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Customization Guide - SAP CPQ - Callidus

Version

This article was created using the 2102 version of SAP CPQ Former (Callidus)

Brief Description

During an SAP Project, it is common to extend the standard functionalities to better fit the Customer's requirements. SAP CPQ is extremely flexible and allows you to reach the customer needs enhancing the CPQ's events powered by Phyton Scripts.

I really hope you enjoy this article!!

Author

I started my career in 1992, working with corporative solutions in mining companies. In 1999, I changed my professional perspective and started my first project in CRM business, using Vantive in Telecom Industries, which I spent 8 years working as CRM Telecom Solution Architect.

Then, in 2006 I was invited to work on my first project as SAP CRM Functional Consultant in Utilities. I have plenty of experience in different modules and submodules inside of SAP CRM. I am an expert in the Interaction Center, Sales, Services, Marketing, and ERP Integrations.

Besides the baseline of SAP CRM, I had the opportunity to work in a different line of business, as Goods, Trade Promotion, Media, Call Center, Mining, Utilities, Heavy Machinery.

With the SAP Cloud technologies, I've become an expert in Cloud solutions and Customer Experience using the platform C4hana (C4Sales, C4Services, Marketing, Qualtrics, CDC/Gigya, CPQ/Callidus).

During those projects, the integration with SAP ERP (ECC and S4hana) became obligatory and the understanding of the integration between S4hana and C4hana was extremely necessary to adequate the CX process and ERP process.

Considering the integration between SAP C4hana and S4hana. It became so necessary, then I concentrate my energy to understand how it works. Today I am an expert in integrating SAP C4hana and S4hana using SAP Cloud Platform Integration.

Below I will describe all points of my carrer and just in case you have doubts about any points, please let me know.

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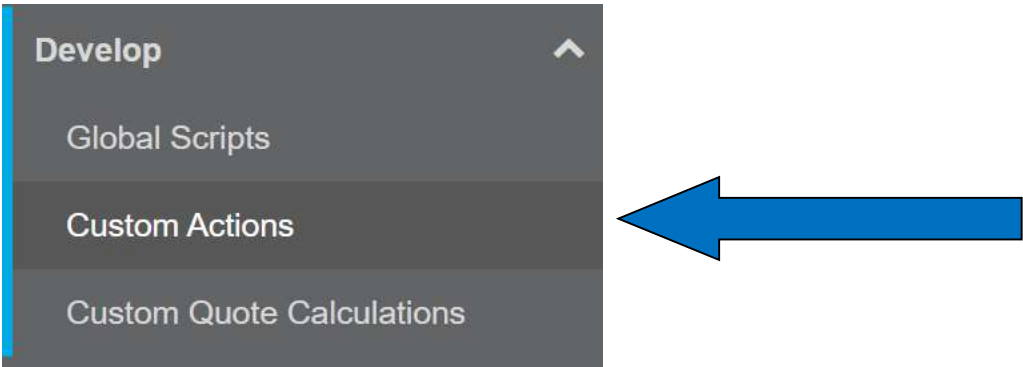
1. Article

1.1. Description

It is extremely necessary for the SAP CPQ Consultant to know how to extend the CPQ functionalities, especially using the Python Scripts. This document will demonstrate how to do it, creating an event into the Quote Page, and a Python Script to read the Quote Data. The example demonstrated in this document is extremely simple, however, it will allow you to understand how to extend CPQ.

1.2. Creating a Custom Actions

Let's start creating a "Custom Actions" clicking the link below.



Then, I will define the name "Read Data ModuloCRM", and the Placement "Quote Page". Save this configuration like that.

Custom Actions » New

Script

History

*Name:

Read Data ModuloCRM

*System ID:

Read_Data_ModuloCRM_cpq

Placement:

Quote page

Modified by:

Modified on:

Display in the quote

Order within quote:

1

Primary Action:

☒

Image:

Upload..

Clear

Lightning Image:

Upload..

Clear

Please note that images should be in 32x32 pixel format.

Custom Action Saved

Custom Actions

Successfully saved!

Select Language : US English

Add New

Search					
Name	Sort Order	Code	Modified Date	Modified By	
Read Data ModuloCRM	1		2/25/2021 12:55:38 PM	Claudio Goulart	

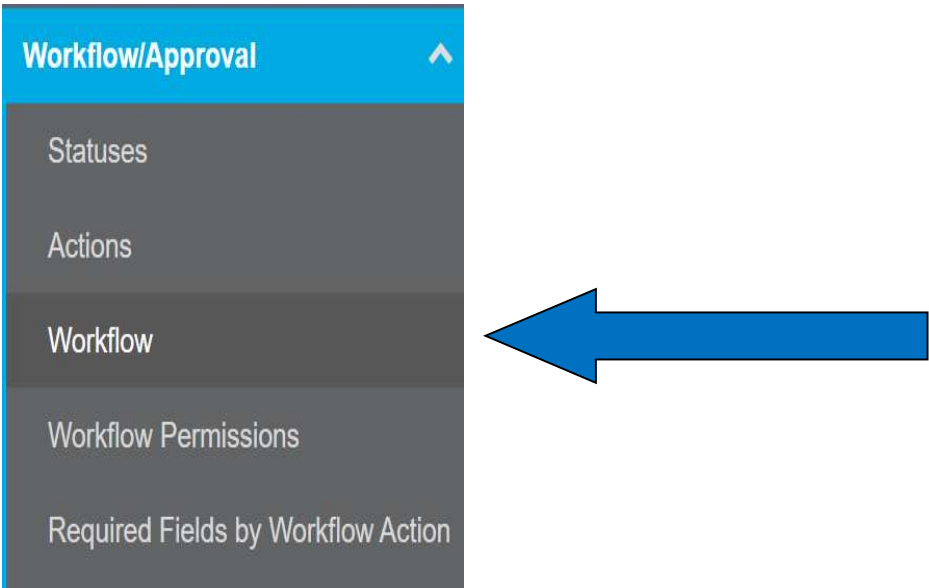
Number of items: 1

Items per page: 10

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1.3. Configuring the Workflow

Now, I will define the Workflow. Click the link Workflow Approval -> Workflow.



Now, click the link below. The intersection Preparing x Preparing.

Workflow Actions														
Switch to: List view Copy from: --Tab-- Copy Clear Workflow: clear														
My Quotes Waiting for Approval Other Quotes														
Expand All Close All	Preparing	Request Support	Open	Customer Accepted	Customer Rejected	Awaiting Internal Approval	Approved	Rejected	Expired	Lost	Order FAILED	Order Confirmation Pending	Order Placed	
Preparing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Request Support	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Customer Accepted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Customer Rejected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Awaiting Internal Approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Approved	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Rejected	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Expired	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lost	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Order FAILED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Order Confirmation Pending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Order Placed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

It is exhibiting the method available for this combination, then I will look for my event “Read Data ModuloCRM”

Status Administration » Status Administration											
Tab: My Quotes											
Start Status: Preparing											
End Status: Preparing											
Action name	Selected	Automatic Reconfigure	Automatically Update Items to New Product Version	Prompt Users For Update to New Product Versions	Disable action if Quote has incomplete items	Perform on	Condition	Notifications	PreActions	PostActions	
Add Comment from CLM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Global custom action		Edit	Edit	Edit	
Add Item	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cart Item		Edit	Edit	Edit	
Approval History	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cart		Edit	Edit	Edit	
Approval Reminder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cart Item		Edit	Edit	Edit	
Approve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cart Item		Edit	Edit	Edit	
Attach Document To SAP Opportunity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Global custom action		Edit	Edit	Edit	
Attach Document To SAP Opportunity And Sales Quote	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Global custom action		Edit	Edit	Edit	

I found it, check it.

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Read Data ModuloCRM

☒

☐

☐

☐

Global custom action

Edit

Edit

Edit

Saving and returning to the page before. Check my event appears.

Workflow Actions

Switch to: [List view](#) Copy from: --Tab-- Copy Clear Workflow: [clear](#)

My Quotes

Waiting for Approval

Other Quotes

Expand All Close All	Preparing	Request Support	Open	Customer Accepted	Customer Rejected	Awaiting Internal Approval	Approved	Rejected	Expired	Lost
Preparing	<div>Add Item Delete History Read Data ModuloCRM Save Quote View Proposal</div>									
Request Support										
Open										
Customer Accepted										
Customer Rejected										
Awaiting Internal Approval										
Approved										

1.4. Configuring the Workflow Permissions

Now, its time to define who will be allowed click this event. In the Workflow Approval -> Workflow Permissions define who will permit trigger this event.

Workflow/Approval

Workflow Permissions

Look for our event “Read Data ModuloCRM”.

Workflow Permissions

List Permissions: [by User Type](#)

Actions Permissions

Actions	User Types
Accept Proposal	Customer Quote Acceptance
Add Comment from CLM	
Add Item	Sales, Customer, Partner, Sales Management
Approval History	Sales, Partner, Sales Management, CFO
Approval Reminder	
Approve	Sales Management, CFO
Attach Document To SAP Opportunity	
Attach Document To SAP Opportunity And Sales Quote	
Attach Document To SAP Sales Quote	Sales
Cancel Changes	
Change E-Sign Status	
Change Status	Sales
Change Status From CLM	
Change Status In CLM	
CheckOut	Customer
Conditional Reconfigure	
Copy	Sales, Customer, Partner, Sales Management

I found it below, then click the “+” below to add user types.

Read Data ModuloCRM

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Now, select the user types below. Then all users assigned to those user type will be allowed see our event.

Workflow Permissions » New

Actions Permissions

Actions	User Types	
Read Data ModuloCRM	CFO	<input type="checkbox"/>
	Customer	<input type="checkbox"/>
	Customer Quote Acceptance	<input type="checkbox"/>
	Partner	<input type="checkbox"/>
	Sales	<input checked="" type="checkbox"/>
	Sales Management	<input type="checkbox"/>
	Sales Rep ModuloCRM	<input type="checkbox"/>

Save

Cancel

1.5. Checking the Event into the SAP CPQ

Now, I will login using a Sales Rep.

SAP Sales Cloud

Username

Password

.....

Domain

MODULO

☐ Remember me

Login

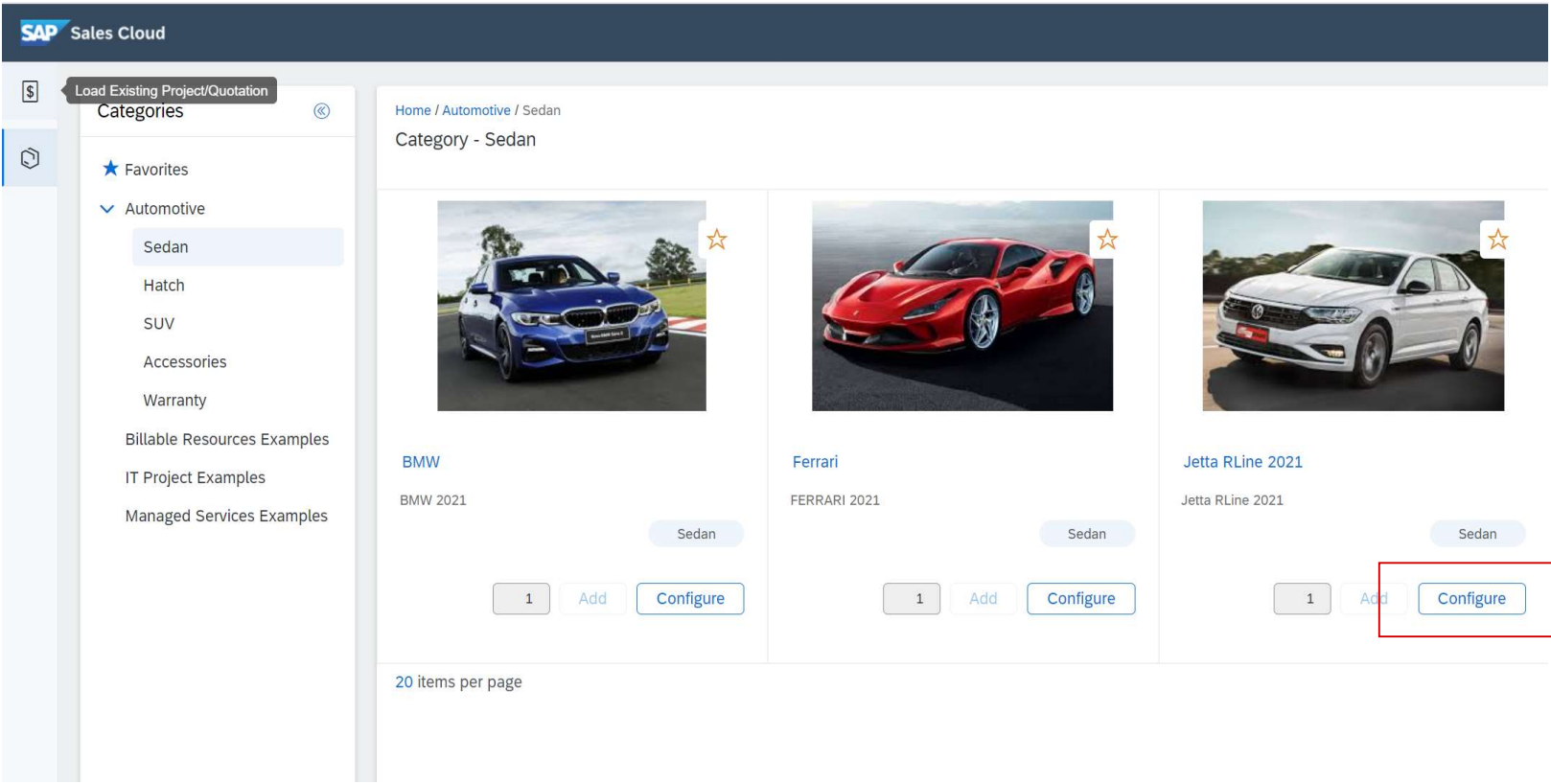
Forgot Password

Register

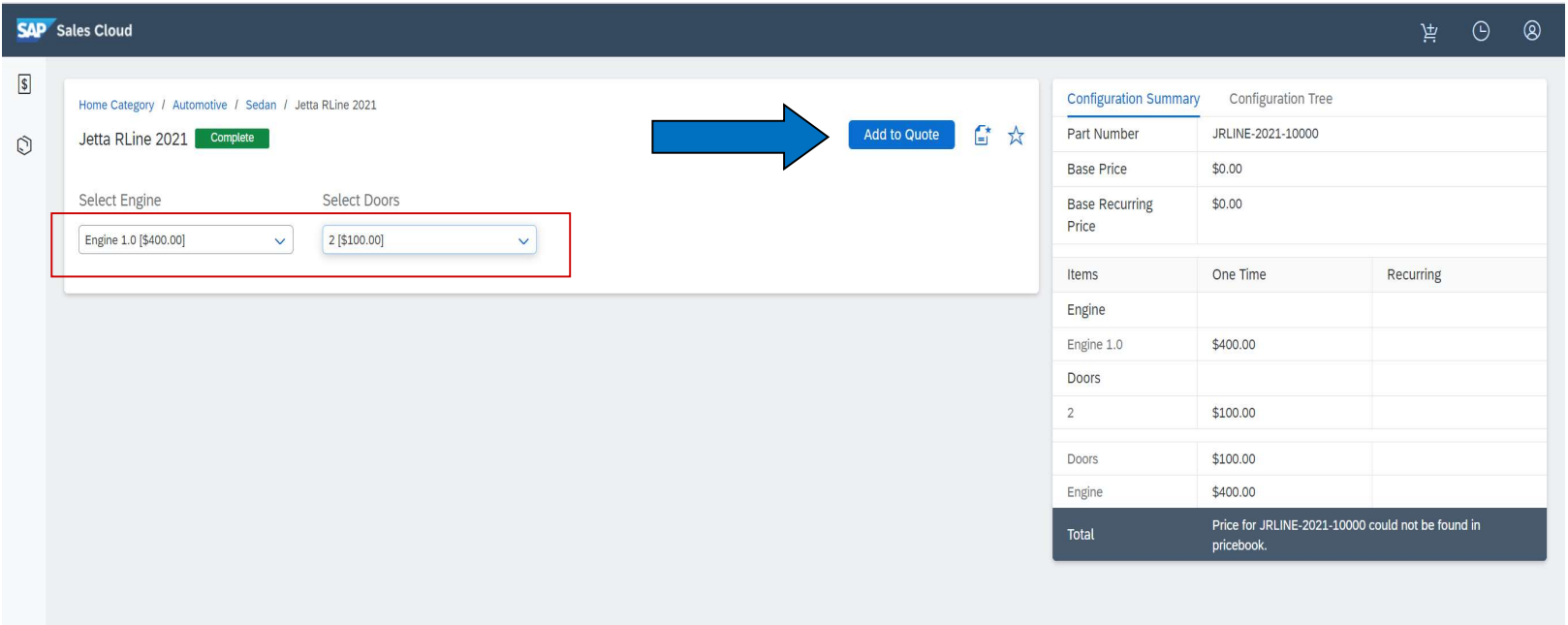
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Click the button Configure.



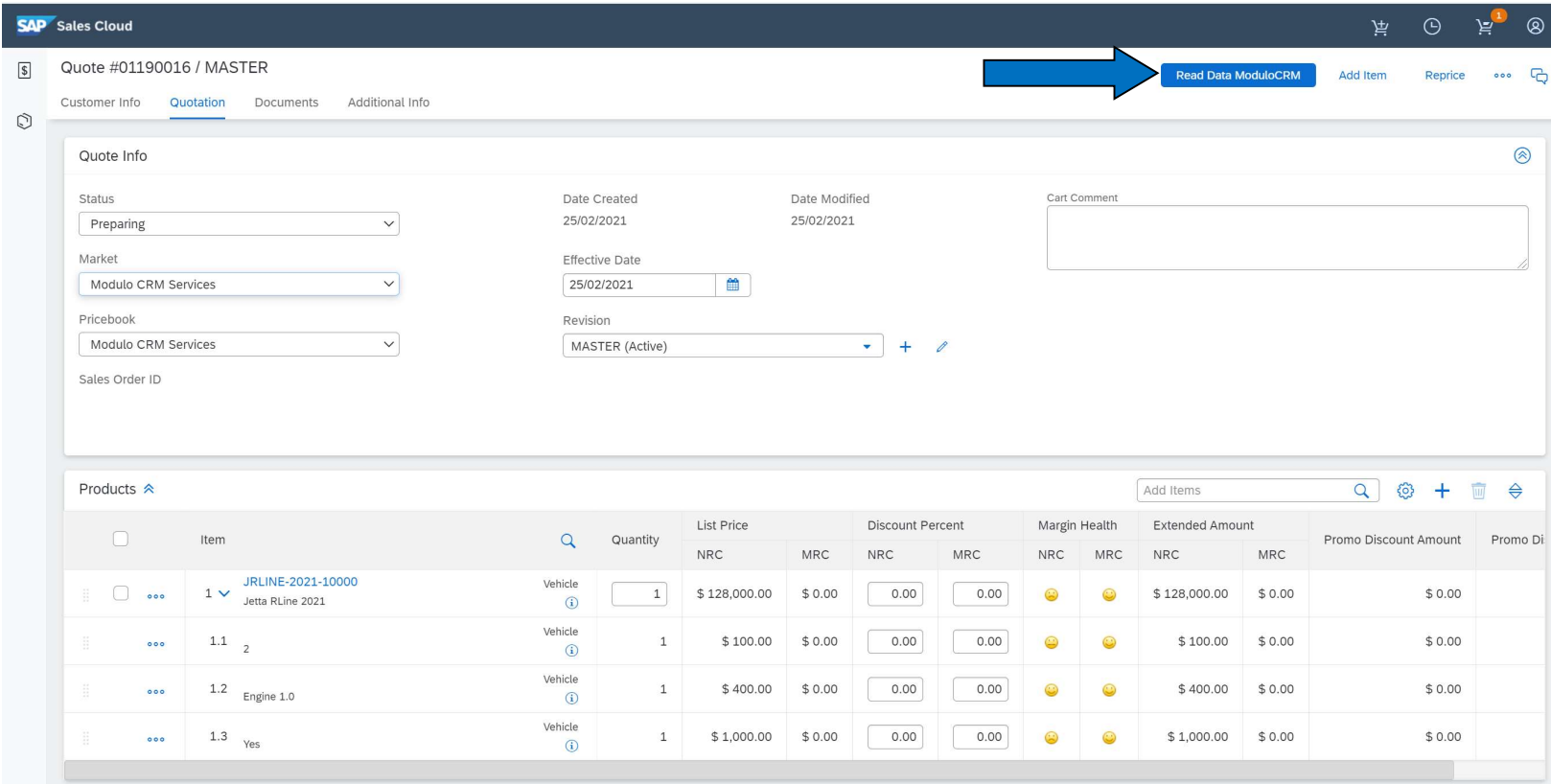
Select the Engine and Doors, then, click the button “Add to Quote”.



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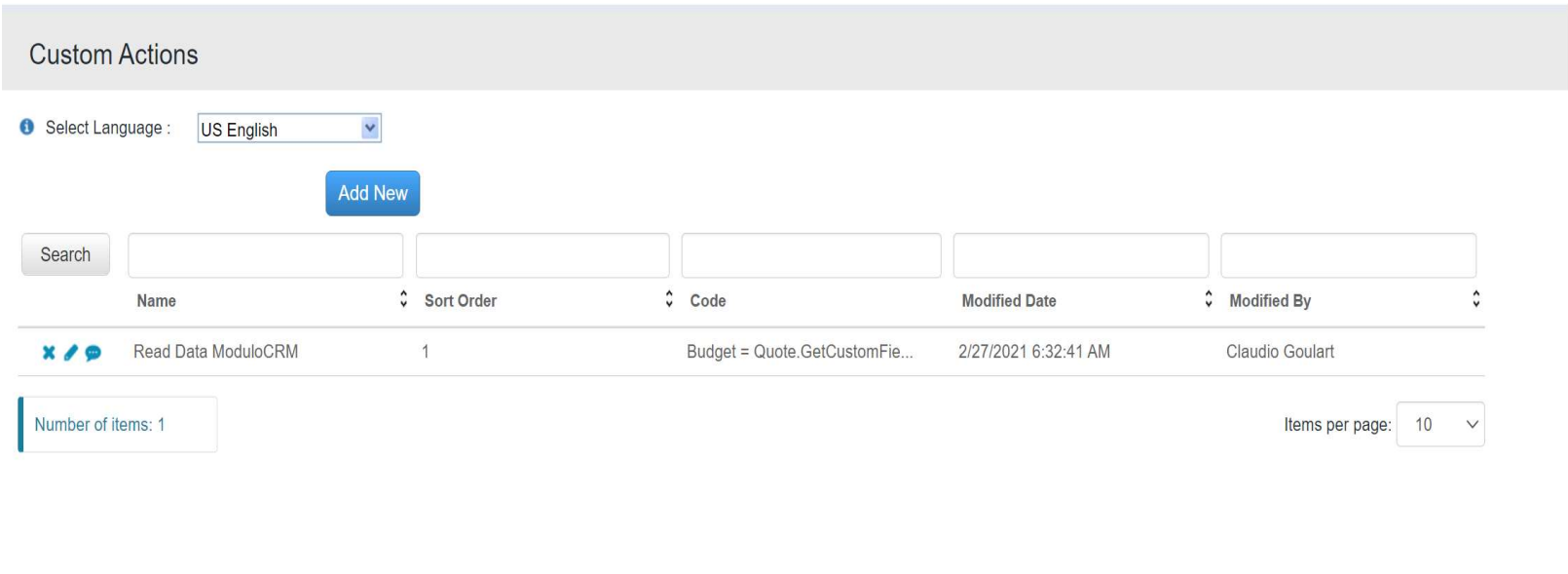
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Check this out, out event appears “Read Data ModuloCRM”.



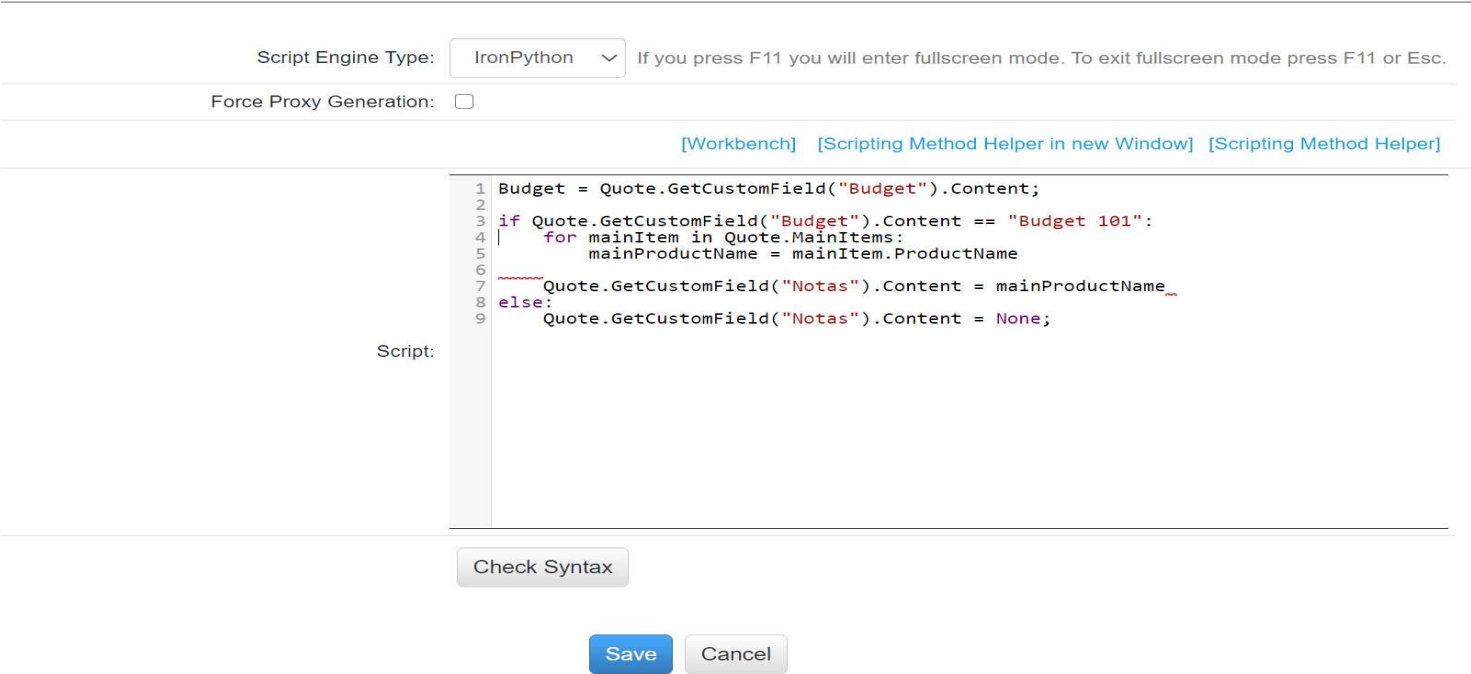
1.6. Using Python to read the Quote Data into our Event.

Do you remember the event that we created? We will use it to create our python script.



I created a simple script to read the main product of our Quote if the Budget equal to “Budget 101”. Then, I will capture the product name. Simple but will serve to our propose.

Scripting Code



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1.7. Testing our event

Check it out!! The name of our product is “Jetta Rline 2021”. Then I will click the button “Read Data ModuloCRM”

SAP Sales Cloud

Quote #01180038 / MASTER

Customer InfoQuotationDocumentsAdditional Info

Quote Info

Status

Preparing

Date Created

02/26/21

Date Modified

02/27/21

Cart Comment

Market

USA in \$

Effective Date

02/26/21

Pricebook

US Pricebooks

Revision

MASTER (Active)

Sales Order ID

Products

Add Items

Item	Quantity	List Price	Discount Percent	Margin Health	Extended Amount	Promo Discount Amount
		NRCMRC	NRCMRC	NRCMRC	NRCMRC	Promo Discount Amount
1 JRLINE-2021-10000 Jetta RLine 2021	1	\$ 0.00\$ 0.00	0.000.00	0.000.00	\$ 0.00\$ 0.00	\$ 0.00
1.1 2	1	\$ 100.00\$ 0.00	0.000.00	0.000.00	\$ 100.00\$ 0.00	\$ 0.00
1.2 Engine 1.0	1	\$ 400.00\$ 0.00	0.000.00	0.000.00	\$ 400.00\$ 0.00	\$ 0.00
1.3 Yes	1	\$ 1,000.00\$ 0.00	0.000.00	0.000.00	\$ 1,000.00\$ 0.00	\$ 0.00

The Budget is “Budget 100”, then the code won’t do nothing!!

SAP Sales Cloud

Quote #01180038 / MASTER

Customer InfoQuotationDocumentsAdditional Info

Costs

Shipping

\$ 10,000.00

Standard Shipping

State Tax

0.00 %

NRC

\$ 0.00

VAT

0.00 %

NRC

\$ 0.00

Totals

Total Weight

0.00

Total

\$ 11,500.00

MRC

\$ 0.00

Custom Fields

Budget

Budget 100

Date Start

02/26/21

Date End

02/25/21

Devices

Laptops

Edition

Small Business

Industry

Notas

Information

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When I define the Budget “Budget 101”, the field “Notas” will be fulfilled with the name of our main Product.

Custom Fields

Budget

Budget 101

Date Start

02/26/21

Date End

02/25/21

Devices

Laptops

Edition

Small Business

Industry

Notas

Jetta RLine 2021

information

That’s it folks!! I hope you enjoy it.