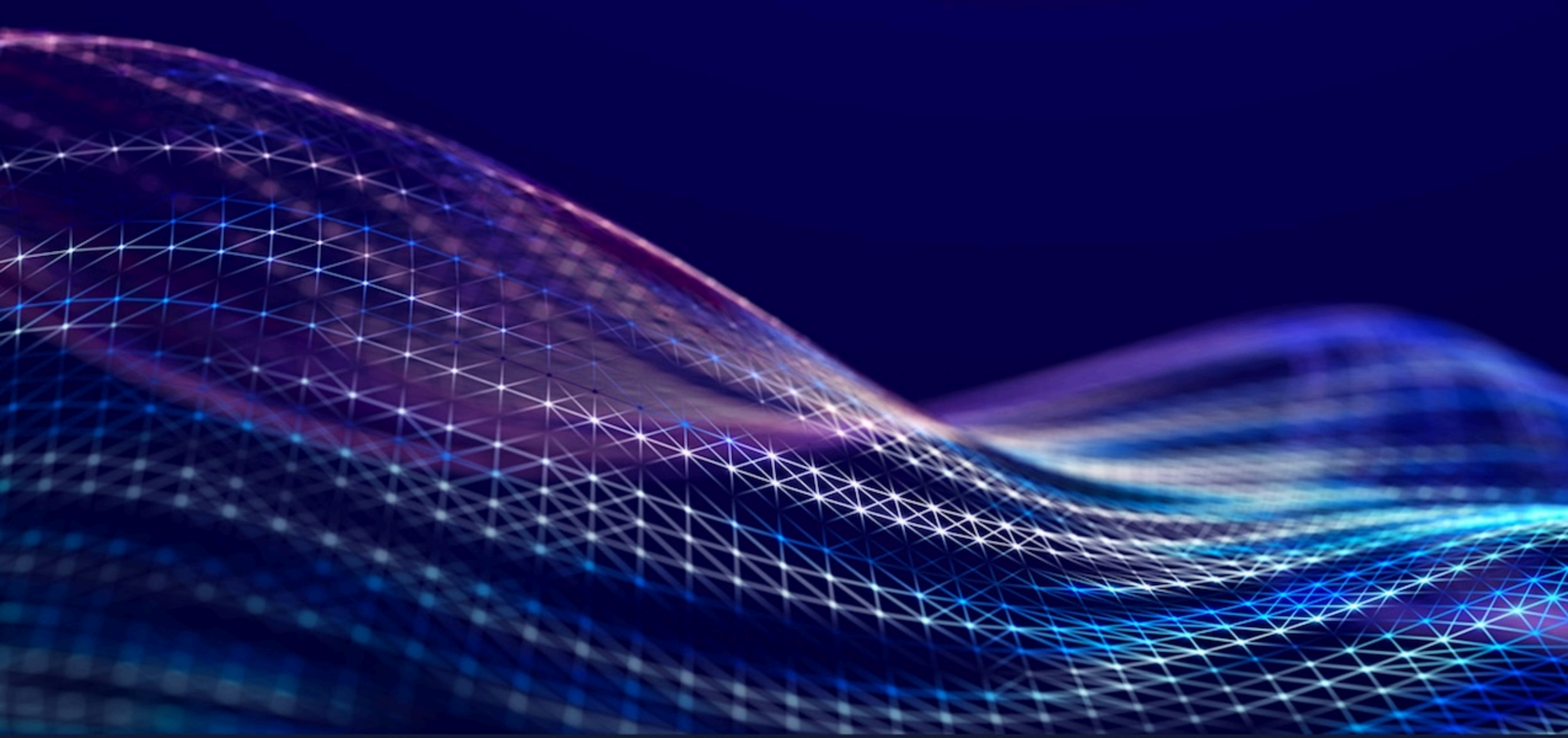

Tungsten Supplier Portal Synchronizer for Process Director Accounts Payable

Installation and Configuration Guide

Version: 2025.1

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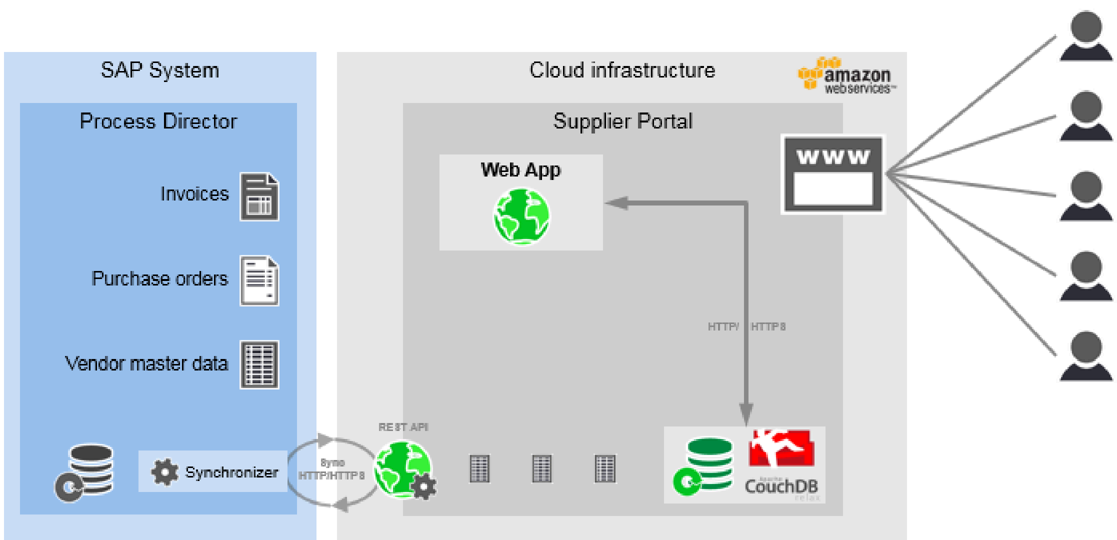
Preface

Tungsten Supplier Portal Synchronizer for Process Director Accounts Payable™ is responsible for sending and receiving data from an Enterprise Resource Planning (ERP) system to Tungsten Supplier Portal™. Synchronizer is located inside the ERP system and calls out to Supplier Portal to begin its work.



The synchronization is always initiated from Synchronizer in the SAP systems. All connections are outbound. No port needs to be open for an inbound connection to the SAP systems. The synchronization can be configured to use either SSL or plain HTTP. For security reasons, it is recommended to use SSL.

Synchronizer activity is categorized by document type.

- Invoices (document originates from the ERP system)
- Incoming invoices (document originates from Supplier Portal)
- Purchase orders (document originates from the ERP system)
- Vendor master data (data originates from the ERP system)
- Vendor master change request (data originates from Supplier Portal)
- Order Confirmation inbound (document originates from Supplier Portal)
- Order Confirmation outbound (document originates from the ERP system)

About this guide

This guide explains how to install and configure Tungsten Supplier Portal Synchronizer for Process Director Accounts Payable to enable the synchronization of documents between Tungsten Supplier Portal and the ERP system.

Chapter 1

Get started

Synchronization

When first implementing Supplier Portal, a one-time initial synchronization must be executed to bring invoices, purchase orders, and vendor master data from the SAP system into Supplier Portal.

The recommended order for the initial synchronization is as follows.

1. Vendor master data
2. Purchase orders
3. Process Director Accounts Payable documents

After this initial synchronization, any subsequent synchronization runs are incremental. Incremental synchronization offers selection criteria that are different from those for the initial synchronization.

To detect the changes for a specific object type, incremental synchronization runs use the synchronization markers of previous incremental synchronization runs.

Transport Control Program

The Transport Control Program (TP) is a utility for controlling transports between SAP systems and for upgrading SAP releases.

TP, a Transport Management System (TMS) feature available as of SAP Basis version 702, compares the component version of the transport that is released with the component version of the system to which the transport is going to be imported. If the versions differ, the difference is highlighted in the import queue (`STMS_IMPORT` transaction).

> You can turn off the check for the component versions by setting the `SP_TRANS_SYNC` transport parameter to `OFF`. To add this parameter, in the domain controller, go to **STMS** > **Systems Overview** > **<SID>**. Then, on the **Transport Tool** tab, in change mode, add the `SP_TRANS_SYNC` parameter.

Synchronization markers

A synchronization marker is an entry that is calculated based on the selection screen, with the timestamp of the last synchronization run. Subsequent incremental synchronization runs use this timestamp to reduce the amount of data to be synchronized.

Every object type has its own synchronization marker. Whenever the selection screen is adjusted, a new synchronization marker is calculated. An empty filter hash field indicates the default selection screen in which no additional filters were applied.

Synchronization markers are used for both types of synchronization runs.

- After the initial synchronization run, you must manually generate synchronization markers for the process types that were synchronized.

  For more information, see Generate initial synchronization markers.
- If an incremental synchronization run fails with the "Last incremental run for XY not found" message, or if an additional incremental synchronization run is necessary for a specific time frame, you can edit existing synchronization markers.

  For more information, see Edit the synchronization markers.

Generate initial synchronization markers

To generate the synchronization markers after the initial synchronization, complete the following steps.

1. Go to the `/COCKPIT/GC_SYNC` transaction.
2. Select the connection.
3. Under **Documents type**, select the checkboxes for the process types that you included in the initial synchronization run.
4. In the transaction code field, enter %SYNCMARK_ADD.
5. In the **Enter date for sync mark generation** dialog box, enter the date of the initial synchronization run and click **Continue**.
6. To check if the synchronization markers have been correctly set, go to the `/COCKPIT/GC_C4` transaction.

Edit the synchronization markers

If an incremental synchronization fails, you can manually add or correct the required synchronization markers.

1. Go the the `/COCKPIT/GC_CI` transaction.
2. In the IMG, select **Manage** > **Edit synchronization markers**.

   The **Supplier Portal incremental synchronization** window appears.
3. In change mode, click **New Entries**.
4. Add the synchronization markers, as required. For a detailed description of each parameter, see Edit synchronization markers in the IMG reference.
5. Click **Save**.

View release information

To view information about the installed Synchronizer version, complete the following steps.

1. Go to the `/COCKPIT/GC_SYNC` transaction.
2. Click **Release notes** .

Chapter 2

Install Synchronizer

You can install Synchronizer on any ERP system with SAP Basis version 620 or newer that has the latest supported Process Director Accounts Payable version installed (use the `/COCKPIT/VER` transaction to display the Process Director Accounts Payable version).

1. Go to the `STMS` transaction.
2. In the **Transport Management System** window, import the transport request.
3. Ideally, the component versions of the source and target systems should match. If the versions differ, the difference is highlighted in the import queue (`STMS_IMPORT` transaction) by the Transport Control Program (TP). You then have the following options.
   - If you still want to import the transport request, upon importing, on the **Options** tab, select **Ignore invalid component version**. If you do not select this option, the import displays a warning message about the difference in the SAPCOMPONENT versions.
   - If you perform the import using the command line, you can use the mode u4. For example: tp import <TR> <SID> u4.
   - You can limit the check for certain components. See SAP Note 1742547 under the "Configuration: Component inclusion and exclusion" section. SAP Note 1756116 corrects a program error with that function.
4. Complete the post installation.
5. Install certificates.

Complete the post installation

Follow the procedure to complete the post installation.

1. Perform an initial consistency check to validate the current installation, using the `/COCKPIT/GC_RICK` transaction.
2. If required, create the missing object and subobject. For more information see Create the object and subobject.
3. If required, create the missing indexes. For more information, see Create an index.
4. Implement the required EMEIC corrections to Process Director Accounts Payable.

Create the object and subobject

When using the application log, the Synchronizer program requires a certain object and subobject in the `SLG0` transaction. For more information, see SAP Note 1706526 - Missing APPLOG in transaction CRIT. As of version R69, the objects are delivered.

If the object and subobject are missing, you must create them by completing the following steps.

1. Go to the `SLG0` transaction.
2. In change mode, click **New Entries**.
3. In the **Overview of Added Entries** window, complete the following substeps.
   - In the **Object** field, type `/COCKPIT/GC_SYNC`.
   - In the **Object text** field, type `ReadSoft Supplier Portal Synchronizer`.
4. Click **Save** .
5. Select the newly created entry.
6. Double-click the **Sub-objects** dialog structure menu.
7. In the **Sub-objects** window, complete the following substeps.
   a. In the **Subobject** field, type `/COCKPIT/GC_SYNC_DOC`
   b. In the **Sub-object text** field, type `Documents`.
8. Click **Save** .

Create an index

The Synchronizer program requires a specific indexing in the `CDHDR` table.

For more information about index creation in the `CDHDR` table, see the following SAP Notes.

- 573864 - CD: Select in CDHDR, without an index
- 856624 - Indexes for the CDHDR table (SAPKB62050/51, SAPKB64011)
- 884534 - CD: Two CDHDR table indexes, with the "no database index" option
- 1271166 - CD: CHANGEDOCU_WRI performance selection control parameter

Index creation is not required on an SAP HANA system.

To create an index, complete the following steps.

1. Go to the `SE11` transaction.
2. In the `CDHDR` table, create an index for the following fields, as described in SAP Note 573864.
   - `MANDANT`
   - `OBJECTCLAS`
   - `UDATE`
   - `UTIME` (optional)

   This index is shipped by SAP with the ERP 6.0 EHP5 release, as `CDHDR~003`. If you have ERP 6.0 EhP5 or a newer release, make sure that the `CDHDR~003` index in the `CDHDR` table is active in the DDIC and the database.

Install certificates

Synchronizer requires a secure connection to Supplier Portal. To ensure correct Synchronizer operation, the SAP system requires that a proper certificate chain be established to validate the security certificate in use.

To install certificates using the Trust Manager, complete the following steps.

1. Go to the `STRUST` transaction.
2. Double-click the **SSL client SSL Client (Standard)** node.
3. Under **Certificate**, import the certificate by completing the following substeps.
   a. Click **Import certificate** .
   b. In the **Import certificate** dialog box, on the **File** tab, select the certificate file that you want to import.

      In the case of cloud-delivery solutions, two certificates are used - the `readsoftdev.com` certificate for the development (DEV), quality assurance and test (QAT) instances, and the `readsoftonline.com` certificate for the production instance (PRD).

   c. Click **Continue** .
   d. Click **Add to Certificate List** .

Chapter 3

Configure Synchronizer

You must configure the synchronization parameters as well as the logic according to which the synchronization between the ERP system and Supplier Portal is executed.

1. Open the IMG using the `/COCKPIT/GC_CI` transaction.
   You can also go to the `/COCKPIT/GC_SYNC` transaction and click **Setup**.
2. To successfully run Synchronizer, you must configure at least the basic settings by completing the following steps.
   a. Define the connection parameters
   b. Define invoice settings
   c. Define purchase order settings
   d. Define vendor master data settings
   e. Define master data change request settings
   f. Define order confirmation request settings
   g. Define the upload object types
3. Optional. Adjust the standard synchronization of document types to development classes. For more information, see Redefine document type references.
4. Optional. If Supplier Portal notes should be used, register the vendors who should be able to receive such notes. For more information, see Register portal suppliers.

Define the connection parameters

To define the connection parameters, complete the following steps.

1. In the IMG, select **Basic settings >** > **Define connection**.
   The **Supplier Portal connection** window appears.
2. In change mode, click **New Entries**.
3. Define the connection parameters. For a detailed description of each parameter, see Define connection in the IMG reference.
4. Optional. To test the connection, click **Connection test**.
5. Click **Save**.

Define invoice settings

To define invoice settings, complete the following steps.

1. In the IMG, select **Basic settings** > **Define IV settings**
   The **Process Director AP settings** window appears.
2. In change mode, select the necessary settings.
   - **SuppPort note** enables the use of Supplier Portal notes in Process Director Accounts Payable invoices.
   - **WEB BOARD note**.

     Web Board notes are required only if the customer is moving from Web Board to Supplier Portal. For new installations, it is recommended that you use Supplier Portal notes.

   - **Select Relevant** enables the selection of relevant fields to be synchronized.
   - **SyncOnlyAttchID** unhides the **Sync IV without attachments - only ID** checkbox in the common selection filter parameters.
3. Click **Save**.

Define incoming invoice settings

To define incoming invoice settings, complete the following steps.

1. In the IMG, select **Basic settings** > **Define II settings**.
   The **Process Director II settings** window appears.
2. In change mode, select the necessary settings.
   - **Ignore rejected**
     Enables invoice creation using reference numbers that were previously used in rejected invoices.

     In bulk mode, duplicate checks are skipped to improve performance.

   - **Image required**
     Enables additional checks to ensure that a new PDAP document is created only if the Supplier Portal invoice image is successfully transferred to the SAP ArchiveLink repository.

     By default, if certain document types are not registered in the **Register Attachment Type** settings, their attachments are not transferred to SAP from Supplier Portal. If the **Image required** option is enabled, document types used for invoice images must be registered in these settings.

Define purchase order settings

To define the purchase order settings, complete the following steps.

1. In the IMG, select **Basic settings** > **Define PO settings**
   The **Purchase order settings** window appears.
2. In change mode, under **Purchase order settings**, define the following parameters.
   - **Version Mgmt**: Select this checkbox if you have activated SAP Purchase Order Version Management. SAP Purchase Order Version Management enables you to generate and manage versions of purchase requisitions and external purchasing documents, such as purchase orders (POs).
   - **Release Proc**: Select this checkbox if you are using the SAP Purchase Order Release Procedure. SAP Purchase Order Release Procedure provides a number of options to control the approval (release) of purchase orders.
   - **Sync deleted items**: Select this checkbox to synchronize line items that have been deleted from a purchase order.
     After the synchronization is complete, the items are displayed as deleted in Supplier Portal too.
   - **Sync locked items**: Select this checkbox to synchronize locked line items.
     After the synchronization is complete, the items are displayed as locked in Supplier Portal too.
   - **Partner Functn**: Type a partner function to replace the name and number of the vendor during synchronization. When several partners are specified at header level in the purchaser order, Synchronizer checks whether the specified partner function exists in the purchase order and if it does, replaces the vendor name and number with the name and number of the specified partner function.
3. Click **Save** .

Define vendor master data settings

During synchronization, bank data can be protected by masking it. Only the last four digits of the bank number will then be visible in Supplier Portal.

For example, 12345678 is displayed as ****5678; 123456 is displayed as **3456.

To define the masking of vendor master bank data, complete the following steps.

1. In the IMG, select **Basic settings** > **Define MA settings**.
   The **Vendor master data settings** window appears.
2. To allow masking of vendor bank data, in change mode, select the **Mask values** checkbox.
3. Click **Save** .

Define master data change request settings

Suppliers can request changes to their vendor master data in the Supplier Portal. The changes are made in the SAP system and synchronized to the Supplier Portal. To transfer the changes, you must map the SAP fields to the Supplier Portal fields.

To define the mapping from Supplier Portal to the Process Director master, complete the following steps.

Prerequisite: Before you set up the mapping, you need to set up a vendor master configuration in `/EBY/PDBOC`. For more information, see the *Tungsten Automation Process Director Configuration Guide*

1. In the IMG, select **Basic settings** > **Define MC settings**.
2. In change mode, click **New Entries**.

   New Entries are not available if the configuration already exists.
3. Under **Vendor master change request**, configure the mapping from Supplier Portal to the Process Director vendor master. For a detailed description of each configuration parameter, see Define MC settings in the IMG reference.
4. If the Supplier Portal environment does not yet exist in Process Director, complete the following steps.

   a. Go to the `/EBY/PDBOC` transaction and create a new environment called SP – Supplier Portal.

   b. Create an external data model for the newly created environment. For details about the model, see External data model.

   For an example of a possible mapping, see Example mapping.
5. Click **Save**.

External data model

Origin	Node ID	Parent	Logical level
SP (Supplier Portal)	SINGLEITEM		HEADER
SP (Supplier Portal)	BANKDATA	SINGLEITEM	BANK

Example mapping

Origin	Map ID	Node ID	Parent	Logical level	Field name	External field name
SP	<MAPID>	SINGLEITEM	/	HEADER	ACTIVITY	ACTIVITY
SP	<MAPID>	SINGLEITEM	/	HEADER	ANRED	TITLE
SP	<MAPID>	SINGLEITEM	/	HEADER	BUKRS	COMP_CODE
SP	<MAPID>	SINGLEITEM	/	HEADER	KTOKK	ACCOUNT_ GROUP

Origin	Map ID	Node ID	Parent	Logical level	Field name	External field name
SP	<MAPID>	SINGLEITEM	/	HEADER	LAND1	COUNTRY_KEY
SP	<MAPID>	SINGLEITEM	/	HEADER	LIFNR	VENDOR_NO
SP	<MAPID>	SINGLEITEM	/	HEADER	NAME1	NAME1
SP	<MAPID>	SINGLEITEM	/	HEADER	ORT01	CITY
SP	<MAPID>	SINGLEITEM	/	HEADER	PSTLZ	POSTCODE
SP	<MAPID>	SINGLEITEM	/	HEADER	SORT1	SEARCH_TERM1
SP	<MAPID>	SINGLEITEM	/	HEADER	STRAS	STREET_NO
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	BANKL	BANK_KEY
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	BANKN	BANK_ACCT
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	BANKS	BANK_CTRY
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	BUKRS	COMP_CODE
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	LIFNR	VENDOR
SP	<MAPID>	BANKDATA	SINGLEITEM	BANK	WAERS	WAERS

Define the upload object types

You need to activate the document types that are to be transferred from Process Director Accounts Payable to Supplier Portal , and from invoices/credits in Supplier Portal to Process Director Accounts Payable.

To define the upload types, complete the following steps.

1. In the IMG, on the Supplier Portal Customizing menu, click **Advanced settings**.
2. Next to the **Register attachment type** entry, click the **IMG - Activity** button.
3. In the **Supplier Portal archive object** window, click **Display -> Change**.
4. In change mode, click **New Entries**.
5. Enter the parameters necessary to activate the document types. For a detailed description of each parameter, see Register attachment type in the IMG reference.

   Configure the same settings on the Supplier Portal side.

6. Click **Save**.

Define order confirmation request settings

To define the order confirmation request settings, complete the following steps.

1. In the IMG, on the **Supplier Portal Customizing** menu, click **Basic settings**.

2. Next to the **Define OR settings** entry, click **IMG - Activity** .
3. In the **Order confirmation request settings** window, click **Display -> Change** .
4. In change mode, under **Order confirmation request settings**, configure the mapping for options for order confirmations. For a detailed description of each configuration parameter, see Define OR settings in the IMG reference.
5. If the Supplier Portal environment does not yet exist in Process Director, complete the following steps.
   a. Go to the /EBY/PDBOC transaction and create a new environment called SP - Supplier Portal.
   b. Create an external data model for the newly created environment. For details about the model, see External data model.
6. Click **Save** .

If you add a note to an already synchronized order confirmation document in Process Director and run the synchronization again, the added note will be visible in the document in Supplier Portal too.

See the *Tungsten Automation Process Director Configuration Guide* for more information about adding notes.

Register the attachment types

To process attachments, you need to register them, as well as assign them to document types.

To register the attachment types, complete the following steps.

1. In the IMG, on the **Supplier Portal Customizing** menu, click **Advanced settings**.
2. Next to the **Register attachment type** entry, click **IMG - Activity** .
3. In the **Supplier Portal archive object** window, click **Display -> Change** .
4. In change mode, click **New Entries**.
5. Set up the mapping of the document types to the corresponding object types. For a detailed description of each parameter, see Register attachment type in the IMG reference.
6. Click **Save** .

Configure user exits

User exits enable customers to add their own functionality, without modifying the standard program.

For more information on developing and working with user exits, refer to the following guides:

- *Tungsten Automation Process Director Advanced Configuration Guide*
- *Tungsten Automation Process Director Accounts Payable Configuration Guide*

To configure a user exit, complete the following steps.

1. In the IMG, on the **Supplier Portal Customizing** menu, click **Advanced settings**.
2. Next to the **Configure user-exit** entry, click **IMG - Activity**.
3. In the **Synchronizer user-exit** window, click **Display -> Change**.
4. In change mode, click **New Entries**.
5. Set up the mapping of the function names to the corresponding object types. For a detailed description of each parameter, see Configure user exits in the IMG reference.
6. Select the **Active** checkbox to activate the user exit.
7. Click **Save**.

User exit for filtering document lists

You can configure a user exit to filter the document lists selected for processing in Synchronizer. This user exit can be used to define custom parameters for the required filtering. It is invoked after the selection of documents (initial or incremental) and before the synchronization begins.

The function module template for the user exit is `/COCKPIT/GC_EXAMPLE_FILTER`.

You can use it as an interface template to create a function module based on custom logic with the parameter CT_LIST. For example, to filter out previously selected documents. You can also:

- Add entries to the synchronization list, provided they use the line type /COCKPIT/SGC_DISPATCHER_LIST.
- Modify entries that were selected during the document selection stage of synchronization. To accomplish this, identify the required entry and extract the substring from the IDENT field containing the document ID, such as PO numbers in PO synchronization or GUID of the invoice in IV synchronization.

Redefine document type references

The standard synchronization of document types to development classes can be replaced with a custom synchronization.

To redefine document types to reference custom development classes, complete the following steps.

1. In the IMG, on the **Supplier Portal Customizing** menu, click **Advanced settings**.
2. Next to the **Redefine document type** entry, click **IMG - Activity**.
3. In the **Supplier Portal Redefine document type** window, click **Display -> Change**.
4. In change mode, click **New Entries**.
5. Set up the mapping of document types to custom development classes. For a detailed description of each parameter, see Redefine document type in the IMG reference.

   > If, within the Supplier Portal configuration, you redefine the standard class to a custom class in order to map custom or more fields than those in the standard, you need to add those fields to the view.

6. Click **Save**.

Register portal suppliers

To enable sending Supplier Portal notes to Supplier Portal vendors, you need to register these vendors.

Prerequisite: Supplier Portal notes are enabled in the `COCKPIT/GC_C8` transaction.

1. In the IMG, on the **Supplier Portal Customizing** menu, click **Manage**.
2. Next to the **Registered Portal Suppliers** entry, click **IMG - Activity**.
3. In the **Registered Portal Suppliers** window, click **Display -> Change**.
4. In change mode, click **New Entries**.
5. Enter the data of the vendors that you want to register. For a detailed description of each parameter, see Registered Portal Suppliers.
6. Click **Save**.

Chapter 4

Synchronize search helps

In most cases, you need to make adjustments in Supplier Portal to support the search help. Before synchronizing the search help to determine if it is supported in the standard Supplier Portal configuration, consult with your Tungsten Automation representative.

To create, update, and delete search helps in Supplier Portal, complete the following steps.

1. Go to the `/COCKPIT/GC_SRCHHELP` transaction or the `/COCKPIT/GC_SEARCHHELP` program.
2. In the **Synchronize searchhelp** window, under **Destination**, select the connection from the `/COCKPIT/GC_C1` transaction.
3. Under **Selection**, define the parameters, as required. Then, select the radio button to decide whether you want to create, update, or delete a search help.
4. Under **Logging**, define the parameters that are required to activate logging.
5. Under **Debugging**, define the parameters that are required to activate debugging and other parameters.

Selection parameters

Parameter	Description
Object type	• II = Incoming invoice • IV = Process Director Accounts Payable • MA = Master data • PO = Purchase order
Header field	Header field in Supplier Portal
Table name	DDIC table name for the data table

Logging parameters

Parameter	Description
Parameters	Print all the used parameters in a log
Log level	• 0 = Abort • 1 = Error • 2 = Production (default, recommended) • 3 = Performance • 4 = Warn • 5 = Info • 6 = Debug
Verbose	Print additional information like timestamp and message class
Statistics	Print statistics at the end of the log

Debugging parameters

Parameter	
Verbose	Print additional information like timestamp and message class
Dump HTTP requests	Activate the dump of HTTP requests.
Path for HTTP dump files	Path for the HTTP dump files.

Chapter 5

Run Synchronizer in SAP

Configure initial synchronization

After you have configured Synchronizer, you must execute a one-time initial synchronization between Supplier Portal and SAP. After this initial synchronization, you only need to perform incremental synchronization runs. For details, see Configure incremental synchronization.

1. Go to the `/COCKPIT/GC_SYNC` transaction.
   The Supplier Portal Synchronizer window appears.
2. To establish a connection to Supplier Portal, under **Destination**, select the connection you set up using the `/COCKPIT/GC_C1` transaction.
3. Configure the attachment types that need to be synchronized.
4. To execute an initial synchronization run, make sure that the **Incremental synchronization** checkbox under **Process setup** group is cleared.
   Document types unavailable for a full initial synchronization run cannot be selected when this checkbox is cleared.
5. Under **Document type**, define the document type parameters, as required.
6. Under **Common selection filter**, define the common selection filter parameters, as required.
7. Optional. Under **Logging**, define the logging and monitoring parameters, as required.
8. Optional. Under **Options**, select the parameters that are required to activate debugging or other synchronization options.
9. To execute the synchronization run, click **Execute**.
10. After the initial synchronization, you need to generate the initial synchronization markers for the process types that you synchronized. For details, see Generate initial synchronization markers.

Configure incremental synchronization

After you have configured Synchronizer and executed a one-time initial synchronization between Supplier Portal and SAP, you must execute incremental synchronization runs only.

> If no synchronization markers have been created for incremental synchronization runs, an error message will be displayed. In this case, you need to modify the as described in Edit the synchronization markers.

1. Go to the `/COCKPIT/GC_SYNC` transaction.

The Tungsten Supplier Portal Synchronizer window appears.

2. Under **Destination**, to establish a connection to Supplier Portal, select the connection you set up using the `/COCKPIT/GC_C1` transaction.
3. Configure the attachment types that need to be synchronized.
4. Under **Process setup**, select the **Incremental synchronization** checkbox.
5. Under **Document type**, define the document type parameters, as required.
6. Under **Common selection filter**, define the common selection filter parameters, as required.
7. Optional. Under **Logging**, define the logging and monitoring parameters, as required.
8. Optional. Under **Options**, select the parameters that are required to activate debugging or other synchronization options.
9. To execute the synchronization run, click the **Execute** button.

By default, the synchronization process runs for 3600 seconds. To improve performance by limiting the processing time, navigate to the `RZ11` transaction and adjust the value of the `rdisp/max_wprun_time system` parameter. This parameter applies to both types of synchronization and determines the processing time for a batch of documents, as specified in the Max. No. of Objects field.

For example, it sets the time for processing a batch of 250 documents. If the 3600-second limit is reached before all documents in the batch are processed, a new batch is formed, starting from the last unprocessed document.

Document type parameters

Parameter	Description
Process Director AP	Documents with document type IV are synchronized. Documents created or updated in Process Director Accounts Payable are synchronized to Supplier Portal.
Purchase order	Documents with document type PO are synchronized. Documents created or updated in SAP are synchronized to Supplier Portal.
Incoming invoice	Documents with document type II are synchronized. Documents created or updated in Supplier Portal are synchronized to Process Director Accounts Payable.
Vendor master data	Documents with document type MA are synchronized. Documents created or updated in SAP are synchronized to Supplier Portal. Synchronizing vendor master data between Process Director and Supplier Portal is possible only if the Master Data Maintenance process type license has been activated in Process Director.

Parameter	Description
Vendor master change request	Documents with document type MC are synchronized. Documents created or updated in Process Director are synchronized to Supplier Portal. This checkbox is available only if, in the /`COCKPIT/GC_C11` transaction, the vendor master change request object type has been configured accordingly.
Portal Supplier	Synchronize registered Supplier Portal vendors.
Order confirmation inbound	Documents with document type OR_IN are synchronized. Documents created or updated in Supplier Portal are synchronized to Process Director.
Order confirmation outbound	Documents with document type OR_OUT are synchronized. Documents created or updated in Process Director are synchronized to Supplier Portal.

Common selection filter parameters

The following general common selection filter parameters are valid for all document types.

Parameter	Description
Supplier	Limit the selection to the supplier in the Process Director Accounts Payable/purchase order/master data).
Company Code	Limit the selection to the company code in Process Director Accounts Payable/purchase order.
Account group	Limit the selection to the account group in Process Director Accounts Payable/purchase order/master data.
Order Type	Limit the selection to the order type of the purchase order.
Process Director doc. type	Limit the selection to Process Director Accounts Payable document types. See the *Tungsten Process Director Accounts Payable Configuration Guide* for more details.
Document Date	Limit the selection to the document date of the Process Director Accounts Payable document.

- **Sync IV without attachments**

  The checkbox is valid only for the Process Director Accounts Payable document type (IV). Select this checkbox to speed up the initial or incremental synchronization by loading documents without attachments.
- **Sync IV without attachments - only ID**

  The checkbox is valid only for the Process Director Accounts Payable document type (IV). Select this checkbox to speed up the initial or incremental synchronization by loading documents without image or file attachments, while retaining only the metadata. This metadata includes information about attachments, enabling the creation of links and synchronization between customer archive systems and Supplier Portal. Attachment files are downloaded when users request them from Supplier Portal by clicking the links.

By default, this checkbox is hidden.

This feature requires additional Supplier Portal configuration. Ensure the necessary Supplier Portal settings are configured before selecting this checkbox. For assistance, contact Tungsten Automation Technical Support.

Additional filter parameters

In full synchronization mode, you can display additional filters for the selected document types. Clear the **Incremental synchronization** checkbox, then select the **Full run filter for doc type** checkbox.

Process Director AP

The additional filter parameters for the Process Director Accounts Payable document type (IV).

Parameter	Description
Document number	Document number (`DOCNO`)
Creation date	Creation date (`CR_TIMESTAMP`)
Reference PO number	Reference PO number (`PO_NUMBER`)

Select the **Sync only IV attachments** checkbox if you performed synchronization without attachments earlier and want to synchronize the attachments.

Purchase order

The additional filter parameters for the Purchase order document type (PO).

Parameter	Description
Purchasing document	Purchasing document (`EBELN`)
Document date	Document date (`BEDAT`)

Vendor master data

The additional filter parameters for the vendor master data document type (MA).

Parameter	Description
Include deleted records	Includes deleted records. In the **Process setup** select **Full run filter for doc type**, then among the **Documents type** select **Vendor mater data**. In the **Vendor master data** section that became available, select **Include deleted records** to synchronize the vendors that are marked for deletion in SAP with the `lfa1-loevm` deletion flag. The SAP **Posting Block** settings are not taken into account during synchronization.

Order confirmation outbound

The additional filter parameters for the order confirmation outbound document type (OR_OUT).

Parameter	Description
Order confirmation number	The order confirmation document number (`NUMBR`).
Reference PO number	Number of the purchase order that the order confirmation references (`EBELN`).
Confirmation date	Creation date of the order confirmation (`ERDAT`).

Logging parameters

Parameter	Description
Parameters	Print all the used parameters in a log
Log level	• 0 = Abort • 1 = Error • 2 = Production (default, recommended) • 3 = Performance • 4 = Warn • 5 = Info • 6 = Debug
Verbose	Print additional information like timestamp and message class
Statistics	Print statistics at the end of the log

Parameter	Description
Monitoring level	To acquire additional logging information sent from the Synchronizer to Supplier Portal, in the Monitoring level text box, enter a monitoring level. • 0 - Off: Switches off monitoring • 1 - Basic: Sends simple information about the synchronization • 2 - Document: Sends back an additional table with information of each document status. The information is connected with the logging information in Supplier Portal. Monitoring is available for incremental synchronization runs only. For initial synchronization runs, the sending of monitoring documents is switched off.
Write Application log	Select this checkbox to create a basic application log with additional logging information. You can view this log in transaction `SLG1`.

Options

Parameter	
Debug mode (synchron)	Deactivate parallel task execution (available only for the `/COCKPIT/GC_SYNC` transaction).
Bulk update mode	Perform synchronization using bulk API operations for the type II and IV documents. The checkbox is only available if Wait indexing is enabled (**Supplier Portal Customizing** > **Advanced Settings** > **Index polling settings** > **Wait indexing**).
Display document IDs	Display log information about the documents that have been selected for synchronization in the simulation mode.
Display log tree	With this view, more detailed information about selected documents is available, and it is also possible to jump directly to the referenced documents' vendors.
Store log in SP	Store a log for the full initial synchronization in Supplier Portal (available only when the Incremental synchronization checkbox is cleared)
Verbose	Print additional information like timestamp and message class
Dump HTTP requests	Activate the dump of HTTP requests.
Path for HTTP dump files	Path for the HTTP dump files.

Commands

The commands that are available for the `/COCKPIT/GC_SYNC` transaction.

Command	Description
`%SIMPLE`	Hides the Options section with the expert options.

Command	Description
`%EXPERT`	Shows the Options section with the expert options.
`%FILTER_HASH`	Shows the current filter hash.
`%HELP`	Shows the list of available hidden commands.
`%SYNCMARK_ADD`	Creates a synchronization mark for the current filter hash.

Chapter 6

Check the data consistency

Synchronizer can be used in conjunction with the Supplier Portal database to test whether the synchronization run has selected the correct fields for the synchronization and whether the database has properly received the data.

To check for data consistency, complete the following steps.

1. Check the field selection
2. Check the data

Check the field selection

Synchronizer loads fields into a field catalog from the SAP system, and then queries Supplier Portal as to which fields should be synchronized.

To check if the loaded data is consistent, complete the following steps.

1. Examine the fields loaded into the field catalog by selecting a document type. Ensure that Synchronizer operates in log level 6 (DEBUG mode).
2. Trigger the synchronization on at least one document.
   The resulting log file shows the fields loaded into the catalog (see Example 1).
3. Synchronizer queries the web service of Supplier Portal to determine which fields should be synchronized. To check whether the selection is correct or not, view the log file (see Example 2) and compare its content with the view selection in the database.

   For the configuration on the Supplier Portal side, contact your Tungsten Automation representative.

Example 1:

```
20131218195830,983 d    Add to Field catalog: ACCOUNT COMP_CODE
20131218195830,983 d    Add to Field catalog: ACCOUNT COPA_ICON
20131218195830,983 d    Add to Field catalog: ACCOUNT COSTCENTER
```

Example 2:

```
20131218195831,189 d    Mapping skip: False /COCKPIT/SHDR_IF -> HEADER VENDOR_NO
20131218195831,189 d    Mapping skip: True /COCKPIT/SHDR_IF -> HEADER DIFF_INV
20131218195831,189 d    Mapping skip: False /COCKPIT/SHDR_IF -> HEADER PO_NUMBER
```

Check the data

To check that the data transmission has been successfully executed without any errors, complete the following steps.

1. Examine the source document, either directly on the ERP database or in the `TEKKI` service transaction in Process Director.
2. Compare the source document with the values in the Supplier Portal database after the synchronization.

   You can also use the user interface for further examination and to confirm that the values are correct. However, as some fields are used for logical reasons but do not have a display purpose, the user interface does not show all the synchronized values.

Chapter 7

Background jobs

The following programs can be run as background jobs.

Program	Description
/COCKPIT/GC_SYNCHRONIZER	Used to schedule Synchronizer as a background job.
/COCKPIT/GC_SEARCHHELP	Used to schedule the regular Supplier Portal search help updates as background jobs.
/COCKPIT/GC_DYNAMIC_DISCOUNT	Used to schedule dynamic discounting settings as background jobs.
/COCKPIT/SAP_DOC_IMPORT	Used to import SAP invoices (MM and FI) into Process Director Accounts Payable as a background job.

If you use the SM36 transaction to define background jobs, you can add SAP or email users as spool list recipients. Spool list recipients receive logs for every program run, thus having better control if the job succeeds or fails.

Chapter 8

IMG reference

Basic settings

Define connection

/COCKPIT/GC_C1

Parameter	Description
Connection	Name of the connection to the Supplier Portal.
Destination	A destination of type G (HTTP connections to the external server) in the SM59 transaction. If you enter a destination, you do not need to specify a host name, port number and SSL port number.
Host Name	Host name of the Supplier Portal tenant.
SSL Port Number	Port number for the secure SSL/TLS connection
Port Number	Port number for the non-secure connection
HTTP Script	URI for the web service. Usually, supplier-portal/rest/sync For backward compatibility, the legacy application context name pdweb-idaho is still supported, but rerouted to supplier-portal.
Username	Username for the web service
Password	Password for the web service
ERP sys ID	ERP system ID If you keep the field empty, the system ID from the SAP system is taken.

Define IV settings

/COCKPIT/GC_C8

Parameter	Description
SuppPort note	Determines that Supplier Portal notes are used for Process Director Accounts Payable invoices. To ensure that the Supplier Portal notes reach the intended vendor, it is recommended to register the vendors who should be able to receive notes. For more details, see Register portal suppliers.
WEB BOARD note	Determines that Web Board notes are used for Process Director Accounts Payable invoices. Web Board notes are required only if the customer is moving from Web Board to Supplier Portal. For new installations, it is recommended that you use Supplier Portal notes.
Select Relevant	Enables the selection of relevant fields to be synchronized.
SyncOnlyAttchID	Unhides the Sync IV without attachments - only ID checkbox

Define II settings

`/COCKPIT/GC_C21`

Parameter	Description
Ignore rejected	Enables invoice creation with reference numbers from rejected invoices.
Image required	Enables additional checks to ensure that a new PDAP document is created only if the Supplier Portal invoice image is successfully transferred to the SAP ArchiveLink repository.

Define PO settings

`/COCKPIT/GC_C2`

Parameter	Description
Version Mngt	Select this checkbox if you have activated SAP Purchase Order Version Management. SAP Purchase Order Version Management enables you to generate and manage versions of purchase requisitions and external purchasing documents, such as purchase orders (POs).
Release Proc	Select this checkbox if you have activated the SAP Purchase Order Release Procedure. SAP Purchase Order Release Procedure provides a number of options to control the approval (release) of purchase orders.
Synchronize deleted items	Select this checkbox to synchronize line items that have been deleted from a purchase order.
Synchronize locked items	Select this checkbox to synchronize locked line items.

Parameter	Description
Partner Functn	Type a partner function to replace the name and number of the vendor during synchronization. When several partners are specified at header level in the purchaser order, Synchronizer checks whether the specified partner function exists in the purchase order and if it does, replaces the vendor name and number with the name and number of the specified partner function.

Define MA settings

`/COCKPIT/GC_C12`

Parameter	Description
Mask values	During synchronization, bank data can be protected by masking it. Only the last four digits of the bank number will then be visible in Supplier Portal.

Define MC settings

`/COCKPIT/GC_C11`

Parameter	Description
Object type	Process Director object type For the vendor master change request, it must be MD_VENDOMA (object type for Process Director vendor master).
Origin	Origin of the data Check in the `/EBY/PDBOC` transaction to determine which origins are maintained for Supplier Portal.
Mapping ID	The mapping ID used in the `/EBY/PDBOC` transaction to map the vendor master data from Supplier Portal to Process Director.

Define OR settings

`/COCKPIT/GC_C14`

Parameter	Description
Object type	Process Director object type For the order confirmation request, it must be OR (object type for Process Director order confirmations).
Origin	Origin of the data Check in the `/EBY/PDBOC` transaction to determine which origins are maintained for Supplier Portal.
Mapping ID	The mapping ID used in the `/EBY/PDBOC` transaction to map the order confirmation data from Supplier Portal to Process Director.

Advanced settings

Register attachment type

/COCKPIT/GC_C16

Parameter	Description
Object type	• II Incoming invoice • IV Process Director Accounts Payable • MA Vendor master data • MC Vendor master change request • OR_IN Order confirmation inbound • OR_OUT Order confirmation outbound • PO Purchase order • SP Portal Supplier
Document type	Use to select the document type that can be attached and processed for the corresponding object type. It can be any document type from the OAC2 transaction which is set up in use with /COCKPIT/B or /COCKPIT/I, /EBY/PDMDV for MC, or /EBY/PDOR for OR in the OAC3 transaction.

Configure user exits

/COCKPIT/GC_C15

For the corresponding task, see Configure user exits.

Parameter	Description
Object type	• II Incoming invoice • IV Process Director Accounts Payable • MA Vendor master data • MC Vendor master change request • OR Order Confirmation • PO Purchase order • SP Portal Supplier
Function name	Use to select the custom function module that can be run for the corresponding object type.
Active	Select this checkbox to activate the user exit.

Redefine document type

/COCKPIT/GC_C10

Parameter	Description
Type	Object type • II Incoming invoice • IV Process Director Accounts Payable • MA Vendor master data • MC Vendor master change request • OR Order Confirmation • PO Purchase order • SP Portal Supplier
Reference to	The custom development class that the object type should reference to. A custom development class should inherit from the original `/COCKPIT/CL_GC_XX_SYNCHRONIZER` class where `XX` is the selected object type.

Index polling settings

`/COCKPIT/GC_C17`

Parameter	Description
Wait indexing	Select this checkbox to enable index polling.
Number of attempts	The number of index polling attempts made (default is 10).
Attempt delay	The time in seconds between index polling attempts made (default is 60).
Index threshold	The number of changes in the database that still allows index polling to begin (default is 10).

Synchronization abort settings

`/COCKPIT/GC_C18`

Parameter	Description
Failed batches	Synchronization will be aborted after this number of batches that contain only failed invoices. Default value is 1. Value range ≥ 1.
Error ratio	The percentage of invoices that failed or were left unprocessed before the synchronization is aborted. Default value is 20. Value range from 0 to 99.

Define IV relevant fields

`/COCKPIT/GC_C19`

Parameter	Description
Structure	The structure of the Process Director Accounts Payable document where a user chooses relevant fields to be synchronized. Default structure is Header.

Parameter	Description
Field name	Any field from the Header data table (`/COCKPIT/THDR`).

The configuration in `/COCKPIT/GC_C8` and `/COCKPIT/GC_C19` defines the criteria for selecting invoices for the next incremental synchronization run. An invoice is included if:

- The "Select Relevant" option is enabled in `/COCKPIT/GC_C8`, and the values of the fields specified in `/COCKPIT/GC_C19` differ between the `/COCKPIT/THDR` and `/COCKPIT/THDRV` tables.
- `/COCKPIT/GC_C19` is empty, and the invoice has only a single version, that is, no entries in the `/COCKPIT/THDRV` table.

Define undisplayed follow-up flags

`/COCKPIT/GC_C20`

Follow-up flags listed in this table will not be sent to Supplier Portal during synchronization.

Parameter	Description
Follow-up	Follow-up flag ID. Use the search help or enter the value manually.
Icon	Follow-up flag icon, autofilled after entering a correct value in the "Follow-up" field.
Description	Follow-up flag description, autofilled after entering a correct value in the "Follow-up" field.

Dynamic discounting settings

Supplier Portal does not currently support dynamic discounting.

Manage

Initial consistency check

`/COCKPIT/GC_RICK`

Edit synchronization markers

`/COCKPIT/GC_C4`

Parameter	Description
Filter hash	A filter hash is calculated if there is any selection for the incremental synchronization. The empty filter hash is for the default selection screen.

Parameter	Description
Type	The document type. • II = Incoming invoice • IV = Process Director Accounts Payable • MA = Master data • MC = Master data change request • PO = Purchase order
Marker	The synchronization marker.

Edit error queue

/COCKPIT/GC_C9

Parameter	Description
Filter hash	A filter hash is calculated if there is any selection for the incremental synchronization. The empty filter hash is for the default selection screen.
Type	The document type. • II = Incoming invoice • IV = Process Director Accounts Payable • MA = Master data • MC = Master data change request • PO = Purchase order
Number	The dispatcher number
Counter	The number of attempts in the last synchronization run.
Taskname	The number of the task in the synchronization run.
State	The synchronization status. • 0 Ready • 1 Temporally error • 9 Skipped • 10 Updated • 11 Created • 12 Permanent error • 13 Error queue
Message text	The text of the message.
Time stamp	Start timestamp of the synchronization run.
Time stamp	Stop timestamp of the synchronization run.

Registered Portal Suppliers

/COCKPIT/GC_C13

Parameter	Description
Company Code	The company code of the vendor.
Vendor	The vendor number.
E-Mail Address	The email address of the vendor.

Appendix A

Troubleshooting

Connection problems

If it is not possible to connect to Supplier Portal using either the `SM59` or the `/COCKPIT/GC_C1` transaction, you have several troubleshooting options.

- In the `STRUST` transaction, check if the correct certificate is in place. For more information, see Install certificates.
- Check if a proxy is in place and requires user authentication.
- Change the port from 443 to 80.
- In the `SE37` transaction, use the `HTTP_GET` function module for a connection test (`http://{sp-url}/checkHealth`).

Synchronization issues

If there is an issue with the synchronization in SAP, you can check the log files for possible causes.

1. Go to the `SLG1` transaction.
2. Select a date range for the `/COCKPIT/GC_SYNC` object and the `/COCKPIT/GC_SYNC_DOC` sub-object.
3. Click Execute.
4. Analyze the displayed log files.

'Last incremental run for XY not found' error

If the "Last incremental run for XY not found" error message is displayed, you must manually create a synchronization marker. For more information, see Generate initial synchronization markers.

HTTP errors

HTTP error	Possible cause
401 403	The user is not authorized. In Supplier Portal, check the user credentials and the user settings.
407	A proxy authentication is required. Check with the local IT team.
408	The request has timed out, possibly due to a slow connection. Check with the local IT team.
5xx	Usually indicates that Supplier Portal has a technical issue. Check with SP Operations.
Other	Needs to be investigated on a case by case basis.

Edit the error queue

The error queue displays the documents that failed to synchronize. These documents will be processed again in another incremental synchronization.

To edit the list of documents in the error queue, complete the following steps.

1. In the IMG, select **Manage** > **Edit error queue**.
2. In change mode, edit the document list, as required. For a detailed description of each parameter, see Edit error queue in the IMG reference.
3. Click **Save** .