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Custom Joule Skill & Agent in SAP Build Customer Collection Inbound email

Configuration & User Guide

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Contents

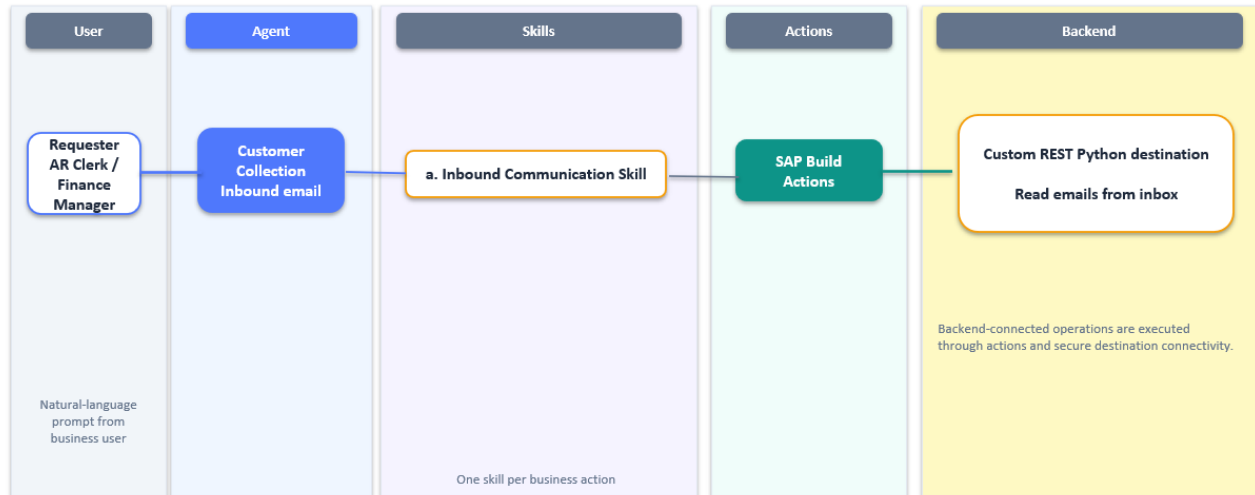
Overview	3
Business Value & Benefits	5
Prerequisites	5
Configuration Guide	5
Setup Business Technology Platform Cockpit	5
Configure SAP S/4HANA Destination	7
User Roles Configuration	8
Services used:	8
Artifacts in the Agent:	8
Setup Content Package	8
Import Custom Joule Agent	8
Configuration & Modification	9
Release and Deploy the Project	9
Test the Joule Skills And Agent in SAP Build	9

Overview

- This configuration guide describes how to configure and deploy an SAP Joule Agent to process inbound customer collection emails using SAP BTP, SAP Build / Joule Studio, Joule Skills, and a custom Joule Agent. The solution enables intelligent handling of inbound customer communications by reading emails from a connected inbox, structuring the content, identifying customer intent, and enabling appropriate follow up actions within SAP business processes through a governed natural language experience.
- The guide follows the standard configuration guide template and aligns with Intelligent Collections design patterns. The solution is based on a layered architecture in which a custom REST Python service reads inbound emails from the mailbox, SAP Build Actions invoke backend services and integrations, Joule Skills encapsulate business capabilities, and the Joule Agent orchestrates skills to fulfill user requests initiated through inbound customer emails.
- **Functionality Overview:**
 - A custom Inbound Email skill retrieves the latest customer collection email via a secured custom REST Python destination and extracts email content and metadata.
 - The Joule Agent analyzes the structured email content to determine customer intent, such as Promise to Pay, Dispute, or General Inquiry.
 - Based on the identified intent, the appropriate Joule Skill is invoked to process the request.
 - Joule Skills trigger SAP Build Actions, which can call SAP S/4HANA OData services to perform follow up business activities such as creating or updating collection relevant objects.
 - The Joule Agent validates required business inputs, ensures consistent backend processing, and returns a confirmation containing business relevant details such as customer information, reference documents, action performed, and processing status, with optional navigation to the relevant SAP application for review or further processing.

Solution flow (example given below) :

Customer Collection Inbound email



The following steps describe the highlevel solution flow of Customer Collection Inbound email

1. A business user (AR Clerk or Finance Manager) submits a natural-language request to SAP Joule related to customer collection inbound emails.
2. SAP Joule triggers the Customer Collection Inbound Email agent based on the user request.
3. The agent invokes the Inbound Communication Skill to handle the inbound email processing logic.
4. The skill calls SAP Build Actions to orchestrate secure backend execution.
5. SAP Build Actions connect to the custom REST Python destination.
6. The Python service accesses the configured inbox and reads the latest email.
7. The email content is parsed, structured, and analyzed to determine intent.
8. The structured email data and identified intent are returned to the Joule agent for presentation or further processing.

Business Value & Benefits

- Reduces manual effort for AR and finance teams by intelligently processing inbound customer emails and extracting key information.
- Enables quicker and more informed responses by structuring email content and identifying customer intent in near real time.
- Supports intent-driven follow-up actions such as workflow initiation, case creation, escalation, or task routing within SAP processes.
- Improves consistency and accuracy in handling inbound communications by applying standardized interpretation and classification logic.
- Enables execution of follow-up business transactions in SAP S/4HANA by invoking OData services based on the identified email intent, such as creating Dispute case, creating Promise to Pay cases, or triggering financial processes.

Prerequisites

For this template to run successfully, the following prerequisites are required:

- SAP Joule must be enabled and configured in the target SAP landscape with appropriate authorizations for agent and skill creation.
- A custom REST Python destination must be created and configured in SAP BTP, with secure connectivity and authentication to access the target email inbox.
- The Python backend service must be deployed and accessible, with logic implemented to read the latest email, parse content, and return structured data and intent.
- SAP Build Actions must be available and configured to invoke the custom REST destination from the Joule skill.
- Required roles and authorizations must be assigned to users and technical users for Joule agent execution, destination access, and action invocation.
- If follow-up business processing is required, relevant SAP S/4HANA OData services must be activated, exposed, and accessible from the SAP BTP environment.
- Network connectivity, trust configuration, and security settings (OAuth/scopes/certificates as applicable) must be in place between SAP Joule, SAP BTP, and backend systems.

Configuration Guide

Setup Business Technology Platform Cockpit

- Ensure the required entitlements are assigned to the target SAP BTP subaccount.

- Assign relevant role collections for SAP Build, Joule, destination administration, and action execution.
- Verify trust and identity configuration (for example IAS / corporate identity provider) where applicable.
- Confirm administrators can access SAP Build, destinations, tenant configuration, and environment management.

Configure SAP S/4HANA Destination

- To access the process automation capability of SAP Build, create the following destination in the SAP BTP cockpit:

Destination Property	Value
Name	/search
Type	HTTP
URL	<destinatoin url>
Proxy Type	OnPremise
Authentication	BasicAuthentication

- Add the additional property:

Parameter	Value
HTML5.DynamicDestination	true
WebIDEEnabled	false
HTML5.Timeout	6000
sap.applicationdevelopment.actions.enabled	true
sap.processautomation.enabled	true

User Roles Configuration

To access this solution, users must be assigned the required SAP Build, Joule, and backend business role collections applicable to the collections scenario.

- SAP BTP Administrator roles for entitlements, destinations, trust, and environment setup.
- SAP Build developer / designer roles for actions, skills, and project maintenance.
- Joule / AI administrator roles for agent configuration, release, and deployment.
- Business user roles for collections management, customer line-item access, dispute monitoring, and sales order / delivery block follow-up where needed.
- SAP S/4HANA user roles with authorization to display / change sales orders, apply delivery blocks, and access related dispute and receivables data.

Services used:

The following **Action Projects** are used in this template:

Action Project Name	Service Used	Purpose
Inbound Mail Communication Actions	SAP Custom HTTP/REST service	Reads the latest mail in the inbox for customerID

Artifacts in the Agent:

Type	Name	Description
Joule Skill	Inbound Mail	Reads the mail from inbox for a customer and read the intent . For ex Payment status

Setup Content Package

Import Custom Joule Agent

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 “Customer Collection Inbound email”
3. In the Search bar type “ Customer Collection Inbound email”
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 “Customer Collection Inbound email” project is available for use.

Configuration & Modification

- Once the Joule Skill and Agent project is added to the Lobby, it will be required to modify to consider the dispute reasons and other org specific attributes.
- Optional modifications include:
 - Updating agent instructions
 - Adding or modifying Joule Skills
 - Extending security validation logic
 - Customizing response formats

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
Give insights about the latest mail for customer xxxxxx1234	Agent returns the mail content in structured (markdown) manner and lists out the key points. For ex. CustomerID, Amount, Doc no. etc

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 have to switch the toggle on for ‘**Share Environment Capabilities**’.

The screenshot shows the SAP Build Control Tower interface. At the top, there is a breadcrumb trail: 'Control Tower / Environments / Build Demos'. Below this, there are buttons for 'Edit', 'Share', and 'Delete'. A table header lists fields: 'Last Updated:', 'Author:', 'Members:', 'Identifier:', and 'Description:'. A navigation menu 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', 'Refresh', and 'Settings' (the latter is highlighted with a red box). Below this, the 'Environment Capabilities' section is visible. A modal window titled 'Joule Settings' 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.' Below the text is a toggle switch for 'Share Environment Capabilities' which is turned on (highlighted with a red box). At the bottom of the modal are 'Apply' and 'Cancel' buttons (the 'Apply' button is highlighted with a red box).