Configuration Guide
Third-Party Integration with SAP Market Rates Management, Bring Your Own Rates data option
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English

Third-Party Integration with SAP Market Rates Management, Bring Your Own Rates data option

SAP

Content

1 Introduction

The following blog post describes potential scenarios that might be useful to customers with an S/4HANA Public Cloud license and interested in Market Rates Automation from an external service into S/4HANA Cloud ERP.

The solution components of the architecture required to accomplish this scenario are the following which are also identified in the diagram below:

- S/4HANA Public Cloud license
- SAP BTP License
    - o SAP Market Rates Management, Bring Your Own Rates data option (API Instance)
    - o SAP Market Rates Management Application
    - o SAP Integration Suite – Cloud Integration
- External Third-Party Exchange Rate Service

L0 SAP BTP Solution Diagram
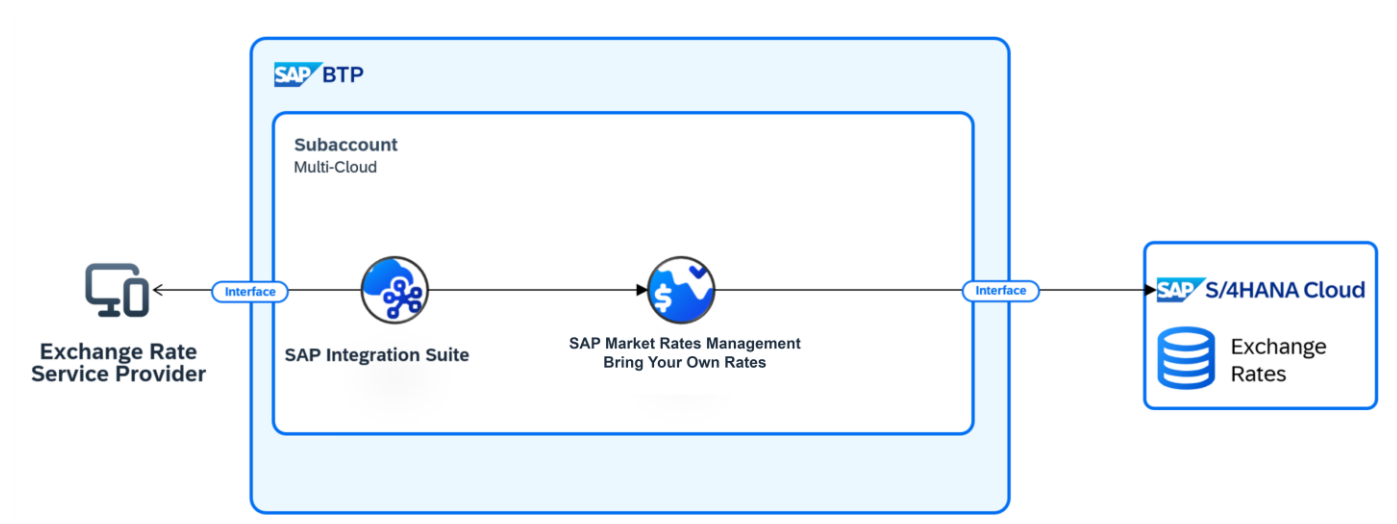
With the SAP Market Rates Management – Bring Your Own Rates data option - the following rate types can be used:

- Exchange Rates
- Securities
- Interest Rates
- Indexes
- Basis Spreads
- Credit Spreads
- Forex Swap Rates
- General Volatilities
- Exchange Rate Volatilities
- Security Price Volatilities
- Interest Rate Volatilities
- Index Volatilities

There are already several blogs explaining how to implement Best Practice Scope Item 1S4 (Automatic Market Rates Management).

This particular document post serves as a complement to the standard activation between the SAP BTP service and S4 Public Cloud with guidance how to include a third-party source. Moreover, this particular scenario focuses only on Exchange Rate type, although overarching logic will be similar for any other rate type.

2 Pre-Requisites

- Setup the necessary services and applications in SAP BTP described in this document.
- Third-Party Service for Market Rates Integration which can use HTTPS or ODATA protocols

For the full end-to-end, the Scope Item 1S4 should also be implemented although it can be implemented after the initial setup between the Third-Party Provider and SAP Market Rates Management, Bring Your Own Rates

Configuration Steps

Step	Activity	Persona
Step 1	Subscription and Activation of SAP Market Rates Management, Bring Your Own Rates Application and Instances	BTP Admin / Cloud Architect
Step 2	Develop Custom Interface to connect with Exchange Rate Service Provider and SAP Market Rates Management, Bring Your Own Rates APIs	Integration Expert
Step 3	Configuration of 1S4 Scope Item	• Integration Expert • BTP Admin
Step 4	Configure Data Notation DataFeed for Exchange Rates (or any additional Rate Types)	S4 Public Cloud Finance/Treasury Expert
Step 5	Configure Scheduled Job for Exchange Rates Replication	S4 Public Cloud Finance/Treasury Expert

3 Connectivity from SAP Integration Suite and Third-Party service provider

Note: The system from which you upload market data must support OAuth and HTTPS calls.

The Interface is prepared with externalized parameters to define the address and any query related parameters to perform an external Request-Reply call.

Receiver		
Connection	Receiver:	Exchange_Rate_Service
	Adapter Type:	HTTP
	Address:	
	Query:	
	Authentication:	OAuth2 Client Credentials
	Credential Name:	

The current interface is defined to execute HTTP request. If another option is preferrable and the Third-Party service provider also allows such option, the interface needs to be adjusted to such option, choosing the right adapter in the "Request-Reply" request.

4 SAP Integration Suite Additional Configurations and Adaptations

Additional configurations are required to connect both services. The majority are already prepared as "Externalized Parameters" which can store elements like the addresses and credentials.

This is available for both receivers (in this particular case) – external service provider and SAP Market Rates Management, Bring Your Own Rates.

However, in case the protocol of the external service provider changes, such as ODATA, the elements required might differ, as might be for this particular example where a query piece might be required to pull the necessary data or perform any filters. This was not consider in this interface template.

For the purpose of deploying the Security Artifact as an OAUTH Client Credentials, the following elements are used from the SAP Market Rates Management, Bring Your Own Rates instance in the SAP BTP Sub Account.
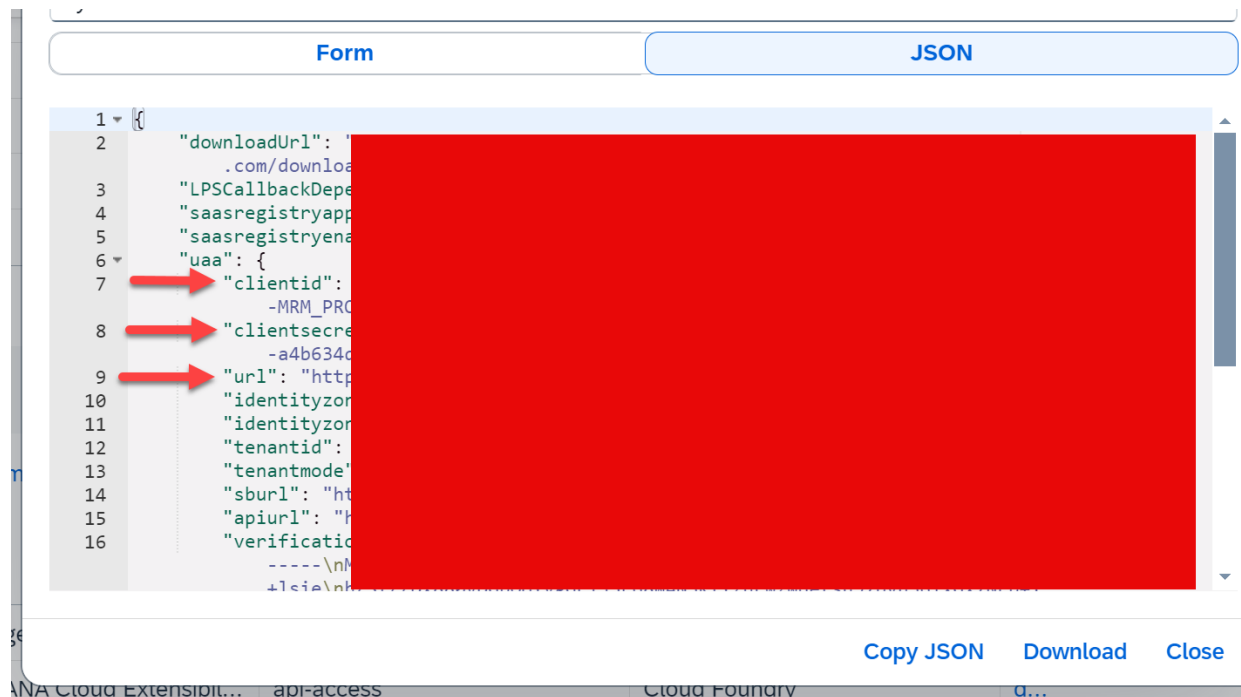
The URL is used as the authentication mechanism which shall be added "/OAUTH/Token" at the end.

This information is used in the Security Artifact only.

JSON Adjustments

There are adjustments that required manual changes depending on the settings performed in S/4HANA Public Cloud related to the origin of data. The following fields need to be mapped to the correct attributes:

- Provider Code
- Market Data Source

Both are defined while configuring S/4HANA Public Cloud as per the following screenshot already available in Chapter presenting the S/4HANA Public Cloud configurations.

<table>
<tr><td><</td><td>SAP</td><td colspan="2">Datafeed: Translation Table Currencies: Display: Details ⌄</td></tr>
</table>

Menu ⌄   Previous Entry   Next Entry   Other Entry...

Administrative Data

Currency Pair: EUR   ⧉ HF

Rate Type: M

Max. Deviation in Percent: 0

☐ Indirect Quotation

Datafeed Parameters

Data Provider: Y001

Instrument: EUR~CHF:01

Data Source: BYOR

Property: CMID

Explanation:

Currency Settings

External	Datafeed:		SAP	System:	
1	: 1		1		: 1

Therefore, after making such configurations, usually made by the finance expert, the integration expert or whomever responsible for the setup of the interface needs to make the very same adjustments in the JSON Groovy Script in the transformation step of the interface.
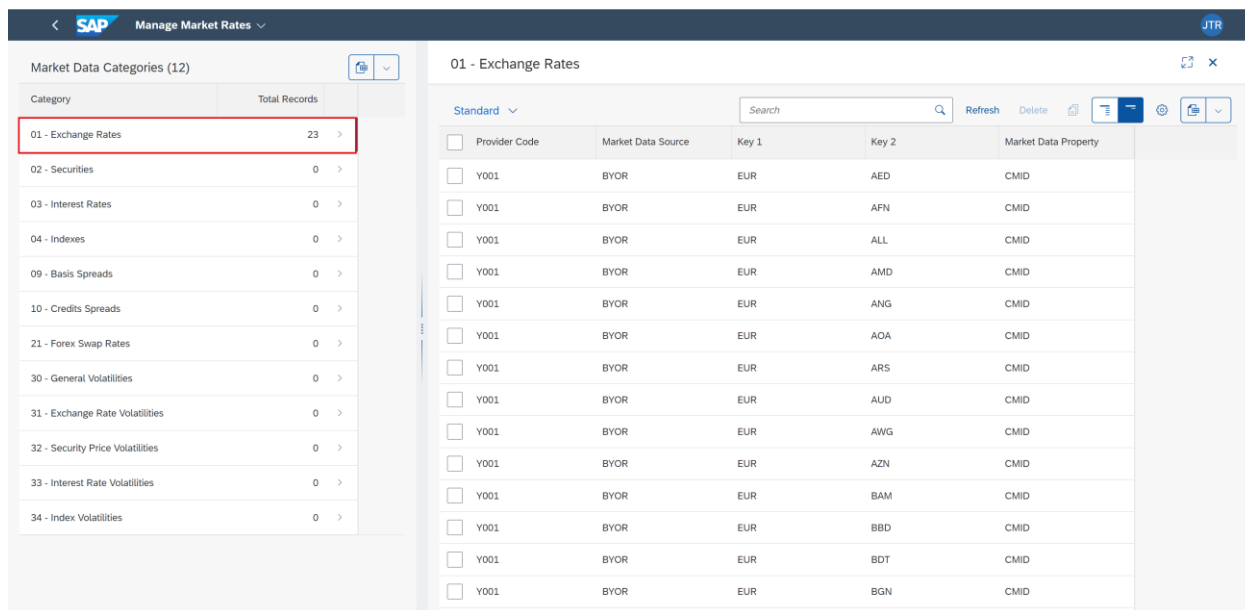
Note: the current transformation is only considering Exchange Rates and not additional Market Rate Types. Therefore, it's vital that such adjustments/enhancements are considered in case additional market rate types are included on top. The structure of the JSON expected by the Upload API is the same but the attributes might differ in S/4HANA Public Cloud.

5 Connectivity between SAP Integration Suite and SAP Market Rates, Bring Your Own Rates data option

The interface is configured to define the "UploadURL" of the SAP Market Rates Management, Bring Your Own Rates data option Service Instance. The entire setup of the service instance is available in the HELP SAP Portal.

Activation of Communication between SAP Market Rates Management, Bring Your Own Rates data option and S/4HANA Public Cloud.

The instructions to activate this communication are available in the 1S4 Setup Instructions. Mainly, it will then consume the Download API, already shared above, to replicate the exchange rates stored in SAP Market Rates Management.

The final steps to conclude the configuration of this scenario are driven by Treasury/Finance Experts who need to configure the mappings of Exchange Rate Type in S/4HANA Public Cloud and finally configure the Scheduled Job to pull the exchange rates on a recurrent basis, using the standard program to run the Communication Scenario SAP_COM_0203 where the Outbound Service will be configured and active.

Configure Data Notations in S/4HANA Public Cloud

A Treasury Expert is finally requested to configure the notations that will map the necessary fields into S/4HANA Public Cloud.

This is accomplished in the Fiori App "Assign Currency Notations – Datafeed"

The " Data Provider" needs to be defined to "SAP Market Rates Management"

< **SAP**   **Datafeed: Translation Table Currencies: Display** ∨

Menu ∨   [Details] [Select All] [Deselect All]

Instrum. Class: 01   Data Provider: Y001

Datafeed: Translation Table Currencies

	From	To	RType	Instrument
☐	EUR	AED	M	EUR~AED:01
☐	EUR	AFN	M	EUR~AFN:01
☐	EUR	CHF	M	EUR~CHF:01
☐	EUR	INR	M	EUR~INR:01
☐	EUR	USD	M	EUR~USD:01
☐				
☐				
☐				
☐				

This configuration needs to be executed to all exchange rates required to bring into S/4HANA Public Cloud. The example above only shows the use cases simulated with the external service.

Looking inside the configuration for each exchange rate, each notation is defined with the data source and also type of rate definitions.

Datafeed: Translation Table Currencies: Display: Details ⌄

Menu ⌄ [Previous Entry] [Next Entry] [Other Entry...]

Administrative Data

Currency Pair: `EUR` [⧉] HF

Rate Type: `M`

Max. Deviation in Percent: `0`

☐ Indirect Quotation

Datafeed Parameters

Data Provider: `Y001`

Instrument: `EUR~CHF:01`

Data Source: `BYOR`

Property: `CMID`

Explanation: `_____`

Currency Settings

External	Datafeed:	SAP	System:
`1`	: `1`	1	: 1

Configure Scheduled Job for Exchange Rate Replication

The final step to automate this entire process is to configure and activate one job that will run on a recurrent basis and use the communication scenario activated in the previous steps.

The Fiori App used for this point will be "Schedule Treasury Office Jobs"

The Job Template to be used will be "Request Current Market Data" – "SAP_FIN_TRM_DATAFEED".
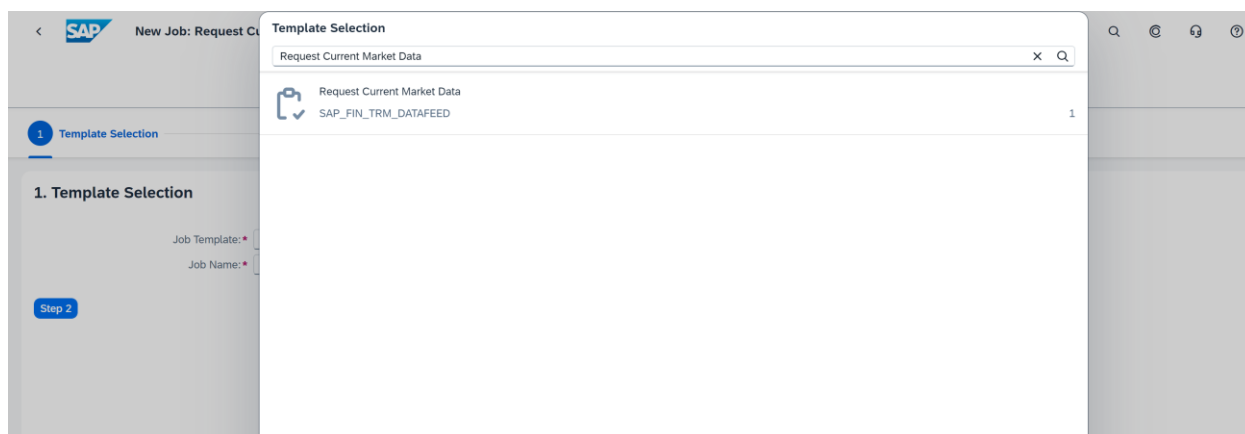
In the Parameters section of the Job definition will be similar to what has been configured in the Currency Notations activity to define which date is supposed to be pulled.

Hope this blog can help you understanding the activities required to automate the replication of rates from external service providers using SAP Market Rates Management, Bring Your Own Rates data option with S/4HANA Public Cloud.

Configuration Guide

6 SAP Content References

- API Business HUB
- SAP Market Rates Management, Bring Your Own Rates data option
- SAP Best Practices Scope Item 1S4
- Blog Post with Technical Guidance
- Discovery Center