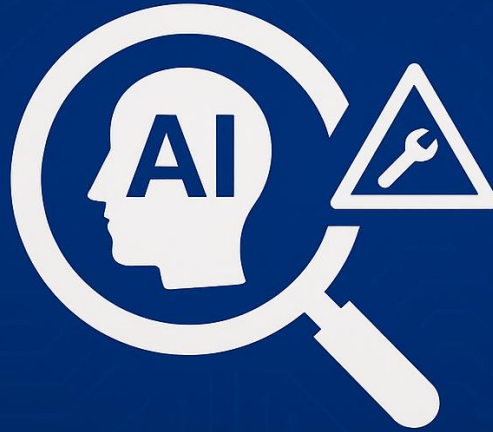


SAP TROUBLESHOOTER AGENT



PUBLIC

Custom Joule Skill & Agent in SAP Build SAP Troubleshooter Agent

Configuration & User Guide

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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.



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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.

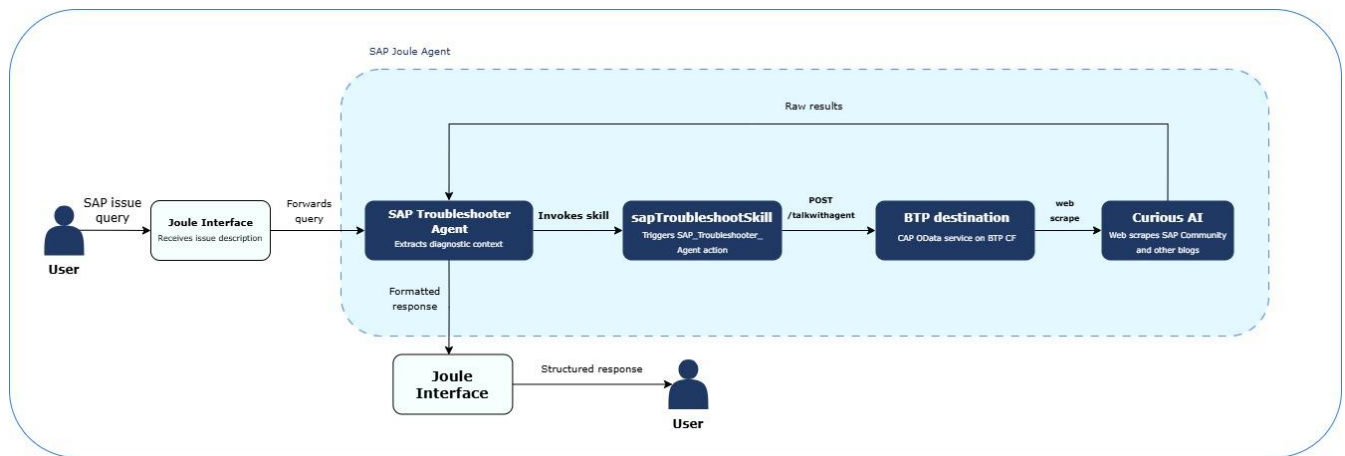
Overview

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

SAP Troubleshooter Agent – An AI-powered diagnostic assistant built on SAP Joule Studio. The agent analyses SAP issues described in natural language, retrieves troubleshooting insights from an external analysis service, and returns structured remediation guidance with relevant SAP documentation references.

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:



The Solution flows is as follows:

1. User submits a natural language SAP-issue description or troubleshooting request via the Joule interface. Example: "We see TIME_OUT dumps for /IWFND/MAINT_SERVICE activation, identify root cause and fix."
2. The SAP Troubleshooter Agent receives the query. It never requests clarification and automatically extracts diagnostic context from the user prompt.
3. The agent invokes the sapTroubleshootSkill Joule Skill. This triggers the SAP_Troubleshooter_Agent SAP Build Action.
4. The Build Action sends a POST request containing the full user prompt to the /talkwithagent endpoint via the capservice BTP Destination.
5. The CAP OData service on BTP Cloud Foundry forwards the query to the Curious AI web-scraping engine, which retrieves diagnostic information from authoritative SAP sources and returns a JSON payload containing synthesized content and reference links.
6. The agent processes the JSON response and structures the output into exactly four paragraphs: Opening, Diagnosis Overview, Remediation Steps, and Operational Considerations.
7. A References section with 2–4 authoritative SAP source links from the response is appended, and the complete structured answer is delivered to the user via Joule.

Business Value & Benefits

- Real-time SAP diagnostic knowledge retrieval across all major SAP components and error types
- Automatic context extraction from user queries — no clarification requested
- Strictly structured four-paragraph diagnostic response format: Opening, Diagnosis Overview, Remediation Steps, Operational Considerations
- Professional, technical tone using correct SAP terminology throughout (transaction codes, table names, basis terms)
- Mandatory References section with 2–4 authoritative SAP source links per response
- Coverage across ABAP, S/4HANA, HANA, Basis, Security, Fiori/Gateway, PI/PO, CPI, BTP, and SAP ECC
- Graceful fallback: provides the most probable SAP-based explanation when search data is insufficient, without fabricating logs or SAP Notes
- Enforced single-pass workflow: query → skill → synthesize → four-paragraph answer → references → end

Prerequisites

SAP Joule Studio & BTP

- Joule Studio configured in SAP Build (refer to the setup guide for your tenant).
NOTE: If you need additional help with prerequisites such as setting up SAP Build Process Automation and SAP Build Work Zone, you can run the Discovery Centre mission: *Setup Joule Studio for a BTP Enterprise Account*.
- Ability to create BTP Destinations in the subaccount cockpit.
- Network connectivity from BTP to the Curious AI service host.
- Confirm the /talkwithagent endpoint is reachable and returns HTTP 200 with a valid JSON.
- Obtain any authentication credentials required by the external service (API key, OAuth token, or no-auth if publicly available).
- SAP S/4HANA (On-Cloud) accessible from SAP BTP.

Backend Service

1. Get the Code

Get the backend CAP service ZIP file from SAP Troubeshooter agent's dependencies, extract the zip file and open it in code editor

2. Check Python Version

Ensure Python 3.10+ is installed.

3. Create & Activate Virtual Environment

```
python -m venv venv
```

```
>Windows: venv\Scripts\activate  
>Mac/Linux: source venv/bin/activate
```

4. Install Dependencies

```
pip install -r requirements.txt
```

5. Configure Environment

Rename .env.example to .env and update it with your credentials and configuration.

6. Run the Application

```
python main.py
```

This starts the server and exposes POST /api/invoke.

When triggered, the agent calls the tool, which scrapes an external web source and returns the results to the agent for display.

Deployment & Destination

- Push the codebase to Cloud Foundry: `cf push` - note the assigned app route URL.
- Create a BTP Destination pointing to the CF app route (Type: HTTP, appropriate Authentication).
- In Joule Studio, reference the destination — the agent will invoke POST /api/invoke through it.

Configuration Guide

This section describes the configuration steps required to set up the SAP Troubleshooter Agent.

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	<Destination Name>
Type	HTTP
URL	https://<host>/odata/v4/chat-service
Client ID	<Client ID>
Client Secret	<Client Secret>
Token Service URL	<Token Service URL>
Proxy Type Internet	Internet
Authentication	No Authentication (or OAuth2ClientCredentials if secured)

NOTE: All destination values shown above are placeholders. Actual system specific values must be maintained in the SAP BTP cockpit.



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Additional Properties:

Additional Property	Value
HTML5.DynamicDestination	true
HTML5.Timeout	6000
sap.applicationdevelopment.actions.enabled	true
sap.processautomation.enabled	true

User Roles Configuration

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

Services used:

There is 1 Action project used in this template.

Action Project Name	Service Used	Purpose
Troubleshoot Agent	/talkwithagent	POST action that sends the user query to /talkwithagent

Artifacts in the Agent:

Type	Name	Description
Joule Skill	SAP Troubleshoot Skill	Sends SAP troubleshooting queries to the external Curious AI service and returns diagnostic insights with documentation references.
Joule Agent	SAP Troubleshooter Agent.	An AI-driven assistant that interprets SAP issues and provides troubleshooting with relevant documentation across S/4HANA, BTP, HANA, Fiori, Integration Suite, and ECC.

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](#).



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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 “**SAP_Troubleshooter_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 “**SAP_Troubleshooter_Agent**” project is available for use.

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 want to modify the agent, with its instructions/additional context or other fields, you can do so.

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 must release 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 to agent.

Prompts	Expected Result
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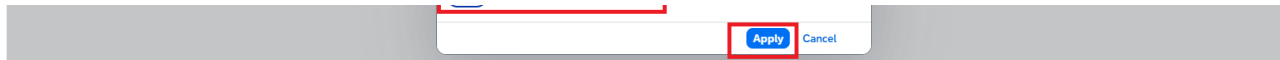
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Why are TIME_OUT dumps occurring when activating /IWFND/MAINT_SERVICE?	A four-paragraph structured troubleshooting explanation
Investigate short dump DBIF_RSQL_SQL_ERROR in ST22.	Diagnostic insights and possible root causes
Why are SAP Fiori Launchpad tiles not loading?	Recommended remediation steps
Troubleshoot CPI integration flow failing with HTTP 500 error.	A References section with 2–4 SAP documentation links

NOTE:

1: 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 Work zone, 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’**.



Support:

Since this is a learning content, support is not provided.