



Kofax eFlow

Analyze Recognition User's Guide

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KOFAX

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Preface

The Kofax eFlow Analyze Recognition module helps you to analyze and improve the eFlow recognition process. It examines the recognition results for each level of the analyzed collections (form, field, class and character) and compares them to the golden data, that is, data that has already passed through the application workflow and is fully classified, validated, complete, and correct.

Product documentation

To access the full Kofax eFlow documentation set online, see the [Kofax eFlow Product Documentation page](#). For a complete set of Kofax eFlow documents, refer to the Kofax eFlow Release Notes.

Overview

You can test how various modifications in the eFlow configuration affect the recognition results, and apply the modifications that are most successful.

Using Analyze Recognition is an iterative, trial and error process that involves repetition of the following steps until you achieve optimal results.

1. Run Analyze Recognition on prepared collections and view the analysis results to determine which forms, fields, classes and characters are not correctly recognized, or are false positives.
2. Change your recognition configuration based on these results.
3. Run Analyze Recognition again on the same collections and view the new analysis results.

Preparation

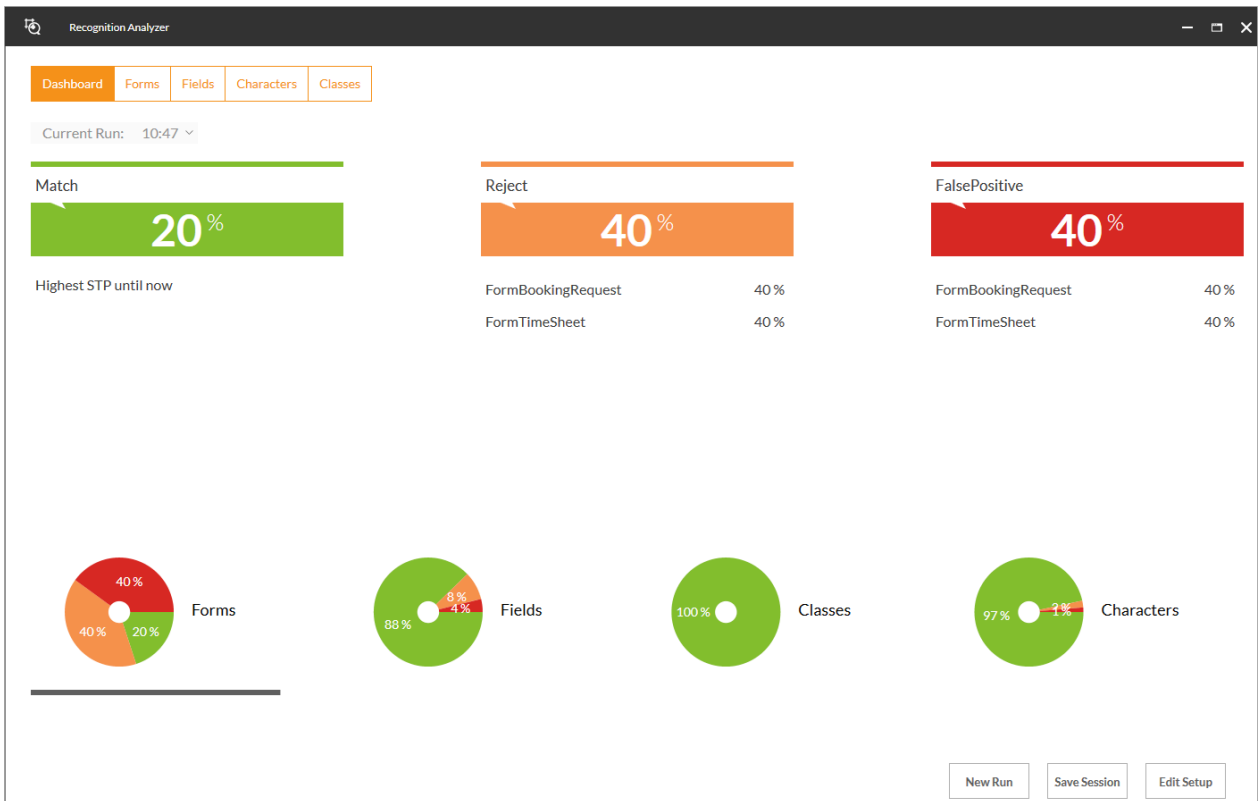
1. Decide which forms and data you want to analyze, and prepare collections containing these forms. We recommend using at least ten forms for each Empty Form Image (EFI).
2. Run the prepared collections through the application workflow, manually correcting the data in the Validate station, if necessary.

This process produces the golden data, which Analyze Recognition compares with the recognition results of each analysis run. The same collections used to produce the golden data must be used for the analysis.

Open Analyze Recognition

To open Analyze Recognition, in the **eFlow LaunchPro**, select **Analyze Recognition** from the **Reports** list.

The **Recognition Analyzer** window appears.



Setup Analyze Recognition

Before running Analyze Recognition, you must specify which collections and fields you want to analyze.

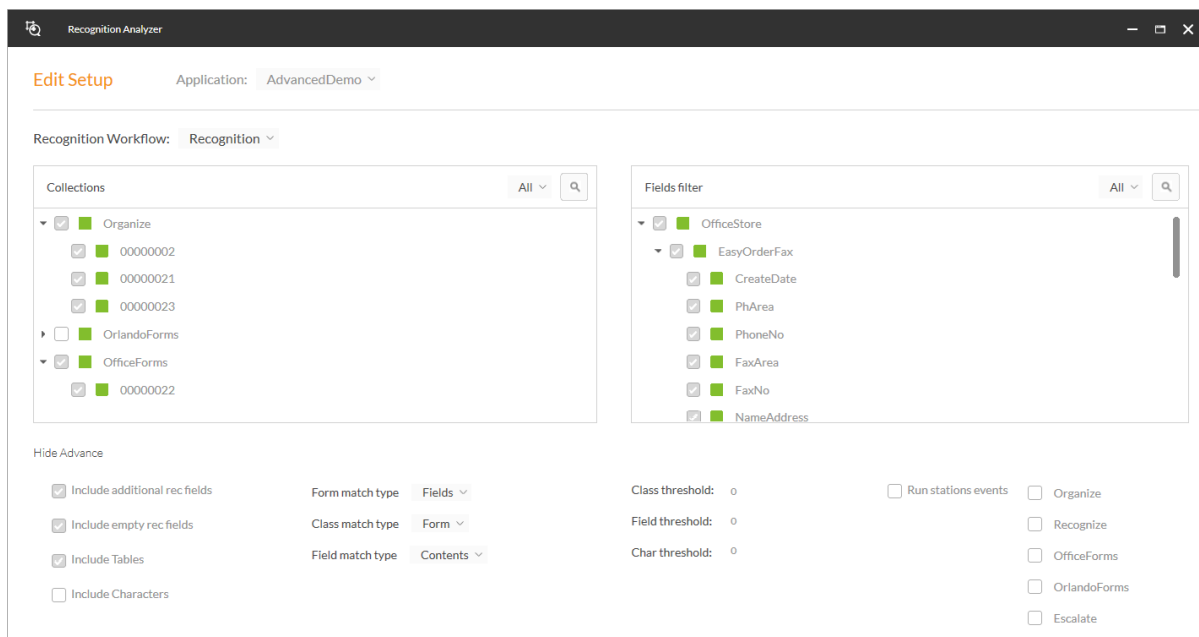
1. At the bottom right of the Analyze Recognition Dashboard, click **Edit Setup**.
2. In the **Edit Setup** window, select an application and recognition workflow.

3. In the **Collections list, select the collections you want to analyze.**

All stations queues that currently contain collections are listed. Collections that are on hold are not displayed.

i The Data may vary from one queue to another. For example, data in the Deliver station queue is likely to be more complete and correct than data awaiting completion in the Validate station.

You can search for collections or filter the collections list. See [Search and filter](#).



4. In the **Fields filter list, select the fields you want to analyze.**

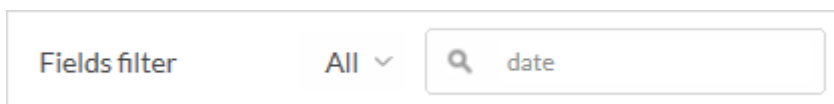
You can search for fields or filter the fields list. See [Search and filter](#).

5. Optional. Click **Advanced Settings to select further options. See [Advanced settings](#) for more information.**

Search and filter

To search for a collection or field, click **Search** , type a search term and press Enter.

To view all collections or fields again, click **Search** again.

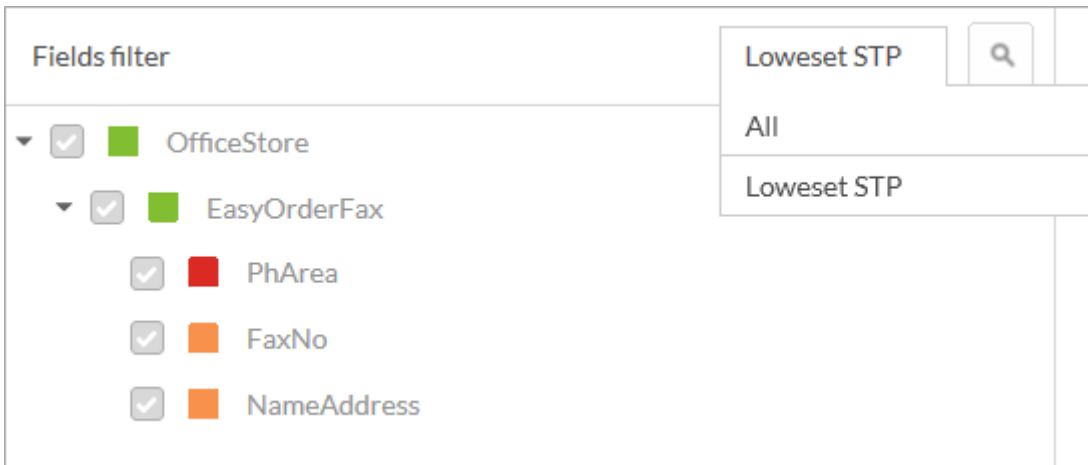


To display only collections or fields with the lowest straight-through processing rate, click the arrow next to **All** and select **Lowest STP**.

This filter is only relevant if you have run Analyze Recognition. After a run, collections and fields are color coded in the **Edit Setup** screen, depending on whether they match the golden data.


- **Red:** Rejected data.
- **Orange:** False positive data.
- **Green:** Matching data.

When you select the Lowest STP filter, only collections or fields with rejected or false positive data are displayed.



Advanced settings

Setting	Description
Include additional rec fields	Select this check box to include fields that were recognized but do not exist in the golden data, such as extra rows in a table added by a Validate operator.
Include empty rec fields	Select this check box to include fields that were empty in recognition.
Include tables	Select this check box to include table data in the analysis.
Include characters	Select this check box to perform the analysis at character level as well as at the form, field and class level.
Form match type	Specify how forms are matched between the recognized data and the golden data. A form is considered a match if the following are satisfied. Fields: The recognized content of all fields in the form is the same as the golden data field contents. FormType: The recognized form type is the same as the golden data form type. FieldsAndType: Both the recognized field contents and the form type are the same as the golden data field contents and form type. FormIndex: The recognized form index is the same as the golden data form index.

Setting	Description
Class match type	<p>Specify how classes are matched between the recognized data and the golden data.</p> <p>A class is considered a match if the following are satisfied.</p> <p>Page: The recognized page class is the same as the golden data page class.</p> <p>Form: The recognized form class is the same as the golden data form class.</p>
Field match type	<p>Specify how fields are matched between the recognized data and the golden data.</p> <p>A field is considered a match if the following are satisfied.</p> <p>Contents: The recognized field contents are the same as the golden data field contents.</p> <p>Location: The recognized field location (ROI) is the same as the golden data field location.</p> <p>ContentsAndLocation: Both the recognized field contents and the location are the same as the golden data field contents and location.</p>
Class threshold Field threshold Char threshold	<p>Specify threshold values to display in the analysis results only classes, fields or characters whose confidence percentage reaches or exceeds this threshold.</p>
Run station events	<p>Select this check box to run station events during the analysis. Select each station for which events should run. Station events are configured in the Design module Workflow Designer.</p> <div data-bbox="565 1050 1450 1134" style="background-color: #e0f2f7; padding: 5px;"> <p> Events can alter the data, so if you ran events when you prepared the golden data, you should also run those events when performing the analysis.</p> </div>

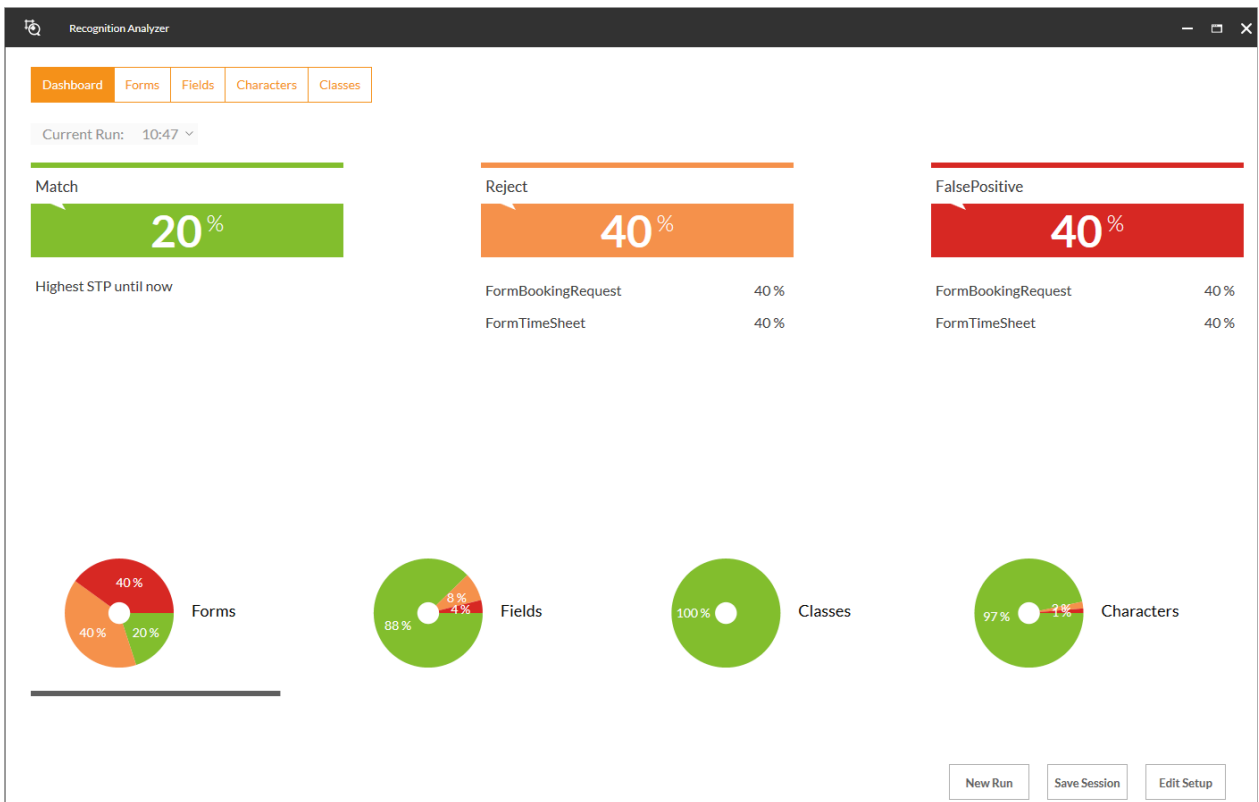
Run Analyze Recognition

To start the analysis, in the **Edit Setup** window, click **New Run**.

Progress is displayed in a bar at the bottom of the screen.



When the run is complete, the results are presented on the dashboard.



The pie charts at the bottom of the screen show the percentage of matched (green), rejected (orange) and false positive (red) results for each level. To select a level, click on the corresponding pie chart. The currently selected level is highlighted with a gray bar below the pie chart.

The bars at the top of the screen show for the selected level the overall percentage of matched, rejected and false positive results.

If the current run has produced the highest level of matches of all runs performed so far, the message "Highest STP until now" is displayed.

The rejected and false positive items are listed. For example, when you click the Fields pie chart, all rejected and false positive fields are listed.

To view details for an item, click the item in the list.



View analysis results

To view detailed information about the results of the analysis for each level, click the appropriate button at the top left of the screen:

- **Forms**
- **Fields**
- **Characters**
- **Classes**

Forms

The Forms page shows the match results of all forms in the analyzed collections.

The screenshot displays the 'Forms' page in a software interface. At the top, there are navigation tabs: 'Dashboard', 'Forms', 'Fields', 'Characters', and 'Classes'. Below the tabs, there are filters for 'Type: Match', 'Filter Tree: Off', and 'Clear Filter'. The main content area shows a table of form analysis results. The table has columns for 'Collection Name', 'Order', 'Match', 'Data', 'Gold', 'Data pages', 'Gold pages', 'Data fields', 'Gold fields', 'Data Classes', 'Gold Classes', and 'Action'. The table contains 10 rows of data, with the first row highlighted in red. To the right of the table, there is a preview of a scanned form document. The document is a 'BOOKING REQUEST' form for 'FRANCIS PLEASANT HOSPITAL'. It contains fields for 'Name', 'Address', 'Phone', and 'Fax'. The form is marked as 'REMOVED' and has a signature. The preview also shows a barcode and some other text.

Collection Name	Order	Match	Data	Gold	Data pages	Gold pages	Data fields	Gold fields	Data Classes	Gold Classes	Action
00000041	1	Reject	FormBookingRequest	FormBookingRequest	1-1	1-1	17	17			Fields... Classes...
00000041	2	Match	FormTimeSheet	FormTimeSheet	2-2	2-2	14	14			
00000041	3	Reject	FormBookingRequest	FormBookingRequest	3-3	3-3	17	17			
00000041	4	Reject	FormTimeSheet	FormTimeSheet	4-4	4-4	14	14			
00000041	5	FalsePositive	FormBookingRequest	FormBookingRequest	5-5	5-5	17	17			
00000041	6	FalsePositive	FormTimeSheet	FormTimeSheet	6-6	6-6	14	14			
00000041	7	Match	FormBookingRequest	FormBookingRequest	7-7	7-7	17	17			
00000041	8	FalsePositive	FormTimeSheet	FormTimeSheet	8-8	8-8	14	14			
00000041	9	FalsePositive	FormBookingRequest	FormBookingRequest	9-9	9-9	17	17			
00000041	10	Reject	FormTimeSheet	FormTimeSheet	10-10	10-10	14	14			

- To view only a specific form, at the top left of the screen, select the form in the **Forms** list.
- Click **Clear Filter** to view all forms again.
- To view a form's image, click the form.

- To view a form's fields or classes, click the form, and at the extreme right of the list in the **Action** column, click **Fields** or **Classes**.

Fields

The Fields page shows the match results of all fields in the analyzed collections.

Form	Name	Match
FormBookingRequest	DepartmentCode	80 %
FormBookingRequest	Trust1	80 %
FormBookingRequest	DepartmentFax	100 %
FormBookingRequest	Country	100 %
FormBookingRequest	City	100 %
FormBookingRequest	SignatureExist	100 %
FormBookingRequest	Date	100 %
FormBookingRequest	RequestCode1	40 %
FormBookingRequest	AssignmentCode1	60 %
FormBookingRequest	ShiftDate1	100 %

- To view only a specific field, select the field in the **Fields** selection list.
- Click **Clear Filter** to view all fields again.
- To view details for a specific field, double-click the field. Each occurrence of the field is displayed with its corresponding form and page number. For each occurrence, the match status and the recognized and golden data values, together with the data confidence percentage, are displayed.
- To view more details for a specific field occurrence, click the field occurrence in the list. The field value is highlighted on the image, and details of the recognition workflow activities are displayed.

Forms(10) > Fields(31)

< Fields < FormBookingRequest/RequestCode1 40% >

Collection	Form	Page	Match	Data	Gold	Data Conf.	Action
00000041	1	1	Match	B60	B60	84%	
00000041	3	3	Reject	B*0	B40	52%	
00000041	5	5	Reject	B**	B10	32%	Characters...
00000041	7	7	Match			0%	
00000041	9	9	Reject	B1*	B10	45%	

Activities

Activity	Contents	Conf.	Form Type	Form	Rectangle	Skew	Shift	Rotate
IntegraActivity		0%		5	31,1100,220,115	{X=0,Y=0}	41,41	0
FieldOcrActivity	B**	32%	FormBookingRequest	5	65,1130,139,57	{X=0,Y=0}	41,41	0

- To view details of the characters for a field occurrence, click the field, and in the **Action** column, click **Characters**.
- Use the navigation controls at the top of the list to move to the next or previous field, or to return to the fields list.

< Fields < FormBookingRequest/RequestCode1 40% >

Characters

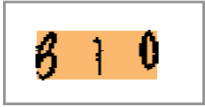
The Characters page shows the match results for each character of a selected field.

Characters < FormBookingRequest/RequestCode1.33 % >

Collection	Page	Data	Gold	Match	Fault Positive	Reject	Row
00000041	1	B60	B60	100%	0%	0%	-1
00000041	3	B*0	B40	67%	0%	33%	-1
00000041	5	B**	B10	33%	0%	67%	-1
00000041	7			100%	0%	0%	-1

OCR Voting

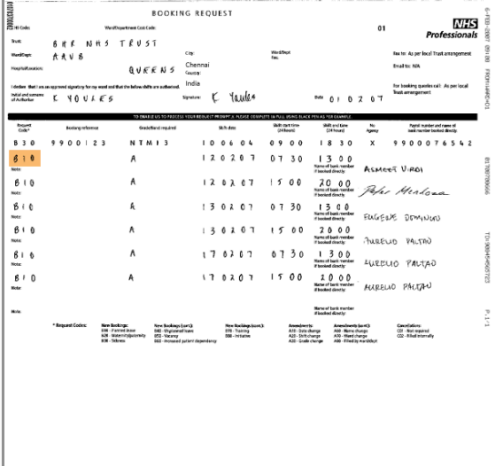
Scan



Gold

Vote (HandAlphaNumRequestedCode)	B (96%)	1 (0%)	0 (0%)
▶ OCEHandAlphaNum	B (95%)	1 (67%)	0 (100%)
▶ AEGHandAlphaNum	* (0%)	* (0%)	* (0%)
▶ A2IAHandAlphaNum	B (98%)	7 (17%)	D (44%)
▶ CharactellHandAlphaNum	B (70%)	1 (60%)	O (72%)

Capture screenshot.



BOOKING REQUEST

Client: BRENST TESTI
 Name: ARUB
 Identification: QUEEN'S
 Address: E YOUVES
 City: Chemical
 State: India
 Zip: 010207

Item	Booking reference	Booking request	Qty	Unit price	Sub total	Rate	Remarks
B10	9900123	NTM13	100604	0900	1830	X	9900076542
B10	A	120207	0730	1300			Assessment VAND
B10	A	120207	1500	2000			Assessment VAND
B10	A	130207	0730	1500			EDGEWELL DEMAND
B10	A	130207	1500	2000			EDGEWELL DEMAND
B10	A	170207	0730	1300			ALBENLO PALTO
B10	A	170207	1500	2000			ALBENLO PALTO

Filter analysis results

To filter the analysis results, in the **Type** list, select appropriate options. For example, to display only rejected items, select **Reject**.

To view all results again, in the **Type** list, select **All**, or click **Clear Filter**.

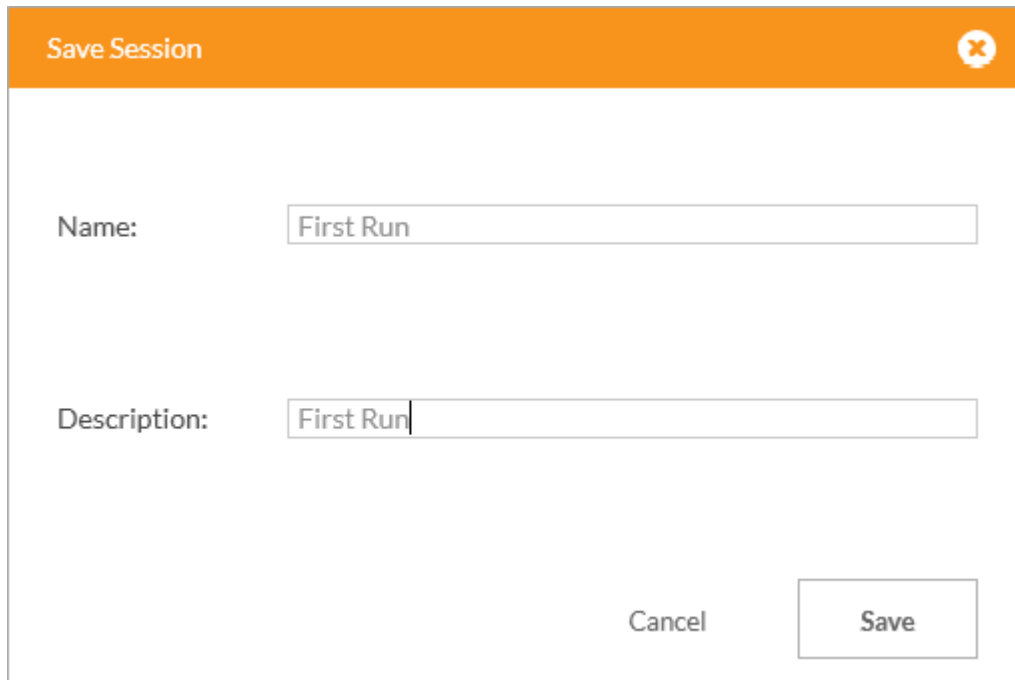
Type: **Reject** Filter Tree **On** [Clear Filter](#)

- All
- Match
- Reject
- FalsePositive

Save analysis results

After running the Analyze Recognition, you should save the results. You can make changes to the eFlow recognition configuration. Run the Analyze Recognition again, and compare the new results with the results of previous runs.

1. At the bottom right of the Dashboard, click **Save Session**.
2. In the **Save Session** dialog box, type a name and description for the run, then click **Save**.



The image shows a 'Save Session' dialog box with an orange header bar containing the title 'Save Session' and a close button (an orange circle with a white 'x'). The main area is white and contains two text input fields. The first field is labeled 'Name:' and contains the text 'First Run'. The second field is labeled 'Description:' and contains the text 'First Run'. At the bottom right of the dialog, there are two buttons: 'Cancel' and 'Save'.


Load analysis results

To view the results of a saved run, perform the following steps:

1. At the top left of the screen, in the drop-down list, select **Load**.

Current Run: 15:37
All Runs Trend
Compare...
Load...
Remove...

2. In the **Please run to load** dialog box, select the run you want to load and select one of the options in **Type** area.

Please run to load 

Name	Date	Time	STP%	Reject%	FP%	Description
<input type="checkbox"/> Second Run	1/16/2018	15:39	20 %	40 %	40 %	Second Run
<input checked="" type="checkbox"/> First Run	1/16/2018	15:34	20 %	40 %	40 %	First Run

Type: Load runtime statistic data
 Restore application in different name
 Restore application and override

Cancel

Option	Description
Load runtime statistic data	
Restore application in different name	
Restore application and override	

3. Click **Load**.

Remove analysis results

To delete a saved run, perform the following steps:

1. At the top left of the screen, in the drop-down list, select **Remove**.

Current Run: 15:37
All Runs Trend
Compare...
Load...
Remove...

2. In the **Please select run to remove** dialog box, select the run you want to delete, and then click **Delete**.

Compare analysis results

To compare the results of two analysis runs, perform the following steps:

1. At the top left of the screen, in the drop-down list, select **Compare**.

Current Run: 15:37
All Runs Trend
Compare...
Load...
Remove...

2. In the **Please select runs to compare** dialog box, select two check boxes for the run to compare.
3. In the **Set as Golden** column, select one of the runs.

Please select runs to compare								
	Date	Time	STP%	Reject%	FP%	Name	Description	Set as Golden
<input checked="" type="checkbox"/>	1/16/2018	15:39	20 %	40 %	40 %	Second Run	Second Run	<input type="radio"/>
<input checked="" type="checkbox"/>	1/16/2018	15:54	20 %	40 %	40 %	First Run	First Run	<input checked="" type="radio"/>
<input type="checkbox"/>	1/16/2018	16:00	20 %	40 %	40 %	Third Run	Third Run	<input type="radio"/>

Cancel

4. Click **Compare**.