

PUBLIC

Custom Joule Skill & Agent in SAP Build Supplier Agent

Configuration & User Guide

Version: 1.0

Date: 2026-02-20



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This document contains 2 sections. Each section covers different information about this template content package.

1. **Overview:** In this section, you will get quick overview of the use case, what are high-level components used and how the template works in nutshell. Prerequisite section provides information of different services of SAP Business Technology Platform that are required to use this template.
2. **Configuration Guide** It contain sections which will guide you to setup your (a) SAP Business Technology Platform Account with destination, user roles etc., (b) Links and steps to set up Joule studio and Joule (c) Import and configure the template using SAP Build Process Automation - Joule studio

Note:

- Learning contents are published only for demo and reference purposes. We do not provide any support to learning / sample content.
- This documentation is not a detailed guide to setup SAP Business Technology Platform services. It assumes that IT admin who is setting the content is skilled with SAP Business Technology Platform environment. **Configuration section must be followed.**
- This template content is to accelerate your solution development. You must modify this template according to your requirements to achieve the desired business goal. To use this template content, you need to have basic knowledge and understanding of SAP Build Process Automation and its capabilities.

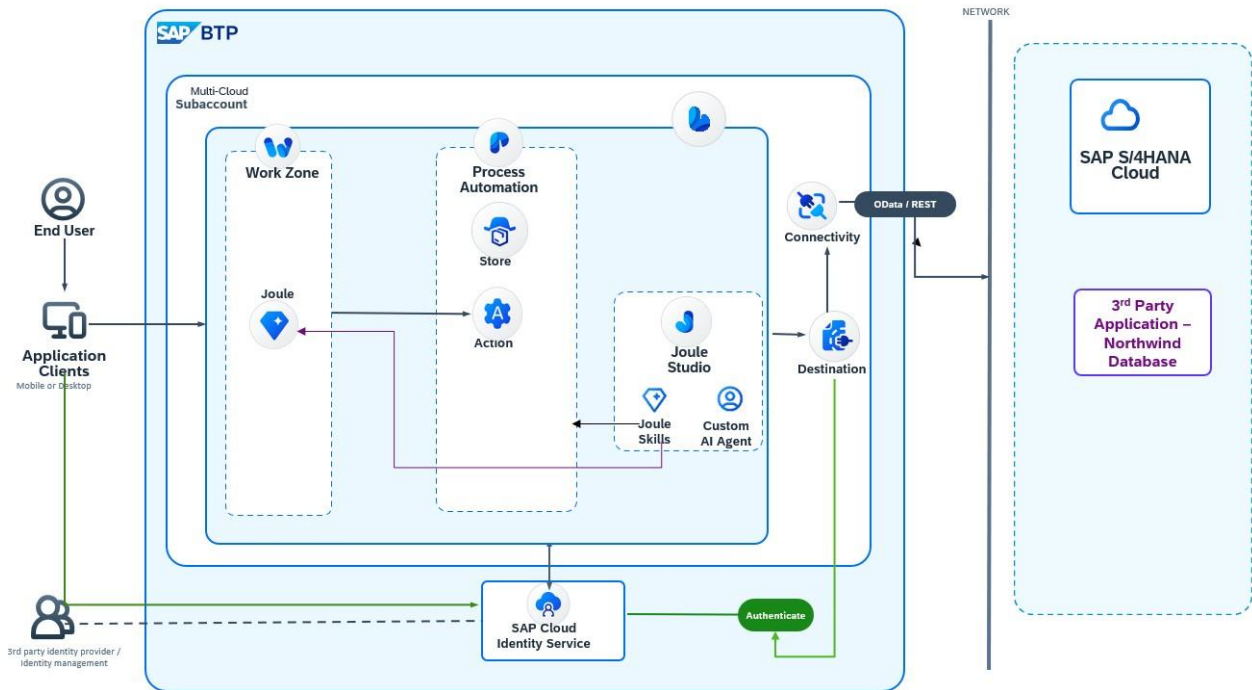
Overview

This document provides technical information about what needs to be configured to make the package 'Supplier Agent' run. The main audience of this document are technical personas like IT Administrators/Developers/Functional experts.

'Supplier Agent' – fetches the technical and food suppliers from 2 different backend systems, Northwind and SAP S/4HANA Procurement.

If you're new to Joule Studio or want to explore how AI agents can augment business workflows, this example provides a practical, ready-to-use scenario.

Solution flow :



1. The requester, 'Supplier Planner', requests for consolidated (technical and food) suppliers to the Supplier Agent. The Agent refers to the Joule skills that are provided as tools to it. The Agent refers to the provided tool first to give the information as it is instructed to do so in the Agent design.
 - a. The Joule skill which is designed to provide the technical suppliers, 'Retrieve Technology Suppliers' is referred to get the technology supplier details. Here, '**Get entities from Supplier**' action associated with the '**SAP S/4HANA**' project is used.
 - b. Next the joule skill which is designed to provide the food suppliers, '*Retrieve Food Supplier Details (NW)*', is referred, to get the food supplier details. Here, '**Get entities from Supplier**' action associated with the '**northwindactions**' project is used.

The list is then consolidated by Agent and all the suppliers are displayed.

Prerequisites

For this template to run successfully the following prerequisites are needed.

- Joule Studio in SAP Build
Follow the setup guide [here](#) based on your tenant configuration.

NOTE: If you need additional help with these prerequisites (such as setting up SAP Build Process Automation and SAP Build Work Zone), you can run the Discovery Center mission: [Setup Joule Studio for a BTP Enterprise Account](#).

Configuration Guide

Setup Business Technology Platform Cockpit

Configure SAP Build Process Automation Destination

To access the process automation capability of SAP Build, you can configure the destination. Please create destination as stated below:

Destination Property	Value
Name	sap_process_automation_service
Type	HTTP
URL	<" endpoints"."api">
Client ID	<"uaa"."clientid">
Client Secret	<"uaa"."clientsecret">
Token Service URL	<"uaa"."url">/oauth/token
Proxy Type Internet	Internet
Authentication	OAuth2ClientCredentials

Add the property **sap.processautomation.enabled** as **true** to view the destination in the SAP Build Process Automation tenant. Please refer [help document](#) for more details.

Configure SAP S/4HANA Destination

This content package can be used with SAP S/4HANA Cloud, Public Edition. Destination can be created accordingly.

Destination Property	Value
Name	<Name>
Type	HTTP
URL	<SAP S/4HANA endpoint> Example: https://<s4system-name>-api.xxxxxxxx
Proxy Type Internet	Internet
Authentication	Basic Authentication
Username	<Username> of the SAP S/4HANA Communication User
Password	<Password> of the SAP S/4HANA Communication User

NOTE: Make sure the API used in this template (see the below sections to get the API name) is exposed with the correct communication scenario to the communication user.

Communication scenario: Business Partner, Customer and Supplier Integration (SAP_COM_0008)

User Roles Configuration

To access this template, the users need to have the roles as described [here](#).

The template also uses Actions. hence assign the relevant role collection as mentioned [here](#).

Services used:

There are two Action projects used in this template. They use different APIs/Services.

Action Project Name	Service Used	Purpose
Business Partner (A2X)	https://{host}:{port}/sap/opu/odata/sap/API_BUSINESS_PARTNE/A_Supplier	To retrieve suppliers from SAP S/4HANA Cloud Public Edition
Northwind Actions	ODATA Destination-> <i>NORTHWIND_DEST</i>	Northwind system connection (SAP Sample system) precreated by SAP to retrieve the food supplier details

Artifacts in the Agent:

Type	Name	Description
Joule Skill	Retrieve Customer Order Details	Retrieves order details for a specified customer from Northwind.
Joule Skill	Retrieve Food Supplier Details (Northwind)	A skill to retrieve supplier information for food products from Northwind
Joule Skill	Retrieve Technology Supplier Details S4HANA	A skill to retrieve supplier information for technology products from S4HANA
Joule Agent	Supplier Agent	Agent to fetch all the suppliers from S/4HANA System

Setup Content Package

Import Custom Joule Agent

All imported custom agents are available in SAP Build Store. To know more about the SAP Build Store visit [SAP Build Process Automation Store](#).

This template can be downloaded from the SAP Build Store:

1. Navigate to the **Store** option in your SAP Build Lobby.
2. Select the **Project Type** filter as “Joule Agent and Skill”
3. In the Search bar type “**Supplier Agent**”
4. Select the “Create from Template” button to add the template into your lobby.
5. Once the creation is complete, navigate to the Lobby to find the “**Supplier Agent**” project is available for use.

NOTE: If you want a step by step guide with screen shots for execution of the Joule Skills(Without Agent), you can refer to the Discovery Center mission : [SAP Discovery Center Mission - Build custom Joule skills for SAP and non-SAP systems using Joule Studio](#)

Configuration & Modification

Once the Joule Skill & Agent project is added into the lobby, it can be run directly without any modification.

However, if you need to modify Joule skills that are used within the project or you want to modify the agent, with its instructions/additional context or other fields, you can do so.

In order to understand the various capabilities of Joule Studio and work with them please refer to the link: [Create AI Capabilities | SAP Help Portal](#)

Release and Deploy the Project

Once the agent is verified by the user / modified based on user need, it has to be released and deployed into a shared environment.

- Refer to the link below to create/Share an Environment:
[Environments | SAP Help Portal](#)
- Refer to the link below to release a project:
[Release a Project | SAP Help Portal](#)
- Refer to the link below to deploy a project:
[Deploy a Project | SAP Help Portal](#)

Test the Joule Skills And Agent in SAP Build

1. To access your projects, navigate to **Control Tower ->Tenant Configuration->Environments**.
2. Select your environment.
3. After deploying the project, the project should be seen in the Shared Environment.
4. Click on the Tab, '**Joule**'
5. Click on the button '**Launch**'

This will open the Joule launchpad where you can key in the below prompts in order to test the agent.

Prompt	Expected Result
Show the Food Supplier details from Northwind System	Supplier details from Northwind system should be displayed
Retrieve top 5 supplier details from both Northwind and SAP S/4HANA System	Top 5 supplier details should be displayed as a list from both Northwind and SAP S/4HANA system NOTE: Mention the top '5' mandatorily. If the records in SAP S/4HANA system are too high, then results will not be rendered.
Retrieve all past orders for customer VINET.	All the order details from customer 'VINET' should be listed. NOTE: Since the details are retrieved from Northwind system, the same name mentioned in the prompt must be used. Northwind system has name specific orders.

NOTES:

1: In the instructions provided in the Agent design, we have restricted the suppliers from SAP S/4HANA as '20'. As there could be huge set of data in your SAP S/4HANA system, not everything can be displayed. Current size limit for the data is 10,000 bytes.

2: Currently the Agent will be only deployed in the SAP Build environment and hence testing can also be done only in the Build Lobby. If you want to **activate the Joule in other systems** Eg: SAP S/4HANA or SAP Workzone, then click on the **settings** in 'Control Tower->Environments-><Your Shared Environment that was created>->Joule'

Here you must switch the toggle 'on' for '**Share Environment Capabilities**'.

The screenshot shows the SAP Control Tower interface for managing environments. The breadcrumb trail is 'Control Tower / Environments / Build Demos'. There are buttons for 'Edit', 'Share', and 'Delete' in the top right. Below the breadcrumb, there are fields for 'Last Updated:', 'Author:', 'Members:', 'Identifier:', and 'Description:'. A navigation bar includes 'Projects', 'Triggers', 'Automation Launchers', 'Agent Management', 'Alert Handlers', 'Variables', 'API Keys', 'Visibility Scenarios', 'Processes and Workflows', and 'Joule'. The 'Joule' tab is active, showing 'Joule Digital Assistant' with a 'Shared' status and buttons for 'Launch', a refresh icon, and a settings icon (highlighted with a red box). Below this, there is a section for 'Environment Capabilities' with a 'Version' field. A 'Joule Settings' dialog box is open, containing the text: 'Selecting this option deploys the environment's capabilities to Joule shared assistant, making them available to users who have "Execute" or "Administrator" rights for this environment.' The 'Share Environment Capabilities' toggle is turned on and highlighted with a red box. At the bottom of the dialog, the 'Apply' button is highlighted with a red box, along with a 'Cancel' button.

Support

If you experience any issues with the product, please raise an incident in the '**BPI-PA**' component