Cleo Integration Cloud™ | Clarify

Chapter

Transforming spreadsheet to multi-format flat file

Overview

This topic demonstrates how to transform data on a spreadsheet to a flat file.

The target is a delimited multi-format flat file.

Features, functions, and tips not discussed in previous demos include: the ability to delete a node detected by the Schema wizard but not needed for processing, and alternate methods of creating Composite Rules and defining Simple Rules.

Contents

Scenario

Data is received in a spreadsheet designed for and distributed to trading partners. The backend ERP system cannot process spreadsheets, however, but it can process delimited multi-format flat files. So, this Clarify solution transforms the source data received in spreadsheets to ERP-consumable multi-format target flat files.

This scenario assumes a relatively small operation that processes purchase orders one-at-a-time. That is, they are received so infrequently that some manual intervention is acceptable. Specifically, each spreadsheet must be renamed when received, and that spreadsheet must be manually relocated to another folder when Clarify finishes its processing.

Trading partners enter purchase orders on a spreadsheet. Illustrated here is a sample spreadsheet with one line item and information in all other available input fields (which are shaded).

DEMO COMPANY PURCHASE ORDER SPREADSHEET

Purchase Order	
Number	Your Number Here
Date	12/25/2012

Company Information	
ID	CompanyID
Name	CompanyName
Address Line 1	CompanyAdd1
Address Line 2	CompanyAdd2
City	CompanyCity
State	CompanyState
Zip Code	11111-1111

Ship To	
Indicator	New
Name	ShipToName
Address 1	ShipToAdd1
Address 2	ShipToAdd2
City	ShipToCity
State	ShipToState
Zip Code	22222-2222

Bill To	
Indicator	New
Name	BillToName
Address 1	BillToAdd1
Address 2	BillToAdd2
City	BillToCity
State	BillToState
Zip Code	33333-3333

For Internal Purposes

Contact Information		
ContactName	ContactPhone	ContactEmail

Special Instructions
Note1
Note2
Note3

Line Items							
#	Your SKU	Item Description	Brand	Our SKU	Qty	Unit	Cost	Extended Cost
1	YourSKU1	ItemDesc1	BrandName1	OurSKU1	11	Case	100.00	1,100.00

	TOTALS		
		Line Items	1
		Quantity	11.00
		Cost	1,100.00

_____   _____
date   authorized by

The spreadsheet data must be transformed to a delimited multi-format flat file for consumption by the back-end application that fulfills these orders. This spreadsheet's data would be transformed as below.

```
PO*Your Number Here*12/25/12
CI*CompanyID*CompanyName*CompanyAdd1*CompanyAdd2*CompanyCity*CompanyState*11111-1111
ST*CompanyID*ShipToName*ShipToAdd1*ShipToAdd2*ShipToCity*ShipToState*22222-2222
BT*CompanyID*BillToName*BillToAdd1*BillToAdd2*BillToCity*BillToState*33333-3333
CN*ContactName*ContactPhone*ContactEmail
SI*Note1*Note2*Note3
LI*1*YourSKU1*ItemDesc1*BrandName1*OurSKU1*11*Case*100*1,100
LI*2*YourSKU2*ItemDesc2*BrandName2*OurSKU2*22*Each*200*4,400 TO*2*33*5,500
```

As noted, all fields are populated on the sample spreadsheet above to produce the complete target flat file as detailed above. However, the backend ERP system requires that for the **ST** (Ship To) and **BT** (Bill To) formats, data should be generated only if the purchase order spreadsheet indicates *New* in the respective *Indicator* fields. Also, the **SI** (Special Instructions) format should be generated only if there is a note in the first of the three available lines.

Examples

Besides two sample *txt* files, the *C:\Clarify_demos\demo03*folder contains four pairs of spreadsheets, one each for the *xls* and *xlsx* formats. Three of those pairs represent different customer's purchase orders. The expected asterisk-delimited multi-format target flat file for each of those is illustrated here.

> To process one of these customer's files, copy it from the *C:\Clarify_demos\demo03*folder to the *C:\Clarify_demos\demo03\in* folder, delete the *PurchaseOrder* file already there, and rename the copied file as *PurchaseOrder*.

PurchaseOrder_BestValue_22

The resulting target data has no **ST** format or **BT** format data, as this purchase order spreadsheet does NOT indicate new Ship To or Bill To information. Likewise, there is no **SI** format data, as there are no Special Instructions.

```
PO*BestValue*22*1/1/13
CI*HI-BVGS*BEST VALUE GOOD STUFF*1 BEST VALUE BOULEVARD**HONOLULU*HAWAII*96815
CN*BOB SMITH*(555) 555-5555*BSMITH@BVGS.COM
LI*1*PINGBALL*WHITE PING PONG BALLS (100)*TABLE GAME ITEMS*500682*200*Case*16*3,200
LI*2*BARSOAP*DECORATIVE SOAP BAR*KEEP IT CLEAN*500227*900*Each*0.75*675
TO*2*1,100*3,875
```

PurchaseOrder_FV-2013_0047

The resulting target data has **BT** format data, as this purchase order spreadsheet indicates new Bill To information. There is no **ST** format data, but **SI** format data is present, as there are two lines of Special Instructions.

```
PO*FV-2013*0047*1/3/13
CI*WY-FV*FAMILIAR VASES*100 INDUSTRIAL WAY*SUITE 123*CASPER*WYOMING*82604
BT*WY-FV*BOB SMITH*23 SOUTH CENTER ST**POTTSVILLE*PENNSYLVANIA*17901
CN*BOB SMITH*(555) 555-5555*BSMITH@BVGS.COM
SI*New Billing Address*Please handle with care
LI*1*PV-28 EQ*28-INCH PORCELAIN VASE*FANCY VASES**1*Each*375*375
TO*1*1*375
```

PurchaseOrder_GoodStuff_303

The resulting target data has **ST** format data, as this purchase order spreadsheet indicates new Ship To information. No **BT** format is present, however.

```
PO*GoodStuff 303*1/2/13
CI*HI-BVGS*BEST VALUE GOOD STUFF*1 BEST VALUE BOULEVARD**HONOLULU*HAWAII*96815
ST*HI-BVGS*ABC DISTRIBUTION COMPANY*1234 MAIN STREET*PO BOX 938*CLEVELAND*OHIO*44109-1234
CN*SUSAN JOHNSON*(555) 555-6666*SJOHNSON@BVGS.COM
SI*Please note the new SHIPTO address
LI*1*LMWG01*LARGE MANS WORK GLOVES BLACK*GLOVELY STUFF*500151*160*Pair*9.25*1,480
LI*2*LMWC01*LARGE MANS WINTER COAT BLACK*MANITZ COLDOUT*500155*6*Each*100*600
LI*3*SWG-RED*SMALL WOMENS GLOVES - RED*GLOVELY STUFF*500001*24*Pair*12.5*300
TO*3*190*2,380
```

Resources

The resources needed to accomplish this transformation are meant to provide a basic understanding of how Clarify objects work together. All resources are created and defined on the *Clarify Workbench | Project Explorer*.

- Project [**com.training.demo03.sstoff**] – A Project is a directory within the Workspace.

- Package [**com.training.demo03.sstoff**] – A Package is a directory within a Project.

- File Adapter [**ReadSsFA**] – This File Adapter brings the source data to Clarify.

- File Adapter [**WriteTxtFA**] – This File Adapter sends the target data out of Clarify.

- Spreadsheet Schema [**PurchaseOrderSS**] – This Schema describes the spreadsheet data.

- Flat File Schema [**PurchaseOrderFF**] – This Schema describes the delimited flat file data.
  As this Schema describes the same flat file used in the *com.training.demo02.multifftoff* Project, that Schema will be copied from there and pasted here.

  > If you did not create that Project, or if you choose to not check it out from Cleo's SVN Repository, you must create this Schema.

- Transformation Settings [**AsteriskDelimitedTargetTS**] – This Transformation Settings object informs the Business Process of the delimiter to use when writing the target file. No delimiter is necessary for reading the source file, as it has a spreadsheet format.

- Ruleset [**PurchaseOrderSsToFfRS**] – This Ruleset transforms the data from the source format to the target format.

- Business Process [**PurchaseOrderSsToFfBPS**] – This Business Process sequences three user-defined objects to read the source data, transform it to the target format, and write that out to a file on the local file system.

Project: com.training.demo03.sstoff

Select *File | New | Clarify Project*.

Type **com.training.demo03.sstoff** in the *Project name* field.

Click **Finish**.

When Clarify creates a Project, it automatically creates a Package named the same as the Project. All resources for this Project are created in its *com.training.demo03.sstoff* Package.

File Adapter: ReadSsFA

Select the Package.

Select *File | New | File Adapter*.

Choose *Read* and click **Next**.

Type **ReadSsFA** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

Click in the *File Name* field. Click the **Open** button, locate/select the *PurchaseOrder.xlsx* file in the *C:\Clarify_demos\demo03\in* folder, and click **Open**.

Save the object and close the editor.

File Adapter: WriteTxtFA

Select the Package.

Select *File | New | File Adapter*.

Choose *Write* and click **Next**.

Type **WriteTxtFA** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

Click in the *File Path* field. Click the **Browse For Folder** button, locate/select the *C:\Clarify_demos\demo03\out* folder, and click **OK**.

Type **target_data.txt** in the *File name* field.

Save the object and close the editor.

Schema: PurchaseOrderSS

To create a Schema from a sample file, the sample must reside in the Workspace.

Bring the sample file to Clarify

Right-click the Project and select *New | Folder*.

Type **samples** in the *Folder name* field and click **Finish**.

Copy the *sample_PurchaseOrder.xlsx* file in the *C:\Clarify_demos\demo03* folder.

Right-click the Project's *samples* folder and select *Paste*.

Create the Schema

Select the Package.

Select *File | New | Spreadsheet Schema*. A wizard assists with creating and defining this object.

The *Spreadsheet Schema* panel allows for specifying the object's location and name. Type **PurchaseOrderSS** in the *Name* field.

Select **Version 2**.

The *Create* panel allows for using a sample flat file or creating an empty one. Choose *Create From Sample* and click **Next**.

The *Create From Sample* panel allows for selecting the spreadsheet to use. Click **Browse**, select the *sample_PurchaseOrder.xlsx* file and click **OK**. Click **Next**.

The *Worksheet* panel allows for selecting the worksheet housing the data to be defined. Select *PO* and click **Next**.

Several panels allow for defining a spreadsheet Schema: *Create Area*, *Cell Names*, *Create Row Expression*, and *Area*. Repeat these, as necessary, to define this spreadsheet's eight areas.

The *Create Area* panel allows for defining areas on the worksheet (refer to the table below).
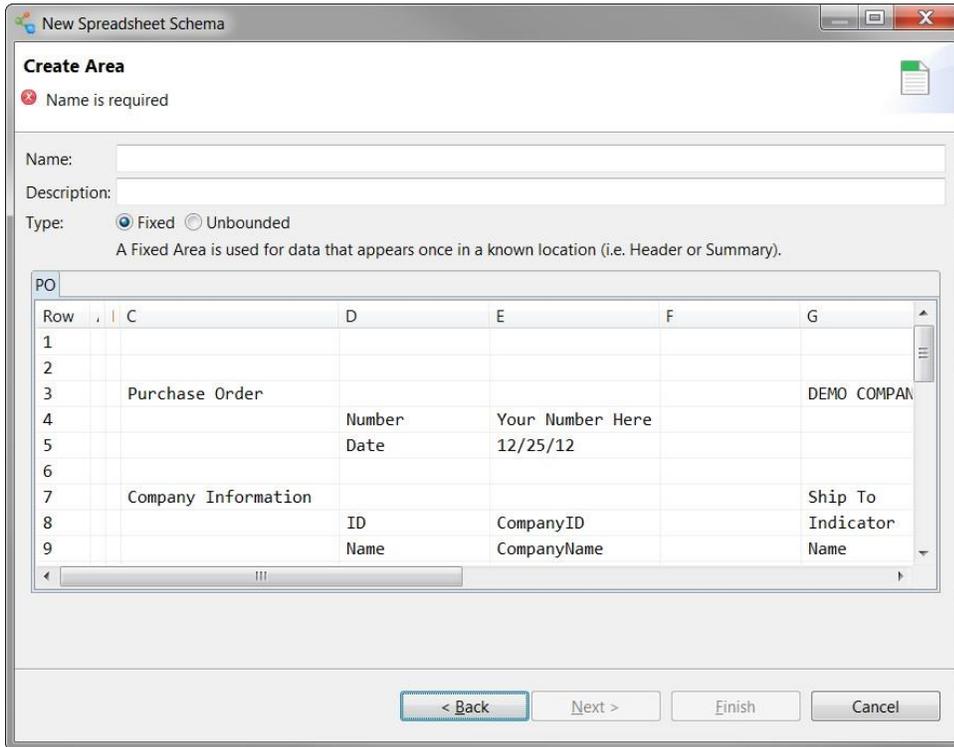
Area	Name	Type	Cells	Notes
1	PurchaseOrder	Fixed	E4:E5	
2	Company	Fixed	E8:E14	
3	ShipTo	Fixed	H8:H14	
4	BillTo	Fixed	K8:K14	
5	Contact	Fixed	G17,I17,K17	Control-click to select non-contiguous cells
6	Notes	Fixed	G20:G22	
7	LineItems	Unbounded	C26:L26	
8	Totals	Fixed	L29:L31	

Provide a *Name* and (optionally) a *Description* for the area. Indicate the *Type* (either *Fixed* or *Unbounded*).

Select the cells containing the data.

Click **Next** to continue to the next panel.

The *Cell Names* panel proposes labels for the data cells selected in the previous panel. Re-naming is used here for two areas only. If no re-naming is necessary, click **Next**.
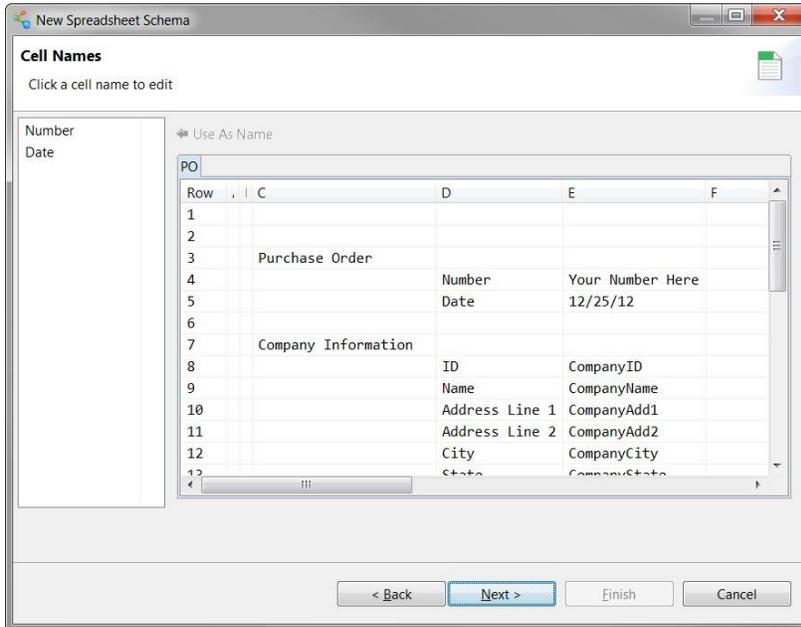
For the *Contact* area, click each of the three proposed cell names and type the new name, as indicated here.

Proposed Name	New Name
Contact_Information	Name
ContactName	Phone
ContactPhone	Email

For the *Notes* area, click each of the three proposed cell names and type the new name, as indicated here.

Proposed Name	New Name
Special_Instructions	Note1
Note1	Note2
Note12	Note3

Click **Next**.

The *Create Row Expression* panel only appears when defining an *Unbounded* area.

For the *LineItems* area, select *C* from the *Column* dropdown, select *NOTEMPTY* from the associated expression dropdown, and click **Add Phrase.** Click **Next**.

The *Area* panel allows for defining another area. Select *Create Another Area* and click **Next** to loop back to the *Create Area* panel.

After defining the *Totals* area, click *No More Areas* and click **Finish**.

The object is created, and its editor appears.

As the spreadsheet merges some cells while the wizard treats each cell individually, the Schema includes an unnecessary node. To delete that node, expand the *PO* sheet node to display its areas, expand the *LineItems* area's node to display its cells, select the *cell_G* entry (in the *Cell 5* column), and click the **Delete** button.
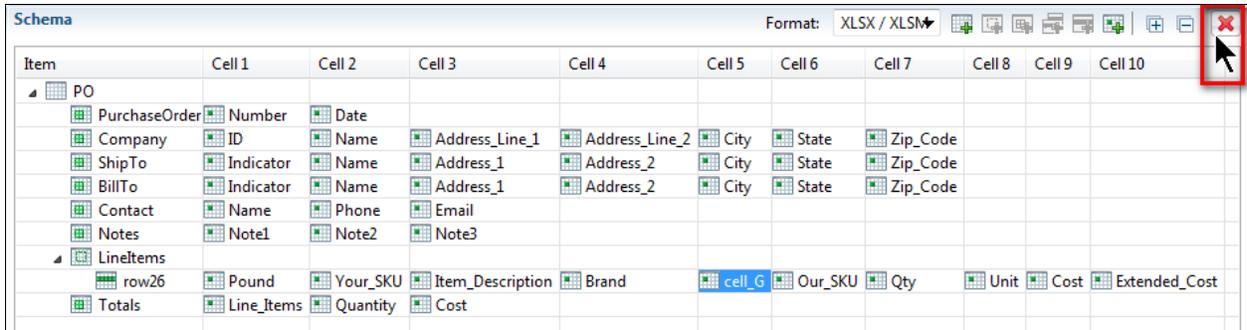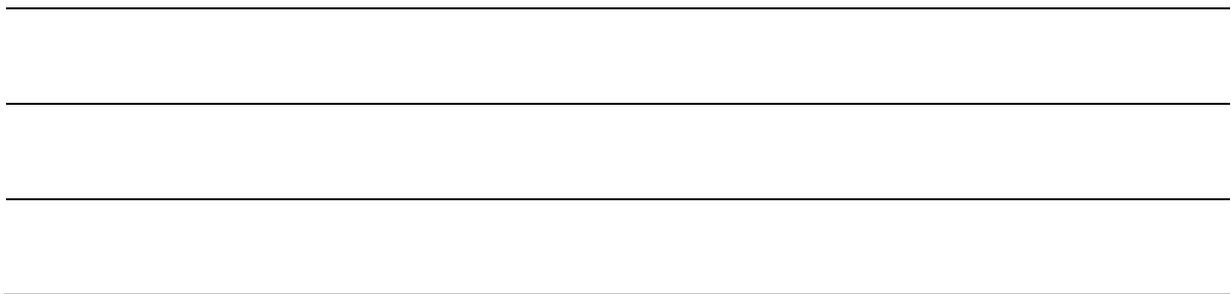

As "#" is an invalid character, the wizard converted the spreadsheet's column header for the line item numbers to "Pound". To rename that node, select it (in the *Cell 1* column).
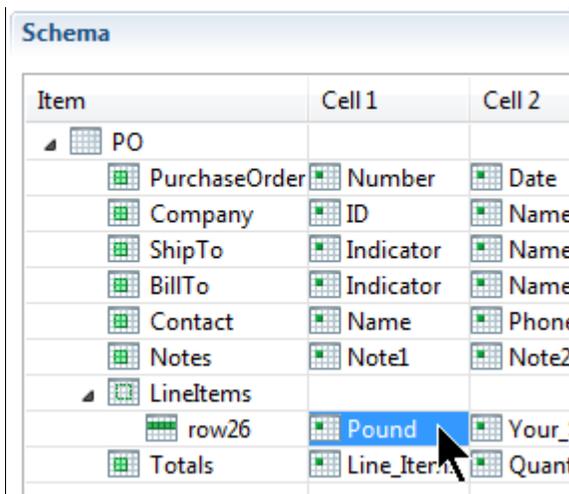
In the *Properties* view's *Properties* tab, click in the *Name* field, type **LineNumber**, and click **OK**.

Save the object and close the editor.

Schema: PurchaseOrderFF

Resources created for one Project may be copied and pasted into another Project. For this demo, the *com.training.demo02.multifftoff* Project's *DelimitedFF* Schema can be copied from there, pasted here, and then renamed.

If you did not create that Project, check it out from Cleo's SVN Repository.

In the **com.training.demo02.multifftoff** Project, right-click the *DelimitedFF* Schema and select **Copy**.

In this Project, right-click the Package and select **Paste**.

Right-click this Project's *DelimitedFF* object and select *Rename*. Edit the original name in the *New name* field so it reads **PurchaseOrderFF.ffSchema** and click **OK**.

Double click the *PurchaseOrderFF* object to display its editor, select the *Source* record node, access the *Properties* view's *Properties* tab, click in the *Name* field, type **Target**, and click **OK**.

Save the object and close the editor.

Transformation Settings: AsteriskDelimitedTargetTS

Select the Package.

Select *File | New | Transformation Settings*.

Type **AsteriskDelimitedTargetTS** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

Type an asterisk in the *Delimiter* field of the *Target Connector* section.

Save the object and close the editor.

Ruleset: PurchaseOrderSsToFfRS

This Ruleset transforms the data from the source format to the target format.

Select the Package.

Select *File | New | Ruleset*.

Type **PurchaseOrderSsToFfRS** in the *Name* field.

Click **Next**. A wizard assists with defining this object.

The *Schema Types* panel allows for selecting both the source and target Schemas. Choose *Spreadsheet* for the source and *Flat File* for the target. Click **Next**.

The *Source Schema* panel allows for selecting an existing Schema. Click **Browse**, select the *PurchaseOrderSS* object, and click **OK**. Click **Next**.

The *Target Schema* panel allows for selecting an existing Schema. Click **Browse**, select the *PurchaseOrderFF* object, and click **OK**.

Click **Finish**. The object is created, and its editor appears.

Expand the *Source* section's *Workbook: PurchaseOrderSS* node and then its *Worksheet: PO* node to display all area nodes. When an area's cells are required to create/define a rule, expand that area node as needed.

Expand the *Target* section's *File: PurchaseOrderFF* node and then its *Record Group: Target* node to display all record nodes. When a record's fields are required to create/define a rule, expand that record node as needed.

This Ruleset requires several Composite Rules and several Simple Rules for each. Three Composite Rules must be conditioned.

Composite Rule 1: Record PO

This Composite Rule serves as the parent for Simple Rules designed to populate the target Schema's *Record: PO* fields.

To create and define this Composite Rule, drag the target's *Record: PO* node to the *Rules* section.

Rules for Composite Rule 1

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
PurchaseOrder: Number	PO: POnumber
PurchaseOrder: Date	PO: POdate

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 2: Record CI

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: CI* fields.

To create this Composite Rule, right-click the previous Composite Rule and select *Add sibling | Composite Rule | Composite Rule*. This undefined rule appears in the *Rules* section.

To define this Composite Rule, drag the target's *Record: CI* node to the *Return Assignments* area.

Rules for Composite Rule 2

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
Company: ID	CI: CIcode
Company: Name	CI: CIname
Company: Address_Line_1	CI: CIadd1
Company: Address_Line_2	CI: CIadd2
Company: City	CI: CIcity
Company: State	CI: CIstate
Company: Zip_Code	CI: CIzip

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 3: Record ST

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: ST* fields.

To create and define this Composite Rule, simultaneously press the **Ctrl** key and select the last Rule created to remove focus from it. Then drag the target's *Record: ST* node to the white space of the *Rules* section below the last rule created.
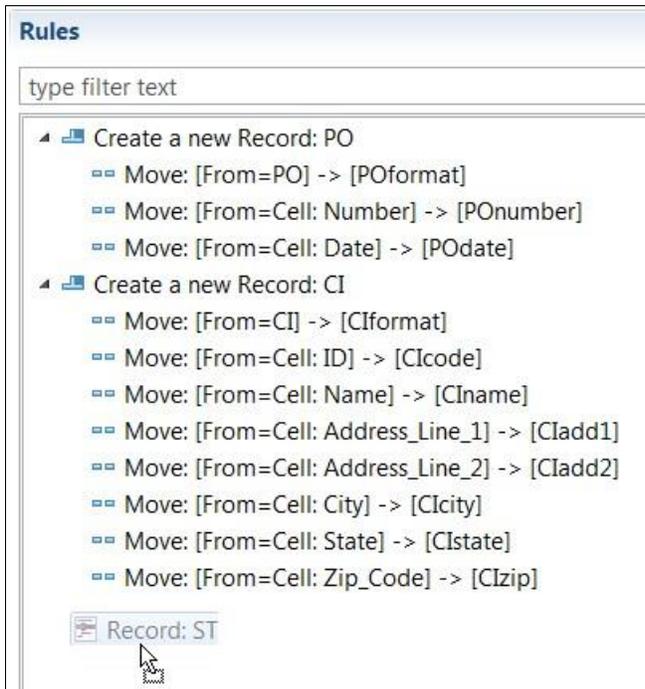
Condition Composite Rule 3

This Composite Rule must be conditioned to execute only when the source data indicates that the Ship To address is new.

Display the Ruleset editor's *Variables* panel. Click the **Add** button. Type **IsAddressNew** in the *Name* field and **New** in the *Value* field. Click **OK**. The variable appears at the bottom of the list.

Select the Composite Rule and display the *Properties* view's *Condition* tab.

Display the Ruleset editor's *Actions* panel, type **str** in the *Filter* field to restrict the display to items containing that text and drag *StringEquals* to the *Condition* tab's *Condition* field.

Drag the source's *ShipTo* area's *Cell: Indicator* node to the *Condition* tab's *SourceString1* property.

Display the Ruleset editor's *Variables* panel and drag *IsAddressNew* to the *Condition* tab's *SourceString2* property.

Rules for Composite Rule 3

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
ShipTo: Indicator	ST: STcode
ShipTo: Name	ST: STname
ShipTo: Address_Line_1	ST: STadd1
ShipTo: Address_Line_2	ST: STadd2
ShipTo: City	ST: STcity
ShipTo: State	ST: STstate
ShipTo: Zip_Code	ST: STzip

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 4: Record BT

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: BT* fields.

To create and define this Composite Rule, simultaneously press the **Ctrl** key and select the last Rule created to remove focus from it. Then drag the target's *Record: BT* node to a neutral area of the *Rules* section.

Condition Composite Rule 4

This Composite Rule must be conditioned to execute only when the source data indicates that the Bill To address is new.

Select the Composite Rule and display the *Properties* view's *Condition* tab.

Display the Ruleset editor's *Actions* panel and drag *StringEquals* to the *Condition* tab's *Condition* field.

Drag the source's *BillTo* area's *Cell: Indicator* node to the *Condition* tab's *SourceString1* property.

Display the Ruleset editor's *Variables* panel and drag *IsAddressNew* to the *Condition* tab's *SourceString2* property.

Rules for Composite Rule 4

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
BillTo: Indicator	BT: BTcode
BillTo: Name	BT: BTname
BillTo: Address_Line_1	BT: BTadd1
BillTo: Address_Line_2	BT: BTadd2
BillTo: City	BT: BTcity
BillTo: State	BT: BTstate
BillTo: Zip_Code	BT: BTzip

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 5: Record CN

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: CN* fields.

To create this Composite Rule, right-click the previous Composite Rule and select *Add sibling | Composite Rule | Composite Rule*. This undefined rule appears in the *Rules* section.

To define this Composite Rule, drag the target's *Record: CN* node to the *Return Assignments* area.

Rules for Composite Rule 5

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
Contact: Name	CN: CNname
Contact: Phone	CN: CNphone
Contact: Email	CN: CNemail

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 6: Record SI

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: SI* fields.

To create and define this Composite Rule, simultaneously press the **Ctrl** key and select the last Rule created to remove focus from it. Then drag the target's *Record: SI* node to a neutral area of the *Rules* section.

Condition Composite Rule 6

This Composite Rule must be conditioned to execute when there is a note in the first of the three available special instruction lines.

Select the Composite Rule and display the *Properties* view's *Condition* tab.

Display the Ruleset editor's *Actions* panel, type **empty** in the *Filter* field to restrict the display to items containing that text, display the *Properties* view's *Condition tab*, and drag *IsNotEmpty* to the *Condition* field.

Drag the source's *Notes* area's *Cell: Note1* node to the *Condition* tab's *sourceNode* property.

Create a variable (named **Boolean**) and drag it to the *Condition* tab's *trimValue* property.

Rules for Composite Rule 6

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
Notes: Note1	SI: SInote1
Notes: Note2	SI: SInote2
Notes: Note3	SI: SInote3

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 7: Record TO

This Composite Rule serves as the parent for Rules designed to populate the target's *Record: TO* fields.

To create and define this Composite Rule, simultaneously press the **Ctrl** key and select the last Rule created to remove focus from it. Then drag the target's *Record: TO* node to a neutral area of the *Rules* section.

Rules for Composite Rule 7

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Cell	Target Record: Field
Totals: Line_Items	TO: TOlines
Totals: Quantity	TO: TOquantity
Totals: Cost	TO: TOcost

To create and define these Rules, drag the source Schema node to the target Schema node.

Composite Rule 8: Record LI

This Composite Rule relates the source and target Schemas at their respective *detail* node levels, and serves as the parent for Rules designed to populate the target's *Record: LI* fields.

To create this Composite Rule, right-click the previous Composite Rule and select *Add sibling | Composite Rule | Composite Rule*. The undefined rule appears in the *Rules* section.

To define this Composite Rule, expand the source's *Area: LineItems* node, drag its *Row: _row26* node to the *Properties* view's *Source* property, and then drag the target's *Record: LI* node to the *Target* property.

Rules for Composite Rule 8

Ensure that this Composite Rule is selected before creating its child Rules, as indicated here.

Source Area: Row: Cell	Target Record: Field
LineItems: _row26: LineNumber	LI: LInumber
LineItems: _row26: Your_SKU	LI: LIyourSKU
LineItems: _row26: Item_Description	LI: LIdesc
LineItems: _row26: Brand	LI: LIbrand
LineItems: _row26: Our_SKU	LI: LIourSKU
LineItems: _row26: Qty	LI: LIquantity
LineItems: _row26: Unit	LI: LIunit
LineItems: _row26: Cost	LI: LIcost
LineItems: _row26: Extended_Cost	LI: LIextcost

To create and define these Rules, drag the source Schema node to the target Schema node.

Save the object and close the editor.

Business Process: PurchaseOrderSsToFfBPS

Select the Package.

Select *File | New | Business Process*.

Choose *No Template* and click **Next**.

Type **PurchaseOrderSsToFfBPS** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

This Business Process requires three tasks to (1) read the source data, (2) transform the data, and (3) write the target data.

Task 1: Read the source data

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **read** in the *Filter* field to restrict the display to tasks containing that text. Double-click the *ReadSsFA* user-defined object to select it. That task is displayed on the top line.

To define this task, click the *Properties* view tab.

This task has one parameter.

Click in the *storageNodes* parameter's field. This parameter represents the AdapterPayload (the data of the source file). The bold-italic text indicates that this is a mandatory parameter. A list of available parameters and variables appears. As none yet exist, that list is empty. Click **New Variable**. An AdapterPayload may be an Array, Object, or StorageNode. Double-click *StorageNode* to indicate it as the type for this variable. *newVariable* appears in the *Properties* view and also appears in the *Variables* section, with its name pre-selected, ready for a name change. Type **source** and press **Enter** to rename this variable. This new name is reflected in the *Properties* view.

Task 2: Transform the data

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **rs** in the *Filter* field to restrict the display to tasks containing that text. Double-click the *PurchaseOrderSsToFfRS* user-defined object to select it. That task is displayed on the second line.

To define this task, click the *Properties* view tab.

This task has several parameters. Provide values for the first three; the last three are not necessary here.

Click in the *sourceNode* parameter's field. This parameter represents the StorageNode containing the data to be transformed. In the list of available parameters and variables, double-click the previously-defined *source* variable, as the data read by the first task is the data to be transformed.

Click in the *targetNode* parameter's field. This parameter represents the StorageNode containing the transformed data. A list of available parameters and variables appears. Click **New Variable**. *newVariable* appears in the *Properties* view and also appears in the *Variables* section, with its name pre-selected, ready for a name change. Type **target** and press **Enter** to rename this variable. This new name is reflected in the *Properties* view.

Click in the *settings* parameter's field. This parameter represents the Transformation Settings object to be used during transformation. Click the *TransformationSettings Literal* tab and double-click the previously-defined *Demo03AsteriskDelimitedSourceTS* object to select it.

Task 3: Write the target data

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **wri** in the *Filter* field to restrict the display to tasks containing that text. Double-click the *WriteTxtFA* object to select it. That task is displayed on the third line.

To define this task, click the *Properties* view tab.

This task has only one parameter.

Click in the *storageNodes* parameter's field. This parameter represents the AdapterPayload (the data to be written to the target file). In the list of available parameters and variables, double-click the previously-defined *target* variable, as the data transformed by the second task is the data to be written.

Save the object and close the editor.

Deploy, Launch, Audit

Now that all of the Project's resources are created on the *Clarify Workbench | Project Explorer*, the remaining activities take place on various views of the *Admin Console* perspective.

The Project's top-level object – in this case, the Business Process – must be deployed to the *Local Test* server. Then, that Business Process can be launched and the result audited.

Deploy

Access *Admin Console | Projects*.

In the *Workspace* section, expand the *com.training.demo03.sstoff* Project, and then expand its Package node.

Drag the *PurchaseOrderSsToFfBPS* object to the *Selected Scenarios* section.

Start the *Local Test* server by ensuring that it is displayed in the *Server Environment* dropdown and then clicking the **Start** button.

When fully-expanded, the *Server Projects* section shows all installed objects.

Launch

Access *Admin Console | Business Process*.

Click *com.training.demo03.sstoff.PurchaseOrderSsToFfBPS* and click the **Launch** button.

Audit

Access *Admin Console | Auditor*.

The *Log Entries* section shows the results.