

SAP CLOUD PLATFORM | EXTERNAL

# Setup & Configuration Guide

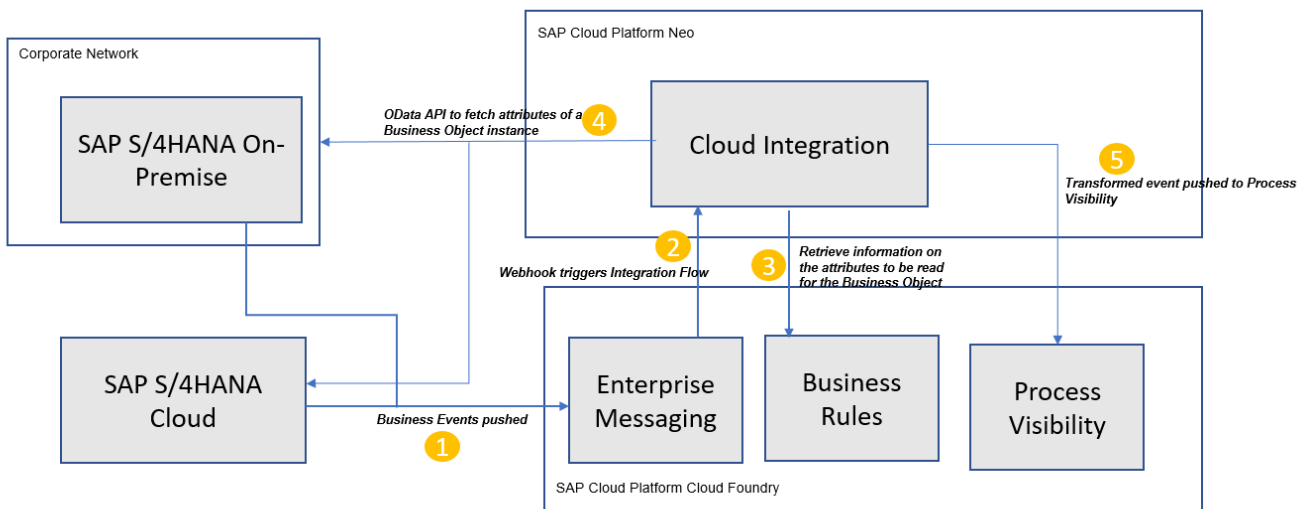
## SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Cloud Platform Process Visibility

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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 Cloud Platform Process Visibility. Once you have the business events from SAP S/4HANA, you can use SAP Cloud Platform Process Visibility 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 Cloud Platform Services

The integration package **SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Cloud Platform Process Visibility** 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 Cloud Platform:

- SAP Cloud Platform Workflow Management to orchestrate the process.
- SAP Enterprise Messaging to consume business events from SAP S/4HANA
- SAP Cloud Platform Integration (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 Cloud Platform Enterprise Messaging

SAP Cloud Platform 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 Cloud Platform Process Visibility**' 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 Cloud Platform Process Visibility** is available in [SAP API Business Hub](#).



This integration package helps in acquiring business events from SAP S/4 HANA or SAP S/4HANA Cloud & pushing them to SAP Cloud Platform Process Visibility.

Vendor: SAP Mode: Editable

Version: 1.0

Overview **Artifacts (1)** Documents (1) Tags Comments

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

Copy the content package to your SAP Cloud Platform 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 Cloud Platform Integration

1. Access your SAP Cloud Platform 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 Cloud Platform Process Visibility**”.
4. Click on the package “**SAP S/4HANA and SAP S/4HANA Cloud Integration with SAP Cloud Platform Process Visibility**”.
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 <a href="#">Determine Service Configuration Parameters</a>
Client ID	<uaa.clientid>  Determine the <uaa.clientid> from the service key of the Process Visibility service instance. For more details, see <a href="#">Determine Service Configuration Parameters</a>
Client Secret	<uaa.clientsecret>  Determine the <uaa.clientsecret> from the service key of the Process Visibility service instance. For more details, see <a href="#">Determine Service Configuration Parameters</a>
Client Authentication	Send as <b>Request Header</b>

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 <a href="#">Determine Service Configuration Parameters</a>
Client ID	<uaa.clientid>  Determine the <clientid> from the service key of the Business Rules service instance. For more details, see <a href="#">Determine Service Configuration Parameters</a>
Client Secret	<uaa.clientsecret>  Determine the <clientsecret> from the service key of the Business Rules service instance. For more details, see <a href="#">Determine Service Configuration Parameters</a>
Client Authentication	Send as <b>Request Header</b>

- 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.

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 Cloud Platform Process Visibility”**
- 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 <a href="#">Determine Service Configuration Parameters</a>
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 <a href="#">Determine Service Configuration Parameters</a>
S4HANA	S4HANA Host URL	<ul style="list-style-type: none"> <li>For S/4HANA On-Premise system, http:&lt;S4HANA host&gt;: port</li> <li>For S/4HANA Cloud https:&lt;S4HANA Cloud host&gt;</li> </ul>
S4HANA	Proxy Type	<ul style="list-style-type: none"> <li>“On-Premise” for SAP S/4HANA On-Premise</li> <li>“Internet” for SAP S/4HANA Cloud</li> </ul>

Save and Deploy all the integration flow.

## Create OAuth Client in Cloud Platform Integration tenant (Neo Environment)

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

## Integration flow endpoint URL

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

The screenshot shows the 'Monitor view' for the integration flow 'Push business events from SAP S4HANA to SAP Cloud Platform Process Visibility'. At the top right, there are buttons for 'Restart', 'Undeploy', and 'Download'. Below the title, deployment details are listed: 'Deployed On: Sep 11, 2020, 17:34:22', 'ID: Push\_business\_events\_from\_SAP\_S4HANA\_to\_SAP\_Cloud\_Platform\_Process\_Visibility', 'Deployed By: I057028', and 'Version: 1.0.0'. The package name is 'Acquire SAP S/4 HANA business events for SAP Cloud Platform Process Visibility'. A navigation bar at the bottom includes 'Endpoints', 'Status Details', 'Artifact Details', and 'Log Configuration'. The 'Endpoints' tab is active, showing the URL: `https://<del>e0209-1f1map.hcisb.int.sap.svc2.hanaondemand.com</del>/http/PushEventsToProcessVisibility`. A copy icon is visible on the right side of the URL field.

## 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 Cloud Platform Process Visibility.



## 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 Cloud Platform Process Visibility. The SAP S/4HANA Business Object can be added as a process to the scenario. For more information, see [Get Started with SAP Cloud Platform Process Visibility](#).