MFG127988: Isn’t It Great When We Integrate?

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Use JavaScript to send a JSON packet to a Jitterbit Harmony API
Use Jitterbit Harmony to receive and transform data
Insert data into an on-premise SQL database via stored procedure
Pass arguments to a console application (C# Executable) and perform an action

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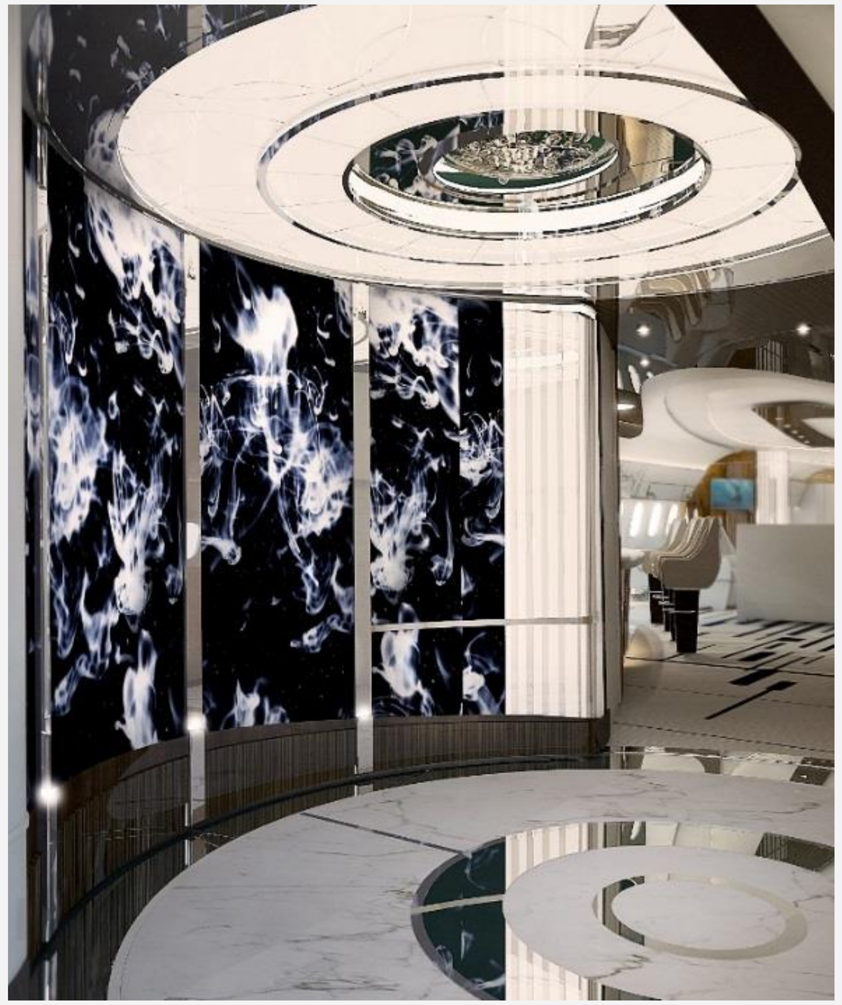
GREENPOINT

Artistry Engineered

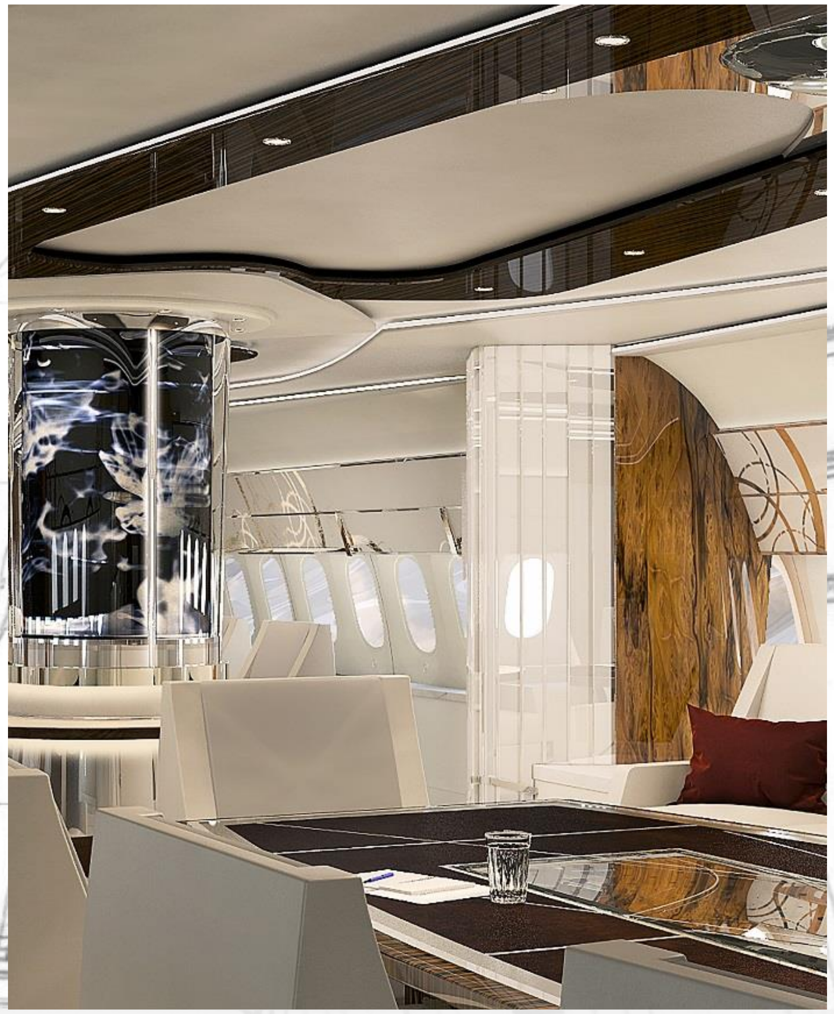
VIP 787 – *Azure* Interior



VIP 787 – *Azure* Interior

SBID Design Award 2015

IIDA InConcept Award 2014



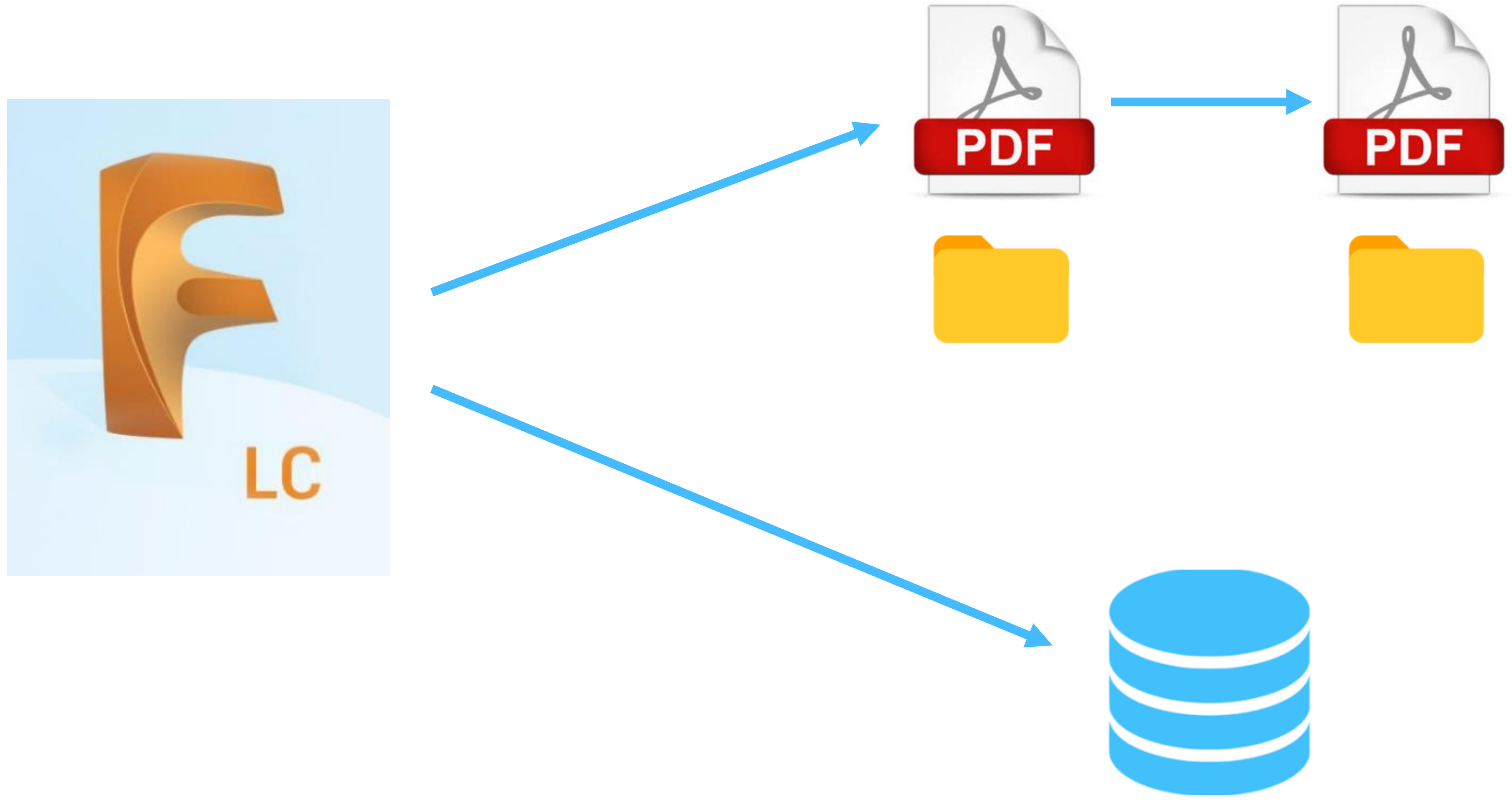
Crystal AirCruises 777-200LR

Delivered early August 2017

Crystal AirCruises 777-200LR

Sleeps up to 88 guests comfortably

Real World Business Application

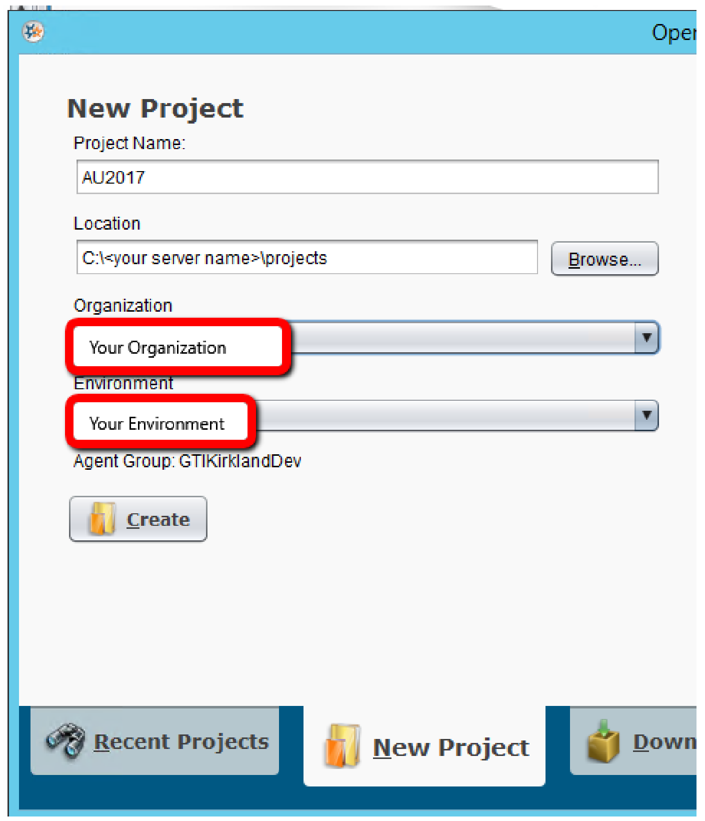


How Do We Achieve This With Fusion Lifecycle

- A triggering event that will initiate the scripting
- The script will aggregate the FLC data and send to a Jitterbit API
- Receive API request and transform the data
- Use the data to run external systems

Start In Jitterbit Studio

- Create a project
- Create an operation
- Choose a transformation type
- Give it a name



New Project

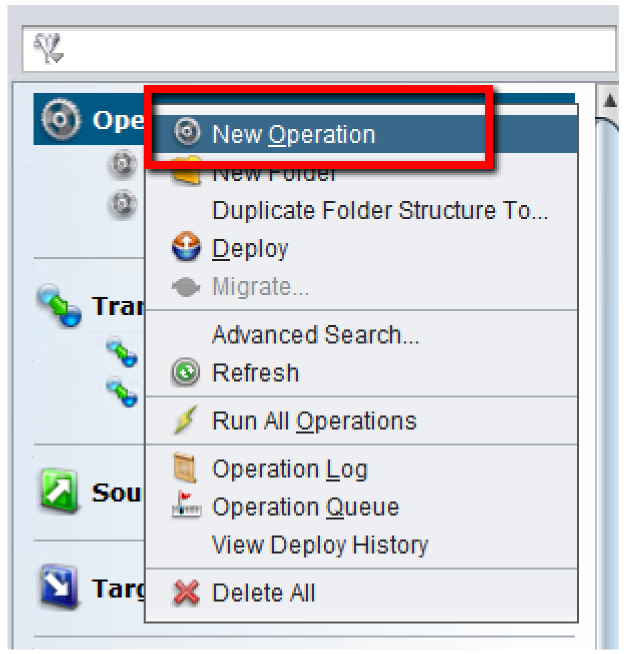
Project Name: AU2017

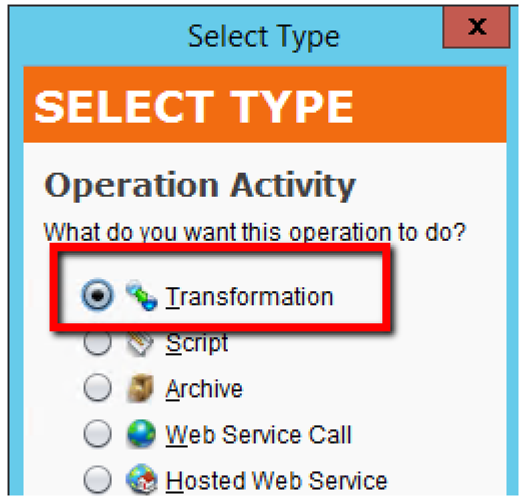
Location: C:\<your server name>\projects

Organization: Your Organization

Environment: Your Environment

Agent Group: GTIKirklandDev





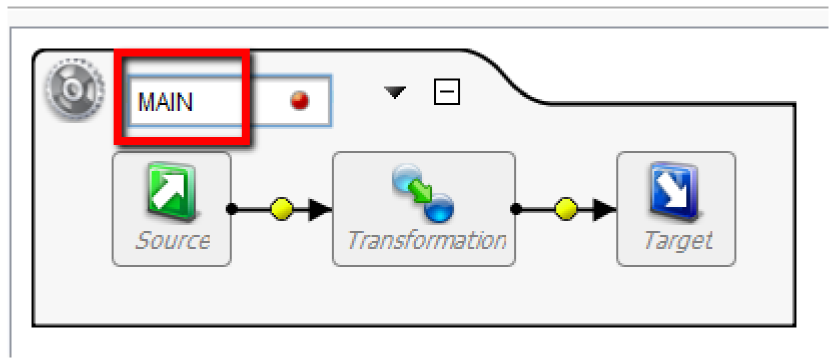
Select Type

SELECT TYPE

Operation Activity

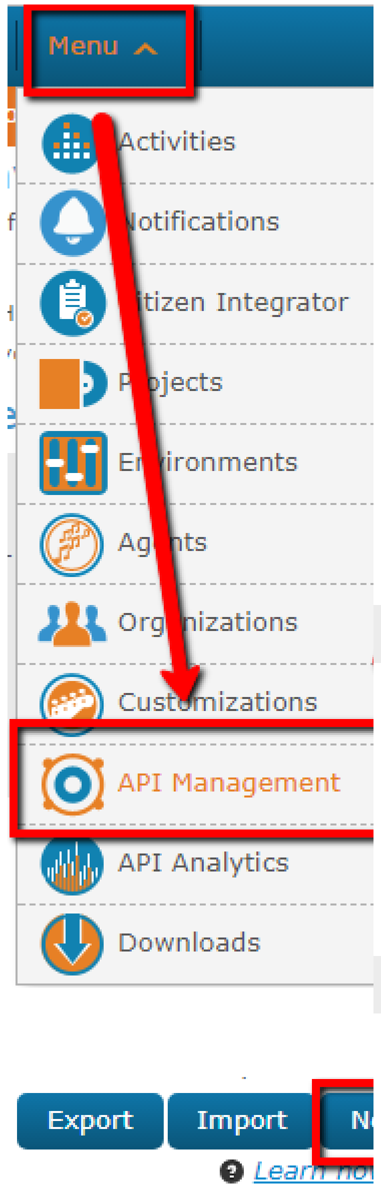
What do you want this operation to do?

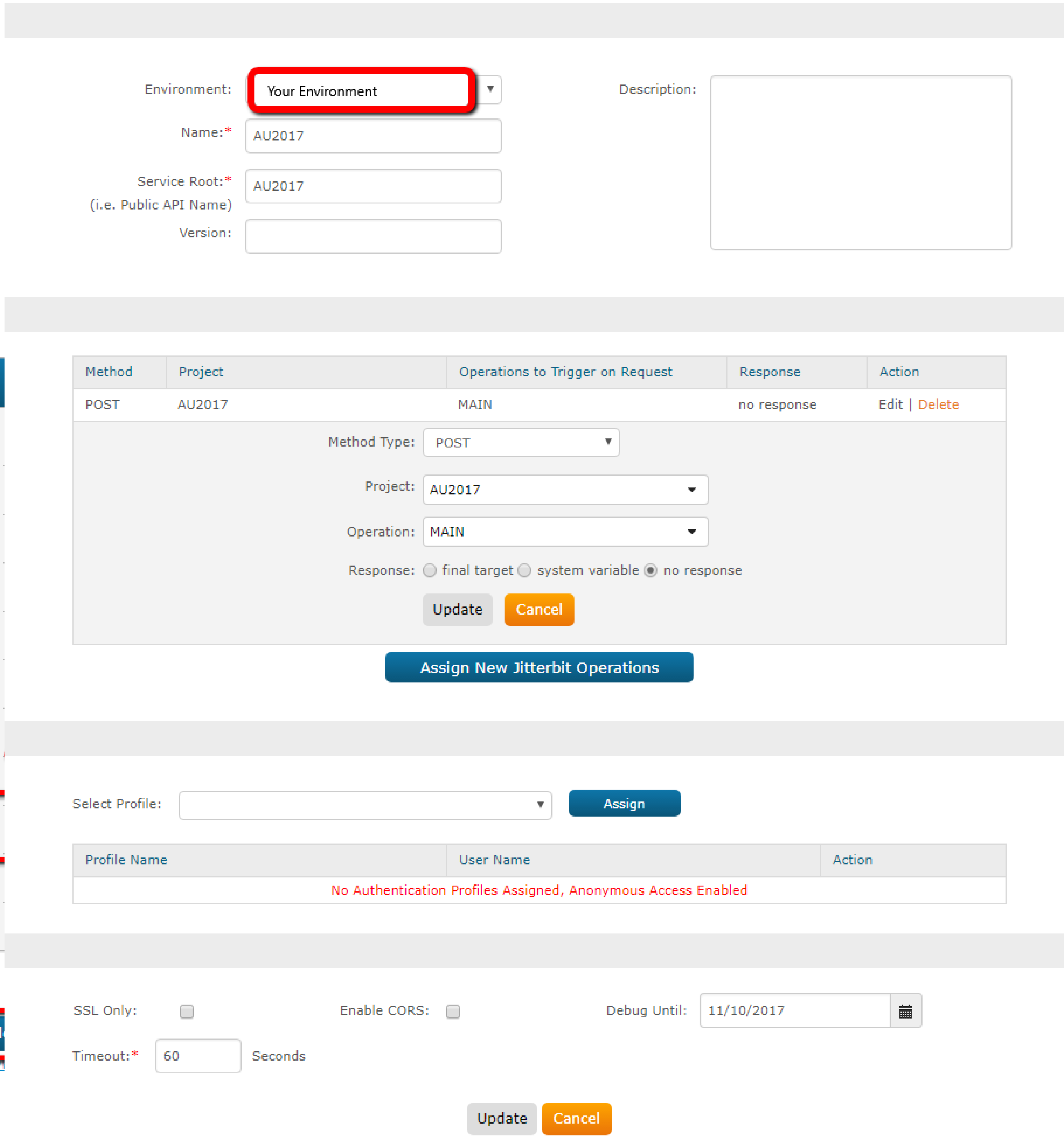
- [✓ Transformation]
- Script
- Archive
- Web Service Call
- Hosted Web Service



Create an API in Jitterbit Harmony

- Navigate to Custom API
- Select New Custom API Service
- Fill out the form
  - Method: POST
  - Operation: Your Operation





Environment:	Your Environment
Name:*	AU2017
Service Root:* (i.e. Public API Name)	AU2017
Version:	
Description:	

Method	Project	Operations to Trigger on Request	Response	Action
POST	AU2017	MAIN	no response	Edit | Delete

Method Type:	POST
Project:	AU2017
Operation:	MAIN
Response:	final target / system variable / [✓ no response]

Update Cancel

Assign New Jitterbit Operations

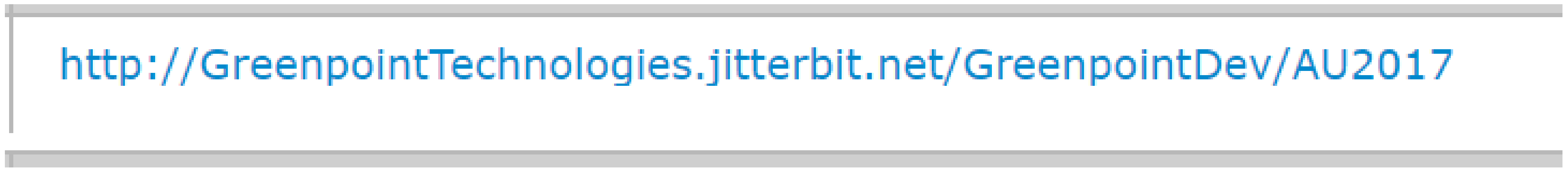
Select Profile: Assign

Profile Name	User Name	Action
No Authentication Profiles Assigned, Anonymous Access Enabled		

SSL Only:	☐	Enable CORS:	☐	Debug Until:	11/10/2017
Timeout:*	60 Seconds				

Update Cancel

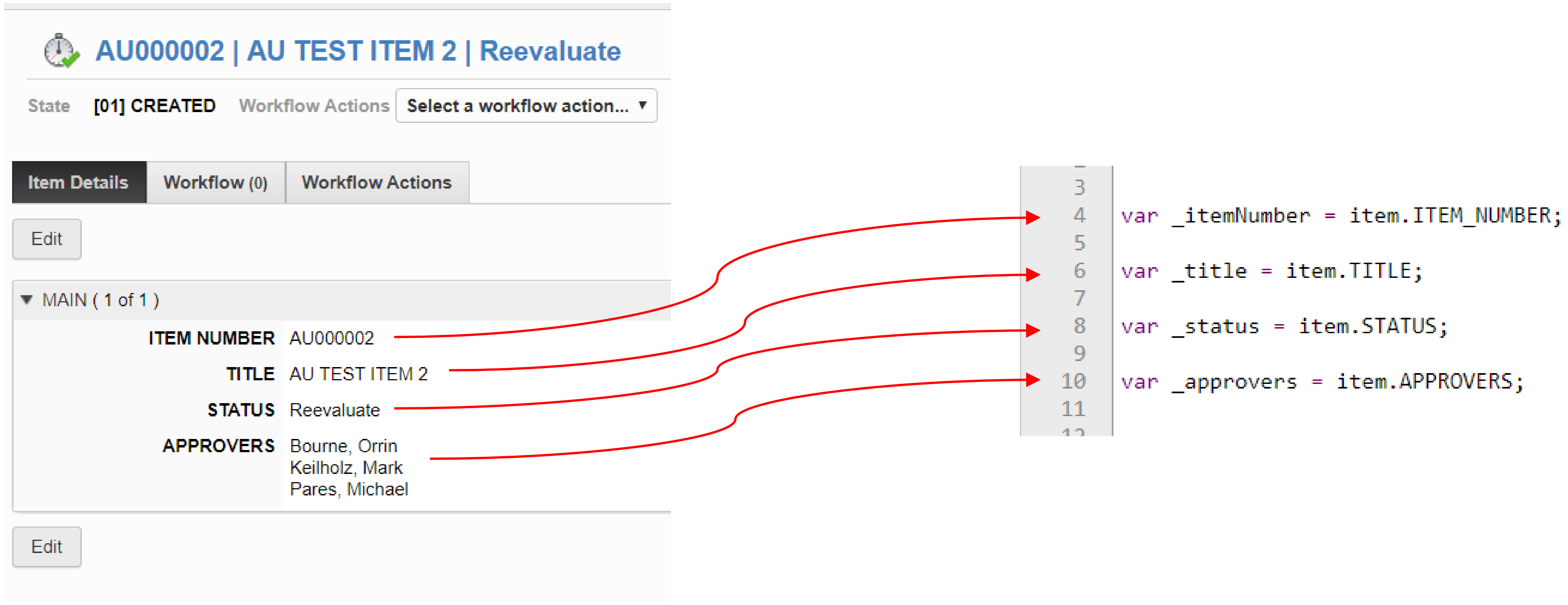
Create an API in Jitterbit Harmony (cont.)



http://GreenpointTechnologies.jitterbit.net/GreenpointDev/AU2017

Write Some Code in Fusion Lifecycle

- Collect pertinent meta data through scripting
- Consider how to handle special coding needs (i.e to arrays, linking pick lists etc.)



AU000002 | AU TEST ITEM 2 | Reevaluate

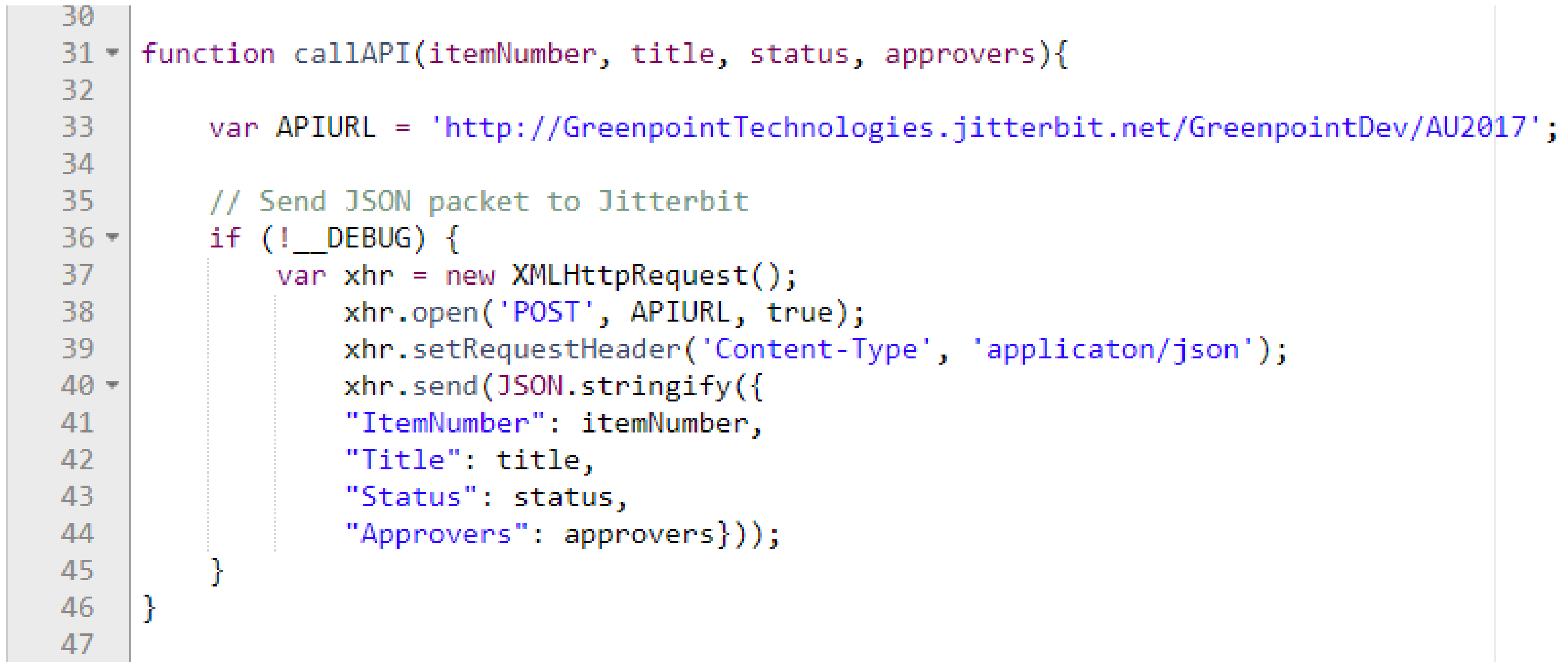
State [01] CREATED Workflow Actions Select a workflow action...

ITEM NUMBER	AU000002
TITLE	AU TEST ITEM 2
STATUS	Reevaluate
APPROVERS	Bourne, Orrin Keilholz, Mark Pares, Michael

```
var _itemNumber = item.ITEM_NUMBER;

var _title = item.TITLE;

var _status = item.STATUS;

var _approvers = item.APPROVERS;

```

Write Some Code in Fusion Lifecycle (cont.)

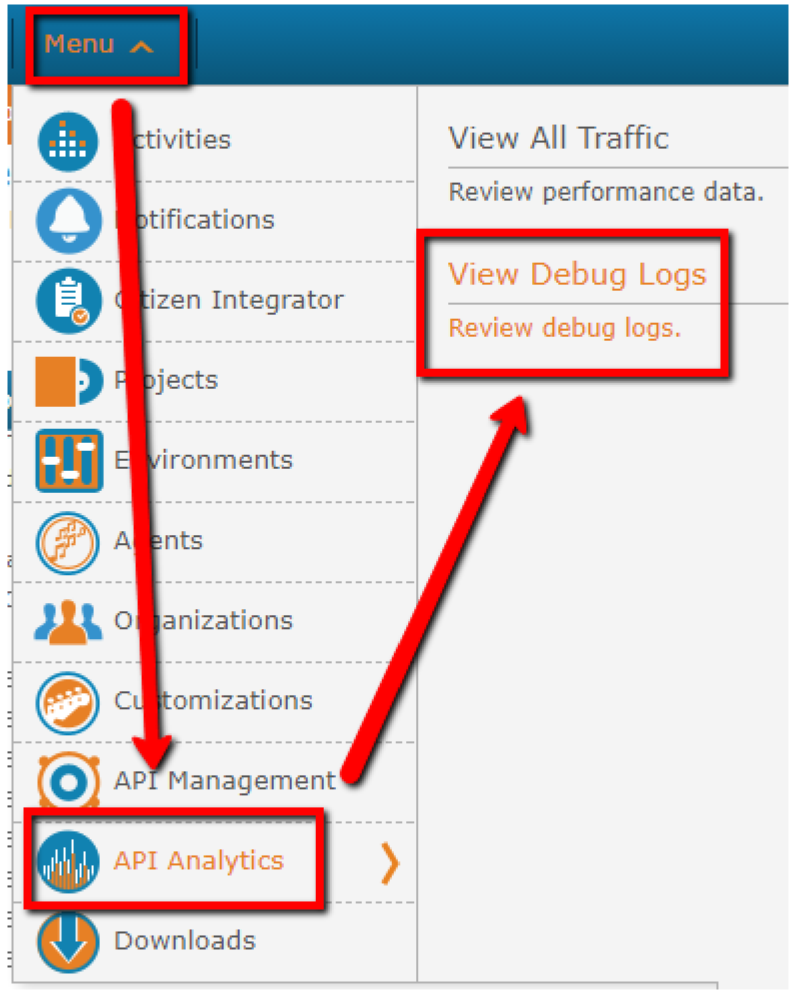
- Build the request (use simple names with an obvious meaning)
- Send JSON packet

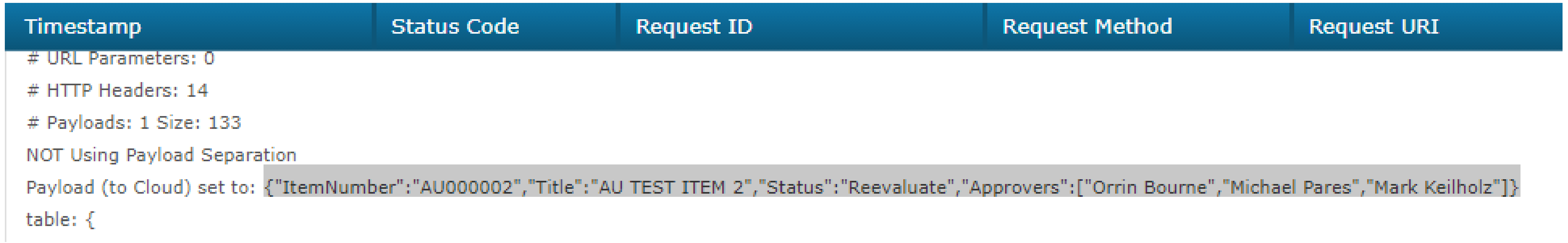


```
function callAPI(itemNumber, title, status, approvers){

    var APIURL = 'http://GreenpointTechnologies.jitterbit.net/GreenpointDev/AU2017';

    // Send JSON packet to Jitterbit
    if (!__DEBUG) {
        var xhr = new XMLHttpRequest();
            xhr.open('POST', APIURL, true);
            xhr.setRequestHeader('Content-Type', 'applicaton/json');
            xhr.send(JSON.stringify({
            "ItemNumber": itemNumber,
            "Title": title,
            "Status": status,
            "Approvers": approvers}));
    }
}
```

Review Debug Logs in Jitterbit Harmony

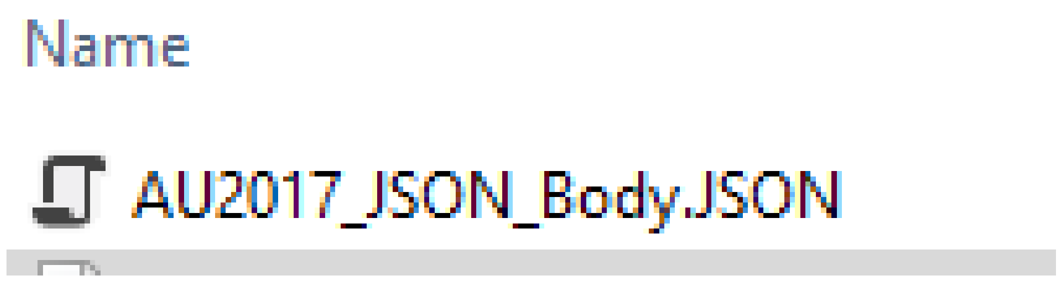
- Navigate to Debug logs
- Copy JSON body and save a text file in an accessible location
- Change extension to .JSON





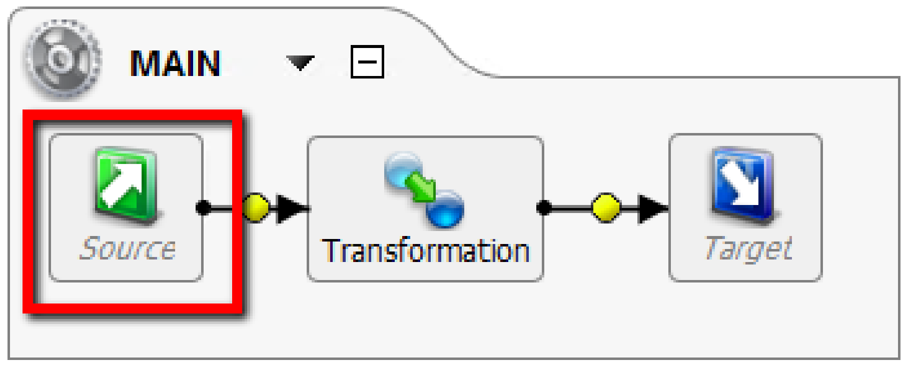
Timestamp	Status Code	Request ID	Request Method	Request URI

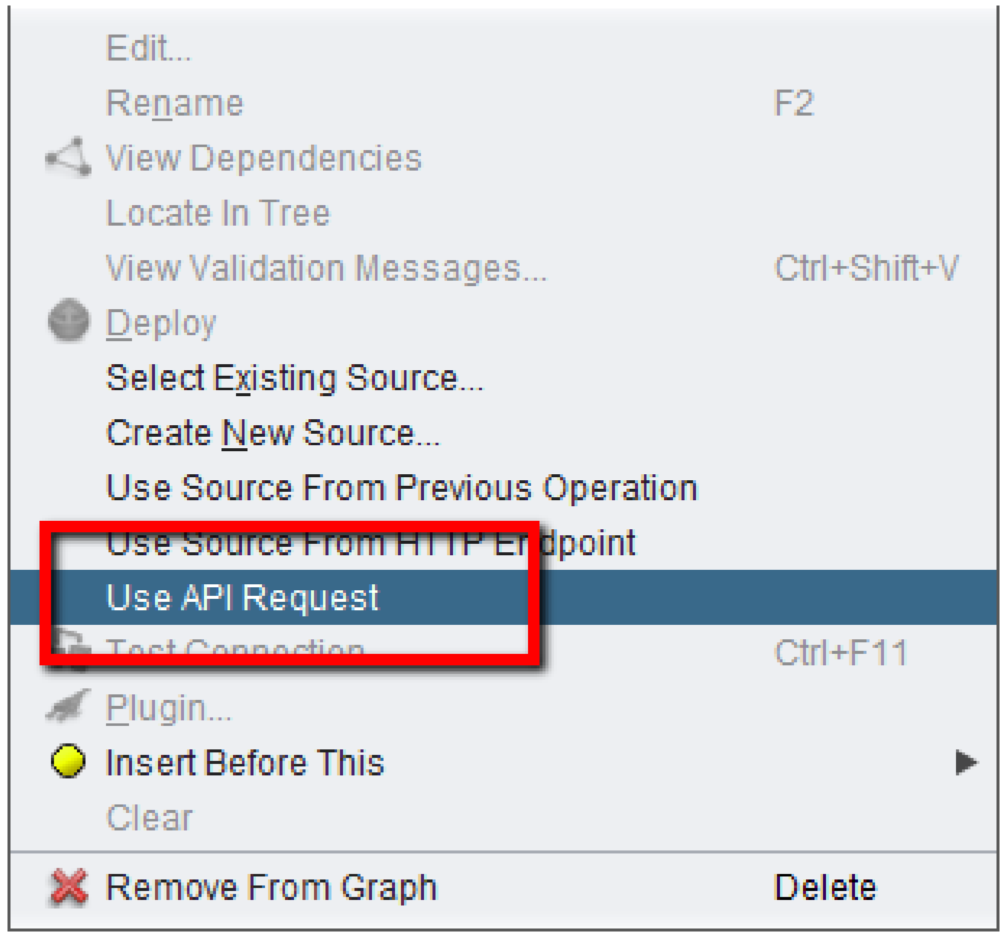
```
# URL Parameters: 0
# HTTP Headers: 14
# Payloads: 1 Size: 133
NOT Using Payload Separation
Payload (to Cloud) set to: {"ItemNumber":"AU000002","Title":"AU TEST ITEM 2","Status":"Reevaluate","Approvers":["Orrin Bourne","Michael Pares","Mark Keilholz"]}
table: {
```

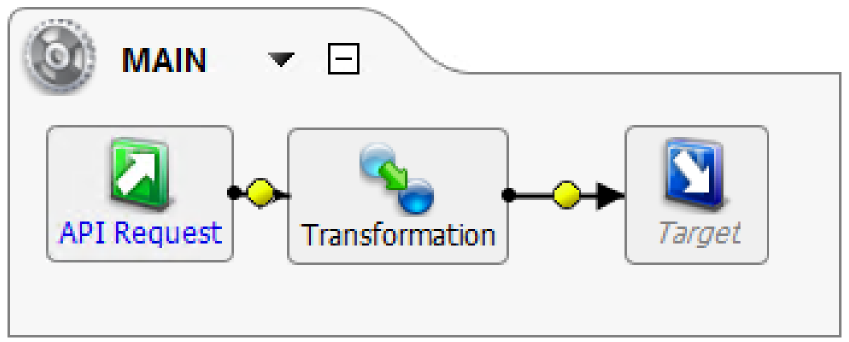


Create the Source

- RMC on the source
- Select “Use API Request”

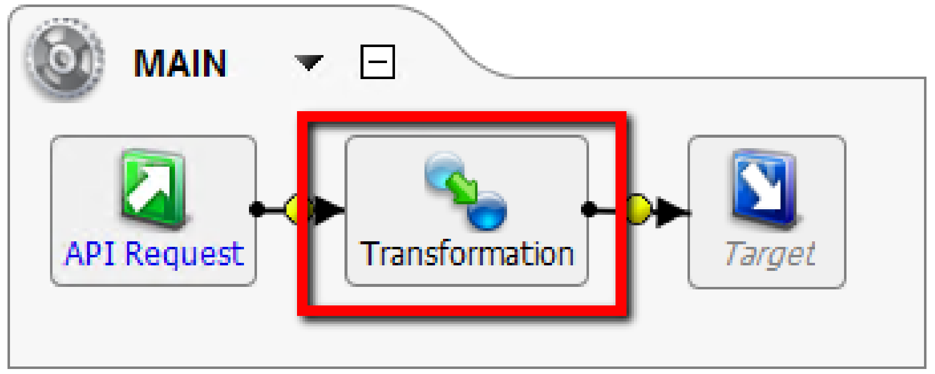


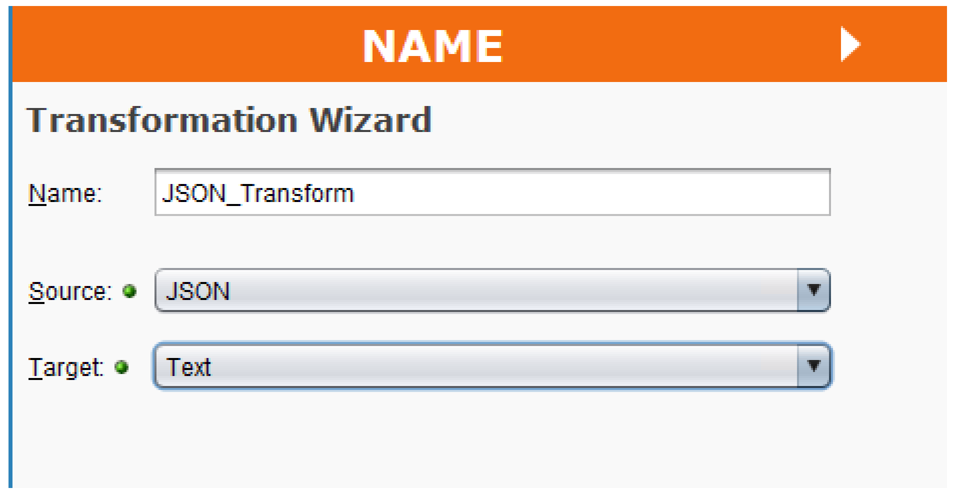




Create the Transformation

- Double click the Transformation
- Select Create New Transformation
- Set Source: JSON and Target:Text
- Select "Create a new JSON…"
- Click "NEXT"



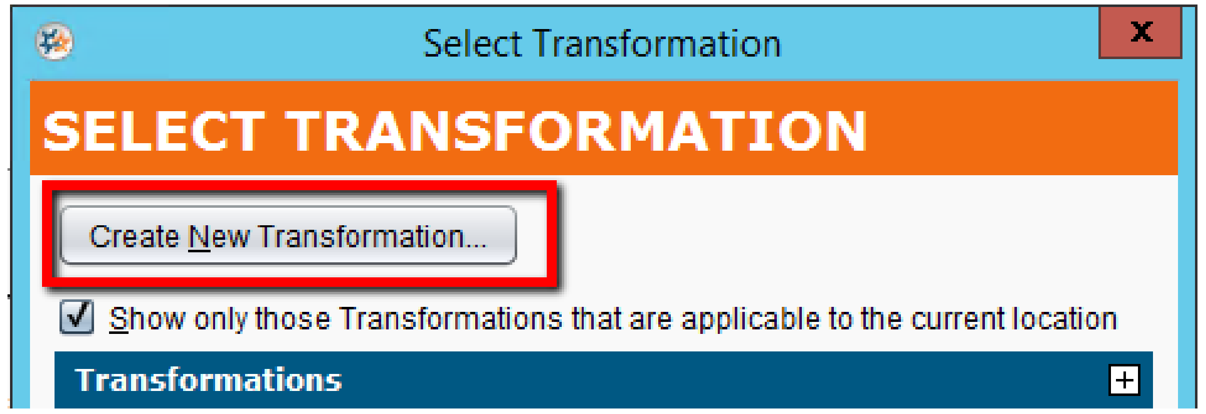

NAME

Transformation Wizard

Name: JSON_Transform

Source: JSON

Target: Text

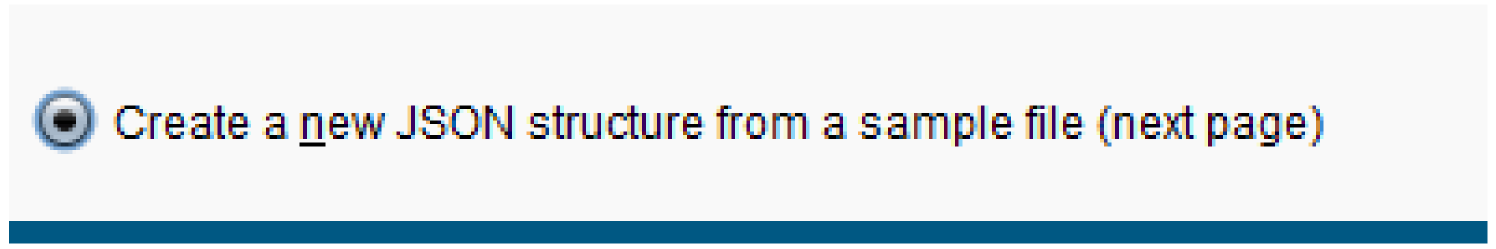

Select Transformation

SELECT TRANSFORMATION

Create New Transformation...

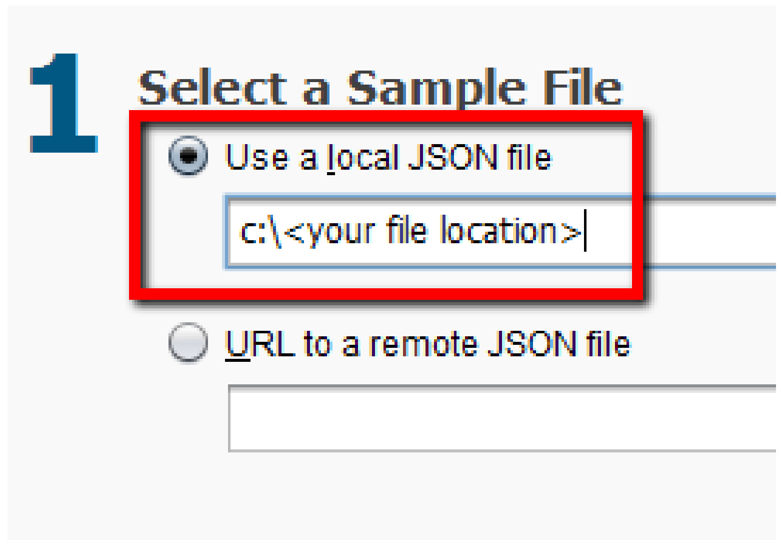
☑ Show only those Transformations that are applicable to the current location

Transformations


● Create a new JSON structure from a sample file (next page)

Define Source Data Structure

- Find the JSON file you saved earlier
- Generate the XSD file
- Review the results

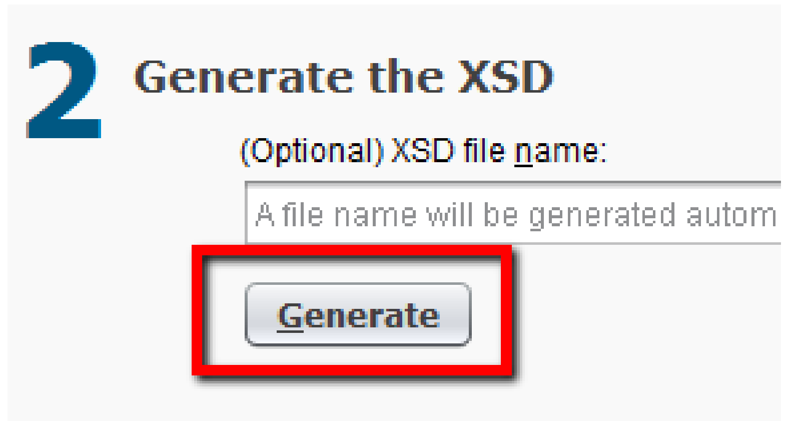


1 Select a Sample File

● Use a local JSON file

c:\<your file location>

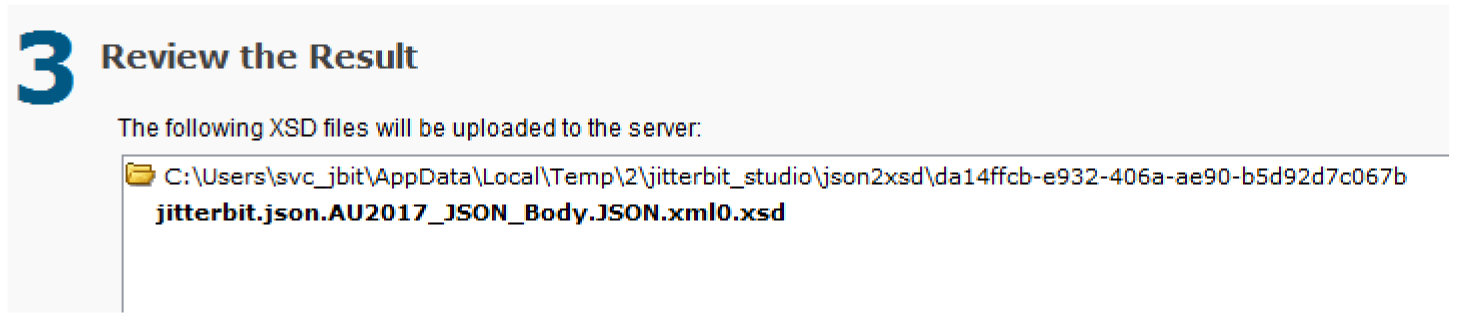
○ URL to a remote JSON file



2 Generate the XSD

(Optional) XSD file name:

A file name will be generated autom



3 Review the Result

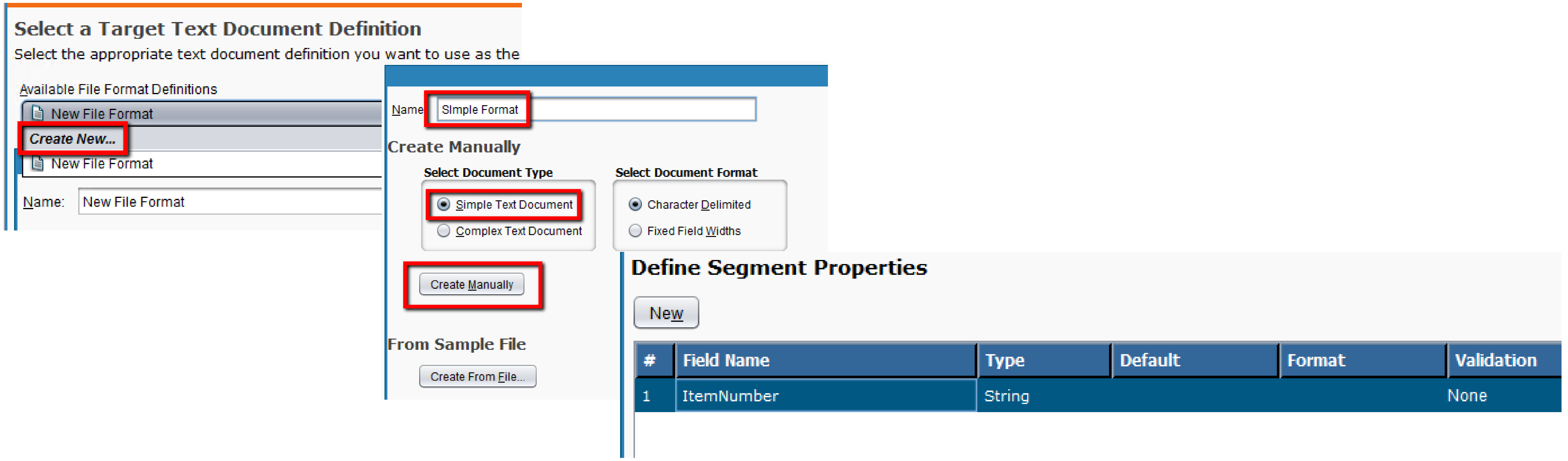
The following XSD files will be uploaded to the server:

C:\Users\svc_jbit\AppData\Local\Temp\2\jitterbit_studio\json2xsd\da14ffcb-e932-406a-ae90-b5d92d7c067b

jitterbit.json.AU2017_JSON_Body.JSON.xml0.xsd

Define a Target Data Structure: “Simple” Method

- Select “Create New” from drop down
- Name it. Select Simple Text Document and Create Manually
- Select “NEW”, add a field and repeat as needed. Select FINISH



Select a Target Text Document Definition

Select the appropriate text document definition you want to use as the

Available File Format Definitions

- New File Format
- *Create New...*
- New File Format

Name: New File Format

Name: SImple Format

Create Manually

Select Document Type: [✓ Simple Text Document] Complex Text Document

Select Document Format: [✓ Character Delimited] Fixed Field Widths

Create Manually

From Sample File

Create From File...

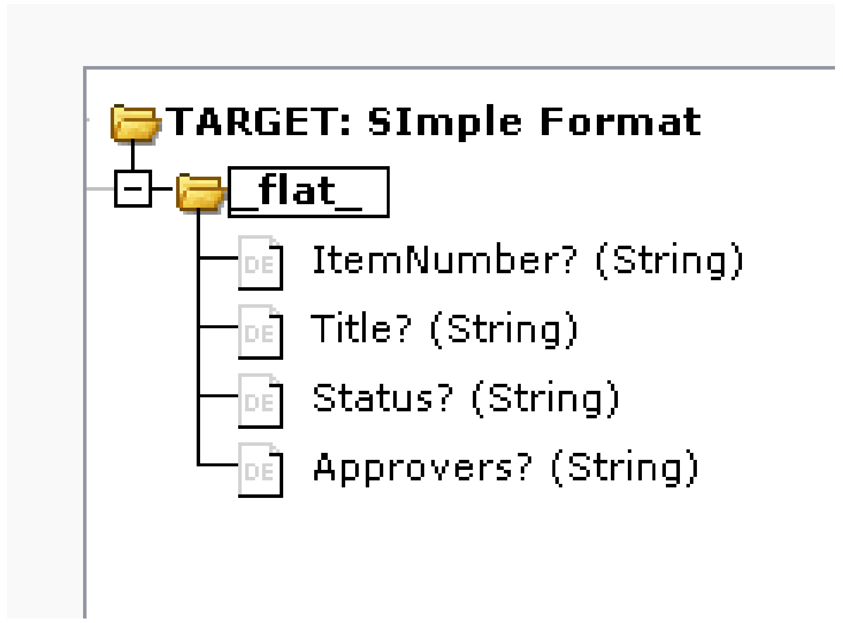
Define Segment Properties

New

#	Field Name	Type	Default	Format	Validation
1	ItemNumber	String			None

Define a Target Data Structure: “Simple” Method (cont.)

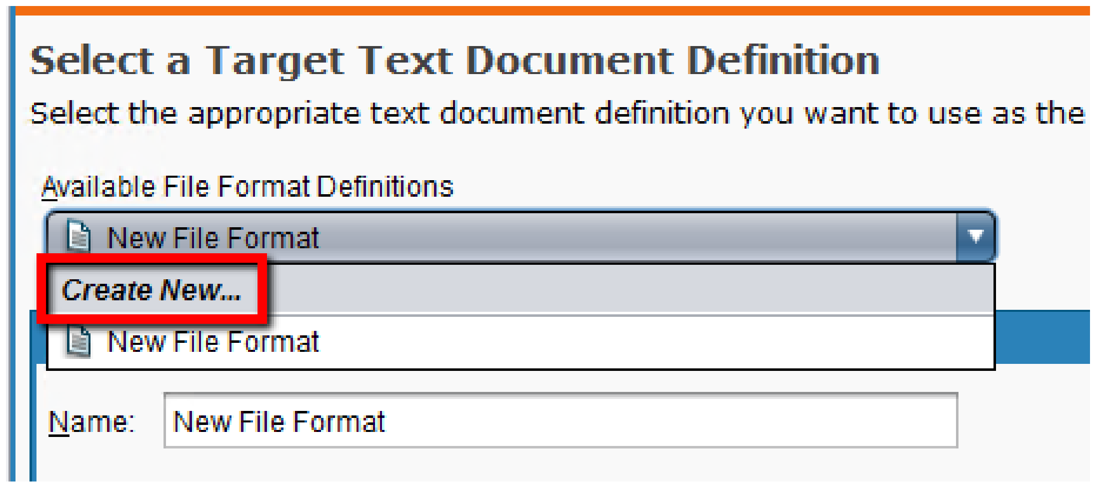
- Review the data structure



TARGET: SImple Format
flat
ItemNumber? (String)
Title? (String)
Status? (String)
Approvers? (String)

Define a Target Data Structure: “Complex” Method

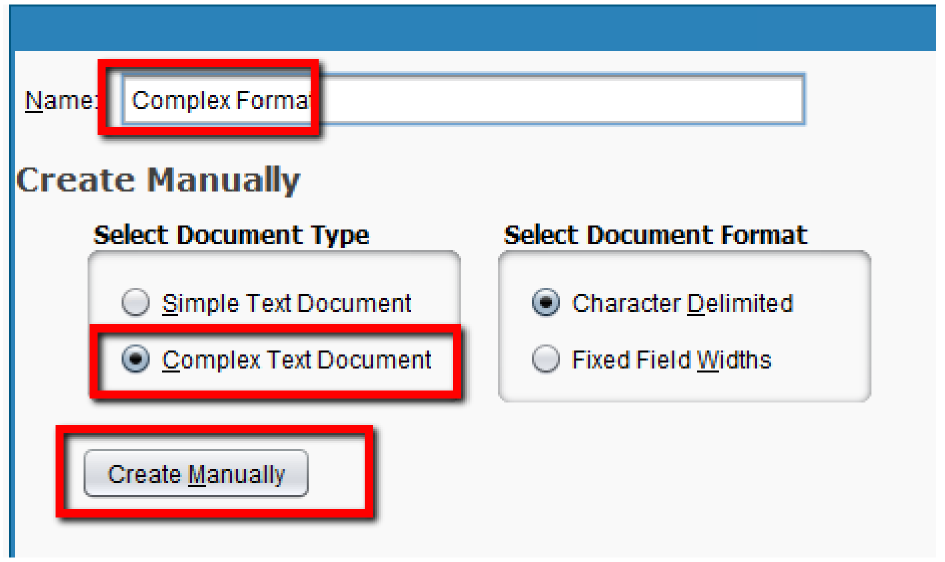
- Select “Create New” from drop down
- Name it. Select COMPLEX and Create Manually


Select a Target Text Document Definition

Select the appropriate text document definition you want to use as the

Available File Format Definitions: New File Format

Name: New File Format


Name: Complex Format

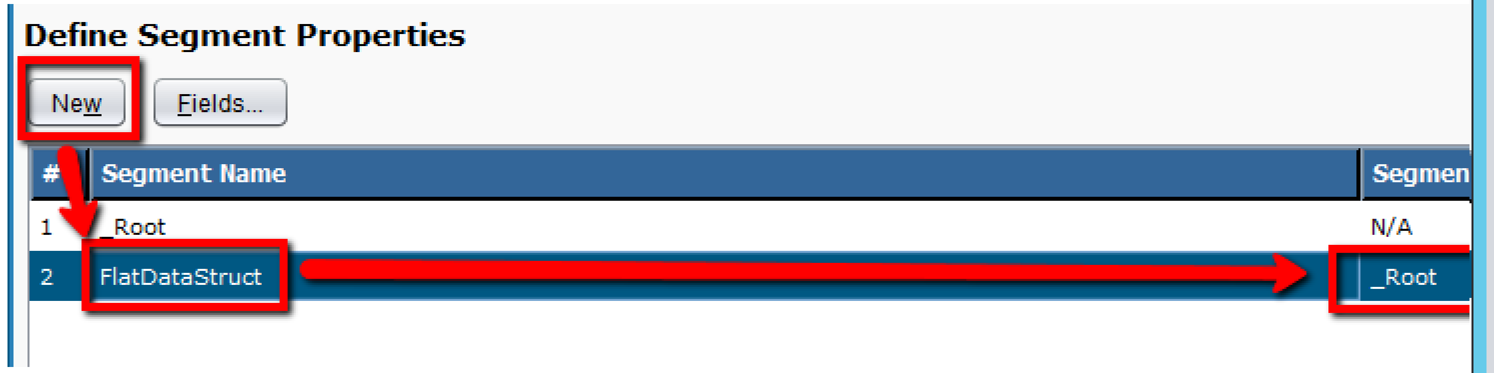
Create Manually

Select Document Type: Simple Text Document [✓ Complex Text Document]

Select Document Format: [✓ Character Delimited] Fixed Field Widths

Define “Flat” Data Structure: “Complex” Method (cont.)

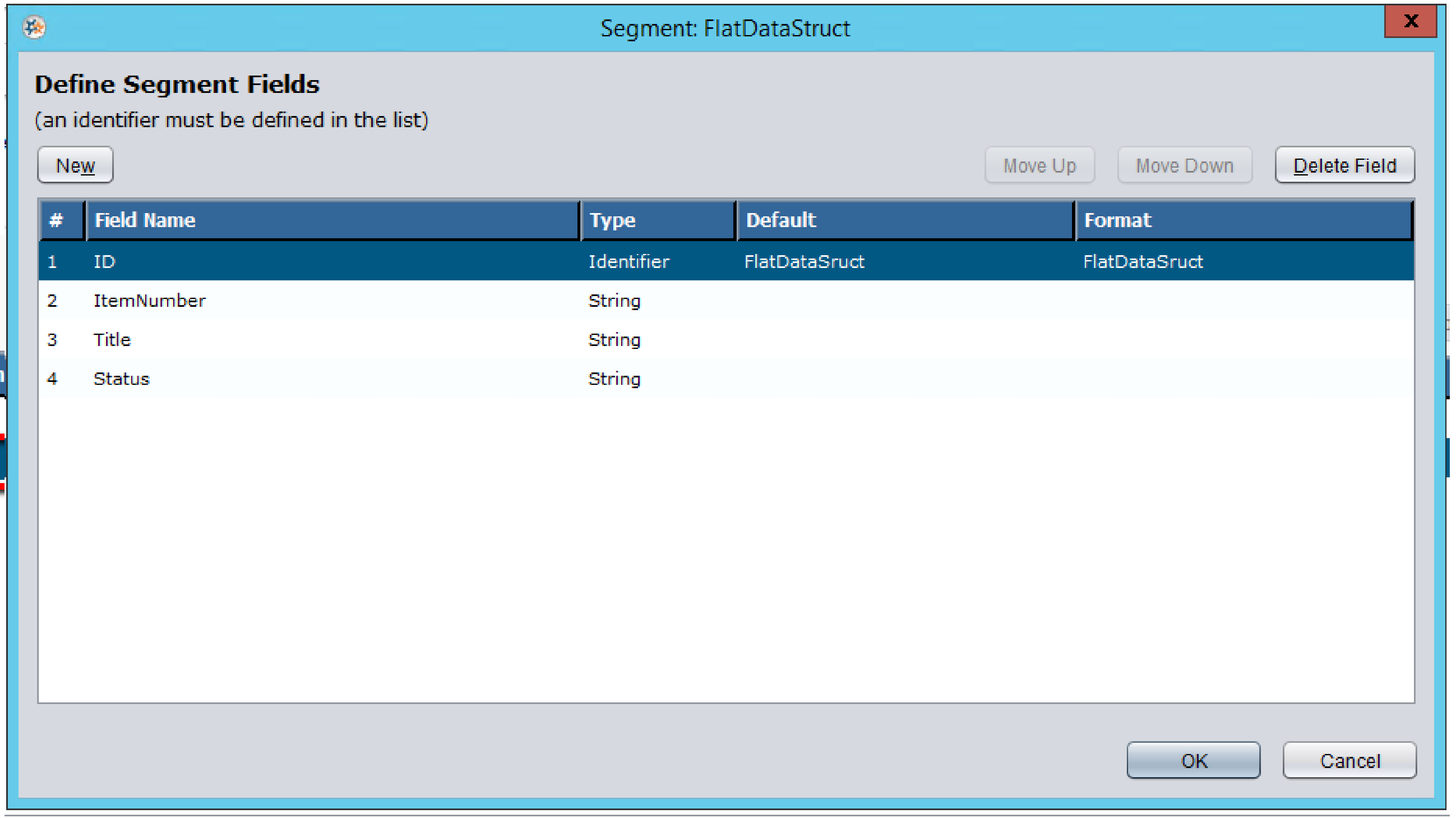
- Select “New” and add a name for the “simple” data segment
- Segment Parent: _Root, Occurrence: Only Once
- Select “Fields” and Field Names for the flat data



Define Segment Properties

New | Fields...

#	Segment Name	Segmen
1	_Root	N/A
2	FlatDataStruct	_Root



Segment: FlatDataStruct

Define Segment Fields

(an identifier must be defined in the list)

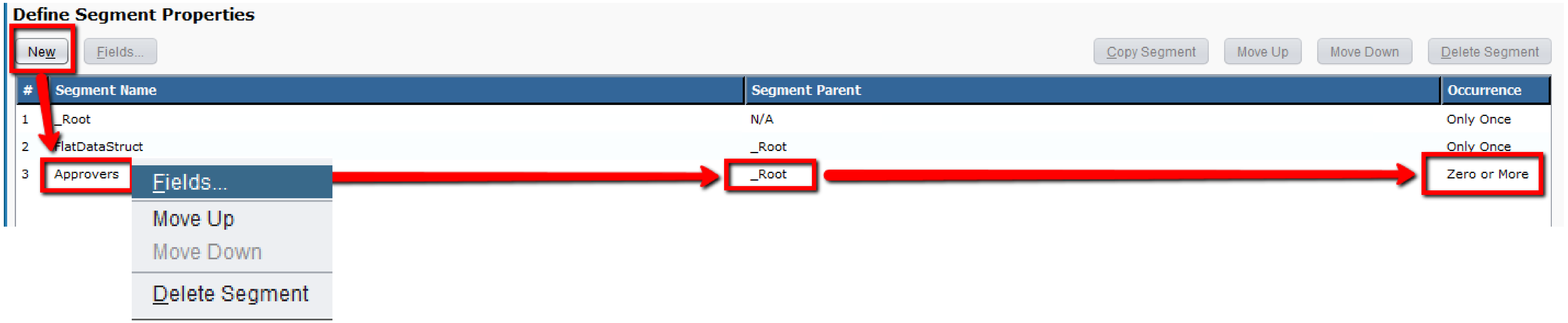
New | Move Up | Move Down | Delete Field

#	Field Name	Type	Default	Format
1	ID	Identifier	FlatDataSruct	FlatDataSruct
2	ItemNumber	String		
3	Title	String		
4	Status	String		

OK | Cancel

Define a Target Data Structure: “Complex” Method (cont.)

- Select “New”, enter a name for the “complex” data segment
- Segment Parent: _Root, Occurrence: Zero or More
- RMC on complex data name and chose “Fields”.

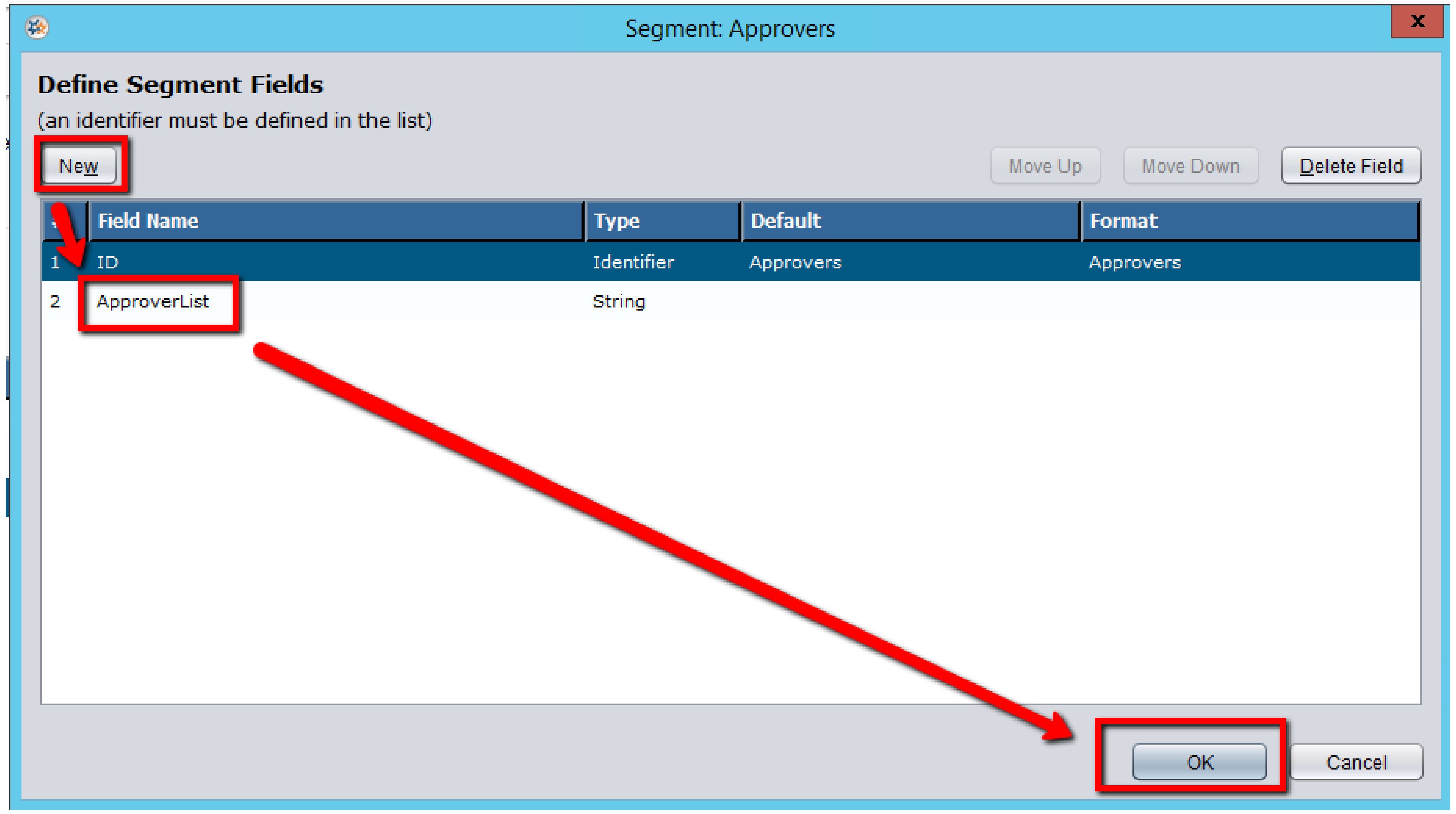


Define Segment Properties

#	Segment Name	Segment Parent	Occurrence
1	_Root	N/A	Only Once
2	FlatDataStruct	_Root	Only Once
3	Approvers	_Root	Zero or More

Define a Target Data Structure: “Complex” Method (cont.)

- Select “New”
- Add fields and data types



Segment: Approvers

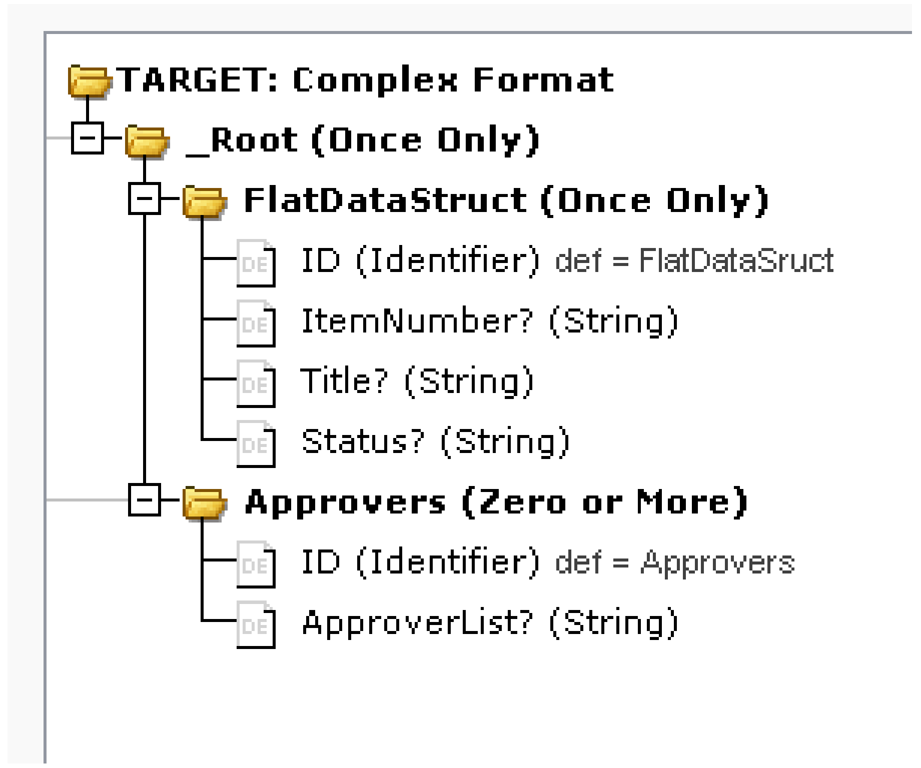
Define Segment Fields

(an identifier must be defined in the list)

	Field Name	Type	Default	Format
1	ID	Identifier	Approvers	Approvers
2	ApproverList	String		

Define a Target Data Structure: "Complex" Method (cont.)

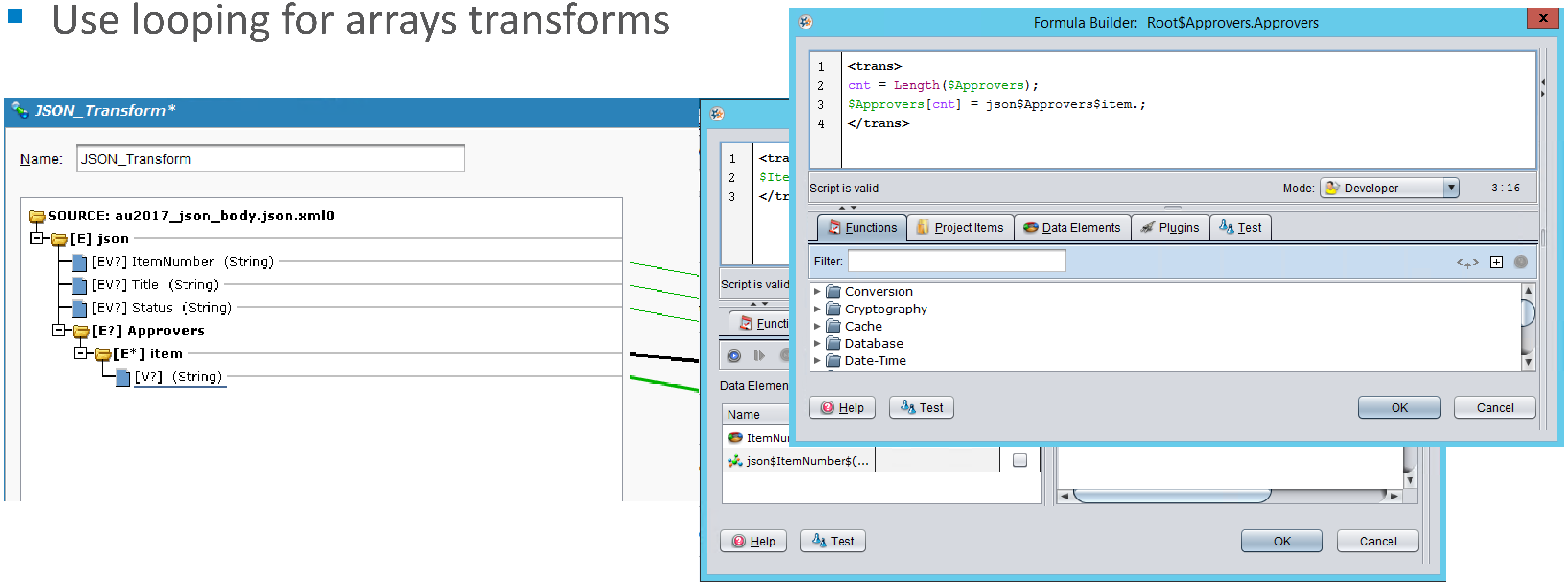
- Review the transformation structure



```
TARGET: Complex Format
  _Root (Once Only)
    FlatDataStruct (Once Only)
      ID (Identifier) def = FlatDataSruct
      ItemNumber? (String)
      Title? (String)
      Status? (String)
    Approvers (Zero or More)
      ID (Identifier) def = Approvers
      ApproverList? (String)
```

Map and Transform the Data

- Map data
- Assign variables and cast/transform as needed
- Use looping for arrays transforms



JSON_Transform*

Name: JSON_Transform

```
SOURCE: au2017_json_body.json.xml0
[E] json
  [EV?] ItemNumber (String)
  [EV?] Title (String)
  [EV?] Status (String)
  [E?] Approvers
    [E*] item
      [V?] (String)
```

Formula Builder: _Root$Approvers.Approvers

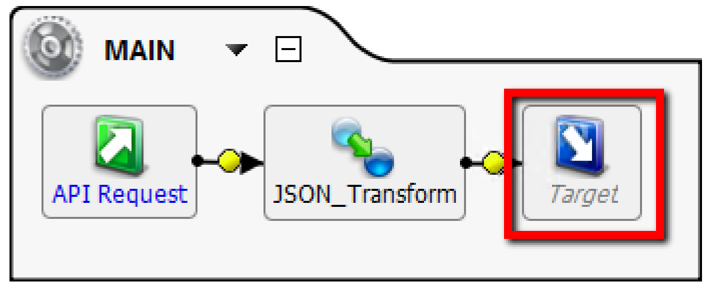
```
<trans>
cnt = Length($Approvers);
$Approvers[cnt] = json$Approvers$item.;
</trans>
```

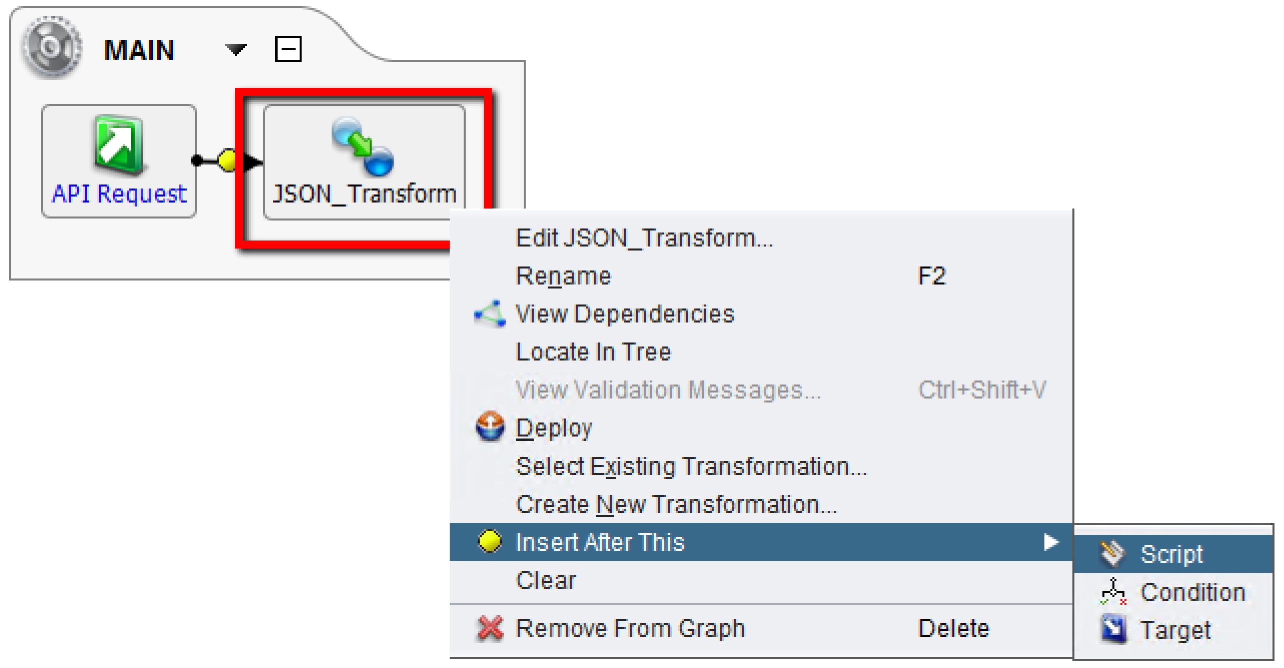
Script is valid

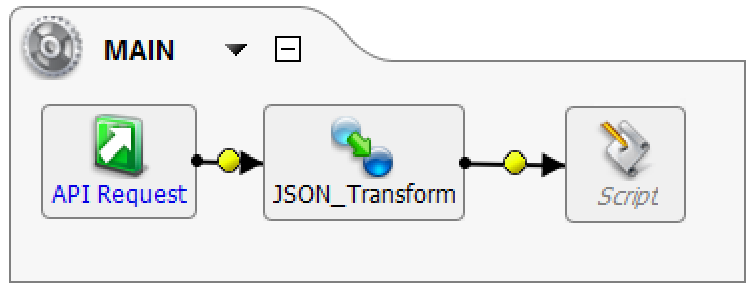
Mode: Developer 3:16

Modify Process and Create a Script

- RMC and delete the default target
- Select the transformation>RMC>Insert After This>Script

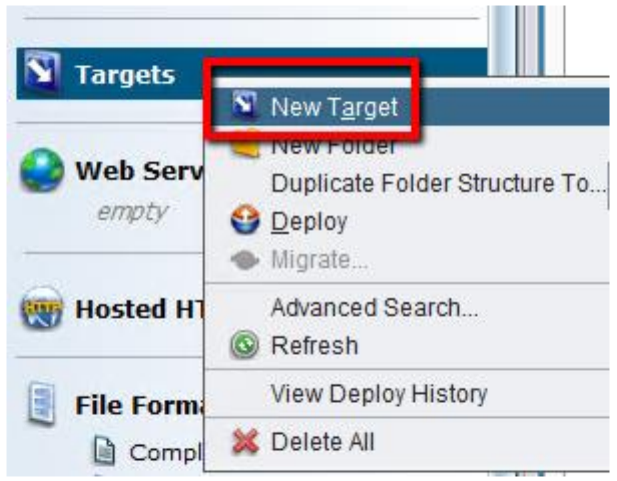


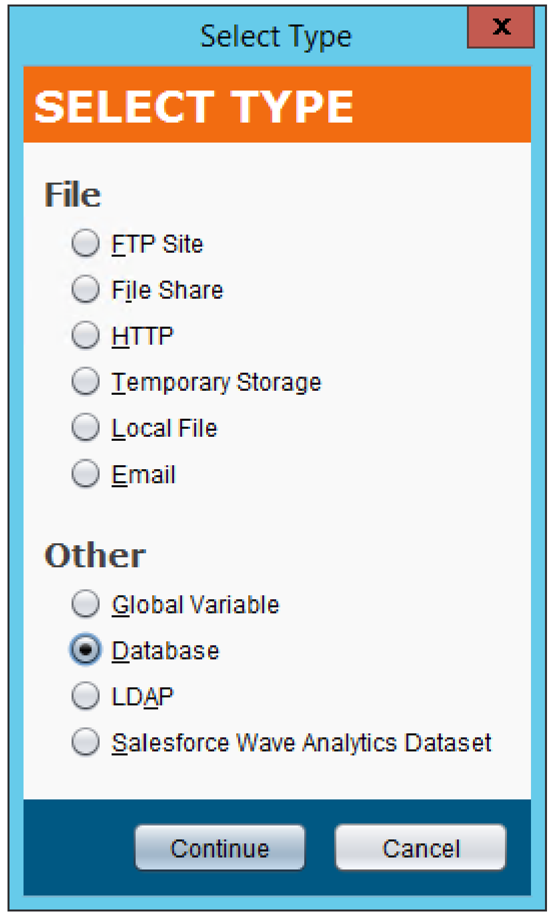




SQL: Run a Stored Procedure

- Create a database connection: Locate Targets>New Target
- Select Database
- Create the connection

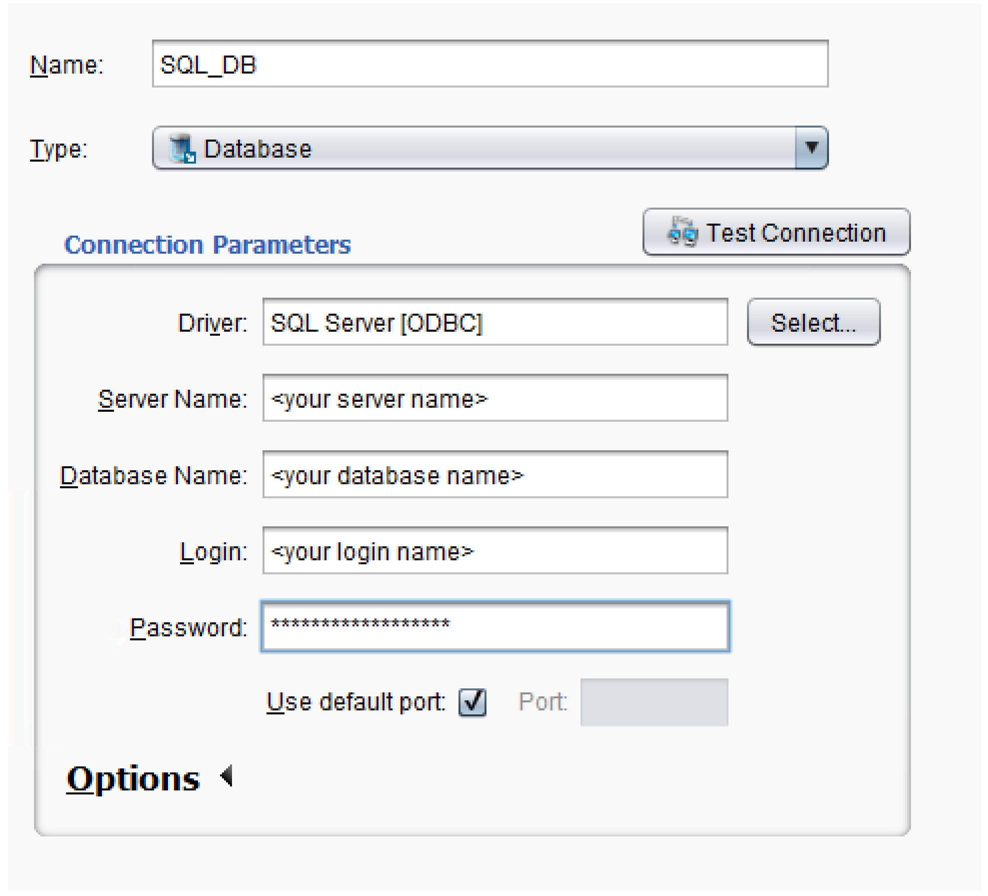



Select Type

SELECT TYPE

File
- ( ) FTP Site
- ( ) File Share
- ( ) HTTP
- ( ) Temporary Storage
- ( ) Local File
- ( ) Email

Other
- ( ) Global Variable
- (●) Database
- ( ) LDAP
- ( ) Salesforce Wave Analytics Dataset


Name: SQL_DB

Type: Database

Connection Parameters

Driver: SQL Server [ODBC]

Server Name: <your server name>

Database Name: <your database name>

Login: <your login name>

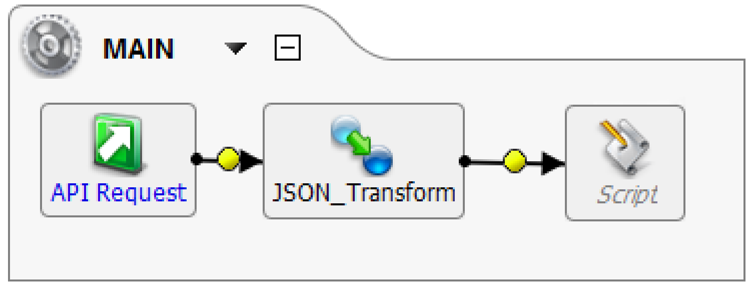
Password: ******************

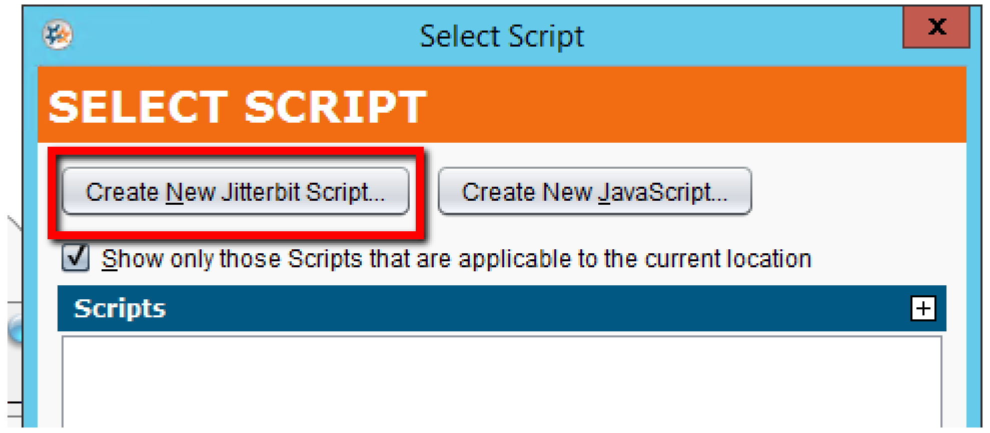
Use default port: ✓ Port:

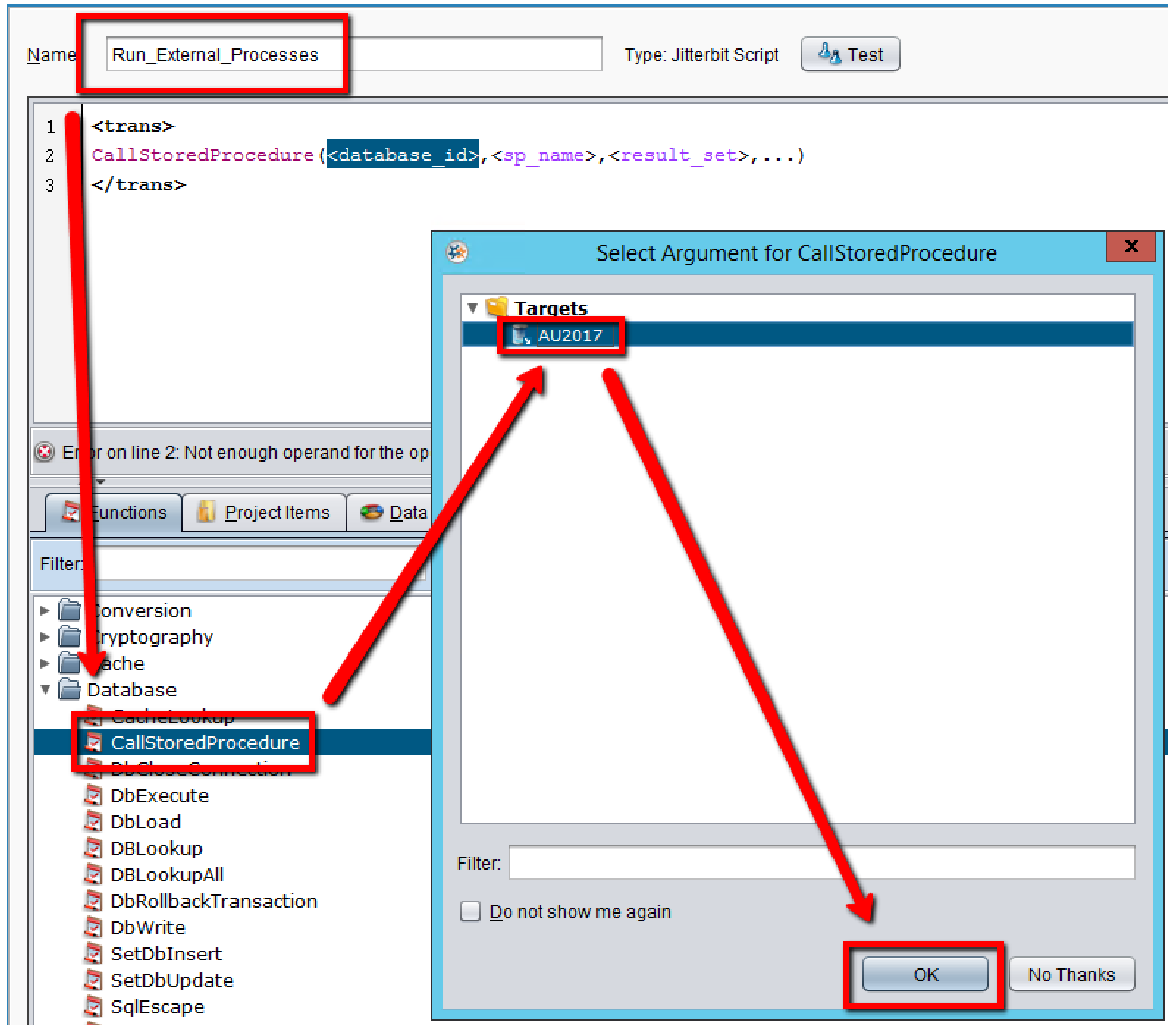
Options

SQL: Run a Stored Procedure (cont.)

- Double click the script icon
- Create a new script
- Apply function CallStoredProceedure




Select Script
SELECT SCRIPT
Create New Jitterbit Script...
Create New JavaScript...
Show only those Scripts that are applicable to the current location
Scripts

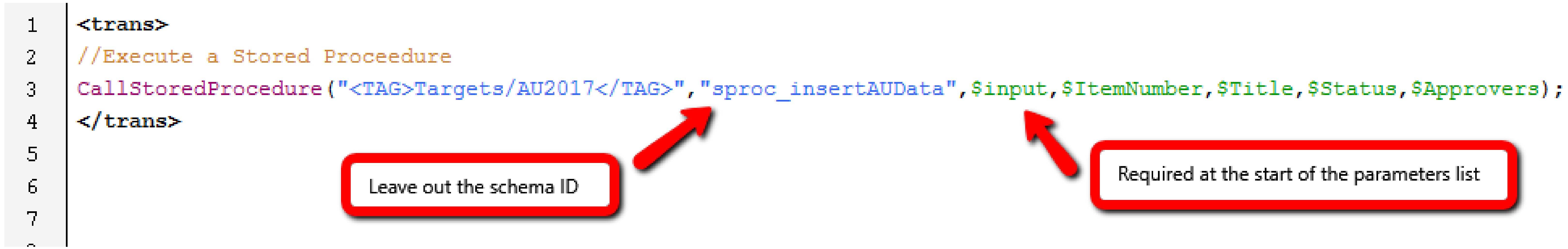


```
<trans>
CallStoredProcedure(<database_id>,<sp_name>,<result_set>,...)
</trans>
```

Error on line 2: Not enough operand for the op

SQL: Run a Stored Procedure (cont.)

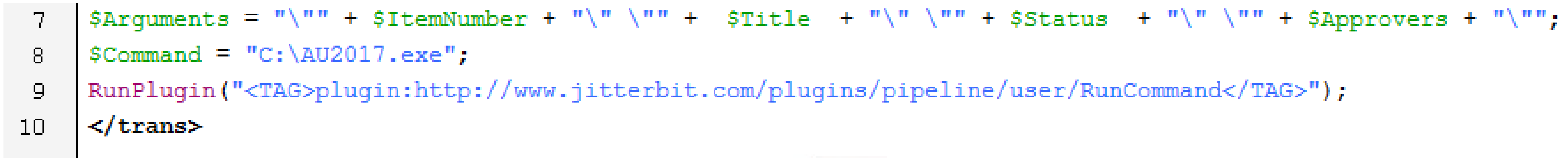
- Write the code for the sproc
- Leave out the schema ID when naming the stored procedure
- Insert the variable “$input” and then list the variables/params



```
<trans>
//Execute a Stored Proceedure
CallStoredProcedure("<TAG>Targets/AU2017</TAG>","sproc_insertAUData",$input,$ItemNumber,$Title,$Status,$Approvers);
</trans>
```

C#: Run a Console Application

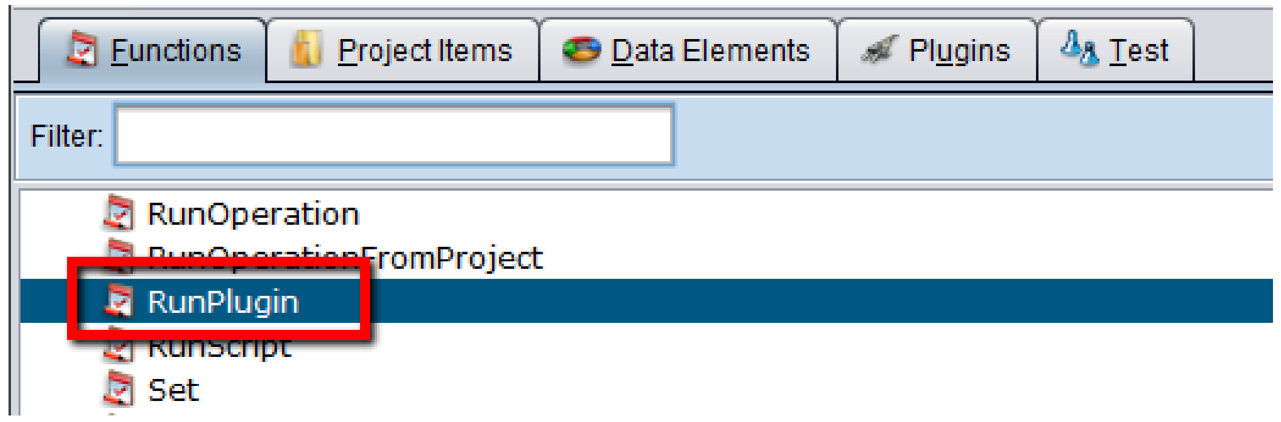
- Build “$Arguments” string
  - Encapsulate argument data in quotes (use escape characters)
  - Command is simply the path to the EXE
- Build “$Command” string
  - The string is simply the path to the EXE - Avoid white spaces
  - The Jitterbit service account should have access to the location

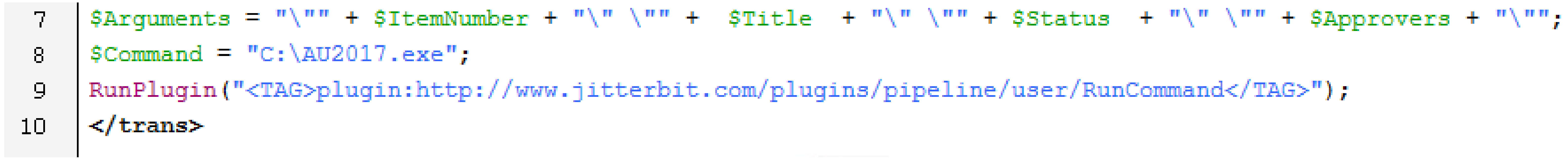


```
$Arguments = "\"" + $ItemNumber + "\" \"" +  $Title  + "\" \"" + $Status  + "\" \"" + $Approvers + "\"";
$Command = "C:\AU2017.exe";
RunPlugin("<TAG>plugin:http://www.jitterbit.com/plugins/pipeline/user/RunCommand</TAG>");
</trans>
```

C#: Run a Console Application

- From the Functions tab locate General>RunPlugin
- Insert into the code





```
$Arguments = "\"" + $ItemNumber + "\" \"" +  $Title  + "\" \"" + $Status  + "\" \"" + $Approvers + "\"";
$Command = "C:\AU2017.exe";
RunPlugin("<TAG>plugin:http://www.jitterbit.com/plugins/pipeline/user/RunCommand</TAG>");
</trans>
```

Trigger Script from Fusion Lifecycle

- Hook the action script up to a triggering event in FLC
  - Workflow transition
  - On edit or create script
  - Push button script

QUESTIONS