



PUBLIC

Custom Joule Skill & Agent in SAP Build Audit SAP Security 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.
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:

- This agent and documentation are intended for Business use. The content is designed to support real business scenarios and enterprise integrations.
- This documentation does not provide a full end-to-end setup guide for all SAP Business Technology Platform services. It assumes that the IT administrator responsible for setup has prior experience with SAP Business Technology Platform and related services. The configuration steps outlined in this document must be followed as described.
- This content is provided to accelerate enterprise solution implementation. Customers are expected to adapt and extend the agent, skills, and configurations based on their specific business requirements. Users should have a basic understanding of SAP Build Process Automation and its capabilities to effectively customize and operate the solution.

Overview

The **Audit SAP Security Agent** is designed to assist SAP security administrators and auditors in retrieving and analyzing security-related data from SAP S/4HANA systems using natural language queries.

The agent converts user questions into ABAP Open SQL queries and executes them via SAP APIs (OData services) to fetch data from standard SAP security tables.

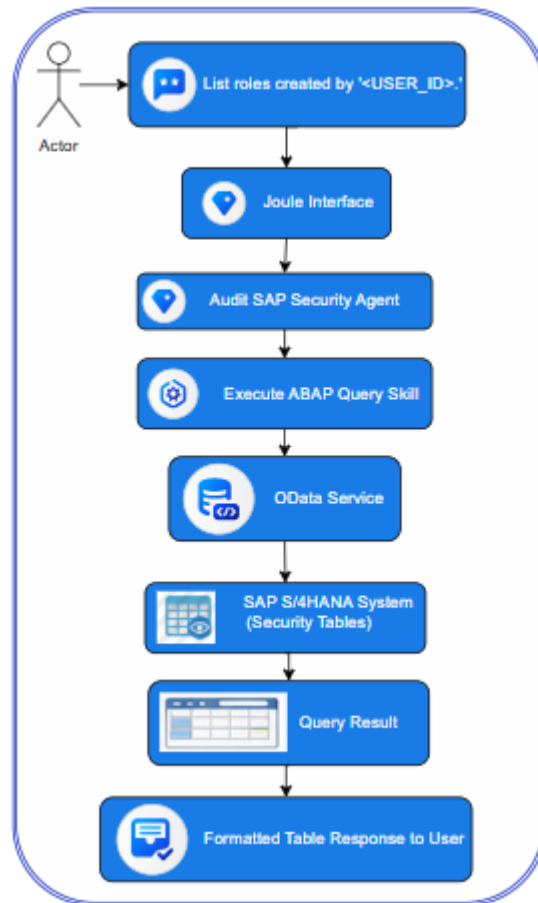
It enables users to perform security audits such as:

- Role analysis
- Transaction-level access checks
- User-role assignments
- Locked user identification

This eliminates the need for manual ABAP query writing and improves efficiency, accuracy, and accessibility for both technical and non-technical users.



Solution flow :



The requester, SAP Security Auditor / Administrator, requests security-related information (roles, users, transactions) to the Audit SAP Security Agent. The Agent refers to the Joule skills that are provided as tools for 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 execute ABAP queries, 'Execute ABAP Query', is referred to retrieving the required SAP security data. Here, the OData service associated with the SAP S/4HANA project is used.
- b. The Agent converts the user request into an ABAP Open SQL query and passes it to the 'Execute ABAP Query' skill. The skill executes the query on SAP S/4HANA security tables to fetch the relevant data.

The results are then returned to the Agent and displayed to the user in a structured format (table or count-based response).

Business Value & Benefits

- Simplifies SAP security audits by allowing natural language interaction instead of manual ABAP query creation.
- Reduces dependency on deep SAP technical and ABAP expertise.
- Saves time during internal and external audit activities.
- Minimizes human error associated with manually written queries.
- Enables faster access reviews, role analysis, and user account verification.
- Improves efficiency and productivity of security administrators and auditors.
- Supports consistent and repeatable audit processes across SAP landscapes.
- Provides a scalable and reusable solution for SAP security audit automation.

Prerequisites

For this agent 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](#).

- SAP S/4HANA system (On-Premise) accessible from SAP BTP
- SAP S/4HANA Purchasing & related OData/API services active and reachable
- SAP Build with Joule Studio Enabled
- SAP Business Technology Platform (BTP) account with destination configuration permissions
- SAP Cloud Connector configured for On-Premise connectivity
- Required user roles/authorizations for Purchase Orders and Info Records in SAP S/4HANA

Configuration Guide

This section describes the configuration steps required to set up the Audit SAP Security Agent. It includes the necessary configurations in the SAP Business Technology Platform cockpit, destination setup, user role configuration, and details of services and artifacts used by the agent.

The configuration ensures secure connectivity between SAP Build Joule Studio and SAP S/4HANA using OAuth-protected OData services, enabling the Joule Agent to retrieve and process business document data.

Setup Business Technology Platform Cockpit

Configure SAP S/4HANA Destination

The Audit SAP Security Agent connects to the backend SAP S/4HANA system using the following destination.

Destination Property	Value
Name	<Destination Name>
Type	HTTP
URL	http://{host}:{port}/sap/opu/odata/SAP/ZVP_DYNAMIC_ABAP_EXE_SRV

Proxy Type Internet	OnPremise
Authentication	Basic Authentication
Username	<Username>
Password	<Password>

- **Additional Properties :**

Parameter	Value
HTML5.DynamicDestination	true
WebIDEEEnabled	false
HTML5.Timeout	6000
WebIDESystem	E4H
sap.applicationdevelopment.actions.enabled	true
sap.processautomation.enabled	true

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

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)

SAP Cloud Connector Details

Cloud Connector Required: Yes

Reason: The backend (E4H) is on-premise, and the destination uses Proxy Type "on Premise".

Therefore, SAP Cloud Connector with the specified Location ID is required.

User Roles Configuration

To access and use the Audit SAP Security Agent, the users need to have the roles as described [here](#).

Services used:

There is one Action project used in this agent.

Action Project Name	Service Used	Purpose
auditSAP_test	/ZVP_DYNAMIC_ABAP_EXE_SRV	Executes dynamically generated ABAP query to retrieve SAP security data from S/4HANA system.

Artifacts in the Agent:

Type	Name	Description
Joule Skill	Execute ABAP Query	Executes ABAP Open SQL queries generated by the agent to retrieve SAP security data from S4/HANA.
Joule Agent	SAP Agent	Converts natural language SAP security queries into ABAP queries and retrieves relevant security data from SAP S/4 HANA using configured APIs.

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 “**Audit SAP Security 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 “**Audit SAP Security 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 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.

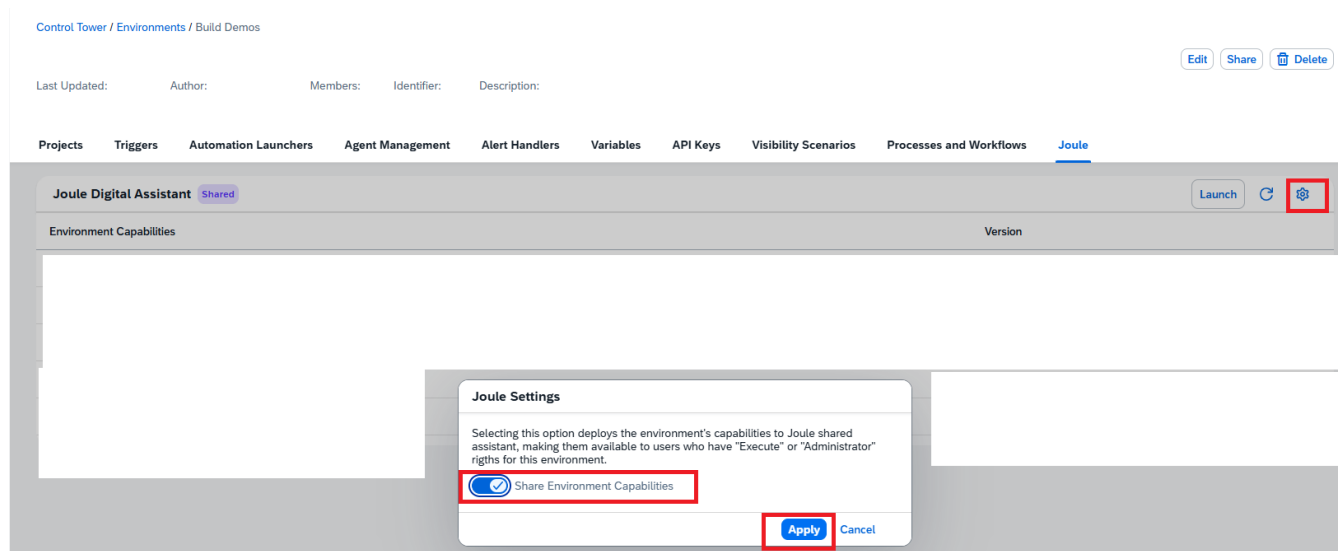
Prompt	Expected Result
List roles that contain no transactions.	A structured table is displayed with roles that contain no transactions.
Count how many users have access to '<TRANSACTION_CODE>'. Example: Count how many users have access to 'SU01'.	A single sentence displaying the total number of users assigned roles containing transaction '<TRANSACTION_CODE>'. Example: A single sentence displaying the total number of users assigned roles containing transaction 'SU01'.
What are the roles present which can allow user to perform '<BUSINESS_ACTION>'. 	A table listing roles that contain relevant transaction code mapped to '<BUSINESS_ACTION>'.

Example: What are the roles present which can allow user to create a sales order.	Example: A table listing roles that contain transaction 'VA01' (sales order creation).
List roles created by '<USER_ID>'. Example: List roles created by 'INFdev1'.	A structured table showing role names from <ROLE_TABLE> where <CREATE_BY_FILE> = '<USER_ID>'. Example: A structured table showing role names from AGR_DEFINE where CREATE_USR = 'INFdev1'.
Count of currently locked users.	A single sentence showing the total number of users with lock status.

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 Workzone, then click on the **settings** in 'Control Tower->Environments-><Your Shared Environment> ->Joule

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



Support :

If you experience any issues or support related to Audit SAP Security Agent, Please contact:
SAP_BTP_AI_AUTO@infosys.com

