
林紹薦	林|紹|薦

Figure 6-1 Mayanmar Myanmar



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6.2.7 Entity Name Tokens(dnClusterNameTokens)

This cluster uses the standardized entity name to generate cluster keys. The default logic is as follows:

1. Remove initials.
2. Remove common name tokens, such as Limited, or Corporation.
3. Normalize whitespace.
4. Convert space characters to pipe characters.
The following table describes the Entity Name Tokens Cluster.

Table 6-13 Entity Name Tokens Cluster

dnEntityName	Name with initials and common name tokens stripped	dnClusterNameTokens
ANGLO CARIBBEAN CO LTD	ANGLO CARIBBEAN	ANGLO|CARIBBEAN
GUAMATUR S A	GUAMATUR	GUAMATUR

6.2.8 Entity Name Meta(dnClusterLongName)

This cluster uses the standardized entity name to generate cluster keys. The default logic is as follows:

1. Remove initials.
2. Remove common name tokens, such as Limited, or Corporation.
3. Normalize whitespace.
4. Remove common business words, such as Company, or Association.
5. Transliterate any non-Latin characters into Latin.
6. Apply the Metaphone transformation (the standard double-Metaphone algorithm) out putting a key with a length of up to eight characters.
The following table describes the Name Metaphone Cluster.

Table 6-14 Name Metaphone Cluster

dnEntityName	Name with initials, common name tokens and common business words stripped	dnClusterLongName
HAVANA INTERNATIONAL BANK LTD	HAVANA BANK	HFNPNK
CIMEX S A	CIMEX	SMKS
LA EMPRESA CUBANA DE FLETES	EMPRESA CUBANA FLETES	AMPRSKPN

6.2.9 Entity Name Trim(dnClusterShortName)

This cluster uses the standardized entity name to generate cluster keys. The default logic is as follows:

1. Remove all whitespace.
2. Left-trim the value to a maximum of 4 characters.
   The following table describes the Name Trimmed Cluster.

Table 6-15 Name Trimmed Cluster

dnEntityName	dnClusterShortName
HAVANA INTERNATIONAL BANK LTD	HAVA
CIMEX S A	CIME
LA EMPRESA CUBANA DE FLETES	LAEM

6.2.10 Entity Start End Name Tokens(dnClusterStartEndNameTokens)

This clustering method is designed as a looser version of the Entity Name Tokens cluster and allows for variation in entity names by creating clusters for the first five and last five characters of each name token.

The default logic is as follows:

1. Remove initials.
2. Remove common name tokens, such as Limited, or Corporation.
3. Normalize whitespace.
4. For each token that is longer than five characters, replace with two new tokens that are:
   - The first five characters of the token
   - The last five characters of the token

The following table describes the Start/End Name Tokens Cluster.

Table 6-16 Start/End Name Tokens Cluster

dnEntityName	Name with initials and common name tokens stripped	dnClusterStartEndNameTokens
HAVANA INTERNATIONAL BANK LTD	HAVANA INTERNATIONAL BANK	HAVAN|AVANA|INTER|IONAL| BANK
CIMEX S A	CIMEX	CIMEX
LA EMPRESA CUBANA DE FLETES	LA EMPRESA CUBANA FLETES	LA|EMPRE|PRESA|CUBAN|UBA NA|FLETE|LETES

6.3 Matching

Individual and entity matching is centered on individual and entity names respectively. Other items of data, such as associated countries and cities, are used to strengthen a possible match. Match rule groups are places in the following order:

- Individual name match groups
- Aircraft name match groups
- Vessels name match groups
- Entity name match groups

The following general notes describe the approach to matching:

- Matches are ranked according to how well the name matches. An exact name match rates as a matchat the highest level, with the lowest level being represented by two loosely possible name matches with a different name structure. Further ranking is imposed by how well additional information (such as city or country information, and date of birth information) matches between the records.
- Oracle Financial Services Transaction Filtering allows for various levels of name match, including, but not limited to:
  - Name variation recognition. This is carried out by name standardization. For example, all variations of Mohammed (Muhamad, Mohammad, Mohamed and so on) are substituted with ‘Mohammed’ when matching. This is particularly used for given names, though also applied when matching whole names. For example, more than 20 variations of the name ‘Mohammed’ are recognized and considered to be the same name.
  - Allowances for name abbreviation and initials. For example, ‘Pete’ is a possible match to ‘Peter’, and ‘J’ is a possible match to‘John’.
  - Allowances for typographical errors and transliteration differences. For example, ‘Abdool’ is a possible match to ‘Abdul’, even if the variants are not standardized.
  - Allowances for names being out of order or structured differently. For example, ‘Mohammed Abbas Al-Tikriti’ can be matched with ‘Mohammed Al-Tikriti Abbas’.
  - Allowance for additional names. For example, ‘Juan Carlos Ferreira’ can be matched with ‘Juan Ferreira’.
  - Allowance for names being split differently. For example, ‘Xiao Jian’ is a match to ‘Xiaojian’.
- Oracle Financial Services Transaction Filtering attempts to prevent false positives by various means, including, but not limited to, the following methods:
  - Backing up typo tolerance with Meta phone matching. For example, ‘Mary’ and ‘Mark’ are not considered a match, although they are only one character different.
  - Backing up typo tolerance with consideration of the percentage of characters that are different. For example, the initials ‘A’ and ‘E’ are not considered a match, even though they are only one character different.
  - Considering the different significance and commonality of name tokens. For example, if name qualifiers such as ‘Al’ are shared between two Arabic names, this is not as significant as if an uncommon name such as ‘Abbas’ is shared.

It may be advisable to tune the set of match rules that are activated. In particular, you may wish to activate or deactivate some of the lower match rules in the list, which lead to the weakest name matches. Factors affecting the usefulness of these rules include:

- the policies of the organization
- the quality of the transaction data
- the provenance of the transaction data

For example, Asian and Arabic names may be subject to more typographical and name ordering issues than other names. Where the data contains many of these names, the lower strength rules may identify more possible matches. The organization may want to review some or all of these as a matter of policy, or it may consider the matches too weak to review.

The required rules are easily activated or deactivated as needed in Oracle Financial Services Transaction Filtering.

6.3.1 Match Rules

There are several different types of match rule involved in the name and address screening:

- The name matching rules: These are organized by the level of name match, with the strongest name matching rules placed at the top of the decision table.

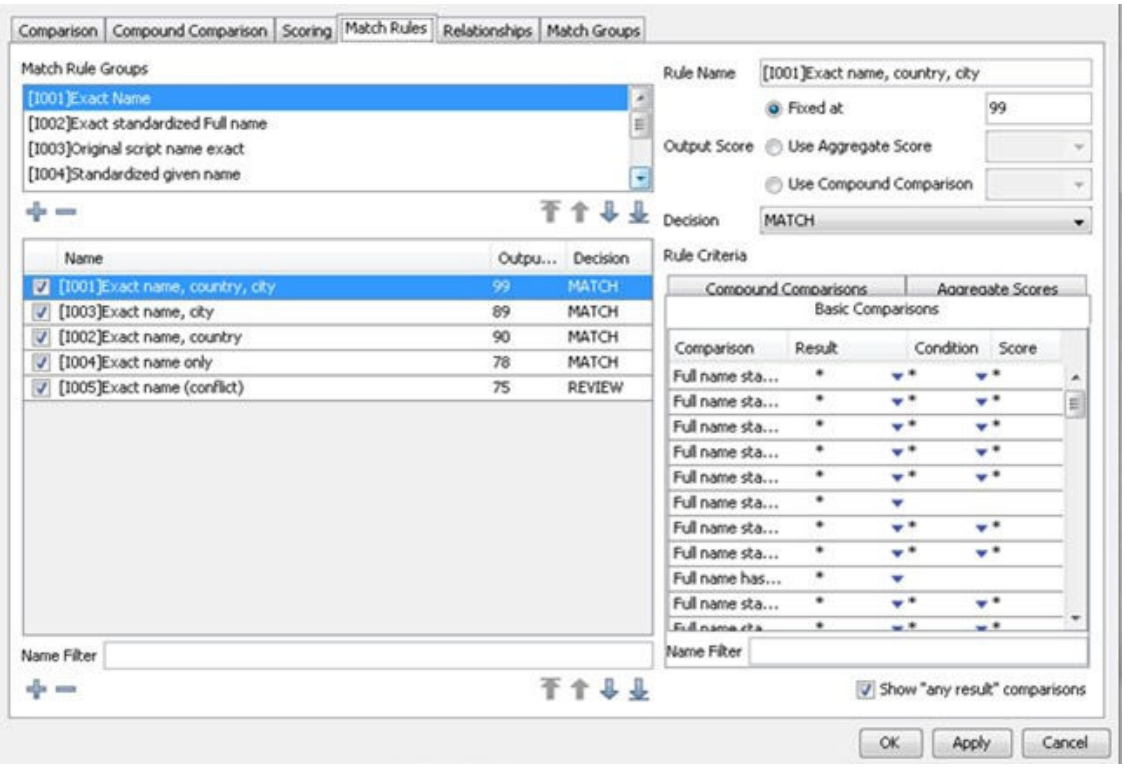
This means that the match rules are not ordered by strength across all identifiers. For example, a weaker name match that is strengthened by matches on city and country is likely to be a stronger overall match than a strong name with strongly contradictory data in the other fields.

The last rule in each set is a 'conflict' rule, and in many cases will be disabled by default. These rules allow records which fulfill the specified level of name match but have conflicting supporting data fields indicating that a true match is unlikely.

- The loose name matching rules: These are also based around name matching, but identify looser matches and are not enabled by default. These rules are likely to result in a large number of false positive matches and are most likely to be of use when screening against sanctions lists, where it is important that no true matches are missed.

For the sake of clarity, match rules are divided into groups. As each group is selected, the match rules it contains are displayed in the window below:

Figure 6-2 Match Rules Displayed



The priority of the groups can be changed using the arrows below the **Match Rules Group** list. When a group is highlighted:

- Click to move it up one place in the list.

- Click to move it down one place in the list.
- Click to move it to the top of the list.
- Click to move it to the bottom of the list.

The remainder of this section describes the matching rules that are present in Oracle Financial Services Transaction Filtering in greater detail.

6.3.2 Individual Name Matching Rules

The following table describes the individual name matching rules:

Table 6-17 Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
I001	Exact name	Full name match after name standardization using full name map	-	-
I002	Exact standardized Full name	Given names and family name match exactly.	- JOSEPH JOSEPH	- TSANGA T'SANGA
I003	Original script name exact	The original script Name fields match exactly.	- А Л Е К С А Н Д Р О С О К И Н	- А Л Е К С А Н Д Р О С О К И Н
I004	Standardized given name	Given names match aftername standardization using Given name map. Family name matches exactly.	- BILL WILLIAM	- JONES JONES
I005	Full name	The full name matches exactly, after standardization of all name tokens using the Given Name Map.	- JOHN MIKE SMITH JOHN MICHAEL SMITH	
I006	Full name without titles	The full name matches exactly, after standardization of all name tokens using the Given Name Map and removal of titles.	- DR DOUGLAS BAKER DOUGLAS BAKER	
I007	Abbreviated standardized given name	Given names match using a **Starts With** comparison, after name standardization using the Given Name Map.	- JOSEPH ABANDA	- TSANGA

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		Family name matches exactly.	JOSEPH	T'SANGA
I008	Given name similar and sounds like	Given name matches with an **Edit Distance** of 1 or 2 after name standardization. At least one of the given names, excluding initials, must match by a 4-character Metaphone key. Family name matches exactly	- JOSEPH JOESPH	- ABANDA ABANDA
I009	First name similar and soundslike	The first given name matches with an **Edit Distance** of 1 or 2 and with a **Character Match Percentage** of 66% or more, after given name standardization. At least one of the given names, excluding initials, must match by a 4-character Metaphone key. Family name matches exactly.	- AMER MOHAMMAD RASHEED AMIR RASHID MOHAMMED	- AL UBAIDI AL UBAIDI
I010	Additional given names	All name tokens from the given names field with fewest tokens must be present in the other given names field. Family name matches exactly .	- MOHAMMED DIN MOHAMED	- HANIF HANIF
I011	Additional names	All name tokens from the full name with fewest tokens must be present in the other full name. At least 2 name tokens must match with the same matching logic; that is, if a name only has one token it is not considered a match. At least 2 name tokens must	- LOTFI RIHANI	

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		exist in the Full Name. Word Match Count may return >1 if a single name matches twice in a longer name string. For example, 'ABDUL' matches 'ABDUL ABDUL' with a Word Match Count of 2. Matching is order sensitive.	LOTFI BEN ABDUL HAMID BEN ALI RIHANI	
I012	Original script name in any order	All names in the original script name fields match, regardless of order.	- Καρλος Μολινα	- Μολινα Καρλος
I013	Original script name with typos	Original script name fields match with an 80%+ **Character Match Percentage** score.	- Καρλος Μολινα	- Καρλος Μολινα
I014	All names in any order	All names in the full name match (using a **Word Edit Distance** of 0) after name token standardization, in any order. A single typo (1 character edit) is allowed in each name token.	- ABDUL JABBER OMARI OMARI ABDUL JABBER	
I015	Abbreviated given name	Given names match using a **Starts With** comparison. Family name is a close metaphone match.	- CHRIS CHRISTOPHER	- HUNT HUNTER
I016	Abbreviated given name and family name typos	Given names match using a **Starts With** comparison, after name standardization using Given Name Map. Family name matches with an edit difference of 1-2. At least one of the family name tokens, excluding initials must match	- IBRAHIM ABDUL SALAM	- MOHAMED BOYASSEER

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		by a 4-character Metaphone key.	IBRAHIM	BOYASEER
I017	Abbreviated given name without titles and family name with typos	The first given name matches with a **Starts With** match, after name token standardization and stripping titles. Family name matches with an edit difference of 1-2. At least one of the family name tokens, excluding initials, must match by a 4- character Metaphone key.	- SAHIR DR SAHIR MUSA	- BARHAN BERHIN
I018	Original script name in any order with typos	All names in the original script name fields match, regardless of order, with each name requiring an 80%+ **Character Match Percentage** score.	- Хасан Ченгиз	- Ченгиз Хассан
I019	First name and full name similar and sounds like	The full name matches with a **Character Match Percentage** of 80% or above, after name token standardization. At least one of the family name tokens, excluding initials, must match by a 4- character Metaphone key.	- MOHAMMAD HUSAYN MOHAMMAD HASSAN	- MASTASAEED MASTASAEED
I020	Given name similar and family names and sounds like	The given name matches with an **Edit Distance** of 1 or 2, after name standardization. The given name matches by 4-character Metaphone key, after name standardization. The family name matches with an **Edit Distance** of 1-2. The family name matches by	- AMER MOHAMMAD RASHEED	- AL UBAIDI

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		4-character Metaphone key.	AMIR RASHID MOHAMMED	AL UBEIDI
I021	Abbreviated given name and family name similar	The first given name matches with a **Starts With** match, after name token standardization. The family name matches with an **Edit Distance** of 1 or 2. The family name matches by 4-character Metaphone key.	- VIKTOR ANATOLYEVICH VICTOR	- BOUT BOOT
I022	Full Name no whitespace	Combination of Given name an Family name without spaces	CHRIS CHRISTOPHER	HUNT HUNTER
I023	Original script name additional names	All names in one original script name field must be fully contained within the other field, provided there are at least two names in each field.	- Миленко Врачар	- Миленко Иванович Врачар
I024	Additional names typo tolerant	All name tokens from the full name with fewest tokens must be present in the other full name.A character error tolerance of 20% is allowed (that is, one character edit every 5 characters). At least 2 name tokens must match with the same matching logic. If a name contains only one token it is not considered a match according to this rule. **NOTE:** Word Match Countmay return >1 if a single name matches twice in a longer name string. For example, ‘ABDUL’ matches	- ABDUL WAHED SHAFIQ	- -

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		'ABDUL ABDUL' with a Word Match Count of 2. Matching is order sensitive.	ABDUL WAHAD	-
I025	Full name contained and multiple names in common	The full name matches with a **Contains** match, after standardization of all name tokens using the Given Name Map. At least 2 name tokens must match in the full name.	-	- -
			ABU BAKAR	-
			ABU BAKAR BA'ASYI	-
I026	Full name	The full name	-	-
-	characters	matches with a	MOHAMMED AL GHABRA	-
-	longer	**Longest**		
-	-	**Common**	ALGHABRA MUHAMAD	-
-	-	**Substring Sum Percentage** of 90% +, relating to	RAMATULLAH WAHIDYAR FAQIR MOHAMMAD	-
-	-	the longer string, and considering	WAHIDYAR RAMA TULLAH	-
-	-	substrings of 5	-	-
-	-	characters or	-	-
-	-	more in length,	-	-
-	-	after name	-	-
-	-	standardization.	-	-
I027	Original script	All names in one	-	-
-	name	original script	Ю Р И Н Е Ё Л О В	Ю р и й В а с и л ь е в и ч Н е ё л о в
-	additional names with typos	name field must be fully contained within the other field, provided		
-	-	there are at least	-	-
-	-	two names (all of	-	-
-	-	which have an	-	-
-	-	80%+ Character	-	-
-	-	Match	-	-
-	-	Percentage) in	-	-
-	-	each field.	-	-
I028	Abbreviated	The first given	-	-
-	first name	name matches with a **Starts With** match, after	KHADAF ABUBAKAR	JANJALANI
-	-		-	-

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		name token standardization.	KHADAFFI	JANJALANI
-	-	Family name	-	-
-	-	matches exactly.	-	-
I029	Additional names in any order	All name tokens from the full name withfewest tokens must be present in the other full name. At least 2 name tokens must match with the same matching logic. If a name contains only one token it is not considered a match according to this rule. **NOTE:** Word Match Countmay return >1 if a single name matches twice in a longer name string. For example, ‘ABDUL’ matches ‘ABDUL ABDUL’ with a Word Match Count of 2. Matching isorder insensitive.	- HA THI NGUYEN THI HA	- - -
I030	Additional names in any order typo tolerant	All name tokens from the full name with fewest tokens must be present in the other full name.A character error tolerance of 20% is allowed (that is, one character edit every 5 characters). At least 2 name tokens must match with the same matching logic. If a name contains only one token it is not considered a match according to this rule. **NOTE:** Word Match Countmay return >1 if a single name matches twice in a	- STEPHENS MARTIN	- -

Table 6-17 (Cont.) Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data	Example Matching Data
		longer name string. For example, ‘ABDUL’ matches ‘ABDUL ABDUL’ with a Word Match Count of 2. Matching isorder insensitive.	MARRTIN JOHN STEPHENS	-

6.3.3 Loose Individual Name Matching Rules

The following table describes the loose individual name matching rules:

Table 6-18 Loose Individual Name Matching Rules

Group Code	Matching Rule	Logic Summary	Example Matching Data
I031	Full name characters shorter only	The full name matches with a **Longest Common Substring Sum Percentage** of 90%, relating to the shorter string, and considering substrings of 5 characters or more in length, after name standardization. At least 2 name tokens must exist in the full name.	- ABU BAKAR ABU BAKAR BA’ASYI
I032	Full name no initials match with initials in any order relating to shorter	All initials in one Full Name field must be fully contained within the initials of the other Full Name field; AND the standardized Full Name field without initial must be fully contained within the other standardized Full Name field without initials; AND both fields must contain at least two names.	- CARL J FISHER J C FISHER
I033	Full name contained, last initial same, primary list is single token	The Full Name field from the watch list record contains only one name, which is fully contained within the record being screened; AND the initial of the last name in the record being screened must match the initial of the name in the watch list record.	- JANINE CHERRY CHERRY

6.3.4 Aircraft Matching Rules

The following table describes the details of the Aircraft matching rules:

Table 6-19 Aircraft Matching Rules

Group Code	Matching Rule	Summary of Rule Logic	Example Matching Data
A001	Aircraft part-standardized name exact	The part- standardized entity name matches the name of a listed aircraft exactly	-
A002	Aircraft name exact	The entity name matches the name of a listed aircrafts after number cardinal and ordinal standardization	4TH YK-AYF FOURTH YK-AYF
A003	Aircraft part-standardized name with typos	The part- standardized entity name matches the name of a listed aircraft with a Character Match Percentage of 80-99%.	N840PN 1 N840PN
A004	Aircraft name with typos	The entity names match with a Character Match Percentage of 80-99% after number cardinal and Ordinal standardization	-

6.3.5 Vessel Matching Rules

The following tale describes the details of the Vessel matching rules:

Table 6-20 Vessel Matching Rules

Group Code	Matching Rule	Summary of Rule Logic	Example Matching Data
V001	Vessel part-standardized name exact	The part- standardized entity name matches the name of a listed vessel exactly.	DYNASTY DYNASTY
V002	Vessel name exact	The entity name matches the name of a listed vessel after number cardinal and ordinal standardization	4th OCEAN FOURTH OCEAN
V003	Vessel part-standardized name with typos	The part- standardized entity name matches the name of a listed vessel with a Character Match Percentage of 80-99%	RAHIM RAHIM 3

Table 6-20 (Cont.) Vessel Matching Rules

Group Code	Matching Rule	Summary of Rule Logic	Example Matching Data
V004	Vessel name with typos	The entity name matches the name of a listed vessel after number cardinal and ordinal standardization	RAHUM 3 TRAHIM THREE

6.3.6 Entity Matching Rules

The match rules in Oracle Financial Services Transaction Filtering are organized by the level of entity name match, with the strongest name matching rules at the top of the decision table.

There are two types of matching rules involved in entity screening:

- Entity name matching rules: Entity name matching rules are organized by the level of entity name match, with the strongest matching rules placed at the top of the decision table. This means that the match rules are not ordered by strength across all identifiers. For example, a weakermatch rule that is strengthened by matches on City and Country is likely to be a stronger overall match than a strong match rule with strongly contradictory data in the other fields.
- Loose entity matching rules: These are also based around entity name matching, but identify looser matches and are not enabled by default. These rules are likely to result in a large number offalse positive matches and are most likely to be of use when screening against sanctioned lists where it is important that no true matches are missed.

For the sake of clarity, match rules are divided into groups, as shown in the below tables.

All entity matching rules use a standardized form of the entity name. The strongest rules use the 'part- standardized name', meaning the entity names match after only simple global standardizations (such as considering AND and & as the same) are applied. Other rules apply additional rules for standardization as noted in the table below.

Usage of 'word' in the table below implies a space-delimited token in the prepared names.

The following table describes the Entity Name Matching Rules.

Table 6-21 Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E001	Part-standardized name exact	The part-standardized entity name matches a listed entity name exactly	HUMAN APPEAL INTERNATIONAL HUMAN APPEAL INTERNATIONAL
E002	Name exact	The entity names match exactly after number cardinal and ordinal standardization.	ABN Bank ABN
E003	Original script name exact	The original script names match exactly.	Н И А Э П О А О Н И А Э П О А О

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E004	Name without suffixes exact	The entity names match exactly after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed.	CAPITAL DIRECT LTD CAPITAL
E005	Name without business words similar and sounds like	The entity names match with a Word Match Percentage of 80% after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key.	PARAGON INVESTMENT CORPORATION PIC
E006	Name without business words exact	The entity names match exactly after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed.	LIFE HEALTHCARE GROUP HOLDINGS LTD LHCG
E007	Name without business words has all words out-of-order	All remaining words in each entity name match exactly, but in any order, after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed.	HEALTH EDUCATION SERVICES HEALTH SERVICES
E008	Name without suffixes starts with and multiple names in common	The entity names are a Starts With match after number cardinal and ordinal standardization,and after common company prefixes and suffixes are removed. There are at least two significant words (not common business words) in common between the two names. The listed name is not an acronym alias of a longer primary entity name.	BAE SYSTEMS (LANCASTER HOUSE) LIMITED BAE SYSTEMS LIMITED

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E009	Name without business words has all words with typos	All remaining words in each entity name match with a Character Match Percentage of 80 or more, after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed	GERBERA ASSOCIATES LTD GERBARA ASSOCIATES LTD
E010	Original script name in any order	All words in the Original Script Names match exactly, in any order	Н И А Э П О А О Н И А Э П О А О
E011	Original script name with typos	The Original Script Names match with a Character Match Percentage of 80% or more.	Н И А Э П О А О Н И А Э П О А О
E012	Name without business words with typos, and sounds like	The entity names match with a Character Match Percentage of 80 ore more after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key and the first three letters of each name are the same.	GOLDSTREAM PROPERTIES LTD GOLDSTREAM PROPERTIES LTD
E013	Name without suffixes contains, similar and multiple names in common	The entity names are a Contains match and the Word Edit Distance is no more than one between the names (where each word matches with a Character Match Percentage of 80 or more), after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two significant words (not common business words) in common between the two names.	HAMPSHIRE HERITAGE DEVELOPMENTS LTD HAMPSHIRE HERITAGE DEVELOPMENTS LTD

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E014	Name has additional words, sounds like and multiple names in common	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two significant words (not common business words) in common between the two names. The list name is not an acronym alias of a longer primary entity name.	MOSCOW CITY CENTER PLC MOSCOW CITY CENTER PLC
E015	Name without business words contains, sounds like and multiple names in common	The entity name is a Contains match with a listed entity name, after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. There are at least two significant words (not common business words) in common between the two names. The first word of each name has the same 4-character Metaphone key.	HI-TECH RECRUITMENT LTD HI-TEC RECRUITMENT LTD
E016	Original script name in any order with typos	All words in the original script name match with a Character Match Percentage of 80 or more, in any order.	Н И А Э П О А О Н И А Э П О А О
E017	Name without business words has most words out-of-order	The entity names match (in any order) with a Word Match Percentage of between 75 and 99, after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The list name is not an acronym alias of a longer primary entity name.	BACK TO HEALTH CLINICS LIMITED BACK TO HEALTH CLINICS LIMITED

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E018	Name without business words, similar, sounds like, with multiple names and a residual token in common. The group name differs from the rule name.	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. There are at least two significant words (not common business words) in common between the two names, and at least one of these is not a word in the English dictionary or a very common word in Watchlist name data. The list name is not an acronym alias of a longer primary entity name.	CHARLES F ASH CONSTRUCTION CO INC CHARLES F ASH CONSTRUCTION CO INC
E019	Name without business words, similar with typos, sounds like, with multiple names and residual token in common The group name differs from the rule name. See the Match dialog for details.	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. There are at least two significant words (not common business words) that match with a Character Match Percentage of 80 or more, and at least one of these is not a word in the English dictionary or a very common word in Watchlist name data. The list name is not an acronym alias of a longer primary entity name.	CLARKS HOME BAKERY LTD CLARKS HOME BAKERY LTD

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E020	Name has additional wordstolerant, sounds like and multiple names in common	All words in the shorter entity name match in the longer entity name (in order) with a Character Match Percentage of 80 or more after number cardinal and ordinal standardization. There are at least two significant words (not common business words) in common between the two names. The list name is not an acronym alias of a longer primary entity name.	ABU AL FULUS ABU AL FULUS
E021	Name without suffixes contains, similar and residual token in common	The entity names are a Contains match and the Word Edit Distance is no more than one between the names (where each word matches with a Character Match Percentage of 80 or more), after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There is at least one significant word in common (not a common business word, a word in the English dictionary or a very common word in Watchlist name data).	ACCLAIM ACM LTD ACCLAIM ACM LTD

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E022	Name without suffixes starts with and residual token in common	The entity names are a Starts With match after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There is at least one significant word in common (not a common business word, a word in the English dictionary or a very common word in Watchlist name data). The listed name is not an acronym alias of a longer primary entity name.	ENRON METALS BROKERS LTD ENRON METALS BROKERS LTD
E023	Name without suffixes starts with and substring in common	The entity names are a Starts With match, and there is a common substring at least 8 characters inlength, after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. The listed name is not an acronym alias of a longer primary entity name.	ACCURATE SECTION BENDERSLTD ACCURATE SECTION BENDERSLTD
E024	Name without suffixes contains, residual token in common and significant overlap	The entity names are a Contains match and the Word Match Percentage is 50 or more, after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There is at least one significant word in common (not a common business word, a word in the English dictionary or a very common word in Watchlist name data).	NON EMERGENCY TRANSPORT INC NON EMERGENCY TRANSPORT INC

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E025	Name without common tokens exact, and multiple residual tokens in common	The entity names match exactly, with at least two words matching, after number cardinal and ordinal standardization, and after common company prefixes, suffixes, and other words, and all English dictionary and common Watchlist name words are removed.	LIFE CARE CENTER PUNTA GORDA LIFE CARE CENTER PUNTA GORDA
E026	Original script name has additional names	All words in the shorter original script name match in the longer original script name (in order), and there are at least two matching words.	Н И А Э П О А О Н И А Э П О А О
E027	Name without suffixes contains, multiple names in common and significant overlap	The entity names are a Contains match and the Word Match Percentage is 50 or more, after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There is at least two significant words (not common business words) that match with a Character Match Percentage of 80 or more.	CAPITAL CITY TRANS SERVINC CAPITAL CITY TRANS SERVINC
E028	Name without business words similar and full name sounds like	The entity names match with a Character Match Percentage of between 80 and 99 after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. The names share the same metaphone key after number cardinal and ordinal standardization.	IBERIA AIRLINES IBERIAN AIRLINES

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E029	Name without business words similar with typos, sounds like and significant overlap	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. The names match with a Word Match Percentage of 50 or more when common business words are not stripped. There are at least two significant words (not common business words) that match with a Character Match Percentage of 80 or more. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	MED AMERICA CLINICS INC MED AMERICA CLINICS INC
E030	Name has additional words, sounds like and residual token in common	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization. There is at least one significant word (not a common business word, an English dictionary word or a word or a common Watchlist name word) in common between the two names. The list name is not an acronym alias of a longer primary entity name.	DJ CASE AND ASSOCIATES INC DJ CASE AND ASSOCIATES INC

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E031	Name has additional words with typos, sounds like and residual token in common	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization. There is at least one significant word (not a common business word, an English dictionary word or a word or a common Watchlist name word) that matches with a Character Match Percentage of 80 or more. The list name is not an acronym alias of a longer primary entity name.	GARLICK HELICOPTERSINC GARLICK HELICOPTERSINC
E032	Name has additional words, sounds like and substring in common	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization. There is a common substring of at least 8 characters in length between the two names after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. The list name is not an acronym alias of a longer primary entity name.	NATIONWIDE SECRETARIAL SERVICESLTD NATIONWIDE SECRETARIAL SERVICESLTD

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E033	Name without business words, similar, sounds like and multiple names in common	All words in the shorter entity name match in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. There are at least two significant words (not common business words) that match. The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	CENTRAL OKLAHOMA FAMILY MEDICAL CENTER CENTRAL OKLAHOMA FAMILY MEDICAL CENTER
E034	Name without business words, similar with typos, sounds like and multiple names in common	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. There are at least two significant words (not common business words) that match with a Character Match Percentage of 80 or more. The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	BLACK WORLD COLLEGE OF HAIRDESIGN BLACK WORLD COLLEGE OF HAIRDESIGN

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E035	Name without business words has typos and sounds like	The entity names match with a Character Match Percentage of between 80 and 99 after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key.	BOURNE CHIROPRACTICLTD BOURNE CHIROPRACTICLTD
E036	Name without suffixes contains with typos and multiple names in common	The entity names are a 'Contains' match where each wordmatches with a Character Match Percentage of 80 or more after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two significant words (not common business words) that match.	MEDICAB OF METRO NEW ORLEANS MEDICAB OF METRO NEW ORLEANS
E037	Name without suffixes contains,similar, and multiple words in common	The entity names are a Contains match and theWord Edit Distance is no more than one between the names (where each word matches with a Character Match Percentage of 80 or more), after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two significant words (not common business words) that match with a Character Match Percentage of 80 or more.	GROSVENOR NURSING SERVICES GROSVENOR NURSING SERVICES

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E038	Original script name has additional names with typos	All names in one original script name field must be fully contained within the other field, provided there are at least two names (all of which have an 80%+ Character Match Percentage) in each field.	Н И А Э П О А О Н И А Э П О А О
E039	Name has additional words and sounds like	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization.	ATRIUM INCORPORATORS WORLDWIDE LTD ATRIUM INCORPORATORS WORLDWIDE LTD
E040	Name has additional words with typos and sounds like	All words in the shorter entity name match in the longer entity name (in order) with a Character Match Percentage of 80 or more after number cardinal and ordinal standardization. The first word of each name has the same 4-character Metaphone key.	BRILLIANT GENERAL BUILDING CONTRACTOR LTD BRILLIANT GENERAL BUILDING CONTRACTOR LTD
E041	Name without business words loose match and full name sounds like	The entity names match with a Character Match Percentage of between 60 and 79 after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The names have the same Metaphone key.	BRC BRC

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E042	Name without business words contains, sounds like, and residual token in common	The entity names are a Contains match after number cardinal and ordinal standardization,and after common company prefixes, suffixes and other words are removed. There is at least one significant word (not a common business word, and English dictionary word or a very common word in Watchlist name data) in common between the two names. The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	GARLICK HELICOPTERSINC GARLICK HELICOPTERSINC
E043	Name without business words contains, sounds like, and substring in common	The entity names match with a Character Match Percentage of between 60 and 79 after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The names have the same Metaphone key.	NATIONWIDE SECRETARIAL SERVICESLTD NATIONWIDE SECRETARIAL SERVICESLTD
E044	Name without suffixes starts with	The entity names are a Starts With match after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. The list name is not an acronym alias of a longer primary entity name.	MARK MARK

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E045	Name without business words has additional words and sounds like	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	CROSS CROSS
E046	Name without business words has additional words with typos and sounds like	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization,and after common company prefixes,suffixes and other words are removed.The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	GROSVENOR NURSING SERVICES GROSVENOR NURSING SERVICES
E047	Name without business words contains and sounds like	The entity names are a Contains match after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	ENRON METALS BROKERS LTD ENRON METALS BROKERS LTD

Table 6-21 (Cont.) Entity Name Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E048	Name without suffixes starts with and allows acronyms	The entity names are a Starts With match after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed.	ANR ANR
E049	Name without suffixes contains, significant overlap and multiple words in common	The entity names are a Contains match, there are at least two words that match with a Character Match Percentage of 80 or more,and the two entity names match with a Word Match Percentage of 50 or more after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed.	ALTAR ALTAR
E050	Name contains with typos and multiple words in common	The entity names are a 'Contains' match where each wordmatches with a Character Match Percentage of 80 or more after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two words (not prefixes or suffixes) that match.	CHERRY CHERRY

The following table describes the Loose Entity Matching Rules.

Table 6-22 Loose Entity Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E0001	Name exact	The entity names match exactly after number cardinal and ordinal standardization	NOVEMBER SEVENTEEN NOVEMBER 17
E0002	Original script name in any order	All words in the Original Script Names match exactly, in any order.	О А О Н И А Э П О А О Н И А Э П

Table 6-22 (Cont.) Loose Entity Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E0003	Original script name with typos	The Original Script Names match with a Character Match Percentage of 80% or more.	Ε Π Α Ν Α Σ Τ Α Τ Ι Κ͵ Α Ρ Ι Σ Τ Ε Ρ Α Ε Π Α Ν Α Σ Τ Α Τ Ι Κ Η Α Ρ Ι Σ Τ Ε Ρ Α
E0004	Original script name in any order with typos	All words in the original script name match with a Character Match Percentage of 80 or more, in any order.	Ε Π Α Ν Α Σ Τ Α Τ Ι Κ͵ Α Ρ Ι Σ Τ Ε Ρ Α Ε Π Α Ν Α Σ Τ Α Τ Ι Κ Η Α Ρ Ι Σ Τ Ε Ρ Α
E0005	Original script name has additional names	All words in the shorter original script name match in the longer original script name (in order), and there are at least two matching words.	В Ъ О Р Ъ Ж Е Н А И С Л Я М С К А Г Р У П А В Ъ О Р Ъ Ж Е Н А И С Л Я М С К А Г Р У П А
E0006	Original script name has additional names with typos	All words in the shorter original script name match in the longer original script name (in order) with a Character Match Percentage of 80 or more, and there are at least two matching words.	В Ъ О Р Ъ Ж Е Н А И С Л Я М С К А Г Р У П А В Ъ О Р Ъ Ж Е Н А И С Л Я М С К А Г Р У П А
E0007	Name without business words contains, sounds like, and residual token in common	The entity names are a Contains match after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. There is at least one significant word (not a common business word, and English dictionary word or a very common word in Watchlist name data) in common between the two names. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	HENDERSON EQUITY PARTNERS GP LTD HENDERSON EQUITY PARTNERS GP LTD

Table 6-22 (Cont.) Loose Entity Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E0008	Name without business words contains, sounds like, and substring in common	The entity names are a Contains match and there is a common substring at least 8 characters in length after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	HAMILTON NEWS HAMILTON NEWS
E0009	Name without suffixes starts with	The entity names are a Starts With match after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. The list name is not an acronym alias of a longer primary entity name.	JACOB JACOB
E0010	Name without business words has additional words and sounds like	All words in the shorter entity name exist in the longer entity name (in order) after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	IDEAL SOLUTION ESTATES MANAGEMENT LTD IDEAL SOLUTION ESTATES MANAGEMENT LTD

Table 6-22 (Cont.) Loose Entity Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E0011	Name without business words has additional words with typos and sounds like	All words in the shorter entity name match with a Character Match Percentage of 80 or more in the longer entity name (in order) after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4-character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	AVANT GARD LTD AVANT GARD LTD
E0012	Name without business words contains and sounds like	The entity names are a Contains match after number cardinal and ordinal standardization, and after common company prefixes, suffixes and other words are removed. The first word of each name has the same 4- character Metaphone key. The list name is not an acronym alias of a longer primary entity name.	MOREX TRADING LTD MOREX TRADING LTD
E0013	Name without suffixes starts with and allows acronyms	The entity names are a Starts With match after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed.	INTERTRADE CLASSICLTD INTERTRADE CLASSICLTD
E0014	Name without suffixes contains, significant overlap and multiple words in common	The entity names are a Contains match, there are at least two words that match with a Character Match Percentage of 80 or more, and the two entity names match with a Word Match Percentage of 50 or more after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed.	INTERTRADE CLASSICLTD INTERTRADE CLASSICLTD

Table 6-22 (Cont.) Loose Entity Matching Rules

Group Code	Name Matching Rule	Summary of Rule Logic	Example Matching Data
E0015	Name contains with typos and multiple words in common	The entity names are a 'Contains' match where each word matches with a Character Match Percentage of 80 or more after number cardinal and ordinal standardization, and after common company prefixes and suffixes are removed. There are at least two words (not prefixes or suffixes) that match.	MOREX TRADING LTD MOREX TRADING LTD

7

Identifier Matching

This chapter discusses the matching webservice used for Identifier matching against the sanctioned Identifier list such as Bad BICs Ref Data. This chapter includes the following topics:

7.1 Identifier

The following identifier is used for matching:

- BICCODE
- LEICODE
- Passport Number
- National Idendifier

7.2 Cluster

The following cluster is used for BIC matching:

- BIC Code Cluster (BICCODE)
- LEICODE

7.3 Match Rules

The following table describes match rules are used for BIC matching:

Table 7-1 Name NormalizationGroup

Group Code	Matching Rule	Summary of Rule Logic	Example Matching Data
B001	Exact bank identification code (BIC) match	Exact match of Input BIC size is of 8 characters with reference data BIC is of 8 characters OR Input BIC size is of 11 characters with reference data BIC is of 11 characters	DEUTDEFFXXX DEUTDEFFXXX DEUTDEFF DEUTDEFF

Table 7-1 (Cont.) Name NormalizationGroup

Group Code	Matching Rule	Summary of Rule Logic	Example Matching Data
B0002	Bank identification code (BIC) match contains	Matched input BIC size can be either 8 or 11 characters with reference data BIC of 8 or 11 characters	deutdeffXXX DEUTDEFF DEUTDEFF DEUTDEFFXXX
B0003	Exact Legal Entity Identification (LEI) Match	It is a unique 20-character alphanumeric code	HB7FFAZI0OMZ8PP8O E 2
B0004	Legal Entity Identification (LEI) Contains	It is a unique 20-character alphanumeric code	HB7FFAZI0OMZ8PP8O E 2
B0005	Exact Passport Number Match	Unique 9 alpha numeric value	H079XXXXXXXX
B0006	Passport Number Contains	Unique 9 alpha numeric value	H079XXXXXXXX
B0007	Exact Identification Match	National ID Driving Licence No. National Tax No. Company Identification No. DUNS Number International Maritime Organization (IMO) Ship No. Manufacturer's Serial Number (MSN) Aircraft No. International Securities Identification Number (ISIN)	-
B0008	Identification Contains	National ID Driving Licence No. National Tax No. Company Identification No. DUNS Number International Maritime Organization (IMO) Ship No. Manufacturer's Serial Number (MSN) Aircraft No. International Securities Identification Number (ISIN)	-

The reference data is 'Bad BICs Ref Data' For information on the reference data for watchlists, see Oracle Financial Services Transaction Filtering Administration Guide.

8

Country and City Matching

This chapter discusses the matching webservice that is used for country and city matching against the sanctioned country and city list. The sanctioned country and city reference data names are Blacklisted Country Ref Data and Blacklisted Cities Ref Data respectively. The blacklisted city information is extracted from the party address field of the input message and the blacklisted country extraction happens from different fields such as Country from party address, Country ISO code from BIC, Country ISO from IBAN, and Country confirmation from party location.

This chapter includes the following topics:

8.1 Identifiers

The following table describes the identifiers are used for Country and City matching:.

Table 8-1 identifiers are used for Country and City matching

Identifier Description	Standard prepared attribute name
Country	Country Code (ISO)
City	City
Country ISO3 Code	Country ISO3 Code
Country ISO2 Code	Country ISO2 Code
City ISO Code	City ISO Code
Country Record ID	Country Record ID
City Record ID	City Record ID
Country Fuzzy	Country Fuzzy
City Fuzzy	City Fuzzy

8.2 Clusters

The following clusters are used for Country and City matching:

- Country: This cluster uses the Country to generate cluster keys.
- City: This cluster uses the City to generate cluster keys.
- CountryISO3 Code: This cluster uses the Country ISO3 Code to generate cluster keys.
- CountryISO2 Code: This cluster uses the Country ISO2 Code to generate cluster keys.
- City ISO Code: This cluster uses the City ISO Code to generate cluster keys.
- Country Fuzzy: This cluster uses the Country Fuzzy to generate cluster keys.
- City Fuzzy: This cluster uses the City Fuzzy to generate cluster keys.

- Country Synonyms: This cluster uses the Country Synonyms to generate cluster keys.
- City Synonyms: This cluster uses the City Synonyms to generate cluster keys.

8.3 Match Rules

The following table describes the match rules are used for country and city matching:

Table 8-2 Match Rules Used for Country and City Matching

Matching Rule	Summary of Rule Logic	Example Matching Data
Exact country name	Matches country name exactly	UNITEDSTATES UNITEDSTATES
Country name in any order	Matches country name in any order	STATES UNITED UNITEDSTATES
Exact County Synonyms name	Matches country name with country synonyms exactly	NORTH KOREA DPRK
Exact ISO country code (ISO 3)	Matches ISO 3 country code exactly	USA USA
Exact ISO country code (ISO 2)	Matches ISO 2 country code exactly	KP KP
Country name similar and sounds like	Matches country name which is similar and sounds like the matched country	CONGO DR CONGO
Country name at least one word matching	Matches country name with at least one word matching	UNITED STATES
Exact City Name with Country	Matches country with city name exactly	SINGAPORE SINGAPORE
Exact City name	Matches city name exactly	ABU ALFULUS AL ABUFULUS
City name in any order	Matches city name in any order	AL FULUSABU ABU ALFULUS
Exact ISO city code (ISO)	Matches city name with country synonyms	ALF ALF
Exact City Synonyms name	Matches city with city synonyms exactly	CHENNAI MADRAS
City name similar and sounds like	Matches city name which is similar and sounds like the matched city	SINGAPORE SINGAPORE
City name at least one word matching	Matches city name with at least one word matching	ABU FULUS

9
Narrative Matching

This chapter discusses the matching webservice that is used for free text or narrative field screening such as remittance information, reference fields, and sender to receiver information. This particular webservice screens individual, entity, vessel and aircraft names (if present) against different records such as watchlist records, country against sanctioned country reference data, city against sanctioned city reference data, BIC against sanctioned BIC reference data and key words against Stopkeywords reference data or StopKeywords Ref Data.

This chapter includes the following topics:

9.1 Identifiers

The following table describes the identifiers are used for Narrative matching:

Table 9-1 Identifiers Used for Narrative Matching

Identifier Description	Standard prepared attribute name
dnFullName	dnFullName
dnGivenName	dnGivenName
dnINDOriginalScriptName	dnINDOriginalScriptName
dnEntityOriginalScriptName	dnEntityOriginalScriptName
dnEntityName	dnEntityName
Country	Country
City	City
BIC	BIC
Country ISO3 Code	Country ISO3 Code
Country ISO2 Code	Country ISO2 Code
City ISO Code	City ISO Code
Country Fuzzy	Country Fuzzy
City Fuzzy	City Fuzzy
Country Synonyms	Country Synonyms
City Synonyms	City Synonyms
Vessel	Vessel
dnAircraftIndicator	dnAircraftIndicator

9.2 Clusters

The following clusters are used for Narrative matching:

- FullName: This cluster uses the Full Name to generate cluster keys. Full Name Cluster allows new records to be matched against existing records in a system.
- GivenName: This cluster uses the Given Name to generate cluster keys. Given Name Cluster allows new records to be matched against existing records in a system.
- INDScript Name: This cluster uses the IND Script Name to generate cluster keys. IND Script Name Cluster allows new records to be matched against existing records in a system.
- EntityName: This cluster uses the Entity Name to generate cluster keys. Entity Name Cluster allows new records to be matched against existing records in a system.
- ENTScript Name: This cluster uses the ENT Script Name to generate cluster keys. ENT Script Name Cluster allows new records to be matched against existing records in a system.

9.3 Match Rules

The following table describes the match rules used for Country, city, bad BIC and stop key words advanced match processing:

Table 9-2 Identifiers Used for Advanced Match Processing

Matching Rule	Summary of Rule Logic	Example Matching Data
Exact bank identification code (BIC) match	Exact match of Input BIC size is of 8 characters with reference data BIC is of 8 characters OR Input BIC size is of 11 characters with reference data BIC is of 11 characters	DEUTDEFFXXX DEUTDEFFXXX DEUTDEFF DEUTDEFF
Bank identification code (BIC) contains	Matches input BIC size can be either 8 or 11 characters with reference data BIC of 8 or 11 characters	deutdeffXXX DEUTDEFF DEUTDEFF DEUTDEFFXXX
Exact country name	Matches country name exactly	UNITESSTATES UNITESSTATES
Exact county synonym	Matches country name with country synonyms	NORTH KOREA DPRK
Country name in any order	Matches country name in any order	STATES UNITED UNITEDSTATES
Exact ISO country code (ISO 3)	Matches ISO 3 country code exactly	USA USA
Exact ISO country code (ISO 2)	Matches ISO 2 country code exactly	KP KP
Exact city name	Matches city name exactly	ABU AL FULUS
Exact city synonym	Matches against city synonym column of reference data	ABU AL AL FULUS
City name in any order	Matches city name in any order	AL FULUSABU ABU ALFULUS

Table 9-2 (Cont.) Identifiers Used for Advanced Match Processing

Matching Rule	Summary of Rule Logic	Example Matching Data
Exact ISO city code (ISO)	Matches city name with country synonyms	ALF ALF
Exact Stop Keywords	Matches exact stop words	EXPLOSIVE EXPLOSIVE

The following table describes the match rules are used for Entity and individual match processing:

Table 9-3 Identifiers Used for Entity and individual Match Processing

Matching Rule	Summary of Rule Logic	Example Matching Data- Given Names	Example Matching Data- Given Names
Exact Port name	Matches the exact Port name	Jawaharlal Nehru Port	-
Exact Port synonym name	Matches the exact Port synonym name	JNU Port	-
Exact Port Code	Matches the exact Port code	INVTZ1	-
Port name in any order	Matches the port name in any order	Jawaharlal Nehru Port Nehru Jawaharlal Port	-
Port name at least one word matching	Matches the Port name with at least one word matching	Jawaharlal Port Nehru Port	-
Exact goods name	Matches the exact goods name	Crude oil	-
Exact goods synonym name	Matches the exact goods synonym name	Oil	-
Goods name in any order	Matches the goods name in any order	Crude Oil Oil Crude	-
Goods name at least one word matching	Matches the goods name at least one word matching	Crude Oil	-
Exact Individual Full Name	Given names and family name match exactly	JOSEPH JOSEPH	TSANGA T'SANGA
Exact Individual Given Name	Given name matches exactly	JOSEPH JOSEPH	MIKE MICHAEL MICHAEL
Exact Individual Original Script Name	The original script Name fields match exactly	Ε Π Α Ν Α Σ Τ Α Τ Ι Κ Η Α Ρ Ι Σ Τ Ε Ρ Α Ε Π Α Ν Α Σ Τ Α Τ Ι Κ Η Α Ρ Ι Σ Τ Ε Ρ Α	-
Vessel part-standardized name exact	The part-standardized entity name matches the name of a listed vessel exactly	DYNASTY DYNASTY	-

Table 9-3 (Cont.) Identifiers Used for Entity and individual Match Processing

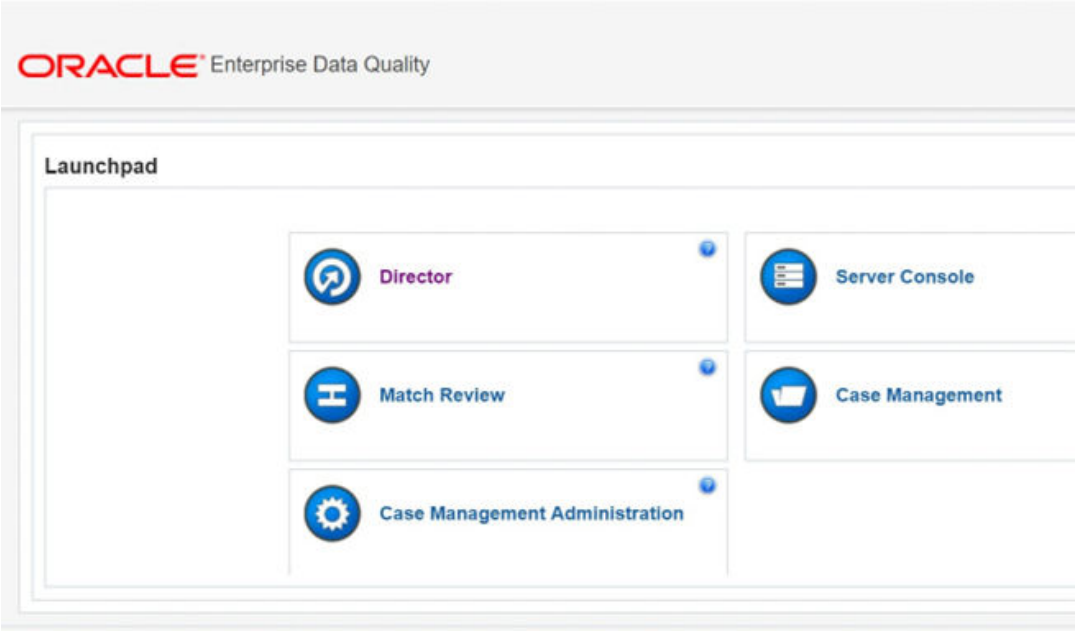
Matching Rule	Summary of Rule Logic	Example Matching Data- Given Names	Example Matching Data- Given Names
Vessel name exact	The entity name matches the name of a listed vessel after number cardinal and ordinal standardization	4TH OCEAN FOURTH OCEAN	-
Aircraft part-standardized name exact	The part-standardized entity name matches the name of a listed aircraft exactly	EP-GOM EP-GOM	-
Aircraft name exact	The entity name matches the name of a listed aircrafts after number cardinal and ordinal standardization	4TH YK-AYF FOURTH YK-AYF	-
Exact Entity Name	The entity names match exactly after number cardinal and ordinal Standardization	NOVEMBER 17 NOVEMBER SEVENTEEN	-
Exact Entity Original Script Name	The original script names match exactly	Н И А Э П О А О Н И А Э П О А О	-
Standardized given name	Matches the standardized given name	Mohammed	-
Name in any order	Matches the full name in any order	Mohammed Ali Ali Mohammed	-
Original script name in any order	Matches the original script name in any order	Н И А Э П О А О Н И А Э П О А О	-

9.4 Enabling a Match Rule and WebService

By default, only stop keywords match rules are enabled. To enable any other match rules:

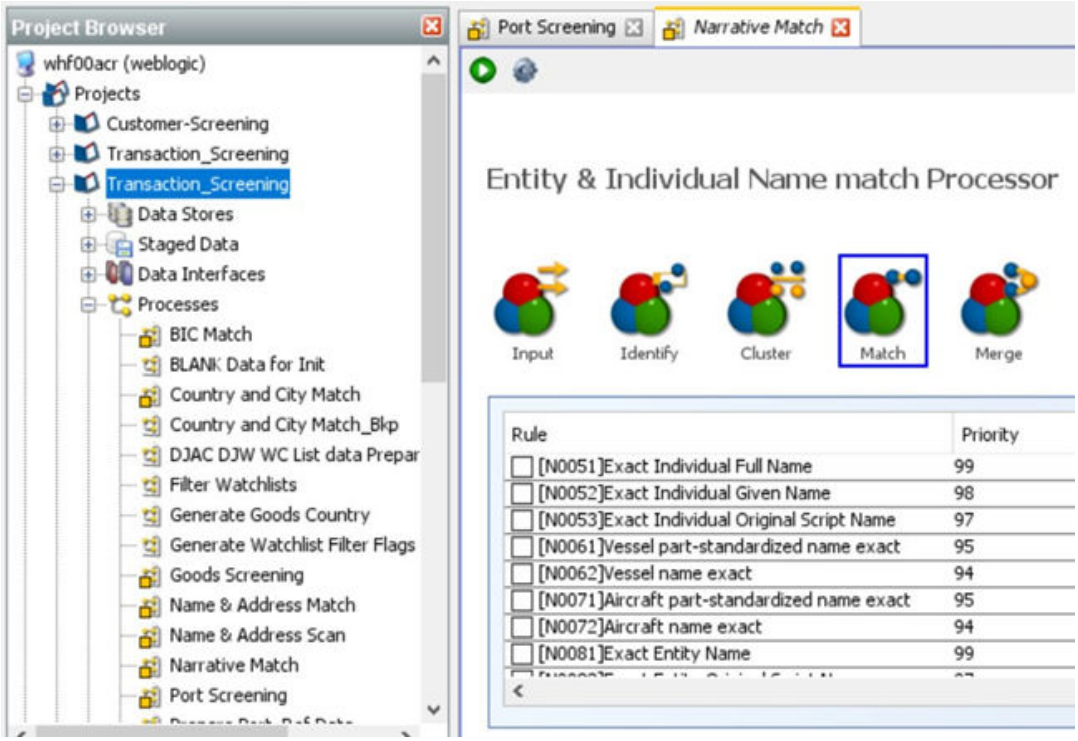
1. Open the Director menu in EDQ.

Figure 9-1 Director menu in EDQ



2. In the Project Browser pane, expand the **Transaction_Screening**project.
3. Expand the **Processes** nodeand double-click **Narrative Match**.In the Narrative Match tab, all match rules aredisplayed.

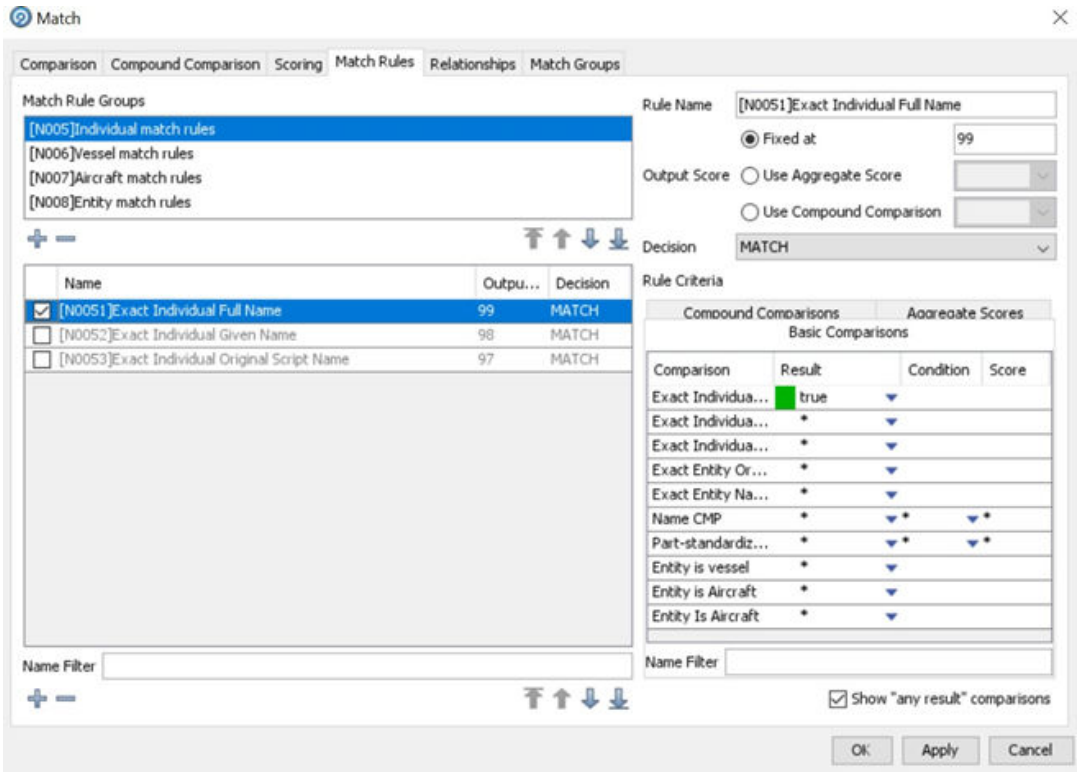
Figure 9-2 Narrative Match Tab



4. Double-click **Match**.
5. Click the **Match Rules**tab.

6. In the Match window, select the match rule that you want to enable and click**Apply**.

Figure 9-3 Match Window



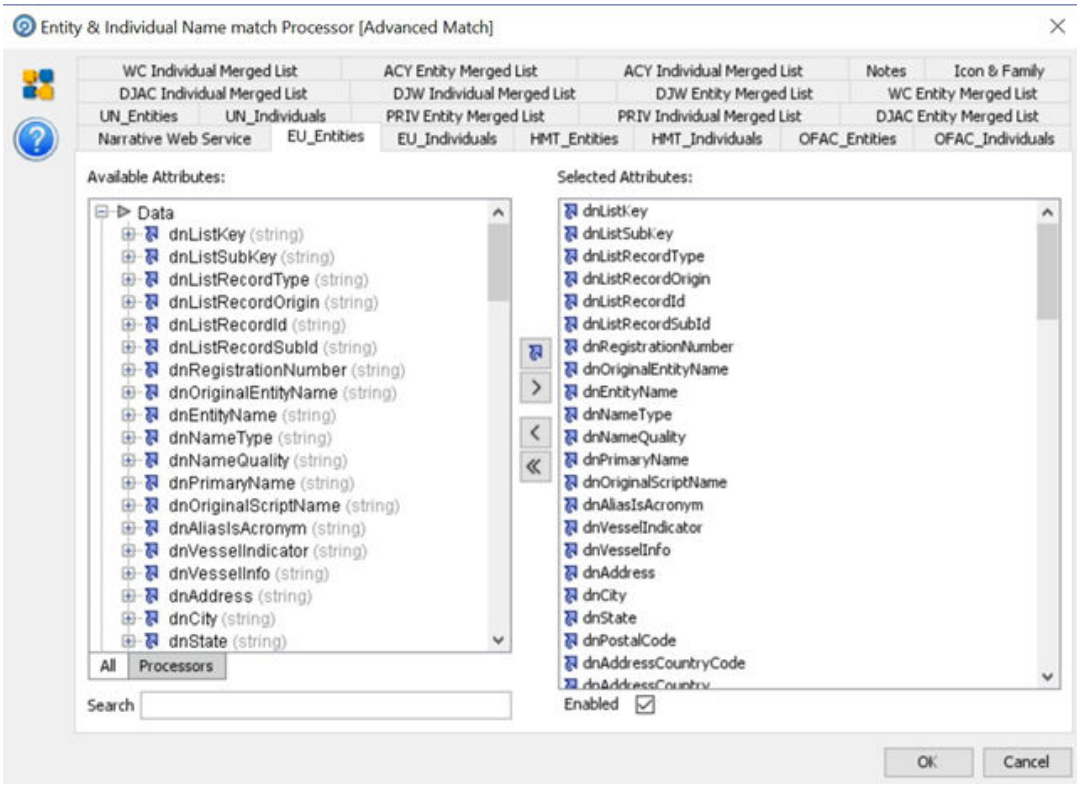
7. Click **OK**.The match rule that you have enabled is displayed with a tick next to it in the Narrative Match tab.

Figure 9-4 Narrative Match Tab

To disable the match rule, deselect the match rule, click **Apply**, and click **OK**. To view the match rules for any web services which are disabled:

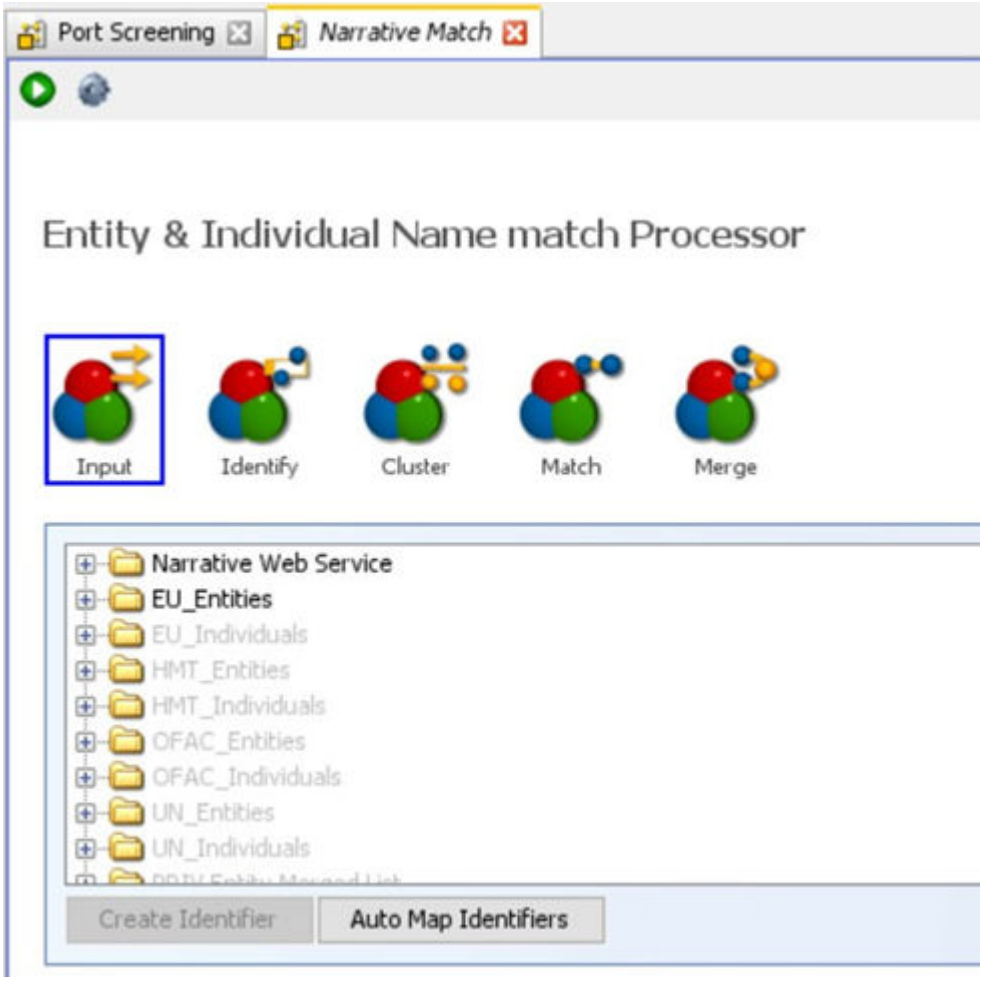
1. In the Narrative Match tab, Double-click**Input**.
2. In the **Entity & Individual Name Match Processor** window, select the web service which you want to enable.

Figure 9-5 Entity Individual Name Match Processor Window



3. Select the **Enabled** check box.
4. Click**OK**.The web service that you have enabled is highlighted in the Narrative Match tab.

Figure 9-6 Narrative Match Tab



To disable the web service, deselect the **Enabled** check box and click **OK**.

10

Trade Goods Matching

This chapter discusses This matching webservice is used to extract the trade goods name and match the name against the prohibited goods list.

This list provides country-wise data.

This chapter includes the following topics:

10.1 Identifiers

The following table describes identifiers are used for Trade Goods matching:

Table 10-1 Identifiers Used for Trade Goods Matching

Identifier Description	Standard prepared attribute name
Goods Name	Goods Name
Country From	Country From
Country To	Country To
Goods Synonyms	Goods Synonyms

10.2 Clusters

The following clusters are used for Trade Goods matching:

- GoodsName: This cluster uses the Goods Name to generate cluster keys. Goods Name Cluster allows new records to be matched against existing records in a system.
- Goods Synonyms: This cluster uses Goods Synonyms to generate cluster keys. Goods SynonymsCluster allows new records to be matched against existing records in a system.

10.3 Match Rules

The following table describes the match rules used for Trade Goods match processing:

Table 10-2 Identifiers Used for Trade Goods Matching

Matching Rule	Summary of Rule Logic	Example Matching Data-Goods Name	Example Matching Data-Import Country ISO from	Example Matching Data-Export Country ISO to
Exact goods name, Import Country ISO from, Export Country ISO to	Exact Match against goods name,Country ISO (Import Prohibition from) AND Country ISO (Export Prohibition to) columns of prohibited goods reference data	Crude Oil	CH	DN
Exact goods name, Import Country ISO from	Exact Match against goods name,Country ISO (Import Prohibition from) columns of prohibited goods reference data	Crude Oil	CH	CR
Exact goods name, Export Country ISO to	Exact Match against goods name,Country ISO (Export Prohibition to) columns of prohibited goods reference data	Crude Oil	VE	UG
Exact goods name	Exact Match against goods name column of prohibited goods reference data	Crude Oil	VE	UG
Exact goods synonym name, Import Country ISO from, Export Country ISO to	Exact Match against goods synonym name, Country ISO (Import Prohibition from) AND Country ISO (Export Prohibition to) columns of prohibited goods reference data	Oil	TW	GB
Exact goods synonym name, Import Country ISO from	Exact Match against goods synonym name, Country ISO (Import Prohibition from) columns of prohibited goods reference data	Oil	TW	US

Table 10-2 (Cont.) Identifiers Used for Trade Goods Matching

Matching Rule	Summary of Rule Logic	Example Matching Data-Goods Name	Example Matching Data-Import Country ISO from	Example Matching Data-Export Country ISO to
Exact goods synonym name, Export Country ISO to	Exact Match against goods synonym name, Country ISO (Export Prohibition to) columns of prohibited goods reference data	Oil	UK	UM
Exact goods synonym name	Exact Match against goods synonym name column of prohibited goods reference data	Oil	UK	UM
Goods name in any order, Import Country ISO from, Export Country ISO to	Matches city ISO code exactly	Crude Oil Oil Crude	UR	SS
Goods name in any order, Import Country ISO from	Match against goodsname in any order exact Country ISO (Import Prohibition from) columns of prohibited goods reference data	Crude Oil Oil Crude	UR	SS
Goods name in any order, Export Country ISO to	Match against goods name in any order, exact Country ISO (Export Prohibition to) columns of prohibited goods reference data	Crude Oil Oil Crude	VN	CH
Goods name in any order	Match against goods name column in any order of prohibited goods reference data	Crude Oil Oil Crude	VN	CH
Goods name at least one word matching, Import Country ISO from, Export Country ISO to	Word match count is >0 against goods name in reference data, exact Country ISO (Import Prohibition from) AND exact Country ISO (Export Prohibition to)	Crude Oil	ZA	SW

Table 10-2 (Cont.) Identifiers Used for Trade Goods Matching

Matching Rule	Summary of Rule Logic	Example Matching Data- Goods Name	Example Matching Data- Import Country ISO from	Example Matching Data- Export Country ISO to
Goods name at least one word matching, Import Country ISO from	Word match count is >0 against goods name in reference data, exact Country ISO (Import Prohibition from)	Crude Oil	ZA	SW
Goods name at least one word matching, Export Country ISO to	Word match count is >0 against goods name in reference data, exact Country ISO (Export Prohibition to)	Crude Oil	TW	GB
Goods name at least one word matching	Word match count is >0 against goods name in reference data	Crude Oil	TH	TJ

11

Trade Port Matching

This chapter discusses the matching webservice that is used to extract the trade port name and match it to the country while screening. This is done because two countries may not have the same port name, so this avoids duplication. The port name is also matched against the sanctioned port reference data.

This chapter includes the following topics:

11.1 Identifiers

The following table describes the identifiers used for Trade Port matching:

Table 11-1 Identifiers Used for Trade Port Matching

Identifier Description	Standard prepared attribute name
Port Name	Port Name
Port Code	Port Code
Port Synonyms	Port Synonyms
Port In Any Order	Port In Any Order
Country	Country

11.2 Clusters

The following clusters are used for Trade Port matching:

- PortName: This cluster uses the Port Name to generate cluster keys. Port Name Cluster allows new records to be matched against existing records in a system.
- Port Code: This cluster uses the Port Code to generate cluster keys. Port CodeCluster allows new records to be matched against existing records in a system.
- Port Synonyms: This cluster uses the Port Synonyms to generate cluster keys. Port SynonymsCluster allows new records to be matched against existing records in a system.
- PortName In Any Order: This cluster uses the Port Name In Any Order to generate cluster keys. Port Name In Any Order Cluster allows new records to be matched against existing records in a system.
- ISOCountry: This cluster uses the ISO Country to generate cluster keys. ISO Country Cluster allows new records to be matched against existing records in a system.

11.3 Match Rules

The following table describes the match rules used for Country, city, bad BIC and stop key words advanced match processing:

Table 11-2 Match Rules Used Advanced Match Processing

Matching Rule	Summary of Rule Logic	Example Matching Data- Port Name	Example Matching Data- Country
Exact port name and country (ISO)	match against port name column of reference data along with country name where port should belong to that country	Port of Houston	CH
Exact port name only	match against port name column of reference data	Port of Houston	CH
Exact port synonym name and country (ISO)	match against port synonym column of reference data along with country name where port should belong to that country	Houston Port	VE
Exact port synonym name only	match against port synonym column of reference data	Houston Port	VE
Exact port code only	match against port code columns of reference data along with country name where port should belong to that country	3003	TW
Port name in any order and country (ISO)	match against port name in any order against port name column of reference data along with country name where port should belong to that country	ABERDEEN-HOQUIAM, WASH ADDISON USER FEE AIRPORT, DALLA	TW
Port name in any order	match against port name in any order against port name column of reference data	ABERDEEN-HOQUIAM, WASH ADDISON USER FEE AIRPORT, DALLA	UK
Port name at least one word matching and country (ISO)	word match count is >0 along with country name where port should belong to that country	ABERDEEN	UK
Port name at least one word matching	word match count is >0 along with country name	ABERDEEN	UR