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Setting Up *SAP Central Invoice Management Backend Enablement* **(4N6)**

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1 Purpose

This document describes additional configuration steps that have to be carried out by customers in order to activate the SAP Central Invoice Management Backend Enablement. As these configuration steps are customer-specific, they must be carried out by the customer.

2 Document History

Version	Date	Change
1.0		First Version Document of SAP Central Invoice Management Backend Enablement for Release version 2005 CE

3 Introduction to SAP S/4HANA Central Invoice Management

Global Invoice Departments (e.g. Shared Service Centers) are seeking unified visibility and control over the local purchasing processes across all the plants belonging to same or different company codes. Analytics such as spend visibility and automation of the invoicing processes across different plants have become an urgent need to make informed decision and simplify business process.

There is growing need to have central control over the invoice processes across the business units. Currently customers are challenged to control & optimize the invoices and payments processes across the organization which in turn directly improves the profitability.

3.1 Scope

SAP Central Invoice Management provides a central invoice management system on the SAP Cloud Platform (SCP).

Within organizations, there is a growing need to have central control over the invoice processes across the business units. Businesses need analytics such as spend visibility along with automation of the invoicing processes across different locations to make informed decisions and simplify business processes.

SAP Central Invoice Management helps organizations to centrally manage their invoice business processes for all the connected systems. This business solution provides the flexibility of grouping multiple connected systems to Central Invoice Management, carrying out invoice processes centrally, which provides a consolidated overview of the overall business.

Central Invoice Management on the SAP Cloud Platform (SCP) gives a single point of access and visibility to invoices in connected systems.

Business value propositions offered from central invoice management are listed below:

- Extracting Invoice documents from backend systems to Hub system
- Monitoring Invoice documents from central invoice management app as a single access point
- S/4HANA Cloud or S/4HANA On-premise or SAP ERP performs as one of the connected systems. This set-up instruction document serves as the guide for setting up the S/4HANA Cloud or S/4HANA On-premise or SAP ERP as one backend system to connect with SAP Cloud Platform (SCP).

3.2 Target Audience

This setup guide is intended for technical consultants/Administrators who want to set up or perform any configuration activity to integrate the SAP Cloud Platform (SCP) - Central Invoice Management with S/4HANA Cloud or S/4HANA On-premise or SAP ERP as connected system.

3.3 Use of this Document

This set-up instruction contains information about SAP Central Invoice Management Backend Enablement and related set-up configuration to help you get started.

3.4 Terminology Used in this Document

Terms	Meaning
Connected System	S/4HANA (Cloud or On-Premise) or ERP
PO	Purchase Order
PI	Process Integration
RFC	Remote Function Call

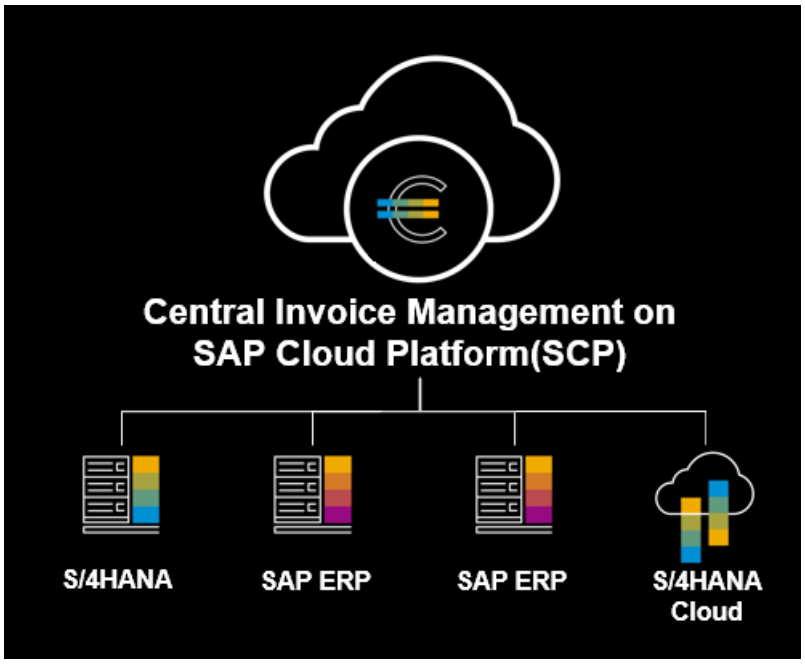
3.5 Important Definitions

Terms	Meaning
SAP Cloud Platform (SCP) HUB System	The SAP Cloud Platform (SCP) acts as a hub system when it is connected to multiple connected systems.
Connected System	Any ERP system from release ECC6.0 EHP 7 and above with add-on HUBERPI is considered as a connected system. Any S/4HAHA On-Premise 1709 or higher, with add-on HUBS4IC is considered as a connected system. Any S/4HANA Cloud 2005 or higher is considered to be a connected system.

Terms	Meaning
Logical System / Communication System	Identifies a unique combination of system ID and client of a connected system. This unique combination enables data exchange between the connected system and the SAP Cloud Platform (SCP) Hub system.
Communication Arrangements	A communication arrangement describes a communication scenario with a remote system during configuration time. It provides the required metadata for the service configuration, such as credentials, outbound ports, destinations, URLs, and other service specifications which contains technical data to enable inbound and outbound communication. **i Note** The setup of communication scenarios is only necessary in S/4HANA Cloud.
Communication Users	Communication users are identities within SAP S/4HANA with user group SAP_CUST_COM and created and owned by the customer. Communication users are created via the application Maintain Communication Users, assigned to communication systems and used within communication arrangements to process inbound communication services.

3.6 Deployment Scenario

This scenario is relevant to customers who want to address their strategic procurement needs in the cloud or continue with their on-premise investments for operational procurement.


Central Invoice Management on
SAP Cloud Platform(SCP)
S/4HANA
SAP ERP
SAP ERP
S/4HANA
Cloud

4 Preparation

In this section, the prerequisites and business roles are introduced.

4.1 Prerequisites

It is mandatory that the scope item SAP Central Invoice Management Backend Enablement (4N6) is active. You can check this in the App *Manage Your Solution* under *View Solution Scope*.

If the scope item is not active, please request the activation via BCP - Ticket Component: `XX-S4C-OPR-SRV`.

Supplier invoices created from different sources in the Connected System are replicated into Central Invoice Management (SCP). The administrator needs to set up connections to the various backend systems before the user can view the invoices.

The following prerequisites are also necessary before getting started:

For details, please refer to Prerequistes in Central Invoice Management Configuration and Administration Guide.

4.2 Business Roles

The following roles are provided as example roles from SAP. You can use these as templates to create your own roles.

Table 4: Business Roles

Business Role Name	Business Role ID As Delivered by SAP
Administrator	`SAP_BR_ADMINISTRATOR`

5 Configure the Central Invoice Management on SAP Cloud Platform (SCP)

5.1 Install and Configure the SAP Cloud Connector

For all scenarios integrating Central Invoice Management with SAP On-Premise scenarios, you need to install a Cloud Connector.

Refer to the SAP documentation on the Cloud Connector for detailed information.

Specify URL Paths:

When configuring the access control list for the cloud to on-premise scenario, you need to specify URL paths (resources) that can be invoked on the on-premise host.

Please refer to the list of default URL paths in the SCP Cockpit in Central Invoice Management Configuration and Administration Guide.

5.2 Create Destinations and Subscribe to Central Invoice Management in the SCP Cockpit

Please carry out the steps according to the corresponding steps Create Destinations and Subscribe to Central Invoice Management in the SCP Cockpit in Central Invoice Management Configuration and Administration Guide.

6 Configure the Connected System

6.1 Configure the Connected System – ERP or S/4HANA On-premise

6.1.1 Configure OData Services

Use

You need to create your own PFCG roles by adding the OData Services to a new role first. In this activity, the following OData Services need to be registered in the connected system.

- API_CV_ATTACHMENT_SRV
- CIMV2_SI_BULK_EXTRACT_SRV
- CIMIC_CONFIGURATION_SRV
- MM_PUR_GF_BULK_EXTRACT_SRV
- CIMIC_SI_API_SRV

Procedure

For information of how to activate and maintain the OData services, please refer to SAP Gateway Foundation (SAP_GWFND)

Search for the chapter Activate and Maintain Services : *SAP Gateway Foundation (SAP_GWFND) > SAP Gateway Foundation Developer Guide > OData Channel > Basic Features > Service Life-Cycle > Activate and Maintain Services* .

For SAP Gateway Configuration, please refer to SAP Gateway Foundation Configuration Guide in SAP Gateway Foundation (SAP_GWFND) .

6.1.2 Clean up Gateway Cache

Use

This activity allows you to clear the cache for SAP gateway.

Cleaning up the cache is an operational activity that you can perform on a regular basis to ensure that irrelevant files are removed from your system.

Procedure

To clear the cache for gateway in the connected system, perform the following steps:

1. Log onto the connected system and enter transaction **`/N/IWFND/CACHE_CLEANUP`**.
2. Check *Cleanup Cache for all Models* and choose *Execute*.
3. Enter transaction **`/N/IWBEP/CACHE_CLEANUP`**.
4. Check *Cleanup Cache for all Models* and choose *Execute*.

6.1.3 Configure Batch Parallelization for Gateway

Use

A parallelization of consecutive queries in a batch request is used to optimize the performance of the batch request processing.

For performance optimization, we recommend the user to activate batch parallelization for Gateway in the connected system.

Configuration Parameters

The following parameters are valid for the current SAP client:

- *Activate Parallelization for Batch Queries*: Mark or unmark this option to enable or disable the parallelization.
- *Maximum Number of Parallel Queries*: Specify the maximum number to limit the amount of parallel processing queries to save system resources.

Procedure

To configure the batch parallelization for gateway in the connected system, perform the following steps:

1. Log on to the connected system and enter transaction `SPRO`.
2. Navigate to the configuration activity: *SAP NetWeaver > Gateway Service Enablement > Back-end OData Channel > Configuration Settings > Define Parallelization of Batch Queries* .
3. Check the *Activate Parallelization for Batch Queries* checkbox.
4. Choose *Save*.

Result

Performance Optimization

In case of serialization, the duration of the consecutive queries is the sum of all query processing times. Contrary to this, the total duration in the parallel mode is just the maximum duration of these query processing times and a minimal overhead for parallelization.

6.1.4 Configure Message Type

In this section, how to activate change pointers and configure message types are introduced.

6.1.4.1 Activate Change Pointers Generally

Use

In this activity, you activate change pointers in general for Delta Load in the connected system.

Procedure

1. Log on to the connected system and enter transaction `BD61`.
2. Select the *Change pointers activated (in general)* checkbox.
3. Choose *Save*.

6.1.4.2 Activate Change Pointers for Message Type

Use

In this activity, you activate change pointers for message type for Delta Load in the connected system.

Procedure

1. Log on to the connected system and enter transaction `BD50`.
2. Find the Message Type `CIMINV`, then select the *activate* checkbox.
3. Choose *Save*.

7 Appendix

7.1 Get S/4HANA Cloud Own System Information

Use

In this activity, you get system ID and host name for Own System.

Procedure

1. Log on to the SAP S/4HANA Fiori UI launchpad with the user that has the role template `SAP_BR_ADMINISTRATOR`.
2. In *Communication Management* section, navigate to *Communication System* application..
3. On the *Communication Systems* screen, choose *Adapt Filter*.
4. On the *Adapt Filters* screen, choose *More Filters*.
5. On the *Select Filters* screen, select **`Own System`** and choose *OK*.
6. On the *Adapt Filters* screen, make the following entries and choose *GO*.
   - *Own System*: **`Yes`**
   - Choose *Own System* and note down the System ID, Host Name, UI Host Name, Logical System and HTTPS port.

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