

# Mule 4 Dynamic Evaluate Component



# Dynamic Evaluate

- A behaviour which allows you to dynamically select the dataweave script instead of hardcoding the script in the Transform Message component.
- This component lets you execute an expression which eventually evaluates a Dataweave script where in the expression being executed here again results in a dataweave script.
- This way we can dynamically select the dataweave script to be executed with respect to any varying parameter.

## Use Case

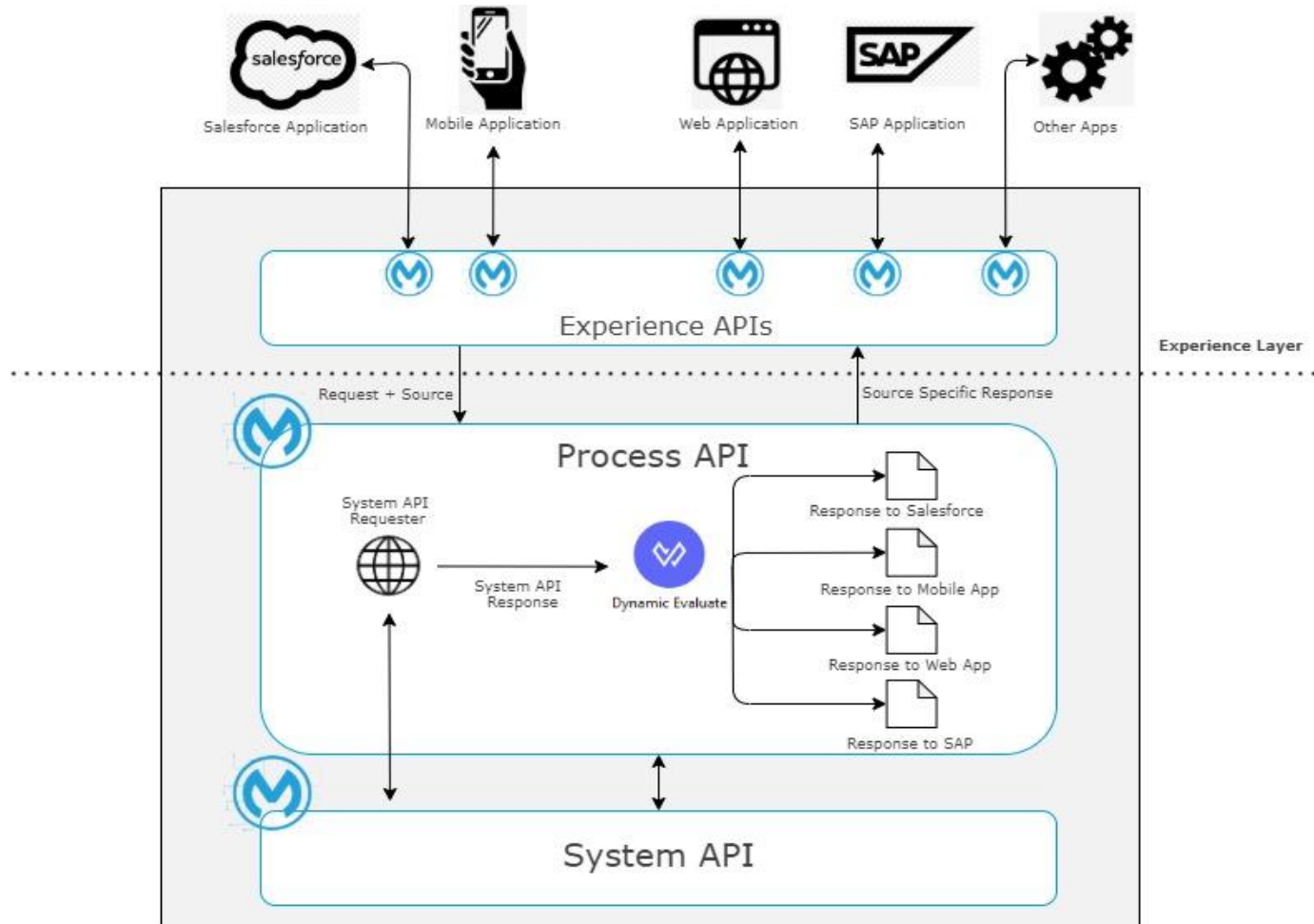
As a developer I want to orchestrate the response retrieved from System API and respond back to Experience API with client expected response structure dynamically.

### Functional Scenario:

Assume we are in API led connectivity approach where we have

- A set of Experience APIs invoked by different applications like salesforce, SAP, Mobile Apps, Web Apps etc for the same functionality.
- A Process API to orchestrate the response coming from System API with respect to source of the request.
- A System API which connects to backend systems like databases etc to get the required data.





# Implementation Steps

- Create a mule project
- Create dwl files as shown below specific to each Client Application

```
{/} webApp.dwl X
1 output application/json
2 ---
3 {
4   firstName: firstName,
5   lastName: lastName,
6   address1: address1,
7   address2: address2
8 }

{/} mobileApp.dwl X
1 output application/json
2 ---
3 {
4   firstName: firstName,
5   address1: address1
6 }

{/} salesforceApp.dwl X
1 output application/json
2 ---
3 {
4   firstName: firstName,
5   lastName: lastName,
6   address1: address1,
7   address2: address2,
8   company: company
9 }
```

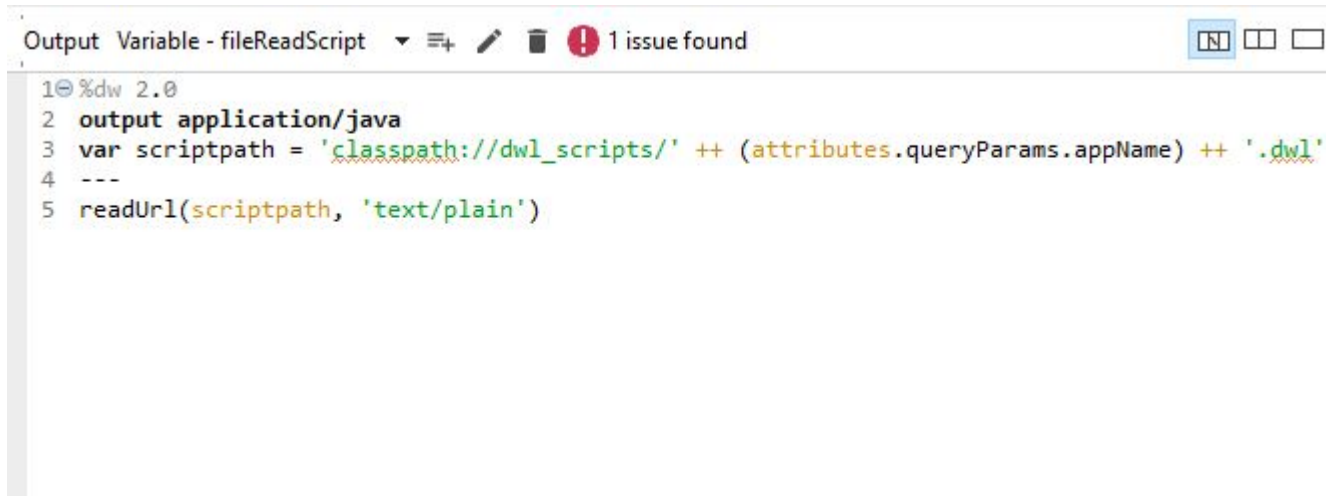
# Implementation Steps

- Set below payload in Transform Message Component and assume it to act as response from system API

```
Output Payload ▾ ⚙️ 🗑️ ! 1 issue found
1 %dw 2.0
2 output application/json
3 ---
4 {
5     "firstName": "Hello",
6     "lastName": "World",
7     "address1": "Hyderabad",
8     "address2": "India",
9     "company": "Technology"
10 }
```

# Implementation Steps


- Create a mule variable to store the dynamic dataweave client specific script using `readUrl()` in which dw file to be picked is based on the `queryParams(appName)` passed by client application



```
Output Variable - fileReadScript 1 issue found
1 %dw 2.0
2 output application/java
3 var scriptpath = 'classpath://dw1_scripts/' ++ (attributes.queryParams.appName) ++ '.dw1'
4 ---
5 readUrl(scriptpath, 'text/plain')
```

# Implementation Steps

- Configure Dynamic Evaluate Component to read the dynamic script and run on the payload.



The screenshot displays the MuleSoft IDE interface for configuring the Dynamic Evaluate component. The top bar includes tabs for 'Dynamic Evaluate', 'Problems', and 'Console'. On the left, a sidebar contains links for 'General', 'Metadata', 'Notes', and 'Help'. The main configuration area shows a green checkmark indicating 'There are no errors.' Below this, the 'Display Name' is set to 'Dynamic Evaluate'. The 'Parameters' section contains the expression '#[payload]'. The 'Expression' field is set to '#[ vars.fileReadScript' with a small 'fx' icon and a dropdown menu. The 'Target' field is empty. The 'Target Value' field is set to '#[ payload' with a small 'fx' icon and a dropdown menu.

Dynamic Evaluate x Problems Console

General

Metadata

Notes

Help

There are no errors.


Display Name: Dynamic Evaluate

Parameters:

#[payload]

Expression:  #[ vars.fileReadScript

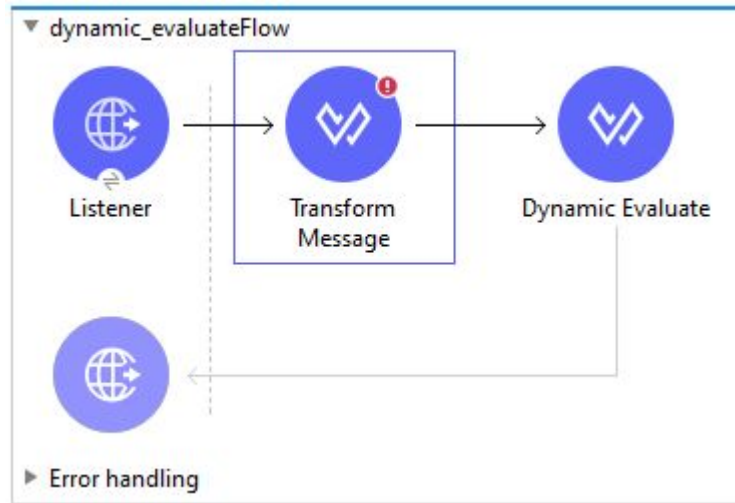
Target:

Target Value:  #[ payload




# Implementation Steps

- Final Mule Flow





# Deploy and Test

GET 

http://localhost:8081/dynamic/evaluate?appName=mobileApp

Params

Send 

Save 

Auth


Headers

Body

Pre-req.

Tests

Code

Key	Value	Description	...	Bulk Edit	Presets 
New key	Value	Description			

Status: 200 OK

Time: 51 ms

Body

Cookies


Headers (3)


Test Results

Pretty


Raw

Preview

JSON 





```
1 {  
2   "firstName": "Hello",  
3   "address1": "Hyderabad"  
4 }
```

GET 

http://localhost:8081/dynamic/evaluate?appName=webApp

Params

Send 

Save 

Auth


Headers

Body

Pre-req.

Tests

Code

Key	Value	Description	...	Bulk Edit	Presets 
New key	Value	Description			

Status: 200 OK

Time: 373 ms

Body

Cookies


Headers (3)


Test Results

Pretty

Raw

Preview

JSON 



```
1 {  
2   "firstName": "Hello",  
3   "lastName": "World",  
4   "address1": "Hyderabad",  
5   "address2": "India"  
6 }
```

GET 

http://localhost:8081/dynamic/evaluate?appName=salesforceApp

Params

Send 

Save 

Auth

Headers

Body

Pre-req.

Tests

Code

Status: 200 OK

Time: 342 ms

Body

Cookies

Headers (3)

Test Results

Pretty

Raw

Preview

JSON 



## Additional Information

Codebase Location :

[https://github.com/praneethveni/mule-artifacts/tree/master/dynamic\\_evaluate](https://github.com/praneethveni/mule-artifacts/tree/master/dynamic_evaluate)