


Overview

EOS Access allows users to create **Transforms**, which are used to extract selected report data in a format that can be opened for quick and efficient analysis. Transforms are composed of **Markers** that group and extract a unique set of lines within a report; as well as **Fields** that define blocks of data to be included in the output record. Before using the Transform functionality, the user must create a template or use a public template (blue text) that has been made available. Each transform template must contain at least one record marker and, possibly, one or more header (or page header) markers. A **Ruler** has been provided within the Transform to assist with identifying the horizontal location of the data within the report.

Users can access to the *EOS Access User Guide* to assist with creating Transforms by clicking the **Help** hyperlink located above the Ruler or the **Help**  icon located in the top, right corner of the user's homepage.

Creating Transform Template:

1. Open the report that you wish to use as a model for the transform template.
2. Select the **Transform** button, then the **New Transform** button. The transform design screen is displayed.
3. Update **Name** and **Description** of Transform as necessary.
4. **Limit report range** (Optional) -- If you do not want the output to include the whole report, change the **Start at page** and/or **End of page** to set page limits for the transform operation.
5. Once the Transform information has been updated, the user must add a **Marker**: Please see **Markers** below for more details.
6. Once a Marker has been added, the user can add **Fields** to define a block of data to be included in the output record. Please see **Fields** below for more details.
7. Once the Marker(s) and Field(s) have been created, the user can assign **Patterns**. Please see **Defining a Pattern** below for more details, as well as page 2 for a comprehensive list of formatting characters.
8. Once all Markers, Fields, and Patterns are completed, click **Save**, located at the bottom right of the transform window, then **Close**.
9. Once closed, the user will be taken back to the Transform window where he or she can apply the template to the report by selecting the **Download** icon.

Markers

Markers can be added to a transform by clicking **Add marker** located in the top, left of the transform window, or click on the "+" located to left of the line. The new marker appears under the **Markers'** branch of the Transform Tree, the **Marker Name** and **Type** appear above the report, and the marker line within the report is highlighted in light blue.

Marker Types:

- When the transform finds a marker with type **record**, it creates a new **Record** in the output. Any fields associated with that record marker are included in the output **Record**.
- When the transform finds a marker with type **Header**, it updates the current output record with any fields associated with that header marker.
- The type **Page Header** has the same functionality as the header, with one important difference. If the output format is JExcelAPIWriter, in the output file, a new worksheet is generated for each page header. For other output formats, the page header is treated as a header.

The **Case Sensitive** box located under the marker name applies to the pattern. If the pattern contains text, then marking the **Case Sensitive** box will match only report lines that have the same 'case' as the pattern.

Fields

Fields can be added by selecting marker that contains the data for the field definition and clicking **Add Field**. Once selected all lines assigned to the Marker should be highlighted in blue. To assign a field and add define a pattern (please see section below) select a block of text on any line highlighted in light blue. Make sure the field selected is sufficiently long to avoid abbreviating any matching data. When the mouse button is released, all matching field data in the model report is highlighted in dark blue and the field details are set in the Transform Tree. In the Properties panel, review and modify the pattern for the field.

When adding a Field, it is important to assign a Field **Type**. The Type defines what type of conversion to perform on the data when creating the output. Where the Input and Output formatting properties are available, they define how to interpret the source data and output the results. Field Types include: Text, Numeric, Date, and Multi-line. Please see page 2 for commonly used formatting characters for these Types.

EOS Access Transforms

Marker Pattern & Formatting Tools



Defining a Pattern

In order to define markers and fields from the report, you must use a Pattern. Define the pattern by using the **Marker Pattern** line at the top of the model report display to line up the pattern with the matching data position in the report layout. You can delete and/or add spaces to move the pattern across the marker pattern. The formatting tools below should be used when defining a Marker or Field.

When the Pattern property is defined for a marker, all report lines that match the marker are immediately highlighted in light blue. Note: Once the pattern has been defined, the user can scroll down in the model report to see if the correct report lines are highlighted.

Numeric Pattern Formatting Tools		
Character	Matches which characters in the source file	
0	A digit, always show this digit even if the value is zero	
#	A digit, suppressed if zero	
.	Placeholder for decimal separator	
,	Placeholder for grouping separator	
;	Separates formats (that is, a positive number format verses a negative number format)	
-	Default negative prefix	
%	Multiply by 100 and show as percentage	
?	Multiply by 1000 and show as per mille ‰	
*	Currency sign. It will be replaced by a currency symbol. If it is present in a pattern, the monetary decimal separator is used instead of the decimal separator.	
X	Any other characters can be used in the prefix or suffix	
'	Used to quote special characters in a prefix or suffix	
Date Pattern Formatting Tools		
Character	Matches which characters in the source file	Example
d	Numeric day of the month	12, 24
E	Name of day in week	Wednesday, Wed.
M	Month of the year	July, Jul, 7
y	Year	2017, 17
a	AM/PM marker	PM
H	Hour in day (0-23)	0
k	Hour in day (1-24)	24
K	Hour in am/pm (0-11)	0
h	Hour in am/pm (1-12)	12
m	Minute in hour	30
s	Second in minute	55
X	To ignore part of a delimited date string	
Note: All characters should be lower case in date formatting unless specifying the month(M).		
General Pattern Formatting Tools		
Character	Matches which characters in the source file	
Space	Any character	
*	Non space characters	
@	Alpha (a-z and A-Z) characters	
#	Digit (0-9) characters	
_	Space character	
!	An empty line or a line containing only spaces. *Note that in the marker pattern, the “!” must be in the first position and must be the only character in the marker pattern	
<	A line containing the form feed instruction	
[]	Useful when the text is not fixed width and thus difficult to align the pattern with the matching text. Used to enclose any characters, including the special characters listed above. Permit pattern matching over a variable column width, as opposed to matching only lines where the pattern is in exactly the same horizontal position. For example: the following would match all lines that contained a comma anywhere in the horizontal position identified by the brackets. [,].	