FUZZY LOGIC API REFERENCE

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Overview

Fuzzy Logic APIs by Exis exist for integration with Customer applications.

API key: To call the API, the customer will need to have a valid api key assigned by Exis. This key is tied to the subscription of the customer. A sample key looks like this:

EF8BB766-ABCD-ABCD-ABCD-779EB9E7666

The key must be used to call the API web service.

The APIs use simple http POST/GET calls to submit and retrieve data.

The endpoint for the API calls is: http://fuzzylogic.azurewebsites.net/api

The data must be compressed before it is sent. The compression that is used by the APIs is the LZW well known algorithm. There is a sample class in C# as well as javascript provided.

To obtain a result from Exis Fuzzy Logic APIS (EFAI) 4 steps need to be performed in sequence.

The reason it is done this way is that the user can close the browser window (or an application window) but the fuzzy logic process will continue running in the background without interruption. The results can be obtained at any time by using the appropriate process id retrieved in step 1.

1. Obtain a process id (session id) by calling the appropriate api (see below).
2. Submit data and parameters (see below).
3. Retrieve status periodically (3 seconds recommended interval) to check success.
4. Retrieve result (see below).

Retrieving Session / Process ID (GET)

Endpoint: http://fuzzylogic.azurewebsites.net/api/GetProcessID

Process ID uniquely identifies the particular run, such as in case where you have multiple users hitting the apis at the same time. This is the first step that must be performed.

Use your key to retrieve the session id like this:

http://fuzzylogic.azurewebsites.net/api/GetProcessID?apiKey=EF8BB766-A98D-4BEC-9C5B-779EB9E7431C

Will return a session id: 6e195d07-690b-45e8-89d3-767e3c674bad

Submitting data to the API

Endpoint: http://fuzzylogic.azurewebsites.net/api/RetrieveFuzzyDupes

Use the following api call to post the data (POST) data to the service.

Javascript example:

```
  url: ' http://fuzzylogic.azurewebsites.net/api/RetrieveFuzzyDupes',
                                type: 'POST',
                                data: JSON.stringify({ apiKey: apiKey, Approximation:
$('#approximation').val(), Parameters: JSON.stringify(parameters), Data:
LZW.compress(JSON.stringify(preparedData)), includeSourceDataInResult: false, processId:
processId, deferResults: true }),
                                contentType: 'application/json;charset=utf-8'
```

API Parameters:

apiKey: This is the key provided to your organization for all transactions.

Approximation: 0-99 Good starting point is a value of 15.

Parameters: This is a JSON array (stringified) which cross references the column number and parameters of the data.

For every column that you want ot perform fuzzy logic operation on, you must have the parameters defined:

```
var parameter = {
                    columnHeader: <column title>,
                    sourceColumnNumber: <0 based index of the column number>,
                    columnNumber: <0 based index of the column number>,
                    usePhoneticMatch: false,
                    equateSynonyms: true,
                    removeTitles: true,
                    removePunctuation: true,
                    removeArticles: true,
                    removeCustom: false,
                    removeBlanks: true,
                    removeConsecutiveBlanks: false,
                    removeNumerics: false,
                    removeNonNumerics: false,
                    caseSensitive: false,
                    numberOfCharsToMatch: 0
                };
```

Example (javascript):

Given the following table for fuzzy logic matching:

	A	B	C
1	Column a	Column b	
2	John Smit	123456789	
3	John Smit	123456789	
4			
5			

Sample data for parameters for above:

[{"columnHeader":"Column a","sourceColumnNumber":0,"columnNumber":0,"usePhoneticMatch":false,"equateSynonyms":true,"removeTitles":true,"removePunctuation":true,"removeArticles":true,"removeCustom":false,"removeBlanks":true,"removeConsecutiveBlanks":false,"removeNumerics":false,"removeNonNumerics":false,"caseSensitive":false,"numberOfCharsToMatch":0},{"columnHeader":"Column b","sourceColumnNumber":1,"columnNumber":1,"usePhoneticMatch":false,"equateSynonyms":true,"removeTitles":true,"removePunctuation":true,"removeArticles":true,"removeCustom":false,"removeBlanks":true,"removeConsecutiveBlanks":false,"removeNumerics":false,"removeNonNumerics":false,"caseSensitive":false,"numberOfCharsToMatch":0}]

includeSourceDataInResult: "False" when posting data

processId: Process id which was retrieved from the GetProcessID api.

deferResults: true. When posting data to the service use value of true. The reason is that the results may take a little time to generate.

A	B	C	D	E	F	G	H	I	J
Column a	Column b			Group#	Approxin	Record #	Column a	Column b	
John Smith	123456789			1	0	2	John Smith	123456789	
John Smith	123456789			1	0	3	John Smith	123456789	

Retrieve process information

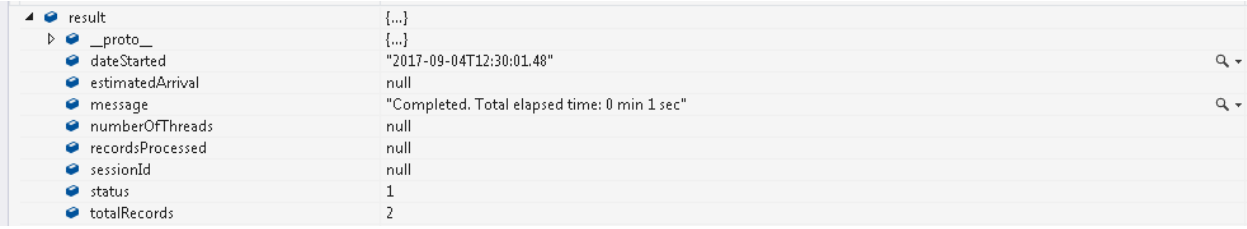
Endpoint: http://fuzzylogic.azurewebsites.net/api/GetProcessInfo

```
   $.getJSON('http://fuzzylogic.azurewebsites.net/api/GetProcessInfo', { id: processId },
function (data)
```

You must use this api before calling the retrieve fuzzy dupes api below to check the status of your given fuzzy logic operation.

Id: Pass the unique process id that you create in the get process id api for the current run.

The data returned in the payload is a LZW compressed JSON record which has the following structure:



result	{...}
__proto__	{...}
dateStarted	"2017-09-04T12:30:01.48"
estimatedArrival	null
message	"Completed. Total elapsed time: 0 min 1 sec"
numberOfThreads	null
recordsProcessed	null
sessionId	null
status	1
totalRecords	2

```
var parameter = {
        dateStarted: “2017-01-01T12:30:01.48”,
        estimatedArrival: <”predicted date and time when the process will complete”>,
        Message: <“Completed. Total elapsed time: 0 min 1sec”>,
        numberOfThreads: 2,
        records Processed: 100,
        sessionId: <Your session id>,
        status: <1 = success, -2 = cancelled, -1 = error>
                 };
```

After this api returns the status of “1” (success) you can call the api to retrieve the results of the fuzzy logic processing below.

Retrieving fuzzy logic data from the API

Endpoint: http://fuzzylogic.azurewebsites.net/api/RetrieveFuzzyDupes

Use the following api call to post the data (GET) data to the service.

Javascript sample:

```
  $.ajax({url: ' http://fuzzylogic.azurewebsites.net/api/RetrieveFuzzyDupes',
                                                        type: 'GET',
```

```
                                                        data: { apiKey: apiKey,
sessionId: processId }
```

apiKey: Your api key for your organization

processId: unique process id created for this run.

Data: Data payload will be a LZW compressed JSON array with the following columns of data:

Group # - this number identifies those records that are similar. Records with the same group number are the once that are possibly similar.

Approximation value – This number identifies the approximation of how close records in the group id are. 0 means records are the same. 10 means they are somewhat similar, etc. The smaller the number the more similar the records are going to be.

Record # - 0 based index of the records in the input data set.