

SAP BUSINESS TECHNOLOGY PLATFORM | EXTERNAL

Setup & Configuration Guide

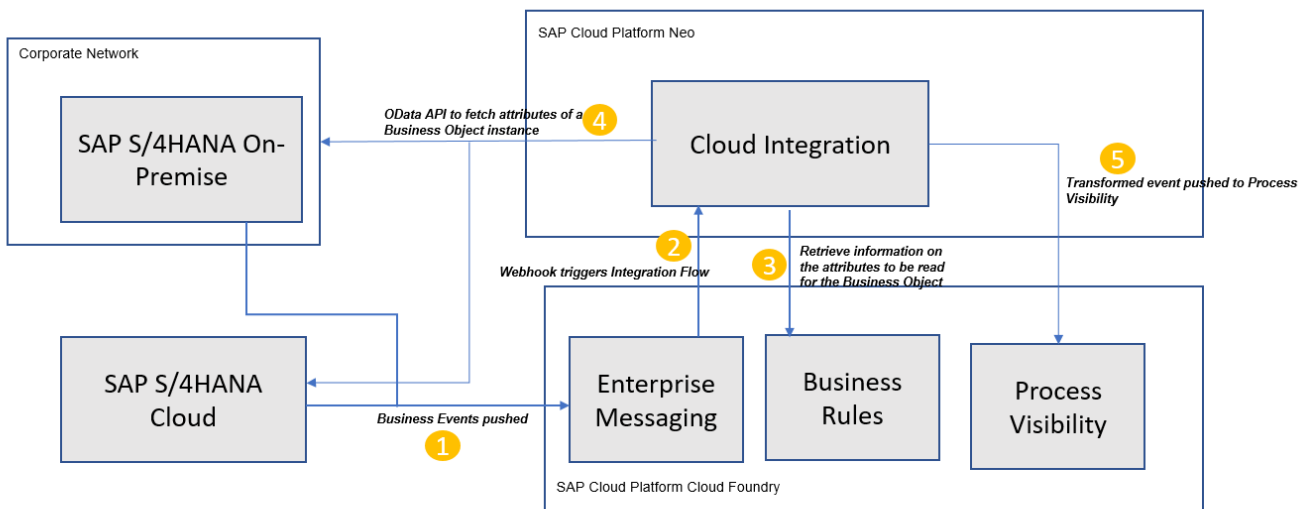
SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility Service

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Overview

This document provides information about the configuration steps to consume the Integration package that helps transforming business events from SAP S/4HANA (On-Premise/Cloud) and pushing them to SAP Process Visibility service. Once you have the business events from SAP S/4HANA, you can use SAP Process Visibility service to gain visibility on an end to end process involving SAP S/4HANA Business Object as a process participant. If parts of the end to end process are executed on SAP S/4HANA and if this involves a change of state for the business object, then the business events are published. To view the list of business events published in SAP S/4HANA, refer [API HUB documentation](#).



Required SAP Business Technology Platform Services

The integration package **SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility service** is intended to be used with SAP S/4HANA On-Premise (Version 2020 onwards) and SAP S/4 HANA Cloud (Version 2008 onwards).

You also require the following service subscriptions in SAP Business Technology Platform:

- SAP Workflow Management to orchestrate the process.
- SAP Enterprise Messaging to consume business events from SAP S/4HANA
- SAP Integration Suite (in the Neo environment).
- SAP Cloud Connector to establish access to on-premise resources.

Configure SAP S/4HANA (On-Premise/Cloud) to push business events to SAP Enterprise Messaging

SAP Enterprise Messaging can receive events from SAP S/4HANA (On-Premise/Cloud). Use the following blogs to perform the necessary configuration.

SAP S/4HANA On-Premise

<https://blogs.sap.com/2019/09/16/sap-enterprise-messaging-for-s4hana-on-premises/>

SAP S/4HANA Cloud:

<https://blogs.sap.com/2020/08/19/sap-s-4hana-cloud-enterprise-event-enablement-whats-new-with-cloud-2008/comment-page-1/#comment-524508>

Note: At the end of this configuration, you will have the business events from SAP S/4HANA (On-Premise/Cloud) available in the queue created using SAP Enterprise Messaging.

Import live process package

This integration content package requires the live process package '**SAP S/4HANA and SAP S/4HANA Cloud Event Consumption in SAP Process Visibility service**' to be setup on your tenant. Search for this package on [API Hub](#) and set this up on your tenant.

[Optional] Configure SAP Cloud Connector

If business events must be consumed from SAP S/4HANA on premise system, you need to configure SAP Cloud Connector to enable a secure tunnel for invoking the ODATA APIs. For more information, see [Configure Cloud Connector](#)

Note: Add mapping with HTTP protocol and enable the service - sap/opu/odata/sap.

Copy, configure and deploy Integration Flow

The integration content package **SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility service** is available in [SAP API Business Hub](#).



<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	Push business events from SAP S4HANA to SAP Process Visibility service	
<input type="checkbox"/>	Push business events from SAP S/4HANA to SAP Process Visibility service Created	Integration Flow

Copy the content package to your SAP Integration tenant. To be able to copy and deploy integration flows, you need the AuthGroup.IntegrationDeveloper role assigned in your tenant.

Copy pre-packaged Integration content in SAP Integration Tenant

1. Access your SAP Integration tenant management node (<https://<cpitenant>.hana.ondemand.com/itspaces>). Please refer [help documentation](#) on how to get tenant management node address.
2. View all pre-packaged integration flows under Discover→Integration. (<https://<cpitenant>.hana.ondemand.com/itspaces/shell/discover>)
3. Search content package “**SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility service**”.
4. Click on the package “**SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility service**”.
5. Click Copy to import the Integration content package to your workspace.
6. Navigate to the *Design* view (<https://<cpitenant>.hana.ondemand.com/itspaces/shell/design>) to open the imported content package.

Deploy credential artifacts

- Choose the **Operations View** tab.
- Under the **Manage Security** section, choose **Security Material**.
- From the **Create** dropdown menu, choose **OAuth2 Credentials**. Create the credentials PVS & RULES as given below

Property Name	Value
Name	PVS
Grant Type	Client Credentials
Token Service URL	<uaa.url>/oauth/token Determine the <uaa.url> from the service key of the Process Visibility service instance. For more details, see Determine Service Configuration Parameters
Client ID	<uaa.clientid> Determine the <uaa.clientid> from the service key of the Process Visibility service instance. For more details, see Determine Service Configuration Parameters
Client Secret	<uaa.clientsecret> Determine the <uaa.clientsecret> from the service key of the Process Visibility service instance. For more details, see Determine Service Configuration Parameters
Client Authentication	Send as Request Header

Property Name	Value
Name	RULES
Grant Type	Client Credentials
Token Service URL	<uaa.url>/oauth/token Determine the <url> from the service key of the Business Rules service instance. For more details, see Determine Service Configuration Parameters
Client ID	<uaa.clientid> Determine the <clientid> from the service key of the Business Rules service instance. For more details, see Determine Service Configuration Parameters
Client Secret	<uaa.clientsecret> Determine the <clientsecret> from the service key of the Business Rules service instance. For more details, see Determine Service Configuration Parameters
Client Authentication	Send as Request Header

- Add **User Credential** with the following details.
 - Credential: S4HANA
 - Username/Password: Provide the inbound communication user credentials using which the [OData APIs](#) can be invoked.
- Deploy the credentials as shown.

Overview / Manage Security Material

Security Material (8)

Name	Type	Status
S4HANA	User Credentials	Deployed
PVS	OAuth2 Client Credentials	Deployed
RULES	OAuth2 Client Credentials	Deployed

Configure and deploy the Integration Flow

- Open the integration flow **“Push business events from SAP S4HANA to SAP Process Visibility service”**
- Click **Configure** button and set values for the **Receivers** as given below:

Receiver	Property	Value
PROCESS_VISIBILITY	CP Process Visibility Rest API host	bpmpruntime.cfapps.<datacenterID>.hana.ondemand.com e.g. bpmpruntime.cfapps.eu10.hana.ondemand.com Determine <datacenterID> from the service key of the Process Visibility service instance. For more details, see Determine Service Configuration Parameters
BUSINESS_RULES	CP Business Rules Runtime Host	bpmruleruntime.cfapps.<datacenterID>.hana.ondemand.com e.g. bpmruleruntime.cfapps.eu10.hana.ondemand.com Determine <datacenterID> from the service key of the Business Rules service instance. For more details, see Determine Service Configuration Parameters
S4HANA	S4HANA Host URL	<ul style="list-style-type: none"> For S/4HANA On-Premise system, http:<S4HANA host>: port For S/4HANA Cloud https:<S4HANA Cloud host>
S4HANA	Proxy Type	<ul style="list-style-type: none"> “On-Premise” for SAP S/4HANA On-Premise “Internet” for SAP S/4HANA Cloud

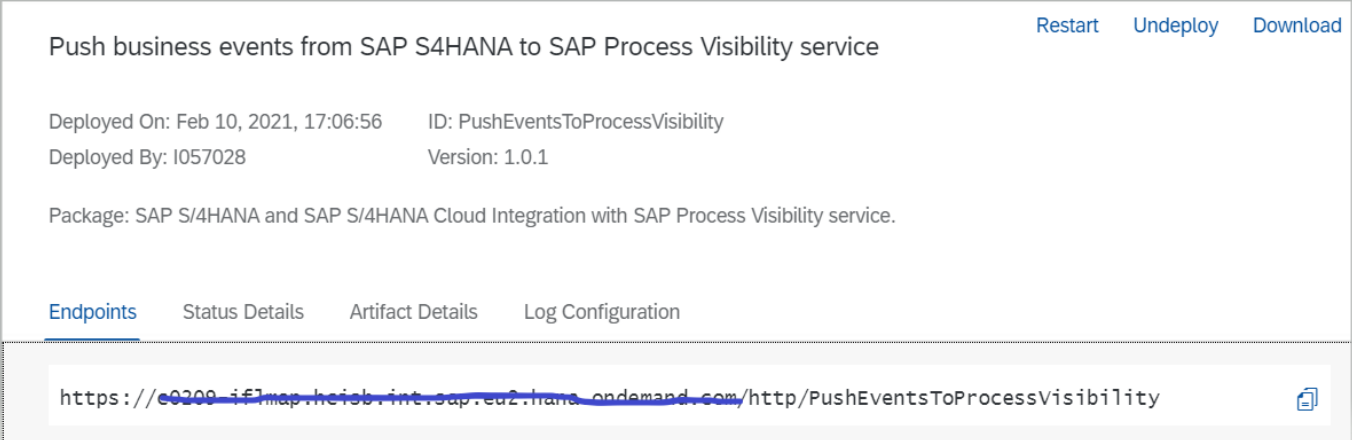
Save and Deploy all the integration flow.

Create OAuth Client in SAP Integration tenant (Neo Environment)

1. Create an OAuth client in SAP Integration tenant in the Neo environment. For more information, see [Create an OAuth Client in the Neo Environment](#).
2. Assign the required SAP Integration [Roles](#) to your OAuth client (oauth_client_).

Integration flow endpoint URL

Once the **Push business events from SAP S4HANA to SAP Process Visibility** service integration flow is deployed, from the **Monitor view**, fetch the rest endpoint URL.



The screenshot shows the SAP Integration Monitor interface for the service 'Push business events from SAP S4HANA to SAP Process Visibility service'. At the top right, there are buttons for 'Restart', 'Undeploy', and 'Download'. Below the service name, deployment details are listed: 'Deployed On: Feb 10, 2021, 17:06:56', 'ID: PushEventsToProcessVisibility', 'Deployed By: I057028', and 'Version: 1.0.1'. The package description is 'SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Process Visibility service.' A navigation bar includes 'Endpoints', 'Status Details', 'Artifact Details', and 'Log Configuration'. The 'Endpoints' tab is active, displaying the URL: `https://e0209-iff1map-hc1eb-int.sap.eu2.hana.ondemand.com/http/PushEventsToProcessVisibility`. A copy icon is visible to the right of the URL.

Create Webhook

You already have a queue created using the Enterprise Messaging hub UI. The business events are available in the queue. To transform the business events and push them to process visibility, perform the following steps

- Create Webhook

See [Manage Webhook Subscriptions](#) to create webhook by providing the following configuration:

- Queue Name: Select the queue that was created to hold the business events
- Quality of service: 0
- Exempt Handshake: Yes
- Webhook URL: <Provide the Integration flow endpoint> fetched from [here](#)
- Authentication: OAuth2ClientCredentials.
- Client ID & Client secret: Based on the configuration provided [here](#)

Note: Activate Webhook if it is not already active

As soon as a message is available in the queue, the webhook gets called triggering the integration flow. The Integration flow transforms the message and pushes it to SAP Process Visibility service.

Realizing end to end visibility on processes

With the events being acquired from SAP S/4HANA, you can now create a visibility scenario using SAP Process Visibility service. The SAP S/4HANA Business Object can be added as a process to the scenario. For more information, see [Get Started with SAP Process Visibility service](#).