

## **AI Agent Studio demo. New features in Release 25D.**

### **Agent Team of type “Workflow”. Steps.**

- 1. Query Purchase Order, depending on Supplier field, if found.**
- 2. Create a Payables invoice from the PO (only one line)**
- 3. Generate Deep Link for the created invoice.**

### **Introduction/Goal.**

Release 25D is full of new features, Agent Teams are now of 3 types:

- Supervisor.
- Sequential.
- Workflow. This document apply to this one.

We will prepare a basic demo to show the steps **needed for learning purposes.**

Feel free to improve and add your own new features.

We will build our first prototype for Workflow Agent Team that includes:

- Incoming parameters (triggers).
- Variables, assigning from triggers.
- Assigning values from business objects responses to variables.
- Several Business Object Functions (based on Business Objects).
- “If conditions”.
- “Send eMail” nodes.
- Generate Deep Link to allow user to navigate to the Payables invoice just created.

**Disclaimer: this demo is for learning purposes, only one line of purchase order will be used to create the payables invoice.**

## **Preparatory steps.**

We assume you have basic knowledge to build the business objects tools, to summarize steps.

Recommendation: you could review previous chapters where we detail how to accomplish these tasks.

## **Build Business Object 1.**

Name: AA\_BO\_PURCHASE\_ORDER.

Description: get purchase order data.

Operation: GET.

**Edit scenario - AA\_BO\_PURCHASE\_ORDER**

Name getPurchaseOrder	Description get purchase order data
Operation Type HTTP GET	Resource Path /fscmRestApi/resources/11.13.18.05/purchaseOrders? onlyData=true&q=OrderNumber='{pOrderNumber}'&expand=lines

Resource path for scenario.

```
/fscmRestApi/resources/11.13.18.05/purchaseOrders?onlyData=true&q=OrderNumber='{pOrderNumber}'&expand=lines
```

Parameters.

**Parameters and Business Object Fields**

Name	Data Type	Description	Is Parameter
pOrderNumber	string	purchase order parameter	true
POHeaderId	integer	Value that uniquely identifies the purchase order.	false
OrderNumber	string	Number that uniquely identifies the purchase order in the sold-to legal entity.	false
Status	string	Status of the purchase order relative to the purchase order life cycle.	false
ProcurementBU	string	Business unit that manages and owns the purchase order.	false
SupplierId	integer	Value that uniquely identifies the supplier.	false
Supplier	string	Supplier who fulfills the item.	false

Supplier	string	Supplier who turns the item.	false
SupplierSite	string	Location that the supplier uses to purchase the item.	false
BillToBU	string	Business unit that processes supplier invoices for the purchase order.	false
lines.LineNumber	number	Number that uniquely identifies the purchase order line.	false
lines.LineType	string	Type that indicates whether the purchase order line references an item or a service.	false
Description	string	Description of the purchase order.	false
Total	number	Ordered amount plus the exclusive tax amounts for the purchase order.	false
lines.Item	string	Abbreviation that uniquely identifies the item on the purchase order.	false
lines.Description	string	Description of the item that the purchase order references.	false
lines.Total	number	Ordered amount plus the exclusive tax amounts on the purchase order	false

## Build Business Object 2.

Name: AA\_BO\_SUPPLIER\_DATA.

Description: get supplier data.

Operation: GET.

The screenshot shows the configuration interface for a business object named 'AA\_BO\_SUPPLIER\_DATA'. It includes fields for Family (set to PRC), Product (set to Other), Name (set to AA\_BO\_SUPPLIER\_DATA), and Code (set to ORA\_PRC\_OTHER\_AABOSUPPLIERDAT). The Resource Type is set to 'Monolith resource', and the Resource Path is set to '/fscmRestApi/resources/11.13.18.05/suppliers'. A description field contains the text 'Get supplier details'. At the top right, there are 'Cancel' and 'Save' buttons.

Resource path for scenario.

```
/fscmRestApi/resources/11.13.18.05/suppliers?expand=DFF&q=SupplierId='{pSupplierId}'&onlyData=true&fields=BusinessRelationshipCode,SupplierId,Supplier,SupplierNumber,TaxpayerCountryCode
```

## Business Object Functions

<a href="#">+</a> Add from Specification <a href="#">Import</a>			
Name	Description	Resource Path	Actions
getSupplierData	Get supplier details	/fscmRestApi/resources/11.13.18.05/suppliers?expand=DFF&q={pSupplierId}&onlyData=true&fields=BusinessRelationshipCode,SupplierId,Supplier,SupplierNumber,TaxpayerCountryCode	<a href="#"></a> <a href="#"></a> <a href="#"></a>

## Parameters and Business Object Fields

<a href="#">Add Parameter</a> <a href="#">Add Field</a> <a href="#">Add Field from Specification</a>				
Name	Data Type	Description	Is Parameter	Actions
pSupplierId	string	Supplier Id parameter	true	<a href="#"></a> <a href="#"></a>
SupplierNumber	string	Supplier Number	false	<a href="#"></a> <a href="#"></a>
Supplier	string	Supplier	false	<a href="#"></a> <a href="#"></a>
BusinessRelationshipCode	string	Business Relationship	false	<a href="#"></a> <a href="#"></a>
TaxpayerCountryCode	string	Taxpayer Country Code	false	<a href="#"></a> <a href="#"></a>
SupplierId	integer	Supplier Id	false	<a href="#"></a> <a href="#"></a>

## Example Usages

<a href="#">+</a> Add		
Description	Sample Payload	Actions
Sample payload	{"pSupplierId":111}	<a href="#"></a> <a href="#"></a>

### **Build Business Object 3.**

Here we will create a payables invoices with the minimum data.

Name: AA\_CREATE\_AP\_INV.

Description: Create payables invoice.

**Create a new business object**

Family PRC	Product Other
Name AA_CREATE_AP_INV	Code ORA_PRC_OTHER_AACREATEAPINV
Resource Type Monolith resource	Resource Path /fscmRestApi/resources/11.13.18.05/invoices
Description Create payables invoice	

#### **Business Object Functions**

<a href="#">+</a>	<a href="#">Add from Specification</a>	<a href="#">Import</a>	
Name	Description	Resource Path	Actions
createAplInvoice	Create payables invoice	/fscmRestApi/resources/11.13.18.05/invoices	<a href="#"></a> <a href="#"></a> <a href="#"></a>

Scenario.

**Edit scenario - AA\_CREATE\_AP\_INV**

Name createAplInvoice	Description Create payables invoice
Operation Type HTTP POST	Resource Path /fscmRestApi/resources/11.13.18.05/invoices
Operation Payload	
{ "InvoiceNumber": "{pInvoiceNumber}", "InvoiceCurrency": "{pInvoiceCurrency}", "InvoiceAmount": "{pInvoiceAmount}", "InvoiceDate": "{pInvoiceDate}", "BusinessUnit": "{pBusinessUnit}", "Supplier": "{pSupplier}", "SupplierSite": "{pSupplierSite}", "Description": "{pDescription}", "invoiceLines": [ { "LineType": "Normal", "LineAmount": "{pLineAmount}", "LineTax": "{pLineTax}" } ] }	

## Parameters and Business Object Fields

Add Parameter	Add Field	Add Field from Specification	
pInvoiceAmount	string	Invoice amount parameter	true
pInvoiceDate	string	Invoice date parameter	true
pBusinessUnit	string	Business Unit parameter	true
pSupplier	string	Supplier parameter	true
pSupplierSite	string	Supplier site parameter	true
pDescription	string	Invoice Description parameter	true
pLineNumber	string	Line number parameter	true
pLineAmount	string	Line amount parameter	true

Resource path:

/fscmRestApi/resources/11.13.18.05/invoices

Operation: POST.

Operation payload:

```
{
    "InvoiceNumber": "{pInvoiceNumber}",
    "InvoiceCurrency": "{pInvoiceCurrency}",
    "InvoiceAmount": "{pInvoiceAmount}",
    "InvoiceDate": "{pInvoiceDate}",
    "BusinessUnit": "{pBusinessUnit}",
    "Supplier": "{pSupplier}",
    "SupplierSite": "{pSupplierSite}",
    "Description": "{pDescription}",
    "invoiceLines": [
        {
            "LineNumber": "{pLineNumber}",
            "LineAmount": "{pLineAmount}"
        }
    ]
}
```

Example usage.

## Example Usages

Description	Sample Payload	Actions
Invoice creation	{ "InvoiceNumber": "DEMO_AI_FF_02", "InvoiceCurrency": "USD", "InvoiceAmount": 2212.75, "InvoiceDate": "2019-02-01", "BusinessUnit": "US1 Business Unit", "Supplier": "ABC Consulting", "SupplierSite": "ABC US1", "Description": "Office Supplies", "InvoiceLines": [ { "LineNumber": 1, "LineAmount": 2112.75 } ] }	 

```
{
    "InvoiceNumber": "DEMO_AI_FF_02",
    "InvoiceCurrency": "USD",
    "InvoiceAmount": 2212.75,
    "InvoiceDate": "2019-02-01",
    "BusinessUnit": "US1 Business Unit",
```

```
"Supplier": "ABC Consulting",
"SupplierSite": "ABC US1",
"Description": "Office Supplies",
"invoiceLines": [
    {
        "LineNumber": 1,
        "LineAmount": 2112.75
    }
]
```

## Deep link.

This Deep link is in our demo instance, we will document the setup.

**Edit deeplink - AP Invoice View Link**

Family FIN	Product Other		
Name AP Invoice View Link	Code ORA_FIN_OTHER_APINVOICEVIEWLINK		
Relative url <code>/fscmUI/faces/deeplink?objType=AP_VIEWINVOICE&amp;action=VIEW&amp;objKey={InvoiceId}</code>	Description A link allowing a user to view AP Invoice Details		
Message Click {deeplink} for details on this invoice.			
Parameter Name	Description	Data Type	Sample Value
InvoiceId	The Internal ID of the invoice	string	300000136616859

`/fscmUI/faces/deeplink?objType=AP_VIEWINVOICE&action=VIEW&objKey={InvoiceId}`

## Tool for Deep Link.

**AP Invoice View Link**

Tool Type Deep Link	Tool Name AP Invoice View Link
Tool Code AP_INVOICE_VIEW_LINK	Family FIN
Product Other	
Description A link to the invoice details based on the internal id of the invoice	
Require human approval <input checked="" type="checkbox"/>	
Enable if you want human approval before running the tool.	
<b>Deep link</b>	
AP Invoice View Link	
Message	
Click {deeplink} for details on this invoice.	

## Worker Agent creation for Deep Link.

**AA\_AP\_INVO\_AGENT\_FOR\_DL**

Worker Agent

Agent Name AA_AP_INVO_AGENT_FOR_DL	Agent Code AAAPINVOAGENTFORDL
Family PRC	Product Other
Maximum Interactions 10	
Description This agent creates a deep link that takes users directly to a corresponding payables invoice.	
Agent Persona and Role	
<p>Editing the value changes this to a custom agent team.</p> <p><b>Prompt</b> You are an agent used to generate a deep link for requisition details by taking input parameter Invoiceld. Given an input of Invoiceld, construct a deep link using the "AP Invoice View Link" tool. The Invoice ID will be the input to you that is {{\$context.\$agents.\$self.\$input}} Once the deep link is ready, show the deep link in the output.</p> <p>Type {{ to start seeing context-sensitive expressions.</p>	
<p><b>Cancel</b> <b>Update</b></p>	

### Description.

This agent creates a deep link that takes users directly to a corresponding payables invoice.

### Prompt.

You are an agent used to generate a deep link for requisition details by taking input parameter Invoiceld. Given an input of Invoiceld, construct a deep link using the "AP Invoice View Link" tool. The Invoice ID will be the input to you that is {{\$context.\$agents.\$self.\$input}} Once the deep link is ready, show the deep link in the output.

Include the Tool in the Agent.

The screenshot shows the Oracle AI for Fusion interface. On the left, there is a sidebar with icons for search, refresh, and other navigation. The main area has a title bar "AA\_AP\_INVO\_AGENT\_FOR\_DL" and a sub-header "Custom Agent". Below this, there is a "Tools(1)" section containing a single item: "AP Invoice View Link". A tooltip for this tool states: "This agent creates a deep link to the invoice details based on the internal id of the invoice." To the right of the agent's interface, a detailed view of the "AP Invoice View Link" tool is shown. This view includes fields for "Tool Type" (Deep Link), "Tool Code" (AP\_INVOICE\_VIEW\_LINK), "Product" (Other), "Description" (A link to the invoice details based on the internal id of the invoice), and "Requires human approval" (unchecked). Under the "Deep link" section, there is a preview message: "AP Invoice View Link" followed by "Message: Click [deepLink] for details on this invoice." At the bottom of the interface are standard browser-style navigation buttons.

Output.

The screenshot shows the Oracle AI for Fusion interface. The title bar indicates the agent is named "AA\_AP\_INVO\_AGENT\_FOR\_DL" and is a "Worker Agent". Below the title bar, there are tabs for "Details", "LLM", "Input Variables", and "Output", with "Output" being the active tab. Under the "Output" tab, there is a section titled "Output" with two mode options: "Output Builder Mode" (selected) and "Simple Mode". Below this, there is a "Properties" section containing a JSON schema definition:

```
{ "$schema": "http://json-schema.org/draft-04/schema#", "type": "object", "properties": { "deeplink": { "type": "string" } } }
```

Text for the Output.

```
{ "$schema": "http://json-schema.org/draft-04/schema#", "type": "object", "properties": { "deeplink": { "type": "string" } } }
```

Input Variables.

**AA\_AP\_INVO\_AGENT\_FOR\_DL**

Worker Agent

Details LLM **Input Variables** Output

**Input Variables**

**Add**

Name Invoiceld	Type Integer
Value	<b>Add</b>
Description Invoice Id	

**Cancel** **Apply**

The screenshot shows a configuration interface for a worker agent named 'AA\_AP\_INVO\_AGENT\_FOR\_DL'. The 'Input Variables' tab is active. A variable named 'Invoiceld' is defined with the type 'Integer'. The 'Value' field is empty, and there is a note indicating context-sensitive expressions can be typed. The 'Description' field contains 'Invoice Id'. At the bottom, there are 'Cancel' and 'Apply' buttons.

### **Steps to setup Agent Team.**

Create Agent Team of type Workflow.

Name: AA\_AT\_WF\_PO\_TO\_INV.

Description: Generate payables invoices from purchase orders for a specific list of suppliers

**AA\_AT\_WF\_PO\_TO\_INV**

Details	LLM	Security	Triggers	Variables	Error Handling
Agent Team Name AA_AT_WF_PO_TO_INV				Agent Team Code AAATWFPOINV	
Family PRC				Product Other	
Type Workflow				Maximum Interactions	
Description Generate payables invoices from purchase orders for a specific list of suppliers					

Triggers tab.

**AA\_AT\_WF\_PO\_TO\_INV**

Details	LLM	Security	Triggers	Variables	Error Handling
<b>Webhook</b>					
pMailTo	string				
pOrderNumber	string				

## Variables tab.

The screenshot shows the 'Variables' tab selected in the navigation bar of a workflow editor. The tab contains five variable definitions:

- varTaxpayerCountryCode**: string
- varBusinessRelationshipCode**: string
- varSupplId**: integer
- pOrderNumber**: string
- pMailTo**: string

## Error Handling tab.

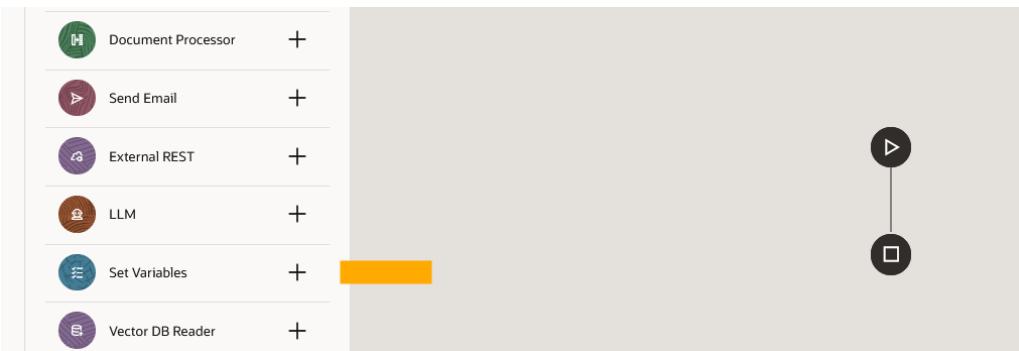
The screenshot shows the 'Error Handling' tab selected in the navigation bar. It is configured to send an email for permanent errors. The configuration includes:

- Email** section: Set to send an email when a workflow instance encounters a permanent error.
- Recipients**: `{$context.$variables.pMailTo}`
- CC**: `{`Type {{ to start seeing context-sensitive expressions.}`}`
- Email Subject**: `{"Error: - " + $context.$variables.pOrderNumber}`
- Email Template**:  

```
{"There was an error order number " + $context.  
$variables.pOrderNumber+"<br><details><summary><b>Details:</b></summary><br><b>Node:</b> "+  
$context.$error.$nodeCode+"<br><b>Error:</b> "+$context.$error.$errorMessage+"<br><b>Node  
Input:</b> "+JSON.stringify($context.$nodes[$context.$error.$nodeCode].$input)+"</details>"})|
```

Set variables, we will assign values from “Triggers” data.

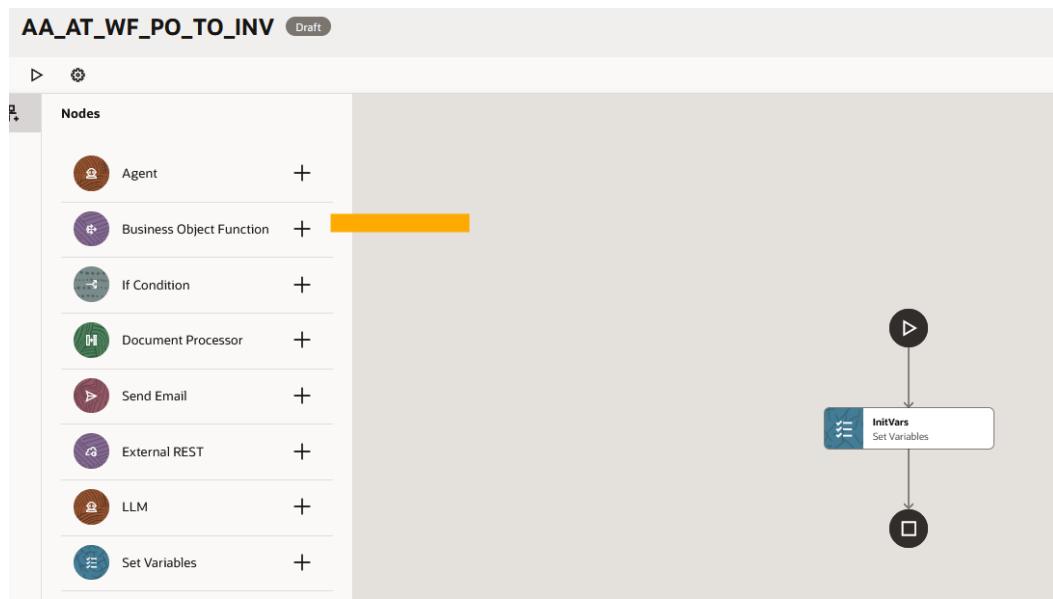
Select the right list as shown.



After the node is on canvas.

Node “set variables”on canvas.	Assign value to first variable.
<p>A diagram showing the 'InitVars' node (Set Variables) on the canvas, connected by arrows to a trigger node above it and a process node below it.</p>	<p><b>InitVars</b> Set Variables</p> <p>Name InitVars</p> <p><b>Variables</b></p> <p>Name pOrderNumber</p> <p>Value {{context.\$triggers.REST.\$input.pOrderNumber}}</p> <p>Type {{ to start seeing context-sensitive expressions.</p>
	<p><b>Second variable.</b></p> <p><b>InitVars</b> Set Variables</p> <p>Name InitVars</p> <p>Code INITVARS</p> <p><b>Variables</b></p> <p>pOrderNumber string</p> <p>Name pMailTo</p> <p>Type string</p> <p>Value {{context.\$triggers.REST.\$input.pMailTo}}</p> <p>Type {{ to start seeing context-sensitive expressions.</p>

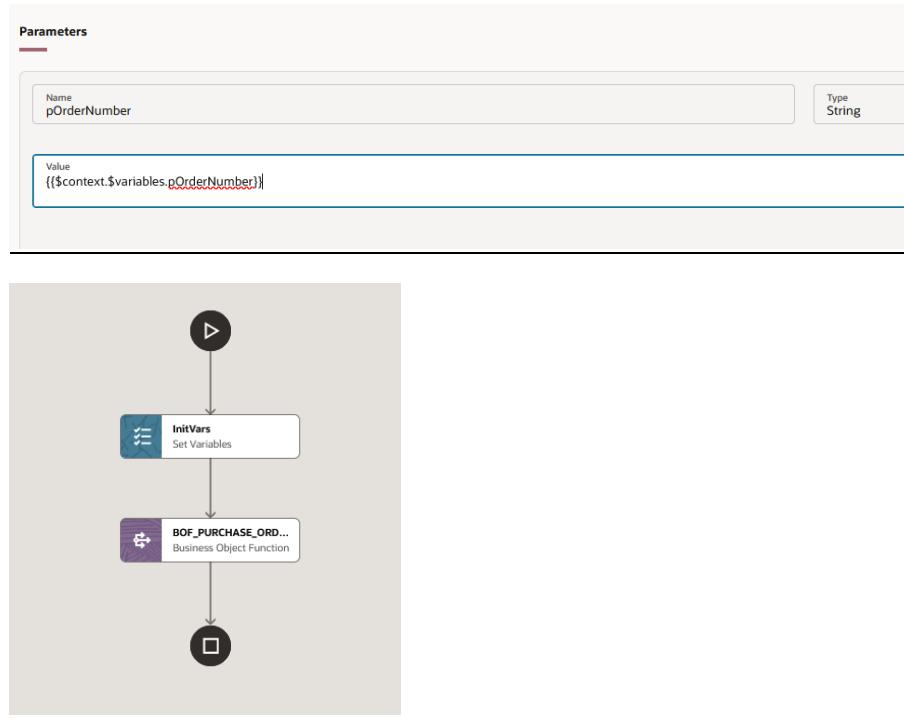
Now we have to read the Purchase Order using, so we need to include one of the Business Objects created above. The node is called “Business Object Function”.



Name : BOF\_PURCHASE\_ORDER.

The screenshot shows the configuration page for the 'BOF\_PURCHASE\_ORDER' Business Object Function. It includes fields for Name (BOF\_PURCHASE\_ORDER), Code (BOPPURCHASEORDER), Type (Business Object Function), Family (PRC), Product (Other), Business object (AA\_BO\_PURCHASE\_ORDER), and Function (getPurchaseOrder). Below these, the 'Parameters' section lists 'pOrderNumber' as a string parameter. The 'Output' section shows 'Specification Mode' selected over 'Simple Mode'. At the bottom, there is a 'Properties' section containing an empty JSON object {}.

Here in parameters, we assign the variable that previously has been assigned in trigger by the user.



## Output.

In this step we have to tell the Agent team the structure of the output.

The screenshot shows the configuration of the 'BOF\_PURCHASE\_ORDER' Business Object Function. It includes fields for Name (BOF\_PURCHASE\_ORDER), Code (BOFPURCHASEORDER), Type (Business Object Function), Family (PRC), Product (Other), Business object (AA\_BO\_PURCHASE\_ORDER), and Function (getPurchaseOrder). The 'Parameters' section shows a parameter 'pOrderNumber' of type string. The 'Output' section is set to Specification Mode, showing JSON schema properties for an array of internal lists.

```

Properties
{
  "$schema": "http://json-schema.org/draft-07/schema#",
  "title": "Internal_List1",
  "type": "array",
  "properties": {
    "Internal_List1": {
      "type": "array",
      "items": [
        "Name": "chiar1"
      ]
    }
  }
}
  
```

## Text for Output.

```
{  
    "$schema": "http://json-schema.org/draft-07/schema#",  
    "title": "Internal_List1",  
    "type": "object",  
    "properties": {  
        "Internal_List1": {  
            "type": "array",  
            "items": {  
                "type": "object",  
                "properties": {  
                    "lines": {  
                        "type": "array",  
                        "items": {  
                            "type": "object",  
                            "properties": {  
                                "LineNumber": {  
                                    "type": "integer"  
                                },  
                                "Total": {  
                                    "type": "integer"  
                                },  
                                "LineType": {  
                                    "type": "integer"  
                                },  
                                "Description": {  
                                    "type": "integer"  
                                }  
                            }  
                        }  
                    }  
                }  
            }  
        },  
        "POHeaderId": {  
            "type": "integer"  
        },  
        "Total": {  
            "type": "number"  
        },  
        "SupplierId": {  
            "type": "integer"  
        },  
        "Supplier": {  
            "type": "string"  
        },  
        "ProcurementBU": {  
            "type": "string"  
        },  
        "Supplier": {  
            "type": "string"  
        },  
        "CurrencyCode": {  
            "type": "string"  
        },  
        "SupplierSite": {  
            "type": "string"  
        }  
    }  
}
```

## Initial Tests.

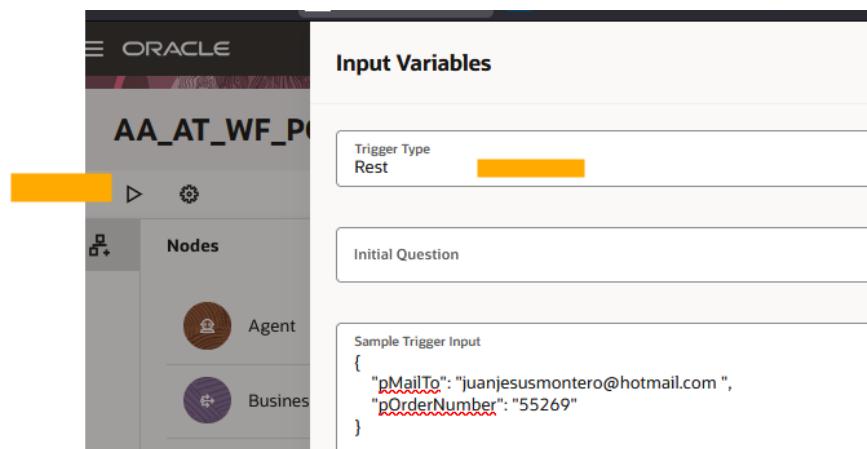
We have completed the demo step by step.

For testing, this data from Postman will be useful:

```
{  
  "items": [  
    {  
      "POHeaderId": 2055,  
      "OrderNumber": "55269",  
      "Status": "Closed",  
      "ProcurementBU": "UK Business Unit",  
      "BillToBU": "UK Business Unit",  
      "SupplierId": 300000047837151,  
      "Supplier": "EDF",  
      "SupplierSite": "EDF UK"  
    },  
    {  
      "POHeaderId": 2144,  
      "OrderNumber": "US165029",  
    }  
  ]  
}
```

Our sample payload and how to run the Preview.

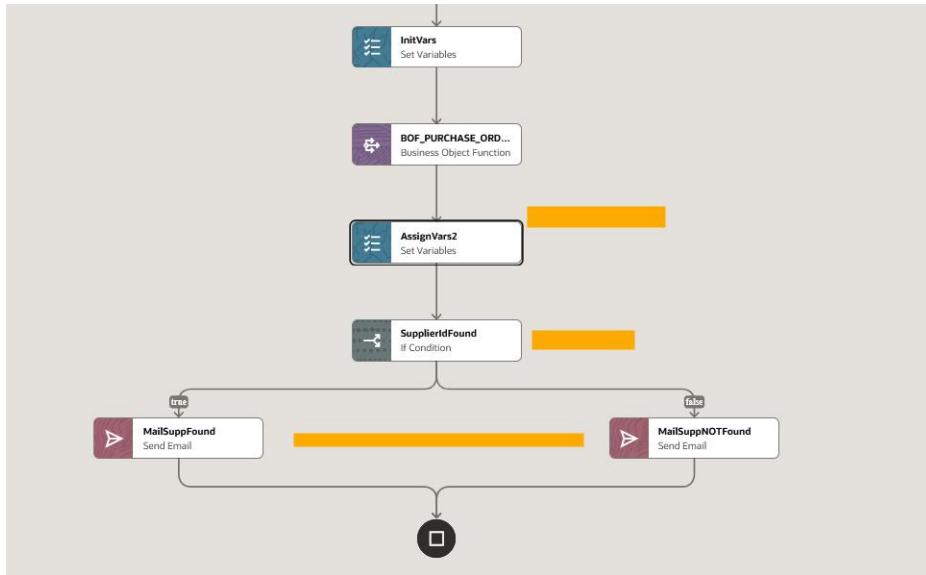
```
{  
  "pMailTo": "juanjesusmontero@hotmail.com ",  
  "pOrderNumber": "US165029"  
}
```



Response.

## Let us add more steps.

Assign value in “AssignVars2” step to variable from result on Business Object BOF\_PURCHASE\_ORDER.



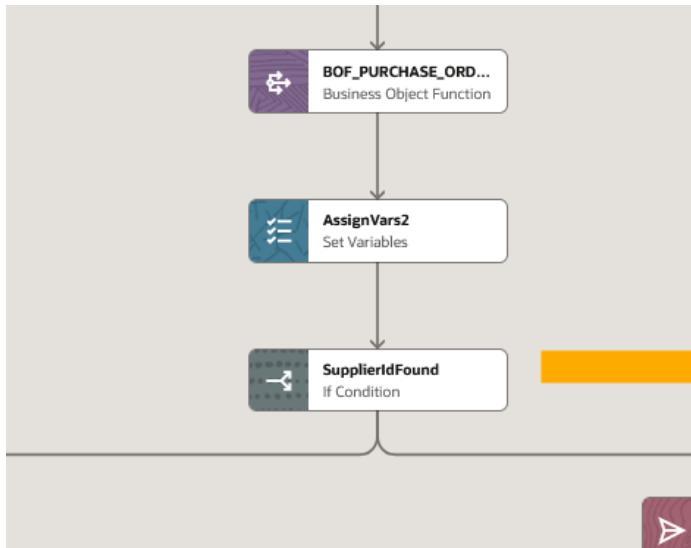
Select using this tool:

The screenshot shows the configuration of the BOF\_PURCHASE\_ORDER Business Object Function. It includes fields for Name, Code, Type, Family, Product, Business-object, and Function. Below this, the 'Parameters' section is expanded, showing a parameter named 'pOrderNumber' with a value expression: \${context.\$variables.pOrderNumber}. To the right, a context menu is open over the 'SupplierId' field, displaying a tree structure of variables and nodes related to the purchase order, such as INITVARS, BOFPURCHASEORDER, ASSIGNVARS2, and SUPPLIERIDFOUND.

The screenshot shows the configuration of the AssignVars2 Set Variables step. It includes fields for Name, Code, and Type. In the 'Variables' section, a variable named 'varSupplierId' is defined with a type of 'integer'. Its value expression is set to \${context.\$nodes.BOFPURCHASEORDER.\$output.items[0].SupplierId}.

```
{${context.$nodes.BOFPURCHASEORDER.$output.items[0].SupplierId}}
```

We will now add “If condition”.



**SupplierIdFound**  
If Condition

Name SupplierIdFound	Code SUPPLIERIDFOUND	Type If Condition
-------------------------	-------------------------	----------------------

If Condition  
{{\${context.\$variables.varSuppid}"aaa"!="aaa"}}

Type {{ to start seeing context-sensitive expressions.

```
{ ${context.$variables.varSuppId+"aaa"!="aaa" } }
```

Our payload for testing.

```
{
  "pMailTo": "juanjesusmontero@hotmail.com",
  "pOrderNumber": "US165029"
}
```

InitVars

BOF\_PURCHASE\_ORDER

AssignVars2

SupplierIdFound

MailSuppNOTFound

```
{
  "result": {
    "status": "SUCCESS"
  }
}
```

Notice we receive the mail.

## We will add more steps to our Workflow.

Let us add another Business Object for Suppliers, to get “BusinessRelationshipCode” field.

BOF\_SUPPLIER  
Business Object Function

Name: BOF_SUPPLIER	Code: BOFSUPPLIER	Type: Business Object Function
Family: PRC	Product: Other	Business object: AA_BO_SUPPLIER_DATA
Function: getSupplierData		

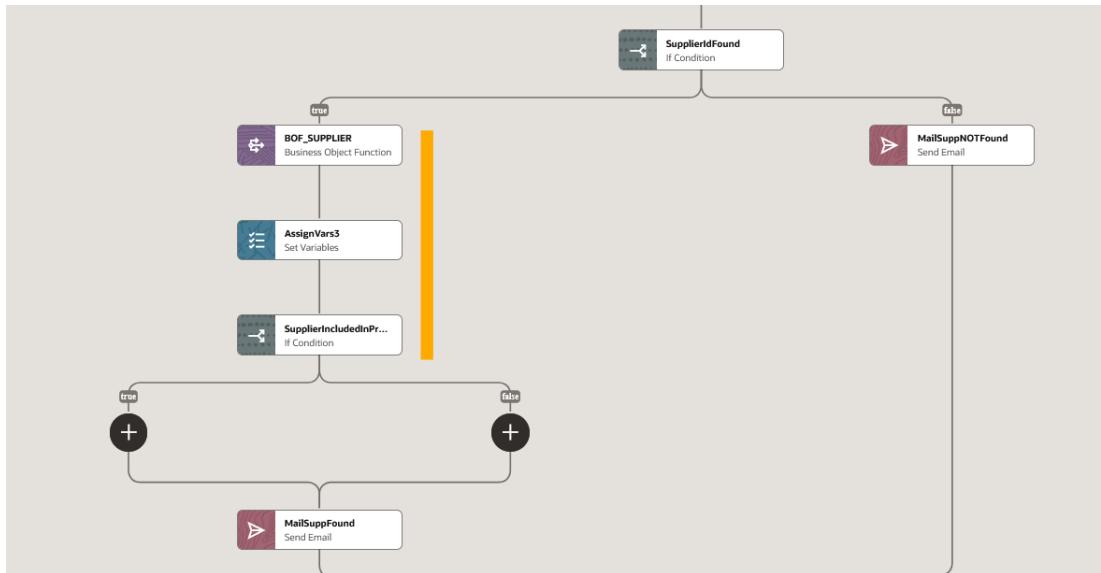
Parameters

Name: pSupplierId	Type: String
Value: \${context.\$variables.varSupplierId}	

Cancel Apply

After including the business object for Suppliers... now we will assign the variable “varBusinessRelationshipCode” and include a new “If condition”.

We will consider only suppliers with type='SPEND\_AUTHORIZED'



Assign variable value.

AssignVars3  
Set Variables

Name: AssignVars3	Code: ASSIGNVARS3
-------------------	-------------------

Variables

Name: varBusinessRelationshipCode	Type: string
Value: \${context.\$nodes.BOFSUPPLIER.\$output.items[0].BusinessRelationshipCode}	
Type {{ to start seeing context-sensitive expressions.	

```
{ ${context.$nodes.BOFSUPPLIER.$output.items[0].BusinessRelationshipCode} }
```

If condition.

### SupplierIncludedInProcess

If Condition

Name  
SupplierIncludedInProcess|

Enter a unique name

Code  
SUPPLIERINCLUDEDINPROCESS

If Condition  
{{ \$context.\$variables.varBusinessRelationshipCode=='SPEND\_AUTHORIZED'}}

 Type {{ to start seeing context-sensitive expressions.

{ \${context.\$variables.varBusinessRelationshipCode=='SPEND\_AUTHORIZED' } }

## New steps.

Now we will create a payables invoice with the information from the purchase order.

Investigate this REST API. You will need to make sure your user has the proper roles to get a successful POST operation.

Sample working payload.

```
{  
    "InvoiceNumber": "DEMO_AI_FF_01",  
    "InvoiceCurrency": "USD",  
    "InvoiceAmount": 2212.75,  
    "InvoiceDate": "2019-02-01",  
    "BusinessUnit": "US1 Business Unit",  
    "Supplier": "ABC Consulting",  
    "SupplierSite": "ABC US1",  
    "Description": "Office Supplies",  
    "invoiceLines": [  
        {  
            "LineNumber": 1,  
            "LineAmount": 2112.75  
        },  
        {  
            "LineNumber": 2,  
            "LineType": "Freight",  
            "LineAmount": 100,  
            "ProrateAcrossAllItemsFlag": true  
        }  
    ]  
}
```

The screenshot shows a REST client interface with the following details:

- Method: POST
- URL: https://fa-etit-saasfademo1.ds-fa.oraclepdemos.com/fscmRestApi/resources/11.13.18.05/invoices
- Headers: (10)
- Body: Raw JSON (selected)
- Body content:

```
1 {  
2     "InvoiceNumber": "DEMO_AI_FF_01",  
3     "InvoiceCurrency": "USD",  
4     "InvoiceAmount": 2212.75,  
5     "InvoiceDate": "2019-02-01",  
6     "BusinessUnit": "US1 Business Unit",  
7     "Supplier": "ABC Consulting",  
8     "SupplierSite": "ABC US1",  
9     "Description": "Office Supplies",  
10    "invoiceLines": [  
11        {  
12            "LineNumber": 1,  
13            "LineAmount": 2112.75  
14        },  
15    ]  
}
```
- Response status: 201 Created
- Response content:

```
1 {  
2     "InvoiceId": 300000317625536,  
3     "InvoiceNumber": "DEMO_AI_FF_01",  
4     "InvoiceCurrency": "USD",  
5     "PaymentCurrency": "USD",  
6     "InvoiceAmount": 2212.75,  
7     "InvoiceDate": "2019-02-01",  
8 }
```

Payload.

```
{  
    "InvoiceNumber": "{pInvoiceNumber}",  
    "InvoiceCurrency": "{pInvoiceCurrency}",  
    "InvoiceAmount": "{pInvoiceAmount}",  
    "InvoiceDate": "{pInvoiceDate}",  
    "BusinessUnit": "{pBusinessUnit}",  
    "Supplier": "{pSupplier}",  
    "SupplierSite": "{pSupplierSite}",  
    "Description": "{pDescription}",  
    "invoiceLines": [  
        {  
            "LineNumber": "{pLineNumber}",  
            "LineAmount": "{pLineAmount}"  
        }  
    ]  
}
```

## **“Agent Team” more steps.**

New Business Object Function.

Name: BOF\_CREATE\_AP\_INV.

BO called: AA\_CREATE\_AP\_INV.

The screenshot shows the configuration of a Business Object Function named BOF\_CREATE\_AP\_INV. The function is associated with a Business Object AA\_CREATE\_AP\_INV and a Business Process AA\_CREATE\_AP\_INV. It has several parameters defined:

Parameter	Type	Description
pInvoiceNumber	string	
pInvoiceCurrency	string	
pInvoiceAmount	string	
pInvoiceDate	string	
pBusinessUnit	string	
pSupplier	string	
pSupplierSite	string	

**Disclaimer.**

In this demo only one line from PO will be used to create the payables invoice.

One more advanced demo would be based on “Quote to Purchase Requisition Assistant” and “Sales Order Assistant” provided by Oracle IN 25D.

In next chapters we will try to overcome this.

## Mapping.

Parameters

Name pInvoiceNumber	Type String
Value {{'D-'+\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].POHeaderId}}	
Type {{ to start seeing context-sensitive expressions.	
{ 'D-'+\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].POHeaderId} }	

## Note.

in our testing we are changing the prefix to avoid the “duplicate invoice” error.

```
{ 'D-'+$context.$nodes.BOPURCHASEORDER.$output.items[0].POHeaderId} }
```

<table border="1"> <tr> <td>Name pInvoiceCurrency</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].CurrencyCode}}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pInvoiceCurrency		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].CurrencyCode}}		Type {{ to start seeing context-sensitive expressions.		<table border="1"> <tr> <td>Name pInvoiceAmount</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Total}}</td></tr> </table>	Name pInvoiceAmount		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Total}}			
Name pInvoiceCurrency													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].CurrencyCode}}													
Type {{ to start seeing context-sensitive expressions.													
Name pInvoiceAmount													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Total}}													
<table border="1"> <tr> <td>Name pInvoiceDate</td><td></td></tr> <tr> <td colspan="2">Value {"2025-01-06T17:40:03+00:00"}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pInvoiceDate		Value {"2025-01-06T17:40:03+00:00"}		Type {{ to start seeing context-sensitive expressions.		<table border="1"> <tr> <td>Name pBusinessUnit</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].ProcurementBU}}</td></tr> </table>	Name pBusinessUnit		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].ProcurementBU}}			
Name pInvoiceDate													
Value {"2025-01-06T17:40:03+00:00"}													
Type {{ to start seeing context-sensitive expressions.													
Name pBusinessUnit													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].ProcurementBU}}													
<table border="1"> <tr> <td>Name pSupplier</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Supplier}}</td></tr> </table>	Name pSupplier		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Supplier}}		<table border="1"> <tr> <td>Name pSupplierSite</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].SupplierSite}}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pSupplierSite		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].SupplierSite}}		Type {{ to start seeing context-sensitive expressions.			
Name pSupplier													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].Supplier}}													
Name pSupplierSite													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].SupplierSite}}													
Type {{ to start seeing context-sensitive expressions.													
<table border="1"> <tr> <td>Name pDescription</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.Internal_List1[0].lines.items[0].Description}}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pDescription		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.Internal_List1[0].lines.items[0].Description}}		Type {{ to start seeing context-sensitive expressions.		<table border="1"> <tr> <td>Name pLineNumber</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].LineNumber}}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pLineNumber		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].LineNumber}}		Type {{ to start seeing context-sensitive expressions.	
Name pDescription													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.Internal_List1[0].lines.items[0].Description}}													
Type {{ to start seeing context-sensitive expressions.													
Name pLineNumber													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].LineNumber}}													
Type {{ to start seeing context-sensitive expressions.													
<table border="1"> <tr> <td>Name pLineAmount</td><td></td></tr> <tr> <td colspan="2">Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].Total}}</td></tr> <tr> <td colspan="2">Type {{ to start seeing context-sensitive expressions.</td></tr> </table>	Name pLineAmount		Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].Total}}		Type {{ to start seeing context-sensitive expressions.								
Name pLineAmount													
Value {{\$context.\$nodes.BOPURCHASEORDER.\$output.items[0].lines.items[0].Total}}													
Type {{ to start seeing context-sensitive expressions.													

## Output.

### **BOF\_CREATE\_AP\_INV**

Business Object Function

#### **Parameters**

pDescription

string

pLineNumber

string

pLineAmount

string

#### **Output**

Output Builder Mode

Specification Mode     Simple Mode

```
Properties
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "properties": {
    "InvoiceId": {
      "type": "number"
    }
  }
}
```

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "properties": {
    "InvoiceId": {
      "type": "number"
    }
  }
}
```

A new test will generate a POST operation.

Notice we have created a very-very basic Payables invoice for learning purposes, feel free to include new fields in header and line.

## BOF\_CREATE\_AP\_INV

Latency

8.56 seconds

Input

```
{  
    "resource_path": "/fscmRestApi/resources/11.13.18.05/invoices",  
    "serviceName": "FA",  
    "body_template": {  
        "InvoiceNumber": "D-300000296208759",  
        "InvoiceCurrency": "USD",  
        "InvoiceAmount": 1113.62,  
        "InvoiceDate": "2025-01-06T17:40:03+00:00",  
        "BusinessUnit": "US1 Business Unit",  
        "Supplier": "Lee Supplies",  
        "SupplierSite": "Lee US1",  
        "invoiceLines": [  
            {  
                "LineNumber": 1,  
                "LineAmount": 86.51  
            }  
        ],  
        "query_dict": {},  
        "headers": {},  
        "operation_type": "POST"  
    }  
}
```

Output

```
{  
    "responsestatus": 201,  
    "response": {  
        "InvoiceId": 300000317627649, [REDACTED]  
        "InvoiceNumber": "D-300000296208759",  
        "InvoiceCurrency": "USD",  
        "PaymentCurrency": "USD",  
        "InvoiceAmount": 1113.62,  
        "InvoiceDate": "2025-01-06",  
        "BusinessUnit": "US1 Business Unit",  
        "Supplier": "Lee Supplies",  
        "SupplierNumber": 1252,  
        "ProcurementRUI": null.  
    }  
}
```

Now in SaaS.

### Search Results

▶ Search: Invoice

Actions ▾	View ▾	Print	Edit	Print	Detach	Validate	Approval ▾	Post ▾
Invoice Number	Invoice Date	Creation Date	Supplier or Party	Supplier Site	Unpaid Amount	Invoice Amount	Applied Prepayments	Invoice Type
	D-300000296208759	1/6/25	10/13/25 10:5...	Lee Supplies	Lee US1	1,113.62 USD	1,113.62 USD	0.00 USD Standard

Invoice: D-300000296208759

### More changes in “Agent Team” to include Deep Link.

We will add the new agent created above in preparatory steps.

Name of the new node: AA\_AP\_INVO\_AGENT\_FOR\_DL\_IN\_AT.

**AA\_AP\_INVO\_AGENT\_FOR\_DL\_IN\_AT**  
Agent

**Details**   LLM   Tools   Topics

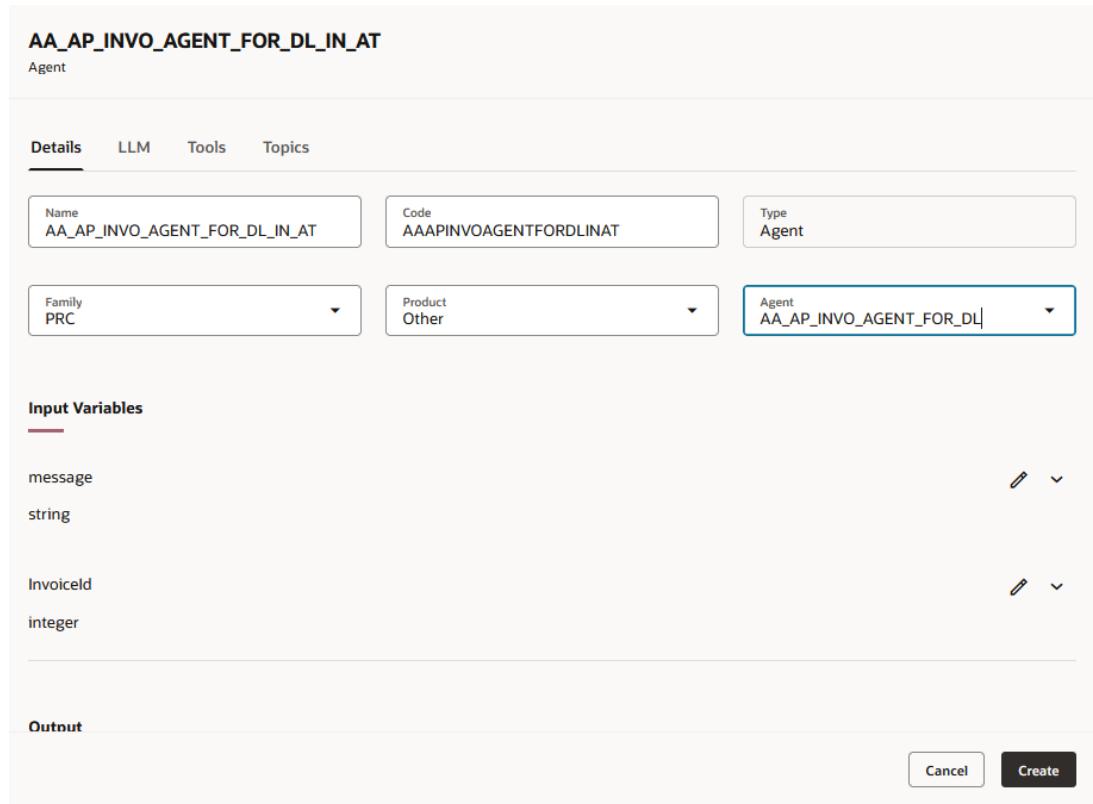
Name AA_AP_INVO_AGENT_FOR_DL_IN_AT	Code AAAPINVOAGENTFORDLINAT	Type Agent
Family PRC	Product Other	Agent AA_AP_INVO_AGENT_FOR_DL

**Input Variables**

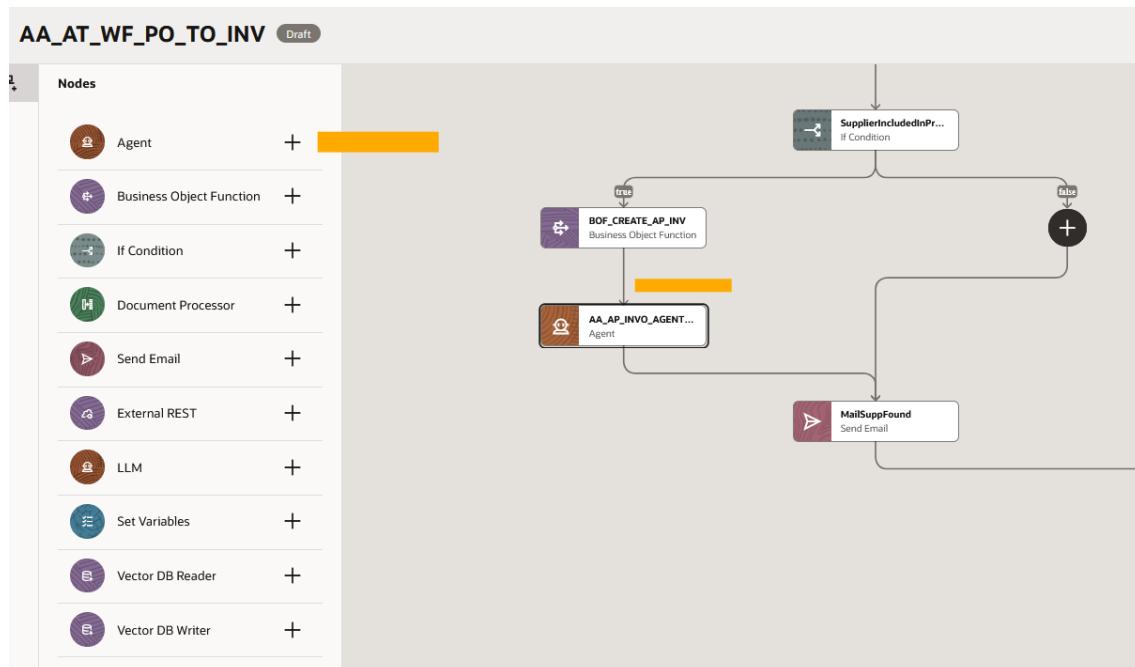
message string
Invoiceld integer

**Output**

**Create**



Select Agent = “AA\_AP\_INVO\_AGENT\_FOR\_DL”.



Then add value to parameter.

The screenshot shows the configuration page for an agent named 'AA\_AP\_INVO\_AGENT\_FOR\_DL\_IN\_AT'. The 'Agent' tab is selected. The 'Details' tab is active, showing the following fields:

- Name: AA\_AP\_INVO\_AGENT\_FOR\_DL\_IN\_AT
- Code: AAAPINVOAGENTFORDLINAT
- Family: PRC
- Product: Other

The 'Input Variables' section contains a variable named 'message' with type 'string'. Its value is defined as a context expression: \${context.\$nodes.BOFCREATEAPINV.\$output.InvoiceId}. A tooltip indicates that context-sensitive expressions can be started with {{.

```
{ ${context.$nodes.BOFCREATEAPINV.$output.InvoiceId} }
```

## **Testing.**

Our payload for testing.

```
{
  "pMailTo": "juanjesusmontero@hotmail.com",
  "pOrderNumber": "US165029"
}
```

**AA\_AP\_INVO\_AGENT\_FOR\_DL\_IN\_AT**

Input tokens: 1841      Output tokens: 258      Total tokens: 2099      Latency: 21.02 seconds

**Input:**

```
{"message": "hi", "Invoiceld": "300000317625851"}
```

**Output:**

```
{
  "deeplink": "https://fa-erit-saasfademo1.ds-fa.oraclepdemos.com/fscmUI/faces/deeplink?objType=AP_VIEWINVOICE&action=VIEW&objKey=Invoiceld=300000317625851"
}
```

**Context:**

**Tools:**

LLM Call(0)	<>	AP Invoice View Link	<>
LLM Call(1)	<>	LLM Call(2)	<>

{ "deeplink": "here" }

Ask Oracle

If we click on link generated we go here.

≡ ORACLE

Invoice Details : po9-300000296208759

Invoice Date	1/6/25	Invoice Amount
Invoice Type	Standard	Applied Prepayments
Supplier or Party	Lee Supplies	Unpaid Amount
Supplier Site	Lee US1	Holds
Address	5000 CARTER DR., LOS ANGELES, CA-90032	Notes

Lines    Holds and Approvals    Payments    Installments    Distribution Details

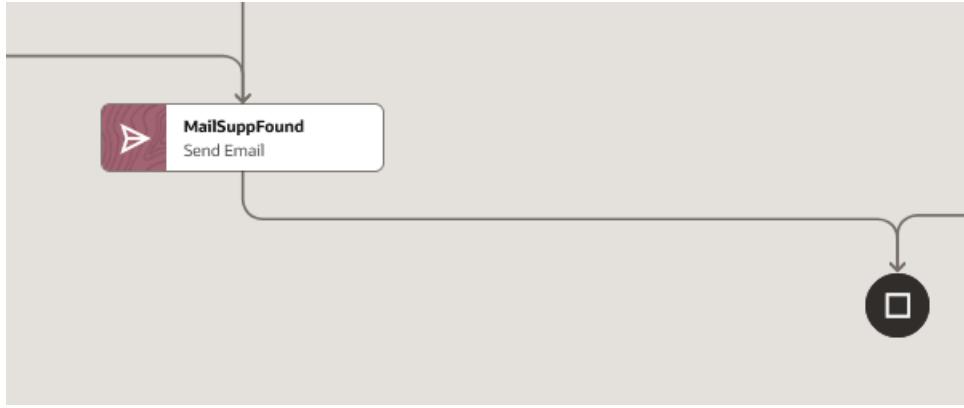
Items

Line	Amount	Description
1	88.51	

Shipping and Handling

## **MailSuppFound. FOR FUTURE USE.**

Feel free to relocate and adapt.



**MailSuppFound**  
Send Email

Name MailSuppFound	Code MAILSUPPFOUND	Type Send Email
Recipients {\$context.\$variables.pMailTo} ① Type {{ to start seeing context-sensitive expressions.		
CC ① Type {{ to start seeing context-sensitive expressions.		
Email Subject {"Purchase Order Data - " + \$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].Supplier + ", " + \$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].SupplierId} ① Type {{ to start seeing context-sensitive expressions.		
Email Template {\$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].SupplierId}		

### **Recipients:**

{\$context.\$variables.pMailTo}

### **Subject:**

{"Purchase Order Data - " + \$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].Supplier + ", " + \$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].SupplierId}

### **Template:**

{\$context.\$nodes.BOFPURCHASEORDER.\$output.items[0].SupplierId}

### **Conclusion.**

We have built our first prototype for Workflow Agent Team that includes:

- Incoming parameters (triggers).
- Variables, assigning from triggers.
- Assigning values from business objects responses to variables.
- Several Business Object Functions (based on Business Objects).
- “If conditions”.
- “Send eMail” nodes.
- Generate Deep Link to allow user to navigate to the Payables invoice just created.