**Oracle® Fusion Middleware**

WebCenter Forms Recognition AP Project
Solution Guide

14c (14.1.1.0.0)

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Provides information about AP Project
functionality and how to use AP Project

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Oracle Fusion Middleware Oracle WebCenter Forms Recognition AP Project Solution Guide, 14c (14.1.1.0.0)

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# About Account Payables Project for WebCenter Forms Recognition

Account Payables Project (AP Project) automates data entry for invoices and credit notes.

AP Project also includes processes for tax determination and validation, automatic general ledger account coding, and solutions reporting.

AP Project can be integrated with almost any environment and includes the following components:

1. Reporting feature for auditing and reporting purposes.

2. Verifier for document quality assurance purposes

## Accounts Payable Solution Overview

### About Supported Accounts Payable Documents

AP Project currently supports the following document types:

- Vendor invoices

- Vendor credit memos

- Third-party freight invoices

You need to configure any additional document types, such as statements or travel and expense forms, as new document classes within the solution.

### About Supported Languages

AP Project is a language-independent solution that can process documents using Western European, Cyrillic, Chinese, Japanese, and Greek character sets.

Refer to Technical Specifications Guide for the list of languages support.

### About Project Configuration

Project requirements are configured through the project INI file and the AP Project database. These settings overwrite the property settings with the AP Project project itself. However, these settings are overwritten by the settings configured within the WebCenter Forms Recognition Runtime Server for the defined project. The solution permits the configuration of the following components:

- Setting up clients and client-specific settings

- Business rules relating to predefined data fields and document scope

- Database connection settings for validations and reporting through the Reporting Database

- Connection settings to Oracle eBusiness Suite

- Data export settings for non-ERP connections, such as MS SQL or Oracle DB, or file export

- Document archiving and exporting image file formats

- Error messaging, color scheme, and presentation of field data you want to display within Thick Verifier

- Tax code validation and determination

## About AP Project Solution Architecture

You can integrate the AP Project solution with almost any existing environment. This section provides several possible examples.

## Typical Invoice Processing Solution Architecture

This section provides an overview of early archive architecture.

Invoice documents are scanned directly into the WebCenter Enterprise Capture solution. A copy of the document (1 file per invoice) is passed to the WebCenter Forms Recognition Runtime Server. For documents requiring client processing, you must incorporate the ID of the client into the image file name. The document is processed by AP Project with the metadata being exported to the Workflow module (optional) of WebCenter Forms Recognition, which also includes the Reporting feature for auditing and reporting purposes. The Verifier workstations are used for document quality analysis (QA) if required.

The Workflow module is used for escalating exceptions and other A/P functions prior to the invoice being booked into the ERP system. Data validation is through a live connection to the enterprise resource planning (ERP) system or alternative data source. The following image provides an architectural example of the WebCenter Forms Recognition solution:



WebCenter
Forms Recognition
Verifier Workstation(s)

WebCenter
Forms Recognition
Web Server

WebCenter
Forms Recognition
Web Verifier Client(s)

WebCenter
Enterprise Capture

WebCenter
Forms Recognition
Runtime Server(s)

WebCenter
Content: Imaging

Workflow

ERP System

Validation Data, e.g. PO Number, Vendor Data, etc.
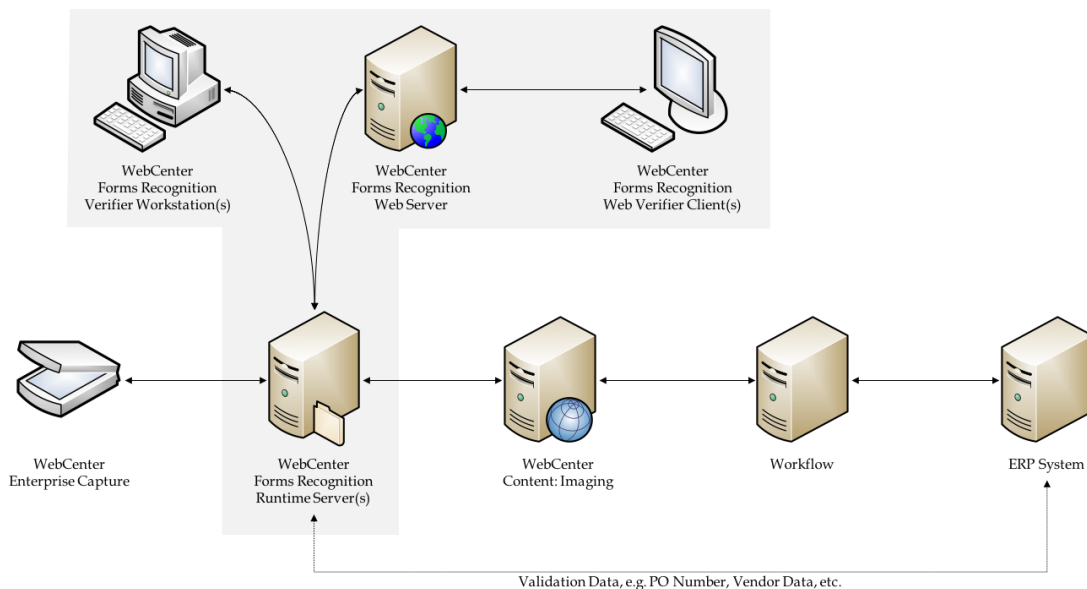
The optional Workflow module escalates exceptions and other A/P functions prior to booking the invoice into the ERP system.

Invoice documents are scanned and passed to WebCenter Forms Recognition Runtime Server. The document is processed by AP Project with the metadata being exported to the Workflow module of WebCenter Forms Recognition, which also includes the Reporting feature for auditing and reporting purposes. The Verifier workstations are used for document QA, if required.

Data validation is performed through a live connection to the ERP system or an alternative data validation source.

# About the solution features

## Duplicate Invoice Number Checking

The AP Packaged Project provides the ability to identify a duplicate invoice by performing a lookup against a configured data source; typically the customer's ERP database. This check is performed as part of the document validation procedure, which means it will be performed both on the RTS instance after data extraction, and also within the Verifier application (and Web Verifier). Therefore, both extracted Invoice Number values, and manually entered Invoice Number values will be subject to this check for duplicates.

Different organizations may have varying definitions of what constitutes a 'duplicate' invoice. Typically, a duplicate invoice is defines as one coming from the same vendor (including the vendor site) with the same invoice number and issued to the same company. The AP Project provides configuration options to define which of these values should be used to define a duplicate invoice for a particular implementation.

Where a duplicate invoice is identified, the document will be prevented from being exported, and will require manual verification so the appropriate action can be taken. The system will not allow an invoice with a duplicate invoice number to be released and exported unless the configuration allows the Verifier user to forcefully validate and release the document with the duplicate invoice number in place.

This feature can be enabled and configured through the WFR section.

## Credit Note Export: Negative Quantity and Totals

Some ERP systems, such as Oracle E-Business Suite, require that when a credit note is inserted into the system through its automatic entry interface the header-level total and the quantity and total at line-level are expressed as negative values.

The AP Packaged Project exports numeric values as positive numbers by default, but this feature allows the project to be configured to always export the quantity and total amounts as their negative values when the document is a credit note. If enabled, this will occur for all credit notes, irrespective of whether the original document expressed those values as positive or negative values.

This feature can be enabled through the WFR section.

## Metadata Pass-through

The AP Packaged Project provides the ability to parse the image filename, and write component values to the CSV and/or XML files that are created during export. This is in addition to the basic import functionality described in the IMP section of the project configuration.

Unlike the basic import function, where image filename component values are assigned to fields within the Invoices class, this Metadata Pass-through feature does not require fields to be created to hold the component values.

Both the basic import function and this Metadata Pass-through feature can be enabled within the same project, and work independently of each other.

This feature requires that the image filename use the underscore character as a separator to delimit the components. For example:

Assume the image filename: **007_00000011_204_05-26-2021_EMEA.tif**

The image filename in this example has five components:

- 007

- 00000011

- 204

- 05-26-2021

- EMEA

You can configure up to 99 components through the project configuration file, and for each configured component, you can specify whether it should be written to the CSV file, the XML file or both files at export. An example configuration could be in table *BRWCUSTAB*:

| GroupName | ParameterName | IndexID | ParameterType | Value |
|---|---|---|---|---|
| WFR | CMPFILENAMECOMPONENT | 1 | VL | 1 |
| WFR | CMPCSVFIELDID | 1 | VL | <%ZXX> |
| WFR | CMPXMLHEADERFIELDNAME | 1 | VL | imageComponent1 |
| WFR | CMPFILENAMECOMPONENT | 2 | VL | 2 |
| WFR | CMPCSVFIELDID | 2 | VL | <%ZYY> |
| WFR | CMPXMLHEADERFIELDNAME | 2 | VL | NULL |
| WFR | CMPFILENAMECOMPONENT | 3 | VL | 3 |
| WFR | CMPCSVFIELDID | 3 | VL | NULL |
| WFR | CMPXMLHEADERFIELDNAME | 3 | VL | imageComponent3 |

In the example configuration given above, component 1 will be written to both the CSV file and the XML file, component 2 will be written only to the CSV file, and component 3 will be written to only the XML file.

This feature can be enabled and configured through the WFR section.

## PO Number Removal for Non-PO Invoices

By default with the AP Packaged Project, if a document is manually processed in the Verifier application, and the user changes the Invoice Type from PO to NO-PO, any existing value in the PO Number field will remain intact.

For some ERP integrations, this situation, where a non-PO invoice has a PO number value, can cause the invoice to be created in the ERP system erroneously as a PO-based invoice.

If enabled, the PO Number Removal feature will ensure that during document validation any PO Number value is removed if the Invoice Type is set as NO-PO.

This feature can be enabled through the WFR section of the project configuration file.

## Separator Page Detection for Supporting Documents

Invoices are commonly received with supporting documentation attached. While customers typically want to retain these as a single document in the downstream content repository after Forms Recognition has processed them, the supporting pages should not be considered during extraction.

While WebCenter Forms Recognition does allow for the first n pages and /or the last n pages of a document to be OCR'd, this functionality cannot be effectively used in this situation, where invoices are a variable number of pages.

Instead, all pages of the document should be OCR'd as normal, then this Separator Page Detection feature allows the project administrator to configure one or more phrases, which, if found on the document, should be considered as a separator. In this case, all OCR text following this separator will be discarded from the workdoc, and will not be considered during the extraction step of the Forms Recognition workflow. This feature can also be configured to remove the page containing the separator phrase(s) from the exported image if required.

**Note:** If separator page removal is enabled, additional settings must be configured in the BRWEXP section and the CSV section of the project configuration to ensure that the modified image file is exported from Forms Recognition instead of the original image that was imported. These settings are described in WFR section.

This feature can be enabled and configured through the WFR section of the project configuration.

## Export Custom Unit of Measure Value to XML

There may be situations where a customer may wish to export a line item Unit of Measure value that differs from that on the purchase order line. For example, the unit of measure value may be expressed on the invoice, and extracted by the AP Packaged Project, as EACH, but the output requirement may be that the exported value is written as Each in the XML output file.

In some scenarios the required output may be entirely different, for example an extracted value of EACH may be required to be written to the XML as EA.

This feature allows a project administrator to specify whether one or more units of measure should be exported as a different value to the one that was extracted, and to configure the value that should be written to the XML in each case.

This feature can be enabled and configured through the WFR section of the project configuration.

## Force Validation of Documents Using Custom Invalid Reasons

Standard functionality of the Verifier application provides the user with a couple of options for handling invalid documents, or documents that cannot be successfully validated and released for export:

1. The user can set the document to an exception state and (optionally) move it to a separate batch for processing later.

2. The user can manually reclassify the document to the Void class.

While these options are sufficient in the majority of cases, there may be a business requirement to allow an invalid document to pass verification and be released for export. This is particularly true where the downstream process will be able to identify this type of document and process it accordingly. Again, standard functionality within Verifier will often allow users to set an appropriate *Invalid Reason* to allow

documents that could otherwise not be validated to continue through to export.

However, the *Invalid Reason* approach is limited because each invalid reason is linked to a rule, and none of the available rules make all fields in a document valid, so there may still be some fields that require user entry or correction. In the case of a bad image or a document that is not an invoice, such manual verification may not be appropriate, or even possible.

This feature allows an administrator to configure the project so that the Verifier user can forcibly validate a document, and allow it to be released to export, by selecting one of a defined list of invalid reasons.

This feature can be enabled and configured through the WFR section.

## Format Line Items in XML for the E-Business Suite Open Interface

In some cases where E-Business Suite is the downstream ERP system, the XML output from the AP Packaged Project may not meet the specific validation criteria of the EBS open interface. This may result in the import failing or invoice lines being imported with EBS holds applied unnecessarily.

For example, in a scenario where the **PURCHASE_BASIS** EBS field is configured to determine a service PO, and the value of that field is **SERVICES**, that value is exported to the XML file as the line type, e.g.:

```
<lineType>SERVICES</lineType>
```

However, **SERVICES** is not a valid line type value for the EBS open interface, and this value should actually be exported in the XML file as **ITEM**.

Additionally, for certain line types, such as **FREIGHT** and **MISCELLANEOUS**, the EBS open interface may expect the quantity, unit price and unit of measure to be zero or empty. Finally, for invoices where the PO type is **SERVICE** the EBS open interface may require the quantity and unit price values to be transposed in the XML file.

This feature allows the project administrator to configure how the line item data is written to the XML file in all of the examples described above, to ensure that the resulting file content will not cause any unnecessary rejections or failures during import into E-Business Suite through the open interface.

This feature can be enabled and configured through the WFR section.

## What is the automatic tax determination and validation?

The AP Project solution incorporates an automatic tax code determination and validation feature to ensure that the document is correctly coded for tax prior to submission to the downstream ERP system.

This feature is in place so that a fully complete document can be created downstream; therefore, manual rework in the ERP system is not required.

The determination of tax codes only applies to invoices that relate to purchase orders and is only carried out when a line item is paired to its purchase order counterpart.

The system supports tax determination for countries with or without tax jurisdictions.

## About data export options

AP Project provides several standard export options. These export options are listed below.

- Export to database tables

- Standard extraction results file

- CSV file output

- XML file output

- TIFF file output

- Fully text-searchable PDF file output

- Integration to archive systems

- OCR XML File

A user exit is provided for additional export requirements. Export options can be switched on and off with the parameters set within the system configuration.

The export event fails if any of the following conditions occur.

- Late archiving is required but the document cannot be archived.

- The system is required to read the AP Project Tax Table for the purposes of tax determination but cannot read the tax table.

- The system is required to read the Miscellaneous Charges Account Assignment table to code a general ledger entry but cannot read the table.

- The system is required to export the TIFF image to a designated directory but cannot write the image.

- The system is required to export a PDF to a designated directory but cannot create the document.

- A standard AP Project results file needs to be created in a designated directory but the file cannot be created.

- A CSV output file needs to be created in a designated directory but the file cannot be created.

- Export needs to be written to a database but the database insert or update is unsuccessful.

- An XML file needs to be created in a designated directory but the file cannot be created.

- An OCR XML file needs to be created in a designated directory but the file cannot be created.

- The system is required to do line pairing but connectivity issues arise when trying to read purchase order data or service entry sheet data.

- A custom export fails.

- An unexpected error occurs.

Under such circumstances, the document is set to state 750 (failed export), with an error message indicating the problem set against the invoice number field. Further detail is written into the standard AP Project log file for the RTS instance that performed the export.

The export does not fail under the following conditions.

- Line pairing was unsuccessful.

- A document could not be successfully coded or validated for tax.

- The update to the invoice number history database was unsuccessful.

- A database error occurred during the unit of measure conversion component of line pairing.

Unsuccessful SQL statements, such as those carried out for reporting, are written into the standard AP Project log file for an RTS instance that performed the export step. You can manually execute these at a future point in time.

If there are multiple export options activated, export terminates at the point at which the first export option fails. This sends the document to state 750 denoting an export failure. Upon retrying the export, only the export options that did not complete successfully upon the previous attempts are carried out. You can configure the system to repeat all export options, irrespective of whether they were completed beforehand, if required.

## About document management system integration

AP Project supports integration to document management systems (DMS) in both the early and late archiving scenarios.

During early archiving, the image is archived prior to reaching AP Project. In this scenario, AP Project requires a copy of the archived image with the unique archive document ID embedded into the document file name. Configuration options define whether this unique archive document ID constitutes the entire file name or a component of that file name. At the time of document export, the archive document ID is passed downstream through the AP Project URN field.

During late archiving, the image is archived after processing in AP Project. The standard CSV file output can be configured to produce an import file compliant with Oracle ECM.

## About ERP system integration

Integration to downstream ERP systems with AP Project is possible through the following interfaces.

- Flat file transfer.

- Export to database staging tables.

The various export options can be activated in the system configuration.

## About solution reporting

AP Project contains SQL scripts for solution reporting.

## WFR Section

Following configuration settings are available in BRWCUS table. The Indexed/numbered (NN) configuration is stored in BRWCUSTAB table, the IndexId column used to specify the index/number.

## FilterVendorsByCompanyCode

(True/False) If this option is set to **True**, only vendors that belong to the invoice's company

code will be considered as candidates and returned in the results of a vendor search in Verifier. Review BRWRC and BRWIMP tables.

## SetNegativeAmountsForCredit

(True/False) If this option is set to **True**, the following fields will always be exported to the XML file as negative values when the Document Type is CREDIT:
- Invoice Total
- Line Item Quantity
- Line Item Total

## RemovePONumberForNoPO

(True/False) If this option is set to **True**, any value in the PO Number field will be removed during document validation if the Invoice Type is NO-PO.

## PerformDuplicateInvoiceCheck

(True/False) If this option is set to **True**, a lookup will be performed against the configured data source to determine whether the Invoice Number value already exists (i.e. whether this is a duplicate invoice).

This check is performed during document validation.

## CDIERPName

(Freetext) The name of the ERP (or other) system that will be used in the information messages displayed as a result of the duplicate invoice check.

The default value for this setting is E-Business Suite.

## CDISQLConnectionGroup

(NN) SQL connection group specifying the database connection string, which will be used to perform the duplicate invoice check.

If no connection group is specified, the system will use group 01. Review BRWSQL or Database settings in WFRSCMWeb for the specified connection group.

## CDIDBTableName

(Freetext) The name of the database table or view containing invoice data that will be used to perform the duplicate invoice check.

The default value for this setting is XX_OFR_INVOICES_V.

## CDIDBInvoiceNumber

(Freetext) The name of the field in the database table that contains the invoice number.
The default value for this setting is INVOICE_NUMBER.

## CDIDBSupplierID

(Freetext) The name of the field in the database table that contains the supplier ID.
The default value for this setting is VENDOR_ID.

## CDIDBSupplierSite

(Freetext) The name of the field in the database table that contains the supplier site ID.
The default value for this setting is VENDOR_SITE_ID.

## CDIDBCompanyCode

(Freetext) The name of the field in the database table that contains the company code.
The default value for this setting is ORG_ID.

## CDIIgnoreBlankValues

(True/False) If this option is set to **True**, the duplicate invoice check will be performed using only the configured database fields where the invoice has an extracted (or entered) value.

For example, if the CDIDBCompanyCode setting is configured, but the document does not have a Company Code value, the lookup will be performed with that field omitted from the query.

## CDIAllowForceValidation

(True/False) If this option is set to **True**, a message box will be displayed in Verifier stating that this is a duplicate invoice number. The user will have the option to validate and release the document anyway.

If this option is set to **False** (default), the document cannot be released in Verifier while there is a duplicate invoice number.

## EnableMetadataPassthrough

(True/False) If this option is set to **True**, the configured file name components will be written to the CSV and/or XML output file(s) during export.

## NN_CMPFilenameComponent (BRWCUSTAB)

(Number) This setting identifies which component of the file name should be written to the corresponding field(s) in the CSV and/or XML files.

An underscore character must be used to separate the components in the image file name. For example, assume an image file name of AA_BB_CC_DD_EE.tif. The value of component 4 is DD.

## NN_CMPCSVFieldID (BRWCUSTAB)

(Freetext) The unique identifier used in the BRWCSV section to determine where the component value will be written in the CSV output file.

Oracle recommends that custom identifiers should begin with a Z, e.g. <%ZAA>.

This setting may be left blank if it is not required for the component value to be written to the CSV file (i.e. the value is only required to be written to the XML file).

## NN_CMPXMLHeaderFieldName (BRWCUSTAB)

(Freetext) The tag that will be used to contain the component value in the header section of the XML output file.

For example, if you want the value to appear in the XML file as
<myComponent4>DD</myComponent4>, the value for this setting would be myComponent4.

This setting may be left blank if it is not required that the component value be written to the XML file (i.e. the value is only required to be written to the CSV file).

## SPDEnableSeparatorDetection

(True/False) If set to **True**, the Separator Page Detection feature will be enabled.

## SPDRequireAllPhrases

(True/False) If set to **True**, all of the configured separator phrases configured in NN_SPDSeparatorPhrase must appear on the same page in the document for that page to be considered as a separator page.

If set to **False**, then the first page of the document that contains any of the configured separator phrases will be considered to be a separator page.

## SPDDeleteSeparatorPage

(True/Flase) If set to **True**, the separator page will be removed from the document in Forms Recognition.

To ensure that this modified document (with the separator page removed) is exported instead of the original image (that still contains the separator page), the following additional settings must be specified in the BRWEXP section and BRWCSV table:

```
EXP_OP_OutputTiffFile=YES
EXP_VL_TiffName=XXX
EXP_VL_TiffDPI=300
EXP_VL_TiffFormat=G4FAX
EXP_OP_RedactInvoiceNumber=NO
CSV_OP_01_OutputImage=NO
```

## SPDSeparatorPhrase

(NN) A phrase that signifies a separator page.

Separator phrases should not include any of project's configured word segmentation characters, and other special characters such as asterisks should be avoided.

Separator phrases should be a text string that is not likely to legitimately appear in an invoice document, for example, XXX WFR SEPARATOR PAGE XXX.

Where more than one separator phrase is configured, the NN component must begin at 01 and run sequentially.

## XCUEnableCustomUOM

(True/False) This parameter should be set to **True** to the Export Custom Unit of Measure Value to XML feature.

## XCUUseISOCode

(True/False) If this parameter is set to **True** the value that will be written to the <UOM> tag for the line item in the output XML file will be the corresponding ISOCode for the extracted UOM value, as defined in the BRWUOM section of the project configuration.

For example, assume the following settings:

```
UOM_VL_02_ISOCode=EA
UOM_VL_02_Alias=Each,EACH
UOM_VL_02_ExportValue=Each
```

If a line item unit of measure was extracted as EACH, and this parameter is set to **True**, the value written to the XML file will be EA, because that is the *ISOCode* setting that corresponds to the Alias parameter for this UOM group, where the extracted value exists in the comma-separated list of aliases.

If this parameter is set to **False**, the value that will be written to the <UOM> tag for the line item in the output XML file will be the corresponding (optional) ExportValue for the extracted UOM value, as defined in the BRWUOM table of the project configuration. In the example given above, the value written to the XML file would be Each.

If the Export Custom Unit of Measure Value to XML feature is not enabled, or if the extracted Alias cannot be found in the project configuration, or if the ExportValue setting is not configured, the extracted unit of measure will be written to the XML file. Also review BRWUOMTYPE table for more information.

## IFVEnableIVRForceValidation

(True/False) If this parameter is set to **True**, the Verifier user can forcibly validate a document by selecting one of the Invalid Reason options defined in the *IFVInvalidReasonGroups* parameter. This allows the document to pass through to export with known invalid values in one or more of the extraction fields.

## IFVInvalidReasonGroups

(Freetext) Comma-separated list of Invalid Reason groups that, if selected by the Verifier user, will cause the document to be considered valid and ready for export, irrespective of whether one or more fields failed validation.

For example, assume the project administrator added the following custom invalid reasons to the project configuration:

```
IVR_VL_10_Rule=SETAMOUNTSTOVALID
IVR_VL_10_VerifierDisplay=COULD NOT VALIDATE DOCUMENT
IVR_VL_10_ExportCode=10
IVR_VL_11_Rule=SETAMOUNTSTOVALID
IVR_VL_11_VerifierDisplay=KNOWN INVALID DOCUMENT
IVR_VL_11_ExportCode=11
```

To enable the Verifier user to select either of the above Invalid Reasons to forcibly validate a document and release it for export, this parameter should be configured as follows: WFR_VL_IFVInvalidReasonGroups=10,11

## FXIFormatXMLforOIT

(True/False) If set to **True**, one or more functions of the Format XML for OIT feature will be enabled, depending on which are configured.
If set to **False**, none of the functions provided by this feature will be enabled.

When this setting is set to **True**, it is important that the following settings in the BRWEXP section have their values removed:

```
EXP_VL_XMLTableLineType=
EXP_VL_XMLTableQuantity=
EXP_VL_XMLTableUOM=
```

```
EXP_VL_XMLTableUnitPrice=
```

Failure to remove those values will not prevent this feature from working correctly, but will result in duplicate tags being written to the XML output. Instead, the following settings in the BRWEXP table must be set:

```
EXP_VL_XMLTableOITLineType=lineType
EXP_VL_XMLTableOITQuantity=quantity
EXP_VL_XMLTableOITUOM=UOM
EXP_VL_XMLTableOITUnitPrice=unitPrice
FXIDefaultLineType
```

(Freetext) Defines the line type value that should be used by default when the sample is configured to set blank values to the default or to replace defined values with the default.

## FXISetBlanksToDefault

(True/False) If set to **True**, the line type tag in the XML output will be populated with the value defined in **FXIDefaultLineType**. If set to **False,** any lines where the line type is blank will have an empty tag written to the XML.

## FXILineTypesToDefault

(Freetext) Comma-separated list that defines which line type value(s) should be replaced with the value defined in **FXIDefaultLineType** when it is written to the XML file.

This setting can be useful in implementations where the item category is being used for Service PO determination, in which case the value from the defined item category field would typically be written to the XML file as the line type.

Leave this setting blank if no line type values should be set to the defined default value.

## FXIEmptyQUPUOMforLineType

(Freetext) Comma-separated list that defines which line types should have empty quantity, unit price and UOM tags in the XML output file. The value(s) specified here should match the values in the line type field of the line item.

Leave this setting blank if no line types should be written to the XML file with empty quantity, unit price and UOM fields (i.e. the actual values should be written to the XML file).

## FXIFlipLineQUPforPOType

(Freetext) Comma-separated list that defines which line types should be written to the XML file with the quantity and unit price values transposed. If enabled, the quantity value will be written to the unit price tag in the XML file, and vice versa.

Leave this setting blank if this flip should not occur for any line types.

# About project fields and features

The following section provides details on the standard fields delivered in the AP Project Solution and the additional features and integration options that are available.

## Document Type

The document type field denotes whether the incoming document is an invoice or a credit memo.

The system automatically determines the field result, which can be changed within the Verifier application.

Using the system configuration options, the system administrator may enter indicative words and phrases for a credit memo that can influence the document type selection. The system default value is INVOICE.

## Invoice Type

The invoice type field denotes whether the invoice is purchase order (PO) or non-purchase order related (NO- PO).

The invoice type determines the following information.

- Whether line items are required from the invoice.
- How the invoice should be handled downstream.
- Whether a purchase order number is required.

Within the system configuration settings, you can configure a default value for this field.

For example, in an environment where the majority of invoices are purchase order related, you can set this default to PO.

Further configuration options are available to complete the following actions.

- Overwrite a NO-PO default and set it to PO based upon whether a purchase order number is detected or a valid purchase order number is detected.
- Overwrite the default based upon an attribute in the ERP vendor master data that would indicate whether NO-PO invoices from this vendor are permitted. For example, the vendor account group, the vendor industry sector, whether the vendor has a purchasing view, and so on.
- Overwrite the default based on a component of the image file name set by the scanning software where PO and NO-PO invoices are sorted upfront and scanned using different scan jobs.

## PO Type

The PO type field denotes whether the extracted purchase order relates to materials or services.

The system default is MATERIAL but it is possible to configure the system to switch this to SERVICE depending on the following purchase order characteristics.

- Purchase order document type.
- Line type / item category of the purchase order lines.
- The unit of measure on the purchase order lines.
- The prefix of the extracted purchase order number. For example, if service purchase orders all begin with 52 and 523456 is extracted as the purchase order number, then 52 should be entered as the service PO prefix.

The content of the PO type field controls whether line items are required, whether just the total of each line item and a description is required, and how the system handles the invoice during the line-

pairing event at document export.

## Invoice Number

This is the document number for an invoice or credit memo.

Field formatting options are available to perform the following actions.

- Remove all special characters from an extracted invoice number.
- Remove special characters if they appear at the start or end of the invoice number (Oracle recommends that this setting is always switched on).
- Retain only a specified set of special characters.
- Remove spaces from within an invoice number.
- Remove any leading zeroes from the invoice number.

The formatting helps promote a common standard of invoice number entry to increase the efficacy of a duplicate invoice detection routine in the downstream process.

An extracted invoice number can be marked as invalid under the following conditions.

- OCR errors are detected in one or more of the characters where the confidence level falls below the required minimum (default 50 percent).
- The system identified more than one candidate on the document whose respective confidences are closer than the distance setting against the field (default 10 percent).
- The format of the invoice number in terms of its length and sequence of alpha and numeric characters does not match previous invoice numbers submitted from the same vendor as stored in the invoice number validation table.
- The invoice number confidence falls below a configurable threshold.

The validation for comparing the format of the invoice number with the previous invoice numbers submitted from the same vendor is optional. It can also be specified how many previous invoice numbers the current invoice number should be compared against, and how many hits qualify as a successful validation. This check is not carried out in the Verifier application as user input is assumed to be correct.

At the point of document export, it is possible to configure the system to update the invoice number history table automatically with the results for the current document. As vendors often use a different numbering sequence for invoices and credit notes, the system accounts for the document type when performing this check.

It is also possible to configure the invoice number as an optional field for a utility invoice.

## Invoice Date

The invoice date field is mandatory for all documents.

The system automatically converts the invoice date on the document, irrespective of how it is expressed, into the designated Verifier output format. The Verifier output format can be set to DD/MM/YYYY, MM/DD/YYYY, or YYYY-MM-DD.

This formatting relies on the vendor's country of origin being available within the vendor master data in

order to handle ambiguous dates.

For example, 01/02/2009 is January 2, 2009 in the US, but reads as February 1, 2009 in Europe. If the vendor country exists in a configurable list of countries where the national date preference is MM/DD/YYYY (for example, the US), then the system converts the date to 01/02/2009 if the Verifier output format is MM/DD/YYYY, and to 02/01/2009 if the Verifier output format is DD/MM/YYY.

If a date is entered manually in the Verifier application, then no conversion takes place unless the date entered is "impossible" for the Verifier output format.

For example, if the format is set to MM/DD/YYYY and the user enters 28/02/2009, the system automatically flips the date to 02/28/2009.

The system can be configured to invalidate the invoice date if any of the following conditions are true.

- It is more than x days in the future.

- It is not in the current month.

- It falls more than x days prior to the current date where x is configurable. Machine and user local settings play no part in the system's internal handling of dates.

User input into the date field is not subject to the checks above as long as the date entered is valid for the output format.

If the downstream export event involves writing the extracted date into a flat file, or into a database table, the output format of the date can be set to DDMMYYYY, MMDDYYYY, or YYYYMMDD with an optional separator.

The system is able to handle dates expressed in the Gregorian calendar and the Japanese Emperor's calendar. The system also supports the Thai Buddhist calendar.

## Company Code

The company code field represents the unique ID of the legal entity within the customer's wider organization for which the invoice is intended.

For implementations involving Oracle e-Business Suite, this field represents the organization ID; for implementations involving PeopleSoft, this field represents the accounts payable business unit.

The field can be determined by one of the following methods.

- Through parsing the image filename if the company code is set at the point of scan.

- Using the Associative Search Engine pointing to a CSV or database extract of the master company code data.

- Through a lookup to a database table or downstream ERP system based on the extracted purchase order number (PO invoices only). If a value is found and the system is configured to take the company code from the purchase order in all cases, this overwrites any company code determined through other means.

The company code can be validated against a downstream ERP system or a database table.

## Vendor ID / Site ID / Internal Vendor ID

AP Project employs its unique associative search engine to ascertain the invoice vendor. Multiple instances of vendor master data within a single data source (each instance referred to as a vendor partition) is also supported by the solution.

By pointing AP Project to an extract of the client's vendor master, whether in a flat file or in a database table, the system analyzes the text of the invoice. The system then selects the closest matching vendor record in a fault-tolerant manner that accounts for spelling differences, OCR errors, abbreviations, and vendor details embedded within logos on the invoice.

If the system is not confident enough that the closest matching vendor from the extract is the correct vendor, the field is marked invalid and the document is sent to a Verifier. The Verifier user can either accept this vendor or select an alternative using the vendor search facility within the Verifier application.

If the Verifier user knows the Vendor ID, they can enter it manually into the validation form. In most cases, this value validates successfully when the user presses Enter, except when an external Vendor ID and/or Site ID is specified in the master vendor extract file for that vendor. In this case, the Vendor ID field validation fails and the workaround is to use the Vendor Search to populate the vendor fields.

The vendor ID is a mandatory field for both PO and NO-PO invoices.

For PO invoices, the vendor is defaulted from the purchase order and is compared against the vendor determined by the associative search engine for validation purposes only. It is possible to configure the system to ignore the purchase order vendor and take the associative search engine vendor in all cases.

For ERP systems, such as Oracle Financials that use a vendor ID and a site ID, only the vendor ID component is used within the validation and the vendor pay-to site does not have to be the same as the order- from site on the purchase order. The automatic extraction of the vendor looks for a vendor at a specific site.

The site ID cannot be entered manually in the Verifier application, but is populated through the chosen result of the vendor search.

If the Verifier user wants to select a vendor that is not represented on the purchase order (for example, an alternate payee or a third-party freight vendor), then this is possible if the vendor exists in the vendor master extract and an appropriate invalid reason is set.

For NO-PO invoices, if the invoice vendor does not exist within the vendor master extract, then the invoice may only pass if an appropriate invalid reason is set.

AP Project also supports scenarios where the ERP uses an external vendor ID for display to the user, but another vendor ID internally. In this scenario, the Verifier application displays the external vendor ID but the system still stores the internal vendor ID so that both values are available for export downstream.

## Purchase Order Number / PO Extension

If activated, the purchase order number field is mandatory for all invoices where the invoice type is PO, unless an appropriate invalid reason is selected.

The system only extracts a purchase order if it matches a valid format specified in the system configuration.

Further configuration options allow this field to be validated against a database table or against a downstream ERP system. If such a validation is set, the purchase order must exist in that system.

On the server side, an additional check is made to ensure that the pay-to vendor set against the extracted purchase order matches the vendor details on the invoice, but it is possible to configure the system to consider and validate the vendor ID and purchase order number independent of each other.

Within Verifier, the user may change the purchase order or vendor and the system lets them pass as long as the chosen vendor is referenced on the purchase order. If an alternate vendor is required, an appropriate invalid reason must be selected from the field drop-down. For ERP systems that use a site ID as well as a vendor ID to identify a unique vendor address, only the vendor ID component needs to be common between the vendor ID field and the purchase order details.

If the user changes the purchase order and the new purchase order does not contain the vendor currently set in the vendor ID field, an information message displays, inviting the user to accept the new vendor or continue with the current vendor. A similar message displays for the currency field if the currency is set to default from the purchase order.

The vendor ID and the purchase order can be entirely decoupled from one another through a setting in the system configuration.

If the new purchase order has not been released and the system does not require line items to be mandatory under this circumstance, a message displays informing the Verifier user.

If the new purchase order is a one-to-one match with the invoice in terms of its overall value or the value of goods received against the purchase order but not yet invoiced (MIRA scenario) and the system does not require line items to be mandatory under this circumstance, a message appears informing the Verifier user.

If the purchase order number is missing or invalid, the Verifier user should select an appropriate invalid reason from the field drop-down box to progress the invoice through the system.

A purchase order must be present and valid for the line-pairing feature to be activated during document export. Multiple purchase orders on a single invoice are supported if activated in system configuration, but are handled only at time of line pairing. From the point of view of extraction and operation in Verifier, only a single purchase order number is required.

The PO extension field is populated in implementations involving JD Edwards or PeopleSoft. In JD Edwards implementations, this holds the purchase order type (for example: OP); in PeopleSoft implementations, this holds the purchasing business unit.

## Bill-To Name

The bill-to name represents the name of the legal entity for which the invoice is intended.

This field can be used to check that the incoming document is intended for a valid company within the customer's organization.

Within system configuration, the system administrator can specify words and phrases that anchor a valid bill- to name. At runtime, the system extracts the full bill-to name.

If no anchors are specified or an appropriate anchor is missing, no value is extracted into the field. Hence, the document is sent to Verifier for a user to review.

## Invoice Subtotal

This field is used to capture the subtotal of the invoice.

The invoice subtotal is neither a mandatory field, nor a field relevant for export. It is only used as part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes, and line items.

The field is formatted automatically to use a period/full-stop as the decimal separator.

## Invoice Freight Amount

This field is used to capture a freight charge specified by the vendor at the invoice header level, but it can also capture a freight amount at the line item level.

The freight amount field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items.

Freight and other fields used to capture miscellaneous charges are assigned to miscellaneous charge groups, which determine how they are processed during line pairing and how they are exported.

Irrespective of where it appears on an invoice, freight forms part of the invoice line item data as it is one of the items that the vendor is billing for. Hence, no freight is exported for any documents where line item extraction is not required.

## Invoice Miscellaneous Charge

This field is used to capture a non-freight miscellaneous charge specified by the vendor at invoice header level.

For example, a fuel surcharge, administration charge, customs charge, pallet charge, and so on. The system is also able to capture miscellaneous charges at the line item level.

The miscellaneous charge field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes, and line items.

Miscellaneous charges are assigned to miscellaneous charge groups, which determine how they are processed during line pairing and how they are exported.

Irrespective of where it appears on an invoice, the miscellaneous charge forms part of the invoice line item data as it is one of the items for which the vendor is billing. Hence, no miscellaneous charge is exported for any documents where line item extraction is not required.

## Invoice Tax Amount

This field is used to capture the total invoice tax amount, such as US sales and use tax, and European VAT. It is also used to capture Canadian GST/HST tax amounts and Brazilian IPI tax amounts.

The tax amount field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items.

The system does not permit a total tax amount to pass if it is a negative value and the invoice total is a positive value.

If line pairing is activated to occur during document export, the system attempts to determine the correct manner in which the tax should be booked in the downstream ERP system.

At time of export, the system sums together all tax amounts read from the document and passes the total value through the tax amount export field.

## Invoice Withholding Tax Amount / ISR Retention (Mexico)

The withholding tax amount fields capture the portion of the invoice total amount that should be withheld by the party settling the invoice for payment to the government as opposed to the vendor.

The ISR Retention field is used specifically to capture the ISR retention component of withholding tax, which can appear on Mexican invoices. The IVA retention component is captured in the regular withholding tax field.

Both withholding tax amount fields are formatted automatically to use a period/full-stop as the decimal separator and form part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes, and line items.

At the time of export, the system outputs withholding tax as a separate header level field with the ISR retention amount added to it. The ISR retention field is also available as a separate export parameter. The system outputs invoice total amount with the withholding tax and ISR retention amounts added back on.

## Provincial Sales Tax

This field is used to capture the Provincial Sales Tax (PST/QST) component of Canadian tax. The system attempts to extract the PST/QST amount from a document if the vendor country of origin is Canada. The regular invoice tax amount field is used to capture the GST component of Canadian tax.

The PST field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes, and line items.

At the time of document export, the tax amount exported is the sum of the regular tax field and the PST field, although the PST component is available separately.

## Invoice Header Discount Amount

This field is used to capture a discount given by the vendor at the invoice header level.

The discount amount is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items.

## Invoice Total

This field is used to capture the total amount of the invoice. The field is mandatory and cannot be zero as long as an invalid reason designating otherwise has not been set.

The invoice total is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes, and line items.

## Currency

The Currency field is used to extract the invoice currency and convert it to the standard ISO-code.

If no currency is captured or no currency appears on the invoice (which is common for domestic transactions), the currency field can be set to default to the currency associated with the vendor's country of origin, or the currency in which the purchase order was raised.

It is possible to validate an extracted or user-entered currency against a database table or a downstream ERP system. Oracle is able to provide an SQL script to create a fully populated table of all world currencies and the countries in which they are used.

Within the configuration, it is also possible to specify which currency symbols and terms are associated with each individual currency (for example, "pounds", "sterling" and "£" are associated with GBP). At runtime, if the corresponding currency symbol is found and this symbol is unique to one particular currency, then this currency is selected. Terms take priority over currency symbols. Additionally, the higher the currency up the list in the system configuration, the greater weight the system attaches to this currency.

If the currency symbol is ambiguous, then the vendor's country of origin is used to find the corresponding currency ISO-code.

For example, "$" is found on the document and the vendor is from Canada, hence the currency is set to 'CAD'.

## Bank Account / Bank Account Code

The bank account number is used to capture the bank account into which the vendor has requested payment to be made.

The bank account code field represents the identification of that bank account for that vendor from the point of view of the downstream ERP system.

The bank account is determined based on whether the bank details are available within the vendor master data.

For each account specified where the account currency matches the currency of the invoice, the system looks for the bank details on the document. If they are found, the first matching bank account number and the corresponding bank account code are copied into the fields. It is possible to configure the system to ignore the currency when choosing an account.

If the user enters a new purchase order or vendor within the Verifier application, the bank account details are reassessed automatically by the system.

It is possible to limit the identification of bank accounts only to those vendors who require payment to be made through a bank transfer. In this scenario, the system only looks to extract a bank account if the list of vendor payment methods contains an entry that denotes a bank transfer as a permitted payment method.

## Payment Order Reference Number / Subscriber Number

The payment order reference (POR) number is a 27-character transaction ID applied to the invoice by the Swiss Postal Service.

AP Project extracts this value from the document (typically domestic invoices supplied by Swiss vendors) and places it in the POR number field.

The POR number is only passed downstream during data export if the vendor has a POR subscriber

number available within the vendor master data extract or if a POR subscriber number has been extracted from the document. The POR subscriber number in the vendor master takes priority over a POR subscriber number extracted from the invoice.

## Payment Reference

This field is used to capture the vendor's payment reference as specified on the invoice.

The payment reference is used in the Nordic countries of Norway, Sweden, Finland and Denmark. In Norway, for example, it is referred to as the KID number. In Sweden, it is referred to as the OCR number. In Finland, it is referred to as the Viite number. In Denmark, it is referred to as the FIK number.

It is possible to configure the payment reference field as relevant only for the Nordic countries. Checksum validation is applied to all extracted or user-entered values.

## Exchange Rate / Local VAT Amount

The exchange rate and local VAT amount fields are used as part of the VAT compliance check. If a vendor charges VAT and the invoice currency is not equal to the currency of the taxing country, the law requires that the vendor must state the VAT in the local currency, or provide the exchange rate used at the time the invoice was generated.

This system checks for this scenario and sets the exchange rate and local VAT amount fields to mandatory accordingly. The user can populate either field.

The exchange rate should be the value by which the invoice tax amount is multiplied to get the same tax amount in the local currency.

At the time of export, only the exchange rate is passed downstream. If a local VAT amount was entered, the system calculates the exchange rate from the invoice currency to the local currency automatically.

## Account Number

The account number field represents the unique identification number of the client from the point of view of the vendor.

This is a mandatory field to use instead of the invoice number for invoices from utility vendors, if the invoice number in the system configuration is set to skip invoice number extraction for utility vendors.

In all other cases, the field is not mandatory.

## Priority Flag

The priority flag field is set to YES or NO depending on the urgency of processing.

The value of this field defaults to NO but can be overwritten by one of the following options.

- The Verifier user
- A component in the document file name

At the point of document export, this value can be passed to the downstream workflow so that the item can be prioritized accordingly.

To increase the item priority in AP Project, documents should be sorted according to priority during the scanning process, then output to a different AP Project import directory that is swept by an RTS instance that sets the priority of all imported documents to 1.

## Scan Date

This scan date field represents the date upon which the invoice was scanned.

This is not extracted from the document but is set through a mapping to the field from the document file name. You can configure the expected format of the date lifted from the document file name. The system subsequently converts the date into the Verifier output format.

If the downstream export event involves writing the scan date into a flat file or into a database table, the output format of the date can be set to DDMMYYYY, MMDDYYYY, or YYYYMMDD with an optional separator.

## Batch Name

The batch name field represents the name of the batch into which the invoice was scanned.

This is not extracted from the document but is set through a mapping to the field from the document file name.

## URN

The URN field is the unique reference number assigned to the document in the upfront scanning process.

This is tied to the AP Project field through a mapping from the document file name. If the field is not mapped to a specific file name component, then the value of the URN field is set by the system to be the entire document file name minus the path and file extension.

The URN can be used by AP Project to:

- Set a key for the document record within the database reporting.
- Set a key for the document record for the purposes of database export and a unique file name for the purposes of flat file export.
- Denote the unique archive document ID for the image as determined by an early archiving process.

## Invalid Reason

The invalid reason field contains a list of possible exceptions that could prevent a Verifier user from being able to correct a document in its entirety.

The system default is NONE but a Verifier user may change this value when a particular exception is encountered so that the document may be progressed out of the Verifier application.

The following table contains a list of the system delivered invalid reasons, their corresponding rule, when they should be selected, and the effect of selecting them.

| Invalid Reason | Usage | Effect |
|---|---|---|
| VENDOR NOT FOUND | The user should select this invalid reason if the invoice vendor cannot be found using the vendor search function. This applies to both PO and NO-PO invoices. | Rule: SETVENDORTOVALID<br><br>The vendor ID field is set to valid.<br><br>You can configure whether line items are still required or not.<br><br>If you configure the AP Project export event to create documents directly in a downstream ERP system, document export fails for NO-PO invoices as the ERP system does not permit an invoice to be created without a vendor ID.<br><br>Line pairing is not carried out at the time of document export.<br><br>If activated, the VAT registration compliance check is not carried out.<br><br>No vendor details are exported.<br><br>For a purchase order invoice, if a vendor does not exist in the Vendor Search pool, then this is a configuration issue.<br><br>For a purchase order document, the SETVENDORTOVALID rule sets the Vendor field temporarily to valid, but the following PO Number validation sets it back to invalid with an error description, "Purchase order vendor cannot be validated against data source (EN082)".<br><br>For a NON-PO invoice, the Vendor is set to valid and remains valid. |
| MISSING/INVALID PO | The user should select this invalid reason if the invoice is purchase order related but the vendor has failed to quote a purchase order number or the purchase order number they did quote was invalid for the invoice. | Rule: SETPOTOVALID<br><br>The purchase order number field is set to valid.<br><br>You can configure whether line items are still required or not.<br><br>Line pairing is not carried out at the time of document export.<br><br>If activated, the VAT compliance check is not carried out. |

| MISSING/INVALID VENDOR & PO | The user should select this invalid reason if both the vendor and the purchase order are invalid or do not exist. | Rule: SETVENDORANDPOTOVALID<br><br>The vendor ID, the PO number, and the line items are all set to valid.<br><br>Line pairing is not carried out at the time of document export.<br><br>If the AP Project export event has been configured to create documents in a downstream ERP system, document export fails. No vendor details are exported.<br><br>If activated, the VAT compliance check is not carried out. |
|---|---|---|
| PO VENDOR <> INVOICE VENDOR | The user should select this invalid reason if the user wishes to pass a different vendor ID to what is set against the purchase order. | Rule: ALLOWNONPOVENDOR<br><br>The purchase order and vendor ID fields are set to valid providing the vendor exists in the vendor master data extract and the purchase order number passes validation. |
| INVOICE AMOUNTS DO NOT ADD UP | The user should select this invalid reason if the invoice is not mathematically correct and the figures do not add up within the specified tolerance. | Rule: SETAMOUNTSTOVALID<br><br>All amount fields and all the line items are set to valid.<br><br>Line pairing is not carried out.<br><br>If activated, the VAT registration compliance check is not carried out. |
| THIRD PARTY FREIGHT | The user should select this invalid reason if the invoice is from a 3 rd party freight vendor quoting the material purchase order from another vendor where they have not been set up as the vendor responsible for freight. | Rule: THIRDPARTYFREIGHT<br><br>The vendor ID field is set to valid as long as the vendor exists and line items are not required in Verifier.<br><br>During line pairing, the net amount of the invoice is posted either to unplanned delivery costs, to condition records, or to a general ledger account, depending on the rules for the miscellaneous charge category assigned to third-party freight vendors. |

| NON VAT COMPLIANT | The user should select this invalid reason if the vendor has not complied with EU regulations and stated the required VAT registration numbers on the document, or they have not provided a local VAT amount or exchange rate if the invoice currency is not the same as the currency of the taxing country, or if they have quoted a rate of VAT not relevant for the taxing country. | Rule: NONVATCOMPLIANT<br><br>The vendor VAT registration number, bill-to VAT registration number, local VAT amount, and exchange rate fields are set to valid.<br><br>If activated, the tax rate column in the VAT table is also set to valid.<br><br>Document export runs as normal with the invalid reason and its associated code being passed to the downstream system. |
|---|---|---|
| STOCK INVOICE | The user should select this invalid reason for PO invoices where the vendor legitimately does not quote a purchase order number on the document. For example, invoices that use retrospective purchase orders. | Rule: STOCKINVOICE<br><br>The PO number field is allowed to pass blank but all other fields require completing as normal.<br><br>Instead, the purchase order number is decided programmatically at time of document export through user exit UserExitSetPO ForLinePairing if line pairing is required. |
| ZERO VALUE INVOICE | The user should select this invalid reason if the invoice has a legitimate zero amount for the total. | Rule: ZEROVALUEINVOICE<br><br>This permits a zero value invoice total to pass as long as the overall invoice is in balance. |
| ENDOR ADDRESS INVALID | The user should select this invalid reason if the vendor can be found in the vendor search but the vendor address does not match what is on the invoice. | Rule: SETVENDORTOVALID<br><br>The vendor ID field is set to valid.<br><br>You can configure whether line items are still required or not.<br><br>If the AP Project export event is configured to create documents directly in a downstream ERP system, document export fails for NO-PO invoices as the ERP system does not permit an invoice to be created without a vendor ID.<br><br>Line pairing is not carried out at the time of document export.<br><br>If activated, the VAT registration compliance check is not carried out.<br><br>No vendor details are exported. |

**Note:** With the exception of PO VENDOR <> INVOICE VENDOR, NON VAT COMPLIANT, THIRD PARTY FREIGHT, and STOCK INVOICE, line pairing is not carried out during document export if an invalid

reason is selected.

Configuration options allow an administrator to change the text, rule, and export code associated with an invalid reason. The administrator can also add new invalid reasons based on an existing invalid reason rule. The table above provides the invalid reason rules available.

## Invalid Reason Code

The invalid reason code is the value that the system assigns to a selected invalid reason for the purposes of document export so that a downstream workflow of the ERP system can act upon that code and behave accordingly.

## Employee ID

The employee ID field represents the identification number or user name of an employee found on the document.

The can be used in a downstream workflow to route the document to the relevant person within your organization. For example, for invoice coding and approval.

The field can also be used to detect an employee, a department, or even a ship-to address on the document to help determine the cost object against which a NO-PO invoice should be posted. In conjunction with the automatic general ledger account coding feature, this enables the complete coding of NO-PO invoices.

The field is determined using the AP Project Associative Search engine pointing to a CSV or database extract of the employee master data.

## Employee Name

The employee name is set by the results of the AP Project Associative employee search.

## Line Item Detail

AP Project attempts to capture information at the line item level in the following columns.

| Line Item Field | Description |
|---|---|
| PO | Purchase order number to which the invoice line item belongs. |
| Line | Purchase order line item number to which the invoice line item relates. |
| Material Number | Material number associated with the invoice line item. |
| GL Account | General Ledger Code to which the line item should be booked. This column is available for custom purposes. |

| Description | Description of the invoice line item.<br>This field is mandatory for multi-line limits purchase orders. |
|---|---|
| Quantity | Quantity invoiced.<br>This field is mandatory. |
| UOM | Unit of measure expressed in the invoice quantity. |
| Unit Price | Line item unit price. This field is mandatory. |
| Price Unit | The number of units for which the unit price is quoted.<br>For example, for a line item where 5000 units are invoiced at 100 dollars per 1000 units, the line item total is 500 dollars. In this case, the price unit is 1000.<br>This value defaults to 1. |
| Discount | Discount given by the vendor against the quoted unit price.<br>This field can represent either a discount expressed as a percentage or a hard amount to be subtracted from the quoted unit price. This field needs to be populated if the unit price captured is not the net unit price of any discounts. |
| Total | Invoice line item total. This field is mandatory. |
| Category | Miscellaneous charge category applied to the invoice line item based on the extracted line item description. |
| VAT Rate | Tax percentage rate applied to the invoice line item. If a valid value is captured, this is used by the system in the tax determination routine for countries that do not use tax jurisdictions. |

| | |
|---|---|
| | During document export, tax rates at line item level are cleaned up (for example, if the total invoice tax amount is zero, then a rate of zero is set for every line item; if the value captured is not between 0 and 100, it is blanked out). Additionally, if automatic tax determination is activated and tax codes are to be determined through a database lookup, the system removes any tax rates that do not correspond to valid percentages listed in the table for the country in which tax applies.<br><br>To increase extraction of tax rates, valid rates must be specified against the primary and secondary rate parameters in the system tax configuration.<br><br>The system does not currently have the ability to extract custom vendor tax rate codes at line-item level, then subsequently perform a conversion to an actual percentage rate based on a legend the vendor specifies elsewhere on the invoice. |
| VAT Amount | VAT amount applied to the invoice line item.<br><br>This column is also available for a user to enter line level ICMS tax amounts, which are mandatory for multi-line Brazilian Note Fiscal invoices where ICMS tax is being charged and no corresponding line level tax rates have been captured. |
| Delivery Note | Line item delivery note number.<br><br>This value is only exported for line items that are not paired. Extraction has been optimized for English language invoices only. |

System configuration options allow you to determine when line items are needed for a particular document. The options you can activate and deactivate are as follows.

- Line items are required for any document.
- Line items are required for NO-PO documents.
- Line items are required for credit memos.
- Line items are required for invoices relating to a service purchase order.
- Only the line item total is required for invoices relating to a service purchase order.
- Only the line item total and description are required for invoices relating to a multi-line limits service purchase order.
- Line items are required if the purchase order has not been released.
- Line items are required for the MIRA scenario, which is when there is a one-to-one relationship between invoice and purchase order (that is, the total value of the invoice matches either the total value of the purchase order or the total value of all goods

receipts against the purchase order that has not yet been invoiced).

- Line items are required if either the VENDOR NOT FOUND or MISSING/INVALID PO invalid reasons have been selected by the user in Verifier.

- Line items are required if the vendor is a utility vendor.

If line items are not required or if an appropriate invalid reason is set, the line item table is set to valid irrespective of content.

Each line item within the table is subject to the following validation formula.

```
Line Total = Quantity * {( Unit Price – Discount ) / Price Unit }
```

The discount can either be a hard value that is subtracted from the unit price or as a percentage discount from the unit price.

If the invoice relates to a service purchase order, then the above check is skipped if only the line total column is required.

## Vendor VAT Registration Number / Bill-To VAT Registration Number

The Vendor VAT Registration Number and Bill-to VAT Registration Number are available to satisfy a European legal/fiscal compliance ruling, which states that if value added tax is to be charged, it is incumbent on the vendor to state their VAT registration number on the invoice. Some countries may also require the VAT registration number of the bill-to party.

AP Project is able to carry out this compliance check automatically if VAT compliance checking is activated.

If activated, the system looks for the appropriate VAT registration numbers on the document, and any values found are extracted into their corresponding fields. A valid vendor and company code must be present for this to occur.

If one or both VAT registration numbers cannot be found, tax is being charged, and both the vendor and company code are in EU member states, the document is presented to a user in the Verifier application for them to key in the missing data. For the data to be accepted, both sets of VAT registration numbers must have the same ISO-code country prefix.

The VAT registration number compliance check can be switched on or off on a company code by company code basis. It is also possible to configure the system to require the vendor VAT registration number only. VAT registration number checking is also supported for cross-border EU transactions where the VAT is zero- rated and both registration numbers are required to appear on the document.

## ICMS Tax Amount

ICMS tax is a form of sales tax applied to material items in Brazil.

It appears on a Brazilian Nota Fiscal invoice as a standalone tax value that cannot be validated in the same way as regular sales tax because the line item amounts on the invoice are already INCLUSIVE of this tax.

AP Project captures the total ICMS tax amount in the ICMS field. The regular AmountTax field is used to capture the IPI tax amount.

A document stops in Verifier if the system believes it to be a Brazilian Nota Fiscal invoice referencing

ICMS tax, yet no ICMS tax amount has been read. The user must then double-check whether ICMS tax was present on the invoice.

A captured ICMS tax value, or one entered by the user manually, is validated mathematically by the application under the following circumstances.

- More than one line item is captured from the invoice.

- The ICMS tax value is greater than zero.

If both of these conditions hold true, then the ICMS tax value must equal the sum of the values captured in the VAT Amount column in the table of line items. If no VAT amount at line item level has been extracted, then the system tries to use a captured VAT rate to determine what the VAT amount would have been. If this cannot be done, then the document stops in Verifier for a user either to correct the ICMS tax amount or to enter the line level ICMS tax amounts in the VAT amount column.

At time of export, the ICMS tax amount is added on to the total invoice tax value but is still available separately in its own export field. If line items are relevant for export, the line level unit prices and totals are outputted EXCLUSIVE of ICMS tax. During line pairing, the system assumes that pricing at the purchase order line item level is expressed exclusive of ICMS tax.

Usage of the ICMS tax amount must be activated in the system tax configuration.

## Delivery Note

Use this field to capture the vendor delivery note number if stated on the invoice.

## Due Date

This field captures the due date for payment.

## Delivery Date

This field is used to capture the delivery date for the goods/services as stated on the invoice. You can configure the field to include capture of dates labelled as ship-to dates.

## VAT Table

You can use the VAT table in lieu of the single AmountTax field to capture a greater level of tax detail from European VAT invoices.

As well as the VAT amount itself, the table also contains columns to capture the corresponding VAT rate and the corresponding invoice amount that is subject to VAT. The multi-line nature of the table also permits the capture of the details corresponding to multiple rates of VAT on a single invoice.

Each row in the table is validated mathematically to ensure that the taxable amount, the tax rate and the tax amount are in balance. It is also possible to validate that the VAT rate captured is valid for the taxing country as part of the VAT compliance checking.

Use of the VAT table automatically deactivates the AmountTax, AmountSubtotal, ICMS, HST, PST, CGST and SGST fields.

## Delivery Notes

This is a table field where multiple delivery notes can be captured and entered.

This table can be used instead on the single delivery note field for projects that require the extraction of multiple delivery notes from a single invoice. Validation and formatting occurs per the options configured for the single delivery note field.

At time of data export, the delivery notes collected in the table are exported as a single value through the standard delivery note header export parameter. The separator used is configurable.

## IBAN

The IBAN number represents the international bank account number for invoice payment. It is extracted by the system in conjunction with the BIC or SWIFT code.

If an IBAN number is extracted and the field is activated within the project, the system performs a checksum validation to ensure that the account number was captured correctly. If the number does not pass this validation, the field is marked as invalid and the document is sent to Verifier.

## BIC

The BIC or SWIFT code is an internationally assigned code to identify a unique banking institution. Use this code in conjunction with IBAN numbers to indicate payment details through a bank transfer. The solution attempts to find a BIC code on the document in conjunction with an IBAN number.

## Your Ref

Use this field to capture a reference number specified on the invoice that relates to the party being billed. It can often consist of a contact name, a reference number, or a combination of both.

## Alternate Payee

The alternate payee field is a supplementary field to the Vendor ID and represents the party to whom actual invoice payments should be made.

## Harmonized Sales Tax

Harmonized Sales Tax (HST) is a type of sales tax adopted by many Canadian states that combines the traditional Goods & Service Tax (GST) and Provincial Sales Tax (PST) into one single tax amount.

The HST can be stated on an invoice on top of GST and PST as a tax in its own right, which means that the system needs to be able to capture all three tax components for the invoice to pass. In this case, the HST amount needs to be extracted into its own field, which requires activating within the system tax configuration.

The HST amount is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items.

At time of document export, the tax amount exported is the sum of the regular tax field, the HST and the PST fields, although the HST component is available separately.

## Invoice Code CN

The invoice code field is used for domestic VAT invoices in mainland China and refers to the ten digit numeric code that habitually appears in the top left hand corner of the document.

Extraction of this field is optional depending on whether the client wishes to use the system to capture data relevant to the Golden Tax invoices validation process.

## Invoice Password CN

The invoice password field is used for domestic VAT invoices in mainland China and refers to the encrypted 4 line coding block that appears in the top right hand quadrant of the invoice document. Configuration options are available to specify permitted lengths and also the special characters that may appear within the coding block.

Extraction of this field is optional depending on whether the client wishes to use the system to capture data relevant to the Golden Tax invoices validation process.

## Mexican UUID number

The Mexican UUID is an electronic invoice number provided by the Mexican SAT authorities and appears as standard on electronic documents. It is 36 characters long and must be captured for government reporting purposes. A value is only extracted if the vendor country of origin is Mexico.

Extraction of this field is optional and a standard user exit 'UserExitMexicanUUIDValidate' is available to support custom field formatting and validation requirements.

## Brazilian CDA

This field is used to capture the Chave De Acesso number that appears on Brazilian Nota Fiscal invoices.

A value is only extracted if the vendor country of origin is Brazil. A checksum 11 operation is performed on all extracted or user-entered values.

## Central Goods & Services Tax (CGST)

This field is used to capture the Central Goods & Services Tax (CGST) from domestic invoices in India. The system only attempts to extract the CGST amount from a document if the vendor country of origin is India or the country cannot be identified. A separate field is available to capture State Goods & Services Tax (SGST). Integrated Goods & Services Tax (IGST) is captured in the regular invoice tax amount field. The CGST field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items. At the time of document export, the total invoice tax amount exported is inclusive of the CGST amount, but CGST is available to be exported separately.

## State Goods & Services Tax (SGST)

This field is used to capture the State Goods & Services Tax (SGST) from domestic invoices in India. The system only attempts to extract the SGST amount from a document if the vendor country of origin is India or the country cannot be identified. A separate field is available to capture Central Goods & Services Tax (CGST). Integrated Goods & Services Tax (IGST) is captured in the regular invoice tax amount field. The SGST field is formatted automatically to use a period/full-stop as the decimal separator and forms part of the mathematical calculation applied to all invoice amounts to ensure correct extraction of the invoice total, taxes and line items. At the time of document export, the total invoice tax amount exported is inclusive of the SGST amount, but SGST is available to be exported separately.

### Payment terms

This field is used to capture the payment terms as stated by the vendor on the invoice.

# Project Configuration

Project requirements are configured through the project INI file and Solution Configuration Manager.

These settings overwrite the property settings within the AP Project project itself. However, these settings are overwritten by the settings configured within the Oracle WebCenter Forms Recognition Runtime Server for the defined project. The solution permits the configuration of the following components.

- Setting up clients and client-specific settings
- Business rules relating to predefined data fields and document scope
- Database connection settings for validations and reporting through the Reporting Database
- Connection settings to Oracle eBusiness Suite
- Data export settings for non-ERP connections, such as MS SQL or Oracle DB, or file export
- Document archiving and exporting image file formats
- Error messaging, color scheme, and presentation of field data you want to display within Thick Verifier
- Tax code validation and determination

# Client Configuration

AP Project is a multi-tenanted solution and supports multiple configuration sets within a single installation.

The basic installation creates a single client with a client ID of 0 (zero), and this is the default client the system uses.

Each document that passes through the system is pre-assigned to a client. The client controls the following.

- The overall document flow.
- The fields that are extracted.
- The mandatory and optional fields, and their corresponding validation rules.
- The data sources that are used for field validation.
- How data is exported.

When you configure a AP Project client, you must consider how the client is utilized for your business needs. For example,

- If the end user is a BPO, a client can be used to represent a single customer of the BPO or a division of a single customer.
- If you have one user working in multiple regions or with multiple divisions with their own requirements, a client can be used to represent each region or division.

- If you have one user working with multiple ERP systems, each ERP system can be set up as an individual client for the different ERP-system connections and processing rules.

Client settings and properties are contained in the client configuration table within Solution Configuration Manager. Using this table, you can edit an existing client, copy a client, or create a new client.

To create a new client, complete the following steps within Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
3. Scroll to the last row in the table where you have the option to create a new entry.
4. Populate **Client ID** with the client ID you would like to use. The ID must be a unique numeric integer.
5. Enter a short description of your client in **Client Name**.
6. Choose the processing profile you wish to assign to the client by selecting the processing profile ID number from the **Processing Profile ID** drop-down.
7. Choose the export profile you wish to assign to the client by selecting the export profile ID number from the **Export Profile ID** drop-down.
8. Choose the instructions profile you wish to assign to the client by selecting the instructions profile ID number from the **Instructions Profile ID** drop-down.
9. Select the **Force Verify** check box if you want all documents belonging to this client to stop in Verifier for a user to review.
10. Enter the client group you want the client to be assigned to in **Client Group**. A client can only be assigned to a single client group. The client group is used to assign users to client documents in the user management table.
11. Select the **Requires Review** check box if you want all documents belonging to this client to be subject to the document supervisor review step.
12. Choose the vendor partition you wish to assign to the client by selecting the vendor partition ID number from the **Vendor Partition** drop-down. Use of vendor partitions must be active in **Global Settings > General Settings** for the selection here to take effect.
13. Choose the employee partition you wish to assign to the client by selecting the employee partition ID number from the **Employee Partition** drop-down. Use of employee partitions must be active in **Global Settings > General Settings** for the selection here to take effect.
14. If you are using a partitioned database table to validate purchase order numbers, choose the purchase order partition you wish to assign to the client by selecting the purchase order partition ID number from the **PO Partition** drop-down. Use of PO partitions must be active in **Processing Settings > PO Number Settings > PO Number Validation** for the selection here to take effect.
15. If you are using a partitioned tax table for VAT type tax code determination during line pairing, choose the tax partition you wish to assign to the client by selecting the tax partition ID number from the **Tax Partition** drop-down. Use of tax partitions must be active in **Processing Settings > Tax Settings > Tax Configuration** for the selection here to take effect.

16. Choose the company code partition you wish to assign to the client by selecting the company code partition ID number from the **Company Code Partition** drop-down.

17. Choose the miscellaneous charge account partition you wish to assign to the client by selecting the miscellaneous charge account partition ID number from the **Misc Charge Acc Partition** drop- down.

18. Choose the employee partition you wish to assign to the client by selecting the plant partition ID number from the **Plant Partition** drop-down.

19. Choose the unit of measure conversion data partition you wish to assign to the client by selecting the unit of measure partition ID number from the **UOM Partition** drop-down.

20. Select a priority indicator to be assigned to client documents by selecting a number from the **Priority** drop-down. A value of 0 indicates the highest level of priority. A value of 9 indicates the lowest level of priority. The default value assigned is 5. Any value outside of the range 0-9 is ignored. Documents set to a high priority appear at the top of the Verifier worklist and receive priority processing from the Runtime Server. If you want to use this feature, you must configure the Runtime Server instances to import documents as batches into the database. The client priority level overrides any priority level set in the Runtime Server instance configuration as long as the **Set Batch Priority From RTS** check box is not selected in **Global Settings > General Settings**.

21. Click the **Insert** hyperlink to save your changes.

## Assign documents to a client

Documents must be pre-assigned to clients prior to being captured by the system. You can assign documents using the document filename, a database lookup, or via UserExitAssignClientIDToDocument. If no configuration is in place to assign a client using any of these methods, the document is assigned the default client ID of zero automatically and no error is raised.

## Assign a client ID using a document filename

AP Project uses a parameter in the image filename to identify the client to which a document must be assigned. Therefore, a client ID must be embedded within the image filename and separated by an underscore.

To assign a client ID using a document filename, complete the following steps.

1. Select the project to be used.

2. Select **Global Settings** from the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Import Settings** node.

4. Enter the filename component in **Client ID**. This should be in the format of COMPONENT1, COMPONENT2, COMPONENT3 and so on.

   **Example**  A document intended for client 2 has a client ID embedded in the filename as follows: 12345_2_20120901.tif. The first component of the filename is 12345, the second component and client identifier is 2, and the third component is 20120901. To tell the system that the client ID is the second component, enter COMPONENT2 in **Client ID**.

   If the client ID does not exist in the filename location specified, or the client ID does not exist within the solution, document processing will fail. If no filename component is specified, the system will use client zero for all documents.

5. Enter the single character delimiter used to separate the filename components in

**Separator**. If no value is populated, the system will use an underscore.

6. Save the changes.

## Assign a client ID using a database lookup

You can derive the client ID using a database look-up based on either the document filename or the URN component of the document filename. If the client ID database look-up is configured, it will take precedence over any client ID filename mapping configured elsewhere. To assign a client ID using a database lookup, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Import Settings** node.
4. Select the **Import Client ID From DB** check box. This then reveals further options.
5. Select the SQL connection group that represents the connection to your client ID look-up database using the **SQL Connection Group** drop-down.
6. If you want to query the client ID look-up table using the document filename (without the filepath and file extension), select **FILENAME** from the **Client Key** drop-down. If you want to use the component of the filename mapped in **URN**, select **URN** from the **Client Key** drop-down.
7. Enter the technical name of the client look-up table in **DB Table Name**.
8. Enter the technical name of the client look-up table column that contains the URN into **DB URN**.
9. Enter the technical name of the client look-up table column that contains the client ID into **DB Client ID**.
10. Save the changes.

## Database lookup Client ID Errors

The system displays an error if any of the following conditions occur.

- The client ID look-up table is not mapped or is incorrect.

- The column names for the URN and client ID have not been mapped or are incorrect.

- **Client Key** is set to URN, but no URN has been mapped or a URN does not exist in the filename location specified.

- A connection to the client look-up database cannot be established.

- There is no entry in the look-up table for the document filename or URN.

- There is an entry in the look-up table for the document filename or URN, but the client ID is not populated or is not numeric.

- The client ID read from the table does not exist within the solution.

- There are multiple entries in the look-up table for the same document filename or URN with different client IDs.

## Assign a client ID using UserExitAssignClientIDToDocument

You can use **UserExitAssignClientIDToDocument** to apply custom logic for assigning a client ID to a document. This user exit is called each time the solution settings are loaded and a workdoc is

available. This is typically during the core platform **Document_PreExtract** event. It is called before the system tries to assign a client ID using the document filename or database look-up.

If a client ID has already been assigned to the document, the user exit is not called.

Within the user exit, you can set the **strClientID** string parameter to the client ID you want to use. The client ID should be an integer that is zero or greater. The system raises an error and document processing fails if the client ID is set to an invalid value. If the **strClientID** parameter is left blank, no error is raised and the system continues to try and determine the client using the document filename or database look-up.

# Processing Profile Configuration

A processing profile is a collection of settings that controls the way that a document is processed. It controls what fields are needed, and also how those fields are formatted and validated.

During installation, a single default processing profile is created with a profile ID of zero.

The configuration of this profile can be changed and/or additional processing profiles can be created.

## Create a new processing profile

You can create a processing profile that contains all of the validation and formatting settings in the Solution Configuration Manager. This profile can then be shared between multiple clients, enabling validation and formatting behavior for one or more clients with minimal effort. If none of the available profiles are appropriate for a specific client, additional profiles can be created.

To add a new processing profile to your project, complete the following steps in Solution Configuration Manager.

1. Select a project from the list.

   An additional **Settings** list is displayed.

2. From the **Settings** list, select **Processing Profile Configuration Settings**. An additional **Profile** list is displayed.

3. Select the profile from the **Profile** list that contains settings that are the closest to those you want in your new profile.

   If you are not sure, select the default profile. An additional **Copy Profile** button will now appear.

4. Click **Copy Profile**.

   A **Copy Profile** window is displayed.

5. Keep the default option for the **Profile ID**.

   This is a unique number and it is easiest if you just accept the one provided as it is the next unique number in the sequence.

6. Enter a short **Profile Name** that is easy to remember.

7. Enter a brief description of the profile in **Profile Description**.

8. Click **Save**.

   Your new processing profile will now be available to select in the **Profile** drop-down.

## Profile Groups

A profile group allows you to group together multiple processing profiles under a single group ID. The

profile group ID can subsequently be used when configuring applicable solution functionality. For example, you can use a profile group when configuring which vendor invoices should force stop in Verifier. Assigning a profile group means that all invoices from that vendor will stop for all processing profiles belonging to that group.

## Define a profile group

To define a profile group, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Profile Group Definition** node.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Populate **Profile Group ID** with the profile group ID you would like to use. The ID must be a unique numeric integer.
6. Enter a short description of your profile group in **Description**.
7. Click **Insert** to save your changes.

## Assign processing profiles to a profile group

To assign processing profiles to your profile group, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Assign Processing Profiles to Profile Groups** node.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Select the relevant profile group from the **Profile Group ID** drop-down.
6. Select the processing profile that you wish to assign to the group from the **Profile ID** drop-down.
7. Click **Insert** to save your changes.

   **Note:** You can add a new row if you want to assign more than one processing profile to a profile group. One processing profile can belong to more than one group.

# Field Configuration

Field configuration within AP Project is done using the field configuration table. Each processing profile has its own field configuration settings.

## Field Settings

The Field Settings section within Solution Configuration Manager allows you to select the fields relevant for the processing profile, and also to configure formatting and validation.

To navigate to Field Settings, complete the following steps in Solution Configuration Manager.

1. Select a project from the list.

   An additional **Settings** list is displayed.

2. From the **Settings** list, select **Processing Profile**. An additional **Profile** list is displayed.

3. Select the processing profile you wish to use.
4. Within the **Processing Profile Configuration Settings** hierarchy tree, navigate to the **Field Settings** node.

    The field configuration table is then displayed.

    The settings within the field configuration table allow you to do the following.

    - Switch fields on and off.

    - Set fields to mandatory or optional.

    - Set default field values.

    - Set different field rules depending on the document classification result.

    - Set a field type, such as date, amount, table, text, and corresponding validation rules.

    - Allocate usage of custom fields.

        **Note:** The name of the field is displayed in the FieldName column. This name must not be changed.

## Switch fields on and off

Fields that are not active do not appear on the Dynamic Verifier form. If a standard field in the project is not listed in the field configuration table, it is considered inactive. To turn a field on or off, complete the following steps.

1. Locate the row for the field you wish to switch on or off in the field configuration table.
2. To turn a field on, select the **Active** check box.
3. To turn a field off, clear the **Active** check box.
4. Save the changes.

## Set fields to mandatory or optional

Whether a field is mandatory or optional is controlled using the **Required In RTS** and **Required In Verifier** check boxes. The following table describes the effect of selecting and clearing these boxes in isolation and in tandem.

| Required In RTS | Required In Verifier | Effect |
|---|---|---|
| Cleared | Cleared | The field is entirely optional within the project. |
| Selected | Cleared | If the system does not extract a value into this field automatically, the field is marked invalid and the document is sent to Verifier. The user is permitted to leave a blank value in Verifier. |
| Selected | Selected | If the system does not extract a value into this field automatically, the field is marked invalid and the document is sent to Verifier. The user must enter a value in Verifier. |
| Cleared | Selected | This is an optional field within the project. |

## Apply a country filter

Some fields required by the solution are mandatory or optional depending on the country to which the invoice relates.

For example, the payment reference field needs to stop in Verifier if nothing is extracted when the document is a Danish, Swedish, Finnish or Norwegian invoice, but not when it is from any other country.

The country filter permits a country-specific dimension to determine whether a field is needed or not.

Within the field configuration table, the **Country Filter** column can be populated with a comma-separated list of country ISO-codes. Examples of ISO-codes for the four Nordic countries are DK, SE, FI, and NO.

This means that, if a field is configured as mandatory, and the extracted vendor's country of origin is not specified in the list of countries, the field is permitted to pass as a blank value.

## Force a field to require verification

To configure a field so it is always marked invalid and then reviewed by a user in Verifier, complete the following steps.

1. Locate the row for the required field in the field configuration table.
2. Select the **Force Verify** check box.
3. Save the changes.

## Label a field in Dynamic Verifier

To control how a field is labeled on the Dynamic Verifier form, complete the following steps.

1. Locate the row for the required field in the field configuration table.
2. Note the Text Element ID that has been assigned to the field in the **Verifier Text ID** column.
3. From the **Settings** drop-down, select **Global Settings**.
4. Within the **Global Settings** hierarchy tree, navigate to the **Field Text Settings** node. This displays the field text table.
5. Within the field text table, navigate to the row that matches the Text Element ID noted in step 2 for the appropriate display language.
6. Change the content of the **Display Text** column to reflect how you would like the field to be labeled.
7. Save the changes.

   **Note:** If no Verifier Text ID is assigned to the field in the field configuration table, or if the text element has no content in the field text table for the Verifier user language, the system will use the text in the **Verifier Label** column in the field configuration table as a default. This can also be changed, if required.

## Add a new language for an existing label

To add a new language for an existing label, complete the following steps.

1. Scroll to the bottom of the field text table.

2. Populate the **Text Element ID** column with the appropriate ID.

3. Populate the **Language ID** column with the ISO-Code for the appropriate language, such as 'DE' for German, 'FR' for French.

4. Populate the **Display Text** column with the desired text.

5. Click the **Insert** hyperlink.

## Set field default values

There are two default settings for every field, and their usage depends upon how the default should be applied. To set the default values for a field, complete one of the following steps within the field configuration table.

Field default values apply irrespective of whether the field is active or not.

1. To specify a fixed value for a field that overrides any extracted value and any user input in Verifier, enter the default value in the **Default Value** column.

2. To specify a default value to be used only in the event that the system does not extract anything else automatically, enter the default value in the **Default If Nothing Extracted** column.

3. Save the changes.

   **Note:** Field default values apply irrespective of whether the field is active or not.

## Setting field types

The field type governs which of the additional settings in the table affect the validation of the field. The following are the four field types you can assign to each field.

- Date

- Amount

- Text

- Table

The field type is assigned using the **Field Type** drop-down. The different types, along with their respective configuration options, are described in the following sections.

## Configuring date fields

For a 'DATE' type field, any value extracted must be in a legitimate date format in the Gregorian calendar. If it is not, and the system is unable to convert it, then the field is marked as invalid and the document is sent to Verifier.

You can also configure a validity range for a date anchored to the present day; the display format in Verifier; and the format for export.

## Date validity range

You can set a field-specific date validity range that extends between a previous date and a future date with respect to the current date. This is controlled using the Future Days and No. Days In Past columns in the field configuration table.

To configure a date validity range, complete the following steps in Solution Configuration Manager.

1. Locate the row for the required date field in the field configuration table.
2. In the **Future Days** column, enter a numerical value that indicates the number of days in the future from the present date that an extracted date is considered valid. For example, if today's date is March 20th and a date is extracted as March 31st, and the value is set to 10, then the system will mark the field invalid as the extracted date is 11 days in the future. If future dates are not permitted, set the value to 0 (zero). To disable the check entirely, set the value to -1.
3. In the **No. Days In Past** column, enter a numerical value that indicates the number of days in the past from the present date that an extracted date is considered valid. For example, if today's date is March 20th and a date is extracted as March 9th, and the value is set to 10, then the system will mark the field invalid as the extracted date is 11 days in the past.

   If past dates are not permitted, then this must be set to 0 (zero). To disable the check entirely, the column value must be set to -1.

   The validity range only applies to dates extracted automatically. In Verifier, the user is permitted to pass any value as long as it is a date.

4. If you want to force an extracted date to stop in Verifier if the extracted date is not in the current month, select the **Date Only In Current Month** check box.
5. Save the changes.

## Extraction date validity range

You can also configure an optional date validity range for extraction. The system does not extract a date if it falls in a year earlier than x number of years prior to the current year where x is a value you can configure using the **Maximum Past Years** parameter in **Date Settings**.

For example, if the current year is 2021 and you have the **Maximum Past Years** parameter set to **10**, the system ignores any candidates for a date that occur before the start of 2011. So, 1st January 2011 would be considered a valid date, but 31st December 2010 would not.

This configuration is applied to all standard date fields such as the invoice date, delivery date and due date.

To configure an extraction date validity range, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Date Settings** node.
2. Enter the maximum number of past years in **Maximum Past Years**. The default value is **10**. You can switch off the check by entering **-1**.
3. Save the changes.

## Date format options

You can configure different display and output formats for date fields. These settings apply globally for all dates within a processing profile.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Date Settings** node.
2. Choose how you want dates to appear in Verifier using the **Verifier Format** drop-down. This setting applies globally to all date fields used by the processing profile.
3. To display the date as MM/DD/YYYY in Verifier, select `MMDDYYYY`. To display the date as DD/MM/YYYY, select `DDMMYYYY`. To display the date as YYYY-MM-DD, select `YYYYMMDD`.

4.    Choose the date format you want to use for document export by using the **Export Format** drop- down. This setting applies to all dates for the processing profile.

5.    Enter the separator you wish to use for exported dates in **Export Separator**. This may be left blank. This setting applies to all dates for the processing profile.

6.    Save the changes.

## Configuring amount fields

If the field type is set to 'AMOUNT', the field configuration table provides additional options for formatting amount fields at the time of data export.

To configure amount field export formatting, complete the following steps.

1.    Locate the row for the required amount field in the field configuration table. For line item amount fields such as the quantity, unit price and total, the system uses the configuration settings you have made for the **AmountTotal** field.

2.    Choose what type of amount the field represents using the **Amount Type** drop-down list. The available options are **TAX**, **MISC** and **OTHER**. If you choose **TAX**, any value extracted into this field is handled internally as a sales tax type amount. If you choose **MISC**, any value extracted is handled internally as a miscellaneous charge. In both cases, the values are included in the standard mathematical validation for amount fields. If you choose **OTHER**, the field is handled as a standalone value. The **Amount Type** option only takes effect for custom fields 1-5.

3.    Enter the number of decimal places that should be used for the exported amount field in the **Decimal Places** column. The system will default '2' for the standard amount fields.

4.    Choose how you would like negative amounts to be exported using the **Negative Type** drop-down. You can select one of the following integers (0-3).

- 0 - no special formatting is applied and the amount is exported as extracted.

- 1 - this formats the amount so that the minus sign appears at the end, such as 100.00-.

- 2 - this formats the amount so that the minus sign appears at the beginning, such as - 100.00.

- 3 - this formats the amount to appear in parentheses, such as (100.00).

5.    If an alternative value needs to be exported if the extracted value is either empty or zero, enter the alternate value in the **Output For Zero** column.

6.    If an alternative value needs to be exported if the extracted value is greater than zero, enter the alternate value in the **Substitute Value If Over 0** column.

## Amount field cross-validation

Following extraction, the standard amount fields are validated mathematically to check that the invoice is in balance. The calculation applied depends upon whether the VAT table is being used or not.

## Amount validation without the VAT table

If the VAT table is not being used, the following calculation is applied.

```
AmountTotal = Sum of LineItems + ( AmountTax + PST + HST + CGST + SGST )
```

```
+ ( AmountFreightPrepaidAndAdded + AmountMisc ) - AmountDisc - (
AmountWithholdingTax + ISRRetention )
```

If the above calculation fails and line items are not required for the document, the amount fields can still be validated using the calculation below.

```
AmountTotal = AmountSubtotal + ( AmountTax + PST + HST + CGST + SGST )
+ ( AmountFreightPrepaidAndAdded + AmountMisc ) - AmountDisc - (
AmountWithholdingTax + ISRRetention )
```

## Amount validation with the VAT table

If the VAT table is being used, the following calculation is applied.

```
AmountTotal = ( Sum of tax amount column + sum of taxable amount column ) - (
AmountWithholdingTax + ISRRetention )
```

If line items are required for the document, the following additional calculation is also applied.

```
AmountTotal = Sum of LineItems + ( sum of tax amount column ) + (
AmountFreightPrepaidAndAdded + AmountMisc ) - AmountDisc - (
AmountWithholdingTax + ISRRetention )
```

## Deactivating amount field cross-validation

The calculations above are always applied on the server side in order to set the initial validity of the field, but can be switched off in Verifier.

To switch off the mathematical validation in Verifier, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Amount Settings** node.
2. Select the **Deactivate Cross Validation check box.**
3. Save the changes.

**Note:** We recommend deactivating the check if all fields included in the calculation above are not in scope for the client. Otherwise, a Verifier user is unable to process a document because information needs to be entered or corrected for a field that does not exist on the form.

### Configure separators for amount field export

To configure the separators that appear in amounts during export, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Amount Settings** node.

2. Populate the **Export Thousand Separator** and **Export Decimal Separator** fields with the separators you wish to use. The following table displays the effect upon the output of the amount 10,000 if the number of decimal places in the field configuration table is set to 2. These settings apply for all amount fields within a processing profile.

| Export Thousand Separator | Export Decimal Separator | Output for a value of TEN THOUSAND to 2 decimals |
|---|---|---|
| , | . | 10,000.00 |

| . | , | 10.000,00 |
|---|---|-----------|
| (blank) | . | 10000.00 |
| (blank) | (blank) | 10000.00 |
| ' | . | 10'000.00 |

## Configuring text fields

Text fields are fields that can contain numeric and alphanumeric characters. Examples of text fields within the project include the invoice number, the line item description, and the vendor ID.

The field configuration table contains various options you can use to control the formatting and validation of text fields, ranging from setting a minimum and maximum length, the treatment of special characters to setting an input mask.

To configure a text field, complete the following steps in the field configuration table.

1. Locate the row for the required text field.
2. In the **Min Length** column, enter a numeric value that represents the minimum permitted length of the field. Any extracted value or user input below this length is not permitted. If you enter zero, the minimum length check is not carried out.
3. In the **Max Length** column, enter a numeric value that represents the maximum permitted length of the field. Any extracted value or user input that exceeds this length is not permitted. If you enter zero, the maximum length check is not carried out.
4. In the **Pad Char** column, enter the single character you wish to use to pad out the field content to the right until the maximum field length entered in the **Max Length** column is met. For example, if a value of **1234** is extracted or entered into a field where the pad character is **0** and the maximum field length is set to **10**, the field content is subsequently formatted to **1234000000**.
5. Select the **Pad Only If Numeric** check box if you only want to pad values that consist of digits only. If selected, a value such as **1234** would be padded to **1234000000**, but a value such as **AB123** would not be padded.
6. If you want to have the field value padded by characters added to the left instead of the right, such as 000001234, select the **Right Justify** check box.
7. To remove all special characters from an extracted or user-entered value, select the **Remove All Specials** check box.
8. To specify exceptions to the **Remove All Specials** setting above, enter the special characters you wish to keep in the **Keep Certain Specials** field. You can enter more than one special character here.
9. To remove special characters only from the beginning or the end of an extracted or user-entered value, select the **Remove Start End** check box and ensure that the **Remove All Specials** check box remains cleared.
10. To remove all spaces from an extracted or user-entered value, select the **Remove Blanks** check box.
11. You can trim or take part of an extracted or user-entered value by using the substring functionality. To define the starting point for trimming an extracted value, enter the

numeric index of the starting position in the **Substring Start Pos** column where '1' would denote the first character in the string. Now, enter the desired length of the substring in the **Substring Length** column.

**Example** If you enter a positive number in the **Substring Start Pos** column, the system will count from the beginning of the string moving rightwards. If you enter a negative number in the **Substring Start Pos** column, the system will count from the end of the string moving leftwards.

For example, a business requirement states that invoice numbers cannot be more than five characters, but '123456789' has been extracted. With a 'Substring Start Pos' of 1 and a 'Substring Length' of 5, the invoice number is trimmed to '12345'. With a 'Substring Start Position' of -5 and a 'Substring Length' of 5, the invoice number is trimmed to '56789'.

12. To remove any leading zeroes from an extracted or user-entered value, select the **Remove Leading Zeroes** check box.

13. To set a validation field mask, enter a comma-separated list of the field masks you wish to use in the **Field Mask** column. For example, if you enter 'ABCD,WXYZ', then no value is permitted in this field unless it is equal to either ABCD or WXYZ. In case of wildcard characters, a hash symbol (#) is used to represent any number, an 'at' symbol (@) is used to represent any letter, and a question mark (?) is used to represent either a number or a letter. Hence, if you enter '@@-#####', then the system will enforce entry to correspond to two alpha characters followed by a hyphen, then followed by five numeric characters, such as AB-12345.

## List of special fields

The following is a list of special fields that have additional configurable validations and extraction influences on top of the options available within the field configuration table.

| Fieldname | Additional validations |
|---|---|
| DocumentType | You can choose to stop all documents where the document type is 'CREDIT' by selecting the **Stop All Credits** check box in Processing Settings > Document Type Settings. |
| PONumber | You can configure valid purchase order number formats per processing profile via Processing Settings > PO Number Settings > PO Number Formats. The system cannot extract a purchase order number if the format has not been configured. It is also possible to configure purchase order validation against a database or via Processing Settings > PO Number Settings > PO Number Validation. |
| InvoiceNumber | You can choose to validate the format of an extracted invoice number against a database table of past examples received from the same vendor via Processing Settings > Invoice Number Settings. |
| BillToName | You can configure valid bill-to name formats per processing profile via Processing Settings > Bill-To Configuration > Bill-To Formats. The system cannot extract a bill-to name if the format has not been configured. |
| IBAN | Checksum validations are applied. |

| PaymentReference | Checksum validations are applied for any extracted value if the vendor is from Denmark, Sweden, Finland, or Norway. |
|---|---|
| VendorID | You can choose to validate an extracted vendor ID against the vendor pool via Processing Settings > Vendor Settings. |
| Currency | You can choose to validate an extracted currency against a database via Processing Settings > Currency Settings. An extended currency validation check is also available. Currencies for extraction are set up globally for the project (independent of the profile) via Global Settings > Currency Settings. |
| CompanyCode | You can choose to validate an extracted company code against a database via Processing Settings > Company Code Settings. |
| AmountTax / VAT Rate (in the line items table) | You can configure the expected VAT tax rates as a comma-separated list in the **Primary Rates** and **Secondary Rates** fields in Processing Settings > Tax Settings > Tax Configuration. <br><br>In order to extract a VAT rate in the line items table, the rate must be listed in either of these fields. The primary rates column is intended for the headline rates of VAT in the countries within scope for the profile ID. The secondary rate column is intended for the reduced rate of VAT. It is not necessary to include zero in the list of valid rates. <br><br>We recommend maintaining this list of values for the benefit of extraction of the invoice tax amount. |
| Alternate Payee | This field operates in conjunction with the Vendor ID field. <br><br>You can activate the alternate payee functionality by selecting the **Check For Alternate Payee** check box in Processing Settings > Vendor Settings. The system then tries to identify the party who should receive payment for the invoice as well as the main invoice vendor. <br><br>Cross-validation between the vendor ID and alternate payee is also activated so that a payee cannot be selected unless it has been assigned as a permitted payee of the main invoice vendor. |
| HST | For Canadian invoices, you can choose whether you want the HST amount extracted into the dedicated HST field by selecting the **Extract HST Separately** check box in Processing Settings > Tax Settings > Tax Configuration. |
| PasswordCN | For domestic Chinese VAT invoices, you can specify the valid password lengths and permitted special characters in Processing Settings > Tax Settings > Tax Configuration. |
| DeliveryDate | You can specify whether you wish to consider the invoice shipping date as a delivery date by selecting the **Delivery Date Includes Ship Date** check box in Processing Settings > Date Settings. |
| BrazilianCDA | A checksum validation is applied if the vendor is from Brazil. |

## Using document classes for special field rules

It is possible to configure the system to use alternative field rules depending on the result of the document classification as it stands prior to extraction.

For example, if a custom child class of the main 'Invoices' class, called 'SpecialVATInvoice' is created and this class requires certain length and formatting rules for the Vendor and Bill-to VAT registration number fields, then two additional rows can be added into the field configuration table for 'VendorVATRegNo' and 'BillToVATRegNo', but with the class name column set to 'SpecialVATInvoice'. The class name column is not case sensitive.

Thus, if a document is classified to 'SpecialVATInvoice', the field rules are lifted from the field configuration table entries for that classname. For other invoices, or for other fields that exist on the 'SpecialVATInvoice' class that do not have special class-specific entries, the system continues to use the entry where the classname is set to 'INVOICES', which is the default setting.

Hence, the logic for loading the settings for each individual field is that the system checks for class specific rules using the document class name in the first instance, then, if none exist, the field settings for the 'INVOICES' class are used.

## Working with custom fields

The following custom fields are included with the **<project>.sdp** file and can be set up as per your business needs.

- Custom 1
- Custom 2
- Custom 3
- Custom 4
- Custom 5

This means that for each processing profile, five additional fields are available on top of the standard delivered fields. You can activate and configure these as either a date, an amount, or a text value field. These fields cannot be configured as a table type field. Automatic extraction can be configured for these fields by assigning an extraction profile via the **Extraction Profile** column in the field configuration table. However, any additional configuration within the project file, such as field training or scripting would apply globally across the project for all clients.

## Using table fields

AP Project has the following standard table fields.

- LineItems
- VATTable
- DeliveryNotes

The field type is shown as TABLE for each of these fields, and they must be activated if required for the processing profile.

For the **LineItems** table, each of the individual column names are included as separate rows in the field configuration table so they can be switched on and off, relabelled, and configured like a regular field.

The **Delivery Note** table, which has a single column, is validated according to the settings configured for the standard **Delivery Note** field.

The VAT table has three columns that are formatted and handled as amounts. This cannot be changed.

## Line item validation

Validation rules are applied to each row in the line items table if line items are needed for the document. If one or more rows in the table does not meet this validation, then the line items are marked as invalid and the document stops in Verifier.

The type of validation applied to each row depends on what type of row it is and also the type of purchase order.

**Standard row validation**

The following validation is applied to all non-miscellaneous charge rows in the table where the **PO Type** field is set to **MATERIAL**.

```
Total = Quantity * ( Unit Price / Price Unit )
```

If this calculation does not pass, the system then checks to see whether the line item has a discount. The discount value is captured in the discount column. The discount can be expressed either as a percentage, or as a discount applied to the unit price, or as a discount applied to the entire row. The system determines the type of discount automatically.

The following example shows a valid row if the discount is expressed as a percentage. The price unit is assumed to be 1.

| Quantity | Unit Price | Discount | Total |
|----------|-----------|----------|-------|
| 5 | 10.00 | 10 | 45.00 |

This row is valid as the following calculation holds true.

```
Total = Quantity * ( Unit Price * ( Discount / 100 ) )
```

```
45.00 = 5 * ( 10.00 * ( 10 / 100 ) )
```

The following example shows a valid row if the discount is expressed as a discount applied to the unit price. The price unit is assumed to be 1.

| Quantity | Unit Price | Discount | Total |
|----------|-----------|----------|-------|
| 5 | 10.00 | 2 | 40.00 |

This row is valid as the following calculation holds true.

```
Total = Quantity * ( Unit Price - Discount )
```

```
40.00 = 5 * ( 10.00 - 2.00 )
```

The following example shows a valid row if the discount is expressed as a discount applied to the whole row. The price unit is assumed to be 1.

| Quantity | Unit Price | Discount | Total |
|----------|-----------|----------|-------|
| 5 | 10.00 | 2.50 | 47.50 |

This row is valid as the following calculation holds true.

```
Total = ( Quantity * Unit Price ) - Discount

47.50 = ( 5 * 10.00 ) - 2.50
```

**Miscellaneous charge row validation**

If the line item has been assigned to a miscellaneous charge category, no mathematical validation is carried out for the row, but the description and total columns must be populated for the row to be valid.

**Service line item validation**

Service line item validation is carried out where the PO Type is set to **SERVICE**.

If the PO is a multi-line limits service purchase order and you have configured the system to require line items for multi-line limits in **Processing Profile > Line Item Table Settings**, no mathematical validation is carried out for the row, but the description and total columns must be populated for the row to be valid.

For other service PO types, the standard row validation is performed, but you can configure the system to require only the line item total to be populated.

To configure how you want line items to be validated for service invoices, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Items Table Settings** node.
5. Clear the **Skip For Service** check box if you want line items to be mandatory for service invoices. A further option **Line Total Only For Service** then appears.
6. Select the **Line Total Only For Service** check box if you only want the line item total column to be mandatory for the row. If you clear this check box, then the row will be validated using the standard row validation for material invoices.
7. Clear the **Skip For Multiline Limits** check box if you want line items to be mandatory for invoices relating to multiline limits service purchase orders. In this case, only the line item totals and the line item descriptions are required. If you clear this check box and select the **Skip For Service** check box, the system will only require line items for invoice relating to multiline limits purchase orders, but will not require line items for other service purchase order types. If you select this check box and clear the **Skip For Service** check box, then line item will be mandatory for all service purchase order types. If you select

both check boxes, line items will not be mandatory for the document.

## User Exit For Text Fields

To permit specific formatting and validation coding that cannot be achieved using the regular configuration options, UserExitTextFieldFormatting is available for this purpose within the project file user exit events. For more information, contact your administrator.

## Using substitution rules

Within the field configuration table, a text field can be assigned a substitution rule, which permits an extracted text value to be substituted in part, or as a whole, with another value. This works in a similar way to the standard VB replace command. One substitution rule can be assigned per field. Substitution rules take effect only during data export, and so the effects would not be seen within the Verifier application.

To create a substitution rule, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Substitution Rules** node. This displays the substitution rule configuration table.
4. Scroll to the last row in the table.
5. Populate the **Substitution Rule** column with the next available unique numeric index. Make a note of this new index as you will need it to assign the substitution rules to your field. The **Original** and **Replace** columns must not be populated for substitution rule 0.
6. Populate the **Original** column with the value you wish to replace. This is case sensitive.
7. Populate the **Replace** column with the value you wish to substitute the original value with.
8. Click the **Insert** hyperlink to add your new entry into the table.
9. From the **Settings** drop-down, select **Processing Settings**.
10. Select the processing profile you want to use.
11. Within the Processing Settings hierarchy tree, navigate to the **Field Settings** node. This displays the field configuration table.
12. Locate the row for the field where you wish to add a substitution rule.
13. Using the **Substitution Rule** drop-down, select the ID of the substitution rule created in step 5.
14. Save the changes.

# Dynamic Verifier Form

The Dynamic Verifier form is a form that is displayed to the Verifier user and adjusts automatically to display only those fields which are relevant for the document being processed. Additionally, form texts, dialog boxes, field drop-downs, and error messages are displayed using the language preference of the user.

## Activate the Dynamic Verifier form

As a project global setting, if the Dynamic Verifier form is activated, all documents imported into AP Project will use the Dynamic Verifier form from that point forward.

To activate the Dynamic Verifier form, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **General Settings** node.
4. Select the **Use Dynamic Verifier Form** check box.
5. Save the changes.

## Change the Dynamic Verifier form field order

The Dynamic Verifier form only displays fields that are activated in the field configuration table for the processing profile. The default order of fields is as follows.

1. InvalidReason
2. VendorID
3. SiteID
4. AlternatePayee
5. DocumentType
6. InvoiceType
7. POType
8. CompanyCode
9. InvoiceNumber
10. InvoiceDate
11. DueDate
12. YourRef
13. DeliveryDate
14. DeliveryNote
15. DeliveryNotes
16. AccountNumber
17. PONumber
18. POExtension
19. PORNumber
20. PORSubscriberNo
21. BillToName
22. VendorVATRegNo
23. BillToVATRegNo
24. EmployeeID
25. PaymentReference
26. BankAccount
27. BankAccountCode
28. IBAN
29. BIC
30. AmountSubtotal
31. AmountFreightPrepaidAndAdded
32. AmountMisc

33. AmountDiscount
34. AmountTax
35. HST
36. PST
37. CGST
38. SGST
39. ICMS
40. AmountWithholdingTax
41. ISRRetention
42. VATTable
43. AmountTotal
44. Currency
45. ExchangeRate
46. LocalVATAmount
47. Custom1
48. Custom2
49. Custom3
50. Custom4
51. Custom5
52. InvoiceCodeCN
53. PasswordCN
54. MexicanUUID
55. BrazilianCDA
56. LineItems

You can change the order of the fields as they appear on the Verifier by using the **Tab Order** column within the field configuration table in Solution Configuration Manager.

For example, if the value in the Tab Order column corresponding to the AlternatePayee field is "40", and there are only three other active fields with a lower tab order value (for example, 10, 22 and 37), the AlternatePayee field will be placed fourth from the top on the form. If there are only two other active fields with a lower tab order value, the AlternatePayee field will be placed third from the top.

Some fields in the list above have supplementary fields that are included on the form automatically, and some fields will not appear on the form unless another field is also present. The relationships are as follows.

- The VendorID field also includes the read-only VendorASSA field, which is used to display the corresponding name and address display.

- The EmployeeID field also includes the read-only EmployeeASSA field, which is used to display the corresponding employee details.

- The AlternatePayee field also includes the read-only AlternatePayeeAddress field, which is used to display the corresponding alternate payee name and address. The VendorID field must also be configured to appear on the form for these fields to appear. Both fields are inserted as a block, where the tab order is set relative to the VendorID field.

- The SiteID only appears on the form if the VendorID field is activated. The SiteID field is placed adjacent to the VendorID field on the form with the tab order set relative to the VendorID field.

- The POExtension only appears on the form if the PONumber field is activated. The POExtension field is placed adjacent to the PONumber field on the form with the tab order set relative to the PONumber field.

When you enter document correction within Verifier, the focus moves automatically to the first invalid field. If you press the Tab key, the focus will move to the next field in the list. Verifier also has a setting "Tab through invalid fields only," which moves the field focus through invalid fields only.

## Dynamic Verifier form language translations

AP Project contains a dynamic language translation feature for the Verifier application. If the project uses the dynamic language form, you can select the language you want. When the user logs in, the system translates the Verifier user interface to the language selected. This translation includes all field and column labels, dialog box and message boxes, search dialogs, drop-down options for the document type, invoice type, Purchase Order type, invalid reason fields, and standard system error messages. The Verifier language preference is set per user in the **Language Code** column within **Global Settings > User Management**. If no language preference is set, the system defaults to English. AP Project includes two language packs for English and Simplified Chinese, but additional translations can be configured within the solution. The following table lists each type of text element and the corresponding area within Solution Configuration Manager where they can be set.

| Text element | Table |
|---|---|
| Field and Column labels | Field and column labels can be maintained via **Global Settings > Display Text Settings > Field Text Settings**. The field and column labels texts defined here are linked to their corresponding fields in the field configuration table via the **Verifier Text ID** column. If the **Verifier Text ID** column is populated within the field configuration table and a corresponding field text has been maintained in the user language, then this overrides any other label defined in the **Verifier Label** column. |
| Standard system error messages | System error messages can be maintained via **Global Settings > Error Message Settings**.<br><br>If no error message is defined for the Verifier language preference, the system by default displays the corresponding message in English. If an English language version of the message is not defined, a generic default error message appears. Each error message is presented to the user suffixed by an error code (for example: CN201). This code is present to |
| | facilitate easy cross-referencing to the standard system error message. Standard error messages written to the system export log are in English. |

| | |
|---|---|
| Invalid reason drop-down | Invalid reason texts can be maintained via **Global Settings > Display Text Settings > Invalid Reason Text Settings**.<br><br>The invalid reason texts defined here are linked to their corresponding invalid reasons via the **Text Element ID** column. The value of this column must correspond to the index of an invalid reason defined in the invalid reason configuration table (Global Settings > Invalid Reasons > Invalid Reason Configuration). If no invalid reason text exists for the Verifier user language preference, the system uses the default text defined in the invalid reason configuration table. |
| Document Type drop-down | Document type display texts can be maintained via **Global Settings > Display Text Settings > Document Type Text Settings**.<br><br>The valid values for the **Text Element ID** column are 1 or 2, where 1 indicates an invoice, and 2 indicates a credit memo. The system rejects any other entries. |
| Invoice Type drop-down | Invoice type display texts can be maintained via **Global Settings > Display Text Settings > Invoice Type Text Settings**.<br><br>The valid values for the **Text Element ID** column are 1 or 2, where 1 indicates an invoice type of PO, and 2 indicates an invoice type of NO-PO. The system rejects any other entries. |
| PO Type drop-down | PO type display texts can be maintained via **Global Settings > Display Text Settings > PO Type Text Settings**.<br><br>The valid values for the **Text Element ID** column are 1 or 2, where 1 indicates a PO type of MATERIAL, and 2 indicates a PO type of SERVICE. The system rejects any other entries. |
| Classnames, search dialog labels and information dialog labels | Classnames, search and information dialog labels can be maintained via **Global Settings > Display Text Settings > General Text Settings**.<br><br>If no entry exists for the Verifier language preference, the system uses the entry for English by default. |

| Information box texts | Information box texts can be maintained via **General Settings > Information Messages > Information Message Settings**. |
| --- | --- |
| | If no entry exists for the Verifier language preference, the system uses the entry for English by default. |

# User Management

Users are maintained using the User Management table within Solution Configuration Manager. You can use this table to configure the following user attributes.

- The user permissions within AP Project.
- The user login authentication for a user using Windows authentication, or supply a static user name and password.
- The client groups a user can access.
- The users that are subject to quality reviews.
- The Verifier user language preference for the dynamic Verifier form.

After you configure the user management table, you can configure a server job to automatically import the table into AP Project.

## Add a new user

The User Management table is keyed by a unique combination of the user name and the client group to which they are assigned. If a user is assigned to multiple client groups, then multiple rows need to be added into the table. For example, if user JSMITH needs to be assigned to client groups 1 and 2, two rows need to be created for 'JSMITH', one for client group 1 and the other for client group 2.

To add a new user to the user table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings**.
3. Within the Global Settings hierarchy tree, navigate to the **User Management** node. This displays the user management table.
4. Scroll down to the end of the table where there is a special row where a new user can be added.
5. Enter the user name in the **User ID** column.
6. Select the client group to be assigned to the user by using the **Client Group** drop-down. If the user is an administrator, then any client group can be selected as the system provides administrator access to all client groups.
7. If you want the user to log in with a user name and an encrypted password, enter the encrypted password in the **Encrypted Password** column. If you want the user to log in using Windows Authentication, leave both columns blank. For more information, refer to the AP Project Password Encryption section.
8. If you want users to log in using Windows Authentication, enter the Windows domain information in the **Domain** column.
9. To configure whether verification performed by the user is subject to quality control review, select the **Requires Review** check box.

10. Enter the user group name in the **Primary Group Name** column, such as 'VERIFIERS'. You can enter an existing group name or a new group name, which the system subsequently creates in the background.

11. Choose the permissions you wish to grant the user by selecting a value from the **Authority Level** drop-down. The table below describes the choices available. All users automatically inherit the standard filtering permission 'FLT'.

| Authority Level value | Description |
|---|---|
| DM | This is the administrator role that allows a user to manage users, groups, and user-to-group assignments. Administrators install AP Project, configure applications, and manage data. They also design and maintain projects. This role is the most powerful of the roles, because it encompasses the permissions for all other authority objects. Administrators have access to all client groups. |
| SLM | This is the Supervised Learning Manager role that allows a user to define, modify, and maintain the Learnset. This functionality is accessible only through Verifier. |
| SLV | This is the Supervised Learning Verifier role that allows a user to collect and manage local training data. Supervised Learning Verifiers are subject-matter experts who train Learnset candidates to improve system performance.<br><br>This functionality is accessible only through Verifier. |
| VER | This is the Verifier role that allows a user to verify documents that could not be automatically processed. Typically, members of the Verifier group are clerks. This functionality is accessible only through Verifier. |
| SET | This is the Verifier Settings role that allows a user to change the AP Project for Verifier configuration. This role is given to users who are considered to have enough knowledge of the application to make changes that are beneficial to all Verifier users. |

| AEB | This is the role for a server user required in order to perform automatic import using the import API provided by the WFR 12214 core platform. This role should not be assigned to a Verifier user. |
| --- | --- |

12. Type the Verifier user language preference into the **LanguageID** column. Enter the two character, standard ISO-code. For example, enter 'EN' for English and 'CN' for Chinese.
13. Click the **Insert** hyperlink to save the changes.

## Configure an automatic import job

After the User Management table has been configured, you need to configure an automatic import job to import users into the main Oracle WebCenter Forms Recognition database. The automatic import job is configured in the RTS Management Console against the RTS instance that is carrying out document import. To configure an automatic import job, complete the following steps.

1. Open the RTS Management Console.
2. On the **General** tab, complete the following substeps.
   1. Configure the frequency of the system security updates using the drop down options provided. For example, every 2 days, or every 30 minutes.
   2. Configure the user update starting date and time.
   3. Ensure that the Update system security check box is selected.
3. On the **General** tab, click **OK**.

## Automatic import job errors

Error messages are located in the Intelligent Capture log file for the RTS instance performing the user import job. An error is displayed and the import fails if any of the following conditions are met.

- An invalid connection string or invalid credentials have been supplied for the AP Project platform database in Global Settings > Database Settings.
- The system is unable to connect to the AP Project platform database.
- The **User ID** column is blank in the user management table.
- The **Client Group** column is blank in the user management table and the user is not an administrator.
- The **Client Group** column in the user management table does not contain a numeric value.
- The **Primary Group Name** column is not populated in the user management table.
- You have not allocated clients to the client group in the client configuration table.
- The user the system is trying to add already exists as a user that was created through the Designer application. To resolve this issue, the Designer-created user must be deleted.

# Processing Instructions

Within a BPO operation, it is common for specific processing instructions to be in effect for a particular client.

AP Project provides a mechanism by which specific client instructions can be relayed to a Verifier user, which manifests itself as a button on the Dynamic Verifier form adjacent to the **Document Type** field.

Clicking the button, or pressing F2, will display the instructions to a user via a dialog box.

## Create instructions for the Dynamic Verifier form

To create a set of processing instructions for the Dynamic Verifier form, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Instruction Settings** from the drop-down.
3. Choose an existing instructions profile that is to be used as a basis to create your new instructions profile.
4. Click the **Copy Profile** button. A dialog box will appear.
5. Enter the new profile ID. It is recommended to use the one defaulted by the system.
6. Enter a short name for your instructions profile in **Profile Name**.
7. In the **Instructions** field, enter the instructions that you want to be displayed when a user clicks the Instruction button on the Dynamic Verifier form.
8. Click the **Save** button.

## Assign instructions to a client

To assign instructions to a client, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Client Settings** from the drop-down. This will display the client configuration table.
3. Locate the row in the table that relates to the client to which you wish to link an instructions profile.
4. In the **Instructions Profile ID** column, select the instructions profile ID that you wish to assign using the drop-down.

# Review States

A second verification step can be turned on or off at either the user or the client level. The purpose of this review step is to allow for additional quality control of either automatic extraction or user entry prior to the export of the document.

All fields are extracted by the system automatically. The document flow is as follows. Import > OCR > Classification > Extraction > Review > Export

If one or more fields requires user attention, the document flow is as follows. Import > OCR > Classification > Extraction > Verification > Review > Export When a document goes to review, it is set to a specific state of 699 by default.

**Note:** This state must be accessible only by members of the BPO organization who are authorized to review documents.

When reviewers enter the batch using the Verifier application, they can either make changes to any fields if problems are detected, or if no problems are found, they can press Enter on the first editable field. The document then moves to the regular export.

The before and after values for each field are stored in the Intelligent Capture reporting database

along with the review start and end time, and the ID of the reviewer.

## Set a review state

To set a review state, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **General Settings** node.
4. Set the Review State parameter to `699`.

   **Note:** It is recommended that you use 699 for the parameter, but you can use any values between 650 to 699 or 701 to 749.

5. Save the changes. Activate document review for a client

You can activate document reviews at the client level to send every processed document for a specific client to the review state prior to data export.

To activate document review for a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings**. This displays the client configuration table.
3. Locate the row for the relevant client within the table and select the **Requires Review** column check box.
4. Save the changes.

## Activate document review for specific users

You can also activate document reviews at the individual user level. If you implement review states for users, then all documents processed by that user are sent for further review, regardless of the setting at the client level.

This can be relevant for operations who would wish documents processed by less-experienced users to be subject to supervisory review until the user becomes more proficient.

To configure user-specific document review, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **User Management** node.
4. Select the **Requires Review** check box for the relevant user(s).
5. Save the changes.

# Reporting Configuration

Reporting configuration that provides access to solution performance data. You must use some third-party tool to view the reporting data.

With external reporting you should be able do the following.

- Obtain solution key performance metrics.

- Monitor documents as they move through the system.

- Identify solution bottlenecks.

- Report on productivity at the project and client levels.

- Report on user productivity.

As a prerequisite, the reporting database must already have been created, and the scripts required to create the tables successfully executed.

## Configure reporting database

To configure the connection to reporting database, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Database Settings** node. This displays the database connection configuration table.
4. Check to see whether the database connection to reporting database already exists. Typically, the connection with Index ID '3' is used by default. You can change the details of this connection if needed. You can also insert a new connection by filling out the last row in the table with the required data and clicking the **Insert** hyperlink.
5. Save any changes made.
6. Within the **Global Settings** hierarchy tree, navigate to the **Reporting Settings** node.
7. Select the **Connect to Reporting DB** check box, which will open up further configuration options.
8. Using the **SQL Connection Group** drop-down, select the connection to the reporting database as configured in step 4. By default, this is set to '3'.
9. Oracle WebCenter Forms Recognition begins the reporting trail for each document upon the initial import of the document into the system, but if you want reporting to start sooner, such as at scan time, then clear the **StartNewRecordForImportedDocument** check box.
10. Choose the unique ID you want to use for each new document record inserted into the reporting database using the **Reporting Key** drop-down. If you want to use the original document filename (without the filepath and file extension), then this can be left blank. If you want to use the document URN mapped in Global Settings > Import Settings, then select 'URL' from the drop-down.
11. Optional. If you have created the reporting tables in the reporting database using a different naming convention, you need to update the **Reporting DB Document Table**, **Reporting DB Field Table**, **Reporting DB History Table**, and **Reporting DB Image Table** fields with the new table names.
12. Optional. Information is not written to a database from any documents processed in the Designer module. However, you can have information written to a database from any document processed in the designer for testing and debugging purposes by selecting the **Reporting In Designer** check box.

    **Note:** In production environments, this check box must always be cleared.

13. Optional. If you want to use the Reporting database to house an image of the document,

select the **Store Image In Reporting Tables** check box.

**Note:** Only configure this parameter if you are using reporting for late archiving. In all other cases, accesses document images from a directory. You need to enter the path to this directory in the **Storage Directory** field so that the system knows where to create a copy of the image for use.

14. Optional. To activate line item reporting, select the **Activate Line Item Reporting** check box.

15. Optional. To retrieve a document stored within the tables using a URL, which is both stored against the record in the reporting database and is also available for export to a downstream system, populate the **Archive URL** field with the retrieval web URL. This could be as per the URL in the example below.

   **Example** http://archivesystem.example.com/Page.aspx?URN=XXXXX

   XXXXX is the point in the URL where the unique document indicator is inserted by the system to retrieve the image.

## Document splitting in Reporting database

Within the Verifier application, a user has the ability to split a single document image into two or more document images. If the documents are invoices, then one invoice becomes two or more individual invoices. This means that the corresponding number of new records need to be created in reporting database.

The system creates these new records when the user manually reclassifies the new individual documents, which initially have a status of unclassified in the AP Project workflow. Before manual reclassification, the user must ensure that all necessary splits have taken place for a given original image file, otherwise orphan records remain in the database, which would skew processing statistics.

If usage of the document splitting capability is required, and the system is configured to export data using the standard database, CSV or XML methods, or the file is to be archived into the database, it is not possible to use the URN as mapped to a component of the document filename as the document key for those exports. This is because the URN remains constant for multiple documents, hence database conflicts occur, and export files may overwrite one another.

# AP Project Password Encryption

Password encryption for database connections or users is a standard feature in AP Project.

When configuring a database connection string, if you are using SQL-based authentication, then you need to include the database user name and password within the connection string, which will subsequently be visible in the project ini file or from within Solution Configuration Manager. Your IT security policy may not permit a plain text password to be visible in this manner, therefore a form of password encryption is required.

AP Project uses RSA1024 password encryption. If you are using Oracle WebCenter Forms Recognition version 5.9.1 or higher, you can also use RSA3072 to encrypt your passwords.

The default password is set to *changeit* (can be changed by the Administrator) in the <AP Project 3520\Global\>**Password_Encrypt.bat** and **Password_Encrypt_RSA3072.bat.** The administrator can generate the encrypted password for a new/existing user. The new/existing user must change their password by using the Web Verifier's **change password** feature. Refer to the section *Change your Login Password* of *Oracle WebCenter Forms Recognition Web Verifier User's Guide*.

## Generate an encrypted AP Project database password

To generate an encrypted AP Project password for database connection string or for another user, complete the following steps.

1. Make sure that the CdrCryptDLL was registered correctly during the AP Project installation by running the Register Applications.bat file.
2. In Notepad, open the <AP Project 3520\Global\>**Password_Encrypt.bat** file. This .bat file is used for RSA 1024-bit encryption. If you want to encrypt the password using RSA 3072-bit encryption, open the **Password_Encrypt_RSA3072.bat** file.
3. The file is comprised of the following components.
   - The location of DstCrypt.exe file, which forms part of the core product installation.
   - The password to be encrypted.
   - The public key used for the encryption. This must not be modified.
   - The location of the output file that contains the encrypted password.
4. Edit the file to reflect the appropriate file paths and the plain text password.
   **Note:** This password must not exceed 30 characters in length if RSA1024 encryption is used. For RSA3072 encryption, the password must not exceed 280 characters in length.
5. Save and run the BAT file.
6. Navigate to the location where the output file was created and open in Notepad. The encrypted string following Text [password] encoded to is the encrypted version of the plain text password.
   **Note:** The encrypted string may change each time the Password_Encrypt.bat file or the Password_ Encrypt_RSA3072.bat file is run, even if the plain text password remains the same. This is normal functionality.

## Configure the AP Project database to use an encrypted password

To configure the database to use an encrypted password, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Database Settings** node.
4. Enter the encrypted password for the appropriate database connection string in the **Encrypted Password** column.
5. If the connection string already contains a password, the password parameter can either be removed, or the password can be deleted within the connection string.

# Vendor Configuration

AP Project uses the Associative Search Engine to determine the vendor ID.

You can point the engine at a source of vendor master data held either within a database table or within a flat CSV file. The engine then imports this data and creates a vendor data pool. At the time of data extraction, the engine looks at the text on the document and performs a fuzzy search to find a

matching record within the pool using search criteria that you can configure. The closest matching record is then copied into the vendor ID field ready for validation.

## About vendor partitions

Vendor partitions allow you to hold multiple sets of vendor master data all within a single database table or CSV file. This reduces overhead in maintaining multiple data sources. Use of vendor partitions applies globally across all processing profiles.

A vendor partition represents a single set of vendor master data records. A vendor partition also has a unique ID which must be assigned to all vendors that belong to that set, so that the system knows which vendor belongs to which partition.

Hence, within the data source, whether it be a vendor master database table or CSV file, you must include a column to represent the vendor partition ID. This column must be populated for each row within the data source.

The vendor partition is subsequently assigned to a client via the client configuration table so that the system knows which vendor set belongs to which client. Multiple clients may share the same vendor partition.

When the vendor is being determined by the system at runtime, the system only takes into account vendors that belong to the partition assigned to the document client. Within the Verifier application, when the user executes a search, only vendors assigned to that client are included in the results.

If you only have one set of vendor master data then this step can be skipped.

## Activate use of vendor partitions

To activate use of vendor partitions, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **General Settings** node.
4. Select the **Activate Vendor Filtering** check box. This then displays a further setting.
5. Enter the technical name of the database table column or the name of the column in your CSV file that you are using to represent the vendor partition ID in **Vendor Filter Column**.
6. Save the changes.

## Create a new vendor partition

To create a new vendor partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Vendor Partition Settings** node. This then displays the vendor partition configuration table.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Enter a unique ID for your vendor partition in **Vendor Partition**.
6. Enter a short description for your partition in **Description**.
7. Click the **Insert** hyperlink to save your changes.

## Assign a vendor partition to a client

To assign a vendor partition to a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
3. Locate the row for the client to which you want to assign a vendor partition.
4. Choose the vendor partition you wish to assign to the client by selecting the vendor partition ID number from the **Vendor Partition** drop-down.
5. Save the changes.

## Prepare the vendor master data for import

Vendor master data can be imported into the system from a database table or a CSV file.

AP Project includes standard database table **BRWVendorMaster** that can be used for this purpose. We advise using this table as it includes all of the columns that the system requires across the solution. It is also easier to manage and saves configuration time as the default vendor settings elsewhere in the solution assume usage of this table.

Vendor master data must be presented in a certain format in order to be accepted by the system.

If you are using a CSV file, each row in the file must use a semi-colon as the column delimiter and each row must have an equal number of columns. The file should also be free of double quotes ("). If the CSV file includes non-Western characters, the file must have an encoding type of UNICODE. The system does not support ANSI or UTF-8 encoding.

It is advisable to include a column label line as the first line in the file. Each individual column label should be meaningful and entered without spaces or special characters. When you later import the file, the system uses the label line to assign a meaningful technical name to each column as opposed to an unhelpful column index. It is also advisable to use the same column labels as **BRWVendorMaster** as this simplifies future configuration steps.
The following is a set of rules that must be followed for each vendor master data set that is included in the vendor master database table or CSV file.

Each row in the table or CSV file must represent a unique vendor at a unique address. Each row must also have a unique identifier. Within **BRWVendorMaster**, the **IndexID** column is used for this purpose.

The unique identifier can simply be the vendor ID if you are not using a vendor partition.

If you are using a vendor partition, the unique identifier must be the vendor partition ID followed by a hyphen and then the vendor ID. The partition ID column must also be populated.

At a minimum, the vendor name and country columns must be populated, but you should try to populate as much information as possible. The country column must be populated using the two character country ISO- code.

The table below shows an example row in **BRWVendorMaster** for a UK-based vendor that belongs to vendor partition 0.

| IndexID | PartitionID | ID | Name | Address1 | City | State | Zip | Country |
|---|---|---|---|---|---|---|---|---|
| 0-12345 | 0 | 12345 | Oracle Software | 110 Nottingham Road | Nottingham | | NG9 6DQ | GB |

The **ID** column is populated with the vendor number for the supervised learning workflow. This number is used as part of the naming convention for custom classes created by the supervised learning workflow feature. If you already have another column that contains the exact same information, you do not need to populate the **ID** column.

The following is a list of additional columns available in **BRWVendorMaster** that you need to populate to make use of AP Project standard features.

- If you want to use the VAT compliance check, you must populate the **VATRegNo** column and put an appropriate value in the **EUMember** column for relevant vendors. The value used to denote membership of the European Common VAT Framework is configurable.
- If you want to set a currency based upon the vendor as default, you must populate the **Currency** column.
- If you want to use the automatic tax code determination feature for countries using tax jurisdictions, you must populate the **State** column.
- If you want to configure different behavior for utility vendors in relation to invoice number and line item validation, you must populate the **UtilityFlag** column with an appropriate value for relevant vendors. The value used to denote a utility vendor is configurable.
- If you want to set the invoice type (PO or NO-PO) based on the vendor, you must populate the **InvoiceType** column with appropriate values. The values used to denote a PO or NO-PO vendor are configurable.
- If you want to use the alternate payee functionality, you must enter a comma-separated list of permitted payees into **PermittedPayees** for relevant vendors.
- If you want to extract a bank account number and bank account code, you must enter a colon- separated list of bank accounts in **BankDetails**.
- If you want to process withholding tax at time of document export, you must enter a colon-separated list of withholding tax codes in **WithholdingTaxDetails**.

For the Associative Search Engine to work effectively, it is essential that the vendor data only consist of third party vendors. Intercompany vendors or company employees set up as vendors must be removed.

## Use a site ID and external vendor ID

Some ERP systems such as Oracle Financials and Peoplesoft use a combination of a vendor ID and a site ID to identify a unique vendor at a unique address. If your vendor master is set up in this way, you must provide additional columns in your vendor master data.

If you are using a vendor partition, the unique row identifier for a vendor is constructed as follows.

```
Partition ID + hyphen + Vendor ID + configurable separator + Site ID
```

If you are not using a vendor partition, the unique row identifier is constructed as follows.

```
Vendor ID + configurable separator + Site ID
```

You must also populate the site ID column and the external vendor ID column for each vendor.

The table below shows how to populate BRWVendorMaster correctly for a single vendor with two site locations. In this example, a tilde is used as the configurable separator.

| IndexID | Partition ID | ID | SiteID | Name | City | State | Country | ExternalVendorID |
|---|---|---|---|---|---|---|---|---|
| 0-12345~1000 | 0 | 12345 | 1000 | Oracle Software | New York | NY | US | 12345 |
| 0-12345~2000 | 0 | 12345 | 2000 | Oracle Software | Tampa | FL | US | 12345 |

Oracle Financials also has a concept of an internal and external vendor ID. The external ID is the vendor ID that is displayed to the user through the Oracle Financials interface. The internal ID is the vendor ID that the system uses at database level.

If you want the system to populate the AP Project Vendor ID field with the external vendor ID, you need to put the external ID in the external vendor ID column. You must continue to use the internal vendor ID within the unique row identifier.

You can use external vendor IDs with or without site IDs. If you do choose to use an external vendor ID, you will not be able to change the vendor in Verifier by typing the number directly into the Vendor ID field and pressing enter. You must use the vendor search feature instead.

The table below shows how to populate BRWVendorMaster correctly for a single vendor with two site locations that uses ORACLE1 as the external vendor ID.

| IndexID | Partition ID | ID | SiteID | Name | City | State | Country | ExternalVendorID |
|---|---|---|---|---|---|---|---|---|
| 0-12345~1000 | 0 | 12345 | 1000 | Oracle Software | New York | NY | US | ORACLE1 |
| 0-12345~2000 | 0 | 12345 | 2000 | Oracle Software | Tampa | FL | US | ORACLE1 |

The separator that is used between the vendor ID and site ID in the unique row identifier can be configured per processing profile. The default separator is a tilde.

To assign a separator for the site ID, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Vendor Settings** node.
5. Enter the separator you want to use in **Alph Num Site Separator**.
6. Save the changes.

## Configure the Associative Search Engine

There are multiple ways to configure the Associative Search Engine within Solution Configuration Manager. You can configure the engine to read data from a CSV file, from a database table like BRWVendorMaster.

**Note:** Each time you make changes related to the configuration or database settings below, or when you move a project file to an environment that has different Associative Search Engine settings, you must ensure that these new settings are saved permanently within the project file, otherwise, any automatic refresh of the data pool performed by RTS will continue to use the old settings. You might also need to restart RTS to pickup the changes.

To update the settings within the project file, complete the following steps.

1. Using Designer, open the **<project>.sdp** file.
2. Navigate to Definition Mode.
3. Save the project.

## Configure the Associative Search Engine to use a CSV file

To configure the Associative Search Engine to use a vendor CSV file, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **ASE Settings** node. The Associative Search Engine configuration table is then displayed.
4. Locate the row for the **VendorASSA** field for the **Invoices** class.
5. Ensure that the **Alpha Numeric** check box is selected.
6. Enter the name of the pool directory in **Pool Directory**.
7. If the pool directory is in the same directory as the AP Project project file, select the **Pool Relative** check box. If the pool directory is in another location, enter the UNC path in **Pool Path**.
8. Ensure that the **File Relative** check box is selected. This means that the system will look for the vendor CSV file in the same directory as the AP Project project file.
9. Enter the name of the vendor CSV file in **Import File Name**.
10. Select **FILE** from the **Auto Import Option** drop-down.
11. Save the changes.

## Configure the Associative Search Engine to use a database

Oracle WebCenter Forms Recognition requires a user DSN to be created which reflects a connection to the vendor master database using Oracle / SQL Server-based authentication. If you are using table BRWVendorMaster, the user DSN must be created for the AP Project database.

For more information about creating a user DSN, refer to Windows documentation.

To configure the Associative Search Engine to use a database, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **ASE Settings** node. The Associative Search Engine configuration table is then displayed.
4. Locate the row for the **VendorASSA** field for the **Invoices** class.
5. Ensure that the **Alpha Numeric** check box is selected.
6. Enter the name of the pool directory in **Pool Directory**.
7. If the pool directory is in the same directory as the AP Project project file, select the **Pool Relative** check box. If the pool directory is in another location, enter the UNC path in **Pool Path**.
8. Enter the name of the user DSN you created to represent the connection to your vendor master database in **Import ODBC DSN**.
9. Enter the select statement required to retrieve all rows from the vendor master database table in **Import ODBC Select**.
10. Enter the database user name in **Import ODBC User**.
11. Enter the database user encrypted password in **Import ODBC Encrypted Password**.
12. Select **ODBC** from the **Auto Import Option** drop-down.
13. Save the changes.

## Configure the Associative Search Engine vendor pool

To create the Associative Search Engine vendor pool, complete the following steps using the Designer application.

1. Using Designer, open the **<project>.sdp** file and navigate to the **VendorASSA** field on the Invoices class.
2. Display the field settings.
3. If you are using a CSV file for your vendor master data and the CSV file includes a label line, select the **Import field names from first row** check box.
4. On the **Import** tab, click the **Import** button to import the vendor records. If successful, a message will be displayed indicating the number of vendor records imported. If unsuccessful, an error message will be displayed. In the event of an error, close the project file, correct any configuration errors in the Associative Search Engine configuration table and then retry.
5. Once imported, the vendor field list on the **General** tab is then updated based upon what was available in the data source. Each item in the list is named according to the corresponding table column if you imported the data from a database table, or the column label if you imported the data from a CSV file. On the **General** tab, complete the

following substeps.

1. Ensure that the **Used core engine** drop-down is set to **Brainware V3**.

2. In the **ID** column, click the field that represents the unique row identifier. If you are using
   **BRWVendorMaster**, this field is called **IndexID**. It is usually the first field in the list.

3. In the **Filter** column, click the field that represents the vendor partition. If you are using
   **BRWVendorMaster**, this field is called **PartitionID**.

4. In the **Search** column, using the check boxes provided, select fields that are strong identifiers for the vendor and are highly likely to appear in the documents you are processing. Strong identifiers include the vendor name, street address, zip code, telephone number and tax numbers. Weak identifiers include the vendor state, the vendor country and any processing flags. These should not be selected.

5. Enter the field names that represent that vendor name and the vendor number for supervised learning workflow in the format [Name]_[ID] into **Class name** format.

6. Enter the vendor address display format you want to see in Verifier in **Field contents format**. This is a multi-line field and the first row must be the unique row identifier, which is **IndexID** if you are using BRWVendorMaster. An example format is shown below.

   **Example**

   ```
   [IndexID] [Name] [Address1] [City] [State] [Zip]
   ```

6. Return to the **Import** tab and click the **Import** button to re-import the pool.

7. Save and close the project file.

## Map vendor master fields

To complete configuration of the vendor extraction, you need to map the technical names of the columns in the vendor master database table or the column labels in the CSV file to the vendor master fields provided by the solution so that the system understands what each column is intended to represent.

To map columns in the vendor master data to vendor master fields, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings** from the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Search Field Mapping** node. This then displays a list of the solution vendor master fields.

4. For each vendor master field displayed, enter the technical name of the corresponding database column, or the corresponding column label used in the CSV file. Entry here is case-sensitive. If no corresponding data is available, the field must be blank.

5. Enter the value that you use within the vendor master data to represent membership of the European Common VAT Framework in **EU Member Alias**.

6. Save the changes.

## Work with addresses in non-Western languages

If you are using the thick client Verifier and have vendor addresses that incorporate Cyrillic, Greek or CJKT characters, you must set the desktop locale to use the non-Western language as the language for non-unicode applications. This limits the display to one non-Western alphabet in thick client Verifier at a time.

Multiple non-Western language display is only possible within the thin client Verifier.

## Configure vendor validation

Once the Associative Search Engine has selected a vendor, the system then moves on to perform vendor validation.

Vendor validation involves retrieving key address details from the vendor master record and then checking for the existence of those details on the document. The vendor is assigned a score based on the number of address details that match.

The score allocated is calculated as per the table below.

| Matching data | Score Added |
|---|---|
| Zip | 10 |
| Zip + Address1 | 20 |
| Zip + Name | 20 |
| Zip + VAT Reg No | 20 |
| Zip + Address1 + Name | 30 |
| Zip + VAT Reg No + Name | 30 |
| Zip + VAT Reg No + Address1 | 30 |
| Zip + VAT Reg No + Address1 + Name | 40 |
| PO Box Zip + Name | 20 |
| PO Box Zip + PO Box | 20 |
| PO Box Zip + VAT Reg No | 20 |
| PO Box Zip + PO Box + Name | 30 |
| PO Box Zip + PO Box + VAT Reg No | 30 |
| PO Box Zip + VAT Reg No + Name | 30 |
| PO Box Zip + VAT Reg No + Name + PO Box | 40 |
| Siret ID | 20 |

| | |
|---|---|
| Vendor Identifier | 20 |

The system marks the vendor ID as valid if a score of 20 or more is attained and the second best matching vendor does not attain the same score or greater. Otherwise, the field is marked invalid and the document is sent to Verifier for a user to review manually.

To configure vendor validation, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Vendor Settings** node.
5. Select the **Validate From ASSA** check box.
6. If you want to configure a default country to be used if no vendor is identified or the vendor does not have a country assigned, enter the two character ISO-Code for that country in **Default Country**.
7. If you want the system to consider the bill-to address location (if available) when choosing a vendor to extract, select the **Use Bill To Based Vendor Extraction** check box. This is not recommended.
8. If you want to add the vendor score to the vendor candidate weighting during extraction, select the **Refine Vendor Extraction** check box. This is recommended.
9. If you do not want a vendor to be marked valid for a NO-PO document unless the vendor name is explicitly found on the invoice, select the **Check Name For NO-PO** check box.
10. Save the changes.

## Configure force verify per vendor

You can configure the system to stop an invoice based upon the extracted vendor ID. You may wish do this if you have certain vendors whose invoices require extra manual checks before they are released downstream.

You can configure invoices to stop for a given vendor on a solution-wide basis, or for a specified processing profile group.

To configure the system to force verification for a given vendor, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Vendor Force Verify Settings** node. This then displays the vendor force verification table.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Select the relevant vendor partition ID from the **Vendor Partition ID** drop-down. If you are not using vendor partitions, select vendor partition 0.
6. Enter the vendor number in **Vendor ID**. If your vendor master data is set up to use external vendor IDs, it is the internal vendor ID you must enter here. You do not need to enter a site ID.

7. Enter the name of the vendor in **Vendor Name**.

8. Clear the **Set as Profile Specific** check box if you want force verify to apply to the vendor globally across all processing profile.

9. If you want force verify to apply to the vendor only for a specific processing profile group, select the **Set as Profile Specific** check box and select the relevant processing profile group using the **Profile Group** drop down.

10. Click **Insert** to save your changes.

# PO Number Configuration

AP Project is able to extract and validate purchase order numbers that relate to data held in ERP system database tables.

Different ERP systems have different ways of organizing data in their underlying databases, which necessitates an alternative approach to data validation depending on what type of ERP system is being used.

As standard, the following types of purchase order numbers are supported for database validation.

- Standard purchase order numbers (Oracle e-Business Suite)

- JD Edwards purchase order numbers

- Peoplesoft purchase order numbers

- ERP systems where the database record is keyed from the purchase order number and company code

In order to extract a purchase order number, the expected format or formats must first be configured within the processing profile.

Purchase order number validations are configured per profile ID within PO Number Validation. Purchase order line level configuration that is to be used as part of line pairing is configured per profile ID within Line Pairing Settings. If line pairing is to be used, both the header level validation and the line level validation must be configured within PO Number Validation and Line Pairing Settings.

Purchase order number validation is also configured per processing profile and only one approach to validation can be used within a single processing profile.

The validation process involves performing a look-up to a purchase order header table and a purchase order line item table. If you are using the system to perform line pairing, both the header and the line item validations must be activated. If you are not using the system to perform line pairing, you can choose to validate the purchase order via a look-up to the purchase order header table only.

## Configure purchase order number formats

Purchase order number formats can be configured within the PO number format configuration table. Each row in the table represents a single purchase order number format. A processing profile supports one or more purchase order number format, which is represented by multiple rows in the table.

To configure the format of the purchase order number, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Formats** node. This then displays the PO number format configuration table. During installation, a single row is created which you can amend or you can create a new entry.
5. Scroll to the last row in the table where you have the option to create a new entry.
6. Populate the **Index** column with the next available sequential number.
7. Enter the simple expression that represents your purchase order number in **Format**. It is recommended to define the format in the tightest manner possible. For example, if customer purchase order numbers always begin with '45' or '55' and are ten digits long, it is better to configure two rows for '45########' and '55########' than it is to enter a single format for '##########'.
8. Enter any characters you wish your simple expression to ignore in **Ignore Characters**.
9. Click the **Insert** hyperlink to save the changes.

## Configure the maximum number of OCR words

You can also configure the maximum number of OCR words that is permitted within a single purchase order number. To do this, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
2. Enter the maximum OCR word count in **Max Word Count**. The recommended maximum is 3.
3. Save your changes.

## Configure PO number formats for JD Edwards

JD Edwards purchase orders are different from standard purchase orders because the JD Edwards ERP system identifies a purchase order uniquely within the purchase order header table (F4311) using four keys.

The keys are follows.

- PONUMBER
- COMPANYCODE
- POTYPE
- POSUFFIX

On the invoice, the vendor is expected to state the purchase order number and the purchase order type concatenated together.

For example, if the purchase order number is '12345' and the purchase order type is 'OP', '12345OP' will be stated on the invoice. This must be accounted for when configuring purchase order formats. The recommended simple expression to capture the above is '1####OP'. As 'OP' is commonly used within JD Edwards as a standard purchase order type, and is frequently misread as '0P' by the OCR engine, it is also recommended to add '1####0P' as an additional format. If this type of error is detected, the system will correct the value to 'OP' automatically.

The purchase order number and the purchase order type are later split into separate fields during

purchase order number validation.

## Configure PO number formats for Peoplesoft

The Peoplesoft ERP system uses a double key to identify a purchase order number uniquely within the purchase order header table, PS_PO_HDR. This key consists of the purchase order number and the purchasing business unit.

The Peoplesoft ERP system uses the following unique keys.

- PO_ID
- BUSINESS_UNIT

On the invoice, the system expects the vendor to include the purchase order number and the purchasing business unit concatenated together.

For example, if the purchase order number is '12345' and the purchasing business unit is 'BWARE', either '12345BWARE' or 'BWARE12345' will be stated on the invoice. This must be accounted for when configuring purchase order formats. The recommended simple expressions to capture the above are '1####BWARE' and 'BWARE1####'.

These two values are later split out into separate fields during purchase order number validation.

## Configure purchase order number validation

Standard purchase orders are those which can be identified uniquely in the downstream ERP system using the purchase order number alone. In other words, the ERP system purchase order header table has a single key field called Purchase Order Number.

An example purchase order header table structure (with sample data) reflecting this arrangement would be as follows.

| PONUMBER | VENDORID | COMPANYCODE | POTYPE | CURRENCY |
|----------|----------|-------------|--------|----------|
| 1928370  | 100010   | GB01        | GD     | GBP      |

When a purchase order number is extracted in the purchase order number field, the system can be configured to validate the order against a database, and also to bring back other items of data, such as the vendor ID, the company code, the purchase order type, and the currency.

To configure purchase order number validation using a database, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** using the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Database Settings** node.
4. Create a new SQL connection entry that represents the connection to your purchase order database.
5. Save the changes.
6. Now select **Processing Settings** from the **Settings** drop-down.
7. Select the processing profile you want to use.
8. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.

9.  If you want to restrict the extraction of the purchase order number to the first page of the document, select the **Restrict to First Page Only** check box.

10. Click **Validate From DB**.

11. Select the SQL connection group that represents the connection to your purchase order database using the **SQL Connection Group** drop-down.

12. Select the **Keep Case Sensitive** check box if the purchase order header table database is case sensitive.

13. Select the **Use PO Partition** check box if your purchase order header table uses a partition and then enter the technical name of the table partition column in **PO Partition Column**. If selected, when accessing the PO header table, the system will only look for entries belonging to the partition configured for the client to which the document belongs. The client purchase order partition is configured using the drop-down against the **PO Partition** column in the client configuration table.

14. Enter the technical name of the purchase order header table in **DB Table Name**.

15. To complete the configuration, there are two mandatory columns that must be mapped, the PO number and the vendor ID. If the vendor numbering system also includes a site ID, this must also be mapped. You can add additional columns too. The following sample configuration reflects the purchase order header table structure above.

| Setting in PO Number Validation | Value |
| --- | --- |
| DB Table Name | PO_HEADER |
| DB PO | PONUMBER |
| DB Vendor ID | VENDORID |
| DB Site ID | |
| DB Currency | CURRENCY |
| DB Company Code | COMPANYCODE |
| DB Payment Terms | |
| DB Status | |
| DB Doc Type | POTYPE |
| DB Business Unit | |

16. Select the **Set Company Code From PO** check box if you want the system to overwrite the company code field with the one on the purchase order.

17. Select the **Stop ERS PO** check box if you want purchase orders with one or more line items marked for Evaluated Receipt Settlement to stop in Verifier for user review.

18. Select the **Stop ERS PO In Verifier** check box if you do not want a user to be able to pass a purchase order if one or more line items is marked for Evaluated Receipt

Settlement.

19. Select the **Skip Duplicate PO Check** box if you want the system to ignore instances where more than one matching record is found in the purchase order header table for the same purchase order number. It is recommended that this check box be cleared.

20. Save your changes.

**Result** The system now validates any extracted purchase order against the content of this table. If the purchase order is not present, or if a connection to the table cannot be established, or if the column mapping is incorrect, the system will mark the purchase order number field as invalid, and the document will be sent to Verifier.

## JD Edwards purchase order validation

If you are working with JD Edwards purchase orders, additional configuration steps are required to enable purchase order validation. This is because the purchase order header table used by JD Edwards identifies a unique purchase order using four key fields, which are the purchase order number, the purchase order type, the company code and the purchase order suffix.

The purchase order suffix, which is seldom used within JD Edwards, is currently not supported within the AP Project solution.

The first step is to configure the system to recognize valid purchase order types so that an extracted purchase order value can be parsed correctly into its two constituent components. If parsing is successful, the purchase order number component will be placed into the AP Project 'PONumber' field, and the purchase order type will be placed in the 'POExtension' field. Both of these fields must be activated within the field configuration table.

The second step is to map additional columns for the additional key fields for the purchase order header look- up.

As the company code field forms part of the key for reading the purchase order, it cannot be defaulted from the same purchase order. The strategy to derive the company code must be either to default it based on part of the image filename set during the scanning process in Global Settings > Import Settings, or to use the Associative Search Engine to derive it based on the bill-to details on the invoice. We always recommend the former approach.

To configure the system to handle JD Edwards purchase orders, complete the following additional steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.

2. Clear the **Set Company Code From PO** check box if it is already selected.

3. Select the **JDE PO** check box. This then reveals an additional setting.

4. Enter the list of expected JD Edwards purchase order document types in **JDE PO Types**. You can enter multiple purchase order document types as a comma-separated list.

5. Enter the technical name of the column in the purchase order header table that represents the company code in **DB Company Code**.

6. Enter the technical name of the column in the purchase order header table that represents the purchase order document type in **DB  Doc Type**.

7. Save the changes.

## Peoplesoft purchase order validation

If you are working with Peoplesoft purchase orders, additional configuration steps are required to enable purchase order validation. This is because the purchase order header table used by Peoplesoft identifies a unique purchase order using two key fields, which are the purchase order number and the purchasing business unit.

The first step is to configure the system to recognize valid purchasing business units so that an extracted purchase order value can be parsed correctly into its two constituent components. If parsing is successful, the purchase order number component will be placed in the AP Project PONumber field, and the purchasing business unit will be placed in the POExtension field. Both of these fields must be activated within the field configuration table.

The second step is to map an additional column for the additional key field for the purchase order header look- up.

To configure the system to handle Peoplesoft purchase orders, complete the following additional steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
2. Select the **Peoplesoft PO** check box. This then reveals an additional setting.
3. Enter the list of expected Peoplesoft purchasing business units in **Peoplesoft Business Units**. You can enter multiple business units as a comma-separated list.
4. Enter the technical name of the column in the purchase order header table that represents the purchasing business unit in **DB Business Unit**.
5. Save the changes.

## Validation for alternative purchase order number types

Alternative PO number types refer to those where a unique purchase order is identified in the purchase order header table by a combination of the PO number itself and the company code. To configure the system for alternative PO number type validation, complete the following additional steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
2. Clear the **Set Company Code From PO** check box if it is already selected.
3. Select the **PO Key Uses Company Code** check box. Enter the list of expected Peoplesoft purchasing business units in **Peoplesoft Business Units**. You can enter multiple business units as a comma-separated list.
4. Enter the technical name of the column in the purchase order header table that represents the company code in **DB Company Code**.
5. Save the changes.

## Configure the relationship between the PO and invoice vendor

For purchase order invoices, the invoice vendor is typically driven by what is stated on the purchase order. This means that the extraction result for the vendor ID field must always be set to the purchase order vendor ID and cannot be changed to anything else unless the PO VENDOR <> INVOICE VENDOR invalid reason is selected.

It is possible to configure the system to select the invalid reason automatically if a validated vendor independently determined by the Associative Search Engine appears to be a better fit for the document than the vendor on the purchase order.

It is also possible to decouple the relationship entirely so that the invoice vendor is determined independently, but this is not usually recommended.

If the vendor identifier also includes a site ID, the system will use the highest weighted site ID derived by the Associative Search Engine while continuing to use the vendor number from the purchase order. It is possible to configure the system so that the site ID on the purchase order is always used.

To configure the relationship between the invoice and purchase order vendor, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Vendor Settings** node.
5. Select the **Ignore PO Vendor** check box if you want to decouple the relationship between the invoice and purchase order vendor. This is usually not recommended.
6. Select the **Use ASSA If PO Vendor Invalid** check box if you want the system to use the vendor determined by the Associative Search Engine when the purchase order vendor does not appear to be a good match to the document.
7. Select the **Always Use PO Vendor Site ID** check box if the system must always use the site ID on the purchase order.
8. Save the changes.

## Configure a default purchase order site ID

If the purchase order header does not have a site ID, it is possible to configure a default purchase order site ID for the system to use instead. This default PO site ID defaults to **1** if you do not specify anything else.

You can also configure a priority purchase order site ID that the system uses if the combination of the PO vendor ID and priority site ID exists in the vendor master data. If it does not exist, the default PO site ID is used.

To configure a default purchase order site ID, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
2. Select the **Use Default PO Site ID** check box. This activates the default PO site ID functionality. Further configuration options then appear.
3. Enter the priority purchase order site ID you want to use in **Priority PO Site ID**.
4. Enter the default purchase order site ID you want to use in **Default PO Site ID**. If no entry is present here, the system uses a value of **1**.
5. Save the changes.

## Default the purchase order currency

You can configure the system to use the currency of the purchase order as the invoice currency if no other currency has been extracted from the invoice, or has defaulted from the vendor or the currency field settings.

To configure the system to use the PO currency as a default for the invoice currency, complete the

following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Currency Settings** node.
5. Select the **Default PO Currency** check box.
6. Save the changes.

    **Note:** If you have selected the **Default Vendor Currency** check box, a vendor currency will take priority over a PO currency.

## Configure the PO type field

The purchase order type field denotes whether the purchase order was raised for material or services. The system uses this information to determine how the document is processed during line pairing and whether line items are required.

When implementing the AP Project solution, it is critically important to have a strategy to distinguish material and service purchase orders in order to maximize the success of line pairing, and also to prevent users from being forced to enter line item information in Verifier that will later be discarded.

The purchase order type field defaults to MATERIAL, but standard configuration options are provided to set it to SERVICE based upon the purchase order document type, the purchase order number range, the purchase order line item category, the purchase order line item order quantity unit of measure and the purchase order line item unit price.

To configure the purchase order type field, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
5. Enter a comma-separated list of service purchase order types in **Service PO Types**.
6. Enter a comma-separated list of purchase order number range prefixes in **Service PO Prefixes**. For example, if purchase order numbers for service orders always begin with either 42 or 43, you can enter '42,43' into this field.
7. Enter a comma-separated list of purchase order line item categories that are used to denote service line items in **Service PO Item Categories**.
8. Enter a comma-separated list of service units of measure in **Service PO UOMs**. For example 'HR' for hours or 'AU' for activity units.
9. Select the **Check Service Unit Price** check box if you want the system to consider a purchase order line item with a unit price of 1 to be for a service.
10. Save the changes.

    **Note:** All lines on the purchase order must have either a service item category, a service unit of measure or a unit price of one for the **PO Type** field to be changed to **SERVICE** unless otherwise set by the purchase order document type or purchase order number range.

## Configure padding for extracted PO numbers

You can configure the system to pad an extracted purchase order number with leading zeroes so that it matches data held in the purchase order header table. To configure padding for extracted PO numbers, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Field Settings** node. The field configuration table is then displayed.
5. Locate the row for the purchase order number field.
6. Enter the maximum length permitted for the field in **Max Length**.
7. Enter 0 in **Pad Char**.
8. If you want to add leading zeroes from the left, that is 0000012345, select the **Right Justify** check box.
9. Save the changes.

## Configure the purchase order line item lookup

You can configure the system to perform a look-up to a purchase order line item table for the following reasons.

- To perform line pairing.
- To assess whether the purchase order type is MATERIAL or SERVICE.
- To determine whether the invoice is a MIRA (that is there is a 1-1 relationship between the net invoice amount and either the total purchase order value or the total value of goods receipt not yet invoiced). You can configure the system to make line item entry optional for a MIRA invoice.

The structure of the purchase order line item database table varies depending on the ERP system. An example purchase order line item database table would be as follows.

| PONUMBER* | LINE* | LINETYPE | MATERIAL | DESCRIPTION | ORDER_QTY | ORD_UOM | UNIT_PRICE | PRICE UNIT | ORDER_AMT |
|---|---|---|---|---|---|---|---|---|---|
| 1928370 | 10 | GOODS | 1234A | Concrete | 2000 | KG | 500.00 | 1000 | 1000.00 |

Note that this table uses the purchase order number and purchase order line item number as the key to identify a unique row. For Peoplesoft and JD Edwards, additional key fields will also be needed, which are the purchasing business unit and the company code/purchase order type respectively.

To configure purchase order line item validation, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.

5. Ensure that the **Do Line Pairing** check box is selected.

6. Select the **Get PO Lines from DB** radio button.

7. Select the SQL connection group that represents the connection to your purchase order line items database using the **SQL Connection Group** drop-down.

8. Enter the technical name of the purchase order lines database table in **DB Table Name**.

9. If you are using a purchase order partition, enter the technical name of the column in the purchase order line item table that represents the partition ID in **DB PARTITION ID**.

10. Enter the technical name of the column that represents the purchase order number in **DB PO**.

11. Enter the technical name of the column that represents the purchase order line item number in **DB LINE**.

12. If you are using JD Edwards or alternative purchase orders, enter the technical name of the column that represents the company code in **DB COMPANY CODE**.

13. If you are using JD Edwards, enter the technical name of the column that represents the purchase order document type in **DB ERP PO TYPE**.

14. If you are using Peoplesoft purchase orders, enter the technical name of the column that represents the purchasing business unit in **DB BUSINESS UNIT**.

15. Enter the technical name of the column that represents the line item material number in **DB MATERIAL NO**.

16. Enter the technical name of the column that represents the line item description in **DB DESCRIPTION**.

17. Enter the technical name of the column that represents the line item order quantity in **DB PO QUANTITY**.

18. Enter the technical name of the column that represents the line item unit price in **DB UNIT PRICE**.

19. Enter the technical name of the column that represents the line item total in **DB PO TOTAL**.

20. Enter the technical name of the column that represents the unit of measure for the line item order quantity in **DB UOM**.

21. Enter the technical name of the column that represents the line item price unit in **DB PRICE UNIT**.

22. Enter the technical name of the column that represents the category of line item in **DB ITEM CATEGORY**. The item category is used to help determine whether the line item is for materials or services.

23. Save the changes.

## Additional purchase order line item mappings

The following table contains line item fields that may be mapped, and describes the circumstances under which mapping those fields is beneficial.

| Column mapping parameter | Description |
|---|---|

| | |
|---|---|
| DB MATERIAL GROUP | This column represents the material group to which the purchase order line item material belongs.<br><br>If available, it can be mapped simply to pass this data to a downstream system for a paired line item. It is also used in the automatic tax determination procedure if the selection of the correct tax code is driven by the material group of the item. |
| DB TAX CODE<br>DB TAX JUR CODE | These two columns represent the tax information that was set when the purchase order was originally raised.<br><br>For countries that do not use tax jurisdictions (that is where tax rates are set by government at the national level such as within the European Union), the tax code tells the ERP system how to handle tax for the line item in terms of the percentage rate of tax to be charged as well as describing whether the item is a service, tax-exempt, or zero-rated because it is, for example, an EU cross-border transaction. The tax jurisdiction code is not used under this circumstance.<br><br>For countries that do use tax jurisdictions (that is where tax rates are set at a local level such as in the US, Canada, India and Brazil), the tax code tells the ERP system whether the item is fundamentally subject to tax or not. The accompanying tax jurisdiction code, which is the identification number of a specific tax office, represents the actual percentage rate information.<br><br>These columns need only be mapped if the automatic tax determination feature is being used. |

| | |
|---|---|
| DB PUOM | This column represents the order price unit of measure, which is the unit of measure that is associated with the unit price for the purchase order line item. |
| | It may differ from the regular unit of measure (column DBUOM) which is associated with the order quantity on the purchase order line. |
| | Example: |
| | The client may raise a purchase order for 1000 each (EA) of product A, but the unit price of $10.00 is set per case (CASE). |
| | If there are 10 EA per CASE, then the PO line will appear as follows. |
| | <table><tr><th>Description</th><th>Quantity</th><th>UOM</th><th>UnitPrice</th><th>PUOM</th><th>Total</th></tr><tr><td>Product A</td><td>1000</td><td>EA</td><td>$10.00</td><td>CASE</td><td>$1000.00</td></tr></table> |
| | The PUOM column **MUST** always be mapped in implementations where instances such as the above are possible within the client's ERP system. Not doing so may cause incorrect invoice quantities to be passed downstream for paired line items. |
| DB TOTAL QUANTITY DELIVERED DB TOTAL VALUE DELIVERED DB TOTAL QUANTITY INVOICED DB TOTAL VALUE INVOICED | These four columns provide AP Project with purchase order line item history data, so that the system knows exactly what has been invoiced and goods-receipted to date, in terms of both quantities and overall values. |
| | The success rate of the line pairing operation can be higher if this information is available in the purchase order line item table, which may involve creating a view based on the standard line item table, and a separate history table. |
| | Example 1: |
| | An invoice is received for product A with a quantity of 2, a unit price of $10.00 and an overall line total of $20.00. |

The corresponding purchase order has two line items, both for product A with the same quantities and pricing.

| Line | Description | Order Qty | Unit Price | Total |
|------|-------------|-----------|------------|-------|
| 1 | Product A | 2 | $10.00 | $20.00 |
| 2 | Product A | 2 | $10.00 | $20.00 |

During line pairing, the system would not be able to make a decision between these identical line items if the integrity check is enabled.

However, line item 1 has an open goods receipt against it, whereas there is no goods receipt against line 2. Hence, line 1 is the correct line to choose.

By mapping the additional history columns, it now becomes clear to the system which line to book against as, with this extra information, the lines are no longer identical.

| Line | Description | Order Qty | Unit Price | Total | TQD | TVD | TQI | TVI |
|------|-------------|-----------|------------|-------|-----|-----|-----|-----|
| 1 | Product A | 2 | $10 | $20 | 2 | $20 | 0 | 0 |
| 2 | Product A | 2 | $10 | $20 | 0 | 0 | 0 | 0 |

In this case, the system books the invoice to line 1.

Example 2:

A second invoice comes in with identical line item detail as the invoice in example 1. As the first invoice has already been booked on the ERP system, the status of the history would have changed as line 1 is not only goods receipted, but fully invoiced as well.

Hence, the purchase order line detail appears as follows.

| Line | Description | Order Qty | Unit Price | Total | TQD | TVD | TQI | TVI |
|------|-------------|-----------|------------|-------|-----|-----|-----|-----|
| 1 | Product A | 2 | $10 | $20 | 2 | $20 | 2 | $20 |
| 2 | Product A | 2 | $10 | $20 | 0 | 0 | 0 | 0 |

In this instance, the system is able to see that the first purchase order line is already fully invoiced; hence the invoice line is paired to available PO line item 2.

In example 1 above, the MIRA condition would hold as the net value of the invoice would be equal to the total value of goods receipts not yet invoiced. Hence, by mapping these extra columns, not only would line

| | |
|---|---|
| | pairing succeed, but also the user would not be required to validate line item extraction needlessly in Verifier. |
| | Example 2 would also meet the MIRA condition if there was a $20 goods receipt value against line 2, but no invoices booked against it. |
| | If line pairing is configured to ignore any completed purchase order lines, this means that any fully booked purchase order lines (that is where the total quantity invoiced is greater than or equal to the quantity ordered) are not considered for line pairing under any circumstances. The first PO line in example 2 illustrates this scenario. |
| DB PLANT | The plant is a code set in the client ERP system that represents the physical location where the purchase order line goods are to be delivered, or where a service is to be performed. For example, it could represent a warehouse or an office building. |
| | The plant column can be mapped simply to pass that data to a downstream ERP system for each paired line item, but the system requires the information in either of the following cases. |
| |    • The invoice includes a miscellaneous charge, and miscellaneous charges are set to be processed as general ledger account entries, where the corresponding coding string is driven by the plant on the purchase order; |
| |    • The automatic tax code determination feature is being used and the country of the invoice company code cannot be used to determine where the goods were delivered. |
| | The specific address details related to each plant code, that is the country and the state, can be read from either a database. |
| DB CHARGE CODE<br><br>DB CHARGE CODEID | These two columns are made available for implementations involving Oracle e-Business Suite where the charge code and charge code ID information needs to be brought into AP Project, and then passed back out for each line item where line pairing has succeeded. |
| DB ERS | This column indicates whether the purchase order line is marked for evaluated receipt settlement. If you wish to stop ERS purchase orders in Verifier, this column must be mapped. |

## Configure database validations using a stored procedure

By default, the system accesses purchase order header and line item tables using an SQL select call. However, it is possible to use a custom stored procedure instead, which the customer may wish to do for data security purposes. The stored procedure must be written to return a record set in the same way that would have been achieved had a regular SQL select statement been executed. The system can be configured to use a custom stored procedure for both the purchase order header and purchase order line item look-ups.

To configure usage of a stored procedure, you must first create the parameters that need to be passed to the stored procedure so that it knows how to query the purchase order database. At a minimum, a parameter is needed for the purchase order number.

Secondly, the purchase order look-up must be configured to use a stored procedure using those parameters.

### Set up stored procedure parameters

Stored procedure parameters are created globally and can be shared between processing profiles.

To create a stored procedure parameter, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Global Settings** hierarchy tree, navigate to the **Stored Procedure Settings** node. The stored procedure parameter configuration table is then displayed. Each row in the table represents a single stored procedure parameter. The table is populated with three rows of sample data.
5. Populate **Index** with the next available sequential number. The index serves as the unique identifier for a stored procedure parameter that is used to reference that parameter elsewhere in the configuration.
6. Enter the name of the parameter in **Parameter Name**.
7. Choose the type of parameter you want to create by selecting a value from the **Parameter Type** drop-down. The possible values are VARCHAR, INT, DATE, BOOLEAN, DOUBLE and UNKNOWN.
8. If you have selected a parameter type of VARCHAR, enter the permitted length into **Parameter Size**.
9. Enter the value you wish to assign the parameter in **Parameter Value**. You can either enter a hard value or enter the technical name of an AP Project field, in which case the parameter will be given the content of that field. The AP Project fieldname is case sensitive.
10. Choose the parameter direction by selecting a value from the **Parameter Direction** drop-down. The possible values are 'I' for input and 'O' for output. An input parameter is one that is passed to the stored procedure. An output parameter is one that is received back from the stored procedure.
11. Click the **Insert** hyperlink to save your changes.

### Configure the purchase order look-up to use a stored procedure

To configure database validations using a stored procedure, complete the following steps in Solution

Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
5. Select the **Used Stored Procedure** check box. Further configuration options are then displayed.
6. Enter the technical name of the stored procedure in **Stored Procedure Name**.
7. Enter the index of the relevant stored procedure parameters as a comma-separated list in **Stored Procedure Parameters**.
8. Save the changes.

## Use a stored procedure for the purchase order line item look-up

If you are also using a stored procedure for the purchase order line item look-up, complete the following additional steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
2. Select the **Used Stored Procedure** check box. Further configuration options are then displayed.
3. Enter the technical name of the stored procedure in **Stored Procedure Name**.
4. Enter the index of the relevant stored procedure parameters as a comma-separated list in **Stored Procedure Parameters**.
5. Save the changes.

## Purchase Order Stored Procedures in Oracle

When using an Oracle database, the following format is required for creating stored procedures to retrieve purchase order header data and purchase order line data. This requirement is not necessary when using a different database type, such as SQL Server.

Specifically, the last parameter in the parameter list must use the SYS_REFCURSOR parameter type with direction OUT . Without this, the stored procedure will not work as expected.

**Important** Do not create this parameter in Solution Configuration Manager > Global Settings > Stored Procedure Settings.

The following code displays an example of the correct syntax:

```
CREATE OR REPLACE PROCEDURE
GETPOHEADERDATA ( PO IN VARCHAR2,
PODetails OUT SYS_REFCURSOR) IS
BEGIN
  OPEN PODetails
  FOR SELECT ph.PO,
      ph.VENDOR_ID, ph.SITE_ID, ph.COMPANY_CODE, ph.CURRENCY,
      ph.PO_TYPE
  FROM  BW_PO_Header ph
  WHERE  ph.PO =
GETPOHEADERDATA.PO; END
GETPOHEADERDATA;
```

## UserExitReadPODetails

'UserExitReadPODetails' is available so that a developer may code an alternative approach to retrieve purchase order details (for example, using web services), rather than utilizing the standard functionality. Once retrieved, the details gathered must be populated into the POHeader structure and POLineItems array that form part of the user exit interface.

The user exit interface is as follows.

| Import parameter | Type | Description |
|---|---|---|
| pWorkdoc | Workdoc object | This is the current workdoc object |
| POHeader | POHeaderStructure | This is the purchase order header structure that must be populated within the user exit. |
| POLineItems | POLineItemsStructurearray | This is a 1-based array for the purchase order line items and must be populated if required within the user exit. |
| POKey | POKey | This contains the details of the purchase order that is to be retrieved. |
| Client | ClientData | This is the client data object containing details of the document client. |
| Address | VendorAddress | This is the address structure containing details for the current invoice vendor. |
| strPOReadError | String | This must be set to an appropriate error message if a technical problem arises during the retrieval of the purchase order details. If a message is set, it stops a document in Verifier and also fails the document export. |
| blReadPOLines | Boolean | The system sets this flag to 'TRUE' if the retrieval of line item information is required for the profile of the current document. This field is read only. |
| blDuplicatePO | Boolean | This flag must be set to 'TRUE' if multiple records are returned during the retrieval of the purchase order header information. |
| blExport | Boolean | The system sets this flag to 'TRUE' if the user exit is being called during document export. During validation on the server side or in Verifier, it is set to 'FALSE'. This field is read only. |

| | | |
|---|---|---|
| blPONotFound | Boolean | This flag must be set to 'TRUE' if the purchase order header does not exist in the external data source. It is optional to set it to 'TRUE' if the purchase order header look-up is successful, but the corresponding line items do not exist in the data source. |

To activate the user exit, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
5. Click **Read PO Header Via User Exit**.
6. Save the changes.

## Use the user exit to read purchase order line item data

If you also want to use the user exit to read purchase order line item data, complete the following additional steps within Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.

2. Click **Get PO Lines via User Exit**.

3. Save the changes.

It is not possible to mix and match a custom read of the purchase order header and a standard read of the line item data, or vice versa. If the user exit is used to read the purchase order header, it must also be used to read the line items. User exit import parameter 'blReadPOLines' is set to 'TRUE' if the profile has been configured to read line items, thus notifying the developer that a read of the line item information is needed. If line items are not needed (that is blReadPOLines is set to 'FALSE'), but are retrieved anyway, they are ignored by the system.

The user exit is called when a purchase order number is validated both on server side and also in Verifier. It is also called during document export in order to retrieve the current purchase order details for line pairing. Import parameter 'blExport' provides a means for the developer to distinguish between the two. During validation, it is set to 'FALSE'; during document export, it is set to 'TRUE'.

The key of the purchase order to be retrieved is passed into the function using the 'POKey' import parameter. The POKey has the following structure.

| Structure element | Type | Description |
|---|---|---|
| PONUMBER | String | This contains the formatted purchase order number to be queried. |
| COMPANYCODE | String | This contains the invoice company code. This value is only populated if the company code forms part of the key to identify a unique purchase order. |

| POEXTENSION | String | This contains the JDE PO document type or Peoplesoft business unit, depending upon whether the profile has been configured for JD Edwards or Peoplesoft PO types respectively. If neither is used, the value is blank. |
|---|---|---|

Within the user exit, the developer must use the details provided by the POKey structure to query the external system. If the processing profile ID is also required, then this is available in the 'ProfileID' component of the Client structure, which is also passed into the user exit.

If the client profile has been configured to use a purchase order data partition, the PO Partition ID is also passed into the user exit via the 'POPartition' component of the Client structure. This must be done in tandem with checking that the profile has been set-up to use partitions for the purchase order data.

For example, DicVal("UsePOPartition", "PON") = "YES"

If a technical error occurs when performing the look-up to the purchase order data source, 'strPOReadError' must be set to an appropriate error message. If this value is set to anything but blank, it has the effect of stopping the purchase order in Verifier with the error displayed in the field error text. During export, if 'strPOReadError' is set to an error message, the export fails and the document is sent to status 750. The error is subsequently written into the export instance log file and also displayed to a user in Verifier against the invoice number field.

If the look-up to the external data source is successful, but the PO cannot be found, the 'blPONotFound' import parameter must be set to 'TRUE'. This stops the document in Verifier with an appropriate error message, but, if this occurs at time of document export, the export as a whole does not fail. It is not recommended to set an error in 'strPOReadError' if the purchase order does not exist in the data source. If the processing profile has been configured to look for multiple purchase orders, this could lead to documents getting stuck needlessly at time of export. 'strPOReadError' must be reserved exclusively for the handling of technical configuration or connectivity issues.

If the purchase order header can be read, but the purchase order line items cannot be retrieved, then flag 'blPONotFound' may be to 'TRUE' if it is appropriate that the document must remain in Verifier until the line items become available. If the flag remains set as 'FALSE', then the purchase order number is accepted during validation, but it is not possible to carry out line pairing during document export. This, however, does not let the document export as a whole to fail.

If multiple records are returned for the purchase order header look-up, indicating that duplicate purchase orders exist in the external data source, parameter 'blDuplicatePO' must be set to 'TRUE'. Doing so activates the standard purchase order duplicate handling functionality as long as it has not been deactivated.

Once the data is retrieved successfully, the components of the POHeader structure and the POLineItems array can be populated. The following table describes the structure of the purchase order header (POHeader), explains which of the components are mandatory and which are optional, and also provides hints for populating each component.

| Structure element | Mandatory? | Type | Description |
|---|---|---|---|
| DOCTYPE | No | String | This is the purchase order document type. It must be populated if configuration exists to set the POType field to 'SERVICE' based upon a purchase order document type. |
| COMPANYCODE | No | String | This is the purchase order company code. This needs to be populated if the processing profile is configured to default a company code based upon the purchase order number look-up. |
| VENDORID | Yes | String | This is the PO order-from vendor and is a mandatory item to populate. If the field is not populated, then the system raises a configuration error.

Hence, the purchase order number field is set to invalid and the document is sent to Verifier; if this issue occurs during export, export fails and the document is sent to a 750 state. |

| SITEID | Yes if the document profile uses a site ID | String | This is the site ID for the purchase order vendor. It is mandatory to populate this component if the profile of the document requires a site ID. If the field is not populated, and a site ID is needed, the system raises a configuration error. Hence, the purchase order number field is set to invalid and the document sent to Verifier; if this issue occurs during export, export fails and the document is sent to a 750 state. |
|--------|--------|--------|--------|
| CURR | No | String | This is the purchase order currency. This component must be populated if the processing profile of the document is set to default a currency from the purchase order. The currency must also be populated for line pairing to be carried out. |

| RELEASEFLAG | No | String | This is the purchase order release flag. If purchase orders in the downstream ERP system are subject to a release strategy meaning that the invoice cannot be processed until the purchase order is released, and the purchase order has still not been released, then this field must be populated with a value. Under all other circumstances, it must be left blank. Populating this field with a value has the effect of notifying the Verifier user that the PO has not been released. During export, line pairing is not carried out. |
|---|---|---|---|
| DIFFINV | No | String | This is the remit-to vendor ID. If an order-from and a remit-to vendor are present on the purchase order, the remit-to vendor takes priority in terms of the vendor that is displayed to the Verifier user and exported. |
| STATUS | No | String | This is the purchase order document status. |

| EXRATE | No | Double | This is the exchange rate between the purchase order currency and the local currency of the company code in which the purchase order was created. It is expressed as the factor by which the purchase order totals must be multiplied to convert from the PO currency to the company code currency. For example, if the purchase order document currency is 'CNY' and the company code currency is 'GBP', then, assuming that 1 GBP = 10 CNY, the exchange rate must be set to 0.1. For example, 10 CNY (total in PO currency) * 0.1 (exchange rate) = 1 GBP (total in company code currency) It is not mandatory to populate this field, but if the purchase order currency differs from the company code currency and the invoice is presented in the company code currency, then line pairing cannot be performed. |
|---|---|---|---|
| PAYMENTTERMS | No | String | These are the purchase order payment terms. If you want to use the dynamic payment terms selection feature, you must populate this field so that the system is able to compare the payment terms on the purchase order to the terms on the invoice. |

The following table describes the structure of the purchase order line items array (POLineItems), explains which of the components are mandatory and which are optional, and also provides hints for

populating each component.

Although all but one of the fields are optional, it is recommended to populate as many relevant fields as possible in order to maximize the success of line pairing. The relevant fields that fall into this category are.

- MATERIALNO
- DESCRIPTION
- POQUANTITY
- UOM
- UNITPRICE
- PUOM
- PRICEUNIT
- TOTAL
- TOTALQUANTITYDELIVERED
- TOTALVALUEDELIVERED
- TOTALQUANTITYINVOICED
- TOTALVALUEINVOICED

| Structure element | Mandatory? | Type | Description |
|---|---|---|---|
| LINENO | Yes | String | This is the purchase order line item number. This is a mandatory component used to identify a purchase order line item uniquely within the purchase order. The system raises a configuration error if it is left empty. Hence, the purchase order number field is set to invalid and the document sent to Verifier; if this issue occurs during export, export fails and the document is sent to a 750 state. |
| MATERIALNO | No | String | This is the purchase order line item material number. |

| | | | |
|---|---|---|---|
| MATERIALGROUP | No | String | This is the purchase order line item material group. |
| DESCRIPTION | No | String | This is the purchase order line item description. |
| POQUANTITY | No | Double | This is the line item order quantity. |
| UOM | No | String | This is the purchase order line item quantity unit of measure. |
| UNITPRICE | No | Double | This is the line item unit price. |
| PUOM | No | String | This is the purchase order line item price unit of measure. |
| PRICEUNIT | No | String | This is the purchase order line item price unit. If this value is not populated, the default value is '1'. |
| TOTAL | No | Double | This is the line item order total. |
| TAXCODE | No | String | This is the purchase order line item tax code. It is recommended to populate this field if the automatic tax determination feature is being used. |

| TAXJURCODE | No | String | This is the purchase order line item tax jurisdiction code, which represents the ID of a tax office relevant to the location where the purchase order item is ultimately to be consumed or used. Tax jurisdiction codes are typically used in the US or any country where the rates of sales/use tax are set in law at the provincial level, as opposed to a fixed rate of sales tax set at the national level (such as VAT within the EU). If relevant for the downstream ERP system, It is recommended to populate this field. |
|---|---|---|---|
| TOTALQUANTITYDELIVERED | No | Double | This is the total quantity already delivered for the purchase order line item. |
| TOTALVALUEDELIVERED | No | Double | This is the total value of the goods already delivered for the purchase order line item. |
| TOTALQUANTITYINVOICED | No | Double | This is the total quantity that has already been invoiced for the purchase order line item. |
| TOTALVALUEINVOICED | No | Double | This is the total value of the goods already invoiced for the purchase order line item. |

| ITEMCATEGORY | No | String | This is the purchase order line item category. This must be populated if the document processing profile has been set up to determine whether the POType is 'SERVICE' based upon the purchase order line item categories. |
|---|---|---|---|
| PLANT | No | String | This is the ID of the purchase order line item plant (that is where the goods are to be delivered). This must be populated if the automatic tax determination feature is activated as it specifies the ship-to state/country for the purchase order line item. |
| CHARGECODE | No | String | This is the purchase order line item charge code. |
| CHARGECODEID | No | String | This is the purchase order line item charge code ID. |

| | | | |
|---|---|---|---|
| ERS | No | Boolean | This flag must be set to 'TRUE' if the purchase order line item is marked for ERS (Evaluated Receipt Settlement). If the system has been configured to stop ERS purchase orders, this has the effect of rejecting the invoice to a Verifier user, as, for ERS type purchase orders, no paper invoice is expected as it must be processed electronically as part of an EDI-type transaction. |
| MULTIPLEACCOUNT ASSIGNMENT | No | String | This is an indicator as to whether the purchase order line item has been set up with a multiple account assignment. It must be left blank if no multiple account assignment exists. |
| ACCOUNTASSIGNMENT CATEGORY | No | String | This is the purchase order line item account assignment category. It must be populated if the automatic tax determination feature is being used and configuration exists to default a tax code based upon the purchase order line item account assignment category. |

A suggested overview of the process flow in the script is as follows

1. Connect to the purchase order header data source and query using the key provided in 'POKey';

2. If any connection or configuration issues arise, set 'strPOReadError' to an appropriate error message and exit;

3. If the purchase order does not exist in the data source, set 'blPONotFound' to 'TRUE' and exit;

4. If multiple purchase order headers are retrieved, set 'blDuplicatePO' to 'TRUE' and exit;

5. Populate the POHeader object;

6. If 'blReadPOLines' is set to 'FALSE', exit at this point;

7. Connect to the purchase order line item data source and query using the key provided in 'POKey';

8. If any connection or configuration issues arise, set 'strPOReadError' to an appropriate error message and exit;

9. If no line item data exists for the purchase order, the 'blPONotFound' flag may be set to 'TRUE', but this is optional depending upon project requirements;

10. Loop around the line items returned and copy the data into the POLineItems array;

11. Exit the subroutine.

If a custom validation is also required within the user exit where the desired behavior is such that the document must stop in Verifier with an error message notifying the user of a problem, but the user may still accept the purchase order, then a new step may be inserted between steps 3 & 4 where the error message is passed via 'strPOReadError' only if 'blExport' is 'FALSE' and 'fnIsVerifier' is also 'FALSE'.

```
If Not blExport And Not fnIsVerifier Then
  ' Report error to user from custom validation
strPOReadError = "Custom validation failed – please check the purchase
order."
End If
```

## Use Purchase Order Partitions

Purchase order partitions provide the capability to house multiple sets of purchase order data within a single purchase order header table and a single purchase order line item table. For implementations involving multiple clients with multiple sets of purchase order database tables, the use of purchase order partitions can drastically reduce the administrative effort associated with maintaining so many tables.

The single purchase order header and purchase order line item tables include a partition ID column, which contains an ID that tells the system which rows in the table belong to which client. This ensures that the data for one client is not confused with data belonging to another client.

The steps to create and assign a partition are as follows.

## Register the purchase order partition

To register a new purchase order partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **PO Number Partition Settings** node. This then displays the purchase order partition configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter a unique ID for your purchase order partition in **PO Partition ID**.

6. Enter a short description for your purchase order partition in **Description.**
7. Click the **Insert** hyperlink to save the changes.

## Assign the purchase order partition to a client

To assign the purchase order partition to the client, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Client Settings**. This then displays the client configuration table.
3. Locate the row for the relevant client within the table.
4. Choose the purchase order partition you wish to assign to the client by selecting a value from the **PO Partition** drop-down.
5. Save the changes.

## Activate usage of the purchase order partition

To activate usage of the purchase order partition, complete the following steps.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
5. Select the **Use PO Partition** check box. This reveals an additional setting.
6. Enter the technical name of the column in the purchase order header table that represents the partition ID in **PO Partition Column.**
7. Save the changes.

## Map the partition ID column for the purchase order line item data

If the client profile is also set to read purchase order line item data, the purchase order line item database column, which represents the partition ID, must also be mapped.

To accomplish this, complete the following steps in Solution Configuration Manager.

**Note:** If the purchase order header data is set to use a partition, the system expects that the purchase order line item database table also uses a partition.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
5. Enter the technical name of the column in the purchase order line item table that represents the partition ID in **DB Partition ID.**
6. Save the changes.

# Company Code Configuration

The company code represents the legal entity that is responsible for the payment of an invoice.

Large organizations, especially those that operate in multiple countries, are required to set up individual companies in the areas they operate in order to comply with local legal and fiscal requirements. They may also choose to set up individual companies to represent the different lines of business that they undertake. As such, a single organization may actually consist of multiple, legally-registered companies around the world.

The company code tells the ERP system which of these companies an invoice or credit note is intended for. It is a mandatory item of data that you need to have in order to send a document to an ERP system.

When processing an invoice or credit note into an ERP system, the company code is a mandatory item of data that you need to specify so that the ERP system knows which company the invoice is intended for.

AP Project includes an ability to perform a look-up against a company code. This look-up is used to validate manual user entry in the company code field in Verifier. It is also to retrieve data items associated with the company code which are subsequently used in other areas of the solution. These areas include the following.

- Retrieving the bill-to company VAT registration numbers for VAT compliance checking
- Determining the tax country for automatic tax code determination
- Determining the local currency that is used during line pairing

The company code look-up can be performed directly against supported ERP systems or against a database table. This section explains the steps to configure the company code look-up against a database.

You can choose whether you want to validate the company code against a standard master data table within the AP Project configuration database which you can maintain through Solution Configuration Manager, or whether you want to use an external table that exists in a different database.

## Configure the company code look-up using the standard table

The standard company code look-up table that is installed as part of the AP Project configuration database uses partition IDs to distinguish between different sets of company code master data all within a single table. A partition ID is subsequently assigned to a client. This allows more than one client to share the same set of company code data for ease of maintenance, particularly in cases where more than one client uses the same ERP system.

When performing a company code look-up, the system only looks at the company codes that belong to the company code partition assigned to the client of the current document.

## Register the company code partition

To register a new company code partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Company Code Partition Settings** node. This then displays the company code partition configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.

5. Enter the unique ID for your company code partition in **Company Code Partition**. This must be entered as an integer.
6. Enter a short description for your company code partition in Description.
7. Click the **Insert** hyperlink to save the changes.

## Assign the company code partition to a client

To assign a company code partition to a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
3. Locate the row for the client to which you want to assign a company code partition.
4. Choose the company code partition you wish to assign to the client by selecting the partition ID number from the **Company Code Partition** drop-down.
5. Choose the company code partition you wish to assign to the client by selecting the partition ID number from the **Company Code Partition** drop-down.
6. Save the changes.

## Configure the company code look-up

To configure the company code look-up to use the standard AP Project company code table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Company Code Settings** node.
5. Select the **Validate From DB** radio button. This then reveals further configuration options.
6. Clear the **Use External Table** check box.
7. Save the changes.

## Maintain company code master data

To maintain company code master data within the solution, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Company Code Master Data** node. This then displays the company code configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the partition ID for your company code in **Company Code Partition**.
6. Enter the unique company code ID in **Company Code**.
7. Enter the currency used by the company code in **Currency**. This must be entered as a three character ISO-code. This column is mandatory.
8. Enter the country where the company is legally registered in **Country**. This must be entered as a two character ISO-code. This column is mandatory.

9. Enter the VAT registration number used by the company in **VAT Reg No**. If the company has more than one VAT registration number, these should be entered as a comma separated list.

10. Click the **Insert** hyperlink to save the changes.

### Configure the company code look-up using an external table

To configure the company code look-up using an external database table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Company Code Settings** node.
5. Select the **Validate From DB** radio button. This then reveals further configuration options.
6. Select the **Use External Table** check box. This then reveals further configuration options.
7. Choose the SQL connection group that represents the connection to your company code database by selecting a value from the **SQL Connection Group** drop-down.
8. Enter the technical name of the company code look-up table in **DB Table Name**.
9. Enter the technical name of the column that represents the company code in **DB Company Code**. This column is mandatory.
10. Enter the technical name of the column that represents the company code currency in **DB Currency**. This column is mandatory.
11. Enter the technical name of the column that represents the company code VAT registration number in **DB VAT Reg Nos**. This column is optional.
12. Save the changes.

## Invoice Type Configuration

The invoice type field represents whether the invoice is related to a purchase order or not. The possible field values are **PO** or **NO-PO**. This controls whether the purchase order number and line item fields are mandatory, and how the document is handled at the point of export.

You can configure the system to set an initial value for this field. You can also configure how the system configuration determines the initial value for this field, as well as the circumstances under which the field value can be changed.

The following sections contain three typical example business requirements and the corresponding configuration required.

### Business Requirement 1

The business requirement is that the invoices should be processed as NO-PO, unless a purchase order number is found on the document.

To configure the system to meet this business requirement, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Invoice Type Settings** node.

5. Set the default invoice type to NO-PO by selecting **NPO** from the **Default** drop-down.

6. Ensure the **Set By Vendor** check box is cleared.

7. Ensure that **Set By Vendor CoCode Exception** is not populated.

8. Select the **Set To PO If PO Found** check box if you want to set the invoice type field to **PO** if any value is extracted automatically into the purchase order number field.

9. Select the **Set To PO If Valid PO Found** check box if you only want to set the invoice type field to **PO** if a valid purchase order is extracted into the purchase order number field. The **Set To PO If PO Found** check box must not be selected if you decide to use this option.

10. Select the **Set PO If PO Populated** check box if you want to set the invoice type field to **PO** automatically if the user enters a purchase order number in Verifier.

11. Save the changes.

## Business Requirement 2

The business requirement is that all invoices must state a purchase order number unless the vendor is permitted to supply invoices without a purchase order and no purchase order number can be found on the invoice.

In preparation for this, you need to have a column in the vendor master data that indicates whether the vendor is permitted to supply NO-PO invoices. If you are using BRWVendorMaster for your vendor master data, the InvoiceType column is provided for this purpose. You need to populate this column with a value that indicates that a NO-PO invoice is allowed for this vendor. This can be any value, but you must remember the value you chose in order to complete the rest of the configuration.

Typically, this field is populated with an item drawn from the ERP vendor master data that can help indicate the expected invoice type. This item could be the vendor industry key, the vendor classification, the vendor account group or whether the vendor has a purchasing view created.

Once you have decided upon which column to use and have populated the column appropriately, you can complete the remaining configuration items. You must remember to reimport the Associative Search Engine vendor pool following any changes to vendor master data.

To complete the configuration, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings** from the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Search Field Mapping** node.

4. Enter the technical name of the database column in BRWVendorMaster that represents your invoice type in **Invoice Type**. If you are using a CSV file for your vendor master data, enter the appropriate CSV file column name. This is case-sensitive.

5. Save the changes.

6. Select **Processing Settings** from the **Settings** drop-down.

7. Select the processing profile you want to use.

8. Within the **Processing Settings** hierarchy tree, navigate to the **Invoice Type Settings** node.

9. Set the default invoice type to **PO** by selecting **PO** from the **Default** drop-down.

10. Select the **Set By Vendor** check box.

11. Enter a comma-separated list of exception company codes in **Set By Vendor Co Code Exception**. The system does not execute the vendor specific invoice type check for company codes entered into this field. If you only want to execute the vendor specific invoice type check for company codes entered in this field, clear the **Set By Vendor** check box.

12. Enter the value you chose to indicate that a vendor may supply NO-PO invoices into **NPO Value**.

13. If you also chose a value to indicate that a vendor is expected to supply PO invoices, enter this value in **PO Value**.

14. Select the **Set To PO If PO Found** check box.

15. Save the changes.

## Business Requirement 3

The business requirement is that the invoice type is determined at the point of scan and passed to the system through a value contained in the document filename.

1. Select the project to be used.

2. Select **Global Settings** from the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Import Settings** node.

4. Enter the filename component in **Invoice Type**. This must be in the format of COMPONENT1, COMPONENT2, COMPONENT3, and so on.

   **Example**

   A customer sets up their scanning software to put 'MM' in the image filename if the invoice if it a PO and 'FI' if the invoice is NO-PO. If the document filename is 12345_FI_20120901.tif, the first component of the filename is 12345, the second component is FI, and the third component is 20120901. To tell the system that the invoice type is the second component, enter COMPONENT2 in **Invoice Type**.

5. Save the changes.

6. Select **Processing Settings** from the **Settings** drop-down.

7. Select the processing profile you want to use.

8. Within the **Processing Settings** hierarchy tree, navigate to the **Invoice Type Settings** node.

9. Ensure the **Set By Vendor** check box is cleared and the **Set By Vendor Co Code Exception** field has no content.

10. Enter the value the customer sets at scan time to indicate PO invoice in **PO Value**.

11. Enter the value the customer sets at scan time to indicate a NO-PO invoice in **NPO Value**.

12. Ensure that **Set To PO If PO Found** and **Set To PO If Valid PO Found** are both selected.

13. Save the changes.

# Invoice Number History Check Configuration

The invoice number history check gives you the ability to validate an extracted invoice number against a table of previous invoice or credit note numbers that were submitted by the vendor. It is recommended to use this feature in all implementations of AP Project in order to prevent false

positives on the invoice number field passing to the ERP system.

When performing the invoice number history check, the system retrieves previous examples of the vendor invoice or credit note numbers from the table and compares them to the extracted invoice number value in terms on the length and the sequence of alpha, numeric and special characters. Within the table, the historical records are marked as being for an invoice or credit so the system only looks at the samples belonging to the same document type as the document being processed. The system then sets the invoice number to invalid if there are insufficient records in the history table, or not enough of the prior records match the format of the extracted invoice number.

You can configure the number of historical records the system should keep as well as the minimum number of samples that have to match so that the extracted invoice number is not rejected.

The invoice number history check can also be used to handle common OCR errors that might occur when reading an invoice number.

For example, if you have a vendor who submits an invoice number in the format of **I1234**, but the OCR engine consistently reads this as **11234**, if the invoice number history table shows that the first character expected from this vendor is the letter **I** as opposed to **1**, the system automatically performs the substitution.

This also applies to instances where a zero has been extracted, but the history shows that a letter **O** is expected, and also where the letter **Q** has been extracted, but the history shows that this should be the letter **O**.

No other OCR issues are handled.

Two further validations are available if the invoice number is entirely numeric in format.

The first additional validation is a sequencing check where the system does not consider prior invoice numbers towards the hit count if they are x ahead or more, where x is a number defined using the **Sequencing Limit** parameter.

For example, the **Sequencing Limit** is set to 100 and invoice number 1500 is read from an invoice. In the history table, invoice numbers 1598, 1599, 1600 and 1601 are present. 1600 and 1601 will not be considered valid matches as, although they match the 4 numeric format, they are too far ahead in terms of the sequence. Now, only 1598 and 1599 remain to compare against, so if the value of **No Of Hits** is set to more than 2, the invoice number would be marked as invalid.

This logic does not apply to processing documents that have an invoice number that is more than the sequencing limit. This features focuses only on older invoices.

The second additional validation is an extended check that compares the first x percentage of characters in the extracted value with the values in the invoice number history database where x is configurable using the **Extended Check Percentage** parameter.

For example, if the invoice number history contains three samples for a given vendor: **52001**, **52002** and **52003**, but **72004** is extracted as the invoice number, then, under the standard check, the **72004** would not be challenged as the extracted invoice number is all numeric and five digits in length, which is consistent with the historical vendor invoice number format. Activating the extended check and setting the **Extended Check Percentage** parameter to 20% rejects the extracted invoice number as none of the historical samples begin with a **7**. They all begin with a **5**, hence the required hit count of matches is not reached.

This **Extended Check Percentage** defaults to 25, indicating that the first 25% of a numeric invoice number is used as a basis for the comparison. The system always rounds up the number of

characters to compare using this percentage.

For example, if the parameter is set to 20%, and the invoice number is 1234567890, then the system checks the first two characters as 20% of a length of 10 is 2. This means that the system will look for historical records where the invoice number begins with **12**.

If, however, the parameter is set to 20% and the invoice number is 1234567, the system also checks the first two characters as 20% of a length of 7 is 1.4, which is then rounded up to 2.

If a number less than or equal or zero or greater than 100 is entered, the system uses 25.

You can also configure the system to keep the invoice number history table updated with the latest examples of vendor invoice and credit note numbers as documents are exported. The system only retains the number of records that you specify. So, if you have this maximum configured to **20**, then the system can only retain a maximum of forty records – twenty records of invoice numbers, and twenty records of credit note numbers.
Once this limit is reached, the system deletes the oldest entry from the history table for the document type in order to insert the new one.

## Configure the invoice number history check

The standard invoice number history table that is installed as part of the AP Project configuration database uses the vendor partition ID to distinguish between different sets of invoice number history data all within a single table. A partition ID is subsequently assigned to a client. Use of the vendor partition for this purpose is optional. As well as using the standard invoice number history table, you can also configure the system to point to an external table of prior invoice records, or a AP Project legacy table such a **BW_INVOICE_NUMBER_FORMATS.**

To configure the invoice number history check, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Invoice Number Settings** node.
5. Select the **Validate From DB** check box.
6. Select the **Use Vendor Partition** check box if your project uses vendor partitions.
7. Select the **Use External Table** check box if you want to use an external table for the invoice number history check. Further configuration options then appear. If you want to use the standard table included in the AP Project configuration database for the history check, clear the check box and skip steps 8 to 14.
8. Choose the SQL connection group that represents the connection to the database that contains your external invoice number history table by selecting a value from the **SQL Connection Group** drop-down.
9. Enter the technical name of the external invoice number history table in **DB Table Name**.
10. Enter the technical name of the column that represents the vendor partition ID in **Partition ID**. This column is mandatory if you are using vendor partitions.
11. Enter the technical name of the column that represents the vendor ID in **Vendor ID**. This column is mandatory.
12. Enter the technical name of the column that represents the invoice number history record

ID in **Rec ID**. This column is mandatory.

13. Enter the technical name of the column that represents the sample invoice number in **Invoice Number**. This column is mandatory.

14. Enter the technical name of the column that represents the document type in **Document Type**. This column is mandatory.

15. Enter the value found in the history table **Document Type** column that indicates an invoice in **Invoice Alias**. If you use the standard invoice number history table, this value should be set to **INVOICE**.

16. Enter the value found in the history table **Document Type** column that indicates a credit note in **Credit Alias**. If you use the standard invoice number history table, this value should be set to **CREDIT**.

17. Enter the maximum number of invoice number history records the system should retain in **Max Records**. This value should be entered as an integer greater than zero.

18. Enter the minimum number of invoice number history records that must match the extracted invoice number value in **No Of Hits**. This value should be entered as an integer greater than zero.

19. Select the **Correct OCR Misreads** check box if you want to enable the OCR misread correction feature

20. Select the **Check Sequencing** check box if you want to enable the sequencing check for all- numeric invoice numbers. This then reveals a further configuration setting.

21. Enter the sequencing limit for the sequencing check in **Sequence Limit**. This value should be entered as an integer greater than zero.

22. Select the **Activate Extended Check** check box if you want to enable the extended check for all- numeric invoice numbers. This then reveals a further configuration setting.

23. Enter the **Extended Check Percentage**. This should be entered as an integer greater than zero, but not more than 100.

24. Select the **Update DB At Export** check box if you want the system to update the invoice number history table with a record for the current document at time of document export.

25. Save the changes.

# Invalid Reason Configuration

The invalid reason field provides a means for a Verifier user to export exception documents that could not be verified in full so that the problem can be dealt with in a downstream system.

On the **Verifier** screen, the invalid reason field appears as a drop-down menu where the user can select an appropriate invalid reason from a list of defined exceptions that you can configure. Only one invalid reason can be selected per document. Selecting an invalid reason overrides part of the validation process, allowing missing or invalid data to be accepted.

For each invalid reason, you can configure an invalid reason code. This invalid reason code is subsequently included in the invoice header during document export. A downstream process can then be configured to look for this code and take the appropriate action.

Invalid reasons are configured globally and apply to all clients. Example:

An invoice stops in Verifier due to a missing purchase order that the vendor should have included on the document. The purchase order number field is marked invalid and the user is required to enter a valid purchase order number. The Verifier user is unable to do this as this information is not stated on the invoice. However, a downstream work-flow system has been configured with a process for dealing with missing purchase order numbers. This process could be to return the invoice back to the vendor. The vendor would then be requested to submit a new invoice with the correct purchase order number.

In Verifier, the user selects the **MISSING/INVALID PO** invalid reason from the drop-down menu. This sets the blank purchase order number field to valid and allows the document to pass through Verifier. The invoice is then exported to the downstream work-flow system where the invalid reason code tells the work-flow that the document needs to be routed to the missing purchase order process.

## Invalid Reason Rules

Each invalid reason is assigned an invalid reason rule. The invalid reason rule controls the system response if an invalid reason is selected. When configuring a new invalid reason, you must assign an appropriate invalid reason rule. You cannot create custom invalid reason rules

The following table provides an overview of the invalid reason rules you can use and the standard invalid reasons they are assigned to.

| Rule | Description | Associated Standard Invalid Reasons |
| --- | --- | --- |
| SETVENDORTOVALID | This rule sets the vendor ID to valid irrespective of content. The VAT compliance check is not carried out. | VENDOR NOT FOUND |
| SETPOTOVALID | This rule sets to PO number field to valid irrespective of content. The VAT compliance check is not carried out. Line pairing is not carried out. | VENDOR ADDRESS NOT FOUNDMISSING/INVALID PO |
| ALLOWNONPOVENDOR | This rule permits the vendor ID to be different to the vendor ID on the purchase order. | PO VENDOR <> INVOICE VENDOR |
| SETAMOUNTSTOVALID | This rule sets the document amount fields to valid. The VAT compliance check is not carried out. Line pairing is not carried out. | INVOICE AMOUNTS DO NOT ADD UP |

| | | |
|---|---|---|
| THIRDPARTYFREIGHT | This rule is used for third party freight invoices where the invoice vendor quotes a purchase order number belonging to the material vendor who supplied the goods that were transported. Selecting an invalid reason using this rule permits the vendor ID to be different to the vendor ID on the purchase order.<br><br>No line items are required in Verifier.<br><br>During line pairing, the system then processes the invoice charge as a miscellaneous charge against the material vendor purchase order. | THIRD PARTY FREIGHT |
| SETVENDORANDPOTOVALID | This rule sets the vendor ID and PO number fields to valid irrespective of content.<br><br>The VAT compliance check is not carried out.<br><br>Line pairing is not carried out. | MISSING/INVALID  VENDOR & PO |
| NONVATCOMPLIANT | This rule sets the fields associated with the VAT compliance check to valid. These fields include the vendor & bill-to VAT registration numbers, the exchange rate, the local VAT amount and the VAT rate in the VAT table. | NON TAX COMPLIANT |
| STOCKINVOICE | This rule is used for PO invoices where the PO number is not stated on the document, but instead will be determined at time of line pairing via custom code in **UserExitLinePairingPOs** | STOCK INVOICE |
| ZEROVALUEINVOICE | This rule allows the invoice total field to be zero.<br><br>The VAT compliance check is not carried out. | ZERO VALUE INVOICE |

| SETLINEITEMSTOVALID | This rule sets the line items field to valid irrespective of content. The VAT compliance check is not carried out. Line pairing is not carried out | |
|---|---|---|

## Configure a new invalid reason

To add a new invalid reason, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Invalid Reasons > Invalid Reason Configuration** node. This then displays the invalid reason configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the index of the invalid reason in **Index**. This value must be entered as a unique integer.
6. Choose the invalid reason rule you want to use for your invalid reason by selecting a value from the **Rule** drop-down menu.
7. Enter the default invalid reason display text for the language in **Verifier Display**. This text is used for the invalid reason field on the standard Verifier form.
8. Click the **Insert** hyperlink to save the changes.

## Configure invalid reason display texts for the dynamic Verifier form

If you are using the dynamic Verifier form, AP Project supports multi-language display so that the invalid reasons are displayed in the preferred language of the Verifier user. User preferred languages are configured in **Global Settings > User Management**. You can configure the text displayed for each invalid reason per language. If no entry is found for the user's preferred language, the system uses the default invalid reason text that you configure in the **Verifier Display** column in the invalid reason configuration table.

To add an invalid reason display text for a new language, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Display Text Settings > Invalid Reason Text Settings** node. This then displays the invalid reason text configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the index of the invalid reason in **Text Element ID**.
6. Enter the language in **Language ID**. This must be entered as a two character ISO-code.
7. Enter the invalid reason display text for the language in **Display Text**.
8. Click the **Insert** hyperlink to save the changes.

## Configure the default invalid reason

The default invalid reason display text is the text that is shown in the invalid reason field when no invalid reason is selected. By default, this is set to **NONE**, but it can be changed to a value of your choosing. This default text is used for the standard Verifier form. The section below explains the steps to change it if you are using the default Verifier form. You can also configure the invalid reason code that is exported for the default invalid reason.

To configure the default invalid reason display text, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Invalid Reasons > Invalid Reason Default Settings** node.
4. Enter the display text for the default invalid reason in **Default Text**.
5. Enter the default invalid reason code in **Default Export Code**.
6. Save the changes.

## Configure the default invalid reason display text for the dynamic Verifier form

If you are using the dynamic Verifier form, AP Project supports multi-language display so that the invalid reasons are displayed in the preferred language of the Verifier user. You can configure the display of the default invalid reason for each language. If you are not using the dynamic Verifier form, or no entry is found for the user's preferred language, the system uses the default text that you configure in the **Default Text** parameter in **Global Settings > Invalid Reasons > Invalid Reason Default Settings**.

To add a default invalid reason display text for a new language, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Instructions Settings > General Text Settings** node. This then displays the general text setting configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter 13 in **Text Element ID**.
6. Enter the language in Language ID. This must be entered as a two character ISO-code.
7. Enter the default invalid reason display text for the language in **Display Text**.
8. Click the **Insert** hyperlink to save the changes.

# Alternate Payees

An alternate payee is the party to which payment should be made that is different from the party that supplied the goods or services.

The Invoice Vendor Identification functionality includes the option of specifying an alternate payee.

For example, if an invoice is processed for vendor 1000, and an alternate payee of 2000 is specified, the invoice is created in the downstream ERP system against vendor 1000, but when the payment run is executed, vendor 2000 is the recipient of the funds.

In an ERP system, the relationship between a vendor and one or more alternate payees is tightly defined in the vendor master data. At the time of invoice entry, a user may only specify an approved alternate payee that has been set up against the invoice vendor. Possible alternate payees for a vendor are known as permitted payees. Alternate payees exist as vendor records within the vendor master data in their own right, but they are typically blocked for direct posting and may have a different account group. The alternate payee field and associated functionality can be activated per processing profile ID.

As the alternate payee is a supplementary field to the vendor ID, the vendor ID must also be an active field.

If you activate the alternate payee in the field configuration table, the **Alternate Payee** field becomes active within the **<project>.sdp** file, and will be available as a supplementary field to the vendor ID on the Dynamic Verifier form. However, the field only functions in relation to settings in the field configuration table, effectively becoming an extra free text field that can be used as necessary. The UserExitAlternatePayeeValidate user exit is also available for any custom validation logic.

If you then, in addition, activate the alternate payee field in the field configuration table and also activate the alternate payee functionality via Processing Profile Settings > Vendor Settings, then the field is available for use and the standard functionality around the field usage is activated. Activating an alternate payee in **Vendor Settings** without activating the field in the field configuration table will have no effect.

## Activate the Alternate Payee field

To activate the Alternate Payee field, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Processing Settings**.
3. Select the Profile ID to be used.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Field Settings** node.
5. Locate the row for the AlternatePayee.
6. Select the **Active** check box.
7. Ensure that the VendorID field is also activated.
8. Save the changes.

**Result** The steps above only activate the alternate payee field to serve as a supplementary field to the vendor ID on the Dynamic Verifier form. However, the field only functions in accordance with the settings in the field configuration table, effectively becoming an extra free text field that can be used as necessary. The UserExitAlternatePayeeValidate user exit is also available for any custom validation logic.

## Alternate payee functionality

If the full alternate payee functionality has been activated, when a vendor is identified, either by the ASE or derived from a purchase order, the system checks to see whether the vendor has any permitted payees assigned. If it does, and one of the permitted payees is identified on the invoice, then this payee is copied into the Alternate Payee field.

If none of the permitted payees appear to match the invoice details, the Alternate Payee field is marked as invalid, and the document is sent to Verifier for review.

Within Verifier, the user has the option to enter an alternate payee or to confirm that no alternate

payee is appropriate for the document. A Payee selection button is provided on the Verifier form which invokes a dialog box displaying the permitted payees available for the vendor.

An alternate payee is only accepted by the system as long as it is in the list of permitted payees assigned to the vendor. The vendor record for the alternate payee need not exist in the vendor master extract, but if it does not, then no name and address details are displayed in Verifier. If a payee is entered who is not in the list of permitted payees, the system displays a message, and the content in the Alternate Payee field is removed.

If vendor partitioning is being used, it is not necessary to prefix the list of permitted payees with the partition ID and separator. The system assumes that the permitted payees belong to the same partition as the vendor to which they are assigned. For that reason, it is not possible to have permitted payees spanning multiple partitions.

## Configure the full alternate payee functionality

To configure the full alternate payee functionality, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Processing Settings**.
3. Select the Profile ID to be used.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Vendor Settings** node.
5. Select the **Check for Alternate Payees** check box.
6. Save the changes.

## Assign permitted payees to vendors

To assign permitted payees to vendors, complete the following steps.

1. Open the **BRWVendorMaster** table.
2. In the **Permitted Payee** column, enter the permitted payees as a comma-separated list. For example, 2000,4000.
3. Save the changes.
4. Open Solution Configuration Manager.
5. Select the project to be used.
6. Select **Global Settings**.
7. Within the **Global Settings** hierarchy tree, navigate to the **Search Field Mapping** node.
8. Under the **Permitted Payee** parameter, enter the technical name of the database column that contains the permitted payees configured in step 2, such as PermittedPayee.
9. Save the changes.

# About Bank Account Selection

A key aspect of accounts payable is the prompt payment of vendors in the manner that they wish to be paid. The manner of payment is referred to as the payment method. This can include things such as payment in cash, payment by cheque, or payment through electronic bank transfer or a 'wire' transfer. The bank account selection feature provides functionality to support the latter.

When paying a vendor via a bank transfer, a key item of information is the bank account into which

the vendor wants the funds to be transferred. This information is usually stated on the invoice. When processing an invoice manually into an ERP system, the user selects the appropriate account from a list of accounts that are held in the vendor master data. The user can only choose an account from this pre-approved list. They cannot specify a new destination bank account as allowing them to do so could be open to abuse. If the desired bank account is not listed, the user contacts the vendor master team and asks them to add it. Once added, the invoice can then be processed.

From an ERP system point of view, the bank account is a mandatory item of data if the vendor payment is bank transfer. Payment methods are also held in the vendor master data. An invoice cannot be created if this information is not supplied

## Preparing the vendor master data

To use the bank account selection feature, you need to ensure that the vendor master data holds the vendor payment methods and the vendor bank accounts.

## Payment methods

Vendor payment methods are codes that are used by the ERP system to denote the means by which payment should be made. These codes are typically one alpha character.

For example, **C** to denote payment by cheque, **B** to denote a bank transfer.

One vendor could have multiple payment methods. That is to say, they are willing to accept payment by cheque or by bank account transfer. In the vendor master extract used to create the associative search engine pool for the vendor data, you can include a column that represents the vendor payment methods. If you use table **BRWVendorMaster** to hold your vendor data, the **PaymentMethods** column is already provided for this purpose.

The column should be populated as a comma separated list of payment method codes. For example, C,B.

## Bank accounts

For each vendor in the vendor master data, you can include a column that contains the bank account details. This is mandatory if you want to use the bank account selection feature. If you use table **BRWVendorMaster** to hold your vendor data, the **BankDetails** column is already provided for this purpose. Within this column, you can enter one or more bank account records.

A bank account record consist of three items of information: the bank account number, the bank account routing or sort code and the ERP system bank account code.

Each element in the bank account record should be separated by a comma.

For example, a bank account record of **123456789,20-21-22,GBP1** would denote a bank account number of **123456789**, a sort code of **20-21-22** and a bank account code of **GBP1**.

The bank account code ideally should contain the ISO-code for the bank account currency. This is a requirement if you want the system to consider the bank account currency when deciding which bank account to use.

The minimum data requirement for each bank account record is the bank account number. The sort code and bank account codes are optional and may be left empty, but the comma separators must still be entered. In an example where only the bank account number is provided the bank account record must be entered as **123456789,,**.

For vendors who have multiple bank accounts, each bank account record must be separated by a colon. For example, **123456789,20-21-22,GBP1:987654321,,USD1** would denote two bank account records with bank account codes of **GBP1** and **USD1**.

## Mapping the payment method and bank account fields

Once you have made the payments methods and bank accounts available in the vendor master data and imported the pool, you need to configure the solution so that it knows where to look for the data.

To map the vendor master payment methods and bank account fields, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Search Field Mapping** node. This then displays a list of the solution vendor master fields.
4. Enter the technical name of the database column, or the corresponding column label used in the CSV file for the vendor payment methods in **Payment Methods**. Entry here is case-sensitive. If no corresponding data is available, the field must be left blank.
5. Enter the technical name of the database column, or the corresponding column label used in the CSV file for the vendor bank accounts in **Bank Details**. Entry here is case-sensitive. If no corresponding data is available, the field must be left blank.
6. Save the changes.

## Configure bank transfer payment methods

Once you have prepared your vendor master data to include payment methods and bank accounts, you need to tell the system which of those payment methods are relevant for bank account transfer.

To configure payment methods relevant for bank account transfer, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Payment Method Settings** node.
5. Enter the payment methods relevant for bank transfer in **Bank Methods**. These must be entered as a comma separated list if you have more than one.
6. Save the changes.

## Bank account extraction

AP Project provides three fields for bank account extraction. These three fields are described in the table below.

| Field Name | Description |
|---|---|
| Bank Account | This is the vendor bank account number to which payment should be made. |

| Bank Account Code | This is the ERP system code that represents the vendor bank account. It is often referred to as the partner bank type. The code is unique to one vendor and usually contains the bank account currency.<br>For example: GBP1, USD1. |
|---|---|
| Bank Account Status | This is a status flag used by the bank account validation feature only. It is used to specify whether a bank account defaulted from the vendor master matches details supplied on the invoice. The field is given a value either of **CONFIRMED** or **UNCONFIRMED**. This flag is initially set by the system based on automatic extraction results, but can be changed by a user in Verifier. |

The system carries out bank account extraction after the invoice vendor has been determined. This process is automatic and does not need to be activated in the configuration.

During the extraction process, the system first establishes whether the vendor payment method is relevant for bank transfer. If the vendor has one or more payment methods relevant for bank transfer, or no payment methods are defined, then the system looks at each bank account on the vendor master in turn and compares them against the invoice image. If a match is found, the bank account number and code are copied from the vendor master into the corresponding AP Project fields. If multiple matches are found, the system uses the first account matched. If no match is found, the fields are left blank.

By default, the system only chooses a bank account in a currency that matches the invoice currency. The bank account currency is expected to be contained in the bank account code. If no bank account codes are available in your environment, or these codes do not contain the currency, then you need to deactivate this check. Deactivating the check means that the system does not require the currency to match for an account to be selected. If the vendor master has multiple bank accounts for the vendor, then the system will still choose an account in a matching currency before considering other accounts.

To deactivate the currency check during bank account selection, complete the following steps in Solution Configuration Manager.

1. Select **Processing Settings** from the **Settings** drop-down.
2. Select the processing profile you want to use.
3. Within the **Processing Settings** hierarchy tree, navigate to the **Payment Method Settings** node.
4. Select the **Account Currency Not Required** check box.
5. Save the changes.

## Bank account validation

Bank account validation provides the ability to validate a default vendor bank account against the document. In some ERP systems, if a vendor only has one bank account registered on the vendor master, then this bank account is taken by the ERP system to be the default account for payment even if the user has not actively selected it. Hence, care must be exercised during invoice processing to make sure that the default bank account is actually the one that the vendor wants to be used.

Activating bank account validation automatically adds the bank account, bank account code and bank account status fields to the dynamic Verifier form, irrespective of whether they are individually

active in the field configuration table. The bank account and bank account code fields are also changed to read-only.

During extraction, if the vendor master data has a bank transfer payment method and only has one bank account registered, then this bank account and corresponding bank account code are copied automatically into the AP Project fields. The system then sets the bank account status field to **CONFIRMED** if the default bank account could be found on the document. If the bank account could not be found on the document, the bank account status is set to **UNCONFIRMED**.

If the vendor master data only has one bank account, and the bank account details have been entered in an incorrect format in the vendor master data, the bank account and bank account code fields are populated with **XXXXX** and the bank account status is set to **UNCONFIRMED**.

You can configure the system to force documents with an unconfirmed default bank account to stop in Verifier for a user to check. This marks the bank account status field as invalid. In Verifier, if the user sees that the default bank account is stated on the invoice, they should change the bank account status to **CONFIRMED** and then validate the field. If the default bank account is not stated on the document, they should validate the bank account status field as **UNCONFIRMED**.

At time of export, all invoices with an unconfirmed default bank account will be parked. If you are using XML, database or CSV file export, the **UnconfirmedBankAccount** field included in the invoice header export data is set to a value you can configure. This value can subsequently be used by a downstream system to route the problem document to the vendor master team who can update the vendor bank account details.

To activate bank account validation, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Payment Method Settings** node.
5. Select the **Validate Bank Account** check box.
6. Select the **Stop Invalid Account** check box if you want unconfirmed default bank accounts to stop in Verifier.
7. Enter the value you want to use to denote an unconfirmed bank account in **Unconfirmed Export Value**. This value is then written into the invoice header section of the XML, database and CSV file exports via the **UnconfirmedBankAccount** field. The value defaults to **X**.
8. Save the changes.

## Bank account status field texts

If you use the dynamic Verifier form, you can configure the text display for the bank account status field. By default, the values displayed are either **CONFIRMED** or **UNCONFIRMED**, but you can change this to texts of your choosing.

To change the texts for the bank account status field, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Payment Method Text**

**Settings** node. This then displays the payment method text configuration table.

4. If you want to change to the display text for a confirmed bank account status, locate the row that has a text element ID of **1** and the display language you wish to change it for. Now enter the confirmed bank account display text in **Display Text**.

5. If you want to change to the display text for an unconfirmed bank account status, locate the row that has a text element ID of **2** and the display language you wish to change it for. Now enter the unconfirmed bank account display text in **Display Text**.

6. Save the changes.

# Dynamic Payment Terms Selection

The invoice payment terms describe the payment arrangement a vendor is prepared to offer for settlement of an invoice. They tell the customer when the payment is due, and may also offer a discount if the invoice is settled early.

Common payment terms include Net 30, which means that the invoice should be settled within 30 days of the invoice date, and 2% 10 days, 30 days net, which means that the invoice should be settled within 30 days of the invoice date, but a 2% discount applies if it is settled within 10 days.

Payment terms can also be found in vendor master data and on a purchase order. These terms usually reflect a general agreement with the vendor as to the nature of the payment arrangement and are the default terms that an ERP system would propose at the time of invoice processing. However, it can be the case that the terms on an individual invoice offer a still more preferential payment arrangement that the customer would wish to take advantage of.

The dynamic payment terms selection feature provides the system with the ability to extract and compare the terms on the invoice with the terms set on the vendor master and purchase order, and then to choose the most favorable terms automatically based on a configurable hierarchy of preference. The preferred payment terms are subsequently exported downstream.

## Dynamic payment terms selection process

Within ERP systems, expected payment terms are configured and each term is assigned a code. This code acts as a shorthand way of expressing the detail of the payment arrangement that the ERP system can understand. For example, code 0001 could denote immediate payment, and code 0005 could mean that payment is required within 60 days, but a 5% discount is offered if the invoice is settled within 15 days.

If you are using multiple ERP systems, you can enter or upload multiple sets of payment terms. Each set of payment terms is identified by a payment terms profile ID, which is subsequently assigned to a client so that the system knows which set of payment terms is relevant for which client.

During document processing, the system attempts to extract the payment terms from the invoice into the Payment Terms field. If terms are extracted and payment terms code conversion is activated, the system attempts to identify the corresponding payment terms code using the payment terms configured. If successful, the code is populated into the Payment Terms Code field. You can configure the system to stop the document in Verifier if the extracted terms could not be reconciled to a code. If multiple codes are found, the system automatically selects the code with the highest priority. If all terms have the same priority, the system uses the first code found, but the Payment Terms Code field is set to invalid.

In Verifier, a search facility is provided for a user to select the payment terms code they want to use

based on what is available in the payment terms profile. Any user entry is validated against these terms. The user may pass blank if they wish. A Payment Terms Description field is also provided on the form so that the user can see what the payment terms code represents.

At the time of document export, the system compares the priority of the invoice payment terms code with the purchase order payment terms code and the payment terms code on the vendor master, if available. The code with the highest priority is exported. If all codes have the same priority, the content of the Payment Terms Code field will be exported. Any payment terms codes with a priority of zero is not considered. If all codes have a priority of zero, no payment terms code is exported.

If the invoice relates to multiple purchase orders, the system will take the payment terms code from the PO Number field.

If the payment terms code on the purchase order or on the vendor master do not exist in the payment terms configuration table, they are not considered. If no invoice payments terms code is available, or it no longer exists in the payment terms configuration table, the dynamic selection of payment terms step is skipped.

## Create a payment terms profile

To create a new payment terms profile, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Payment Terms Profile Settings** node.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Populate **Payment Terms Profile ID** with the payment terms profile ID you would like to use. The ID must be a unique numeric integer.
6. Enter a short description of your payment terms profile in **Profile Description**.
7. Click **Insert** to save your changes.

## Assign the payment terms profile to a client

To assign a payment terms profile to a client, complete the following steps in Solution Configuration Manager.

8. Select the project to be used.
9. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
10. Locate the row for the client to which you want to assign a payment terms profile.
11. Choose the payment terms profile you wish to assign to the client by selecting the payment terms profile ID number from the **Payment Terms Profile** ID drop-down.
12. Save the changes.

## Maintain the payment terms configuration table

Each payment term is defined by two percentage fields and three day limit fields. This provides support for up to two discount percentages being offered within a single payment term.

The following examples show how the fields should be populated.

Example 1: Pay immediately / pay upon receipt.

| Days 1 | Percentage 1 | Days 2 | Percentage 2 | Days 3 |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 |

Example 2: Net 30

| Days 1 | Percentage 1 | Days 2 | Percentage 2 | Days 3 |
|---|---|---|---|---|
| 30 | 0 | 0 | 0 | 0 |

Example 3: 2% 10 days, 40 days net

| Days 1 | Percentage 1 | Days 2 | Percentage 2 | Days 3 |
|---|---|---|---|---|
| 10 | 2 | 40 | 0 | 0 |

Example 4: 5% 10 days, 2% 20 days, 30 days net

| Days 1 | Percentage 1 | Days 2 | Percentage 2 | Days 3 |
|---|---|---|---|---|
| 10 | 5 | 20 | 2 | 30 |

To add a new payment term, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Payment Terms Configuration** node. The payment terms configuration table is then displayed.
4. Scroll down to the last row in the table where you have the option to create a new entry.
5. Choose the payment terms profile to which the payment terms belong by selecting the payment terms profile ID number from the **Payment Terms Profile ID** drop-down.
6. Enter the payment terms code in **Payment Terms Code**. The code you enter must be unique within the payment terms profile.
7. Enter a short description of the payment terms in **Description**. The description entered here appears beside the payment terms code on the Verifier form and also in the payment terms search facility.
8. Enter the priority of the payment terms in **Priority**. This should be entered as an integer where 1 represents the highest level of priority. A priority of 0 means that the system will not consider the terms during the dynamic terms selection process.
9. Enter the first period of days in **Days 1**.
10. Enter the first discount percentage in **Percentage 1**.
11. Enter the second period of days in **Days 2**.
12. Enter the second discount percentage in **Percentage 2**.

13. Enter the third period of days in **Days 3**.
14. Click **Insert** to save your changes.

## Configure the payment terms code conversion

To configure the conversion of the invoice payment terms to a payment terms code, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Payment Method Settings** node.
5. Select the **Convert Terms To Code** check box.
6. Select the **Stop In Verifier If Cannot Convert Terms** check box if you want to stop the document in Verifier if payment terms are extracted, but they cannot be converted to a code.
7. Select the **Terms Relevant For NO-PO** check box if you want NO-PO invoices to stop in Verifier if the **Stop In Verifier If Cannot Convert Terms** check box is selected, and you want dynamic payment terms selection to apply for NO-PO invoices at time of export.
8. Select the **Terms Relevant For PO** check box if you want PO invoices to stop in Verifier if the **Stop In Verifier If Cannot Convert Terms** check box is selected, and you want dynamic payment terms selection to apply for PO invoices at time of export.
9. Save the changes.

## Activate a country for dynamic payment terms processing

Payment terms are activated on a country by country basis, where the country is determined by the invoice company code. For that reason, the company code look-up must be activated for the full payment terms functionality to become available.

If the invoice pertains to a country which is not relevant for payment terms, then the invoice will not stop in Verifier if the extracted payment terms cannot be converted into a code. In addition, the dynamic selection of payment terms will not take place at time of document export.

To activate a country for the payment terms process, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** using the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Country Master Data** node. The country configuration table is then displayed.
4. Locate the row for the country you wish to activate for payment terms processing.
5. Select the **Relevant For Dynamic Terms** check box.
6. Save the changes.

## Map the payment terms field from the purchase order header

If you are validating the purchase order using a database look-up, you need to map the payment

terms code field on the purchase order header so that system can retrieve the code for the dynamic payment terms selection.

To map the purchase order header payment terms field, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **PO Number Validation** node.
5. Enter the technical name of the purchase order header table in **DB Payment Terms**.
6. Save the changes.

## Map the payment terms field on the vendor master

If you are validating the purchase order using a database look-up, you need to map the payment terms code field on the purchase order header so that the system can retrieve the code for the dynamic payment terms selection.

To map the purchase order header payment terms field, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Search Field Mapping** node. This then displays a list of the solution vendor master fields.
4. In **Payment Terms**, enter the technical name of the corresponding database column, or the corresponding column label used in the CSV file. Entry here is case-sensitive. If no corresponding data is available, the field must be blank.
5. Save the changes.

## Activate the dynamic payment terms selection

To configure the dynamic payment terms selection at time of document export, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Payment Method Settings** node
5. Select the **Enable Dynamic Terms Selection** check box.
6. Save the changes.

# VAT Compliance

AP Project provides a VAT compliance check to satisfy an EU legal requirement that applies to invoices in scope for value added tax.

This requirement states that if the goods and services being invoiced on the document are within the scope of VAT, the vendor must quote their VAT registration number (the vendor VAT registration

number).

In the case of cross-border transactions within the EU where VAT is zero-rated on invoices if both parties are VAT registered, the vendor must also quote the VAT registration number of the party being invoiced (the bill-to VAT registration number). You can configure the system to require both VAT registration numbers on a company code by company code basis.

Also, if VAT is to be charged, the currency of the invoice must be the local currency of the country whose VAT rates are being applied. For example, if a German vendor registered for VAT in the UK sends an invoice charging UK VAT, the invoice currency must be UK pounds sterling (GBP). If the invoice is issued in the local currency of Germany (EUR) then the invoice must quote one of the following.

- The UK pounds sterling equivalent of the VAT amount, such as the local VAT amount.

- The exchange rate at time of invoice issue between UK pounds sterling and Euros.

AP Project detects these and requires the user to enter either a local VAT amount or an exchange rate if no value is captured automatically.

If the VAT table is used for capturing the invoice tax amounts, it is also possible to extend the VAT compliance check. This is done to verify that the VAT rates captured within the table are valid for the country where VAT is applied if the total invoice tax amount is greater than zero. The country where VAT is applied is derived firstly from the country code represented by the first two characters of an extracted vendor VAT registration number. If not available, the vendor country of origin is used.

The VAT compliance check is configured per processing profile and can be switched on and off depending on the invoice company code.

Prerequisites for VAT compliance checking are as follows.

- The vendor ID, company code, vendor VAT registration number, bill-to VAT registration number, exchange rate, and local VAT amount fields are all active within the field configuration table for the processing profile. The company code and vendor ID fields must both be mandatory for all documents.

- Vendor master data is available with the vendor country and the vendor VAT registration number or numbers available within the data source. If a vendor has multiple VAT registration numbers, these must be expressed as a comma-separated list.

- The company code look-up has been activated and points to a data source that contains the company code country and VAT registration number(s). If a company code has multiple VAT registration numbers, these should be expressed as a comma-separated list.

- VAT registration numbers held within the company code and vendor data sources must be prefixed by a two character country code.

- The country look-up has been activated and points to a data source that contains the national currency, the current VAT rates and a flag to indicate whether the country is or is not a member of the European VAT framework.

## Maintain the country table

The VAT compliance check uses a configurable table of countries which provides the system with details regarding the currency and current VAT rates used by a given country as well as information

regarding whether the country is a member of the European Union VAT directive. The country configuration table is pre- populated with data at time of install, but may require periodic updates to reflect changes in national circumstances.

To maintain the country table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global  Settings** using the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Country Master Data** node. The country configuration table is then displayed.
4. Locate the row for the country you wish to maintain.
5. Select the **EU Tax Member** check box if the country participates in the European Union VAT directive.
6. Enter the official currency used by the country in **Currency**.
7. Enter a comma-separated list of VAT rates used by the country in **VAT Rates**. This must be populated if you wish the system to validate tax rates extracted into the VAT table.
8. Save the changes.

## Configure VAT compliance

If the VAT compliance check is activated for the invoice company code, the corresponding system behavior is as follows.

- If tax is being charged on the invoice, the vendor VAT registration number field must be populated. It is possible to configure certain company codes to require both VAT registration numbers. If both are required, they must have the same two character country prefix.

- If no tax is being charged on the invoice, the vendor VAT registration number field and the bill-to VAT registration number fields must be populated if both parties belong to a European VAT framework member country.

- If tax is being charged on the invoice and the invoice currency differs from the national currency of the country where tax is levied, either the Exchange Rate or Local VAT Amount fields must be populated.

The vendor and company code fields must be populated with valid data for the above checks to be carried out.

If the Verifier user is unable to confirm that the invoice is complete from a VAT perspective, they can select NON TAX COMPLIANT from the invalid reason field drop-down to allow the invoice to pass.

The VAT compliance check is not carried out if the user has selected an invalid reason other than NONE, THIRD PARTY FREIGHT, PO VENDOR <> INVOICE VENDOR or STOCK INVOICE.

To configure VAT compliance, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. Select the **Activate VAT Compliance Check** check box.
6. Enter a comma-separated list of company codes that are not relevant for the VAT

compliance check in **VAT Check Company Code Exceptions**. If the **Activate VAT Compliance Check** check box is cleared, the compliance check will only be executed for company codes listed in this field.

7. Select the **Vendor VAT Check Only** check box. If tax is being charged on the document, the vendor VAT registration number field will become mandatory. The bill-to VAT registration number field will remain optional.

8. Enter a comma-separated list of company codes where both the vendor VAT registration number and bill-to VAT registration numbers are required if tax is being charged on the invoice in **Vendor VAT Check Company Code Exceptions**. If the **Vendor VAT Check Only** check box is cleared, then the vendor VAT registration number and bill-to VAT registration number fields will become mandatory if tax is being charged for all company codes except the ones listed in this field.

9. Select the **Check VAT Cross Border** check box. If no tax is being charged on the document, but both the vendor and company code belong to countries that are members of the European VAT framework, the vendor VAT registration number and bill-to VAT registration number fields will become mandatory.

10. Enter a comma-separated list of company codes not relevant for the cross border VAT check in **Cross Border Company Code Exceptions**. If the **Check VAT Cross Border** check box is cleared, the system will carry out the cross border VAT check only for company codes listed in this field.

11. Select the **Extract Tax Into VAT Table** check box if you want to extract the invoice tax into the VAT table. The VAT table must be active in the field configuration table. This is appropriate for a processing profile that is processing European invoices only.

12. Select the **Check VAT Rates** check box if you want the system to check that any VAT rates extracted into the VAT table are relevant for the country where tax is being charged.

13. Save the changes.

## VAT compliance for non-EU countries

You can extend the check for vendor and bill-to tax registration numbers to include non-EU countries through the use of non-EU tax groups.

A non-EU tax group represents an independent system of invoice compliance checking used in other countries that is separate from that used within the European Union. You can assign the group to one or more countries in the country configuration table. For example, if you wanted the system to check for GST registration numbers on domestic invoices within India, you can create a non-EU tax group TAXINDIA and assign this group to India in the country configuration table.

When processing an invoice, if the VAT compliance check is activated for the invoice company code and the vendor and company code are both located in India, the system will look for the vendor and bill-to GST numbers on the document, and will stop the invoice if they are not found. If you then assign non-EU tax group TAXINDIA to a second country, then the system will extend the compliance check to that country and also to invoices concerning transactions between that country and India, as would be the case between two EU member states.

To assign a country to a non-EU tax group, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings** using the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Country Master Data** node. The country configuration table is displayed.

4. Locate the row for the country you wish to maintain.

5. Enter the name of the non-EU tax group you want to assign to the country in **Non EU Tax Group**. You can use any name you want to.

6. Save the changes.

**Result**

The non-EU compliance check applies only to the vendor and bill-to tax registration numbers. It does not include the check for foreign currency or VAT rates in the VAT table. A country cannot be an EU tax member and also belong to a non-EU tax group. If a country is erroneously designated as both, the EU tax member flag takes priority.

## Tax compliance for India

In addition to checking for the presence of tax registration numbers on the invoice, India has tax compliance requirements as well. A valid tax invoice must include the following information:

- The PAN number

- The invoice total amount in words

- The HSN code

- The place of supply

- The state code of the place of supply

- Document must contain the words TAX INVOICE.

- Document must contain the words ORIGINAL FOR RECIPIENT or a variation of the same.

You can configure the solution to check for these items of information on domestic invoices from India. If activated, seven fields representing these items appear on the dynamic Verifier form. You do not need to activate them separately in the field configuration table. The additional compliance checking occurs if tax is charged on the invoice, and the vendor and company code countries are both set to IN for India. If any of the seven items cannot be found, the document stops in Verifier for a user to perform the check manually. The user can confirm the presence of each field by entering text into the field input box. The NON TAX COMPLIANT invalid reason can be selected to allow the document to pass if any of the seven fields were not stated on the document.

To configure tax compliance for India, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.

5. Select the **Enable India Tax Compliance** check box.

6. Save the changes.

## Golden Tax

Golden Tax is the name given to a government project in mainline China aimed at providing an integrated, nationwide VAT monitoring system. As such, when a VAT invoice is generated by a vendor, it is done so via government-certified Golden Tax software so that the VAT aspect of the invoice is recorded and monitored centrally. All companies and individuals are required by law to raise domestic VAT invoices in this manner. When an invoice is received by a buyer, key details stated on the invoice are validated against the central Golden Tax database to confirm that the invoice is genuine. Only invoices that validate against this central database may be included in a company VAT return for which a VAT refund from the government may be due. Hence, it is in the buyer's interest to ensure that only Golden Tax-certified invoices are being processed.

## Use AP Project with Golden Tax

AP Project has the ability to extract the relevant details from standard, domestic Chinese VAT invoices that are required for the purposes of the Golden Tax validation process. These details can subsequently be included in a standard export, such as XML, database export or CSV file export, and passed to the relevant systems downstream.

The relevant fields are as follows.

- Invoice code
- Invoice password
- Invoice number
- Invoice date
- Invoice total amount
- Invoice tax amount
- Bill-to VAT registration number
- Vendor VAT registration number

Invoices relevant for the Golden Tax process are identified using classification. That is, they are classified initially to the 'Invoice_CN' class, before being returned up to the parent 'Invoices' class. It is also possible to classify documents manually into the 'Invoice_CN' class, or to re-classify invoices back to the 'Generic' class in the event of a misclassification.

In the field configuration table, it is possible to specify whether a field is needed or not needed based upon the initial document class, hence the Golden Tax specific fields and corresponding validation rules which are particular to domestic VAT invoices can be configured as separate entries in the field configuration table relating exclusively to the 'Invoice_CN' class.

Class-specific rules are configured via specifying the initial classname in the 'Class Name' column in the field configuration table. Hence, if a class-specific rule exists, two rows can exist in the field configuration table for the same field - one for the regular 'Invoices' class, and one for the specific class. When reading the field configuration table, the system initially looks for a class-specific entry. If one exists, it will be used; if a class- specific entry does not exist, the entry for the 'Invoices' class will be used. If none exist, the field is considered inactive and not relevant for the processing profile ID.

Typically, the invoice number, date, total amount and tax are already mandatory fields for any AP Project project, but, via configuration, the additional fields, namely invoice code, invoice password, the bill-to VAT registration number and the vendor VAT registration number can all be made

mandatory with the relevant formatting and validation rules added. The system attempts to extract all of these field automatically for documents classified to the 'Invoice_CN' class.

## Special configuration for the invoice password

The invoice password, which appears as a four-line block in the top right hand corner of a standard Chinese VAT invoice, is subject to additional formatting rules. The invoice password is a string of either 84 or 108 characters, consisting of numbers and special characters. You can configure the valid lengths and permitted special characters for this field.

The standard installation comes pre-configured with the appropriate formatting rules for the invoice password as of April 2018, but these can be changed, if required.

To set the formatting rules for the Chinese invoice password, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. In the **CN Password Specials** field, enter the special characters that are permitted to appear in the invoice password.
6. In the **CN Password Valid Length** field, enter the valid lengths that are permitted for the invoice password. If multiple lengths are permitted, then these must be entered as a comma-separated list.
7. Save the changes.

# Line Pairing

The AP Project line pairing feature is a process that takes place at time of document export. It leverages the solution's unique search technologies to reconcile the invoice line items with line items that the ERP system allows you to post against. Normally, these ERP system line items are purchase order line items, but, depending on the ERP system, they may also be goods receipts, service entry sheets or planned conditions for miscellaneous charges.

This is a critical operation for creating a complete purchase order related invoice in the downstream enterprise resource planning (ERP) system, as ERP systems at least require a purchase order line item number for each invoice line entered. Typically, a client's purchase order line item number does not appear on vendor invoices and, when they do, they are not always stated correctly. The AP Project line pairing feature is able to overcome this and derive the correct purchase order line item number and any other relevant data automatically through comparing the extracted invoice line item data with what is available on the purchase order.

The AP Project differentiator allows the system to employ the product's patented fuzzy search technologies to perform the down-to-the-line item description level, which delivers an industry-leading success rate.

Without this feature, even though the document may pass straight through the Verifier application without requiring data correction, the document needs to stop in the ERP system for manual completion. Often this manual completion of the line item data can prove extremely time-consuming, especially when dealing with large purchase orders and a large number of invoice lines.

For example, if the purchase order contains 300 line items and an invoice referencing this purchase order has 60 line items, the user would need to pick the right 60 lines from a list of 300 lines. This is why straight-through processing for purchase order related invoices becomes impossible unless you deploy some form of line pairing.

In addition to this, the line-pairing feature can also perform the following functions.

- Perform checks to ensure that the invoice quantity is being booked in the correct unit of measure and convert to the purchase order unit of measure, if required.

- Reconcile the invoice data to blanket and service purchase orders within the ERP system.

- Handle the posting of invoice miscellaneous charges, such as freight and customs charges, in accordance with client business rules. This is covered in a later section.

- Handle the same material that appears on the purchase order more than once.

- Handle multiple purchase orders that appear on a single invoice.

- Process third-party freight invoices against a purchase order created for a different vendor. Line pairing is not carried out if any of the following conditions exist.

- Line pairing is deactivated in the system configuration.

- Line-item extraction is deactivated in the system configuration.

- The invoice type is NO-PO.

- The document type is CREDIT.

- The PO type is SERVICE and line pairing is deactivated for service PO types.

- The vendor is a utility vendor and line item extraction is switched off for utility vendors.

- The Verifier user has selected an invalid reason of VENDOR NOT FOUND or VENDOR ADDRESS NOT FOUND, and line item extraction is deactivated for that invalid reason.

- The Verifier user has selected an invalid reason of MISSING/INVALID PO, MISSING/INVALID VENDOR & PO, INVOICE AMOUNTS DO NOT ADD UP, or an invalid reason based on the SETINVOICETOVALID rule.

- The purchase order has not been released and line item extraction is deactivated for unreleased purchase orders.

- The purchase order does not have any line items in the data source.

- All lines on the purchase order are fully invoiced and the system is configured to ignore completed purchase order lines.

- A purchase order to be used for line pairing has a duplicate record in the purchase order header database and duplicates are not allowed.

- A purchase order to be used for line pairing has multiple lines with the same line item number and you have configured the system to reject duplicates.

- The invoice currency does not match either the purchase order currency or the local currency of the PO company code.

- The invoice currency does not match the purchase order currency, but does match the local currency of the PO company code, but no exchange rate for conversion between the PO currency and company code currency is available on the purchase order header.

None of the conditions listed above cause document export to fail.

## Activate line pairing

To activate line pairing, perform the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
5. Select the **Do Line Pairing** check box.
6. Select the **Do Line Pairing For Service** check box if you also want the system to do line pairing for service invoices.
7. Select the **Check For Multiple POs** check box if you receive invoices where more than one purchase order number is stated on a single invoice.
8. Select the **Check For Duplicate PO Lines** checkbox if you want the system to fail line pairing if any single purchase order retrieved prior to line pairing has multiple line items with the same line item number. This may indicate a problem with the purchase order line data the system is pointed to.
9. Select the **Multi Pairing To Single PO Line** check box if you receive invoices where there are multiple invoice lines for the same material which need to be paired to one single line on the purchase order. This can happen in cases where the vendor submits a monthly invoice covering multiple, itemized deliveries where the same material features in more than one delivery, but all need to be paired to the same purchase order line item.
10. Select the **Ignore Completed PO Lines** check box if you do not want the system to consider purchase order lines which have already been fully invoiced. A fully invoiced purchase order line means that the quantity already invoiced is either greater or equal to the quantity ordered.
11. Save the changes.

**Next**

To read the purchase order data required for line pairing, AP Project can be pointed to an ERP system or a purchase order database. You can find information on configuring the purchase order line item look-up elsewhere in this user's guide depending on the data source you are using.

If a technical error occurs when trying to retrieve the purchase order, export fails and the document is sent to a state of 750.

The line-pairing feature operates differently depending on whether the invoice purchase order is for materials or services.

## Line pairing for material invoices

If the invoice relates to a material purchase order, the system undertakes four steps before pairing a line item.

1. Identify the corresponding purchase order line item.

2. Identify a goods receipt document, if required.

3. Convert the invoice quantity to the order unit of measure specified on the purchase order line.

4. Compare the invoice line item unit price to the purchase order unit price

(optional). The process is repeated for all line items on the invoice.

If the invoice only has one line item and the purchase order also only has one available line item because any other lines were all either marked for deletion or fully invoiced, then the system skips the first step and proceeds to evaluate the single PO line through steps 2 to 4.

If any of the four steps fail, the invoice line item is not paired.

## Identify the corresponding purchase order line item

In this step, the system initially looks at the invoice material number, unit price and description in that order and tries to find a purchase order line that is a unique match.

If a unique match can be found, the system selects this purchase order line and moves to the next step.

If multiple matches are found, the system also considers the quantity and pricing to see whether a unique match can be found. If a unique match still cannot be found, but the multiple matching lines are all for the same material (this means that the purchase order lines have the same unit price and also the same description or material number), the system by default selects the first available matching purchase order line, but you can configure the system to make no decision in this case. In the multiple material case, you can also configure the system to reject the pairing unless a purchase order number and purchase order line item number can be found in the OCR text around the invoice line item.

If no match can be found, the line is not paired.

For an initial match made using the unit price, you can use the Unit Price Tolerance parameter to reject the pairing if another purchase order line item has a unit price close in value that falls within the percentage range you specify. For example, if the parameter is set to 10, the invoice unit price is $20, and the system finds a single PO line also for $20, but another PO line exists for $22, then the system will reject the initial unit price based pairing as $22 is within 10% of $20.

You can configure tolerances for cases where the initial pairing is made using a fuzzy match using the item description. The Description Threshold controls the minimum percentage by which the extracted description needs to match the purchase order line item description. The Description Distance parameter allows you to specify the percentage distance that the best matching line needs to clear the second best match.

Description-based line pairing only takes place if the extracted invoice line item description is more than four characters in length and it contains either one word with four letters or more, or at least two three letter words.

To configure the relevant parameters, perform the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.

5. Enter the description threshold you want to use in **Description Threshold**. It is recommended to use the default value of 30. A blank entry is understood to be a threshold of zero.

6. Enter the description distance you want to use in **Description Distance**. It is recommended to use the default value of 10. A blank entry is understood to be a distance of zero.

7. Enter the unit price tolerance you want to use in **Unit Price Tolerance**. If you leave this value blank, the additional unit price range check is not performed.

8. Select the **Enable Integrity Check** check box if you do not want the system to select the first matching line item if there are multiple identical purchase lines for the same material.

9. Select the **Require PO Details For Multiple Materials** check box if you do not want the system to make a decision on a multiple materials case unless the specific purchase order number and purchase order line item number is stated on the invoice.

10. Save the changes.

## Identify a goods receipt document

In this step, the system checks to see if the purchase order line item identified in step 1 is configured in the enterprise resource planning (ERP) system to require a specific goods receipt. (The PO line is set for goods receipt based invoice verification.) If a specific goods receipt is required for invoice entry, then the system looks at all of the available goods receipts for that purchase order line, and selects a goods receipt (or combination of goods receipts) that reflect the amounts and delivery note details supplied on the invoice.

If an appropriate goods receipt cannot be determined, then line pairing fails. If the purchase order line does not require a specific goods receipt to be specified when creating an invoice, then the system skips this check.

Configuration options for this step can found in the specific sections concerning the relevant ERP systems.

## Convert the invoice quantity to the purchase order unit of measure

The next step is to ensure that the quantity extracted on the invoice is expressed in the same unit of measure as the purchase order line and performs a conversion if necessary.

You can find more information on this step in the Unit Of Measure Conversions chapter.

## Compare the invoice line item unit price to the purchase order unit price

The final step is an optional check that involves checking that the invoice line item unit price falls within a specified range when compared to the purchase order line item unit price. This range is configured as a percentage using the Description Tolerance parameter. If the invoice unit price falls out of range, the line item pairing is rejected.

For example, if the range is set to 20% and the invoice line is paired to a purchase order line where the unit price is $20, the line item is not paired if the invoice unit price is less than $16 or more than $24.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.

5. Enter the unit price tolerance you want to use in **Description Tolerance**. The unit price check is not carried out if the parameter is left blank.

## Line pairing for service invoices

The AP Project solution provides functionality for service invoice line pairing, which functions in a different way to material line pairing. Invoices are sent down the service line pairing route if the PO Type field is set to SERVICE. You can find more information on configuring the PO Type field in the PO Number Configuration chapter in this document.

The following service purchase order types are supported.

## Single line limits purchase order

A single line limits purchase order is one which has a single line item with either an item category of 1, or a unit price of 1.

It is common practice among many companies to use a unit price of 1 for a service line item on the purchase order, effectively turning the quantity into a de-facto amount field. For example, instead of creating a purchase order line item with a quantity of 1, a unit price of $5000 giving a total value of $5000, the line is created with a quantity of 5000, a unit price of $1 giving a total value of $5000.

This is done for the following reasons.

- This removes the need to pro-rata the quantity based on the invoice net total as a proportion of the overall purchase order line total at the time of invoice entry. For example, if an invoice arrived for
$2478.93 against a service purchase order line created with a quantity of 1 and a unit price of $5000, then the quantity would need to be booked as 0.495786 ( 2478.93 / 5000 ). This is more complex for a user to process and the ERP system may not support the required number of decimal places.

- This prevents the purchase order line being fully invoiced with the difference being posted to profit and loss.

In the single line limits scenario, line item detail is not extracted from the invoice since the line item breakdown provided by the vendor seldom mirrors the manner in which a service purchase order is raised.

For example, a vendor providing consulting services may provide a complete breakdown of all time and costs spent on an engagement, each item of which constitutes an invoice line item. However, purchasing departments are inclined to raise a single line, blanket purchase order marked for "Consulting Services". At time of line pairing, the net invoice amount is booked against this single purchase order line.

## Multiline limits purchase order

A multiline limits purchase order is one every line item has either an item category of 1, (custom purchase order look-up only), or a unit price of 1 (all PO look-up types).

In this scenario, invoice line item extraction is required. To activate line item extraction for invoices relating to multi-line limits purchase orders, perform the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings**hierarchy tree, navigate to the **Line Item Table Settings** node.

5. Clear the **Skip For Multiline Limits** check box.

6. Save the changes.

**Next**

Once this change has been made, line items become mandatory if the invoice relates to a multi-line limits purchase order. Only the description and total columns need to be populated for each line. Line pairing fails for multi-line purchase orders if no line items are available.

At time of line pairing, the system uses the item description and total to identify the correct line item on the purchase order.

## Configure tolerances

You can configure tolerances for cases where pairing is made using a fuzzy match using the item description. These settings are distinct from those used for material line pairing to allow a more precise calibration for service invoices. The Limits Description Threshold controls the minimum percentage by which the extracted description needs to match the purchase order line item description. The Limits Description Distance parameter allows you to specify the percentage distance that the best matching line needs to clear the second best match. Description-based line pairing only takes place if the extracted invoice line item description is more than four characters in length.

You can use the Limits Description Tolerance parameter to reject a pairing if the value of the invoice line is x% greater than the total outstanding amount available against the purchase order line. The total outstanding amount available is calculated as the purchase order line item total minus the total sum of invoices already booked to that line. For example, if the total outstanding amount for a given purchase order line is $500 and the Limit Description Tolerance parameter is set to 10, then the system rejects any pairing where the invoice line is greater than $550.

To configure the tolerance parameters, perform the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
5. Enter the description threshold you want to use in **Limits Description Threshold**. It is recommended to use the default value of 50. A blank entry is understood to be a threshold of zero.
6. Enter the description distance you want to use in **Limits Description Distance**. It is recommended to use the default value of 10. A blank entry is understood to be a distance of zero.
7. Enter the value tolerance you want to use in **Limits Description Tolerance**. If you leave this value blank, the value tolerance check is not performed.
8. Save the changes.

## Service entry sheets purchase order

A service entry sheet is a goods receipt made for purchase order service line items in the ERP system. At time of invoice posting, the invoice details are paired to either a service entry sheet as a whole, or specific line items on the service entry sheet. Hence, the service entry sheet has to exist in the ERP system before posting an invoice is possible.

Use of service entry sheets is not common to all ERP systems. More information on the configuration options available can be found in the specific chapters in this document concerning those ERP systems.

Line pairing does not support a combination of service entry sheet type purchase order lines and any other type of purchase order line items.

## Other service purchase order type

Any invoices for services that does not fall into any of the above categories is processed as another purchase order type. For this purchase order type, line item extraction is not required and it is expected that the purchase order only has one line item. Line pairing fails if the purchase order has more than one line item.

At time of line pairing, the system books the invoice net amount to the single purchase order line, pro-rating the quantity if required.

## Line pairing and reporting

After line pairing has been carried out, the system updates the reporting database with statistical information. This happens during document export.

In reporting table **BRWDocument**, the following columns are updated.

| Column | Description |
|---|---|
| LP_PAIRED | This is the number of invoice lines that were paired. |
| LP_TOTAL | This is the total of the number of paired and unpaired invoice line items. |
| LP_STATUS | This is the line pairing status code. |

The LP_STATUS column contains the line pairing status code. The status codes and their meanings are listed in the table below.

| Status code | Meaning | Description |
|---|---|---|
| 0 | Not relevant for line pairing | This means that the document was not relevant for line pairing (for example, it was a NO-PO invoice) so line pairing was not carried out. |

| 1 | Unable to resolve currencies | This means that the invoice currency did not match the purchase order currency or the currency of the company code for which the purchase order was created. Hence, the system was unable to perform line pairing as there was no way to compare the invoice and purchase order pricing data. |
|---|---|---|
| 2 | All PO lines used or deleted | This means that all lines on the purchase order were either marked for deletion in the ERP system, or were fully invoiced and you have the **Ignore Completed PO Lines** check box selected in **Line Pairing Settings.** A fully invoiced purchase order line item is one where the quantity already invoiced is equal to or greater than the original order quantity. Hence, the system was unable to perform line pairing as there were no available purchase order lines to use. |
| 3 | No available PO lines | This means that line pairing was not carried out because no PO lines could be retrieved for invoice purchase order. |
| 4 | Missing goods receipt | This means that the system tried to pair one or more material invoice line items to a line on the purchase order that required a mandatory goods receipt, but no goods receipt existed for that PO line. Hence, line pairing failed. |
| 5 | Missing service entry sheet | This means that the system tried to pair the invoice to a service entry sheet type purchase order, but no service entry sheets existed for that PO. Hence, line pairing failed. |
| 6 | Unpaired material invoice | This means that line pairing failed for a material invoice. |
| 7 | Unpaired service invoice | This means that line pairing failed for a service invoice. |
| 8 | Unable to resolve misc charges | This means that, for an invoice with miscellaneous charge, line pairing for the material line items was successful, but you have configured one of more miscellaneous charge types to book against planned conditions in the ERP system and the system was not able to book them correctly. Hence, line pairing failed. |
| 9 | Unpaired third party freight | This means that, for a third party freight invoice, the system was unable to book the freight charges to planned conditions in the ERP system. Hence, line pairing failed. |
| 10 | Line pairing successful | This means that line pairing was successful for all items on the invoice. |
| 11 | PO number not unique in database | This means that the system found multiple records in the PO header table for a given purchase order. Hence, line pairing could not be performed. |

| 13 | Missing PO currency | This means that a currency was unavailable in the purchase order header. Because of this, the system was unable to compare the invoice and purchase order amounts.<br><br>Hence, line pairing could not be performed. |
|----|---------------------|---|
| 14 | Missing exchange rate on purchase order | This means that the invoice currency did not match the purchase order currency, but did match the purchase order company code currency. In this situation, line pairing can proceed as long as the exchange rate between the PO currency and company code currency is present on the PO header so the system can convert the amounts.<br><br>However, the exchange rate was not available so line pairing could not be performed. |
| 15 | Unit price out of tolerance | This means that one or more material invoice lines could not be paired due to differences between the invoice and purchase order unit price. This difference exceeded the tolerance you have configured using the **Description Tolerance** setting in **Line Pairing Settings**.<br><br>Hence the line pairing failed.<br><br>Documents failing line pairing with this status code does not necessarily mean that the tolerance you have configured is too strict. The primary purpose of this setting is to prevent lines from being paired incorrectly. For that reason, before making any adjustments, it is important to look at each case to determine whether it is a genuine case of an overly strict tolerance, or whether the setting is actually stopping the system from making an incorrect pairing decision. |
| 16 | Duplicate PO lines found | This means that one or more purchase orders retrieved during line pairing had multiple line items with the same line item number.<br><br>Hence, line pairing was not performed.<br><br>You can choose whether you want the system to perform the purchase order line item duplicate check using the **Check For Duplicate PO Lines** setting in **Line Pairing Settings**. |
| 17 | Duplicate misc charge account coding entries | This means that the duplicate miscellaneous charge account coding entries were found in the master data that you maintain in **Global Settings > Master Data > Misc Charge Acc Master Data**.<br><br>Hence, line pairing was not performed. You can find more detail on the duplicate entries by looking in the export log file for the affected document.<br><br>The duplicate entries must be removed. |

## About line pairing for third-party freight invoices

Within AP Project, a third-party freight invoice refers to a very specific business scenario whereby an invoice is received from a vendor billing for freight, yet that vendor legitimately quotes the purchase order number of another vendor (the material vendor), and it is against this material vendor's purchase order that the freight charge needs to be booked.

AP Project handles freight invoices that do not fall into this category as regular invoices. Third party freight invoices can be identified through the following.

- The identified vendor is not the material vendor for whom the purchase order was raised, but is the vendor set against a planned condition on any of the purchase order line items.

- A user selects the "Third-Party Freight" invalid reason within the Verifier application.

AP Project does not extract line items from third-party freight invoices. Instead, at the time of line pairing, the system books the net invoice amount according to the miscellaneous charge group settings assigned to third-party freight vendors in the BRWMSC table. The rules for posting third-party freight and other miscellaneous charges are described in detail in the Third-party freight section of this document.

# Miscellaneous Charges

Miscellaneous charges refers to the additional items a vendor may include on an invoice document that have to be booked with the primary invoice items.

Examples include a freight charge, a customs charge, an energy surcharge or an administration charge.

Miscellaneous charges can appear at both header and item level from an invoice presentation point of view, but are ultimately treated as line items from an accounting point of view as they form part of the items that a vendor is billing you for.

At the header level, AP Project provides two fields for this purpose. These fields are AmountFreightPrepaidAndAdded and AmountMisc.

At the line item level, the category column is used to identify and classify any miscellaneous charges captured that the vendor specifies as a line item on the invoice. This category is set automatically by AP Project drawing based upon configuration in the miscellaneous charge configuration table.

The handling of miscellaneous charges is dependent on the business rules of the client. The solution configuration options allow the following.

1. Miscellaneous charges to be booked as 'unplanned delivery costs'. (that is a single, header-level amount field within the downstream ERP system)

2. Miscellaneous charges to be booked as a separate invoice line item with a specific line type. (Oracle Financials)

3. Miscellaneous charges to be booked as a direct general ledger account entry.

These events occur during the line pairing operation carried out during document export. Hence, line pairing must be activated for miscellaneous charge processing to occur. In addition, the document must be relevant for line item extraction. If line pairing is deactivated, then any miscellaneous charges will be outputted in the form in which they were captured from the invoice.

**Note:** The system always checks for the existence of a regular purchase order line item representing the miscellaneous charge before applying the configured processing option. If one is found, then this line item is used. Miscellaneous charges set up as regular purchase order line items are identified by the purchase order line item description and the extent to which it fits with the aliases configured as described in the "Assign Line Items to a Miscellaneous Charge Category" section below.

## Miscellaneous charge categories

Miscellaneous charge categories are configured per processing profile using the miscellaneous

charge configuration table within Solution Configuration Manager.

Each row within the table represents a miscellaneous charge category. The category denotes the type of miscellaneous charge, such as a freight charge, a customs charge, and so on.

The number of categories that must be configured is dependent on how you want to process these charges, and the number of miscellaneous charge categories is driven by the number of different processes you want to use.

For example, if all miscellaneous charges, irrespective of what they are, must be summed and booked as a single general ledger account entry in the downstream ERP system, then only one miscellaneous charge category needs to be configured.

However, if you want to book specific miscellaneous charges to a specific general ledger account depending on what type of charge it was, such as account 1000 for freight; account 2000 for customs charges; account 3000 for pallet charges, and so on, then there must be as many miscellaneous charge categories as the number of possible general ledger codes to book them against.

Each miscellaneous charge category is assigned a name and a code. In the Dynamic Verifier application, if a line item is identified as belonging to a particular miscellaneous charge category, the code set for that group in the system configuration will be copied into the category column for that particular line item.

Configuring a miscellaneous charge category involves assigning header and line item fields to that category, and then deciding how you want the process those charges during line pairing.

## Create a miscellaneous charge category

The system is preconfigured with three miscellaneous charge categories. You can adapt or remove these categories for your purposes, or you can create new miscellaneous charge categories to meet the business need.

To create a new miscellaneous charge category, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Categories** node. This displays the miscellaneous charge configuration table.
5. Scroll to the last row in the table where you have the option to create a new entry.
6. Populate the **Index** column with the next available sequential number.
7. Enter a short description of your miscellaneous charge category in the **Type** column. The text you enter here is used as the description if the miscellaneous charge is exported as a line item.
8. Enter the code you would like to use for your miscellaneous charge category in the **Code** column. This should be a single character that is not used by any other miscellaneous charge category.
9. Click the **Insert** hyperlink to save your changes.

## Assign fields and line items to a miscellaneous charge category

Miscellaneous charge categories are assigned fields at header level and lines at line item level. The amounts extracted into those header fields are summed together with the line item totals to give the total value of charges belonging to that category.

For example, if the system captures a freight amount of $100.00 in the header level freight field, and also recognizes two freight charges captured within the line items table for $20.00 and $40.00, then the total value of a miscellaneous charge category configured for freight is $160.00.

## Assign header fields to a miscellaneous charge category

You can assign amount type fields that exist within the AP Project invoices project to your miscellaneous charge category. You must take care only to assign fields that represent miscellaneous charges, as opposed to other amount fields such as those for tax.

To assign a header field to a miscellaneous charge category, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Categories** node. This displays the miscellaneous charge configuration table.
2. Locate the row representing the relevant miscellaneous charge category.
3. Enter the technical name of the AP Project header field in the **Header Field** column. You can enter multiple header fields as a comma-separated list and entry is not case sensitive. You must ensure that the same header field is not assigned to more than one miscellaneous charge category, otherwise, the value of the miscellaneous charge will be double-counted for each additional category it is assigned to leading to an invoice that is out of balance.
4. Save the changes.

## Assign line items to a Miscellaneous Charge Category

The assignment of line items to a miscellaneous charge category occurs using the extracted line item description. Within the miscellaneous charge configuration table, you can define a list of phrases associated with a given miscellaneous charge category. If an extracted or user-entered description for a line item matches one or more of these phrases, then the system will assign that line item to that miscellaneous charge category.

You can also configure forbidden phrases to prevent assignment of a line item to a miscellaneous charge category.

For example, if you have **Delivery** configured as an identifying phrase, and the invoice line item description for a material is **Water Delivery Pump**, then the system would incorrectly recognize the line item as a freight charge. This incorrect assignment can be prevented by configuring **Water** or **Pump** as a forbidden phrase.

To assign line items to a miscellaneous charge category, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Categories** node. This displays the miscellaneous charge configuration table.
2. Locate the row representing the relevant miscellaneous charge category.
3. Enter a list of identifying phrases in the **Alias** column. The list must be comma-separated and is not case sensitive. You must ensure that the same phrase is not assigned to more than one miscellaneous charge category, and also that the chosen phrase does not overlap with any other miscellaneous charge categories defined.

4. Enter a list of forbidden phases in the **Negative Alias** column. This list must be comma-separated and is not case sensitive. It does not matter if the same phrase is used across multiple miscellaneous charge categories.

5. Save the changes.

## Configure processing of miscellaneous charge categories

After creating a miscellaneous charge category and determining which fields and line items belong to that category, the next step is to decide how you want the system to handle the miscellaneous charge during line pairing.

The following options are available.

## Post miscellaneous charges using a specific line type

This option can be used for ERP systems that require a miscellaneous charge to be passed at line item level with an identifying column indicating what type of miscellaneous charge it is. Within AP Project, the line item export parameter 'LineType' is used for this purpose.

If you configure the system to process the miscellaneous charge using a specific line type, the system will create an extra line in the line item output setting the line item total column to the sum of the miscellaneous charge category and the line type column to a value you specify.

To configure the processing of miscellaneous charges to a specific line type, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Categories** node. This displays the miscellaneous charge configuration table.

2. Locate the row representing the relevant miscellaneous charge category.

3. Populate the **Line Type** column with the value that you want the system to export for the **LineType** parameter for the line item export. Entering a value here overrides any other type of miscellaneous charge processing activity configured.

4. Save the changes.

## Process miscellaneous charges as unplanned costs

If you want to export a miscellaneous charge as part of the invoice header data, you need to configure the miscellaneous charge category to handle the charge as an unplanned cost.

During export, the system takes all miscellaneous charges configured to export as unplanned costs, sums them together and exports the total through the single UnplannedFreight export parameter.

To configure a miscellaneous charge category to process charges as an unplanned cost, complete the following steps in Solution Configuration Manager.

1. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Categories** node. This displays the miscellaneous charge configuration table.

2. Locate the row representing the relevant miscellaneous charge category.

3. Ensure the **Line Type** column is empty.

4. Select the **Always Book To Unplanned** check box.

5. Save the changes.

## Post miscellaneous charges to a general ledger account

Miscellaneous charges can be configured to post to a general ledger account. This means that the miscellaneous charge is exported as a general ledger account line item as opposed to a regular line item. One general ledger line item is exported for each miscellaneous charge category that is configured to post to a general ledger account.

A general ledger account line item consists of the following components.

- A general ledger account code representing the type of expense.
- A Cost object, such as a cost center, an internal order, a profit center, a project.
- A tax code.

To configure the system to create a general ledger line item for your miscellaneous charge, complete the following steps in Solution Configuration Manager.

1. Within the Processing Settings hierarchy tree, navigate to the Misc Charge Categories node. This displays the miscellaneous charge configuration table.

2. Locate the row representing the relevant miscellaneous charge category.

3. Ensure that the Line Type column is empty.

4. Ensure that the Always Book To Unplanned check box is cleared.

5. Ensure that the Always Book To Planned check box is cleared.

6. Select the Always Book To GL Account check box.

7. Enter the general ledger account you want to use in the GL Account column.

8. Select the Get Cost Object From PO Line check box if you want the system to use the cost object from the first purchase order line paired to in the first instance. If no cost object is available, the system will use the default cost objects configured for the miscellaneous charge category.

9. Enter a default cost center in the Default Cost Center column. The system uses this cost center if no other cost center can be determined.

10. Enter a default profit center in the Default Profit Center column. The system uses this profit center if no other profit center can be determined.

11. Enter a default tax code in the Default Tax Code column. The system uses this tax code if no tax code can be determined from the first paired invoice line item.

12. Save the changes.

To facilitate greater versatility when posting freight as general ledger account entries, a miscellaneous charge account coding look-up table can be used so that specific general ledger account codes, cost objects and tax codes can be assigned on a company code by company code basis and a plant by plant basis incorporating the purchase order line type, if required. This table is available as a standard table within the solution, but you can also use an external table for this purpose.

The following table contains an example for populating the miscellaneous charge account coding look-up table for company code GB01.

| Company Code | Category | Line Type | Plant | GL Account | Cost Center | Profit Center | Tax Code |
|---|---|---|---|---|---|---|---|
| GB01 | F | A | 1000 | 1000 | 2000 | 3000 | I0 |
| GB01 | F | (space) | 1000 | 1000 | 3000 | 3000 | I0 |
| GB01 | F | A | (space) | 1000 | 3000 | 4000 | I0 |
| GB01 | F | (space) | (space) | 1000 | 2000 | 2000 | I0 |

The company code, plant, line type and category columns are mandatory and form the unique key for each row in the table. A column populated with a space denotes a 'wildcard'. This means that this column is not required to match in order for the system to find a hit.

The system accesses the table according to the following sequence.

1. By miscellaneous charge category, company code, plant and line type.

2. By miscellaneous charge category, company code and line type using a wildcard for the plant.

3. By miscellaneous charge category, company code and plant using a wildcard for the line type.

4. By miscellaneous charge category and company code using wildcards for the plant and line type.

As soon as a matching record is found, the access sequence breaks and that record is used. The above must be considered when populating the table. The plant and line type used to interrogate the table are derived from the first paired line item. If no paired line items are available, the system will use the plant and line type from the first purchase order line.

For example, if a look-up is performed against the table as populated in the example above using miscellaneous charge category 'F', plant 1000, line type 'B' and company code 'GB01', access sequence steps one and two will fail, but access sequence step three will select the second row in the table as a match exists for company code 'GB01', category 'F' and plant '1000'. A match is not require for line type 'B' as the line type column for the second row is populated with the wildcard.

If no row can be identified, the system will set the general ledger account, cost object and tax code in accordance with settings applied in the miscellaneous charge configuration table.

If a row is identified, but no general ledger account is populated, the system will use the general ledger account configured for the miscellaneous charge category.

The system selects the cost object in the following order of priority.

1. The cost object of the first paired invoice line if the 'Get Cost Object From PO Line' check box is selected for the miscellaneous charge category.

2. The cost object set against a row found in table the miscellaneous charge account coding look-up table.

3. The default cost center/profit center configured for the miscellaneous charge category. The system selects the tax code in the following order of priority.

   1. The tax code set against a row found in table the miscellaneous charge account coding look-up table.

2. The tax code from the first paired invoice line item.

3. The default tax code configured for the miscellaneous charge category.

4. For countries and ERP systems that use tax jurisdictions, the tax jurisdiction code is derived from the first paired invoice line.

If the general ledger account is not relevant for tax postings in the ERP system, a double asterisk (**) must be entered into the tax code column in the table. This has the effect of passing a blank tax code and a blank tax jurisdiction code downstream.

To activate usage of the miscellaneous charge account coding table (BRWMISCACC), complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Navigate to the 'Misc Charge Settings' node in the 'Processing Settings' hierarchy tree.

5. Select the **Validate From DB** check box. Further settings are then displayed.

6. Select the SQL connection group that represents the connection to the database that contains the miscellaneous charge account coding table using the **SQL Connection Group** drop-down.

7. If you have changed the name of the table from 'BRWMISCCACC' to something else, enter the new table name in the **DB Table Name** field.

8. Save the changes.

**Result** If an error is raised when trying to connect to table BRWMISCACC, export will fail for the document.

## Configure the miscellaneous charge account coding look-up using the standard table

The standard miscellaneous charge account coding table that is installed as part of the AP Project configuration database uses partition IDs to distinguish between different sets of miscellaneous charge account coding master data all within a single table. A partition ID is subsequently assigned to a client. This allows more than one client to share the same set of coding data for ease of maintenance, particularly in cases where more than one client uses the same ERP system.

When performing miscellaneous charge account coding, the system only looks at the account coding records that belong to the miscellaneous charge account coding partition assigned to the client of the current document.

**Register the miscellaneous charge account coding partition**

To register a new miscellaneous charge account coding partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings**.

3. Within the Global Settings hierarchy tree, navigate to the **Misc Charge Acc Partition Settings** node. This then displays the miscellaneous charge account coding partition configuration table.

4. Scroll to the last row in the table where you have the option to create a new entry.

5. Enter the unique ID for your unit of measure conversion partition in **Misc Charge Acc Partition**. This must be entered as an integer.

6. Enter a short description for your partition in **Description**.
7. Click the **Insert** hyperlink to save the changes.

**Assign the miscellaneous charge account coding partition to a client**

To assign a miscellaneous charge account coding partition to a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
3. Locate the row for the client to which you want to assign a miscellaneous charge account coding partition.
4. Choose the miscellaneous charge account coding partition you wish to assign to the client by selecting the partition ID number from the **Misc Charge Acc Partition** drop-down.
5. Save the changes.

**Configure the miscellaneous charge account coding look-up**

To configure the miscellaneous charge account coding lookup to use the standard AP Project table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Settings** node.
5. Select the **Validate From DB** check box.
6. Clear the **Use External Table** check box.
7. Save the changes.

**Maintain miscellaneous charge account coding master data**

To maintain miscellaneous charge account coding master data within the solution, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Misc Charge Account Master Data** node. This then displays the miscellaneous charge account coding configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the partition ID for your miscellaneous charge account coding record in **Misc Charge Acc Partition**.
6. Enter the company code in **Company Code**. This column is mandatory.
7. Enter the miscellaneous charge category in **Category**. This column is mandatory.
8. Enter the plant in **Plant**. This column is optional.
9. Enter the line type in **Line Type**. This column is optional.
10. Enter the general ledger account that you wish to use for the miscellaneous charge

account posting in **GL Account**. This column is mandatory.

11. Enter the cost center that you wish to use for the miscellaneous charge account posting in **Cost Center**. This column is optional.

12. Enter the profit center that you wish to use for the miscellaneous charge account posting in **Profit Center**. This column is optional.

13. Enter the tax code that you wish to use for the miscellaneous charge account posting in **Tax Code**. This column is mandatory. If you do not want to specify a tax code, you must populate this column with a double asterisk (**).

14. Click the **Insert** hyperlink to save the changes.

When populating the miscellaneous charge account coding table, you must ensure that you do not enter any duplicate rows. A duplicate row is one where the **Misc Charge Account Partition**, **Company Code**, **Category**, **Plant** and **Line Type** columns are populated with the same value. If the system finds a duplicate row prior to performing line pairing, line pairing is not performed.

**Configure the miscellaneous charge account coding look-up to use an external table**

To activate usage of an external miscellaneous charge account coding table (e.g. BRWMISCACC), complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Navigate to the **Misc Charge Settings** node in the **Processing Settings** hierarchy tree.

5. Select the **Validate From DB** check box. Further settings are then displayed.

6. Select the **Use External Table** check box. Further settings are then displayed.

7. Select the SQL connection group that represents the connection to the database that contains the miscellaneous charge account coding table using the **SQL Connection Group** drop-down.

8. If you have changed the name of the table from 'BRWMISCCACC' to something else, enter the new table name in the **DB Table Name** field.

9. Save the changes.

If an error is raised when trying to connect to the external table, export will fail for the document.

## Third-party freight

Within AP Project, a third-party freight invoice refers to a very specific business scenario whereby an invoice is received from a vendor billing for freight, yet that vendor legitimately quotes the purchase order number of another vendor (the material vendor), and it is against this material vendor's purchase order that the freight charge needs to be booked.

Freight invoices that do not fall into this category are handled as regular

invoices. Third party freight invoices are identified by one of the following.

- The identified vendor is not the material vendor for whom the purchase order was raised, but is the vendor set against a planned condition on any of the purchase order line items.

- A user selects the THIRD PARTY FREIGHT invalid reason within the Verifier

application. Line items are not required from third-party freight invoices.

During line pairing, the system books the net value of the invoice against the material vendor's purchase order according to the processing rules set against the miscellaneous charge category assigned to third-party freight vendors.

If the rule is set to post as unplanned, the system will also create a zero-value debit invoice line item against the first line item of the purchase order belonging to the material vendor.

If the rule is set to post against planned condition records on the purchase order, the condition records must be goods receipted.

To assign a miscellaneous charge category for third party freight, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Misc Charge Settings** node.
5. Enter the code for the miscellaneous charge category you wish to assign for third party freight in **Third Party Freight Code**.
6. Save the changes.

## Add new miscellaneous charge fields

The AP Project project file is bundled with two fields for capturing miscellaneous charges at the header level, specifically the AmountFreightPrepaidAndAdded and AmountMisc fields.

The AmountFreightPrepaidAndAdded field is pre-trained to extract freight and transportation costs from invoices. The AmountMisc field is not trained, so that flexibility is there to designate that field for a specific type of miscellaneous charge, such as a pallet charge or an energy surcharge. UserExitAmountMiscPostEvaluate is available for any custom script deemed appropriate to assist with the extraction of this field.

If a third field is required, it must be created at the Invoices level and must be called AmountMiscXXX, where XXX is a meaningful field descriptor. This ensures that the new miscellaneous charge field is included in the mathematical validation applied to the invoice header level amounts. Additionally, the new field must be added to the field configuration table for any relevant processing profiles.

Furthermore, a standard validation event for the new field must be added to the invoices class level containing script to call the system validation routines. The script that needs to be inserted is shown below.

```
Private Sub AmountMiscXXXX_Validate(pField As
SCBCdrPROJLib.ISCBCdrField, pWorkdoc As SCBCdrPROJLib.ISCBCdrWorkdoc,
pValid As Boolean)

    If InitializeDLLAccess("Invoices
       AmountMiscXXXX_Validate") Then On Error GoTo
       Err_AmountMiscXXXX_Validate
       'Trigger event handling routine
       Field_ICALValidate(pField, pWorkdoc, pValid)
    End If Exit Sub
```

```
Err_AmountMiscXXXX_Validate:
    Project.LogScriptMessageEx(CDRTypeError,CDRSeverityLogFileOnly,"Error
AmountMiscXXXX _Validate(Invoices): " &
    Err.Description) Err.Clear
End Sub
```

# Automatic Tax Code Determination

Different ERP systems have different ways of handling tax, but a common requirement is that the ERP system requires a tax code to be passed for each invoice line item. If any of the tax codes are missing, the ERP system will be unable to accept any affected line items, hence automatic processing is not possible.

The tax codes are specific to the ERP system and do not appear on the invoice itself.

AP Project provides an automatic tax code determination feature that takes place during line pairing. When a line is paired, the system tries to determine the correct tax code based upon information that appears on the invoice and information derived from the purchase order.

Successful allocation of a tax code means that the invoice line item can now be accepted by the ERP system and no manual resolution process is necessary.

Prerequisites for using the automatic tax code determination feature are as follows.

- The company code field is active.
- The system is configured to validate the company code using a data source that returns the company code country.
- The vendor ID field is active.
- The system is configured to validate the vendor field against the vendor pool.
- The vendor pool data includes the vendor country of origin. The vendor state must also be included for processing tax for countries with tax jurisdictions.

To activate automatic tax code determination, complete the following steps in Solution Configuration Manager.

**Note:** The method of tax determination depends upon whether the taxing country uses tax jurisdictions.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. Select the **Activate Tax Code Determination** check box.
6. Save the changes.

## Tax code determination for countries without tax jurisdictions

A country without tax jurisdictions is one where a common rate of sales tax is established and applied at the national level. This means that all goods and services are subject to the same rate of sales tax, no matter where they are purchased within the borders of that country.

A good example of this is the European VAT system, however, similar types of systems can be

found in Australia, Singapore and Latin America. This is in contrast to the systems used in countries with tax jurisdictions such as the US, Canada and Brazil, where each state or province within those countries is empowered to set its own local rate of sales tax.

In order to perform automatic tax code determination for countries that do not use tax jurisdictions, the system takes information from both the invoice and the purchase order and uses it to perform a look-up to a tax code table in order to ascertain the correct ERP tax code for the line item.

The tax code table is available as a standard configuration table within the AP Project configuration database, but you can also configure the system to use an external table.

Determining the tax code also requires the system to derive the location where the goods were delivered or service performed, which is represented by the ship-to country. You can configure the system to use the country of the invoice company code for this purpose. If you want the system to use the country of the plant on the purchase order line item, you must also configure the plant look-up. This plant look-up is also available as a standard table within the solution, but you can also use an external table for this purpose.

You can choose to use the standard table for the tax code look-up, but use an external table for the plant look- up.

Additional prerequisites for using the automatic tax code determination feature are as follows.

- The countries in scope for the tax compliance check are maintained in **Global Settings > Country Settings**

To configure automatic tax code determination using the tax table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. Select the **Activate Tax Code Determination** check box. Further settings are then displayed.
6. Select the **Always Use PO Tax Code** check box if you want the system to use the tax code found on the original purchase order line. If the purchase order line item does not have a tax code, the system will proceed with the tax table look-up. If the customer always populates the tax code on the purchase order and that tax code is always correct, then selecting this check box completes the configuration. You cannot use this option if you also use the same processing profile to process invoices that require the automatic tax code determination feature for countries that use tax jurisdictions.
7. Select the **Validate From DB** check box. Further settings are then displayed.
8. Select the SQL connection group that points to the database where the tax table is located using the **SQL Connection Group** drop-down.
9. If you have changed the name of the tax table from 'BRWTAX' to another value, enter the new table name in **DB Table Name**.
10. Select the **Use Tax Partition** check box if you are using a tax partition. If selected, when accessing the tax table, the system will only look for entries belonging to the partition configured for the client to which the document belongs. The client tax partition is configured using the **Tax Partition** drop-down in the client configuration table.
11. If you want to derive the ship-to location from the country of the company code instead

of the country of the plant, select the **Derive Ship-to From Company Code** check box. If you choose this option, you do not need to configure the plant look-up.

12. Select the **Read Plant For DB** check box if you want to read details of the plant from a database. The plant look-up is mandatory if you want to use the automatic tax code determination feature. Further settings are then displayed.

13. Select the SQL connection group that points to the database where the plant table is located using the **Plant SQL Connection Group** drop-down.

14. Enter the technical name of the plant look-up table in **DB Plant Table**.

15. Enter the technical name of the column that represents the unique plant ID in **DB Plant**.

16. Enter the technical name of the column that represents the plant country in the **DB Plant Country**.

17. Save the changes.

## Tax code table structure

The columns in the tax code table are as follows:

| Column name | Type | Description |
|---|---|---|
| Country | String | Country code for the country to which the tax code applies. It represents the country in which the company code is legally registered. For example, GB, FR, CH, DE, and so on. This column must be populated for all records in the table. |
| TaxCode | String | Tax code |
| ShipTo | String | Ship-to country code. This is the country code for the country to which the goods were shipped.<br>This is compared by the system either to the country of the company which received the goods, or the country of the plant set on the relevant purchase order line item depending on the configuration specified in **Processing Settings --> Tax Configuration**.<br>If the ship-to country is the same as the company code country, then it must be entered as it is. If it is different, but is an EU member state, it must be set to EU; if it is a non EU-member state, it must be set to XX. This column must be populated for all records in the table. |
| ShipFrom | String | Ship-from country code. This is the country code for the country from where the goods were shipped. This is compared by the system to the country of the order-from vendor. If the ship-from country is the same as the company code country, then it must be entered as it is. If it is different, but is an EU member state, it must be set to EU; if it is a non EU-member state, it must be set to XX. This column must be populated for all records in the table. |

| Service | Boolean in the standard table; "X" or blank in an external table | This denotes that the record in the tax table is relevant for a service, as opposed to a material line item. |
|---|---|---|
| MaterialGroup | String | Purchase order material category/type/group or class. |
| MaterialNo | String | Purchase order material number. |
| VendorID | String | Order-from vendor ID. |
| Percentage | Number (two decimal places) | Percentage rate associated with the tax code (for example, 17.5, 19.6, 10, 18, and so on). This value is compared with the tax rate captured at the line-item level to support mixed tax rates on a single invoice, or, if no rate is captured, then it is compared to the overall tax rate for the invoice as a whole. When populating the tax table, 999 denotes a blank or unknown percentage. If the percentage is zero, then 0 must be entered. |
| Recovery Percentage | Number (two decimal places) | This is the percentage of the tax that can be recovered from the tax authorities. This value defaults to 100. |
| IndiaInState | Boolean | This column is used for domestic invoices in India only and specifies whether the tax code relates to an in-state or out-of-state transaction. The value defaults to **false**. |

## Configure usage of the standard tax code and plant tables

The standard tax code table and the standard plant table that are installed as part of the AP Project configuration database use partition IDs to distinguish between different sets master data all within a single table. The partition IDs are subsequently assigned to a client. This allows more than one client to share the same set of tax code and plant data for ease of maintenance, particularly in cases where more than one client uses the same ERP system.

When assigning tax codes to invoice line items, or when looking up plants, the system only looks at the tax code and plant records that belong to the corresponding partitions assigned to the client of the current document.

### Register the tax partition

To register a new tax partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Tax Partition Settings** node. This then displays the tax partition configuration table.

4. Scroll to the last row in the table where you have the option to create a new entry.

5. Enter the unique ID for your tax partition in **Tax Partition ID**. This must be entered as an integer.

6. Enter a short description for your partition in **Description**.

7. Click the **Insert** hyperlink to save the changes.

## Register the plant partition

To register a new plant partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings**.

3. Within the **Global Settings** hierarchy tree, navigate to the **Plant Partition Settings** node. This then displays the tax partition configuration table.

4. Scroll to the last row in the table where you have the option to create a new entry.

5. Enter the unique ID for your plant partition in **Plant Partition**. This must be entered as an integer.

6. Enter a short description for your partition in **Description**.

7. Click the **Insert** hyperlink to save the changes.

## Assign the tax and plant partitions to a client

To assign a tax partition to a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.

2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.

3. Locate the row for the client to which you want to assign a tax or plant partition.

4. Choose the tax partition you wish to assign to the client by selecting the partition ID number from the **Tax Partition** drop-down.

5. Choose the plant partition you wish to assign to the client by selecting the partition ID number from the **Plant Partition** drop-down.

6. Save the changes.

## Configure the tax code and plant look-ups

To configure the tax code and plant look-ups to use the standard AP Project table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.

5. Select the **Activate Tax Code Determination** check box. Further settings are then displayed.

6. Select the **Always Use PO Tax Code** check box if you want the system to use the tax code found on the original purchase order line. If the purchase order line item does not have a tax code, the system will proceed with the tax table look-up. If the customer always populates the tax code on the purchase order and that tax code is always correct, then selecting this check box completes the configuration. You cannot use this option if you also use the same processing profile to process invoices that require the

automatic tax code determination feature for countries that use tax jurisdictions.

7. Select the **Validate From DB** check box. Further settings are then displayed.

8. Select the **Use Tax Partition** check box if you are using a tax partition. If selected, when accessing the tax table, the system will only look for entries belonging to the partition configured for the client to which the document belongs. The client tax partition is configured using the **Tax Partition** drop-down in the client configuration table.

9. Clear the **Use External Tax Table** check box.

10. If you want to derive the ship-to location from the country of the company code instead of the country of the plant, select the **Derive Ship-to From Company Code** check box. If you choose this option, you do not need to configure the plant look-up.

11. Select the **Read Plant For DB** check box if you want to read details of the plant from a database. Further settings are then displayed.

12. Clear the **Use External Plant Table** check box.

13. Save the changes.

## Maintain tax code master data

To maintain tax code master data within the solution, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings** from the **Settings** drop-down.

3. Within the **Global Settings** hierarchy tree, navigate to the **Tax Code Master Data** node. This then displays the unit of measure conversion configuration table.

4. Scroll to the last row in the table where you have the option to create a new entry.

5. Enter the partition ID for your tax code record in **Tax Partition**.

6. Enter the tax country in **Country**. This column is mandatory and the country must be entered as a two character ISO-code.

7. Enter the ship-to country in **Ship To**. This column is mandatory and the country must be entered as a two character ISO-code.

8. Enter the ship-from country in **Ship From**. This column is mandatory and the country must be entered as a two character ISO-code.

9. Select the **Service** check box is the tax code record applies to services only.

10. Enter the vendor ID for the tax code record in **Vendor ID**. This column is optional.

11. Enter the material number for the tax code record in **Material**. This column is optional.

12. Enter the material group for the tax code record in **Material Group**. This column is optional.

13. Enter the percentage rate for the tax code in **Percentage**. This must be entered as a numeric value. If you do not want to specify a percentage rate, this column should be populated as 999.

14. Enter the percentage of the tax that is recoverable from the tax authorities in **Recovery Percentage**. This must be entered as a numeric value. For example, if only half of the tax is recoverable, you should populate this column with 50. This column defaults to **100**.

15. Select the **India In State** check box if the tax code record applies to India in-state transactions only.

16. Enter the tax code for the tax code record in **Tax Code**. This column is optional, but

should only be left blank if you do not wish the system to assign a tax code for the tax situation that the tax record represents.

17. Click the **Insert** hyperlink to save the changes.

## Maintain plant master data

To maintain plant master data within the solution, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Plant Master Data** node. This then displays the unit of measure conversion configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the partition ID for your plant record in **Plant Partition**.
6. Enter the unique ID for your plant in **Plant**. This column is mandatory.
7. Enter the state or province where the plant is located in **State**. The state must be entered as a two character ISO-code. This column is optional.
8. Enter the country where the plant is located in **Country**. This column is mandatory and the country must be entered as a two character ISO-code.
9. Enter the tax jurisdiction code for the plant in **Tax Jur Code**. This column is optional.
10. Click the **Insert** hyperlink to save the changes

When populating the tax table, you must ensure that you do not enter any duplicate rows. A duplicate row is one where all columns are populated with the same value aside from the tax code. If the system finds a duplicate row when attempting to assign a tax code to an invoice line, no tax code is assigned.

## Configure usage of external tax code and plant tables

To configure automatic tax code determination using external tax and plant tables, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. Select the **Activate Tax Code Determination** check box. Further settings are then displayed.
6. Select the **Always Use PO Tax Code** check box if you want the system to use the tax code found on the original purchase order line.

If the purchase order line item does not have a tax code, the system will proceed with the tax table look-up. If the customer always populates the tax code on the purchase order and that tax code is always correct, then selecting this check box completes the configuration. You cannot use this option if you also use the same processing profile to process invoices that require the automatic tax code determination feature for countries that use tax jurisdictions.

7. Select the **Validate From DB** check box. Further settings are then displayed.
8. Select the **Use Tax Partition** check box if you are using a tax partition.

If selected, when accessing the tax table, the system will only look for entries belonging to the partition configured for the client to which the document belongs. The client tax partition is configured using the **Tax Partition** drop-down in the client configuration table.

9. Select the **Use External Tax Table** check box. This then reveals further configuration options.

10. Select the SQL connection group that points to the database where the tax table is located using the **SQL Connection Group** drop-down.

11. If you have changed the name of the tax table from `BRWTAX` to another value, enter the new table name in **DB Table Name**.

12. If you want to derive the ship-to location from the country of the company code instead of the country of the plant, select the **Derive Ship-to From Company Code** check box. If you choose this option, you do not need to configure the plant look-up.

13. Select the **Read Plant For DB** check box if you want to read details of the plant from a database. The plant look-up is mandatory if you want to use the automatic tax code determination feature. Further settings are then displayed.

14. Select the **Use External Plant Table** check box. This then reveals further configuration settings.

15. Select the SQL connection group that points to the database where the plant table is located using the **Plant SQL Connection Group** drop-down.

16. Enter the technical name of the plant look-up table in **DB Plant Table**.

17. Enter the technical name of the column that represents the unique plant ID in **DB Plant**.

18. Enter the technical name of the column that represents the plant country in the **DB Plant Country**.

19. Save the changes.

## Tax table access sequence

At runtime, AP Project uses an access sequence to interrogate the tax table in order to find the correct tax code for each invoice line.

This step is not carried out if the system is configured to use the purchase order line tax code in all cases and that tax code is populated or if the tax table is not populated with any entries relating to the country of the invoice company code.

The following steps indicate the access sequence.

1. Check for combination of vendor, material group, ship-to and ship-from.

2. Check for vendor and combination of ship-to and ship-from.

3. Check for material number and combination of ship-to and ship-from.

4. Check for material group, percentage and combination of ship-to and ship-from where the recovery percentage is **100**.

5. Check for material group and combination of ship-to and ship-from.

6. Check for combination of percentage, ship-to, ship-from, and service indicator where the recovery percentage is **100**.

7. Check for combination of ship-to, ship-from, and service indicator.
8. Check for combination of ship-to, ship-from, and tax percentage where the recovery percentage is **100**.

9. Check for ship-to and ship-from combination (default tax code for the country).

The system begins at step 1. If a tax code is found for that step in the access sequence, the

corresponding tax code is used; if not, the system moves to step 2, and so on.

For steps 4, 6 and 8, if you are using an external tax code table that does not include a recovery percentage column, the recovery percentage defaults to **100** for all rows.

If, at the end of step 8, no tax code can be determined, then the invoice is considered to be an exception for reasons of a missing tax code.

## Populating the tax table

The following table shows an example of how the tax code table might typically be populated for the UK (Country Code = GB).

| Country | TaxCode | Vendor ID | ShipTo | Ship From | Service | Material Group | Material No | Percentage | Recovery Percentage |
|---|---|---|---|---|---|---|---|---|---|
| GB | V0 | | 'GB | GB | False | | | 0 | 0 |
| GB | V1 | | GB | GB | False | | | 17.5 | 100 |
| GB | V2 | | GB | GB | False | | | 17.5 | 50 |
| GB | V3 | | GB | EU | False | | | 999 | 0 |
| GB | V4 | | GB | EU | True | | | 999 | 0 |
| GB | V6 | | GB | GB | False | | | 8 | 100 |
| GB | V9 | | GB | GB | False | | | 15 | 100 |
| GB | VF | | GB | XX | False | | | 999 | 0 |
| GB | V1 | | GB | GB | False | | | 999 | 0 |

Using this configuration, the system behaves as follows as a result of each record in turn.

1. If it is a domestic transaction, and no tax is charged, then tax code V0 is always used.

2. If it is a domestic transaction, and tax at the rate of 17.5% is charged on the invoice, then tax code V1 is always used. Note that tax code V1 is selected over V2 as the V1 tax code has a recovery percentage of 100.

3. If the goods are shipped from an EU member state country to the UK, then tax code V3 is always used.

4. If the invoice is from an EU member state vendor and the service is performed in the UK, then tax code V4 is always used.

5. If it is a domestic transaction, and tax at the rate of 8% is charged on the invoice, then tax code V6 is always used.

6. If it is a domestic transaction, and tax at the rate of 15% is charged on the invoice, then tax code V9 is always used.

7. If the invoice is from a vendor outside of the EU, and the goods are shipped to the UK, then tax code VF is always used.

8. If no specific item tax percentage is determined from the invoice, but it is a domestic transaction, then tax code V1 is always used.

Step 8 represents the default tax code for a combination of ship-to and ship-from countries. The most common non-zero tax code must be set against this record.

If an additional business requirement involved a new tax code (VS) which must be used in instances where a non-EU member state vendor submitted an invoice for a service carried out outside the EU, and where tax was charged at 0%, then the following entry must be added to the tax table.

| Country | TaxCode | VendorID | ShipTo | Ship From | Service | Material Group | Material No | Percentage |
|---------|---------|----------|--------|-----------|---------|----------------|-------------|------------|
| GB | VS | | XX | XX | True | | | 0 |

Equally, if a requirement arose whereby a different tax code (DS) must be used in all instances involving a service carried out domestically irrespective of whether tax is charged or not, the following entry must be added to the tax table.

| Country | TaxCode | VendorID | ShipTo | Ship From | Service | Material Group | Material No | Percentage |
|---------|---------|----------|--------|-----------|---------|----------------|-------------|------------|
| GB | DS | | GB | GB | True | | | 999 |

## Handle special cases for tax codes

The tax table provides functionality for handling special cases where a specific tax code is required. The table permits the user to perform the following actions.

1. Allocate a specific tax code to a specific vendor irrespective of the type of transaction and the rate of tax charged.

2. Allocate a specific tax code for a specific material irrespective of the rate of tax charged.

3. Allocate a specific tax code for a specific material group irrespective of the rate of tax charged.

   This can be used in instances where the tax against an individual invoice is not VAT recoverable, or only partially recoverable.

   For example, if all goods and services provided by vendor 12345 are only 50% VAT recoverable meaning that tax code V2 should be used, then the following record should be added to the tax table.

| Country | TaxCode | VendorID | ShipTo | Ship From | Service | Material Group | Material No | Percentage |
|---------|---------|----------|--------|-----------|---------|----------------|-------------|------------|

| GB | V2 | 0000012345 | GB | GB | True | | | 999 |

You must ensure that a separate tax code record exists for tax code V2 specifying the normal percentage and recovery percentage. For example:

| Country | TaxCode | VendorID | ShipTo | Ship From | Service | Material Group | Material No | Percentage | Recovery Percentage |
|---------|---------|----------|--------|-----------|---------|----------------|-------------|------------|---------------------|
| GB | V2 | | GB | GB | True | | | 20 | 50 |

By creating entries that include a combination of the vendor, material number and the material group, these instances can be handled as the access sequence checks for these entries before selecting a tax code based solely on the type of transaction, for example, service, and the tax rate.

It is also possible to leave the tax code column blank for such special cases which must always force those invoices to exception in a downstream process for someone to review.

For all entries in the tax table relating to special cases, the ship-to and ship-from countries must continue to be populated.

## Tax codes for India

You can use the tax table to assign tax codes for invoices from India.

In India, levying of sales tax for a domestic transaction is based on whether the transaction is in-state (i.e. the vendor and customer both operate in the same state), or out-of-state (i.e. the vendor and customer operate in different states).

If the transaction is in-state, then an invoice for a taxable transaction states two tax amounts, CGST and SGST. If the transaction is out-of-state, then the invoice just states a single tax amount, namely, IGST. ERP systems typically use different tax codes depending on which of these two situations is applicable.

In the tax table, the IndiaInState column can be used to differentiate between in-state and out-of-state tax codes. It should be set to "true" if the transaction is in-state, which reflects the CGST/SGST combination.

A sample tax table is shown below.

| Country | TaxCode | VendorID | ShipTo | Ship From | Material Group | Percentage | India InState |
|---------|---------|----------|--------|-----------|----------------|------------|---------------|
| IN | CG | - | IN | IN | - | 18 | True |
| IN | IG | - | IN | IN | - | 18 | False |
| IN | IT | - | IN | XX | - | 0 | False |

In the example above, if a domestic Indian invoice has 9% CGST and 9% SGST, amounting to total 18% tax, the tax code CG is assigned to each paired invoice line item. If the invoice has 18% IGST, tax code IG is assigned. For an invoice where the vendor location is outside India where no tax is charged, the tax code IT is assigned.

The system looks for "true" in the IndiaInState column if the value of the CGST field is not equal to zero. The percentage is calculated from the total tax amount and total invoice amount and rounded off to an integer.

Due to the differing nature of sales tax in India, the system uses a special four step access sequence to access the table if the company code country is set to IN for India. The access sequence is as follows:

1. Check for combination of ship-to, ship-from, percentage, in-state flag, vendor and material group.

2. Check for combination of ship-to, ship-from, percentage, in-state flag and material group.

3. Check for combination of ship-to, ship-from, percentage, in-state flag and vendor.

4. Check for combination of ship-to, ship-from, percentage and in-state flag.

For India, the material and services columns are not used. Checking for the material group and vendor combinations upfront allows you to populate the table with special tax codes that should be used for certain vendors or materials groups on the purchase order line. This can help the system recognize transactions where Input Tax Credit (ITC) is allowable or not, which may require selecting a different tax code. For example, if you wanted to use code CA rather than CG if the purchase order line material group is 12345, but all other details remain the same, you can add the following row into the tax table.

| Country | TaxCode | VendorID | ShipTo | Ship From | Material Group | Percentage | India InState |
|---------|---------|----------|--------|-----------|----------------|------------|---------------|
| IN | CA | - | IN | IN | 12345 | 18 | True |

This means that the system will select tax code CA if the material group is 12345, but tax code CG will continue to be used for all other material groups.

## Tax code determination for countries with tax jurisdictions

A country that uses tax jurisdictions is one where there is no standard national rate of sales tax, but rather each individual region or province is empowered to set local rates of sales tax based on their own chosen criteria. They can also decide to exempt certain goods from sales tax as part of a wider economic strategy. The individual areas empowered to levy tax are referred to as tax jurisdictions. They are, in effect, local tax offices.

Countries that use tax jurisdictions include the US, Canada and Brazil.

The US, for example, has four levels of tax jurisdiction. The rate of sales tax is predominately set at the state level, but each county, city and district is allowed to add percentage points on to that rate in order to collect additional tax revenues to meet their own local requirements. This means that, within the same city, the rate of sales tax may differ depending on what part of the city you are in if a non-uniform district level sales tax has been applied. Currently, as a consequence of multi-level tax jurisdictions, there are over 14,000 separate tax jurisdictions in the US.

In common with most systems of taxation, tax is payable according to the rules of the geographical location where the goods were used or services performed, as opposed to the location where they were purchased. For businesses, this makes processing tax more complicated as it means that the tax position set out by the vendor on the invoice may not be what actually needs to be adhered to.

For example, if a vendor based in Texas orders goods from a vendor in California and those goods are to be used in Texas, then the purchase is subject to the tax rules in Texas. Under normal circumstances, the Californian vendor will not charge tax on the invoice as they are not responsible for collecting tax on behalf of the state of Texas. This does not mean that the buyer is not liable to pay tax, but rather that they must accrue the tax when processing the invoice. This means that they must declare the tax to the local authorities using the same rate as they would have done had they purchased the goods from a local vendor. From an invoice processing point of view, this means that the invoice items should be passed using a tax code that denotes an accrual.

Equally, if a vendor charges tax on the invoice for goods that are tax-exempt in the location where they are to be used, the buyer can deduct the tax when settling the invoice. This means that the invoice is entered as if tax was never charged on the invoice. This process is often referred to as a 'short pay'.

In the scenario where the goods are subject to tax and the vendor charges tax, it is common for the buyer to accept and pay the tax amount charged. This process is often referred to as 'pay tax as billed'.

When raising a purchase order, the buyer typically enters a tax code for each line item. This tax code specifies whether the item is subject to tax or tax-exempt for the tax jurisdiction where the goods are going to be used, or the services are going to be performed.

Unlike tax codes for countries that do not use tax jurisdictions, the tax code has no rate associated with it. It is effectively a processing instruction that tells the ERP system how to process the tax. The tax rate itself is specified using a tax jurisdiction code, which is a unique ID assigned to each tax jurisdiction. It is common for ERP system to be connected to a third party application such as Vertex or Taxware that are continually updated with the tax rules for each jurisdiction.

At the time of invoice entry, the AP user looks at the purchase order tax code and the tax position laid out by the vendor on the invoice. If they agree, the purchase order tax code can be assigned to the invoice line item. If they do not agree, then an alternative course of action is needed.

The table below shows the possible combinations and a common course of action that an AP user would take in a manual process.

| Purchase order line tax code | Vendor invoice tax position | Course of action |
| --- | --- | --- |
| Taxable | Vendor charges tax | Use PO tax code, pay tax as billed |
| Tax exempt | No tax on invoice | Use PO tax code |
| Taxable | No tax on invoice | Use accrual tax code |
| Tax exempt | Vendor charge tax | Use PO tax code, short pay invoice if this applies to all invoice lines |

Automatic tax code determination for countries that use tax jurisdictions incorporates the same kind of decision-making process, and allows you to configure the system to allocate the correct invoice line item tax codes automatically.

## Activate automatic tax code determination for countries with tax jurisdictions

To activate automatic tax code determination for countries with tax jurisdictions, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Configuration** node.
5. Select the **Activate Tax Code Determination** check box.
6. Ensure that the **Always Use PO Tax Code** check box is cleared.
7. Ensure that the **Derive Ship-To From Company Code** check box is cleared.
8. Select the **Read Plant For DB** check box if you want to read details of the plant from a database. The plant look-up is mandatory if you want to use the automatic tax code determination feature for countries with tax jurisdictions. Further settings are then displayed.
9. Select the **Use External Plant Table** check box if you want the system to use an external table for the plant look-up. This then reveals further configuration settings.

    If you want to use the standard table for the plant look-up, clear the **Use External Plant Table** check box. If the check box is cleared, you do not need to carry out steps 10 to 13.

10. Select the SQL connection group that points to the database where the plant table is located using the **Plant SQL Connection Group** drop-down.
11. Enter the technical name of the plant look-up table in **DB Plant Table**.
12. Enter the technical name of the column that represents the unique plant ID in **DB Plant**.
13. Enter the technical name of the column that represents the plant country in **DB Plant Country**.
14. Save the changes.

## Configure tax codes for countries with tax jurisdictions

AP Project provides a tax jurisdiction configuration table where you can set up and configure the processing behavior for each of the ERP tax codes used by the customer.

Each row in the table represents one tax code for one country.

After a line item has been paired, the system performs a look-up to the tax jurisdiction configuration table using the purchase order line item tax code and the country of the invoice company code. Based upon configuration within that table, the system decides whether the invoice line item can simply be assigned the purchase order tax code, or whether a new tax code is needed based upon the presence or absence of tax charged on the invoice.

This process is repeated for all paired line items.
If line pairing succeeds for all invoice lines, the system then checks for any special processing requirements by performing a second look-up to the tax jurisdiction configuration table to ascertain whether the invoice should be short paid or whether tax should be paid as billed based upon the invoice line item tax codes allocated.

At a minimum, you need to populate the table with the two tax codes that the ERP system uses to denote a tax exempt or subject to tax status on the purchase order. You do not need to create table

entries for any tax codes used by purchasing if they do not need to be changed at the time of invoice entry and do not have any special processing requirements.

To add a new tax code into the tax jurisdiction configuration table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Jurisdiction Codes** node. This then displays the tax jurisdiction configuration table.
5. Scroll to the last row in the table where you have the options to create a new entry.
6. Populate the **Index** column with the next available sequential number.
7. Enter the tax code for which you want to create an entry in **Tax Code**.
8. Enter the two character ISO-code for the country to which the tax code applies in **Country**.
9. If you want the system to change this tax code to a different tax code if tax is charged on the invoice, enter the new tax code in **If Tax**.
10. If you want the system to change this tax code to a different tax code if no tax is charged on the invoice, enter the new tax code in **If No Tax**.
11. Select the **Pay Tax As Billed** check box if you want to pay the amount of tax as stated by the vendor on the invoice if any invoice line has been allocated this tax code.
12. Select the **Short Pay If Tax** check box if the tax code is relevant for short pay. The system will short pay the invoice if the vendor is charging tax and all line items have been assigned a tax code relevant for short pay.
13. Save the changes.

## Default a purchase order tax code

If a tax code is not present on the purchase order line item, the system is able to default a tax code based on the purchase order line account assignment category.

To configure the system to set a default tax code based on the purchase order line item account assignment category, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Jurisdiction Codes** node. This then displays the tax jurisdiction configuration table.
5. Locate the row for the tax code you want to default.
6. Enter the relevant account assignment category in **Account Assignment Categories**. If you want the default the tax code for multiple account assignment categories, the categories must be entered as a comma-separated list.
7. Save the changes.

## Configure state-specific exceptions

You can configure state-specific exceptions for any tax code in the tax jurisdiction configuration table.

State specific exceptions are considered when the system initially reads the table using the purchase order line item tax code after a line item is paired. They allow you to configure selection of a different tax code for assignment to the invoice line item based upon a combination of vendor and ship-to states.

The vendor state is derived from the state of the order-from vendor. The ship-to state is derived from the state assigned to the plant on the purchase order line item.

To configure state-specific exceptions, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Tax Jurisdiction Codes** node. This then displays the tax jurisdiction configuration table.
5. Locate the row for the tax code to which you want to add a state-specific exception.
6. Enter the relevant vendor ship-from states as a comma-separated list in **Vendor State**. A blank entry indicates that the state-specific exception applies to all vendor states. No state-specific exception is applied if **Ship To State** is also blank.
7. Enter the relevant ship-to states as a comma-separated list in **Ship To State**. A blank entry indicates that the state-specific exception applies to all ship-to states.
8. If you want the system to change this tax code to a different tax code if the state exception applies and tax is changed on the invoice, enter the new tax code in **If Tax State**.
9. If you want the system to change this tax code to a different tax code if the state exception applies and no tax is charged on the invoice, enter the new tax code in **If No Tax State**.
10. Save the changes.

## Automatic Tax Code Determination and Reporting

After automatic tax code determination has been carried out during line pairing, the system updates the reporting database with statistical information. This happens during document export.

In reporting table **BRWDocument**, the **TAX_STATUS** column is updated with a status code that represents the document level result of automatic tax determination.

The tax status codes and their meanings are listed in the table below.

| Status code | Meaning | Description |
|---|---|---|
| 0 | Automatic tax determination off | This means that automatic tax determination is switched off in **Processing Settings --> Tax Settings --> Tax Configuration**. |
| 1 | No paired invoice lines | This means that automatic tax determination did not occur as there were no paired invoice lines. |

| 2 | Tax configuration error | This means that automatic tax determination could not be carried out due to configuration errors. You can find more detail on these configuration errors in the export log file for the affected documents. |
|---|---|---|
| 3 | Duplicate tax entries | This means that duplicate entries were found in the tax code master data that you maintain in **Global Settings --> Master Data --> Tax Code Master Data**. You can find more detail on these duplicate entries in the export log file for the affected documents. The duplicate entries should be removed. |
| 4 | Missing tax codes | This means that a tax code could not be assigned to one or more paired invoice lines. |
| 5 | Tax coding successful | This means that all paired line items were successfully assigned a tax code. |

# Unit of Measure Conversions

Units of measure appear at line item level on an invoice. They describe the physical quantity to which the line item quantity relates. Common units of measure found on invoices include 'each', 'kilograms', 'lbs', 'boxes', 'cases', and for service invoices that are billing time expended, 'hours' and 'days'.

AP Project looks for a unit of measure when extracting the invoice line items and a designated column is included in the line items table for that reason. This is not a mandatory entry.

When a purchase order is raised within an ERP system, each purchase order line item is assigned an order quantity unit of measure which applies to the order quantity. Some ERP systems also have an order price unit of measure, which denotes the unit of measure for which the purchase order line unit price is quoted. In the vast majority of cases, the order quantity unit of measure and the order price unit of measure is the same.

Within AP Project, each invoice line has only one unit of measure, which is taken as both the invoice quantity unit of measure and invoice unit price unit of measure.

When exporting the line items, the order quantity unit of measure and the order price unit of measure passed downstream for a paired line item are always lifted from the purchase order line item that the invoice line paired to. This cannot be changed as ERP systems are unable to accept invoice line items where the units of measure differ from those used on purchase order.

Hence, if the invoice and purchase order units of measure differ, the system needs to convert the invoice quantity during line pairing so that it is expressed in the order quantity unit of measure used on the original purchase order line. This is in order to prevent the wrong quantity being sent to the ERP system.

In AP Project, this conversion process is referred to as the unit of measure conversion check.

If the system is unable to carry out the conversion check successfully, line pairing will fail.

## Activate the unit of measure conversion check

To activate the unit of measure conversion check, complete the following steps in Solution

Configuration Manager,

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
5. Select the **UOM Check** check box.
6. If the ERP system uses an order price unit of measure, select the **PUOM Check** check box.
7. Enter the tolerance you would like to apply for unit of measure comparisons in **PUOM Tolerance**. This tolerance is the value by which the invoice unit price is allowed to vary from the purchase order unit price in order for the system to infer that the unit of measure for the invoice line must be the same as the order price unit of measure on the purchase order line. Entry must be in the form of a percentage. The default value is 10, denoting 10 percent.
8. Save the changes.

## Unit of measure conversion for custom items

The unit of measure conversion check can be enhanced to work with special cases where the unit of measure conversion ratio between invoice line and purchase order line is neither clear from the pricing, nor a universal constant, for example, kilograms to tonnes.

The challenge that custom units of measure can bring is illustrated by the following example.

A construction company orders 100 bags of concrete, expecting to pay $69.90 US dollars per bag. The company material number for concrete is 1234A. The purchase order would appear as follows.

| Material No | Description | Quantity | Unit of Measure | Unit Price | Unit Price |
|---|---|---|---|---|---|
| 1234A | Concrete | 100 | BAG | $69.90 | $6,990.00 |

The vendor then issues an invoice for a partial shipment of the concrete, but the vendor is invoicing in LBS. The line item on the invoice is presented as follows.

| Description | Quantity | Unit Of Measure | Unit Price | Total |
|---|---|---|---|---|
| Concrete | 30 | LBS | $4.72 | $141.60 |

As price differences between the order unit price and the invoice unit price can occur, converting the invoice quantity from LBS to bags is not possible unless you know how many LBS are in each bag of that particular type of concrete. As such, if the correct conversion ratio is not available, line pairing will fail for this example.

To mitigate this problem, during the unit of measure check conversion, AP Project is able to perform a look-up to a unit of measure conversion table in order to find the correct conversion ratio.

## About the unit of measure conversion table

The unit of measure conversion table holds the conversion ratio between the base unit of measure

and a custom unit of measure for a given material. You can choose to use the standard unit of measure conversions table provided by AP Project, or you can configure the system to use an external table.

**Note:** If an external table is used and the database connection cannot be established, or incorrect configuration entries are present, then the system does not fail document export, but the line item is not paired. If line pairing logging is activated, then any error and tracking messages are recorded in the AP Project log file.

The structure of unit of measure conversions table is as follows.

| Column | Type | Description |
| --- | --- | --- |
| MATERIAL | Varchar | Client material number. |
| BASEUOM | Varchar | Material base unit of measure in the ERP system which is used to account for all stock of that material in a common unit. |
| NUMERATOR | Decimal | Conversion ratio numerator. |
| DENOMINATOR | Decimal | Conversion ratio denominator. |
| UOM | Varchar | External unit of measure. |

During the conversion, the system performs a look-up on this table using the external unit of measure read from the invoice (in this case, LBS) and the material number read from the purchase order (in this case, 1234A).

If a record is found, the system checks whether the order unit of measure on the purchase order (in this case, BAG) is equal to the base unit of measure for the material. If it is, the invoice quantity is converted as per the following calculation.

```
Converted Quantity = Invoice Quantity * (Numerator / Denominator) = 30
 * ( 1
/ 15 ) = 2
```

Therefore, 30 pounds is equal to 2 BAGS, so 2 is the corresponding quantity expressed in the purchase order unit of measure.

Line pairing now succeeds for the invoice line, and the system then exports a quantity of 2, a unit of measure of BAG, and a total line item value of $141.60 to the downstream ERP system.

## Unit of Measure Triangulation

A Unit of Measure Triangulation occurs when the order unit of measure for the purchase order line item is not the same as the base unit of measure for the material. Hence, three different units of measure are in play.

- The invoice line item unit of measure.
- The purchase order line item unit of measure.
- The base unit of measure for the material.

For example, the construction company in example 2 decides to order more concrete, though this

time they wish to order 10 pallets. The purchase order would be raised as follows.

| Material No | Description | Quantity | Unit of Measure | Unit Price | Total |
|---|---|---|---|---|---|
| 1234A | Concrete | 10 | PAL | $1,398.00 | $13,980.00 |

The vendor continues to bill in LBS, and submits their invoice as follows.

| Description | Quantity | Unit of Measure | Unit Price | Total |
|---|---|---|---|---|
| Concrete | 900 | LBS | $4.72 | $4248.00 |

Within the construction company's ERP system, the base unit of measure for the material remains as BAG.

Dealing with this situation requires an additional entry in the unit of measure conversion table to represent the conversion ratio between the material base unit of measure (in this case, BAG) and the purchase order unit of measure (in this case, PAL).

Each single pallet holds 20 bags; hence the additional entry must be as follows.

| Material | BaseUOM | Numerator | Denominator | UOM |
|---|---|---|---|---|
| 1234A | BAG | 1 | 15 | LBS |
| 1234A | BAG | 20 | 1 | PAL |

When converting the invoice quantity, the system first converts it to the quantity in the base unit of measure, then converts it again into the same quantity, but expresses it in the purchase order unit of measure.

The calculations are as follows.

When converting to base unit of measure, the following equation is used.

```
Base UOM Quantity = Invoice Quantity * (Numerator / Denominator) = 900
 * (1
/ 15) = 60
```

When converting to the purchase order unit of measure, the following equation is used.

```
Converted Quantity = Base UOM Quantity * (Denominator / Numerator) =
 60 * (1
/ 20) = 3
```

Line pairing now succeeds for the invoice line item, and a quantity of 3, a unit of measure of PAL, and a total of
$4248.00 is passed to the downstream ERP system.

Under no circumstances must an entry in the table be made as follows.

| Material | BaseUOM | Numerator | Denominator | UOM |
|---|---|---|---|---|

| 1234A | PAL | 1 | 300 | LBS |
|-------|-----|---|-----|-----|

Whereas this may be correct mathematically, it is INCORRECT from a table population point of view, and may lead to incorrect quantity conversions as the base unit of measure for the material is not pallets. The developer must always check with the client so that the base unit of measure for the material can be established correctly. The content of that column must be consistent for all entries in the table relating to a given material.

## Configure usage of the standard Unit Of Measure Conversion Table

The standard unit of measure conversion table that is installed as part of the AP Project configuration database uses partition IDs to distinguish between different sets of unit of measure conversion master data all within a single table. A partition ID is subsequently assigned to a client. This allows more than one client to share the same set of conversion data for ease of maintenance, particularly in cases where more than one client uses the same ERP system.

When performing a unit of measure conversion, the system only looks at the unit of measure conversion records that belong to the unit of measure conversion partition assigned to the client of the current document.

### Register the unit of measure conversion partition

To register a new unit of measure conversion partition, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Unit Of Measure Conversion Partition Settings** node. This then displays the unit of measure conversion partition configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the unique ID for your unit of measure conversion partition in **UOM Partition**. This must be entered as an integer.
6. Enter a short description for your partition in **Description**.
7. Click the **Insert** hyperlink to save the changes.

### Assign the unit of measure partition to a client

To assign a unit of measure conversion partition to a client, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Client Settings** from the **Settings** drop-down. The client configuration table is then displayed.
3. Locate the row for the client to which you want to assign a unit of measure conversion partition.
4. Choose the unit of measure conversion partition you wish to assign to the client by selecting the partition ID number from the **UOM Partition** drop-down.
5. Save the changes.

### Configure the unit of measure conversion look-up

To configure the unit of measure conversion lookup to use the standard AP Project table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Unit Of Measure Settings** node.
5. Clear the **Use External Table** check box.
6. Save the changes.

## Maintain unit of measure conversion master data

To maintain unit of measure conversion master data within the solution, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **UOM Conversion Master Data** node. This then displays the unit of measure conversion configuration table.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the partition ID for your unit of measure conversion record in **UOM Partition**.
6. Enter the material number in **Material**. This column is mandatory.
7. Enter the base unit of measure for the material in **Base UOM**. This must be entered as an ISO- code. This column is mandatory.
8. Enter the numerator component for the conversion in **Numerator**. This must be entered as a numeric value. This column is mandatory.
9. Enter the denominator component for the conversion in **Denominator**. This must be entered as a numeric value. This column is mandatory.
10. Enter the external unit of measure for the conversion in **UOM**. This must be entered as an ISO- code. This column is mandatory.
11. Click the **Insert** hyperlink to save the changes.

## Configure usage of an external Unit Of Measure Conversion Table

To configure usage of an external unit of measure conversion table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Line Pairing Settings** node.
5. Select the **Convert Quantity From DB** radio button.
6. Save the changes.
7. Within the **Processing Settings** hierarchy tree, navigate to the **Unit Of Measure Settings** node.
8. Select the **Use External Table** check box. This then reveals further configuration settings.
9. Choose the SQL connection group that represents the connection to the unit of measure conversion table's database by selecting the SQL connection group ID from the **SQL**

**Connection Group** drop-down.

10. Enter the technical name of the unit of measure conversion table in **DB Table Name**.

11. Enter the technical name of the material number column in **DB Material No.**

12. Enter the technical name of the column used for the base unit of measure in **DB Base UOM.**

13. Enter the technical name of the column used for the conversion numerator in **DB Base Numerator.**

14. Enter the technical name of the column used for the conversion denominator in **DB Denominator.**

15. Enter the technical name of the column used for the external unit of measure in **DB UOM.**

16. Save the changes.

## Configure unit of measure aliases

When the system queries the unit of measure conversion table, it does so using the unit of measure code used by the customer ERP system. However, vendors commonly do not state this code on the invoice. For example, instead of using unit of measure codes 'TO' and 'EA' for 'tonnes' and 'each' respectively, the vendors often choose to use their own terminology, which would not be understood by the customer ERP system.

Hence, AP Project provides a unit of measure translation table where unit of measure aliases used by vendors can be mapped to the codes used by the customer. The translation table is processing profile specific.

To configure the mapping of vendor unit of measure aliases to the codes used by the customer, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Processing Settings** from the **Settings** drop-down.

3. Select the processing profile you want to use.

4. Within the **Processing Settings** hierarchy tree, navigate to the **Unit Of Measure Types** node. The unit of measure translation table is then displayed.

5. Scroll to the last row in the table where you have the option to create a new entry.

6. Populate the **Index** column with the next available sequential number.

7. Enter the unit of measure code used by the customer in the **ISO Code** column.

8. Enter the aliases used by the vendor as a comma-separated list in the **Alias** column.

9. Click the **Insert** hyperlink to save the changes.

# Data Export

Export is controlled via export profiles, which are in turn assigned to clients. During installation, export profile 0 is automatically installed and assigned to client 0. This export profile settings can be changed, if needed, or a new export profile can be added.

For each profile, you can configure the following export options for AP Project.

- Export TIFF images.

- Export a PDF file.

- Export to database tables.

- Export to an XML file.

- Export to a CSV file.

- Export to ProcessIT for Oracle EBS.

- Export an OCR XML file.

- Activate a custom export.

With the exception of the custom export, the options above only apply for documents classified to the 'Invoices' class, or to one of its child classes. For custom base classes, the data export will need to be coded programmatically within 'UserExitCustomExport' on the UserExits script class level.

## Add Export Profiles

You can create an export profile in the Solution Configuration Manager. This profile can then be shared between multiple clients, enabling export behavior for one or more clients with minimal effort. If none of the available profiles is appropriate for a specific client, additional profiles are allowed.

To add an export profile to your project, complete the following steps.

1. Open the Solution Configuration Manager.
2. Select a project from the drop-down. An additional **Settings** list is displayed.
3. From the **Settings** list, select **Export Settings**. An additional **Profile** list is displayed.
4. Select the profile from the **Profile** list that contains settings that are the closest to those you want in your new profile.

   If you are not sure here, select the default profile. An additional **Copy Profile** button then appears.

5. Click **Copy Profile**.

   A **Copy Profile** window is displayed.

6. Keep the default option for the **Profile ID**.

   This is a unique number and it is the easiest if you accept the one provided by default as it is the next unique number in the sequence.

7. Under **Profile Name**, enter a short name that is easy to remember.
8. Under **Profile Description**, enter a brief description of the profile.
9. Click **Save**.

## Configuring the export directory

The system writes export files to the export directory specified against the Runtime Server instance performing the export step.

You can configure an override export directory path at the export profile level. The override export directory takes priority over any export directory configured against the Runtime Server instance. This allows you to maintain the configuration of the export directory within the AP Project configuration database. It also allows you to specify a different export directory at the export profile level without having to create multiple runtime server instances. You can also configure a default export directory path.

This directory is used if no directory is specified against the RTS instance and no override export directory is configured. The core platform does not permit a blank export directory on an RTS instance

performing export, hence usage of the default export directory path is limited, but it could be invoked in custom script.

To configure an override and default export directory, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Export Settings**.
3. Select the relevant Export Profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the default export directory path you want to use in **Default Export Path**.
6. Enter the override export directory you want to use in **Override Export Path**.
7. Save the changes.

## Export TIFF images

Runtime Server settings can be used to export a copy of the original TIFF image to the export directory. It is recommended that this setting be used over custom settings. However, custom settings provide additional options for outputting a second TIFF image and must be used when one or more of the following applies.

- A second TIFF file is required during document export.
- The TIFF filename must be set to the document URN rather than the original image filename.
- The TIFF image resolution needs to be changed from the original image resolution.
- The TIFF image compression ratio needs to be changed from that of the original image.

## Export a configurable TIFF image

To export an additional TIFF image, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Export Settings**.
3. Select the relevant Export Profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Select the **Output TIFF File** check box. Further settings are displayed.
6. To set the name of the TIFF file to match the document URN mapped in Global Settings > Import Settings, in the **Tiff Name** drop-down, select URN. Otherwise, the name of the original imported document is displayed.
7. Save the changes.

## Configure the DPI and the compression type for TIFF images

Configuring the DPI and image compression types is optional. To change the image DPI and compression, complete the following steps.

1. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
2. Set **Tiff DPI** to a DPI of your choice - for example, 200. The default image compression is 300 dots-per-inch.
3. Choose the desired image compression by choosing a value from the **Tiff Format** drop-

down. The default used is G4FAX, but the four options available are as follows:

- G4FAX This is standard Grade 4 compression.

- G3FAX This is standard Grade 3 compression.

- LZWFAX This is LZW compression.

- HUFFAX This is HUF compression.

4. Save the changes.

## Export a PDF file

You can output an invoice as a searchable PDF file. To export a PDF file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Export Settings**.
3. Select the relevant Export Profile.
4. Navigate to **Export Options** on the **Export Settings** hierarchy tree.
5. Select the **Output PDF** check box. Further settings are displayed.
6. To set the name of the PDF file to match the document URN mapped in Global Settings > Import Settings, in the **PDFName** drop-down, select URN. Otherwise, the name of the original imported document is displayed.

## Database Export

You can configure the system to export data to a downstream database of your choice. The database export can write the data into four different types of table.

- An invoice header data table

- An invoice line item data table

- An invoice general ledger account coding table

- An invoice tax line item table

## Configure database export

To activate output to a database, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. Select **Global Settings**.
3. Within the **Global Settings** hierarchy tree, navigate to the **Database Settings** node.
4. Create a new entry that represents the SQL connection to the database that contains the target database tables to which you wish to export data. Make a note of the corresponding Index ID, such as 4.
5. Save the changes.
6. From the **Settings** drop-down, select **Export Settings**.
7. Select the relevant export profile.
8. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.

9. Select the **Export to DB** check box. Further database export options are then displayed.

10. In the **SQL Connection Group** drop-down, select the index ID created earlier that represents the target database.

11. Save the changes.

## Configure invoice header database export

If database export is required, then configuring the system to output data to an invoice header database table is mandatory. The invoice header contains items of data that apply to the document as a whole, such as the invoice number, the invoice date, and the vendor.

The target invoice header database table must have a field that represents the unique key for each row. By default, the system populates this field with the name of the image filename without the file extension.
However, a document URN mapped in Import Settings can be used instead. To configure data export to an invoice header database table, complete the following steps in Solution Configuration Manager.

1. Select the project.

2. From the **Settings** drop-down, select **Export Settings**.

3. Select the relevant export profile.

4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.

5. Enter the technical name of the target invoice header table in **DB Header Table**.

6. Enter the technical name of the field in the target header database table that represents the unique record identifier in **DB Header Key**.

7. In the **DB Key** drop-down, choose how you want the unique record identifier to be created. If you want to use the document URN mapped in Global Settings > Import Settings, select URN. If you want to use the original document filename (without the file extension and filetype), select FILENAME.

8. In the **DB Header Operation** drop-down, select Insert if the system should create a new record in the table for the document. If the system should update an existing record that was created in an upstream process, select Update.

9. Save the changes.

10. Within the **Export Settings** hierarchy tree, navigate to the **Header Field Export Mapping** node. A list of possible header export fields are then displayed.

11. Browse through the list of available header export fields. For each field that should be exported, populate the 'DB Column Name' column with the technical name of the field in the target database table where the value should be written. For example, to write an extracted invoice number into a database field with a technical name of 'INVNO', enter 'INVNO' into the 'DB Column Name' column.

12. Repeat the above two steps for all header fields for which database output is required, ensuring that the **DB Column Name** column is left blank for any field that is not relevant for database output.

13. Save the changes.

## Configure line item database export

The output of invoice line items is optional. The system expects the destination line item table to have a composite key consisting of two fields. One is the document identifier which the system

populates with a value identical to that passed into the header table unique key field, which must have the same technical column name. The second is a line item number index column, which the system will set from 1-n, where n is the number of line items.

To configure the output of line items to a target invoice line items database table, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the technical name of the target database table where the line item data should be written in **DB Line Items Table**.
6. Enter the technical name of the field in the target line items database table where the unique line item row number should be written in **DB Line Items Key**.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **Line Item Export Mapping** node. A list of possible line item export fields are then displayed.
9. Browse through the list of available line item export fields. For each field that should be exported, populate the **DB Column Name** column with the technical name of the field in the target database table where the value should be written.
10. Repeat the above two steps for all line item fields for which database output is required, ensuring that the parameters are left blank for any fields that are not relevant for database output.
11. Save the changes.

## Notes

If no destination table is specified, no line items will be written out. If a table is specified, but no line items key field has been set, then the export will fail and the batch will go to a state of 750.

Additionally, the system will not write out line item data if any of the following conditions hold for any given document:

- The line items field is not active.
- Line items are not subject to validation as configured in Table Settings for the document processing profile.
- The document is a credit memo, and line items are not required for credit notes.
- The document is NO-PO, and line items are not required for NO-PO documents.
- The document is PO-related, but the PO has not been released, and line items are not required for documents with an unreleased PO.
- The user selected an INVOICE AMOUNTS DO NOT ADD UP invalid reason in Verifier.
- The user selected either a VENDOR NOT FOUND, MISSING/INVALID PO or a MISSING/INVALID VENDOR & PO invalid reason in Verifier, and line items are not required for that particular invalid reason.
- The user selected an invalid reason based on the SETINVOICETOVALID rule.
- The document is from a utility vendor, and line items are not required for utility vendors.

**Result**

For MIRA, third-party freight and service-PO invoices where line items were not required and line pairing was either unsuccessful or deactivated, a single line item will be written to the database with a quantity of '1', and a net price and line item total set to the net invoice value. The description is set to 'MIRA,' 'SERVICE' or 'THIRD PARTY FREIGHT' as appropriate.

When writing the line item information to the database, the system will first clear out any existing line item records that are present for the document in question. If the line item export to the database is not successful, the entire document record will be rolled back, which includes the header level entry and document export will fail, sending the batch to a status of 750.

## Configure general ledger account database export

The output of general ledger line items is optional. The system expects the target general ledger account database table to have a composite key consisting of two fields. One is the document identifier, which is populated with a value identical to that passed into the header table unique key field, which must have the same technical column name. The second is a line item number index column, which the system sets from 1- n, where n is the number of general ledger line items.

To configure the output of GL items, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the technical name of the target database table where the GL line item data should be written in **DB GL Items Table**.
6. Enter the technical name of the field in the target GL line item database table where the unique line item row number should be written in **DB GL Items Key**.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **GL Export Mapping** node. A list of possible GL line item export fields are then displayed.
9. Browse through the list of available GL line item export fields. For each field that should be exported, populate the **DB Column Name** column with the technical name of the field in the target database table where the value should be written.
10. Repeat the above step for all GL line item fields for which database output is required, ensuring that the parameters are left blank for any fields that are not relevant for database output.
11. Save the changes.

**Result**

If no table is specified, no GL items will be written out. If a table is specified, but no GL items key field is specified, then the export will fail and the batch will go to a state of 750.

When writing the GL account line item information to the database, the system will first clear out any existing GL item records that are present for the document in question. If the GL item export to the database is not successful, the entire document record will be rolled back, including the header level entry, and document export will fail, sending the batch to a status of 750.

## Configure tax table database export

The output of tax line items is optional. The system expects the destination tax line item table to

have a composite key consisting of two fields: one is the document identifier which will be populated with a value identical to that passed into the header table unique key field, which must have the same technical column name; the second is a tax line item number index column, which the system will set from 1-n, where n is the number of tax line items.

To configure the output of tax line items, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the technical name of the target database table where the tax line item data should be written in **DB Tax Table**.
6. Enter the technical name of the field in the target tax line item database table where the unique line item row number should be written in **DB Tax Key** field.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **Tax Export Mapping** node. A list of possible tax line item export fields are then displayed.
9. Browse through the list of available tax line item export fields. For each field that should be exported, populate the **DB Column Name** column with the technical name of the field in the target database table where the value should be written.
10. Repeat the above step for all tax line item fields for which database output is required, ensuring that the parameters are left blank for any fields that are not relevant for database output.
11. Save the changes.

**Result**

If no table is specified, no tax line items will be written out; if a table is specified, but no tax line items key field is nominated, then the export will fail and the batch will go to a state of 750.

When writing the tax line item information to the database, the system will first clear out any existing tax line item records that are present for the document in question. If the tax line item export to the database is not successful, the entire document record will be rolled back, which includes the header level entry and document export will fail, sending the batch to a status of 750.

## Add additional fields to the database header export

It is possible to add custom fields and values into the database header export. To do this, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Header Field Export Mapping** node. A list of possible header export fields are then displayed.
5. Scroll to the bottom of the list of fields where you will see a special table row where new entries can be added.
6. Populate the **Field Name** column with the name of the new export field you wish to add. This could be the technical name of an actual field within AP Project, or it could be a

'virtual' field.

7. Populate the **DB Column Name** column with the technical name of the field in the target database table where the value should be written.

8. Click the **Insert** hyperlink to the left of the row.

9. Save your changes.

10. Open the **<project>.sdp** file with the Designer module.

11. Go to Definition mode.

12. Right click the UserExits node on the project class tree and select Show Script from the context menu. A script window will appear.

13. Navigate to the **UserExitDBHeaderExport** subroutine and add the following line into the subroutine.

    **Example**

    ```
    fnWriteDBHeaderField(strMappedField, strValue, strDBKeyName,
    strFieldValue)
    ```

    In this statement, 'strMappedField' must match the name of the field entered in the **Field Name** column in step 6. 'strValue' represents the value to be exported. The other two parameters must be left as they are.

    **Note:**

    If the database field being added is a date field, and that date field is in the Verifier output format that has been configured for the processing profile, then the fnWriteDBHeaderDateField function must be used instead. This function has an identical interface, but converts the date into the export output format configured for the processing profile.

14. Close the script window.

15. Save the changes and close the **<project>.sdp** file.

## XML File Export

You can configure the system to output data in the form of a standard XML file which will be written to the export directory specified against the runtime server instance performing export.

## XML file sections

The standard XML output file is divided into five sections.

**Document section**

This section includes global document fields that are separate from the type of business document they represent, such as the scan date, priority flag, the URN and so on. The following sections are children of the document section.

If you are using Oracle WebCenter Forms Recognition version 5.9.1 or higher, the document section also includes information on the document pages.

**Invoice header section**

This section includes fields associated with the invoice header, such as the invoice number, the invoice date, the vendor ID, and so on.

**Invoice line items section**

This section includes invoice line item information written in line-by-line, such as the line item quantity, the unit price, the line item total, and material number.

**General ledger coding section**

This section includes all of the general ledger account entries associated with the invoice, such as the general ledger account number, the cost center, the tax code, and the amount. This functionality is used within the solution for the automatic general ledger coding of invoice miscellaneous charges.

**Tax line items section**

This section includes all of the tax line items associated with the invoice, such as the tax base amount, the tax code, and the tax amount.

Each of the sections has a specific tag, as does each field within those sections. All tags are configurable within the system configuration. The system configuration also controls which fields are written into the file and which fields are not. The structure of the file is as follows.

```
<XML Encoding Header>
<Document>
   [Document level fields]
   <InvHeader>
      [Invoice header fields]
   </InvHeader>
  <InvLines>
      [Invoice line item fields – one set of entries per line item]
  </InvLines>
  <GLLines>
      [GL item fields – one set of entries per GL line]
  </GLLines>
        <TaxLines>
                  [Tax item fields – one set of entries per tax line]
        </TaxLines>
</Document>
```

## Activate output to an XML file

To set up output to an XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Select the **Output XML File** check box. Further options relating to XML output are then displayed.
   Choose how you want the XML file to be named using the **XML Filename** drop-down. If you select FILENAME, the XML file will be given the same name as the original image file, without the file extension and filepath. If you select URL, the system will name the file according to the URL mapped in Global Settings > Import Settings.
6. Enter the file extension you want the XML file to have into the **XML Type** field. The system uses a default of 'XML' if this is not populated.

7. Configure the desired encoding header for the XML file via the **XML Encoding Header** parameter if the default value is not appropriate. XML export will fail if an invalid encoding header is entered.

8. Save the changes.

## Add document level fields into the XML file

The following table displays the document level fields.

| Document Level Field | Description |
|---|---|
| BatchName | This is the batch name as derived from a mapping to the document filename in Global Settings > Import Settings. |
| ClientID | This is the client ID for the document. |
| DocClass | This is the AP Project document class. |
| DocumentLink | This is the link to the document image. |
| PriorityFlag | This is the flag to indicate whether the document has a high priority. |
| ScanDate | This is the scan date as derived from a mapping to the document filename in Global Settings > Import Settings. |
| Status | This is the XML document status. You can configure the value to be outputted within the XML file configuration using the XML Status Exported field. |
| URN | This is the document URN as derived from a mapping to the document filename in Global Settings > Import Settings. If no mapping has been set, the document name, without the filepath and the file extension, is used. |

To add document level fields into the XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the XML tag you would like to use for the document level of the XML file in **XML File Header**. For example, if you enter 'Document,' the system use the tags '<Document>' and '</Document>' to mark the beginning and the end of the document level data.
6. If you wish to add a status field into the XML file, populate the **XML Status Exported** parameter with the value you wish to be written into the file for this field.
7. Save the changes. Within the **Export Settings** hierarchy tree, navigate to the **Header Field Export Mapping** node. This displays the header field export configuration table.

8. Choose the document level fields you would like to export from the available list by populating the **XML Tag** column with the desired XML tag for that field. Any field that does not have an XML tag configured is not exported. The field list displayed is a combined list of document level and invoice header level fields. The relevant document level fields are listed in the table below.

9. Save the changes.

## Add invoice header fields into the XML file

To add invoice header fields into the XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the XML tag you would like to use for the invoice header level of the XML file in **XML Invoice Header**. For example, if you enter 'Invoice,' the system will use the tags '<Invoice>' and '</Invoice>' to mark the beginning and the end of the invoice header level data.
6. Save the changes.
7. Within the **Export Settings** hierarchy tree, navigate to the **Header Field Export Mapping** node. This displays the header field export configuration table.
8. Choose the invoice header fields you would like to export from the available list by populating the **XML Tag** column with the desired XML tag for that field. Any field that does not have an XML tag configured will not be exported.
9. Save the changes.

## Add invoice line item fields into the XML file

To add invoice line item fields into the XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the XML tag you would like to use for the invoice line item section of the XML file in **XML Line Items Header**. For example, if you enter 'Lines,' the system will use the tags '<Lines>' and '</Lines>' to mark the beginning and the end of the line item data.
6. Enter the XML tag you would like to use for each individual line item in **XML Line Items Tag**. For example, if you enter 'Line,' the system will use the tags '<Line>' and '</Line>' to mark the beginning and the end of each line item.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **Line Item Export Mapping** node. This displays the line item field export configuration table.
9. Choose the line item fields you would like to export from the available list by populating the **XML Tag** column with the desired XML tag for that field. Any field that does not

have an XML tag configured will not be exported.

10. Save the changes.

## Add general ledger fields into the XML file

The system will automatically create general ledger line items for invoices where a miscellaneous charge has been configured for booking to a general ledger account.

To add general ledger fields into the XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the XML tag you would like to use for the general ledger section of the XML file in **XML GL Lines Header**. For example, if you enter 'GLLines,' the system will use the tags '<GLLines>' and '</GLLines>' to mark the beginning and the end of the general ledger data.
6. Enter the XML tag you would like to use for each individual general ledger line item in **XML GL Lines Tag field**. For example, if you enter 'GLLine,' the system will use the tags '<GLLine>' and '</GLLine>' to mark the beginning and the end of each line item.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **GL Export Mapping** node within the **Export Settings** hierarchy tree. This displays the general ledger field export configuration table.
9. Choose the general ledger fields you would like to export from the available list by populating the **XML Tag** column with the desired XML tag for that field. Any field that does not have an XML tag configured will not be exported.
10. Save the changes.

## Adding tax item fields into the XML file

To add tax item fields into the XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Enter the XML tag you would like to use for the tax section of the XML file in **XML Tax Header**. For example, if you enter 'TaxLines,' the system will use the tags '<TaxLines>' and '</TaxLines>' to mark the beginning and the end of the tax line item data.
6. Enter the XML tag you would like to use for each individual tax line item in **XML Tax Tag**. For example, if you enter 'TaxLine,' the system will use the tags '<TaxLine>' and '</TaxLine>' to mark the beginning and the end of each line item.
7. Save the changes.
8. Within the **Export Settings** hierarchy tree, navigate to the **Tax Export Mapping** node.
9. Choose the tax line item fields you would like to export from the available list by populating the **XML** Tag column with the desired XML tag for that field. Any field that

does not have an XML tag configured will not be exported.

10.  Save the changes.

## Add a custom header field into the XML file

You can insert custom fields into any section of the XML file.

The process of adding a field to the XML file consists of two steps. The first step is to add a new row to the appropriate export configuration table to represent the new field. The second step is to insert a matching line of code into the XML Export User Exit.

The export configuration table that is used depends on the type of field that needs to be written out. For fields that are written either to the document or invoice header level in the XML file, the header field export configuration table is used; for line item fields, the line item field export configuration table is used; for GL items, the general ledger field export configuration table is used; and for tax line items, the tax field export configuration table is used.

The exact naming of the field in the 'FieldName' column of the field export configuration tables does not need to be the same as the technical name of the relevant field, but must be meaningful. The name of the field also needs to be unique for the export profile ID.

To add a custom header field into the XML file, complete the following steps in Solution Configuration Manager.

1.  Select the project.
2.  From the **Settings** drop-down, select **Export Settings**.
3.  Select the relevant export profile.
4.  Within the **Export Settings** hierarchy tree, navigate to the **Header Field Export Mapping** node. This displays the header field export configuration table.
5.  Scroll to the bottom of the list of fields. At the end, there is a special table row where new entries can be added.
6.  Populate the **Field Name** column with the name of the new export field you wish to add. This could be the technical name of an actual field within AP Project, or it could be a 'virtual' field.
7.  Populate the **XML Tag** column with the desired XML tag for that field.
8.  Click the **Insert** hyperlink to the left of the row.
9.  Save the changes.

## Add matching code into the XML export user exit

To add matching code into the XML export user exit, complete the following steps.

1.  With the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2.  In Definition mode, highlight the UserExits class.
3.  Right-click on the class and select **Show Script**.
4.  Navigate to the UserExitXMLOutput user exit subroutine.
5.  Add an `fnWriteXMLField` command or an `fnWriteXMLDateField` command below the 'Insert Code here' comment.
6.  Save the changes.

**Note:**

- If the field being added is a date field, and the date field format matches the Verifier output format configured for the processing profile, then the 'fnWriteXMLDateField' function must be used instead. This function has an identical interface, but converts the date into the export output format configured for the processing profile.

- Additional values inserted into the XML file need not be tied to actual fields within the project file. You can also insert hard-coded values, or derive values from the document properties, for example, the document filename.

Examples

Header Field Export Mapping: FieldName: "DocInfo", XMLTag: "NewDocInfo"

fnWriteXMLField("DocInfo","New document information",cXMLDocHeader,xmlDoc)

will insert the tag "<NewDocInfo>New document information</NewDocInfo>" into the document level section.

Header Field Export Mapping: FieldName: "InvInfo", XMLTag: "NewInvInfo"

fnWriteXMLField("InvInfo","New invoice information",cXMLInvHeader,xmlDoc)

will insert the tag "<NewInvInfo>New invoice information</NewInvInfo>" into the invoice header section.

## Write data to a CSV file

The structure of the CSV file is configurable for up to five lines per document at the header level, and one additional line for each line item. It is also possible to configure the CSV file output at the document or batch level, and to create multiple files depending on whether the invoice type is PO or NO-PO. You can output any number of different CSV files per document processed.

## Configure the CSV file

Configuration of the CSV file output is performed at the export profile level using the CSV export configuration table within Solution Configuration Manager. Each row in the table represents a single CSV file for output.

CSV files can be activated and deactivated using this table. In addition, there is a global switch that must be activated for any CSV output to occur.

### Activate CSV file output at the global level

To activate CSV file output globally, complete the following steps within Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.
3. Select the relevant export profile.
4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.
5. Select the **Output CSV File** check box.
6. Save the changes.

### Activate CSV file output for each CSV file

To activate output for each individual CSV file, complete the following steps. The naming of the CSV file depends upon whether output is required on a per-document or a per-batch basis.

1. Within the **Export Settings** hierarchy tree, navigate to the **CSV Export Configuration** node. This displays the CSV export configuration table. As part of the installation process, this table is populated with two sample entries, each denoting a single CSV file for output. These two sample entries can be adapted for your use, or you can insert a new entry into the last row of the table and click the **Insert** hyperlink.

   Choose the CSV files you would like to export by selecting the **Output File** check box. Remember to clear the box for any files you do not want.

2. If one file per batch is required, select the **Combined File Per Batch** check box. If one file per document is required, the check box should be cleared.

3. If you chose to output any of the CSV files on a per-batch basis in the step above, set the Document Grouping option for import in the RTS instance settings to `1 folder per batch` or
   `1 batch per subdirectory, 1 folder per batch`.

4. Enter the path to the directory where you would like the CSV file to be exported in the **Filepath** column. If you wish to use the export directory configured on the RTS export instance, then this can be left blank.

5. Choose how you want the CSV file to be named using the drop-down options in the **Filename** column. If you select `FILENAME`, the system will name the CSV file after the original document filename, without the file extension. If you select URN, the system will name the CSV file using the URN mapped in Global Settings > Import Settings. This setting does not apply if you have selected the **Combined File Per Batch** check box as the name of the file will be derived from the Oracle WebCenter Forms Recognition batch number.

6. Enter the file extension you want for your CSV file into the **File Type** column. The system uses 'CSV' by default as the file extension if no entry is made here.

7. If you want to specify a prefix for the CSV file name to ensure unique naming in the event of a multi- CSV file export, you can enter the desired prefix in the **File Prefix** column.

8. Populate the **Separator** column with the single character you intend to use to separate values within the body of the CSV file. The system uses this to ensure that any separated values have this single character stripped out. If no separator is used, this can be left blank.

9. Choose the format for date output within the CSV file using the drop down options against the **Date Format** column. The possible choices are as follows.

   - YYYYMMDD

   - MMDDYYYY

   - DDMMYYYY

10. Choose the separator you wish to use for dates by entering one of the following in the **Date Separator** column.

    - - (dash)

    - / (forward slash)

    - The separator can be left blank, if required.

11. You can restrict CSV file output by invoice type by using the **Invoice Type** drop-down. The options are as follows.

- If you select 'PO', the CSV file will only be exported for PO invoices.

- If you select 'NPO', the CSV file will only be exported for non-PO invoices.

- If the field is left blank, the CSV file will be exported for both PO and non-PO invoices.

12. To output an additional copy of the original image to the destination directory, select the **Output Image** check box.

13. Configure how you want the content of the CSV file to appear for header fields using the **Format Line 1** to **Format Line 5** columns. You can use literals to mark the locations where extracted invoice values should be written. A full list of the available literals is available in the configuration settings overview.

14. Configure how you want the content of the CSV file to appear for line items using the **Line Items** column. You can use literals to mark the locations where extracted invoice values should be written. A full list of the available literals is available in the configuration settings overview.

15. Save the changes.

## Add a new header field to the CSV file

Custom fields can be written into the CSV file. To add custom fields to the file, complete the following steps.

Prerequisite If the CSV field being added is a date field, and that date field is in the Verifier output format configured in Processing Profile Configuration Settings > Date Settings, then in the following steps you must use the fnWriteCSVDateField function instead. This function has an identical interface, but converts the date in the date format configured for the CSV file group. If no group format is set, the date is formatted according to the output date format setting in the Date Settings section.

1. With the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2. Navigate to the **Definition** mode section and highlight the **UserExits** class.
3. Right-click the class and select **Show Script**.
4. Navigate to the **UserExitCSVFile** user exit subroutine.
5. To add the **InvoiceCode** custom field to the file, add the following line to the subroutine.

    **Example**

    ```
     fnWriteCSVField(strRecordText, strKey, "<%myField>",pWorkdoc.Fields
    ("InvoiceCode").Text)
    ```

    **Note:**
    "<%myField>" is now a valid literal that can be used when defining the CSV header Format Lines.

6. Save the changes and close the script.

    **Note:** If the field being added is a date field, and the date field format matches the Verifier output format configured for the processing profile, then the 'fnWriteCSVDateField' function must be used instead. This function has an identical interface, but converts the date into the export output format configured for the processing profile.

## Add a new line item field to the CSV file

Custom line item fields can be written into the CSV file. To add a new line item field, complete the following steps.

1. With the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2. Navigate to the **Definition** mode section and highlight the **UserExits** class.
3. Right-click on the class and select **Show Script**.
4. Navigate to the **UserExitCSVFileLine** user exit subroutine.
5. To add the line item field to the file, add the following line to the subroutine.

   **Example**

   ```
   fnWriteCSVField(strRecordText, strKey, "<%myfield>", "myvalue")
   ```

   **Note:** "<%myField>" is now a valid literal that can be used when defining the CSV line item format.

6. Save the changes and close the script.

   **Note:** If the field being added is a date field, and the date field format matches the Verifier output format configured for the processing profile, then the 'fnWriteCSVDateField' function must be used instead. This function has an identical interface, but converts the date into the export output format configured for the processing profile.

## OCR XML file export

The OCR XML file export outputs a file that contains the following information.

- All the document OCR words with positional information.

- All the document field data (excluding tmp fields) with positional information and validity status, including cell-by-cell content of table data.

- All the field candidate information (optional).

The file can be used by a downstream system that has a component similar to the Verifier application, thus avoiding the need for a second OCR.

## OCR XML file structure

The structure of the XML file is as follows.

```
<OCR XML Header>
<Document>
   <Words>
         <Word>
            <ID>
            <Text>
            <Top>
            <Left>
            <Height>
            <Width>
         </Word>
      </Words>
   <Fields>
      <Field>
         <Name>
         <Text>
```

```
<Valid>
<ErrorDescription>
<PageNr>
<Top>
<Left>
<Height>
<Width>
```

--- The following appears for table fields only.

```
<Rows>
    <Row>
        <ID>
        <Columns>
            <Column>
                <Name>
                <Text>
                <Valid>
                <ErrorDescription>
                <PageNr>
                <Top>
                <Left>
                <Height>
                <Width>
            </Column>
        </Columns>
    </Row>
</Rows>
```

--- The following appears if candidate information is required (non table fields).

```
<Candidates>
    <Candidate>
        <ID>
        <Text>
        <PageNr>
        <Top>
        <Left>
        <Height>
        <Width>
    </Candidate>
</Candidates>
    </Field>
</Fields>
</Document>
```

## OCR XML file configuration options

To activate the output of the OCR XML file, complete the following steps in Solution Configuration Manager.

1. Select the project.
2. From the **Settings** drop-down, select **Export Settings**.

3. Select the relevant export profile.

4. Within the **Export Settings** hierarchy tree, navigate to the **Export Options** node.

5. Select the **Output OCR XML File** check box. This reveals the OCR XML file specific configuration options.

6. Choose how you want the OCR XML file to be named using the OCR XML File Key drop-down. If you select `FILENAME`, the OCR XML file will be given the same name as the original imported document. If you select `URN`, the system will use the document URN mapped in Global Settings > Import Settings.

7. Choose the file extension you want the OCR XML file to have using **OCR XML File Type**. The default value is 'XML' if this is not populated. If you have configured export to produce more than one XML file, you must ensure that they are not going to overwrite one another by having a unique file extension.

8. Enter the XML file encoding header you want to appear as the first line in the file in **OCR XML Header**. You can use the default if you wish.

9. If you want the output file to include field candidate information for each non-table field, select the **Include Candidate Information** check box.

10. Save the changes.

## Set up a custom export

If you have a required data export and the existing export options do not support the data export's format, or if you need to export data for a custom base class, you must create a custom export. The custom export must be scripted and executed within a special user exit. The following sections describe how to implement a custom export.

The user exit is called once for each document that is exported. Once a document is exported, the export history is updated against the document so that it is not unintentionally exported a second time. The history can be cleared by resetting the document back to state 200. If an export is not successful, the user exit is called again during the next attempt.

The script contents of a user exit can be set to anything that your business needs require.

You must check the document class before developing any script that refers to fields using hard-coded field names, particularly if the project uses custom base classes. If a field that does not exist is referenced against the document class, it results in a runtime error. The fnGetBaseClass global function, described in the Global Variables Script Class, can be used to check the document class.

## Configure and activate a custom export

The script contents of the user exit can be set to anything that is required. To configure and activate a custom export, complete the following steps.

1. Within the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.

2. Navigate to **Definition** mode and highlight the **UserExits** class.

3. Right-click on the class and select **Show Script**.

4. Navigate to the **UserExitCustomExport** user exit subroutine.

5. Configure the parameters listed in the following table.

| Parameter name | Description |
|---|---|

| | |
|---|---|
| pWorkdoc | This is the standard Workdoc object that provides access to all document field information (including the originally extracted line item data), the document classname, the document OCR text and the document filename. |
| ExportPath | This is the destination folder for file output. This value is taken from the export filepath configured on the RTS instance responsible for document export. If the RTS instance path is blank, then document export will fail. |
| strDocLink | This is the path to the image of the document, which could be stored either in a storage director or the batch directory, or could be a URL to retrieve the image from an archive. |
| LineData | This multi-line array contains the line items available for export. This is populated for all documents classified as invoices where line items are relevant. |
| GLData | This is the array based on the accounting data type defined on the global variables script level. This array is populated if the system determines that general ledger coding entries are required for the document being processed. In the standard solution, this is only populated for invoices where a miscellaneous charge extracted either at header or line item level is configured to be posted to a GL account. |
| TaxData | This is the array containing the total tax amount that corresponds to each tax code determined during the automatic tax calculation procedure. |
| blLinesRequired | This is the flag indicating whether line item export is relevant for the invoice based on the invoice characteristics, any invalid reasons set, and the configuration in Processing Profile Configuration Settings > Line Item Table Settings. If set to TRUE, line items are relevant for export. |
| Address | This is the vendor address structure. This contains the address details for the document vendor. |
| Flags | These are the document validation flags. This structure contains document-specific flags which can be used to determine what data must be exported. |

6.  To activate the custom export, in Export Options > Export Settings, select the **Custom Export** check box.

7. Save the changes.

# ALM Integration

The ALE Learnset Manager (ALM) is a separate application that allows management of solution learnsets created using the Automatic Learning Engine (ALE). The Automated Learning Engine is a different technology to the Brainware Extraction Engine used within AP Project.

For each processing profile, you can configure AP Project to use ALM as an additional extraction resource in order to improve field extraction rates for documents classified as invoices. This capability applies only to header fields such as the invoice number and the invoice date. It does not apply to line item fields or fields that use the associative search engine. Within the configuration, you can choose which fields you want to use ALM for. For each field, you can decide whether the ALM result should take priority over the AP Project result, or whether the ALM result should be used to increase the confidence of a field candidate generated by AP Project.

You can also configure the system to update the learnset in ALM with new documents and the corresponding field data which has been confirmed to be correct by a Verifier user. This process occurs at time of document export. As more documents are added, the learnsets in ALM are refined further so that field extraction rates in AP Project increase over a period of time.

It is also possible to configure the system to use ALM for fields belonging to custom base classes.

The system requires ALM 2.0 as a minimum version. If you have configured AP Project to update the ALM learnset at time of document export, you do not need to set up any project, classes or fields in ALM in advance. These are created automatically by AP Project.

Integration with ALM is performed using REST API calls. Any technical errors relating to use of ALM that occur during field extraction or document export do not cause the extraction and export workflow steps to fail. Instead, details of the error are written into the Runtime Server Instance log file.

## Configure a connection to ALM

To configure a connection to ALM, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM General Settings** node
5. Select the **Activate ALM** check box if you want to activate usage of ALM for field extraction.
6. In **Base URL**, enter the base URL to connect to the ALM instance. This must be entered in the format `scheme://host:port/` with no additional components. This is a mandatory field.

   **Example**

   Example: http://localhost:8080/.

7. Enter the ALM user ID in **User ID**. This is a mandatory field.
8. Enter an encrypted password in **Encrypted Password**. This is a mandatory field.
9. Enter the name of the ALM project used for invoices in **Invoices Project Name**. This is a mandatory field. If you are using the system to update the learnset in ALM, the system

will create an ALM project automatically with the name you specify here if the project does not exist already.

10. Save the changes.

If the system is not able to establish a connection to the ALM server, or there is missing or incorrect configuration, document processing in AP Project does not stop. Instead, messages are written into the log file of the RTS instance that is performing extraction. Communication with ALM for the purposes of extraction occurs in the **Document PreExtract** event.

## Configure fields with use with ALM

You can choose which fields you want to use with ALM along with how the ALM field extraction results should interact with the AP Project field extraction results.

For each field relevant for ALM field extraction, the system first checks whether AP Project has generated any candidates for the field. If no AP Project candidates have been generated for the field, which may be the case for a custom field where no format analysis strings have been set, the system takes the top weighted candidate returned by ALM and adds it to the AP Project candidate list. This new AP Project candidate is then assigned the weight that was determined by ALM. If this weight meets the evaluation threshold that you have set for the field in Designer, the field is extracted.

If AP Project has generated candidates for the field and one of those candidates matches the top weighted ALM candidate, the matching AP Project candidate weight is uprated from its original value using a percentage of that original value that you can configure.

For example, if AP Project has generated a candidate for the invoice number with a weight of 0.5 and the same value is also the top ALM result for the field, if you have configured 20% as the increase percentage, then the AP Project candidate weight is uprated to 0.6.

You must ensure that you do not have any other configuration in place that might reduce the weight of the AP Project candidate you want to extract. For example, you want the system to extract a date, but that date falls outside of the extraction validity range you have configured using the **Maximum Past Years** parameter in **Date Settings**.

If none of the AP Project candidates match the ALM candidate, the ALM candidate is added to the AP Project candidate list and is assigned the weight determined by ALM.

You can also configure the system to ignore the AP Project candidates and use the top ALM candidate in all cases as long as AP Project candidates exist and the ALM candidate exceeds a configurable confidence threshold. In this instance, the ALM candidate is either assigned a weight of 1 or the weight of the highest AP Project candidate plus 0.1, whichever is higher.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM General Settings** node. This then displays the ALM field configuration table. This table contains a complete list of standard AP Project fields that you are able to use ALM with.
5. Locate the row for the field you wish to configure.
6. Select the **Relevant For ALM** check box if you want to use ALM extraction for the field.
7. Enter the percentage of the original weighting by which a AP Project field candidate

confidence should be uprated if it matches the best ALM candidate in **Increase Percentage**. This should be an integer, so `10` would represent 10%. This setting does not apply to the currency field on the invoices class. For the currency field, only the **Always Use ALM Result** option is available.

8. Select the **Always Use ALM Result** check box if you always want to use the highest weighted candidate generated by ALM.

9. Enter the minimum confidence level that the top ALM candidate must have to be used as the field result in **Min ALM Confidence**. This setting is used in conjunction with **Always Use ALM Result**. This value should be entered as a value between `0` and `1`. If you always want to use the ALM result irrespective of weighting, then this value can be left as `0`.

10. Save the changes.

## Configure the automatic ALM learnset update

You can configure the system to add a document to the ALM learnset during export. This option allows you to enhance the ALM learnset in an automated manner. Adding more documents to the ALM learnset helps familiarize the system with a broader range of invoice formats and can help improve the quality of extraction over a period of time.

ALM stores a project learnset in the form of ALM classes, where each class represents an invoice format. When ALM performs extraction on a given document, it uses the layout of the document to determine which ALM class should be used as the base learnset for field extraction. If the document layout cannot be associated with a class, then no ALM field extraction can be performed. Hence, creating new classes is the means by which the system is able to handle an ever-changing landscape of invoice formats.

Before adding a document to the ALM learnset, the system first checks to see if that document was classified to an existing ALM class during the extraction step. If it was classified to an ALM class, the document is added to that class. The ALM class is recreated if it was deleted subsequent to the extraction step.

If the document was not classified to an ALM class during the extraction step, the system automatically creates a new class. When a new class is created, the name of the class is derived using a combination of the vendor ID and the vendor name for the current document. The vendor ID is taken from the **VendorID** field. The vendor name is derived from the first line of the **VendorASSA** field. Using these two elements, the ALM class name is formed as **VendorName_VendorID**.

In addition, if the ALM project configured in I**nvoice Project Name** does not exist, this project is also created automatically.

Although ALM classes created automatically are named after the vendors for which they were initially created, a single ALM class can be used to aid extraction for multiple vendors that use the same invoice layout. As long as a class with a matching layout was determined during extraction, the system will not create additional classes for the same invoice format on the basis that they were provided by different vendors.

The system only adds a document to the ALM learnset if all of the following conditions are met.

- The automatic ALM learnset update is activated.

- If the document is classified to a custom base class, that custom base class has been registered in the ALM base class configuration table.

- The document only relates to a single image file - for example, it has not been created by

- merging multiple documents together in Verifier.

- The user who verified the document is permitted to add documents to the ALM learnset.

- The Verifier user corrected one or more fields that you have configured as being relevant for ALM.

- For each field corrected, the Verifier user either double-clicked or used a bounding box to select the correct value on the document so that the field result is associated with the correct field location.

- For each field corrected, there were no significant OCR errors on the value the user chose that would have prevented initial automatic extraction. This check does not apply to the currency field on the Invoices class.

- The document invalid reason is set to **NONE, STOCK INVOICE, THIRD PARTY FREIGHT** or **PO VENDOR <> INVOICE VENDOR**. For any other invalid reason, the document is not added to the ALM learnset.

- If the document is an invoice and the vendor invoice frequency check is activated, a sufficient number of records of past vendor invoices exist in the invoice number history table over the time period configured.

To control the growth of the learnset in ALM, you can specify additional criteria to determine whether a document should be added or not. You can configure the system to add a document only in the event that a minimum number of fields relevant for ALM were corrected by the Verifier user. You can also configure the system not to add a document to an ALM class learnset if the number of documents that are already present in that learnset exceeds a specified volume, or not to create a new class if the number of classes that already exist in the ALM project exceeds a value you can specify.

After a document is added to the ALM learnset, you can configure the system to learn the ALM project automatically. Learning the ALM project means that the learnset update becomes available to new documents being processed immediately. If your ALM project has a lot of classes, the learning process can be time consuming. Hence, you may not wish this step to be carried out by AP Project automatically as it would hold up the RTS instance performing export. If you decide not to trigger automatic learning from AP Project, you would need to trigger the project learning in ALM.

To configure the automatic ALM learnset update, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM General Settings** node.
5. Select the **Update ALM At Export** check box.
6. Select the **Learn ALM At Export** check box if you want the system to trigger the learning process for the ALM project.
7. Enter the minimum number of fields that a Verifier user must have corrected in **Min Corrected Field Count** for the document to be relevant for adding to the ALM learnset. This must be an integer greater or equal to one.
8. Enter the maximum number of classes that are allowed to exist for an ALM project in **Max ALM Classes**. The system will not create a new ALM class, and hence not add the current document to the learnset, if the number of classes that already exist in the ALM

project is greater to or equal to the value you specify here. A value of 0 denotes that there is no limit.

9. Enter the maximum number of documents that may exist within an **ALM class in Max Class Document Count**. If the number of documents that already exist in the ALM class learnset is equal to or exceeds the value entered, the system will not add the document to the ALM learnset. A value of 0 entered here specifies that there is no maximum limit.

10. Save the changes.

## Configure the vendor invoice frequency check

The vendor invoice frequency check is an optional feature that allows you to control the automatic creation of classes in ALM based upon how often you receive you documents from each vendor.

For example, if one particular vendor only submits a single invoice once every five years, or you receive a lot of invoices from 'one-off' vendors, you may not want the system to expend resource creating ALM classes for these documents given how infrequently those classes would actually prove useful. You may only want the system to create ALM classes for vendors who send invoices at more regular intervals.

To determine how frequently a vendor submits invoices, the system looks at the number of records in the invoice number history table that you set up in **Processing Settings > Invoice Number Settings**. Each record in this table represents either an invoice or credit note submitted by one particular vendor that the system has processed in the past.

When you configure the frequency check, you can decide how many invoice number history records need to exist in the table for a specified time frame before the document should be added to the ALM learnset. The time frame is measured in days prior to the current date.

For example, if you want the system only to add a document to the ALM learnset if the vendor has previously submitted more than 5 invoices or credit notes in the last 100 days (excluding the current document), you would set the number of target records to **5** and the time period (past days) to **100**.

If the number of records in the invoice number history table does not reach the target, the document is not added to the ALM learnset.

The vendor invoice frequency check is only available for documents classified as invoices. It does not apply to custom base classes. The prerequisites for using the vendor invoice frequency check are as follows:

- The invoice number history check has been activated in **Processing Settings > Invoice Number Settings**.

- The invoice number history is stored in a table with the same columns as **BW_INVOICE_ NUMBER_FORMATS**.

To configure the vendor invoice frequency check for ALM, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM General Settings** node.
5. Select the **Activate Frequency Check** checkbox.

6. Enter the target number of document in **Target Documents**. This value must be entered as an integer. If zero is entered, the system uses a value of 1. The value must be less than or equal to the maximum number of records that the invoice number history table is permitted to hold for a single vendor.

7. Enter the time period for the check in **Past Days**. This value must be entered as an integer. If zero is entered, the system uses a value of 365.

8. Save the changes.

## Configure ALM verifier users

You can configure the system only to add documents to a learnset if they were verified by certain users. It may be that you only want to use documents corrected by senior or more experienced Verifier users as learnset candidates.

To configure the users permitted to update the learnset in ALM, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.

2. Select **Global Settings**.

3. Within the **Global Settings** hierarchy tree, navigate to the **User Management** node. This displays the user management table.

4. Navigate to the row for the user that you want to allow to update ALM.

5. Select the **Relevant For ALM** check box.

6. Save the changes.

## Activate ALM for a custom base class

By default, when ALM extraction is activated, it is only carried out for documents classified to the **Invoices** base class or one of its child classes. It is not carried out for any other classes, including the **Void** class.

However, it is possible to extend usage of ALM so that it is used for fields belonging to custom base classes. ALM cannot be used to drive classification within AP Project. The steps to achieve this are described in the sections below.

### Assign a custom base class to an ALM project

The first step is to register your custom base class as a class relevant for ALM and to assign it to an ALM project. It is recommended to use a separate ALM project per custom base class. If you have configured the system to update the ALM learnset at time of document export, the system will create the ALM project automatically if it does not exist already.

For each custom base class, you can configure the naming convention for the classes created in ALM during the automatic ALM learnset update. You do this by specifying an Associate Search Engine (ASE) field that exists on the custom base class, along with the field used to hold the ASE ID. The ALM classname is determined using the first line of the ASE field, then an underscore, then the content of the ASE ID field.

If you do not specify an ASE field, the system creates a single ALM class matching the custom base class name if it does not exist already. This approach is appropriate if you are using the custom base class for fixed forms. For semi-structured documents, you are advised to use an ASE field. To configure a custom base class for use with ALM, complete the following steps in Solution

Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM Classes** node. This then displays the ALM base class configuration table.
5. Scroll to the last row in the table where you have the option to create a new entry.
6. Enter the base document class name in **Class Name**. This must be entered in upper case.
7. Enter the name of the ALM project you want to use for the custom base class in **Project Name**.
8. Enter the technical name of the ASE field you want to use for the ALM class naming in **ASE Field Name**. This is recommended if you are using the custom base class for semi-structured documents.
9. Enter the technical name of the ID field used for the ASE field in **ASE ID Field**. This field is mandatory if **ASE Field Name** is populated.
10. Click **Insert** to save your changes.

## Configure custom fields for ALM

Each custom base class field you want to use with ALM must be registered in the ALM field configuration table. In addition, each field registered must have a corresponding record in the standard AP Project field configuration table. You can view the standard AP Project field configuration table in **Processing Setting > Field Settings**.

To add a new field into the ALM field configuration table, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **ALM Field Settings** node. This then displays the ALM field configuration table.
5. Scroll to the last row in the table where you have the option to create a new entry.
6. Enter the base document class name in **Class Name**. This must be entered in upper case.
7. Enter the technical name of the field in **Field Name**. This is case sensitive.
8. Select the **Relevant for ALM** check box.

   If necessary, adjust the remainder of the ALM field configuration options as you would do for a AP Project standard ALM field.

9. Click **Insert** to save your changes.

## Add the tmpRTSExtractionResults, tmpVerifierAudit and tmpALMReporting fields to the custom base class

This step is mandatory if you have configured the system to update the ALM learnset at time of document export.

The **tmpRTSExtractionResults** field is used to store the field extraction results determined by RTS. The field is populated during the **Document_Validate** event for the custom base class using the

**ALMStoreRTSResults** method of the solution **ALMUtils** library. It is an internal field and does not require any action beyond its creation. If the field is not created, automatic ALM learnset updates do not occur.

The **tmpVerifierAudit** field is used to store the details of the user who verified the document. It is also populated during the **Document_Validate** event using the **ALMStoreRTSResults** method.

The **tmpALMReporting** field stores ALM field and candidate data to be written into the reporting database tables. You do not need to create this field if you are not using reporting.

To create the **tmpRTSExtractionResults** field, complete the following steps in Designer.

1. In the custom base class, go to the **Fields** view mode.
2. Right-click in the gray space and select **Insert Field Definition**.
3. Enter `tmpRTSExtractionResults` as the fieldname and press **Enter**. The field name is case sensitive.
4. Right-click on the new field and select **Show Properties**.
5. In the pane on the right side of the screen, select the **Validation** tab, and then select the **Always Valid** check box.
6. Repeat steps 3 to 5 but for a new field called `tmpVerifierAudit`. This field name is case sensitive.
7. Repeat steps 3 to 5 but for a new field called `tmpALMReporting`. This field name is case sensitive. These steps are only required if you are using solution reporting.
8. Save the project.

## Add script to custom base class

The final step required to use ALM with a custom base class is to add script into the AP Project project file. To open the script for your custom base class, complete the following steps in Designer.

1. Open Oracle WebCenter Forms Recognition Designer.
2. In the **Class view in definition** mode, highlight the custom base class, then right click and select **Show script**. This then displays the custom base class script window.

**Next**

Script needs to be added into the following events. You must create the event if it does not exist already.

**Document_PreExtract**

The following line of script must be added to the Document_PreExtract event.`Solution.ALMUtils.ExecuteALMExtraction(pWorkdoc)`

This method calls ALM and executes extraction for the current document. The method also refreshes the settings loaded from the AP Project configuration database. Hence, if you are also calling the **UpdateSettings** method from the **Settings** library within the **Document_PreExtract** event, the call to **ExecuteALMExtraction** should be placed before this, otherwise previously loaded settings will be removed.

If you also have a call to **Solution.Document_PreExtract** for the purposes of reporting, the call to **ExecuteALMExtraction** should come before this. Hence, if you are using all three methods, the correct order should be:

```
Solution.ALMUtils.ExecuteALMExtraction(pWorkdoc)Solution.
Settings.UpdateSettings(pWorkdoc, false, false)Solution.Document_
PreExtract(pWorkdoc, "CustomBase")
```

### Field_PostEvaluate

For each field that you wish to use with ALM, the following line of script must be added to the end of the field PostEvaluate event.

```
Solution.ALMUtils.ALMPostEvaluate(pField, pWorkdoc)
```

This method compares the candidates created for the custom base class field with the highest weighted candidate returned by ALM and adjusts the candidate list based on the way you have configured the field in the ALM field configuration table.

The **ALMPostEvaluate** method also offers a third optional, boolean parameter **ignoreNoNumberCandidates** which defaults to **false**. Setting this parameter to **true** means that the system ignores any candidate returned from ALM if it does not contain at least one digit.

Example usage:

```
Solution.ALMUtils.ALMPostEvaluate(pField, pWorkdoc, True)
```

### Document_Validate

If you have configured the system to update the learnset in ALM at time of document export, the following line of script must be added to the Document_Validate event.

```
Solution.ALMUtils.ALMStoreRTSResults(pWorkdoc)
```

This method updates the **tmpRTSExtractionResults** field with the field extraction results derived on server side. If you also have a call to **Solution.Document_Validate** for the purposes of reporting, the call to **ALMStoreRTSResults** should come before this.

## ALM and Reporting

AP Project writes additional information into the reporting database for each relevant document if use of ALM is activated.

This additional information can be used to create reports that allow you to track the performance of ALM at the document and field level and also to identify problematic ALM classes.

These additional items of information are written into the **BRWDocument** and **BRWDistillerFields** tables.

## BRWDocument

The table below describes the additional data that is written into the **BRWDocument** table.

| Column | Description |
| --- | --- |

| | |
|---|---|
| ALMEXTRACTION | If set to 'true', this means that the document was relevant for ALM field extraction. That is, ALM was active for the processing profile and the document class was a class relevant for ALM.<br><br>This value is populated after extraction and validation has been completed. |
| ALMLEARNSET | If set to 'true', this means the document was added to the ALM learnset at time of export.<br><br>This value is populated after extraction and validation has been completed. |
| ALMPROJECT | This is the ALM project used for the document.<br><br>This value is populated after extraction and validation has been completed. |
| ALMCLASS | This is the ALM class used for the document.<br><br>This value is populated after extraction and validation has been completed. |
| ALMPOSITIVEFIELDCOUNT | Total number of fields where extraction was positively impacted by using ALM. This is calculated at time of document export.<br><br>This value is populated after document export has been completed. |
| ALMNEGATIVEFIELDCOUNT | Total number of fields where extraction was negatively impacted by using ALM. This is calculated at time of document export.<br><br>This value is populated after document export has been completed. |
| ALMNETFIELDBENEFIT | This is calculated as ALMPOSITIVEFIELDCOUNT minus ALMNEGATIVEFIELDCOUNT.<br><br>This value is populated after document export has been completed. |

## BRWDistillerFields

The table below describes the additional data for each extraction field that is written into the **BRWDistillerFields** table. The system only populates these data items if an ALM candidate was generated for a field configured as being relevant for ALM extraction.

| Column | Description |
|---|---|
| BFIRESULT | This is the text of the candidate with the highest confidence weighting as determined by AP Project prior to comparison with an ALM candidate.<br><br>This value is populated after extraction and validation has been completed. |

| | |
|---|---|
| BFICONFIDENCE | This is the confidence weighting for the top AP Project candidate as written into **BFIRESULT**.<br><br>This value is populated after extraction and validation has been completed. |
| ALMRESULT | This is the text of the candidate with the highest confidence weighting returned by ALM.<br><br>This value is populated after extraction and validation has been completed. |
| ALMCONFIDENCE | This is the confidence weighting of the top ALM candidate as written into **ALMRESULT**.<br><br>This value is populated after extraction and validation has been completed. |
| ALMUSED | If set to 'true', this means that the ALM candidate was selected as the best candidate for the field.<br><br>This value is populated after extraction and validation has been completed. |
| ALMCORRECT | If set to 'true', this means that the best ALM candidate matches the final value of the field.<br><br>i.e. ALMRESULT = CONTENTV<br><br>This value is populated after document export has been completed. |
| BFICORRECT | If set to 'true', this means that the best AP Project candidate matches the final value of the field.<br><br>i.e. BFIRESULT = CONTENTV<br><br>This value is populated after document export has been completed. |

# Project Customization

Project customization includes such things as changing tolerances and thresholds within the project, adding new fields and classes, configuring existing ASE fields, changing or creating Verifier forms, and setting up new users. You can also add script customizations to the project.

The following customization options are available.

- Project setting customizations
- Script customizations

For custom fields and classes, scripts can be added to the appropriate custom field events and class script respectively. For customizations to the existing Invoices class, this must be done on the UserExits class script window.

Existing fields or classes must not be deleted or renamed under any circumstances. Doing so may cause the solution to stop responding.

## Sequence of class dependencies

When making changes to the script, you must remember that dependencies exist between the various script layers, so it is not possible to execute one script if there is a dependency on a script which is not being executed. Executing a script also performs a syntax check.

For that reason, the scripts must be executed in the following sequence.

```
GlobalFunctions > UserExits > APPackaged > Project
```

## Project script organization

The application script is organized logically across several classes.

## Project script class

The project script class contains script associated with standard system events, which are known as the ScriptModule events.

These ScriptModule events are called at specific points within the Verifier workflow. For example, pre and post-import, pre and post-OCR, pre and post-classification, and at the time of document export.

Do not make any changes to the code on this class level. Doing so may cause the solution to stop responding.

## Global functions script class

The global functions script class contains a series of useful public sub-routines and functions that accomplish common tasks required during solution customization. You can use these public functions within custom code placed in a user exit, or within code for any additional classes that are created.

The public functions, along with a description of their potential uses, are described in the following table.

| Function/subroutine | Description |
|---|---|
| DicVal | This function returns the value of any parameter contained within the system configuration database. The function parameters are as follows.<br><br>• strKey The name of the database parameter.<br><br>• strDic The shortname of the DB table in which the parameter is held.<br><br>Neither strKey nor strDic are case sensitive. For example, if parameter **Export Format** in the **Processing Settings > Date Settings** contains MMDDYYYY, then the following command copies MMDDYYYY into local string variable `strOutputDateFormat.strOutputDateFormat = DicVal("ExportFormat", "DAT")` For the parameters that are Boolean, the function returns a value of YES or NO. |

| | |
|---|---|
| SplitString | This subroutine splits a given string based on a delimiter, and returns the components of the string as an array, along with the number of values in the array. The interface parameters are as follows.<br><br>&bull; strSource The input string to be split.<br><br>&bull; strSplitArray The array containing the split results.<br><br>&bull; strDesignator The delimiter to be used when performing the split.<br><br>&bull; ArrayLineCount The number of array elements in the returned strSplitArray.<br><br>For example:<br><br>`Dim myString As String Dim Words() As String`<br>`Dim intWordCount As Integer`<br>`myString = "MARY HAD A LITTLE LAMB"`<br>A space is set as the delimiter.`Call SplitString (myString, Words(), " ", intWordCount)` The returned words array would contain the following.<br><br>`Words(1) = "MARY" Words(2) = "HAD" Words (3) = "A" Words(4) = "LITTLE" Words(5) = "LAMB"`<br>The returned intWordCount parameter would be set to 5. |
| fnConvertToExternal | This function converts a date in the date format used |
| | internally within AP Project (DD/MM/YYYY) to a date based on the format and separator. The interface parameters are as follows.<br><br>&bull; strDate The date to be formatted.<br><br>&bull; strFormat The format of date (either MMDDYYYY or, YYYYMMDD – any other entry returns DDMMYYYY).<br><br>&bull; strSeparator The separator to be used when converting the date.<br><br>For example,<br><br>`Dim myDate as string`<br>`myDate = "12/08/2009"`<br>`'12th August 2009`<br>`myDate = fnConvertToExternal(myDate, "MMDDYYYY", "-")`<br>The value of myDate is now set as "08-12-2009". |

| | |
|---|---|
| fnConvertToInternal | This function is used to convert a date with a specified format into the date format used internally within AP Project, (DD/MM/YYYY). The interface is as follows.<br><br>  &bull; strDate The date to be formatted to DD/MM/YYYY.<br><br>  &bull; strFormat The current format of strDate (either YYYYMMDD, MMDDYYYY – any other entry returns DDMMYYYY.<br><br>  &bull; strSeparator The separator currently used in strDate.<br><br>For example,<br><br>`Dim myDate as String`<br>`myDate = "2009-08-12"`<br>`'12th August 2009`<br>`myDate = fnConvertToInternal(myDate, "YYYYMMDD", "-")`<br>The value of myDate is now set to "12/08/2009". |
| fnFormatDateForExport | This function converts a date in the Verifier output format, as configured in the DAT section of the system configuration, into a date in the export output format, as configured in Processing Profile Configuration Settings > |
| | Date Settings. For example, an invoice date can potentially appear in any format, but the system converts it to the export format specified in the Processing Profile Configuration Settings > Date Settings. If that format is MMDDYYYY, then 12th August 2009 is displayed in Verifier as 08/12/2009, which is also the technical content of the field object text property, for example the contents of pField. Text or pWorkdoc.Fields("MyDate").Text). fnFormatDateForExport takes the technical contents of the field, and converts it into the date format as specified in the Processing Profile Configuration Settings > Date Settings. Therefore, if the export format is YYYYMMDD with a hyphen (-) as the separator, then the following command populates string variable strDate with 2009-08-12.`strDate = fnFormatDateForExport (pWorkdoc.Fields("MyDate").Text)` The interface of the function is as follows.strDate The date to be converted. |

| fnWriteXMLField | This function writes a single line into the XML file, and is intended for use within UserExitXMLOutput to provide a mechanism to add a custom field into the XML file with a single command. The interface of the function is as follows. |
|---|---|
| | <ul><li>paramFieldName: The name of the parameter containing the tag for the XML field (Export Settings).</li><li>outputValue: The value of the field to be outputted.</li><li>xmlsectionIdentifier: String that specifies the section of the XML file where the field should be written. The following global constants are available.</li></ul>cXMLDocHeader: The document level section cXMLInvHeader:The invoice header sectioncXMLLineItems: The line items sectioncXMLGLItems: The general ledger line items sectioncXMLTaxItems: The tax line items section<ul><li>xmlDoc: The XML document.</li></ul>For example, in Export Settings > Header Field Export Mapping, a new row is created for the fieldname InvoiceCode with a value of INVCODE in column XMLTag. A new field is created against the invoices class in the |
| | project called InvoiceCode which contains the extracted value of 12345, and this value must be written to the invoice header section of the XML file. This can be achieved by putting the following in `UserExitXMLOutput.fnWriteXMLField ("InvoiceCode", pWorkdoc.Fields ("InvoiceCode").Text, cXMLInvHeader, xmlDoc)` This writes out the following line into the invoice header section of the XML file.`<INVCODE>12345</INVCODE>` |
| fnWriteXMLDateField | This function is used to write out a date field to the XML file where the date to be written is in the Verifier output date format specified in Processing Profile Configuration Settings > Date Settings. As well as writing the value into the XML file, the system converts the date passed into the date export format as specified in 'Export Format' setting of the Processing Profile Configuration Settings > Date Settings. The interface and function usage is identical to that of fnWriteXMLField as described above. |

| | |
|---|---|
| fnWriteDBHeaderField | This function is used to write an additional database header field into a downstream database if database export is activated in the Export Settings > Export Options. It is intended to provide a developer with a single command to accomplish this within UserExitDBHeaderExport. The interface of the function is as follows. |
| | • changeKeyName: The name of the parameter containing the table column mapping for the destination field in the database. |
| | • setValue: The field value to be written to the database. |
| | • dbKeyName: The current parameter being assessed by the database header output routine. This value is passed unaltered from the value passed into the user exit. |
| | • exportValue: The current value of the field to be written into the database header table. This value is passed unaltered from the value passed into the user exit. |
| | For example, in Export Settings > Header Field Export Mapping, a new setting is added for field name |
| | InvoiceCode where the 'XML Tag' option has a value of INVCODE, which denotes the technical column name of the downstream invoice header database table. A new field has been created against the invoices class in the project called InvoiceCode which contains the extracted value of 12345.To write the field value into the 'INV CODE' option in Header Field Export Mapping, insert the following code into UserExitDBHeaderExport. `fnWriteDBHeaderField ("InvoiceCode", pWorkdoc.Fields ("InvoiceCode").Text, dbKeyName, exportValue)` When the export runs, the database column INVCODE is populated with the value 12345. |
| fnWriteDBHeaderDateField | This function is used to write out a date field to the invoice header database table where the date to be written is in the Verifier output date format specified in Processing Profile Configuration Settings > Date Settings. Apart from writing the value into the database table, the system also converts the date passed into the date export format as specified in column ExportFormat within Date Settings. |
| | The interface and function usage is similar to that of fnWriteDBHeaderField as described above. |

| | |
|---|---|
| fnGetFileName | This function receives a full filename, which includes the file path and file extension, and returns the name of the file itself. |
| | For example, if c:\My Documents\12345.tif is passed to the function, the output is 12345. |
| | The interface is strFileName. |
| fnGetBaseClass | This simple function returns the base class associated with the class passed to the function. If a base class is passed to the function, the same base class is returned. |
| | For example, if the function receives ExpenseSheets and that class is a child class of Invoices, then the function returns Invoices. |
| | The interface is strClass. |
| fnIsVerifier | This function returns a Boolean true value if the current Oracle WebCenter Forms Recognition Module executing the script is the Verifier Module, except when the Verifier runs the analysis scripts triggered by a manual document re- classification. |
| fnIsAlpha | This function returns a Boolean true value if the string passed with the parameter strString is made up entirely of alphabetic characters (upper or lower case). |
| | The interface is strString. |
| fnGetUserDecimalSeparator | This function reads the local Windows settings for the user logged onto the machine and returns either a full stop/period, or a comma, depending on the decimal separator preferences. |

| fnWriteCSVField | This function replaces a user-defined literal in the CSV file configuration with its corresponding value, and is intended for use within UserExitCSVFile to provide a developer with a mechanism to add a custom field into the CSV 7 output file with a single command. |
|---|---|
| | The interface of the function is as follows. |
| | - strRecordtext The current text of line to be written into the CSV file. |
| | - strKey The CSV file group number, such as 01, 02 and so on. |
| | - strSymbol The user-defined literal to be replace, such as <%ZIC>. |
| | - strValue The value to replace the literal with. |
| | For example, If the CSV group in the Export Settings > CSV Export Configuration settings with IndexID 1 has <%ZIC> in the 'Format Line 1' option, where <%ZIC> is intended to represent the extracted value of custom field InvoiceCode, then the function is called as follows in UserExitCSVFile. |
| | `fnWriteCSVField(strRecordText, strKey, "<%ZIC>", pWorkdoc.Fields ("InvoiceCode").Text)` |
| fnWriteCSVDateField | This function replaces a user defined literal in the CSV file configuration with its corresponding date value, and is intended for use within UserExitCSVFile to provide a developer with a mechanism to add a custom field into the CSV output file with just a single command. |
| | This function must only be used if the date value to be written into the CSV file is in the Verifier Output Format configured in the Processing Profile Configuration Settings > Date Settings. |
| | The date is outputted in the date format configured for the CSV file group. If no configuration has been made here, it is formatted according to the date output format configured within Date Settings. The interface and function usage is identical to that of fnWriteCSVField. |

| fnSetDBConnection | This function can be called from a user exit in order to connect to a database. |
| --- | --- |
| | The function takes in a database connection string with the strConnection input parameter. If the connection is already available, the index of the connection in global database connection array objDBConn is returned. If it is not available or not open, the function initializes the connection and return the relevant index of the objDBConn object. |
| | If the connection cannot be made, the function returns -1 and an appropriate error message is written into the standard Oracle WebCenter Forms Recognition logfile. |
| | For example, the following code instantiates a database connection and executes an SQL call where variable myDBConnection represent the connection string, and mySQL represents the SQL statement (both string variables): |
| | <pre>Dim lngConnection As Long<br>Dim myConnection As ADODB.Connection<br>lngConnection = fnSetDBConnection<br>(myDBConnection)<br>If lngConnection = -1 Then<br>'Connection could not be made – error<br>handling<br>Else<br>'Execute SQL using connection<br>Set myConnection = objDBConn<br>(lngConnection) myConnection.Execute<br>(mySQL)<br>End If</pre> |
| | objDBConn is a global database object available for use in any user exit. |
| | The interface is strDBConnection. |
| | If the connection string uses an encrypted password, then the new command, Solution.Utils.GetDatabaseConnectionString (connectionGroup), can be used to retrieve the connection string. For more information, refer to the AP Project Password Encryption section. |

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| fnGetFieldAnalysisSettings | This function returns an instantiated AnalysisSettings object for the given Associative Search Engine field oASSA and document class strClass.<br><br>The interface is as follows.<br><br>    • strClass: The classname where the Associative Search Engine field is defined.<br><br>    • oASEField: Cedar Field interface that refers to an Associative Search Engine field.<br><br>**Note:**<br>The combination of strClass and oASEField must refer to an existing, non-inherited Associative Search Engine field, else an "ActiveX Object var is nothing" exception is triggered. |
| fnIsValueInList | This function takes a comma-separated list in input parameter strList and a value strValuePreserve. The function returns a Boolean true value if strValuePreserve is one of the values in the list.<br>The interface is strList, strValuePreserve. |
| fnConvertToDouble | This utility function takes in a string strString and converts it to a double value in a way that is consistent with the locale settings of the machine. If the string cannot be converted, the output is zero.<br>The interface is value. |
| fnIsNumeric | This utility function returns a Boolean true value if all characters passed in the input parameter strTemp are numeric, such as 0-9.<br>The interface is value. |
| fnGetMiscChargeTotalForCode | This function adds up all of the invoice miscellaneous charges for a given miscellaneous charge code strCode as registered in Processing Profile Configuration Settings > Misc Charge Configuration > Misc Charge Categories, and returns this total<br>The interface is pWorkdoc, strCode. |

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| fnCalculateExchangeRate | This function calculates the correct exchange rate to pass during document export based upon user entry in the exchange rate and local VAT amount fields in the Verifier application.<br><br>The exchange rate is passed out as a string via the function module name.<br><br>The example usage is as follows.<br><br>Dim strExchRateExport As String strExchRateExport = fnCalculateExchangeRate(pWorkdoc)<br><br>The interface is pWorkdoc. |
| fnCheckForNull | This function receives a value of type variant and returns the value as a string. If the field component has a null value, an empty string is returned.<br>The interface is vInput. |
| fnConvertBoolean | This function receives a Boolean field component from a database record set and returns YES if the value is positive (and NO if the value is negative).<br>The interface is booleanValue. |
| fnSetFromFileName | This function takes the name of an import file parameter mappable in Global Settings > Import Settings, along with the document filename, and parses out the corresponding value from the filename.<br><br>If the field is a date, it is formatted in accordance with the VerifierFormat setting within Date Settings for the relevant processing profile.<br><br>The interface is infoName, fileName. |
| fnGetClientDataForWorkdoc | This function returns the client settings configured in Client Settings that are associated with the current workdoc using the WWClientData structure.<br><br>The example usage is as follows.<br><br>Dim Client As WWClientData<br><br>Client = fnGetClientDataForWorkdoc()<br><br>The interface is pWorkdoc (Optional, not required since AP Project 3.5). |

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| fnGetFieldSettings | This is the function to retrieve the field settings from Processing Profile Configuration Settings > Field Settings for a given field name. The settings are passed back using the Field Settings structure. |
| | The example usage (to retrieve settings for the invoice number associated with profile ID 1) is as follows. |
| | Dim FS as WWFieldSettings |
| | FS = fnGetFieldSettings("INVOICENUMBER", "1") |
| | The interface is strFieldName, strProfileID (Optional, not required since AP Project 3.5). |
| fnFormatAmountForExport | This function receives an amount passed as a double, along with an optional field name as registered in Processing Profile Configuration Settings > Field Settings, and returns the amount back as a string having applied the export formatting rules configured in the Processing Profile Configuration Settings > Amount Settings and Field Settings. |
| | If no field name is passed, then the formatting rules set against AmountTotal in Field Settings for the current processing profile are used. |
| | The interface is dblAmount, strFieldName. |
| | **Note:** |
| | If the strFieldName is not known, only the export options for decimal and thousands separator are applied. |
| fnReadSubRule | This function receives a substitution rule ID as a string and returns the SubRule details. |
| | The interface is strRule. |
| fnGetValueForIR | This function receives the text for an invalid reason as displayed in the field in Verifier via parameter strIR and returns a corresponding property (specified by strValue) belonging to that rule. |
| | Possible values for strValue are RULEID and EXPORTCODE. |
| | The interface is ivrType, verifierDisplay. |
| fnFormatTextForExport | This function receives a string value and the name of a field registered in Processing Profile Configuration Settings > Field Settings and returns the text having applied the corresponding substitution rule for exporting. |
| | The interface is strText, strFieldName. |

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| fnReadCountryData | This function is used to retrieve details for a given country held in **Global Settings > Country Master Data**. The country details are passed back using the CountryData structure. In order for the function to operate, the country look-up must be activated with Global Settings > Country Settings. |
| | Example usage (to retrieve details for the UK): |
| | Dim Country As WWCountryData |
| | Country = fnReadCountryData("GB") |
| | The interface is strCountry. |
| fnMultipleRecords | This function receives a recordset object and returns TRUE if there is more than one record in that record set. |
| | The interface is myRecordSet. |
| | **Note:** |
| | The recordset is set back to the first record after this function call. |
| fnGetIRNone | This function returns the text indicating that no invalid reason is set (default of 'NONE') based upon project configuration settings. The function has no input parameters. |
| fnReadText | This function receives a dictionary name and text ID and returns the corresponding text based upon the current language preference. Interface: strTextID, strDictionary |
| fnReadText | This function receives a dictionary name and text ID and returns the corresponding text based upon the current language preference. |
| | Interface: strTextID, strDictionary |
| | Supported dictionaries are "DTY", "ITY", "IVR" or "PTY". |
| fnIsNumberInList | This function takes in a comma-separated list of numbers in 'strList' and returns true if the parameter passed in 'strValuePreserve' is within that list. |
| | Interface: strList, strValuePreserve. |

## User exits script class

This class contains the project user exit script points. You must not remove or change the definitions of the provided user exits.

## Invoices script class

The Invoices script class contains the source code for the invoice class validation events, which

includes the logic that is used to validate fields and the document as a whole, as well as to control the behavior of the Dynamic Verifier form.

You can add new validation events that correspond to newly created fields on the Invoices script class. These extra events must be created at the end of the existing code in the area marked in the script.

No changes must ever be made to any of the existing code. Doing so may make the solution inoperable.

## AP packaged / generic script classes

These scripts must not be deleted, changed, or renamed. The **<project>.sdp** file may not be recoverable if they are.

## Solution functions

Solution functions are divided across four libraries. They are accessed in Winwrap using the following formula.

```
Solution.<Library>.<Function / Property>.
```

You must add the ICAL_Invoices (3.5) and ICAL_Invoices_PIC (3.5) DLLs as references to any script class that you require to have access to the data types used by these functions.

The section below lists the libraries and functions available.

## Settings library

The settings library consists of the following:

| Function/Property | Description |
|---|---|
| GetDictionarySetting | Internal use only |
| DicVal | This function returns the value of any parameter contained within the system configuration database. The function parameters are as follows:<br><br>• strKey: The name of the database parameter.<br><br>• strDic: The shortname of the DB table in which the parameter is held.<br><br>Neither strKey nor strDic are case sensitive.<br><br>For example, if parameter **Export Format** in **Processing Settings > Date Settings** contains MMDDYYYY, then the following command copies MMDDYYYY into local string variable strOutputDateFormat.<br><br>Example script:<br><br>`strOutputDateFormat = DicVal("ExportFormat", "DAT")` For Boolean type parameters, the function returns a value of YES or NO as a string.<br><br>Example script:<br><br>`Dim strMyValue As String`<br><br>`strMyValue = Solution.Settings.DicVal ("ConnectToEBS", "WFR")`<br>`' Will return YES or NO depending on whether the system is configured to connect to EBS or not.` |
| DicValTable | This function can be used to retrieve indexed custom settings. The function parameters are as follows.<br><br>• ParameterName - the name of the parameter.<br><br>• GroupName - the name of the parameter group.<br><br>• Index - the parameter index ID.<br>For example, parameter 'MySetting' in group 'CUS' with an index ID of 5 can be retrieved using the following command.`strMySettings = Solution.Settings.DicValTable("MySetting", "CUS", 5)`<br><br>For Boolean type parameters, the function returns a value of YES or NO as a string. |

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| GetHighestIndexIDForGroup | This function returns the highest index ID found across all settings that exist within a specified parameter group. The index is returned as an integer. For example, if custom parameter group CUS has a parameter called 'MySetting' with indexes 1-5, and a second parameter called 'MyParameter' with a single index of 7, then the GetHighestIndexIDForGroup function will return 7 for parameter group CUS. The function takes a single parameter which is the parameter group name, for example, CUS or SQL. The function can be used in conjunction with the DicValTable function in user exits to help retrieve indexed custom settings. Example usage:<br><br>```
Dim intHighestIndex As Integer
Dim intIndexID As Integer
Dim strSetting As String

intHighestIndex =
Solution.Settings.GetHighestIndexIDForGroup
("CUS")

For intIndexID = 1 To intHighestIndex
  strSetting = Solution.Settings.DicValTable
("MYSETTING", "CUS", intIndexID)
Next intIndexID
``` |
| ClientData | The ClientData properties expose client data for the current document client that is maintained in **Client Settings** in Solution Configuration Manager.<br><br>ClientErrorDescription - Error description if client determination was invalid.<br>ClientGroup - The client group.ClientID - The client ID. ClientName - The client name. EmployeePartition - The client employee partition ID. ExportProfileID- The client export profile ID. ForceVerify - Flag to indicate whether documents belonging to the client should force-stop in Verifier. InstructionsProfileID - The client instructions profile ID. POPartition - The client purchase order partition ID. Priority - The client document priority (0-9) ProfileID - The client processing profile ID. RequiresReview - Flag to indicate whether documents belonging to this client require review. TaxPartition - The client tax partition ID. ValidClientFound - Flag to indicate whether the document client is valid. VendorPartition - The client vendor partition ID. Example script:`Dim Client as ClientDataSet Client = Solution. Settings.ClientData` |
| GetDictionaryKeys | Internal use only |
| GetDictionaryValues | Internal use only |

| GetErrorMessage | This function returns the error message text associated with a given ID for the specified language. If no translation exists for the supplied language, the English version is returned. If no translation exists for any language, a message is returned that no error text is defined. The error messages are stored in **Global Settings > Error Message Settings**. The function parameters are as follows. |
|---|---|
| | • code The error code. |
| | • language The two-character language code i.e. "EN" |
| | Example script: |
| | ```
Dim strErrMsg as String
strErrMsg = Solution.
Settings.GetErrorMessage(1, "EN")
``` |
| GetInfoMessage | This function returns the information message text associated with a given ID for the specified language. If no translation exists for the supplied language, the English version is returned. If no translation exists for any language, a message is returned that includes the message code. The information messages are stored in **Global Settings > Information Messages > Information Message Settings**. The function parameters are as follows. |
| | • code The information code. |
| | • language The two-character language code i.e. "EN" |
| | Example script: |
| | ```
Dim strInfMsg as String
strInfMsg = Solution. Settings.GetInfoMessage
(1, "EN")
``` |
| GetText | This function returns the message text associated with a given ID for the specified language. If no translation exists for the supplied language, the English version is returned. If no translation exists for any language, an empty string is returned. The messages are stored in **Global Settings > Instruction Settings > General Text Settings**. The function parameters are as follows. |
| | • code The information code. |
| | • language The two-character language code i.e. "EN" |
| | Example script: |
| | ```
Dim strMsg as String
strMsg = Solution. Settings.GetText(1, "EN")
``` |
| GetValue | Internal use only |

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| UpdateDicVal | This method allows you to update the value of a configuration setting within the current workdoc. The setting must already exist. It is not possible to create a new setting using this method. Once updated, the new setting value is saved to the workdoc. The function parameters are as follows:<br><br>&bull; pWorkdoc – the current workdoc<br><br>&bull; parameterName – the name of the setting parameter you want to update<br><br>&bull; groupName – the settings group<br><br>&bull; value – the value you want the system to use for the setting parameter specified<br><br>Example script:<br><br>`Solution. Settings.UpdateDicVal(pWorkdoc, "DBTableName", "PON", "MyNewPOHeaderTable")` |
| UpdateSettings | This method can be used within the script of a custom base class in order to load the AP Project configuration database settings. Before the settings are loaded, the method clears any existing settings from the system memory. The settings are loaded based on the client ID assigned to the current workdoc. An exception is raised if the client ID cannot be determined.<br><br>You can choose to retrieve any existing settings from the workdoc by setting the **ReadFromStorageTable** parameter to **true**.. If no settings are present, the system loads the settings afresh from the AP Project configuration database. |

| | Settings are stored against the workdoc in a table field called **tmpSettings** which must be created manually for the custom base class. It should have at least one column. The system does not throw an exception if the **tmpSettings** table does not exist, but does throw an exception if the field exists, but it not of type table or it does not have any columns defined. |
|---|---|
| | If you are using Oracle WebCenter Forms Recognition 5.9.1 or higher, you can choose to use the efficient memory storage feature to store the settings. This stores and retrieves the settings using named property **UserStrings_0**. More information on how to activate this can be found in **Global Settings > General Settings**. In this circumstance, you do not need to create the **tmpSettings** table. |
| | You can choose to write settings obtained from the AP Project configuration database to the workdoc by setting the **WriteToStorageTable** parameter to **true**. An exception is raised if the system is unable to write the settings successfully. |
| | The function parameters are as follows.<br><br>- Workdoc - this is the workdoc<br><br>- ReadFromStorageTable - flag to indicate whether the system should try to read existing settings stored within the current workdoc<br><br>- WriteToStorageTable - flag to indicate whether the system should write the loaded settings to the current workdoc<br><br>Example:<br>`Solution. Settings.UpdateSettings(pWorkdoc, false, false)` |

## Utility library

The utility library consists of the following.

| Function/Property | Description |
|---|---|
| AdjustEmployeeID | Adjust an employee ID by adding or removing the partition if employee filtering is active.The function parameters are as follows.<br><br>- employeeId The ID to be adjusted. |

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| | • addPartition Whether or not to add the employee partition to the ID<br><br>If employee filtering is inactive or addPartition is False, the employee ID returned is unchanged. If employee filtering is active and addPartition is True, the employee ID returned is returned prefixed with the partition ID and a hyphen. Example script:<br><br>```<br>Dim strEmpID as String<br>strEmpID = Solution. Utils. AdjustEmployeeID<br>("123", True)<br>``` |
| AdjustVendorID | Adjust a vendor ID by adding or removing the partition if vendor filtering is active.The function parameters are as follows.<br><br>• VendorID The ID to be adjusted.<br><br>• addPartition Whether or not to add the vendor partition to the ID<br><br>If vendor filtering is inactive or addPartition is False, the vendor ID returned is unchanged. If vendor filtering is active and addPartition is True, the vendor ID returned is returned prefixed with the partition ID and a hyphen. Example script:<br><br>```<br>Dim strVndID as String<br>strVndID = Solution. Utils. AdjustVendorID<br>("123", True)<br>``` |
| ConvertDateToExternalFormat | Convert from an internal format date (DD/MM/YYYY) to a date based on the format and separator. The function parameters are as follows.<br><br>• Date The internal format date (DD/MM/YYYY).<br><br>• format Output date format.<br><br>• Separator Date part separator.<br><br>This function reformats the supplied date into either MMDDYYYY or YYYYMMDD formats depending on the format passed. The date part separator indicates the required character between the day, month and year parts of the date - typically "-" or "/". Example script:<br><br>```<br>Dim strExternalDate as String<br>strExternalDate = Solution.<br>Utils.ConvertDateToExternalFormat<br>("19/11/2018", "YYYYMMDD", "-")<br>' Returns: 2018-11-19<br>``` |

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| ConvertDateToInternalFormat | Converts the supplied date to the internal format date (DD/MM/YYYY) from a date based on the format and separator. The function parameters are as follows.<br><br>    • Date The original date.<br><br>    • format Input date format.<br><br>    • Separator Date part separator.<br><br>This function reformats the supplied date into DD/MM/YYYY format from the format passed. The format can be MMDDYYYY or YYYYMMDD; any other format will not change the order of the supplied date. The date part separator indicates the character between the day, month and year parts of the date - typically "-" or "/". Example script:<br><br>```\nDim strInternalDate as String\nstrInternalDate =\nSolution.Utils.ConvertDateToInternalFormat\n("2018-11-19", "YYYYMMDD", "-")\n' Returns: 19/11/2018\n``` |
| CurrentDir | This function returns the full path of the current working directory. |
| DecryptPassword | Internal use only |
| ExtractFromFilename | This function extracts a property from a file name. The function parameters are as follows.<br><br>    • fileNamePartIdentifier The part to extract.<br><br>    • filename The file name.<br><br>For example: If the URN identifier is defined as COMPONENT1 and the supplied file name is abc_def_ghi, extracting URN from the file name will return "abc" if the separator is an underscore ("_"). |
| FormatAmountForExport | This function formats a given amount to a string format for export based on the formatting settings you have configured for the field in the Field Configuration Table, and also the thousand and decimal separator settings you have configured in Amount Settings. The function parameters are:<br><br>    Amount - the amount you want to format expressed as a double.<br><br>    • FieldName - the name of the field in the Field Configuration Table whose settings you want to use for the amount formatting. This is not case sensitive.<br><br>If you do not specify a field, the system defaults to using the formatting settings of the **AmountTotal** field.<br><br>```\nDim strExportAmount as StringstrExportAmount\n``` |

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| | • = Solution.Utils.FormatAmountForExport(1.83, "AMOUNTTOTAL") |
| FormatTextToAZ09 | The function formats a given string and removes all characters that are neither letters nor digits.<br><br>Example usage:<br><br>`Dim strInput As StringDim strOutput As StringstrInput = "// 123-AB ++$"strOutput = Solution.Utils.FormatTextToAZ09(strInput)`<br><br>The value contained in strOutput is now **123AB**. |
| GetAddress | This function returns the vendor address for the supplied ID as a VendorAddress data type. The function parameters are as follows.<br><br>  • wdoc The work document.<br><br>  • id The ID.<br><br>  • employee Whether to look for an employee or a vendor ID.<br><br>If the vendor does not exist, the system returns an initialized, but empty data type. Example script:<br><br>`Dim vndAdd as VendorAddress`<br>`Set vndAdd = Solution.Utils.GetAddress (pworkdoc, "0000100563", False)` |
| GetAddressCustom | This function returns an address for a given Associate Search Engine field and ID. It is designed for use in the validation and export scripts for custom base classes. The custom base class is expected to have an associate search engine field where the columns follow the naming conventions defined in **Global Settings --> Search Field Mapping**.<br><br>The function provides the option to return all details specified in |

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| | **Search Field Mapping**, or just the core details that relate to the address. The core address fields are the name, address1, address2, city, state, zip, country, tel no, partitionID, taxID1 and taxID2. You can choose to return only the core address fields by setting **addressonly** to **true**.<br><br>Each time the function is called, **UserExitAddressArray** is called to allow custom logic for the fields returned. The system does not buffer the results.<br><br>The function parameters are as follows:<br><br>   • field - The ASE field<br><br>   • wdoc - The workdoc<br><br>   • id - The unique ID of the record in the ASE pool<br><br>   • addressonly - Flag to indicate that only the core address details should be returned if set to **true**. This value defaults to **false**<br><br>   • defaultcountry (optional) - Default country to be set in the returned address if unavailable in the associate search engine pool data<br><br>If the record does not exist, the system returns an initialized, but empty data type.<br><br>Example script:<br><br>`Dim myAddress as VendorAddress`<br><br>`Set myAddress = Solution.Utils.GetAddressCustom(pField, pworkdoc, "0000100563", False, "US")` |
| GetBaseClass | This function returns the base class for the given class. The function parameters are as follows.<br><br>   • className The name of the class<br><br>Example script:<br><br>`Dim strBaseClass as String`<br>`strBaseClass = Solution.Utils.GetBaseClass ("Invoice_CN2")`<br>`' Returns: Invoices` |
| GetCandidateContext | This function returns words and document texts surrounding a |

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| | given candidate. The words and text are returned using the CandidateCtx data type. It can be used in field post evaluate events to adjust candidate weights based on the text information that surround the candidate. The function parameters are as follows. |
| | <ul><li>Candidate - The candidate</li><li>wDoc - The workdoc</li><li>blKeepNonAlpha - Flag to indicate whether non-alpha characters should be retained in the words returned. This defaults to false.</li></ul> |
| | Example script:<br><br>```<br>Dim CC As CandidateCtx<br>Dim lngCandidate As Long<br>Dim oCandidate As SCBCdrCandidate<br><br>For lngCandidate = 0 To<br>pField.CandidateCount-1<br>  Set oCandidate = pField.Candidate<br>(lngCandidate)<br>  Set CC =<br>Solution.Utils.GetCandidateContext<br>(oCandidate, pWorkdoc)<br>  If CC.WBC1.Text = "HELLO" Then<br>    ' Custom logic based on the word before<br>the candidate<br>  End If<br>Next lngCandidate<br>```<br><br>This function replaces the previous 2.x function fnGetCandidateContext and fnGetCandidateContextNew. |
| GetDatabaseConnectionString | This function returns the database connection string for the supplied connection group. The function parameter is connectionGroup The connection group.<br><br>This function returns the connection string required to connect to the database. |
| GetMiscChargeTotalForCode | This function returns the total of all miscellaneous charges on the document that match the supplied charge code. The function parameters are as follows. |

| | |
|---|---|
| | • wdoc The work document. |
| | • code The miscellaneous charges category code. |
| | Example script: |
| | <pre>Dim tot as Double<br>tot =<br>solution.Utils.GetMiscChargeTotalForCode<br>(pWorkdoc, "F")</pre> |
| GetPaymentTerms | This function returns all payment terms as a zero-based array of data type PaymentTerms for a given payment terms profile ID |
| | The function parameters are as follows. |
| | • PaymentTermsProfileID |
| | Example script: |
| | <pre>Dim PaymentTerms As VariantDim intTerm As<br>IntegerPaymentTerms =<br>Solution.Utils.GetPaymentTerms("0")For<br>intTerm = 0 To UBound(PaymentTerms)…Next<br>intTerm</pre> |
| GetValueForInvalidReason | This function returns information about an invalid reason. The function parameters are as follows. |
| | • value The information required. |
| | • rule The invalid reason's Verifier display text. |
| | This function returns the information determined by the value parameter which can be RULEID, EXPORTCODE or VERIFIERDISPLAY for the invalid reason specified in the rule parameter. Example script: |
| | <pre>Dim strIVRInfo as String<br>strIVRInfo =<br>Solution.Utils.GetValueForInvalidReason<br>("ruleid", "VENDOR NOT FOUND")<br>' Returns: SETVENDORTOVALID</pre> |
| GetVendorKey | This function returns the document's vendor key. The function parameters are as follows. |
| | • wdoc The work document. |
| | Example script: |
| | <pre>Dim strVendorKey as String<br><br>    • strVendorKey =<br>Solution.Utils.GetVendo<br>rKey (pworkdoc)</pre> |

| | |
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| GetWordIDForList | This function looks for a specified list of words in the document OCR text using a Levenshtein search. Words found are returned as an variant array of data type WordCtx. The array is 1-based.The function parameters are as follows.<br><br>&bull; wdoc - The workdoc<br><br>&bull; List - The list of words you want the function to look for.<br><br>&bull; WordCount - The maximum number of OCR words that are allowed in each hit found.<br><br>&bull; Distance - The tolerance the system should use when looking for matches on the document. This is expressed as a value between 0 and 1.<br><br>&bull; IsList - Flag to indicate whether the list provided is a single phrase or a comma-separated list.<br><br>&bull; Ignore - List of characters that the system should ignore when performing the Levenshtein search. If no value is specified, the system will ignore the following characters: ,.-/()[]<br><br>&bull; Separator - This is the separator used to delimit the word list provided. If no value is passed, the system will use a comma<br><br>Example script:<br><br>`Dim words As Variant`<br>`Dim wordcount As Integer`<br>`Dim intWord As Integer`<br>`words = Solution.Utils.GetWordIDForList`<br>`(pWorkdoc, "INVOICE,CREDIT", 1, 0.3, True)`<br>`wordcount = UBound(words)`<br>`For intWord = 1 To wordcount`<br>`  strWord = words(intWord).Text`<br>`Next intWord` |
| InvalidReasonNone | This function returns the default text for the invalid reason code None which can be set in Verifier. |
| IsAlpha | This function determines whether the supplied string contains only alphabetic characters. The function parameters are as follows.<br><br>&bull; str The string to check.<br><br>For example: Solution.Utils.IsAlpha is True when the supplied string is "abc" but False when it's "abc123". |

| IsDate | This function returns true or false depending on whether a supplied input is a valid date. Additional options are available. |
|---|---|
| | The function parameters are as follows. |
| | <ul><li>originalDate - the string input to be evaluated as to whether it is a date or not.</li><li>checkMonthDay - if this Boolean flag is set to **true**, the system checks that the day / month ordering within the original date matches the format configured under the **Verifier Output Format** you have configured in **Processing Profile > Date Settings**.</li><li>checkYear - if this Boolean flag is set to **true**, the system checks whether the year falls within a valid time-frame. This time-frame is defined as no more than one year in the future, and no less than x number of years in the past where x is a value you can configure using the **Maximum Past Years** parameter in **Processing Profile > Date Settings.**</li></ul> |
| | This function can only be used during extraction or export events. |
| | Example usage, which assumes that the current year is 2021 and you have configured the **Verifier Output Format** as **MMDDYYYY** and **Maximum Past Years** as **10** in **Processing Profile > Date Settings**: |
| | ```Solution.Utils.IsDate("10/10/2021", True, True) --> True Solution.Utils.IsDate("XXXX", True, True) --> False Solution.Utils.IsDate("15/15/2021", True, True) --> False Solution.Utils.IsDate("10/10/2022", True,``` |

| | |
|---|---|
| | ```
True) --> True
Solution.Utils.IsDate("10/10/2023", True,
True) --> False
Solution.Utils.IsDate("10/10/2010", True,
True) --> False
Solution.Utils.IsDate("10/10/2010", True,
False) --> True
Solution.Utils.IsDate("01/31/2021", True,
True) --> True
Solution.Utils.IsDate("31/01/2021", True,
True) --> False
Solution.Utils.IsDate("15/15/2021", False,
True) --> True
Solution.Utils.IsDate("2021-10-10", True,
True) --> False
Solution.Utils.IsDate("2021-10-10", False,
True) --> True
``` |
| IsDigits | This function determines whether the supplied string contains only numeric characters.The function parameters are as follows.<br><br>    • str The string to check.<br><br>For example: Solution.Utils.IsDigits is True when the supplied string is "0123" but False when it's "o123". |
| IsValueInList | This function determines whether the supplied string contains only numeric characters.The function parameters are as follows.<br><br>    • List The comma-separated list of strings.<br>    • Val The value to check.<br><br>For example: Solution.Utils. IsValueInList is True when the supplied list is "one, two, three" and the value is "two" but False when the list is "one, two, three" and the value is "four". |
| MachineName | This function returns the name of the machine on which the script is running. |
| ParseAmount | This function returns the numeric value of a string. The function parameters are as follows.<br><br>    • amount The value to be parsed. |

| | |
|---|---|
| | • currentCulture Whether to use the current culture or an invariant culture.<br><br>This function parses amounts respecting decimal and thousands group separators. For the invariant culture, the decimal separator is a full stop and the thousands group separator is a comma. For the current culture on the machine where the script is running, the decimal separator is Solution.Utils.SystemDecimalSeparator and the thousands group separator is Solution.Utils.SystemThousandsSeparatorZero is returned if the string cannot be parsed as an amount. Example script:<br><br>`Dim dblAmt as Double`<br>`' Returns: 123456.78`<br>`dblAmt = Solution.Utils.ParseAmount`<br>`("123,456.78", False)`<br>`' Returns: 123456.78` |
| SetAddress | Internal use only |
| SystemDateSeparator | This function returns the character used to separate day, month and year in the current locale. |
| SystemDecimalSeparator | This function returns the character used to separate the integer part from the fractional part of a number in the current locale.In the US and UK, this is typically a full stop; in many other countries, it's a comma. |
| SystemThousandsSeparator | This function returns the character used to separate groups of thousands in numbers. In the US and UK, this is typically a comma; in many other countries, it's a full stop. |

## Lookup library

The Lookup library contains a series of methods that can be used to retrieve data provided by the solution look-ups. The functions available are listed in the following table.

| Function / property | Description |
|---|---|
| ConvertToISOCode | This function returns an ISO code for a given alias. It can be used to do a look-up on the currency and unit of measure conversion tables to convert a text string to its associated ISO code. |

| | |
|---|---|
| | The function parameters are as follows: <ul><li>alias: The string alias you want to convert to an ISO code</li><li>category: This can be set to **CUR** if you want to do a look-up on a currency alias, or **UOM** if you want to do a look-up on a unit of measure alias</li></ul> This function can only be used during extraction or export events. Example usage: <br><br>`Dim strAlias As StringDim strISOCode As StringstrAlias = "KILO"strISOCode = Solution.Lookup.ConvertToISOCode (strAlias, "UOM")`<br><br> This should return 'KG' as this is the ISO code associated with the alias 'KILO' that you can maintain in Solution Configuration Manager under **Processing Settings > Unit Of Measure Types**.<br><br> If the alias does not have a corresponding ISO code, or you specify an invalid category, the function returns the alias you passed trimmed and converted to upper case. |
| GetCompanyData | This function returns data associated with a specified company code which is passed into the function as a string. The data is returned using the CompanyData data type. The function uses the configuration for the current document processing profile ID in order to perform the lookup, which is defined in **Processing Profile > Company Code Settings**. If the company code does not exist or the look-up is switched off, the function returns an empty, yet initialized data type. If a technical error occurs during the look-up, the function raises an exception. The function can only be used during the validation and export events. Example usage: <br><br>`Dim CompanyData As CompanyData`<br>`Dim strCountry As String`<br><br>`Set CompanyData =`<br>`Solution.LookUp.GetCompanyData ("2000")`<br>`strCountry = CompanyData.Country` |
| GetCountryData | This is for internal use only. To retrieve country data, you can use the fnReadCountryData function provided on the GlobalFunctions class. |

| | |
|---|---|
| GetFieldSettings | This is for internal use only. To retrieve country data, you can use the fnGetFieldSettings function provided on the GlobalFunctions class. |
| GetPlantData | This function returns data associated with a specified plant. The plant is passed into the function as a string. The data is returned using the PlantData data type. The function uses the configuration for the current document processing profile ID in order to perform the lookup, which is defined in **Processing Profile > Tax Settings > Tax Configuration.** If the plant does not exist or the look-up is switched off, the function returns an empty, yet initialized data type. If a technical error occurs during the look-up, the function raises an exception. The function can only be used during the validation and export events. Example usage:<br><br>```Dim Plant As PlantData```<br><br>```Set PlantData =```<br>```Solution.LookUp.GetPlantData("2000")``` |
| GetUserData | This function returns data associated with a specified user. The user ID is passed into the function as a string, and data is returned using the UserData data type. If the user does not exist, the function returns an empty, yet initialized data type. Example usage:<br><br>```Dim User As UserData```<br><br>```Set UserData =```<br>```Solution.LookUp.GetUserData```<br>```("JOHNSMITH")``` |

## Export library

The export library contains some parameters that can be read and changed if required during document export. These parameters are described in the table below.

| Function / property | Description |
|---|---|
| TotalFreightCharges | This numeric value contains the total freight charges that the system exports to Workday. It is populated during line pairing and can be changed for export in **UserExitPostLinePairing**.<br><br>Example usage:<br><br>`Dim dblTotalCharges As DoubledblTotalCharges = 1000Solution.Export.TotalFreightCharges = dblTotalCharges` |
| TotalOtherCharges | This numeric value contains the total other charges that the system exports to Workday. It is populated during line pairing and can be changed for export in **UserExitPostLinePairing**.<br><br>Example usage:<br><br>`Dim dblTotalCharges As DoubledblTotalCharges = 1000Solution.Export.TotalOtherCharges = dblTotalCharges` |

## Document data library

This is for internal use only.

## Project data library

This is for internal use only.

## ALM Library

The ALM library consists of the following:

| Function / property | Description |
|---|---|
| ExecuteALMExtraction | This function connects to ALM and executes extraction for the current document. It is intended to be called from the **Document_PreExtract** event for a custom base class.<br><br>Please refer to the ALM Integration section for more details and coding examples. |

| ALMPostEvaluate | This function compares the field candidates returned by AP Project and ALM and makes a decision which one should be used. It is intended to be called from the **PostEvaluate** event for a field belonging to a custom base class. |
|---|---|
| | Please refer to the ALM Integration section for more details and coding examples. |
| ALMStoreRTSResults | This function stores the server side extraction results in the **tmpRTSExtractionResults** field and logs the Verifier data in **tmpVerifierAudit**. It is intended to be called from the **Document_Validate** event for a custom base class. |
| | Please refer to the ALM Integration section for more details and coding examples. |

## User exits

A user exit is a dedicated public subroutine or function on the UserExits class script level where custom code can be inserted.

Each user exit is called from a relevant point in the application layer baseline code and provides you with the opportunity to perform a custom activity for your implementation.

Customizations must be implemented in a modular fashion within the user exits. If any ancillary functions are required to support these modules, then these must be created as public functions.

These ancillary functions can be placed on the UserExits script class if they are only to be used locally. If they need to be accessed by custom script on other classes, they can be placed at the end of the existing script on the GlobalVariables class in the marked area.

## User exits

The user exits that are available, along with their calling points and suggested uses can be found in the following table.

| User exit | Call routine | Description |
|---|---|---|
| UserExitCustomExport | ScriptModule_ ExportDocument | This is the user exit for custom export modules, such as for custom flat files or custom database updates. |
| | | This is the only user exit which has a corresponding activation option within Export Settings > Export Options. |
| | | The interface is pWorkdoc, ExportPath, strDocLink, LineData, GLData, TaxData, AccountingData, WHTax, blLinesRequired, Address, Flags, strExportError, strError, blShortPay, blCalculateTax, and dblUnplannedDelCost |
| | | All parameters are read only apart from the strExportError parameter. This can be populated with an appropriate error message in the event the export fails. This sets the batch to a status of 750, with the error message set against the invoice number. |
| | | This exit is only called for documents that have not been voided. Special handling for voided documents is inserted in the user exit UserExitVoidDocumentExport. |
| UserExitPostExtract | Document_ PostEvaluate on the invoices class | This is the user exit used to set any custom field defaults, or to reevaluate any extracted fields. |
| | | The interface is pWorkdoc. |
| UserExitRouteDocument | ScriptModule_ RouteDocument | This is the user exit for performing any custom activity connected to the Oracle WebCenter Forms Recognition workflow state of each document, such as changing the state based on a property of the workdoc or document filename so that they can be filtered on a user-by-user basis. |
| | | The interface is pWorkdoc, State. |
| UserExitPONumberPostEvaluate | PONumber_ PostEvaluate on the invoices class | This is the user exit where a custom routine can be added to reevaluate the weightings for candidates for the purchase order number field, such as to check for their existence in an external database. |
| | | The interface is pField, pWorkdoc. |

| UserExitVoidDocumentExport | ScriptModule_ ExportDocume nt | This is the user exit provided for the custom export of documents belonging to the void class. The interface is pWorkdoc, ExportPath, strDocLink, and strExportError. The strExportError parameter is populated with an appropriate error message if the export fails. This has the effect of setting the batch to a status of 750, with the error message set against the invoice number. |
|---|---|---|
| UserExitPONumberValidate | PONumber_ Validate on the invoices class | This user exit can be used for custom purchase order number validations. It is called subsequent to the purchase order number being validated against either the database table. The interface is pField, pWorkdoc, POHeader, POLines, pValid.The POHeader data object and POLines array contain the details for the current purchase order. The values cannot be changed. If the PO number valid flag is to be changed, then the values of pValid and pWorkdoc.Fields("PONumber").Valid is changed to the new Boolean value. If the purchase order details are being read from a database, the line item array is not populated if line pairing is switched off. |
| UserExitPOValidateStart | PONumber_ Validate on the invoices class | This is the user exit used for custom purchase order number validations to be undertaken at the start of the PO number validate routine. Included in the interface is the Address structure, which contains the full details of the current vendor. Also included is the POKey structure, the contents of which may be changed if required. The interface is pField, pWorkdoc, pValid, blExit, POKey, Address. If the PO number valid flag is to be changed, then the values of pValid and pWorkdoc.Fields ("PONumber").Valid is changed to the new Boolean value. If the parameter blExit is set to TRUE, the PO_ Validate routine exits immediately after returning from the user exit. |
| UserExitTerminate | ScriptModule_ Terminate | This user exit is called from the beginning of ScriptModule_Terminate. It can be used to unload any global script objects employed in custom script. The interface is ModuleName. |

| UserExitPreImport | ScriptModule_ PreImport | This user exit is called from the beginning of ScriptModule_PreImport. The interface is pWorkdoc, FilePath, FileType, pCancel. |
|---|---|---|
| UserExitPostClassify | ScriptModule_ PostClassify | This user exit is called from the beginning of ScriptModule_PostClassify. The interface is pWorkdoc. |
| UserExitDocumentTypeValidate | DocumentType_Validate on the invoices class | This user exit is called at the beginning of DocumentType_Validate on the invoices class. The exit can be used to set the valid flag of the document type depending on whether it is an invoice or credit note. The interface is pField, pWorkdoc, pValid. |
| UserExitAmountMiscPostEvaluate | Internal application | This user exit can be used to evaluate the weighting of candidates for a miscellaneous charge in the AmountMisc field in a manner that is appropriate for the project implementation where the desired contents of the field can change depending on client requirements. The interface is pField, pWorkdoc. |
| UserExitChangeReportingCountry | Internal application | This user exit permits a change in the reporting country for countries that do not use tax jurisdictions. The parameter strCountry is initially set to the country of the company code to which the invoice is to be posted, which is assumed to be the tax reporting country. As some companies have sites abroad that are VAT registered in that country, the company code country is not appropriate as a key to retrieve the appropriate tax codes from the AP Project Tax Table. This user exit provides an opportunity to implement specific business logic to select the correct country by setting the strCountry parameter to the desired value. All other parameters passed are read- only. The interface is strCountry, pWorkdoc, POLines (), PlantData(). |

| | | |
|---|---|---|
| UserExitSetTolerance | Internal application | This user exit allows greater flexibility for setting the tolerance against which amount fields are cross-validated mathematically within Oracle WebCenter Forms Recognition. Standard configuration permits different tolerance values to be assigned to different currencies, but if a further dimension is required, such as considering the company code, then this logic is implemented within this user exit. |
| | | Adjusting the tolerances requires manipulating the Tolerance array. |
| | | The interface is Tolerance, pWorkdoc. |
| UserExitDocumentOnAction | Document_ OnAction on the invoices class | This user exit provides an opportunity for a developer to add script that relates to custom buttons that they may elect to add to the Verifier form. |
| | | The ActionName parameter, which is passed into the function, is populated with the technical name of the action associated with a user pressing the button as designated in Verifier Design Mode in the Oracle WebCenter Forms Recognition Designer. |
| | | The interface is pWorkdoc, ActionName. |
| UserExitDBHeaderExport | Internal application | This user exit permits a developer to add custom header fields into the standard database export function, or to change the value of an existing field. |
| | | A setting must be added to Export Settings > Header Field Export Mapping in order to designate the mapping between the export field and the column name of the invoice header database table into which the field is written. |
| | | The interface is strDBKeyName, pWorkdoc, strDocLink, strFieldValue. |
| | | strDBKeyName denotes the name of the field in the 'Field Name' option as per the new setting in Header Field Export Mapping. |
| | | For example, if the 'Field Name' option is set to MyField, then strDBKeyName is set to MyField. strFieldValue is the value to be exported to the database. |
| | | strDocLink is the link to the image of the document, and could be a filepath of a URL, depending on settings in Global Settings > Reporting Settings |

| UserExitXMLOutput | Internal application | This user exit is available for you to add any custom fields into the XML output file. |
| | | The workdoc and the LineData, GLData and TaxData arrays are passed into the user exit, along with the XML document. The XML document is of type MSXML2.DOMDocument60 and can be enhanced using the MSXML2 references. |
| | | Additionally, two global functions, fnXMLWriteField and fnXMLWriteDateField, are available to write data into any section of the xml document. |
| UserExitCSVFile | Internal application | This user exit is called for each header line outputted to the CSV file, and can be used to map custom user literals to their desired value counterparts, for example, to include a custom field in the CSV file output. |
| | | Functions fnWriteCSVField and fnWriteCSVDateField are provided for this purpose to condense the operation into a single command. |
| | | The parameter strRecordText contains the text of the current line to be written into the file and strKey is the CSV index group number for the file being processed. |
| | | The interface is pWorkdoc, strRecordText, strKey. |
| UserExitCSVFileLine | Internal application | This user exit is called for each line item outputted to the CSV file, and can be used to map custom user literals to their desired value counterparts, for example to include a custom line item component in the CSV file output. |
| | | Functions fnWriteCSVField and fnWriteCSVDateField are provided for this purpose to condense the operation into a single command. |
| | | The parameter strRecordText contains the text of the current line to be written into the file, and strKey is the |
| | | CSV group index number for the file being processed. The LineData structure is also passed in containing details of the current line being outputted. |
| | | The interface is pWorkdoc, LineData, strRecordText, strKey |
| UserExitExportSuccess | ScriptModule_ExportDocument | This user exit is called at the point where it is known that all selected exports have been successful for the document being processed. It can be used to update additional reporting data if required. |
| | | The interface is pWorkdoc. |

| UserExitExportFailure | ScriptModule_ ExportDocument | This user exit is called at the point where it is known that export has failed for the document being processed. It can be used to update additional reporting data if required. |
|---|---|---|
| | | The reason for the export failure can be found in strExportError. |
| | | The interface is pWorkdoc, and strExportError. |
| UserExitValueCheck | Internal application | This user exit is called from the invoice number and invoice date post evaluate events for documents that are classified to the Invoices class. It is called once per candidate, and is provided as a window for a developer to insert script to disqualify illegal candidates for the invoice number or invoice date. |
| | | The interface is pField, pWorkdoc, oCandidate. |
| UserExitLinePairingPOs | Internal application | This user exit provides functionality to edit the list of purchase orders that are to be considered during the line pairing operation. New purchase orders may also be added based on criteria that may be coded within the user exit. |
| | | The interface of the user exit is as follows. |
| | | pWorkdoc, PO(), and strExportError. |
| | | The AP Project workdoc object PO() array contains the details of the purchase orders to be used during line pairing. The array is 1-based. |
| | | If an error occurs during the user exit code, the strExportError parameter is populated with the reason for the error. Populating this variable has the effect of failing the document export. |
| UserExitVerifierException | ScriptModule_ Verifier Exception | This user exit is triggered when a user sends a document to an exception state in Thick Verifier. |
| | | The interface is pWorkdoc, Reason, CreateNewBatch, BatchName, BatchDocumentState, BatchPriority, BatchFolderName, ApplyExceptionHandling |

| UserExitFilterVendorSearch | Document_ Post Extract, internal application | This user exit allows a developer to filter the list of vendors shown in the vendor search facility, and also to change the information that is displayed. It can also be used to remove vendors that the system must not consider to be the correct vendor, or to adjust the confidence weightings of candidates that are under consideration to be the correct vendor. |
|---|---|---|

The interface is as follows.

- pWorkdoc The AP Project workdoc object.
- oCandidate The vendor candidate object.
- Address The vendor address structure.
- strDisplay The current vendor search box display line for vendor. This is blank if the user exit is called prior to the initial determination of the correct vendor on server side. Checking whether this string is empty or not allows a different behavior to be defined between server side and search box functions.
- blReject This is initially set to FALSE, but you can set it to TRUE if the vendor is excluded from the search results or from the extraction results.

Example usage 1

You want to exclude any vendors from being extracted automatically and from appearing for selection in the vendor search if they are not set up for the invoice company code.

This can be achieved through the following line of code.

```
If Not fnIsValueInList
(Address.CompanyCodes,
pWorkdoc.Fields("CompanyCode").Text)
Then blReject = TRUE
```

This assumes that a comma-separated list of valid company codes for which the vendor is set up for is available in the vendor master extract, and the correct column is mapped against the CompanyCodes parameter in the SRC section of the system configuration.

**Example usage 2**

You want to exclude any vendors from being extracted automatically if they are not set up for the invoice company code, but wish to allow the Verifier user to select those vendors using a vendor search.

This can be achieved with the following line of code.

```
If strDisplay = "" And Not
fnIsValueInList(Address.CompanyCodes,
pWorkdoc.Fields("CompanyCode").Text)
Then blReject = TRUE
```

The same assumptions for example 1 apply.

**Example usage 3**

You want to lower the confidence of any vendor candidates that do not belong to the invoice company code by 30 percent.

This can be achieved by the following line of code:

```
If strDisplay = "" And Not
fnIsValueInList(Address.CompanyCodes,
pWorkdoc.Fields("CompanyCode").Text)
Then oCandidate.Weight =
oCandidate.Weight – 0.3
```

**Example usage 4**

The following line of code adjusts the display in the Vendor Search box so that only the vendor name, vendor street address and zip code are displayed:

```
If strDisplay <> ""
```

```
Then strDisplay = Address.Name & ", "
& Address.Address & ", " &
Address.Zip
```

The interface is pWorkdoc, oCandidate, Address, strDisplay, blReject.

| UserExitSetReportingLoginName | Internal application | This user exit allows a developer to change the name of the user as reported in the reporting database. |
| --- | --- | --- |
| | | This is used in AP Project where the Web Verifier is being used. Otherwise, the system always populates the Thick Verifier user column in the reporting database with the Oracle WebCenter Forms Recognition service user. |
| | | Input parameter strUserName contains the user name that the system is currently using. |
| | | The interface is pWorkdoc, strUserName. |
| | | It is no longer necessary to insert code into this user exit for Thick Verifier implementations. The system always uses the Thick Verifier logon ID as the user name. |
| UserExitPreMaterialLinePairing | Internal application | This user exit is called prior to the commencement of material line pairing. It is not called for the pairing of service line items. |
| | | The LineData input parameter is always empty at this point. The dblPOTotal parameter contains the total value of all purchase orders being considered during line pairing. The dblGRTotal parameter contains the total outstanding value of all purchase order numbers being considered during line pairing, such as the value of total goods receipt against all purchase orders minus the value of total invoice receipt against all purchase orders. |
| | | It can be used to skip the MIRA process of line pairing by setting dblPOTotal and dblGRTotal both to zero, although this is not recommended. All other parameters passed into the user exit are read only. |
| | | The interface is pWorkdoc, LineData(), dblPOTotal, dblGRTotal, POLines(), GRLines(), POAccounts(),CondData(), ServiceAccounts(), ServicesLines(). |

| UserExitPostLinePairing | Internal application | This user exit is called after the line pairing and automatic tax determination functions have been completed during document export, but before any data outputs have actually been carried out. |
|---|---|---|
| | | It gives the developer an opportunity to look at the line pairing results (held in the LineData array) and make any changes or additional customizations as required. The LineData, TaxData, GLData and WHTax arrays can all be changed in this user exit. |
| | | Interface parameter blLinesRequired is set to TRUE if line items are to be exported for the document in question. |
| | | You can populate the strExportError parameter with an appropriate error to halt processing and fail document export. |
| | | You can also use the strError parameter to force a document to park by setting its value to an appropriate message. |
| | | The interface is pWorkdoc, LineData(), TaxData(), blLinesRequired, strExportError, POLines(), GRLines(), POAccounts(), CondData(), ServiceAccounts(), ServicesLines(), AccountingData(), GLData(), WHTax(), strError, blShortPay, blCalculateTax, and dblUnplannedDelCost |
| | | The parameters in bold above can be changed in the user exit. The other parameters are all read only. |
| UserExitAddressArray | Internal application | This user exit is called each time the details for a vendor are read from the vendor pool. It gives the developer an opportunity to amend or add new parameters to the Address array. |
| | | The user exit is not called if the vendor details have already been read and loaded into the local cache. |
| | | For example, the client has been unable to supply the vendor country of origin as a standard two-character ISO-code, as required by the application. The client is only doing business with vendors from the US and Canada, and is able to provide USA and CAN as the country codes. |
| | | As a result, you can add script to this user exit to convert a 3-character code to a 2-character code. |
| | | The following script in the user exit converts the client's country code to the required application country code. |
| | | Select Case Address.Country Case "USA" Address.Country = "US" Case "CAN" Address.Country = "CA" End Select |

| | | The interface is oASSA, strVendorID, Address. |
|---|---|---|
| UserExitDocumentValidate | Document_ Validate on the Invoices class script level | This user exit is called from Document_Validate on the Invoices class script level. It can be used to code in additional document level validations and activities.<br><br>The interface is pWorkdoc, pValid. |
| UserExitEditDocumentWeblink | Internal application | This user exit permits a developer to manipulate the document web link, as stored in the reporting database and exported downstream.<br><br>The current web link is passed into the user exit using the strWebLink interface parameter, and this may be changed to meet your business needs. The current unique document ID is passed in the strDocID interface parameter, which may not be changed.<br><br>The interface is strWebLink, strDocID. |
| UserExitInvoiceNumberValidate | InvoiceNumber_ Validate on the Invoices class | This user exit is available to include additional validations and formatting against the invoice number field.<br><br>For example, your business rule states that if an invoice number is extracted that is longer than 16 characters, the system must format it so the last 16 characters are retained. The following line of code accomplishes this.<br><br>If Len(pField.Text) > 16 Then pField.Worktext.Text = Right(pField.Text, 16)<br><br>The interface is pField, pWorkdoc, pValid. |
| UserExitSetDocFlags | Internal application | This user exit allows a developer to set the properties on the Flags object based on a custom set of requirements.<br><br>The interface is pWorkdoc, Flags. |
| UserExitInvoiceDateValidate | InvoiceDate_ Validate on the Invoices class | This user exit is available for custom validation logic to be added to the invoice date field validation event.<br><br>The interface is pField, pWorkdoc, pValid. |

| UserExitDueDateValidate | DueDate_ Validate on the Invoices class | This user exit is available for custom validation logic to be added to the invoice due date field validation event.<br><br>The interface is pField, pWorkdoc, pValid. |
|---|---|---|
| UserExitDeliveryDateValidate | DeliveryDate_ Validate on the Invoices class | This user exit is available for custom validation logic to be added to the delivery date field validation event.<br><br>The interface is pField, pWorkdoc, pValid. |
| UserExitVerifierFormLoad | ScriptModule_ Verifier FormLoad | This user exit is called at the end of ScriptModule_ VerifierFormLoad.<br><br>The interface is pWorkdoc, FormClassName, FormName |
| UserExitSetVendorCountry | Internal application | This user exit allows a country to be set for the purposes of field formatting and validation. For example, if the country filter is being used, it determines a vendor from which the country would normally be derived.<br><br>To set the country, import parameter strCountry is set to the two-character ISO-code for the country in question.<br><br>The interface is strCountry, pWorkdoc. |
| UserExitScriptModuleInitialize | ScriptModule_ Initialize | This user exit is called at the end of ScriptModule_ Initialize.<br><br>The interface is ModuleName. |
| UserExitPostImport | ScriptModule_ PostImport | This user exit is called from the beginning of ScriptModule_PostImport.<br><br>The interface is pWorkdoc. |
| UserExitPostImportBatch | ScriptModule_ Post ImportBatch | This user exit is called at the beginning of ScriptModule_PostImportBatch.<br><br>The interface is BatchDatabaseID, BatchName, Priority, BatchState, ExternalGroupID, ExternalBatchID, TransactionID, TransactionType. |
| UserExitTextFieldFormatting | Internal application | This user exit can be used to apply custom formatting and validations to fields of type TEXT in a way that can be used to augment that standard validations and formatting configurable using Processing Profile Configuration Settings > Field Settings.<br><br>The interface is pField, pWorkdoc, pValid, FS, Client. |

| UserExitPreClassify | ScriptModule_ Pre Classify | This user exit is called from the beginning of ScriptModule_PreClassify.<br><br>Interface: pWorkdoc |
|---|---|---|
| UserExitAlternatePayeeValidate | AlternatePayee_ Validate on the Invoices class | This user exit is available for custom validation logic to be added to the alternate payee field validation event.<br><br>The interface is pField, pWorkdoc, pValid. |
| UserExitUpdateSystemSecurity | ScriptModule_ Update SystemSecurity | This is the user exit that is called during the system security update event that is set to run as a periodic background job on the runtime server. In AP Project, the system security event is used to load users created in Global Settings > User Management into the main system user table. This user exit is triggered subsequent to that process.<br><br>The interface is InstanceName. |
| UserExitMoveDocument | ScriptModule_ Move Document | This is the user exit that is called when a document is sent to an exception batch in Thick Verifier. The internal application uses this event to apprise the reporting tables of any change in the document batch ID. The interface is pWorkdoc, OldBatchID, NewBatchID, and Reason. |
| UserExitBatchOpen | ScriptModule_ Batch Open | This is the user exit that is called upon the opening of a batch in Thick Verifier.<br><br>The interface is UserName, BatchDatabaseID, ExternalGroupID, ExternalBatchID, TransactionID, WorkflowType, BatchState. |
| UserExitProcessBatch | ScriptModule_ ProcessBatch | This is the user exit that is called during the Custom Processing workflow step.<br><br>The interface is pBatch, InputState, DesiredOutputStateSucceeded, DesiredOutputStateFailed. |
| UserExitBatchClose | ScriptModule_ Batch Close | This is the user exit that is called when a batch is exited in Thick Verifier.<br><br>The interface is Username, BatchDatabaseID, ExternalGroupID, ExternalBatchID, TransactionID, WorkflowType, BatchState, BatchReleaseAction. |
| UserExitAppendWorkdoc | ScriptModule_ Append Workdoc | This is the user exit that is called when a user merges documents together in Thick Verifier.<br><br>The interface is pLastWorkdoc, pCurrentWorkdoc, pAppendType. |

| UserExitPreOCR | ScriptModule_ PreOCR | This user exit is called from the beginning of ScriptModule_PreOCR. This routine is triggered just before a document is OCR'ed. The interface is pWorkdoc and pCancel. |
|---|---|---|
| UserExitPostOCR | ScriptModule_ PostOCR | This user exit is called at the beginning of ScriptModule_PostOCR. This routine is triggered just after the document is OCR'ed. The interface is pWorkdoc. |
| UserExitVerifierClassify | ScriptModule_ VerifierClassify | This user exit is called before and after the manual reclassification from Verifier. The interface is pWorkdoc, Reason, and ClassName. |
| UserExitPreClassifyAnalysis | ScriptModule_ Pre ClassifyAnalysi s | This is the user that is called during the classification event where the classification matrix may be adjusted or extended to influence the classification result. The interface is pWorkdoc. |
| UserExitReadPODetails | Internal application | This user exit is called during the validation of the purchase order number on both server and Verifier side, as well as during document export prior to line pairing. The user exit allows a developer to implement a custom purchase order number look-up (for example, using a web service) instead of using the standard options. The interface is pWorkdoc, POHeader, POLineItems(), POKey, Client, Address, strPOReadError, blReadPOLines, blDuplicatePO, blExport, and blPONotFound. A detailed explanation on how to use this user exit can be found in the PO Number Configuration section. |
| UserExitPIFExport | Internal application | The user exit is called prior to the system sending an XML output through a web service call. The user exit provides a developer with the opportunity to change the XML document that are sent to PIF through parameter 'xmlDoc'. Within the user exit, if it is decided that export must fail and the document must be sent to Verifier with a 750 state, this is achieved by setting the 'strExportError' parameter to an appropriate error message. The interface is pWorkdoc, LineData, TaxData, strDocLink, xmlDoc, Client, Address, blLinesRequired, Flags, and strExportError. |

| | | |
|---|---|---|
| UserExitPOVendorValidate | PONumber_ Validate on the 'Invoices' class | This user exit is called on the server side only if a PO vendor is validated automatically by the system. It provides a developer with the opportunity to reject the validated PO vendor based upon custom criteria. To reject the PO vendor, the parameter 'blVendorOK' must be set to FALSE. The interface is pWorkdoc, POKey, Address, Client, and blVendorOK. |
| UserExitCompanyCodeValidate | CompanyCod e_Validate on the 'Invoices' class | This user exit is available for custom validation logic to be added to the company code field validation event. The interface is pField, pWorkdoc, and pValid. |
| Sheet | application | This is called during the line pairing routine at the point where the system is attempting to select the correct service entry sheet to post the invoice against it. |
| | | You can select the service entry sheet based on a comparison between the service entry sheet external reference set, and the invoice number. To activate this functionality, the **Find SES With Invoice Number** check box must be selected within **Line Pairing Settings** for the relevant processing profile. |
| | | The user exit is provided so that the invoice number could be substituted with something else (for example, a delivery note number) in order to help identify the right service entry sheet. |
| | | The current reference value to be used, which automatically populates with the invoice number, is held in the strReference interface parameter. To change this to the delivery note number instead, the example code would be as follows. |
| | | strReference = pWorkdoc.Fields("DeliveryNote").Text |
| | | The dblServiceValue parameter contains the total amount of the service. |
| | | The interface is pWorkdoc, strReference, dblServiceValue. |

| | | |
|---|---|---|
| UserExitFocusChanged | Document_ Focus Changed on the 'Invoices' class | This user exit is called during the standard 'FocusChanged' event in Verifier. This event is called each time the field or table cell focus in Verifier is changed, or when the system moves to a new document. |
| | | Any script inserted into this user exit must be kept to a minimum as overly time-consuming operations could make the Verifier application cumbersome to use. |
| | | For example, the script that is relevant only when the system moves on to a new document would be better placed in 'UserExitVerifierFormLoad'. |
| | | The interface is pWorkdoc, Reason, OldFieldIndex, NewFieldIndex. |
| UserExitCheckBank Account | VendorID_ Validate & PONumber_ Validate on the 'Invoices' class | The user exit is called during the bank account check, where the system attempts to determine the appropriate bank account based upon the content of the document and the bank records present in the vendor master data. It allows a developer to customize alternative logic for the bank account selection. |
| | | The import parameter 'Address' contains the details for the currency vendor, which the bank account records specified against the 'BankDetails' property. The currency invoice is passed into the user exit via the 'strCurrency' parameter. |
| | | The interface is pWorkdoc, Address, strCurrency |
| UserExitCellText Formatting | Internal application | This user exit is called for each table cell in the 'LineItems' table which is activated and set to type 'TEXT'. It can be used as a means for a developer to create custom validation and formatting routines for the table cell. |
| | | The parameters passed into the user exit are as follows. |
| | | pWorkdoc myWorktext - this is the table cell worktext object FS - field settings object containing the defined configuration for the table cell pTable - this is the 'LineItems' table object lngRow - the is the row index for the table cell strColumnName - this is the technical name of the column in 'LineItems' Client – client settings object pValid - cell valid/invalid flag strError - cell validation error message |
| UserExitEmployeeIDValidate | EmployeeID_ Validate on the 'Invoices' class | This user exit is available for custom validation logic to be added to the employee ID field validation event. The interface is pField, pWorkdoc, and pValid. |

| UserExitAccountNumber Validate | AccountNumber_ Validate on the 'Invoices' class | This user exit is available for custom validation logic to be added to the account number field validation event. The interface is pField, pWorkdoc, and pValid. |
|---|---|---|
| UserExitPreLinePairing | Internal application | This user exit is called during document export immediately before the commencement of the line pairing process, after purchaser order information has been read.<br><br>It provides an opportunity for a developer to apply custom logic to the purchase order data returned.<br><br>Interface: pWorkdoc, Client, Address, POLines(), GRLines(), POAccounts(), CondData(), ServiceAccounts(), ServicesLines(). |
| UserExitSetEntrySheetNumber | Internal application | This user exit allows a developer to pass a service entry sheet number via the parameter 'strEntrySheetNo' for use during line pairing.<br><br>Interface: pWorkdoc, strEntrySheetNo. |
| UserExitMexicanUUIDValidate | MexicanUUID_ Validate on the 'Invoices' class | This user exit is available for custom validation logic to be added to the Mexican UUID number field validation event. The interface is pField, pWorkdoc, and pValid. |
| UserExitFilterEmployeeSearch | Internal application | This user exit offers the same functionality as 'UserExitFilterVendorSearch' (described above), except that it relates to the employee field.<br><br>The interface is pWorkdoc, oCandidate, Address, strDisplay, blReject. |
| UserExitRejectPOFor LinePairing | Internal application | This user exit offers the capability to reject a purchase order or database purchase order for inclusion in line pairing based on custom criteria. For example, information contained within the purchase order header.<br><br>You can set the blReject parameter to TRUE if you want to reject the purchase order.<br><br>oPOHeader is the purchase order 'PO_HEADER' structure retrieved from using the purchase order look-up BAPI.<br>You can retrieve the order-from vendor via the following command.<br>`oPOHeader.GetValueByName("VENDOR")`<br><br>The record set object DBPOHeaderRecordSet is used to return purchase order header data read from a database. You can access a column that contains the vendor ID with a technical name of 'VENDOR_ID' |

| | | using the following command. |
|---|---|---|
| | | DBPOHeaderRecordSet("VENDOR_ID"). |
| | | To distinguish the method used to retrieve the purchase order header. The interface is pWorkdoc, DBPOHeaderRecordSet, oBAPIPOHeader , POKey, blReject. |
| UserExitOCRXMLOutput | Internal application | This user exit is designed to allow a developer to edit the body of the OCR XML file. |
| | | It is called once the XML document is complete for output, but before it is written out to the export directory. The XML document is passed into the user exit via the xmlDoc parameter. |
| | | The interface is pWorkdoc, xmlDoc. |
| UserExitPaymentReferenceValidate | PaymentReference_Validate on the 'Invoices' class | This user exit is available for custom validation logic to be added to the payment reference field validation event. The interface is pField, pWorkdoc, and pValid. |
| UserExitCustomFieldValidate | Validate events for custom fields 1-5 on the 'Invoices' class | This user exit is available for custom validation logic to be added for the validation events relating to custom fields 1-5. |
| | | pField.Name is used to establish which of the custom fields the user exit is called for. |
| | | The interface is pField, pWorkdoc, and pValid. |
| UserExitAssignClientIDToDocument | Internal application | This user exit is called each time the solution reads the solution settings where the document client ID has not yet been determined and a workdoc is available. This is typically during the core platform **Document_PreExtract** event. You can use the user exit to assign a client ID to a document using custom logic by setting the value of parameter **strClientID** to the client ID you want to use. The client ID should be an integer equal to or greater than zero. An error is raised if an invalid client ID is specified. |
| | | The user exit is called before the system tries to establish a client ID using standard configuration options. If no client ID is set, the system continues to try and determine the client in the standard manner. |
| | | The interface is pWorkdoc, strClientID. |

| UserExitChangePODetails | Internal application | This user exit is called immediately after a purchase order look-up is performed, either during validation or during line pairing at time of document export. It allows you to change details of the purchase order header, such as setting a missing site ID. |
|---|---|---|
| | | It is only called for purchase order look-ups using a database or Workday. |
| | | The interface is pWorkdoc, POHeader. |

## User exit parameters

The following table provides an overview of common invoice solution specific parameters that are passed into user exits.

| Parameter name | Data type | Description |
|---|---|---|
| dblUnplannedDelCost | Double | This holds the total of all miscellaneous charges that have been configured to output as an unplanned charge. |
| blShortPay | Boolean | This flag indicates whether the invoice should be short paid. Short paid means that the tax amount stated by the vendor on the document is ignored and is deducted from the invoice total amount. |
| blCalculateTax | Boolean | This flag denotes whether the calculate tax flag is checked when creating a document. |
| blLinesRequired | Boolean | This flag indicates whether line item export is required for the current document. |
| strError | String | This parameter holds the text for a soft error explaining the reason why a document could not be posted. |
| strExportError | String | This parameter holds the text for a hard error. If set, document export fails and the text of the error is set against the invoice number field. |
| strDocLink | String | The document image link path. |
| Address | VendorAddress | This structure holds the associated details for a given vendor or employee. |
| Tolerance | Tolerance | This structure holds the various amount tolerances associated with the currency of the current document. |

| POHeader | POHeader | This structure holds the various amount tolerances associated with the currency of the current document. |
| --- | --- | --- |
| LineData() | WWLineData | This array holds the line item data for export. |
| AccountingData() | WWAccountingData | This array holds the account assignments to be used when creating a document. |
| GLData() | WWAccountingData | This array holds the general ledger account entries. This is populated by the system automatically if invoice miscellaneous charges are configured to book to a general ledger account. |
| TaxData() | WWTaxData | The array holds the tax line item data for export. |
| WHTax() | WWWithTax | This array holds the withholding tax line item data for export. |
| POLines() | WWPOLine | This array holds the purchase order line items. |
| GRLines() | WWPOLine | This array holds the individual goods receipts and service entry sheets belonging to the purchase order lines read in POLines(). |
| ServiceLines() | WWPOLine | This array holds the service entry sheet line items that belong to an entry sheet held in GRLines(). |
| POAccounts() | WWAccountingData | This array holds the account assignment data for the purchase order line items in POLines(). |
| ServiceAccounts() | WWAccountingData | This array holds the service entry sheet account assignment data. |
| CondData() | WWCondData | This array holds the condition records belonging to the purchase order lines read in POLines(). |
| POKeys() | WWPOKey | This array holds the keys of the purchase orders to be read prior to line pairing. |
| PlantData() | WWPlantData | This array holds the data associated with the plants specified on the purchase order line items read in POLines(). |

## Project data types

AP Project uses a range of data types when passing data between user exits and the main solution, and also to return data from solution functions. The data types used are described in the section below.

## WWLineData

This data type is used for line item data to be exported. The elements contained within the data type are listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| INVOICE_DOC_ITEM | Integer | This is the invoice line item number from 1-n. |
| PO_NUMBER | String | This is the purchase order number, and is populated only if line pairing has been successful for this item. |
| PO_ITEM | String | This is the purchase order line item number, and it is populated only if line pairing has been successful for this item. |
| DE_CRE_IND | X or blank | This is the subsequent debit/credit indicator, and denotes whether the line item is a subsequent debit or credit line item. If this value is set to X and the document type is INVOICE, then the line item is treated as a subsequent debit (the amount only and not quantity). If the value is set to X and the document type is CREDIT, then the line item is treated as a subsequent credit. If the value is blank, the line item is treated as a regular line item. |
| QUANTITY | Double | This is the invoice line item quantity. |
| ITEM_AMOUNT | Double | This is the invoice line item total. |
| PO_UNIT | String | This is the order unit of measure, and it is populated with the purchase order line item order unit of measure if the line item has been paired. |
| PO_PR_UOM | String | This is the order price unit of measure, and is populated with the order price unit of measure from the purchase order line item if the line item has been paired. In all other cases, it is blank. |
| PO_PR_QNT | Double | This is the invoice line item quantity expressed in the order price unit of measure. |
| TAX_CODE | String | This is the invoice line item tax code, and it is populated using the tax determination procedure if a line item is paired. |
| TAXJURCODE | String | This is the invoice line tax jurisdiction code. It represents the downstream ERP system ID for the tax office to which tax is payable for this line item, as used in countries that have tax jurisdictions for their sales tax. It is populated only if the line item is paired. |

| UNIT_PRICE | Double | This is the invoice line item unit price, and it is only populated for unpaired line items. In all other cases, it has a value of zero. |
|---|---|---|
| DESCRIPTION | String | Invoice line item description.<br><br>If the line item is paired, the description is set to the description on the purchase order. If the line is unpaired, this field contains the raw text description that was read from the invoice. For third-party freight invoices, service invoices, and MIRA invoices where no line items were required in the TAB section, and line pairing was either not successful for any lines, or was not carried out, the description is set to THIRD PARTY FREIGHT, SERVICE and MIRA respectively. |
| MATERIAL_NO | String | Invoice line item material number.<br>If the line item is paired, this is populated with the material number from the purchase order line item. If the line is not paired, this is populated with any values read from the invoice. |
| TAX_RATE | String | Invoice line item tax rate.<br>This is the percentage rate of tax applied to the invoice line item. If no percentage tax rate at line item level can be ascertained, then this value is blank. |
| LINETYPE | String | Invoice line item type.<br>This is lifted from the purchase order line item to which an invoice line is paired. |
| CHARGECODE | String | Invoice line item charge code.<br>This is lifted from the purchase order line item to which an invoice line is paired. |
| CHARGECODEID | String | Invoice line item charge code ID.<br>This is lifted from the purchase order line item to which an invoice line is paired. |
| MATERIALGROUP | String | Material group.<br>This is lifted from the purchase order line item to which an invoice line is paired. |
| DISTILLER_LINE | String | Original Oracle WebCenter Forms Recognition line item number. This is the original line item number in the Oracle WebCenter Forms Recognition table field (as viewed in Verifier) that the invoice line was drawn from. This is always populated for unpaired line items and is a 1-based, not a zero-based index. |

| | | |
|---|---|---|
| PLANT | String | Plant ID.<br>This is lifted from the purchase order line item to which an invoice line is paired. |
| COMPANYCODE | String | Company code to which the line item corresponds.<br>This is lifted from the purchase order when an invoice line is paired. |
| POTYPE | String | This is populated only if line pairing has been successful for this item. |
| BUSINESSUNIT | String | This is populated only if line pairing has been successful for this item. |
| MISCCHARGE | 'X' or blank | X indicates that this is a miscellaneous charge line item.<br>The flag is blank if the system has identified the line as a non misc-charge item. |
| ITEM_TEXT | String | This is the item text for the line item. |
| PAIRINGRESULTTYPE | String | The is the pairing result type code for the line item. |
| SPENDCATEGORY | String | This is the Workday spend category. |
| DELIVERYNOTE | String | This is the line item delivery note number. |
| TAXAPPLICABILITY | String | This is the Workday tax applicability reference. |

## WWPOHeaderStructure

The WWPOHeaderStructure data type is used within UserExitReadPODetails. Within that user exit, it is populated with the details of a purchase order header retrieved by a custom look-up to an external data source. The components of the data type are listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| DOCTYPE | String | This is the purchase order document type. |
| COMPANYCODE | String | This is the purchase order company code. |
| VENDORID | String | This is the purchase order-from vendor. |
| SITEID | String | This is the site ID for the purchase order vendor. |
| CURR | String | This is the purchase order currency. |
| RELEASEFLAG | String | This is the purchase order release flag. |

| DIFFINV | String | This is the remit-to vendor ID. |
|---------|--------|----------------------------------|
| STATUS | String | This is the purchase order document status. |
| EXRATE | Double | This is the exchange rate between the purchase order currency and the local currency of the company code in which the purchase order was created. It is expressed as the factor by which the purchase order totals are multiplied to convert from the PO currency to the company code currency. For example, if the purchase order document currency is 'CNY' and the company code currency is 'GBP', then, assuming that 1 GBP is 10 CNY, the exchange rate is set to 0.1. For example, 10 CNY (total in PO currency) * 0.1 (exchange rate) = 1 GBP (total in company code currency) |
| PAYMENTTERMS | String | These are the purchase order payment terms. |

## WWPOLineItemsStructure

The WWPOLineItemsStructure data type is used within UserExitReadPODetails. Within that user exit, it must be populated with the details of a purchase order's lines retrieved by a custom look-up to an external data source. The components of the data type are provided in the following table.

| Element Name | Type | Description |
|--------------|------|-------------|
| LINENO | String | This is the purchase order line item number. |
| MATERIALNO | String | This is the purchase order line item material number. |
| MATERIALGROUP | String | This is the purchase order line item material group. |
| DESCRIPTION | String | This is the purchase order line item description. |
| POQUANTITY | Double | This is the line item order quantity. |
| UOM | String | This is the purchase order line item quantity unit of measure. |
| UNITPRICE | Double | This is the line item unit price. |
| PUOM | String | This is the purchase order line item price unit of measure. |
| PRICEUNIT | String | This is the purchase order line item price unit. |
| TOTAL | Double | This is the line item order total. |

| TAXCODE | String | This is the purchase order line item tax code. |
|---|---|---|
| TAXJUSOURCE | String | This is the purchase order line item tax jurisdiction code. |
| TOTALQUANTITYDELIVERED | Double | This is the total quantity already delivered for the purchase order line item. |
| TOTALVALUEDELIVERED | Double | This is the total value of the goods already delivered for the purchase order line item. |
| TOTALQUANTITYINVOICED | Double | This is the total quantity that has been invoiced for the purchase order line item. |
| TOTALVALUEINVOICED | Double | This is the total value of the goods invoiced for the purchase order line item. |
| ITEMCATEGORY | String | This is the purchase order line item category. |
| PLANT | String | This is the ID of the purchase order line item plant (for example, where the goods are to be delivered). |
| CHARGECODE | String | This is the purchase order line item charge code. |
| CHARGECODEID | String | This is the purchase order line item charge code ID. |
| ERS | Boolean | This flag must be set to TRUE if the purchase order line item is marked for Evaluated Receipt Settlement (ERS). |
| MULTIPLEACCOUNTASSIGNMENT | String | This is an indicator as to whether the purchase order line item is set up with multiple account assignments. Leave this field blank if multiple account assignments do not exist. |
| ACCOUNTASSIGNMENTCATEGORY | String | This is the purchase order line item account assignment category. |
| SPENDCATEGORY | String | This is the Workday spend category. |
| TAXAPPLICABILITY | String | This is the Workday tax applicability reference. |

## WWPOKey

The WWPOKey structure contains the elements that comprise the unique key used to identify a single purchase order. The data type consists of the components described in the following table.

| Element Name | Type | Description |
|---|---|---|
| PONUMBER | String | This is the purchase order number. |
| COMPANYCODE | String | This is the company code. This value is populated only if the company code forms part of the key to identify a unique purchase order. |
| POEXTENSION | String | This is the purchase order number extension. This field contains the additional key required to identify a purchase order uniquely. |

## WWTaxData

The WWTaxData data type holds the tax line items for export. The data type consists of the components listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| TAX_CODE | String | This is the ERP system tax code. |
| TAX_AMOUNT | Double | This is the tax amount. |
| TAX_RATE | Double | This is the tax rate as a percentage. For example, 20 would be 20%. |
| TAX_BASE | Double | This is the invoice amount to which the tax applies. |
| EXTRACT_LINE | String | This is the original line number (1-based index) of the VATTable where the value is captured. This value is only set if the TaxData structure is populated based on the content of the VAT table. |

## VendorAddress

The VendorAddress data type contains data elements associated with a particular vendor, such as the vendor ID, the vendor name, and address details, along with additional information.

The extent to which the data is populated depends on the availability of the data in the vendor extract and mapping in Global Settings > Search Field Mapping.

The data type consists of the parameters listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| NAME | String | This is the name of the vendor. |
| ADDRESS | String | This is the vendor street address line 1. |
| ADDRESS2 | String | This is the vendor street address line 2. |

| ZIP | String | This is the vendor zip code or postal code. |
|---|---|---|
| ID | String | This is the unique ID from the point of view of the data extract, where each row must have a unique reference. |
| SITEID | String | This is the vendor site ID. |
| TELNO | String | This is the vendor telephone number. |
| CITY | String | This is the vendor city. |
| STATE | String | This is the vendor state. For U.S. addresses, the state code is expected here, such as CA = California, or VA = Virginia. |
| COUNTRY | String | This is the vendor country. This must be the two character ISO-code for the country, such as US = United States of America, DE = Germany, GB = United Kingdom. |
| POBOX | String | This is the vendor Post Office (PO) box number. |
| POBOXZIP | String | This is the zip code or postal code associated with the vendor Post Office (PO) box. |
| EUMEMBER | Boolean | This is the Boolean indicator that denotes whether the vendor belongs to an EU member state country. |
| VATREGNO | String | This is the vendor VAT registration number. If the vendor is registered for VAT in more than one country, then multiple VAT registration numbers are provided in the form of a comma separated list. |
| TAXID1 | String | This is the vendor tax ID 1. |
| TAXID2 | String | This is the vendor tax ID 2. |
| TAXJURCODE | String | This is the ID of the tax office where the vendor is based. |
| CURR | String | This is the vendor currency. |
| INVOICETYPE | String | This is the vendor invoice type. This is set to a value that denotes either a Purchase Order-supplying vendor or a vendor who submits invoices that legitimately do not reference a purchase order.<br><br>If this column is used to determine the invoice type field, the meaning of the values contained in the column must be mapped against the 'PO Value' and 'NPO Value' options in Invoice Type Settings for the relevant processing profile. |
| PAYMENTMETHODS | String | This is the comma-separated list of payment method codes appropriate for the vendor. |

| PAYMENTTERMS | String | This is the vendor payment terms code. |
|---|---|---|
| BANKDETAILS | String | This is the vendor bank account details. This must be a colon-separated list in the following format.<br>`BankAccount, SortCode, ERPBankAccountCode`<br>A sortcode is the U.S. equivalent of a routing number. |
| IBAN | String | This is the vendor international bank account number. |
| UTILITYFLAG | String | This is the indicator as to whether the vendor is a utility vendor. |
| PORSUBNO | String | This is the vendor POR subscriber number used only for Switzerland. |
| EXTERNALID | String | This is the ERP system vendor ID if a site ID is used. |
| ACCOUNTGROUP | String | This is the ERP system vendor account group. |
| COMPANYCODES | String | This is the comma-separated list of company codes that are valid for the vendor. |
| SIRETID | String | This is the vendor SIRET ID. This is an ID code used in France that uniquely identifies a single vendor at a single address. It is often found on French invoices. |
| VENDORIDENTIFIER | String | This is the unique vendor identifier code, such as a Chinese tax number. |
| PARTITIONID | String | This is the vendor partition ID. |
| CUSTOM1 through CUSTOM5 | String | Use these fields to store additional information about the vendor that is specific to your needs. |

## Tolerance

The tolerance data type holds the tolerance values that the system uses when performing mathematical validations on the amounts read from the invoice. The data type consists of the components listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| HEADERTOLERANCE | Double | This is the maximum amount by which the document header amounts, such as total = tax + freight + sum of line items/subtotal are allowed to deviate from one another before the system marks them as being invalid. |

| TABLEROWTOLERANCE | Double | This is the maximum amount by which the line item level calculation, such as quantity * unit price = total is allowed to deviate before the system marks a line item as being invalid. |
|---|---|---|
| TAXTOLERANCE | Double | If automatic tax determination is activated, then this is the maximum amount by which a system calculated tax amount or tax rate is allowed to deviate from a tax amount read from the invoice, or a tax rate contained within the tax table. |
| NODECIMALPLACES | Boolean | This value is set to TRUE if the invoice currency does not have a subunit, such as pennies, cents. Common world currencies that do not have subunits are the Hungarian Forint and the Japanese Yen. |

## DocumentFlags

The DocumentFlags data type contains a range of Boolean indicators for document validation that you can use to determine which field items are relevant for export. The data type consists of the elements described in the following table.

| Element Name | Type | Description |
|---|---|---|
| MIRA | Boolean | This flag is set to **TRUE** if the invoice is a **MIRA** and line item extraction is not required for **MIRA** invoices. The options within **Line Item Table Settings** for the relevant processing profile determine if line items are required. |
| INVALID | Boolean | This flag is set to **TRUE** if the user has selected the **INVOICE AMOUNTS DO NOT ADD UP** invalid reason, or they selected an invalid reason that is based on the **SETINVOICETOVALID** rule in Verifier. |
| PONOTRELEASED | Boolean | This flag is set to **TRUE** if the **PO** has not been released and line item extraction is not required for invoices under that circumstance. |
| NOVENDOR | Boolean | This flag is set to **TRUE** if the user has selected either the **VENDOR NOT FOUND** or **MISSING/INVALID VENDOR & PO** invalid reasons, or they selected an invalid reason that is based on the **SETINVOICETOVALID** rule in Verifier. |
| NOPO | Boolean | This flag is set to **TRUE** if the user has selected either the **MISSING/INVALID PO** or the **MISSING/INVALID VENDOR & PO** invalid reason, or they selected an invalid reason that is based on the **SETINVOICETOVALID** rule in Verifier. |

| | | |
|---|---|---|
| CREDIT | Boolean | This flag is set to **TRUE** if the document type is **CREDIT** and line items are not required for credit memos. |
| SERVICE | Boolean | This flag is set to **TRUE** if the PO type is **SERVICE** and line items are not required for invoices that relate to service purchase orders. |
| FI | Boolean | This flag is set to **TRUE** if the invoice type is **NO-PO** and line items are not required for NO-PO invoices. |
| THIRDPARTYFREIGHT | Boolean | This flag is set to **TRUE** if the vendor is third party freight. |
| NOLINEITEMS | Boolean | This flag is set to **TRUE** if any of the following options are true. |
| | | Line item extraction is switched off for the project. |
| | | The line items table field is not activated in **Field Settings** for the profile ID. |
| | | An invalid reason of **MISSING/INVALID VENDOR & PO** is set. |
| | | An invalid reason of **MISSING/INVALID PO** is set and line items are not required under such circumstances. |
| | | An invalid reason of **VENDOR NOT FOUND** is set and line items are not required under such circumstances. |
| | | An invalid reason based on the **SETINVOICETOVALID** rule is set. |
| | | The vendor has been identified as a utility vendor and line items are not required for utility vendors. |

## POHeader

The POHeader data type contains data obtained from the purchase order look-up. The data type consists of the elements described in the following table.

| Element Name | Type | Description |
|---|---|---|
| PONUMBER | String | This is the purchase order number. |
| DOCTYPE | String | This is the purchase order document type. |
| COMPANYCODE | String | This is the purchase order company code. |
| VENDORID | String | This is the purchase order-from vendor. |
| SITEID | String | This is the site ID for the purchase order vendor. |
| CURR | String | This is the purchase order currency. |

| | | |
|---|---|---|
| RELEASEFLAG | String | This is the purchase order release flag. |
| DIFFINV | String | This is the expected 'invoice received from' vendor set on the purchase order. |
| STATUS | String | This is the purchase order status. |
| EXRATE | String | This is the exchange rate between the purchase order currency and the local currency of the purchase order company code. |
| FREIGHTVENDORS | String | This is a tilde separated list of vendors that appear on the purchase order condition records. |
| BUSINESSUNIT | String | This is the Peoplesoft business unit. |
| PROFILEID | String | This is the processing profile of the current document. |
| POPARTITION | String | This is the purchase order partition ID. |
| MULTILINELIMITS | Boolean | This flag indicates whether this is a multiline limits purchase order. |
| PAYMENTTERMS | String | These are the purchase order payment terms. |

## UserData

The UserData data type contains information relating to a solution user. It consists of the components listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| UserID | String | This is the user logon ID. |
| LanguageID | String | This is the user preferred logon language returned as a two character ISO-code. |
| RequiresReview | Boolean | This flag indicates whether the documents verified by the user require review. |
| ClientGroup | String | This is the client group to which the user has been assigned. |
| RelevantForALM | Boolean | This flag indicates whether documents verified by this user are relevant for adding to the ALM learnset. |

## PlantData

The PlantData data type contains information relating to a plant. It consists of the components listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| Plant | String | This is the plant ID. |
| Country | String | This is the two character ISO-Code for the country in which the plant is located. |
| State | String | This is the state in which the plant is located. |
| TaxJurCode | String | This is the tax jurisdiction code for the area where the plant is located. |
| ProfileID | String | This is the processing profile ID of the current document. |

## CompanyData

The CompanyData data type holds data associated with a given company code. It consists of the components listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| CompanyCode | String | This is the company ID. |
| Country | String | This is the two character ISO-code for the country in which the company is registered. |
| Curr | String | This is the currency used by the company code for accounting purposes. |
| ProfileID | String | This is the processing profile ID of the current document. |
| VATRegNumbers | String | This is a comma separated list of VAT registration numbers used by the company. |

## WWAccountingData

The WWAccountingData data type is used to hold accounting strings relevant to the invoice and purchase order. The data type consists of the following components.

| Element Name | Type | Description |
|---|---|---|
| INVOICE_DOC_ITEM | Integer | This is the general ledger coding string line item number from 1-n. |
| PO_NUMBER | String | This is the purchase order number. |
| PO_ITEM | String | This is the purchase order line item number. |

| | | |
|---|---|---|
| GL_ACCOUNT | String | This is the general ledger account number. |
| COMP_CODE | String | This is the coding string company code. |
| DB_CR_IND | String | This is the debit/credit indicator. |
| COSTCENTER | String | This is the cost center. |
| SERIAL_NO | String | This is the serial number. |
| PROFIT_CTR | String | This is the profit center. |
| WBS_ELEM | String | This is the work breakdown structure element. |
| PROFIT_SEGM_NO | String | This is the profit segment number. |
| CO_AREA | String | This is the controlling area. |
| CMMT_ITEM | String | This is the commitment item. |
| FUNDS_CTR | String | This is the funds center. |
| BUS_AREA | String | This is the business area. |
| COST_OBJECT | String | This is the cost object. |
| FUNC_AREA | String | This is the functional area. |
| FUND | String | This is the fund. |
| REF_DATE | String | This is the reference date. |
| ORDERID | String | This is the internal order number. |
| SUB_NUMBER | String | This is the sub number. |
| NETWORK | String | This is the project network. |
| ACTIVITY | String | This is the project activity. |
| RL_EST_KEY | String | This is the real estate key. |
| ASSET_NO | String | This is the asset number. |
| SD_DOC | String | This is the sales order document number. |
| SDOC_ITEM | String | This is the sales order document item number. |
| TAX_CODE | String | This is the tax code. |

| | | |
|---|---|---|
| TAXJURCODE | String | This is the tax jurisdiction code. |
| ITEM_AMOUNT | Double | This is the coding string amount. |
| QUANTITY | Double | This is the quantity. |
| PO_UNIT | Double | This is the order unit of measure relating to the Quantity element. |
| PO_PR_UOM | Double | This is the order price unit of measure. |
| PERCENT | Double | This is the distribution percentage. |
| SHEET_NO | String | This is the service entry sheet number. |
| CUSTOM1 to CUSTOM5 | String | These are custom account assignment fields that may be used by a developer. |

## WWClientData

The WWClientData data type holds element details for the current client. The components of the data type are listed in the following table:

| Element Name | Type | Description |
|---|---|---|
| CLIENTID | String | This is the client ID. |
| PROFILEID | String | This is the profile ID assigned to client. |
| EXPORTPROFILEID | String | This is the export profile ID assigned to client. |
| FORCEVERIFY | Boolean | If set to 'TRUE', all documents assigned to this client are sent to Verifier for manual review. |
| CLIENTGROUP | String | This is the group to which the client is assigned. |
| CLIENTNAME | String | This is the client name. |
| INSTRUCTIONS PROFILEID | String | This is the instructions profile ID assigned to client. |
| REQUIRESREVIEW | Boolean | This is the Requires review flag. |
| VENDORPARTITION | String | This is the vendor partition ID assigned to client. |
| EMPLOYEEPARTITION | String | This is the employee partition ID assigned to client. |
| POPARTITION | String | This is the PO partition ID assigned to the client. |
| TAXPARTITION | String | This is the tax partition ID assigned to the client. |

| | | |
|---|---|---|
| PRIORITY | String | This is the batch priority level for the client. |
| PAYMENTTERMSPROFILEID | String | This is the payment terms profile ID assigned to the client. |
| COMPANYCODEPARTITION | String | This is the company code partition ID assigned to the client. |
| MISCCHARGEACCPARTITION | String | This is the miscellaneous charge account partition ID assigned to the client. |
| PLANTPARTITION | String | This is the plant partition ID assigned to the client. |
| UOMPARTITION | String | This is the unit of measure conversion partition ID assigned to the client. |

## WWCountryData

The country data type holds the basic settings for a country. The components of the structure are listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| COUNTRY | String | This is the country ISO-code ID. |
| EUMEMBER | Boolean | This is the flag to indicate membership of the European Common VAT Framework. |
| CURR | String | This is the local currency of the country. |
| NAME | Boolean | This is the name of the country. |
| VATRATES | String | This is a comma-separated list of VAT rates. |
| NONEUTAXGROUP | String | This is the non-EU tax group to which the country is assigned. |

## WWFieldSettings

The WWFieldSettings data type holds details associated with a given field as read from Field Settings for the relevant processing profile. The components of the data type are listed in the following table.

| Element Name | Type | Description |
|---|---|---|
| FIELDNAME | String | This is the field name. |
| PROFILEID | String | This is the profile ID. |
| VERIFIERLABEL | String | This is the field verifier label. |

| ACTIVE | Boolean | This is the field active flag. |
|---|---|---|
| REQUIREDINRTS | Boolean | This denotes whether the field is required in RTS. |
| REQUIREDINVERIFIER | Boolean | This denotes whether field entry is mandatory in Verifier. |
| COUNTRYFILTER | String | This is the comma-separated list of countries that control whether the field is mandatory or not. |
| FIELDTYPE | String | This is the field type. |
| FORCEVERIFY | Boolean | This is the force verify indicator. |
| DEFAULTVALUE | String | Field default value. |
| DEFAULTIFNOTHINGEXTR | String | This is the field default if no value is extracted automatically. |
| SUBRULE | String | This is the field substitution rule. |
| MINLENGTH | Integer | This is the field minimum length. |
| MAXLENGTH | Integer | This is the field maximum length. |
| RIGHTJUSTIFY | Boolean | This is the indicator as to whether the field must be right-justified if a pad character is used. |
| PADCHAR | String | This is the padding character. |
| PADONLYIFNUMERIC | Boolean | This is the flag to indicate whether padding should occur only if the value to be padded consists of digits only. |
| REMOVEALLSPECIALS | Boolean | This is the flag to indicate whether special characters must be removed. |
| REMOVEBLANKS | Boolean | This is the flag to indicate whether blank spaces must be removed. |
| KEEPCERTAINSPECIALS | String | This is the list of special characters that must be retained. |
| REMOVESTARTEND | Boolean | This is the flag to indicate whether special characters must be removed from the start and end of the string. |
| SUBSTRINGSTARTPOS | Integer | This is the substring start position. |

| SUBSTRINGLENGTH | Integer | This is the substring length. |
|---|---|---|
| REMOVELEADINGZEROS | Boolean | This is the flag to indicate whether leading zeroes must be removed from a string. |
| DECIMALPLACES | Integer | This is the number of decimal places for an exported amount. |
| NEGATIVETYPE | Integer | This is the negative type code. |
| OUTPUTFORZERO | String | This is the export value if an amount field is zero. |
| SUBSTITUTEVALUEIFOVER0 | String | This is the export value if an amount is greater than zero. |
| FUTUREDAYS | Long | This is the number of days that an extracted date is permitted to be in the future. |
| NODAYSINPAST | Long | This is the number of days that an extracted date is permitted to be in the past. |
| DATEONLYINCURRENT MONTH | Boolean | This is the flag to indicate whether the date must only be in the current month. |
| FIELDMASK | String | This is the list of valid field masks for text fields. |
| EXTRACTIONPROFILEID | String | This is the extraction profile ID (for custom fields 1-5). |
| ANALYSISPROFILEID | String | This is the field analysis profile ID. |
| EVALUATIONPROFILEID | String | This is the field evaluation profile ID. |
| BASEWEIGHTING | Double | This is the base weighting to be accorded to all candidates generated for the field. |
| REMOVENONUMBERCANDIDATES | Boolean | This flag indicates whether candidates are removed if they do not contain at least one numeric character. |
| OVERWRITEWITHSEARCHSTRING | Boolean | This flag indicates whether the extracted value is overwritten by the string compare or Levenshtein search used to generate the candidate. |

## WWPOLine

The WWPOLine data type is used to hold purchase order line item, goods receipt and service line item data. The components of the data type are in the following table.

| Element Name | Type | Description |
|---|---|---|
| EBELN | String | This is the purchase order number. |
| EBELP | String | This is the purchase order line item number. |
| KNTTP | String | This is the account assignment category. |
| PSTYP | String | This is the line item category. |
| BUKRS | String | This is the purchase order company code. |
| MATNR | String | This is the material number. |
| MATKL | String | This is the material group. |
| MENGE | Double | This is the open goods receipt quantity that has not yet been invoiced. |
| BSMNG | Double | This is the order quantity. |
| NETPR | Double | This is the order unit price. |
| NETWR | Double | This is the order line total. |
| MWSKZ | String | This is the line item tax code. |
| TXJCD | String | This is the line item tax jurisdiction code. |
| WRBTR | Double | This is the goods receipt total that has not yet been invoiced. |
| MEINS | String | This is the order quantity unit of measure. |
| PEINH | String | This is the price unit. |
| BPRME | String | This is the order unit price unit of measure. |
| LFBNR | String | This is the goods receipt document number. |
| LFGJA | String | This is the goods receipt document year. |
| LFPOS | String | This is the goods receipt document item number. |
| WEBRE | String (X or blank) | This indicates whether the line item is set for goods receipt based invoice verification (GR-IV). |
| LEBRE | String (X or blank) | This indicates whether the line item is set for service based invoice verification (SR-IV). |

| | | |
|---|---|---|
| WEPOS | String (X or blank) | This indicates whether the line item is relevant for goods receipt. |
| WEUNB | String (X or blank) | This indicates whether the line item is relevant for non-valuated goods receipt. |
| WERKS | String | This is the plant to which the ordered goods are to be delivered. |
| XBLNR | String | This is the external document number. |
| TEXT | String | This is the line item description. |
| MATCH | String (X or blank) | This indicates whether the line item was selected during line pairing. |
| REWWR | Double | This is the total value invoiced to date. |
| REMNG | Double | This is the total quantity invoiced to date. |
| WEWWR | Double | This is the total goods receipt value. |
| WEMNG | Double | This is the total goods receipt quantity. |
| EVERS | String | This is the purchase order line shipping conditions code. |
| CONN1 | Double | This is the numerator for the formula that is used to convert the quantity in the order unit price unit of measure to the quantity in the order quantity unit of measure. |
| COND1 | Double | This is the denominator for the formula that is used to convert the quantity in the order unit price unit of measure to the quantity in the order quantity unit of measure. |
| CONN2 | Double | This is the numerator for the formula that is used to convert the quantity in the order quantity unit of measure to the quantity in the material base unit of measure. |
| COND2 | Double | This is the denominator for the ratio that is used to convert the quantity in the order quantity unit of measure to the quantity in the material base unit of measure. |
| MULTI | String | This flag indicates whether the purchase order line item has a multiple account assignment. |
| EXTROW | String | This is the service entry sheet line item number. |
| CHARGECODE | String | This is the line item charge code. |
| CHARGECODEID | String | This is the line item charge code ID. |

| | | |
|---|---|---|
| BUSINESSUNIT | String | This is the Peoplesoft business unit. |
| POTYPE | String | This is the JD Edwards purchase order type. |
| ORDERVENDOR | String | This is the purchase order vendor ID. |
| POKEY | WWPOKey | This is the purchase order key. |
| ERS | String (X or blank) | This indicates whether the line item is relevant for evaluated receipt settlement. |
| SERIAL | String | This is the serial ID for a service entry sheet line item. |
| PROFILEID | String | This is the invoice document processing profile ID. |
| POPARTITION | String | This is the purchase order partition ID. |
| DELETEIND | Boolean | This flag indicates whether the line item has been marked for deletion. |
| HISTORYSTARTPOS | Integer | Internal usage only. |
| VEND_MAT | String | This is the material number used by the vendor. |
| BEDNR | String | This is the line item tracking number. |
| FINALINV | String | This is the final invoice indicator. |
| SPENDCATEGORY | String | This is the Workday spend category. |
| TAXAPPLICABILITY | String | This is the Workday tax applicability reference. |

## WWPlantData

The WWPlantData data type is used to hold the details of a given plant. This data type consists of the components listed in the following table

| Element Name | Type | Description |
|---|---|---|
| Country | String | This is the two character ISO-code that represents the country in which the plant is located. |
| State | String | This is the state in which the plant is located. |
| TaxJurCode | String | This is the tax jurisdiction code for the area where the plant is located. |
| ProfileID | String | This is the processing profile ID for the current document. |

## CandidateCtx

The CandidateCtx data type is used to hold the details of words and text that surround a candidate.
This data type consists of the components listed in the following table.

| Element Name | Type | Description |
| --- | --- | --- |
| WBC1 | WordCtx | The word to the left of the candidate. |
| WBC2 | WordCtx | The word two words to the left of the candidate. |
| WBC3 | WordCtx | The word three words to the left of the candidate. |
| WBC4 | WordCtx | The word four words to the left of the candidate. |
| WAC1 | WordCtx | The first word above the candidate. |
| WAC2 | WordCtx | The second word above the candidate. |
| WAC3 | WordCtx | The third word above the candidate. |
| WFC1 | WordCtx | The word following the candidate. |
| CandidateLineText | String | The full text of the line in which the candidate appears. |
| CandidateLineTextAbove | String | The full text of the line above the candidate. |
| CandidateLineTextBelow | String | The full text of the line below the candidate. |

## WordCtx

The WordCtx data type holds the properties of a given word. This data type consists of the components listed in the following table.

| Element name | Type | Description |
| --- | --- | --- |
| ID | Integer | The word ID. |
| Left | Integer | The left position of the word in pixels. |
| Top | Integer | The top position of the word in pixels. |
| Height | Integer | The height of the word in pixels. |
| Width | Integer | The width of the word in pixels. |
| PageNr | Integer | The word page number. |
| Text | String | The word text. |

| | | |
|---|---|---|
| WordCount | Integer | The number of OCR words in the word. |
| LineIndex | Integer | The ID of the textline that contains the word. |
| Confidence | Double | The word confidence. |
| Valid | Boolean | The word validity flag. |

### PaymentTerms

The PaymentTerms data type holds the properties of a given payment term.

This data type consists of the components listed in the following table.

| Element name | Type | Description |
|---|---|---|
| PaymentTermsProfileID | Integer | The payment terms profile ID. |
| Code | String | The payment terms code. |
| Description | String | The payment terms description. |
| Priority | Integer | The payment terms priority. |
| Days1 | Integer | The first discount period in days. |
| Percentage1 | Decimal | The first discount percentage. |
| Days2 | Integer | The second discount period in days. |
| Percentage2 | Decimal | The second discount percentage. |
| Days3 | Integer | The third discount period in days. |

## Triggering sequence of user exits in Verifier

User exits are triggered when a user is working a problem document in Verifier.

### General actions

The following are a list of general user exit calls that apply to all fields in Verifier.

| Verifier action | User exits |
|---|---|
| User presses Enter on any field. | UserExitSetVendorCountry |
| User presses Enter on any field set to type of TEXT in Field Settings for the relevant processing profile. | UserExitTextFieldFormatting |

### Specific actions

The following table lists the user exits that are fired when a user performs a certain task in the order in which they are fired.

| Verifier action | User exits |
|---|---|
| User presses Enter on the document type field. | UserExitDocumentTypeValidate |
| User presses Enter on the invoice type field. | The following user exit is always called.<br><br>&bull; UserExitPOValidateStart<br><br>The following user exits may be called.<br><br>&bull; UserExitReadPODetails (if a custom PO look-up is used)<br><br>&bull; UserExitCheckBankAccount (only if the PO is validated successfully against a database)<br><br>&bull; UserExitPOValidate (only if the PO is validated successfully against a database)<br><br>&bull; UserExitAddressArray (if a vendor has not been loaded into the buffer) |
| User presses Enter on the invalid reason field. | The following user exit is always called.<br><br>&bull; UserExitPOValidateStart<br><br>The following user exits may be called.<br><br>&bull; UserExitReadPODetails (if a custom PO look-up is being used).<br><br>&bull; UserExitCheckBankAccount (only if the PO is validated successfully against a database).<br><br>&bull; UserExitPOValidate (only if the PO is validated successfully against a database).<br><br>&bull; UserExitAddressArray (if a vendor has not been loaded into the buffer). |
| User presses Enter on the invoice number field. | UserExitInvoiceNumberValidate |
| User presses Enter on the invoice date field. | UserExitInvoiceDateValidate |
| User presses Enter on the invoice due date field. | UserExitDueDateValidate |
| User presses Enter on the delivery date field. | UserExitDeliveryDateValidate |

| | |
|---|---|
| User presses Enter on the vendor ID field. | The following user exit is always called.<br><br>  • UserExitPOValidateStart<br><br>The following user exits may be called.<br><br>  • UserExitReadPODetails (if a custom PO look-up is being used).<br><br>  • UserExitCheckBankAccount (if the invoice type is 'NO-PO', or only if the PO is validated successfully against a database if the invoice type is 'PO').<br><br>  • UserExitPOValidate (only if the PO is validated successfully against a database).<br><br>  • UserExitAddressArray (if a vendor has not been loaded into the buffer). |
| User opens the vendor search box, or performs a vendor search. | The following user exits are always called:<br><br>  • UserExitFilterVendorSearch<br><br>The following user exits may be called.<br><br>  • UserExitAddressArray (if a vendor has not been loaded into the buffer). |
| User clicks on a button on the Verifier form. | UserExitDocumentOnAction |
| User verifies the last invalid field on the Verifier form. | The following user exits are always called:<br><br>  • UserExitDocumentValidate<br><br>The following user exits may be called.<br><br>  • UserExitSetReportingLoginName (if reporting is activated). |
| User presses Enter on the company code field. | UserExitCompanyCodeValidate |
| Cursor/field focus is changed or the system moves to a new document. | UserExitFocusChanged |
| User presses Enter on the purchase order number or purchase order number extension fields. | The following user exit is always called.<br><br>  • UserExitPOValidateStart<br><br>The following user exits may be called.<br><br>  • UserExitReadPODetails (if a custom PO look-up is being used).<br><br>  • UserExitCheckBankAccount (only if the PO is validated successfully against a database).<br><br>  • UserExitPOValidate (only if the PO is |

| | |
|---|---|
| | validated successfully against a database).<br><br>UserExitAddressArray (if a vendor has not been loaded into the buffer). |
| User presses enter on the employee ID field. | UserExitEmployeeIDValidate |
| User presses enter on the account number field. | UserExitAccountNumberValidate |
| User presses enter on the Mexican UUID number field. | UserExitMexicanUUIDValidate |

## Custom settings

You can create custom settings within Solution Configuration Manager and retrieve the values through script. There are two types of custom strings:
- Single settings

- Indexed settings

Single settings represent a single parameter value.

Indexed settings allow you to configure multiple entries for each parameter value with each entry identified using an index ID. This allows a developer to use custom parameters to simulate a look-up table within the configuration database.

### Single settings

To create a new custom single setting, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Custom Settings > Single Settings** node.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the group name for your custom settings in **Group Name**. The group name must be three alphabetic characters.
6. Enter the technical name of your custom setting in **Parameter Name**. This should not contain special characters or spaces.
7. Choose a type for your custom setting by selecting an option from the **Parameter Type** drop-down. The options are **VL** for a string, **BOOL** for a boolean value and **INT** for an integer.
8. Enter the value for your custom setting in **Value**.
9. Click the **Insert** hyperlink to save the changes.

   Example

   Within the script you can access the value of your custom setting using the following sample script for a VL type parameter called MYSETTING.

```
Dim mySetting as String
mySetting = DicVal("MYSETTING", "CUS")
```

In the above example, the value of the MYSETTING parameter in the CUS group is copied into the local string named 'mySetting'.

If the setting does not exist, or is blank, the system will return an empty string. If the setting is of type Boolean, the system will return either YES or NO as a string.

## Indexed settings

To create a new custom indexed setting, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Custom Settings > Indexed Settings** node.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Enter the group name for your custom settings in **Group Name**. The group name must be three alphabetic characters.
6. Enter the technical name of your custom setting in **Parameter Name**. This should not contain special characters or spaces.
7. Enter a unique index ID for your custom setting in **Index ID**. This must be an integer greater than zero.
8. Choose a type for your custom setting by selecting an option from the **Parameter Type** drop-down.
9. Enter the value for your custom setting in **Value**.
10. Click the **Insert** hyperlink to save the changes.

    Within the user exit script you can access the value of your custom setting using the following sample script for a VL type parameter called MYSETTING with an index ID of 1. In this case, the index ID is added as a prefix to the parameter name.

    ```
    Dim mySetting As String
    mySetting = DicVal("1MYSETTING", "CUS")
    ```

    Alternatively, you can access the parameter using the DicValTable function provided in the solution settings library, as per the example script line below. In this case, the index ID is passed as an integer.

    ```
    Dim mySetting As String
    mySetting = Solution.Settings.DicValTable("MYSETTING", "CUS", 1)
    ```

    If the setting does not exist, or is blank, the system will return an empty string. If the setting is of type boolean, the system will return either YES or NO as a string. You can also loop around all available indexes in a settings group using the GetHighestIndexIDForGroup method of the solution settings library. The example code below shows how you can loop around all entries in the CUS group and retrieve the parameters you are interested in.

    ```
    Dim mySetting As String
    ```

```
Dim intHighestIndex As Integer Dim intRow As Integer
intHighestIndex = Solution.Settings.GetHighestIndexIDForGroup("CUS")
For intRow = 1 To intHighestIndex
mySetting = Solution.Settings.DicValTable("MYSETTING", "CUS",
intRow) Next intRow
```

## Custom error messages

You can create custom error messages in Solution Configuration Manager, rather than hard coding them within the script. The error message number range assigned for customer usage is 900-999, which must be adhered to in order to prevent any conflicts in the event of an upgrade.

To create a new error message, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **Error Message Settings** node.
4. Scroll to the last row in the table where you have the option to create a new entry.
5. Populate **Error Number** with the number you wish to assign to your error message. This must be a number between 900 and 999.
6. Enter the two character language ISO-code for your error message in **Language ID**.
7. Enter the text for your error message in **Message**.
8. Save the changes.

**Example**

Within the script you can access the text of your error message using the error number you assigned. The following shows a sample script.

```
Dim myError As String
myError = DicVal("900", "ERR")
```

When retrieving the error message, the system looks for the record with a language ID of EN. The only exception to this is if the command is executed in Verifier, in which case the Verifier user language preference is used.

## Reporting and custom base classes

If you create a custom base class within the project, you must compete the following steps for the class to be included in the reporting results.

- On the custom base class, add script to the Document_PreExtract and Document_Validate events.
- On the base class, create the custom tmpCLSRES field.

## Add a custom script to the Document PreExtract and Document Validate events

To insert a custom script to the Document_PreExtract and Document_Validate events, complete the following steps.

1. Open **Oracle WebCenter Forms Recognition Designer**.
2. In the Class view in definition mode, highlight the custom base class, then right click and

select Show script.

3. Copy the following script into the script window.

**Example**

```
Private Sub Document_PreExtract(pWorkdoc As
SCBCdrPROJLib.ISCBCdrWorkdoc)

    If InitializeDLLAccess("TestCustomBase
       Document_PreExtract") Then On Error GoTo Err_PreExtract
       'Trigger event handling routine
       Solution.Document_PreExtract(pWorkdoc, "CustomBase")
    End If Exit Sub

Err_PreExtract:
    Project.LogScriptMessageEx
(CDRTypeError,CDRSeverityLogFileOnly,"Error PreExtract
(TestCustomBase): " & Err.Description)
    Err.Clear End Sub

Private Sub Document_Validate(pWorkdoc As
SCBCdrPROJLib.ISCBCdrWorkdoc, pValid As Boolean)

    If InitializeDLLAccess("Invoices
       Document_Validate") Then On Error GoTo
       Err_DocumentValidate
       'Trigger event handling routine
       Solution.Document_Validate(pWorkdoc, pValid, "CustomBase")
    End If Exit Sub

Err_DocumentValidate:
    Project.LogScriptMessageEx
(CDRTypeError,CDRSeverityLogFileOnly,"Error Document Validate
(TestCustomBase): " & Err.Description)
 Err.Clear End Sub
```

4. Save the project and close **Oracle WebCenter Forms Recognition Designer**.

## Add the tmpCLSRES field

The tmpCLSRES field is used to store the full classification results and weightings before they are written to the reporting database. It is an internal field and does not require any action beyond its creation. If the field is not created, the system will only log the final class determined for the document, and not the full classification results and weightings.

To create the tmpCLSRES field, complete the following steps in Designer.

1. In the custom base class, go to the **Fields** view mode.
2. Right-click in the gray space and select Insert **Field Definition**.
3. Enter tmpCLSRES as the fieldname and press **Enter**. The fieldname is case sensitive.
4. Right-click on the new field and select **Show Properties**.
5. In the pane on the right side of the screen, select the **Validation** tab, and then select the

**Always Valid** check box.

6.  Save the project.

## Adding additional custom fields

AP Project contains five custom fields that are available for use as required.

If the five fields are not sufficient for your business needs, it is possible to add additional custom fields. The following sections explain the steps required.

## Create an additional field in the Oracle WebCenter Forms Recognition Designer module

To create a new field in the Oracle WebCenter Forms Recognition Designer module, complete the following steps.

1.  Using the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2.  Click the **Spanner** icon to display the project class hierarchy.
3.  Locate and double-click on the **Invoices** class within the project class hierarchy. This then displays the list of fields belonging to that class.
4.  Scroll to the bottom of the field list, and then right-click and select Insert field definition.
5.  Enter a name for the new field and click **OK**.
6.  Save the project.

## Add the standard validation script to the Invoices class

To add a validation script into the Invoices class, complete the following steps.

1.  Using the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2.  Click the **Spanner** icon.
3.  Locate the **Invoices** class in the class hierarchy tree. Right-click on the class name and select **Show Script**.
4.  Scroll to the bottom of the script and paste the following code, substituting `Custom6` for the name of the field you have created.

    **Example**

    ```
     Private Sub Custom6_Validate(pField As
    SCBCdrPROJLib.ISCBCdrField, pWorkdoc As
    SCBCdrPROJLib.ISCBCdrWorkdoc, pValid As Boolean)

       If InitializeDLLAccess("Invoices Custom6_Validate")
          Then On Error GoTo Err_Custom6_Validate
          'Trigger event handling routine
          Field_ICALValidate(pField, pWorkdoc, pValid)
       End If Exit Sub

    Err_Custom6_Validate:
       Project.LogScriptMessageEx
    (CDRTypeError,CDRSeverityLogFileOnly,"Error Custom6_Validate
    (Invoices): " & Err.Description)
    ```

```
Err.Clear End Sub
```

5.  Save the changes.

## Add an entry into the field configuration table

After creating your custom field, you must add a corresponding entry in the field configuration table for all relevant processing profiles.

To do this, complete the following steps in Solution Configuration Manager.

1.  Select the project you want to use.
2.  Select **Processing Settings** from the **Settings** drop-down.
3.  Select the processing profile you want to use.
4.  Within the **Processing Settings** hierarchy tree, navigate to the **Field Settings** node. This then displays the field configuration table.
5.  Scroll to the last row in the table where you have the option to create a new entry.
6.  Configure your field as per the instructions in the Field Configuration chapter. You must ensure that the field is active and a field label text has been defined for it to appear on the Dynamic Verifier form. You must also enter a value in the **Tab Order** column to tell the system where you want the field to appear on the form.
7.  Click the **Insert** hyperlink to save your changes.

## Insert the custom field onto the Dynamic Verifier Form

After creating the custom field and creating a corresponding entry in the field configuration table, the field will now be visible and available to use on the Dynamic Verifier form in Thick Client Verifier only.

It is recommended to perform the following steps in order to save the new field permanently within the project file. This will also make the field available in Thin Client Verifier.

1.  Ensure that the Dynamic Verifier form is activated in **Global Settings** > **General Settings**.
2.  Open the project in **Designer**.
3.  Open the project settings. You can do this via the **Options** > **Settings** menu.
4.  On the **Compatibility** tab, select the **Allow firing of VerifierFormLoad event when in Verifier Test/Train Modes** check box. This ensures that the VerifierFormLoad event is triggered in **Verifier Test/Train Mode**.
5.  Save the project file.
6.  Go to Definition mode, fields view.
7.  Analyze a document belonging to a client for which the new field is relevant.
8.  After classification and extraction is complete, go to Verifier Test Mode. The new field is now visible on the Dynamic Verifier form.
9.  Save the project file.

# Configure Automatic Extraction for Custom Fields

AP Project includes five custom fields (Custom 1 to Custom 5) which can be used for the extraction of data in addition to what is offered by the standard fields within the project.

It is possible to configure a level of automatic extraction for these fields per processing profile using

Solution Configuration Manager.

The following limitations and prerequisites apply to automatic field extraction.

- Automatic field extraction is only available for fields Custom 1 to Custom 5.

- Automatic field extraction can only be carried out on documents that are initially classified either to the 'Generic' class or to one of its child classes.

- Analysis templates 'Custom 1' to 'Custom 5' must exist within the project - these are delivered as standard and must not be deleted, otherwise an error is raised during document processing.

- Analysis templates 'Custom 1' to 'Custom 5' must be assigned to their respective custom fields for automatic extraction to take place. The project file is delivered with this in place.

- The steps involved in configuring automatic field extraction are as follows.

## Set up a field analysis profile

A field analysis profile is where format strings for field extraction candidates are defined. Each analysis profile has a unique ID, which is called the Analysis Profile ID. Field analysis profiles are global in nature and can be shared across processing profiles.

To create a new analysis profile, complete the following steps in Solution Configuration Manager.

1.  Select the project to be used.
2.  Select **Global Settings**.
3.  Within the **Global Settings** hierarchy tree, navigate to the **Analysis Profile** node. This displays the analysis profile configuration table.

    Each row in the table represents one format string, with the unique key formed by the **Analysis Profile ID** and the **Index ID,** so that many format strings can be entered for one analysis profile. The table is pre-populated with a sample entry for analysis profile zero. This is meant for illustrative purposes and must not be used.

4.  Scroll to the last row in the table where you can insert a new entry.
5.  Populate the **Analysis Profile ID** and **Index ID** columns with the next available numbers in the sequence. You must not have any gaps in your index IDs.
6.  Enter the format string you would like to use in the **Format** column.
7.  Specify the type of format string you have entered by selecting the appropriate option from the **Compare Type** drop-down. The table below describes the possible options.

| Compare type | Meaning |
| --- | --- |
| SIMPLE | Simple expression |
| REGULAR | Regular expression |
| TRIGRAM | Trigram compare method |
| LEVEN | Levenshtein compare method |

| STRINGCOMPARE | String compare method |
|---|---|

8. Enter any characters you want the system to ignore when creating candidates for your format string in the **Ignore Candidates** column.

9. Click the **Insert** hyperlink to save the changes.

10. You can add as many format strings as you wish for a single analysis profile as long as each row shares the same analysis profile ID.

## Set up a field evaluation profile

A field evaluation profile is where key words and key phrases used to evaluate candidates generated by a given field analysis profile are defined. Each evaluation profile has a unique ID, which is called the Evaluation Profile ID. Evaluation profiles are global in nature and can be shared across processing profiles.

To create a new evaluation profile, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.

2. Select **Global Settings**.

3. Within the Global Settings hierarchy tree, navigate to the **Evaluation Profile** node. This displays the evaluation profile configuration table.

   Each row in the table represents one key word or phrase, with the unique key formed by the **Evaluation Profile ID** and the **Index ID,** so that many keywords can be defined for one evaluation profile. The table is pre-populated with a sample entry for evaluation profile zero. This is meant for illustrative purposes and must not be used.

4. Scroll to the last row in the table where you can insert a new entry.

5. Populate the **Evaluation Profile ID** and **Index ID** columns with the next available numbers in the sequence. New entries must use an ID of one or greater and you must not have any gaps in your index IDs.

6. Enter the keyword you wish to use to evaluate the field in the **Context** column. The system uses the value you entered to evaluate candidates by looking for matching context above or to the left of each candidate.

7. If the keyword entered is of high relevance to the identification of the correct candidate, you can select the **Strong** check box, so that the system accords a higher weighting to candidates nearer to this keyword.

8. Click the **Insert** hyperlink to save the changes.

9. You can add as many entries as you wish for an evaluation profile as long as each row shares the same evaluation profile ID.

## Set up a field extraction profile

A field extraction profile brings together an analysis profile and optionally an evaluation profile to provide the system with a set of instructions with regard to how to extract a custom field. Extraction profiles are global and can be shared across processing profiles.

To create a new extraction profile, complete the following steps in Solution Configuration Manager.

1. Select the project to be used.

2. Select **Global Settings**.

3. Within the **Global Settings** hierarchy tree, navigate to the **Extraction Profile** node. This displays the extraction profile configuration table.

   Each row in the table represents a unique extraction profile. The unique key for each row is the extraction profile ID. The table is pre-populated with a sample entry for extraction profile zero. This is meant for illustrative purposes and must not be used. New extraction profiles need to be created using an extraction profile ID of one and upwards.

4. Scroll to the last row in the table where you can insert a new entry.

5. Populate the **Extraction Profile ID** column with the ID you would like to use. This must be unique and greater than one.

6. Enter a meaningful name for your extraction profile in the **Description** column. This could describe the type of field you are trying to extract.

7. Choose the analysis profile you want to use for your extraction profile by selecting the relevant analysis profile ID using the Analysis Profile ID drop-down.

8. Choose the evaluation profile you want to use for your extraction profile by selecting the relevant evaluation profile ID using the **Evaluation Profile ID** drop-down. If you do not wish to assign an evaluation profile, for example, because you are able to extract the field using simply a base weighting, then you can leave the column populated with zero.

9. You can enter a base weighting which is then assigned to all candidates generated using your analysis profile in the **Base Weighting** column. This approach can be useful if the field value extracted is uniquely distinct on the document based upon its format, and any candidate that is generated can only be the correct value for the field. The base weighting is entered as a percentage. So a value of '50' means that the weighting of all generated candidates is increased by 0.5.

10. You can select the **Overwrite With Search String** check box if you are using a Levenshtein or string compare method to generate your candidates within the analysis profile and you want to substitute the candidate result text with the original search string. This mitigates any OCR problems if the expected field result must conform to a predefined set of values.

11. Select the **Remove No Number Candidates** check box if you want the system to remove any candidates that do not contain at least one digit.

12. Enter the candidate compare distance in the **Evaluation Distance** column. This value represents the degree of 'fuzziness' that the system applies when generating candidates based upon the format strings entered against the analysis profile. A value of 0 denotes an exact match to the format string; a value of 1 means that no match is required. The recommended value here is 0.3, which denotes that up to a 30% variance between format string and candidate is permitted. If a value less than 0 or greater than 1 is entered, the distance will be set to 0.3.

13. Enter the maximum number of OCR words for a candidate in the **Max Word Count** column.

14. Enter the maximum gap (in millimeters) that is permitted to appear between OCR words within a single candidate in the **Max Word Gap** column.

15. Enter the maximum permitted candidate length (in millimeters) in the **Max Candidate Len** column.

16. Select the **Case Sensitive** check box if you want to search for candidates in a case-sensitive fashion based upon the format strings configured. It is recommended that this check box is cleared.

17. Select the **Keep Spaces** check box if you want to retain a space between OCR words within the text of a generated candidate. It is recommended that this check box is

cleared.

18. Click the **Insert** hyperlink to save your changes.

## Restricting candidate generation by page region

If you want your extraction profile to restrict the generation of candidate by page region, complete the following steps within Solution Configuration Manager.

1. Select **Global Settings**.
2. Within the **Global Settings** hierarchy tree, navigate to the **Extraction Profile** node. This displays the extraction profile configuration table.
3. Locate the relevant extraction profile.
4. Select the **Use Regions** check box.
5. Select the **Use First Page** check box if you want the system to check for candidates on the first page of the document.
6. You can choose to restrict candidate generation to a defined region on the first page by populating the **First Top**, **First Bottom, First Left** and **First Right** columns. These values are expressed as percentages and are used to specify the boundaries of a rectangular area where candidates are generated.

    For example, a value of '0' in 'First Top' means that the topmost boundary of the rectangle is the very top of the first page of the document; a value of '20' means that the topmost boundary is 20% down the length of the page. A value of '100' in 'First Bottom' means that the lowermost boundary of the rectangle is right at the bottom of the first page (100% of the way down), a value of '80' means that the rectangular area stops 80% of the way down the page.

    Similarly, a value of '0' in 'First Left' means that the leftmost boundary of the rectangular area is the far left of the first page of the document; a value of '20' means that the search area starts 20% across the width of the page. A value of '100' in 'First Right' means that the rightmost boundary of the rectangular search area is at the far right of the page (100% of the way across), a value of '80' means that the rectangular area stops 80% of the way across the page.

    If a value entered into these columns is less than 0, then the system will consider the value to be 0; conversely, if a value entered is greater than 100, the system will consider the value to be 100.

7. Select the **Use Subsequent Page** check box if you want the system to check for candidate on all pages that lie between the first and the last page of the document. You can also configure a search region for the subsequent pages using the **Subsequent Top**, **Subsequent Bottom**, **Subsequent Left** and **Subsequent Right** columns.
8. Select the **Use Last Page** check box if you want the system to check for candidates on the last page of the document. You can also configure a search region for the last page using the **Last Top, Last Bottom**, **Last Left** and **Last Right** columns.
9. Save the changes.

## Assign a field extraction profile to a custom field

Once your field extraction profile has been configured, you can assign it to one or more custom fields within the field configuration table.

To assign an evaluation profile to a custom field, complete the following steps within Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Processing Settings** from the **Settings** drop-down.
3. Select the processing profile you want to use.
4. Within the **Processing Settings** hierarchy tree, navigate to the **Field Settings** node. This displays the field configuration table.
5. Locate the row for the custom field to which you want to assign an extraction profile. It is only possible to assign an extraction profile to custom fields 1 to 5.
6. Select the extraction profile ID you want to use from the drop-down against the **Extraction Profile ID** column.
7. Save the changes.

# Appendix B: Solution Configuration Manager Settings

The configuration settings control the way in which the AP Project project file behaves.

The project file can be configured using the **<project>.ini** file that resides in the same directory as the <**project>.sdp** file, and also the AP Project database via Solution Configuration Manager.

## INI File settings

The **<project>.ini** file is used to manage the connection to the AP Project

configuration database. There are two settings.

| Parameter | Type | Description |
|-----------|------|-------------|
| MasterConnectionString | Freetext | This represents the connection string to the AP Project configuration database. |
| MasterEncryptedPassword | Freetext | Optional. This is the encrypted password to connect to the AP Project configuration database. For more information, refer to the AP Project Password Encryption section. |

The INI file must be configured with the correct database details, else, no other project settings take effect and the solution will not function.

## Solution Configuration Manager

Solution Configuration Manager is a web-based application for the administrators of Oracle WebCenter Forms Recognition solutions. The application serves as a user interface between an Oracle WebCenter Forms Recognition administrator and an Oracle WebCenter Forms Recognition solutions project database. This application allows you to configure and manage the database for AP Project packaged solutions.

Solution Configuration Manager has the capability to configure and manage database settings and manage the database connection. When your configuration settings are complete, you can export them as a migration packet.

The settings available in the Solution Configuration Manager are separated into global settings, client settings and profile-specific settings. Profiles are in turn assigned to clients, so having profile-specific settings means that you can configure different behavior for different clients.

For example, if client A requires ten fields, but client B only requires seven of those fields, extracting and validating all ten fields for both clients is unnecessary. You can deactivate the unnecessary fields for client B without affecting the processing of documents from client A.

Global settings apply solution-wide and any changes will affect all profiles.

## Data Input Controls

Configuring Solution Configuration Manager requires working with the configuration options across multiple web forms. These forms have the following input controls.

- Text fields for inputting strings or numbers.

- Drop-down lists for selecting a pre-defined value.

- Check boxes to activate or deactivate a feature. Depending on the selection, additional options may become available.

- Option buttons for selecting from a pre-defined list of values. Depending on the selection, additional options may become available.

- Tables where you can define multiple instances of a set of values.

## Profile Types

A profile enables you to configure different settings and then assign those settings to multiple clients with the same requirements. This minimizes configuration efforts.

There are three types of profiles.

### Processing profile

A processing profile controls which fields are to be extracted, and also how they are to be formatted and validated. It can be assigned to one or more clients.

### Export profile

An export profile controls how a document and its data are to be exported. For example, using an XML or CSV file, or writing the data to a downstream database. An export profile is then assigned to one or more clients.

### Instructions profile

An instructions profile controls the instructions the users see on the Verification screen relating to the documents they are processing. It can be assigned to one or more clients.

## Processing Profile Settings

A processing profile is a collection of different configuration settings, all relating to extraction, formatting and validation. Multiple processing profiles can exist within a single installation.

## ALM Settings

These settings relate to configuration regarding the use of the ALE Learnset Manager (ALM) in AP Project.

**ALM General Settings**

These settings allow you to configure whether ALM should be used, the ALM connection and project details and how the ALM learnset should be updated at time of document export.

| Parameter | Description |
|---|---|
| Activate ALM | If selected, the system connects to ALM for the purpose of performing field extraction. |
| Base URL | This is the URL used to connect to ALM. |
| User ID | This is the user ID used to connect to ALM. |
| Encrypted Password | This is the encrypted password used to connect to ALM. |
| Invoices Project Name | This is the name of the ALM project used for invoices. |
| Update ALM At Export | If selected, the system updates the learnset in ALM with the current document if it meets the criteria to do so. |
| Learn ALM At Export | If selected, the system triggers the learning process in ALM following the learnset update. |
| Min Corrected Field Count | This is an integer value that represents the minimum number of fields a Verifier user must have corrected for the document to be relevant for adding to the ALM learnset. |
| Max ALM Classes | This is an integer value where you can specify the maximum number of classes that may be created automatically for an ALM project. When updating the ALM learnset, the system will not create a new class in ALM if the number of classes that already exist is greater than or equal to the value specified here. Hence, the document is not added to the learnset.<br>A value of 0 denotes no limit to the number of ALM classes that the system is permitted to create. |

| Max Class Document Count | This is an integer value greater than zero where you can specify the maximum number of documents that the system is allowed to add to an ALM class. When updating the ALM learnset, the system will not add a document if the number of documents that already exist in the ALM class learnset is greater than or equal to the value specified here. |
|---|---|
| ActivateFrequencyCheck | If selected, the system performs the ALM vendor invoice frequency check for documents classified as invoices.<br><br>You must have the invoice number history check activated in **Processing Settings > Invoice Number Settings** and use table **BW_INVOICE_ NUMBER_FORMATS** for storing the invoice number history records to be able to use this feature. |
| TargetRecords | Minimum number of records that must exist in the invoice number history table for a given vendor over the time period specified in **Past Days** in order to pass the vendor invoice frequency check.<br><br>The value entered here must not exceed the value entered in **Max Records** in **Processing Settings > Invoice Number Settings**. |
| PastDays | The time period in days for the vendor invoice frequency check.<br><br>Example: a value of 365 means that the system only considers records in the invoice number history table that were created up to 365 days before the current date. |

**ALM Classes**

These settings are used to assign custom base classes to a project in ALM.

| Parameter | Description |
|---|---|
| Class Name | This is the technical name of the custom base class in AP Project. This must be entered in upper case. |
| Project Name | This is the technical name of the ALM project to which the custom base class is assigned. |

| ASE Field Name | This is the technical name of the custom base class Associate Search Engine you want to use to generate the ALM class name. The formula used to generate the ALM class name is the first line of the ASE field that you specify here, then an underscore, then the content of the ID field you specify in **ASE ID Field**. |
|---|---|
| ASE ID Field | This is the technical name of the field on the custom base class that contains the ID that you want the system to use to generate the ALM class name. <br><br> This setting must be populated if a value is entered in **ASE Field Name**. |

**ALM Field Settings**

These settings allow you to select and configure the fields for use with ALM.

| Parameter | Description |
|---|---|
| Class Name | This is the technical name of the class in AP Project. This must be entered in upper case. |
| Field Name | This is the technical name of the field in AP Project. This entry is case sensitive. |
| Relevant For ALM | If selected, the field is relevant for ALM field extraction. |
| Increase Percentage | This is the percentage by which an AP Project candidate confidence should be uprated if it matches the highest weighted candidate returned by ALM. <br><br> For example, entering 10 denotes 10%. |
| Iways Use ALM Result | If selected, the system always uses the highest weighted candidate returned by ALM if it meets the confidence threshold configured in **Min ALM Confidence**. |
| Min ALM Confidence | This is the minimum confidence that the highest weighting candidate returned by ALM must have to be selected as the best result for the field. It is used only if **Always Use ALM Result** is selected. <br><br> It must be entered as a value between 0 and 1. |

## Amount Settings

These settings specify the format string and what characters are ignored for a valid amount.

| Parameter | Description |
|---|---|
| Format | This is a simple expression that defines the format of an amount.<br><br>This is set to `"#[2-10]"` by default. This means that a string with between two and ten digits is expected. |
| Ignore Characters | These are special characters that may appear in an amount, but can be ignored by the format string entered.<br><br>It is set to " ,.'-_$£¥*^€" by default.<br><br>For example, a value of 999.99 is accepted as an amount because it is between two and ten digits in length. The decimal point is ignored. |
| Deactivate Cross Validation | If selected, the mathematical checks applied to the extracted invoice amounts in Verifier are deactivated.<br><br>This setting is cleared by default. |
| Export Thousand Separator | The thousand separator character that is used when formatting the amount for data export. This is set to " , " by default. |
| Export Decimal Separator | The decimal separator character that is used when formatting the amount for data export. This is set to " . " by default. |

## Bill-To Configuration

The bill-to settings are separated into two distinct configuration sets, Bill-To Formats and Bill-To Settings.

**Bill-To Formats**

You can use this table to configure multiple possible format strings for recognizing bill-to names on an invoice.

| Parameter | Description |
|---|---|
| Index | The index for the bill-to name format. This is unique for each profile ID. |

| Format | This is a Levenshtein expression for the bill-to name. Multiple formats can be entered per profile ID, but only one per index. The format string entered is used to help the system locate the correct bill-to name. |
|---|---|
| | For example, if **Random House** is specified as a possible bill-to name, the system uses this to help anchor the bill-to name on the invoice. However, the extracted field is actually what appears on the document. |
| | Therefore, if the bill-to was actually **Random House UK Limited**, then this would be the extracted value. |
| Ignore Characters | These are special characters that may appear in a bill-to name, but can be ignored by the format string entered. |

**Bill-To Settings**

This contains an additional setting that controls the extraction of a bill-to name.

| Parameter | Description |
|---|---|
| Distance | Enter a value between 0 and 1 representing the fuzzy tolerance that is applied when looking for OCR text matching the formats configured in the Bill-To Formats. |

## Company Code Settings

These settings control how the company code field is validated.

| Parameter | Description |
|---|---|
| Validate From DB | This activates company code validation using a database table. |
| Use External Table | If selected, the system uses an external table for the database company code look-up. If cleared, the standard AP Project table is used which you can maintain in **Global Settings --> Company Code Master Data**. |
| | This option is available only when **Validate From DB** is selected above. |

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| | |
|---|---|
| SQL Connection Group | The SQL connection group that represents the connection to the external company code database. If no connection group is specified, the system will use group 1.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Table Name | The name of the external company code database table.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Company Code | This is the technical name of the company code column within the table specified.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Country | This is the technical name of the column that represents the country where the company code is legally based.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Currency | This is the technical name of the company code currency column in the table specified.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB VAT Reg Nos | This is the technical name of the column in the company code database table that holds the VAT registration numbers for the registered company. If the company is registered for VAT in more than one country, data must be provided as a comma-separated list.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |

## Currency Settings

These settings relate to the invoice currency.

| Parameter | Description |
|---|---|
| Dollar Sign Is USD | If this check box is selected and no currency is identified on the invoice, but a $ sign is found in the OCR text, the currency will beset to `"USD."`<br><br>This option is cleared by default. |

| Default PO Currency | If this check box is selected and no currency is identified on the invoice, the system will default the currency from the purchase order. |
| | This option is selected by default. |
| Default Vendor | If this check box is selected and no currency is identified on the invoice, the system will default the currency from the vendor master record. |
| Currency | If the document is purchase order related, the vendor currency default takes priority over the purchase order currency. |
| | This option is selected by default. |
| Validate From DB | This activates currency validation using a database table. |
| SQL Connection Group | The SQL connection group that represents the connection to the currency database. If no connection group is specified, the system will use group 1. |
| DB Table Name | The technical name of the database table used to validate the currency. This setting is mandatory for database lookups. |
| DB Currency | The technical name of the currency column in the specified table. This setting is mandatory for database lookups. |
| Activate Extended Validation | When selected, extended validation is performed on the extracted currency. |
| | The extended validation compares the system-extracted currency to the following, in the order specified. |
| | <ul><li>Permitted global currencies. See the "Global Currencies" setting below.</li><li>The vendor currency, if present in the vendor extract.</li><li>The currency associated with the vendor country of origin.</li><li>The currency of the company code.</li><li>The currency associated with the company code country.</li></ul> |
| | If the invoice currency does not match any of the above, then the currency will be set to invalid and sent to Verifier for a user to review. Errors caused by missing or incorrect configuration for the company code and country look-ups will also set the currency field to invalid. |
| | User input in Verifier is excluded from the above checks and is assumed to be correct. The extended validation is only carried out for invoices classified to the generic node. |
| Global Currencies | A comma-separated list of permitted global currencies. This is set to "USD,EUR" by default. |

## Date Settings

These settings configure the invoice date formatting and validation.

| Parameter | Description |
|---|---|
| Verifier Format | The date format that is displayed in Verifier. Choose from: <br><br>• `DDMMYYYY` <br>• `MMDDYYYY` <br>• `YYYYMMDD` <br><br>This is set to `"MMDDYYYY"` by default. The `"DDMMYYYY"` and `"MMDDYYYY"` formats use a forward slash "/" as the date separator. The `"YYYYMMDD"` format uses a hyphen "-" as the separator. |
| Export Format | The output date format for export. This setting applies to database output and all flat file exports. Choose from: <br><br>• `DDMMYYYY` <br>• `MMDDYYYY` <br>• `YYYYMMDD` <br><br>This is set to `"MMDDYYYY"` by default. |
| Export Separator | The separator that is used when exporting a date. This is set to " / " by default. |
| MMDD Countries | A comma-separated list of countries that use `MM/DD/YYYY` for the date format. This is set to `"US"` by default. The countries must be entered as 2 character ISO-codes. |
| YYMMDD Countries | The comma-separated list of countries that use the `YY-MM-DD` date format. This is set to `"SE"` for Sweden by default. The countries must be entered as 2 character ISO-codes. |
| Delivery Date Includes Ship Date | If selected, this expands the scope of delivery dates to include ship dates as well. This means that dates with a label indicating a shipping date, such as "Shipped" are also extracted. <br><br>This option is cleared by default. |
| Maximum Past Years | The system will not extract an invoice, delivery or due date if it falls in a year prior to the current year minus the number of years you specify using this parameter. This check is not carried out if the parameter is set to -1. The recommended default value is 10. |

## Document Type Settings

These are the settings that relate to the documenttype field.

| Parameter | Description |
|---|---|
| Distance | A document is searched for terms that indicate if it is a credit memo. The distance indicates the fuzziness of a search. The value specified is between 0 and 1, where 0 requires an exact match, and 1 accepts values that do not match at all.<br><br>This is set to `"0.17"` by default. |
| Stop All Credits | If selected, all documents identified as a credit memo are sent to Verifier for manual review.<br><br>This option is cleared by default. |
| Ignore Negative Total | If selected, negative invoice amounts are not used to determine if a document is a credit memo.<br><br>This option is cleared by default. |

## Field Settings

The field configuration table allows you to activate and configure fields within the solution.

| Parameter | Description |
|---|---|
| Class Name | The class name of the document. This determines which field settings are applied. Typically, settings are provided for the "INVOICES" class which is the base class for all invoices. However, subclasses can have different settings. If subclass settings are provided, these override the base class settings.<br><br>**Note:** When adding new fields, you must use uppercase for the "Class Name". |
| Field Name | The technical name of the AP Project field.<br><br>**Note:** Do not change the technical name of any standard fields. |
| Verifier Label | The default field label used in Verifier. |
| Active | If selected, the field is active for a processing profile. This means that field validation is activated and the field appears on the Dynamic Verifier Form. |
| Required in RTS | If selected, and no value for the field is extracted in RTS, the field will be marked invalid and sent for user review in Verifier. |

| | |
|---|---|
| Required in Verifier | If selected, the field is mandatory in RTS and a user is required to populate this field with a valid entry in Verifier. |
| Country Filter | The comma-separated list of country ISO-codes for which the field is mandatory.<br><br>This setting is used in conjunction with "Required In RTS" and "Required In Verifier" check boxes. If a field is mandatory for either of these settings, and the vendor country of origin is not specified in the list, then the field reverts to optional. |
| Field Type | The type of a field. Select one of the following types.<br><br>- AMOUNT<br>- DATE<br>- TEXT<br>- TABLE |
| Amount Type | The type of amount. Select one of the following values.<br><br>- TAX |
| | - MISC<br>- OTHER<br><br>If TAX is selected, the field is handled as a sales tax type amount, and is included in the amount field mathematical validation. If MISC is selected, the field is handled as a miscellaneous charge and is also included in the amount field mathematical validation. If OTHER is selected, the field is handled as a standalone amount.<br><br>The Amount Type option only takes effect for custom fields 1-5. |
| Force Verify | When selected, a field is always marked as invalid and sent to Verifier for review. |
| Default Value | The default value of a field. |
| Default if Nothing Extracted | The default value of a field if the system does not automatically extract a value from a document. |
| Substitution Rule | The substitution rule applied to a text field.<br><br>Substitution rules are configured in the Global Settings > Substitution Rules. These rules are applicable only at the time of export. |

| Min Length | The minimum text field length. |
|---|---|
| Max Length | The maximum text field length. |
| Right Justify | If selected, the system pads the field using the "Pad Char" character from the left, until the "Max Length" is reached. |
| Pad Character | The padding character applied to a text field if it does not meet the maximum length. |
| Pad Only If Numeric | If selected, the system only adds pad characters to the field if the original field value is entirely numeric. |
| Remove All Specials | If selected, all special characters are removed from a text field. This means that all characters that are not letters, digits, or whitespace are removed. |

| | Exceptions are defined in "Keep Certain Specials" below. |
|---|---|
| Remove Spaces | If selected, spaces are removed from a text field. |
| Keep Certain Specials | A non-delimited list of special characters that are retained if "Remove All Specials" is enabled. |
| Remove Start End | If selected, all special characters are removed from the beginning and from the end of an extracted text value. The "Keep Certain Specials" list is not applied here. All characters that are not letters, digits, or whitespace, are removed, regardless of the special characters listed in "Keep Certain Specials". |
| Substring Start Position | The starting character used in conjunction with the "Substring Length" when trimming an extracted value. Positive numbers start from the left while negative numbers start from the right. For example, an invoice number can only be five characters, but the extracted value is "123456789." A "Substring Start Position" value of "-5" and a "Substring Length" value of "5" means that the field is formatted to "56789." |
| Substring Length | The length of a substring. This setting is used in conjunction with "Substring Start Position". |
| Remove Leading Zeroes | If selected, any leading zeroes are removed from an extracted text value. |
| Decimal Places | The number of decimal places that should be used when exporting an amount field. |
| Negative Type | This controls the output format during export if the extracted value for an amount field is less than zero. Choose one of the following settings.<br><br>• 1 - This value means that the minus sign appears after the amount, such as 100.00-.<br>• 2 - This value means that the minus sign appears before the amount, such as -100.00. |

| | |
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| | • 3 - The value means that the minus sign does not appear, but the related value appears in parentheses. For example, (100.00). |
| Output For Zero | The value that is output during export if the amount is zero. |
| Substitute Value if Over 0 | The value that is output during export if the amount is greater than zero. |
| Future Days | The number of days in the future that an extracted date is considered valid. For example, today is March 20 and an extracted date is March 31. If the value is set to 10, then the system marks the field invalid as the extracted date is 11 days in the future.<br><br>If future dates are not permitted, set the column value to zero. To disable the check, set the value to -1. In Verifier, the user can pass any value as long as it is a valid date. |
| No. Days in Past | The numerical value that indicates the number of days in the past that an extracted date is considered valid.<br><br>For example, today is March 20 and an extracted date is March 9. The value is set to 10, so the system marks the field invalid as the extracted date is 11 days in the past.<br><br>If past dates are not permitted, set the value to zero. To disable the check entirely, set the column value to -1.<br><br>In Verifier, the user can pass any value as long as it is a valid date. |
| Date Only in Current Month | If selected, an extracted date that is not in the current month is marked invalid and the document is sent to Verifier.<br><br>In Verifier, the user can pass any value as long as it is a valid date. |
| Field Mask | A comma-separated list of characters allowed in an extracted or user-entered value. |

| | For example, if the content of this column is set to "ABCD, WXYZ," only values "ABCD" or "WXYZ" are permitted. |
| --- | --- |
| | Wildcard characters are also permitted, where # represents any number, an @ represents any letter, and a ? represents either a number or a letter. |
| Verifier Text ID | The text ID for the Verifier field display label. This must correspond to an existing Text Element ID in Global Settings > Display Text Settings > Field Text Settings. This takes priority over the text specified against the 'Verifier Label' setting. |
| Extraction Profile ID | The extraction profile ID assigned to custom fields (1 to 5) that are relevant for configurable automatic field extraction feature. The content of this column corresponds to an "Extraction Profile ID" value that is configured in the Global Settings > Custom Extraction Profiles > Extraction Profiles.<br><br>A value of zero means that no configurable extraction is required for this field. |

## Invoice Type Settings

These configuration settings are used to determine the invoice type field.

| Parameter | Description |
| --- | --- |
| Default | This value indicates whether the default invoice type is a purchase order or a non-purchase order. Select one of the following:<br><br>- PO<br>- NPO<br><br>If the invoice type exists in the image filename and this has been mapped to the "Invoice Type" setting in the Global Settings > Import Settings, then the invoice type value here is overwritten by the value from the "Import Settings". |
| Set By Vendor | Specifies if the invoice type field is set by the extracted vendor. |

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|---|---|
| Set By Vendor Co Code Exception | A comma-separated list of company codes that are exceptions to the above "Set By Vendor" parameter. |
| | For example, if "Set By Vendor" is selected, and this setting is set to "1000,2000," then the system sets the invoice type according to the vendor, except when the invoice belongs to company code "1000" or "2000." |
| | If "Set By Vendor" is cleared, then the system sets the invoice type according to the vendor, only if the invoice belongs to company code "1000" or "2000." |
| PO Value | The value used in the document filename or the Invoice Type column in the vendor master data to indicate a purchase order invoice. For example, MM. |
| NPO Value | The value used in the document filename of the Invoice Type column in the vendor master that represents a non-purchase order invoice. For example, FI. |
| Set To PO If PO Found | If this option is selected and a purchase order number is found, the invoice type is set to "PO" regardless of any default or vendor-specific settings. |
| Set To PO If Valid PO Found | If this option is selected and the purchase order is validated against a database, the invoice type is set to "PO" regardless of any default or vendor-specific settings. |
| Set To PO If PO Populated | If selected, the system always sets the invoice type to "PO" if any value is present in the purchase order number field. This applies in RTS and in Verifier. |

## Invoice Number Settings

These settings enable you to configure the validation options for the invoice number field.

| Parameter | Description |
|---|---|
| Extract Delivery Notes Into Table | If selected, the delivery note number field is deactivated and the table field DeliveryNotes is used to collect delivery note numbers instead. |

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|---|---|
| Remove Korean Invoice Number | If selected, the system blanks out any extracted invoice numbers if the vendor country is Korea. |
| Skip For Utility Vendor | If selected and the vendor is identified as a utility vendor, then the invoice number is set to valid and an account number is required instead. |
| Utility Alias | This is a comma-separated list of values that identify a vendor as a utility vendor. This is compared against values found in the **Utility Flag** column in the vendor master data. |
| | This option is available only when **Skip For Utility Vendor** is selected above. |
| Accept Two Characters | If selected, the system does not automatically set a two-character invoice number to invalid on the server side. |
| | If cleared, an extracted invoice number that is two characters or less is automatically marked as invalid, and the document is sent to Verifier for confirmation. |
| Validate From DB | This activates invoice number validation where an extracted value is compared against previous invoices numbers supplied by the same vendor. |
| Use Vendor Partition | If selected, a partition is used for the invoice number history check. |
| | This functionality mirrors the vendor partition functionality. It is possible to hold all invoice number history data within a single database table, then use partitions to ensure segregation of client data. |
| | For example, in a AP Project project, there are three clients; Client A, Client B, and Client C. Vendor partitions are used. Clients A & B use vendor partition 1, and Client C uses vendor partition 2. A single invoice number history pooled between all clients may be used. |
| | As a result, if this option is selected, the system uses the vendor partition ID specified in the **Client Settings > Client Configuration**. Also, if the invoice number history table is updated during |

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| | export, the system updates the table that inserts the relevant vendor partition ID into the column that represents the partition. This is specified using the **Partition ID** setting below.<br><br>If this option is selected and no vendor partition is set in the **Client Settings > Client Configuration**, the system raises an error.<br><br>**Note:**<br>If an invoice number table with partitions is used, then all clients pointing to that table must use the partition. If this is not the case, then during the invoice number history update, the system can erase history data that belongs to another client if the vendor number is the same.<br><br>This option is available only when **Validate From DB** is selected above. |
| Use External Table | If selected, the system performs the invoice number history check against an external table. If cleared, the standard AP Project table is used.<br><br>This option is available only when **Validate From DB** is selected above. |
| SQL Connection Group | The SQL connection group that specifies the external invoice number history database connection string that is set in **Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Table Name | The name of the external invoice number history database table.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| Partition ID | The name of the column that contains the partition ID in the invoice number history lookup table. This setting is not mandatory if **Use Vendor Partition** is cleared.<br><br>If vendor partitions are used and this column is blank, the system raises an error message and sends the document to Verifier.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |

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|---|---|
| Vendor ID | The column in the database table that contains the vendor number. This setting is mandatory.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| Rec ID | The column in the database table that contains the record ID.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| Invoice Number | The column in the database table that holds the invoice number. This setting is mandatory.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| Document Type | The column in the database table that represents a document type of either invoice or credit. This setting is mandatory.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| Invoice Alias | The value in the document column of the invoice number history database table that indicates an invoice. This setting is mandatory.<br><br>This option is available only when **Validate From DB** is selected above. |
| Credit Alias | The value in the document column of the invoice number history table that indicates a credit memo. This setting is mandatory.<br><br>This option is available only when **Validate From DB** is selected above. |
| Max Records | The maximum number of records that are considered when comparing an extracted invoice |

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| | number to historic invoice numbers from the same vendor in the database. By default, this is set to "20" records per document type. Such as, an INVOICE or CREDIT.<br><br>A vendor billing system can use different number ranges for invoices and credit notes. This means that if the Max Records is set to 20 and the vendor submits invoice and credit memos, the maximum number of records that the system maintains in the invoice number history table is actually 40 records.<br><br>This option is available only when **Validate From DB** is selected above. |
| No Of Hits | The number of hits required to validate the extracted invoice number format with the invoice number history database table. By default, this is set for two records.<br><br>This option is available only when **Validate From DB** is selected above. |
| Correct OCR Misreads | If selected, the system tries to repair specific OCR issues if found in the extracted invoice number.<br><br>For example, if the number "1" has been read in the extracted value, but the invoice history shows that this should be the letter "I" in as many records as set in the No Of Hits parameter, then the extracted value will be changed to an 'I' automatically on server side only. This also applies to instances where a zero has been extracted, but the history shows that a letter 'O' is expected, and also where the letter "Q" has been extracted, but the history shows that this should be the letter "O".<br><br>No other OCR issues are handled.<br><br>This option is available only when Validate From DB is selected above. |
| Check Sequencing | If selected, and if the vendor supplies invoice numbers that are entirely numeric, then, when carrying out the invoice number format comparison against the vendor's prior history, the system does not consider prior invoice numbers towards the hit count if they are x ahead or more, where x is a |

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| | number defined using the Sequencing Limit parameter. |
| | This feature is available to add an additional validation layer to ensure that no old invoices are processed with an older Invoice Number than what is in the Invoice Number History. |
| | For example, the Sequencing Limit is set to 100 and invoice number 1500 is read from an invoice. In the history table, invoice numbers 1598, 1599, 1600 and 1601 are present. '1600' and '1601' will not be considered valid matches as, although they match the 4 numeric format, they are too far ahead in terms of the sequence. Now, only 1598 and 1599 remain to compare against, so if the value of No Of Hits is set to more than 2, the invoice number would be marked as invalid. |
| | This logic does not apply to processing documents that have an Invoice Number that is more than the sequencing limit. This features focuses only on older invoices. |
| | This option is available only when Validate From DB is selected above. |
| Sequencing Limit | If no sequence limit is specified and the sequencing limit is set to zero, then the system uses the default sequencing limit of 100. |
| | This option is available only when Validate From DB and Check Sequencing are selected above. |
| Activate Extended Check | If selected, the system activates an additional check if the extracted invoice number is numeric. This additional check compares the first x number of characters in the extracted value with the values in the invoice number history database where x is configurable using the Extended Check Percentage parameter. |
| | If the system is unable to find a number of matches that is greater or equal to the value defined in No Of Hits, the invoice number is marked invalid and the document is sent to Verifier for a user to check. |
| Extended Check Percentage | This parameter defaults to 25, indicating that the |

| | first 25% of a numeric invoice number is used as a basis for the comparison. The system always rounds up the number of characters to compare using this percentage. |
|---|---|
| | For example, if the parameter is set to 20%, and the invoice number is 1234567890, then the system checks the first two characters as 20% of a length of 10 is 2. |
| | If, however, the parameter is set to 20% and the invoice number is 1234567, the system also checks the first two characters as 20% of a length of 7 is 1.4, which is then rounded up to 2. |
| | If a number that is less than or equal to zero or greater than 100 is entered, the system uses 25. |
| | This option is available only when **Validate From DB** and **Activate Extended Check** are selected above. |
| Update DB At Export | If selected, the system updates the invoice number history table with a record for the current document during document export. |
| | This option is available only when Validate From DB is selected above. |
| Invoice Number Confidence | The minimum confidence for an extracted invoice number. If the invoice number does not meet this confidence, it is marked invalid and sent to Verifier for a user to review. The number represents a percentage. For example, a value of 20 means the invoice number confidence must be 20% or greater. |
| | This check is carried out by the system only if the invoice number history check is not in use. |

## Line Item Table Settings

These settings control invoice line item validation.

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|---|---|
| Extract Line Items | If selected, line item extraction is enabled. If |
| | cleared, line items are not required for any document. |

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|---|---|
| Skip For Service | If selected, line items are not mandatory for invoices relating to a service purchase order.<br><br>**Note** For the best results, select this option. This is because line items are not usually required for service purchase orders. If cleared, data may be extracted that has no purpose.<br><br>This setting is available only when "Extract Line Items" is selected above. |
| Line Total Only For Service | If selected, only the line item total value is required for the invoices relating to a service purchase order. The "Skip For Service" check box must be cleared for this setting to take effect. This setting is available only when "Extract Line Items" is selected above . |
| Skip For Multi Line Limits | If selected, the system does not require line items for invoices related to a multiline limits purchase order. A multiline limits purchase order is one where all purchase order line items fall into one of the following categories:<br><br>   - The line item category is 1.<br><br>   - The line item category is 9 and the line is not relevant for goods-receipt based invoice verification.<br><br>   - The quantity ordered is equal to the order line total amount with a unit price of 1 and the CheckServiceUnitPrice parameter is set to true in **Processing Profile > PO Number Settings > PO Number Validation**.<br><br>If cleared, the system requires the user to enter line items for the above mentioned purchase order types. The user is required to enter a description and total only. This setting is available only when Extract Line Items and Skip For Service are selected above. |
| Skip For NO PO | If selected, line items are not mandatory for non-purchase order invoices.<br><br>**Note** For the best results, select this option. This is because line items are not usually required for non-purchase orders. If cleared, data may be extracted that has no purpose.<br><br>This setting is available only when "Extract Line Items" is selected above. |

| Skip For Credit | If selected, line items are not mandatory for credit memos.<br><br>This setting is available only when "Extract Line Items" is selected above. |
|---|---|
| Skip For MIRA | If selected, line items are not mandatory for invoices that have a 1-1 match with the total purchase order value, or the value of all goods receipts not yet invoiced for the entire purchase order.<br><br>This setting is available only when "Extract Line Items" is selected above. |
| Skip For Unreleased PO | If selected, line items are not mandatory for invoices relating to a purchase order that has not yet been released.<br><br>This setting is available only when "Extract Line Items" is selected above. |
| Skip For Invalid PO | If selected, the system does not require line items if a missing or invalid purchase order invalid reason is selected by the user.<br><br>This setting is available only when "Extract Line Items" is selected above. |
| Skip For Invalid Vendor | If selected, the system does not require line items if the vendor-not-found invalid reason is selected by the user.<br><br>This setting is available only when "Extract Line Items" is selected above. |
| Skip For Utility Vendor | If selected, the system does not require line items for a utility vendor. This saves considerable processing time if utility invoices are large documents with multiple backing sheets. This is because the system does not need to evaluate as potential line items that require extraction. This setting is available only when "Extract Line Items" is selected above. |
| Never Validate Line Items | If selected, line items may be extracted, but no validation is carried out.<br><br>This setting is available only when "Extract Line Items" is selected above. |

## Line Pairing Settings

These options configure how line pairing is carried out.

| Parameter | Description |
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| | |

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|---|---|
| Do Line Pairing | If selected, line pairing is carried out during document export for PO invoices. |
| Do Line Pairing For Service | If selected, line pairing is carried out for invoices that relate to a service purchase order.<br><br>This option is available only when "Do Line Pairing" is selected above. |
| Multi Pairing To Single PO Line | If selected, the system is allowed to pair multiple lines on an invoice for the same material to a single line on the purchase order.<br><br>This option is available only when "Do Line Pairing" is selected above. |
| Check For Multiple POs | When selected, the system checks for multiple purchase order numbers on the document.<br><br>This option is available only when "Do Line Pairing" is selected above. |
| Check For Duplicate PO Lines | If selected, the system checks to see if multiple purchase order line items on a single PO have the same PO line item number. This could indicate a problem with the purchase order data. Line pairing is not carried out if duplicate PO lines are found. |
| Get PO Lines From Workday | If selected, the purchase order line item information is read from Workday. |
| Get PO Lines From DB | If selected, the purchase order line items are read from a database. |
| SQL Connection Group | The SQL connection group that specifies the purchase order database connection string as set in Global Settings > Database Connection Settings . If no connection group is specified, the system uses group 1.<br><br>This option is available only when "Get PO Lines from DB" is selected above. |
| DB Table Name | The name of the database table that contains purchase order line item information.<br><br>This option is available only when "Get PO Lines from DB" is selected above. |

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| Use Stored Procedure | If selected, the system calls a stored procedure to retrieve the purchase order line item information from the database. |
| | This option is available only when "Get PO Lines from DB" is selected above. If you are using an Oracle database, specific configurations are required. |
| Stored Procedure Name | The comma-separated list of stored procedure parameter indexes that are used when calling the above stored procedure. These parameters must be defined in Global Settings > Stored Procedure Settings . |
| | This option is available only when "Get PO Lines from DB" and "Use Stored Procedure" are selected above. |
| Stored Procedure Parameters | The comma-separated list of stored procedure parameter indexes from defined stored procedure settings that are used when calling the above stored procedure. These parameters relate to the Global Settings > Stored Procedure Settings . |
| | This option is available only when "Get PO Lines from DB" and "Use Stored Procedure" are selected above. |
| DB PARTITION ID | The technical name of the purchase order line item database table column that holds the record partition ID. |
| | This column is mandatory if the "Use PO Partition" check box is selected in Processing Profile > PO Number Settings > PO Number Validation. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB PO | The name of the column in the purchase order line database table that holds the purchase order number. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB Line | The name of the column in the purchase order line database table that holds the purchase order line number. |
| | This option is available only when "Get PO Lines from DB" is selected above. |

| | |
|---|---|
| DB MATERIAL NO | The name of the column in the purchase order line database table that holds the purchase order line item material number. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB MATERIAL GROUP | The name of the column in the purchase order line database table that holds the purchase order line item material group. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB DESCRIPTION | The name of the column in the purchase order line database table that holds the purchase order line item description. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB PO QUANTITY | The name of the column in the purchase order line database table that holds the order quantity for the purchase order line item. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB UNIT PRICE | The name of the column in the purchase order line database table that holds the unit price for the purchase order line item. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB PO TOTAL | The name of the column in the purchase order line database table that holds the overall total for the purchase order line item. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB TAX CODE | The name of the column in the purchase order line database table that holds the tax code for the purchase order line item. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| DB TAX JUR CODE | The name of the column in the purchase order line database table that holds the tax jurisdiction code for the purchase order line item. |
| | This option is available only when "Get PO Lines from DB" is selected above. |

| | |
|---|---|
| DB UOM | The name of the column in the purchase order line database table that holds the order unit of measure for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB PRICE UNIT | The name of the column in the purchase order line database table that holds the purchase order line item price unit. This option is available only when "Get PO Lines from DB" is selected above. |
| DB PUOM | The name of the column in the purchase order line database table that holds the order price unit of measure for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB TOTAL QUANTITY DELIVERED | The name of the column in the purchase order line database table that holds the total quantity delivered to date for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB TOTAL VALUE DELIVERED | The name of the column in the purchase order line database table that holds the total value delivered to date for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB TOTAL QUANTITY INVOICED | The name of the column in the purchase order line database table that holds the total quantity invoiced to date for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB TOTAL VALUE INVOICED | The name of the column in the purchase order line database table that holds the total value invoices to date for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |
| DB ITEM CATEGORY | The name of the column in the purchase order line database table that holds the item category or line item type for the purchase order line item. This option is available only when "Get PO Lines from DB" is selected above. |

| | |
|---|---|
| DB PLANT | The location code for the ship-to address where the goods were delivered, or where a service was performed. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB CHARGE CODE | The name of the column in the purchase order line database table that holds the charge code for the purchase order line item. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB CHARGE CODE ID | The name of the column in the purchase order line database table that holds the charge code ID for the purchase order line item. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB COMPANY CODE | The name of the column in the purchase order line database table that holds the company code for the purchase order line item. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB ERP PO TYPE | The name of the column in the purchase order line database table that holds the JD Edwards purchase order type for the purchase order line item. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB BUSINESS UNIT | The name of the column in the purchase order line database table that holds the PeopleSoft purchasing business unit for the purchase order line item. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |
| DB ERS | The name of the column in the purchase order line database table that holds a flag that indicates if this purchase order is intended for the Evaluated Receipt Settlement (ERS) process. <br><br> This option is available only when "Get PO Lines from DB" is selected above. |

| Convert Quantity From DB | If selected, and a difference between the invoice unit of measure and the purchase order unit of measure cannot be resolved via mathematical or order history information on the purchase order, the system performs a database look-up using the line item material to look for the conversion ratio between the deviating units of measure if available. |
|---|---|
| | The unit of measure look-up table is configured in Processing Settings > Unit Of Measure Configuration > Unit Of Measure Settings. |
| | If a ratio is found, the invoice quantity is converted to reflect the PO unit of measure. If a ratio is not found, the line is not paired. |
| | If the database lookup is not configured correctly, or the relevant entry is missing, the line item is not paired. |
| | This option is available only when "Get PO Lines from DB" is selected above. |
| Get PO Lines via User Exit | If selected, purchase order line item details are retrieved via a custom lookup in `UserExitReadPODetails`. |
| Description Threshold | This value indicates the minimum confidence needed to pair a line item based on the fuzzy match on description. |
| | A value of "100" requires an exact match between the invoice line and purchase order line descriptions. |
| | For example, if the PO line item description is "BROWN HATS," then a 100% match is achieved only if the invoice line item description is one of the following. BROWN HATS, brown hats, BROWN or HAT. |
| | <ul><li>BROWN HATS</li><li>brown hats</li><li>BROWN or HAT</li></ul> |
| | For information purposes, "BROWN HAT" is only a 99.99% match and "HATS BROWN" is only an 85% match. |
| | A setting of zero means that the closest match to the invoice line is taken as long as there is some degree of similarity. |
| | If no valid value is specified, the default value is "0." |
| | It is recommended to set a threshold value of "30". |
| | **Note** The invoice line item description must be at |

| | least 5 characters long and contain either a single word greater than three characters in length or two words of three characters in length for the system to consider it when selecting a purchase order line item. |
|---|---|
| | <ul><li>This option is available only when "Do Line Pairing" is selected above.</li></ul> |
| Description Distance | This value indicates the minimum confidence distance between the best and second best possibility for the fuzzy match on the description. |
| | For example, if this value is set to 10% and the system is 51% sure that line 1 is the right result, but 45% sure that line 2 is the right result, then the line will not pair as the 6% distance between them is less than the minimum confidence distance. |
| | It is recommended to use a value of "10 "for this setting. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Description Tolerance | The line pairing tolerance that the invoice unit price is allowed to deviate from the purchase order unit price. If left blank, this additional check is not carried out. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Limits Description Threshold | This indicates how confident a fuzzy match on the system is in order to pair a service line item. |
| | A setting of "100" requires an exact match between the invoice line and purchase order line descriptions. |
| | A setting of "0" means that the closest match to the invoice line is taken as long as there is some degree of similarity. |
| | If no value or an invalid value is provided, the system defaults to "0. |
| | It is recommended to set this value to "50." |
| | **Note** The invoice line item description must be at least 5 characters long and contain either a single word greater than three characters in length or two words of three characters in length for the system to consider it when selecting a purchase order line item. |
| | This option is available only when "Do Line Pairing" is selected above. |

| | |
|---|---|
| Limits Description Distance | The minimum confidence distance between the best and second best service line item description candidates. |
| | For example, if this value is set to 10% and the system is 51% sure that line 1 is the right result, but 45% sure that line 2 is the right result, then the line will not pair as the 6% distance between them is less than the minimum confidence distance. |
| | The default value is for this setting is 0%. |
| | It is recommended to use a value of "10 "for this setting. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Limits Description Tolerance | The percent tolerance that the assigned invoice lines and their total value may exceed the original purchase order line item order total. |
| | For example, if the original purchase order line has a total of "10,000" and the tolerance is set to 10, then the system stops pairing invoice lines to this purchase order line as soon as the total value booked to date exceeds "11,000." |
| | If left blank, this check is not carried out. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Unit Price Tolerance | This activates an extra check for invoice lines that pair to purchase order lines primarily based upon the unit price. |
| | If set to 10, the system will not pair an invoice line to a purchase order line if the purchase order has another line item that has pricing within 10% of the purchase order line originally chosen. |
| | If set to zero, no extra check is carried out. |
| | This option is available only when "Do Line Pairing" is selected above. |
| UOM Check | If selected, this activates the unit of measure conversion check. It is recommended that this check box is selected. |
| | This option is available only when "Do Line Pairing" is selected above. |

| PUOM Tolerance | The percentage that the PO unit price may differ from the invoice unit price, in order for the same order price unit of measure. If left blank, the system looks for an exact match. |
|---|---|
| | This is only considered if "UOM Check" is also selected. The recommended setting is "10." This option is available only when "Do Line Pairing" and "UOM Check" are selected above. |
| PUOM Check | If selected, the system applies conversions to the extracted invoice quantity, based on ratios read from the purchase order if the PO line item order quantity unit of measure differs from the order price unit of measure. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Pair To Single GR | If selected, the system only pairs the invoice line to a single goods receipt line if the corresponding purchase order line is set for goods receipt-based invoice verification. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Find GR With Delivery Number | If selected, the system looks for the goods receipt external delivery note in the OCR text of the document to help select the correct goods receipt. This check applies if the purchase order line item is set for goods receipt invoice verification. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Only Use Delivery Number To Find GR | In order for this setting to work, also select the "Find GR With Delivery Number" check box. |
| | If selected, the external delivery note must be present in the OCR text of the document for the system to select the corresponding goods receipt. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Require PO Details For Multiple Materials | If selected, and the purchase order has multiple line items for the same material, the system requires the purchase order details to be present on the invoice at line item level in order to select the correct line item. |
| | This option is available only when "Do Line Pairing" is selected above. |

| Ignore Completed PO Lines | If selected, the system does not consider any purchase order lines as relevant for pairing where the quantity invoiced to date is either equal or greater than the quantity originally ordered.<br><br>This option is available only when "Do Line Pairing" is selected above. |
|---|---|
| Activate Sub Deb Check | If selected, the system sets the subsequent debit flag to "X" during line pairing. This occurs when all of the following criteria are met.<br><br>- An invoice line is paired to a purchase order line.<br>- The quantity invoiced to date is equal to the delivered to date quantity.<br>- The delivered to quantity is greater than zero.<br>- The invoice unit price adjustment is less than half of the original unit price on the purchase order.<br>- This option is available only when "Do Line Pairing" is selected above. |

| | |
|---|---|
| Enable Integrity Check | If selected, the system does not book an invoice line to the first open PO line/good receipt in the following circumstances.<br><br>• When line pairing against purchase orders that have multiple open lines for the same material.<br>• Lines are set for goods receipt based invoice verification when there are multiple open goods receipts.<br><br>This does not apply when:<br><br>• A reference purchase order or line has been specified at the invoice line item level.<br>• A delivery note number or values and quantities can distinguish the correct purchase order line or goods receipt for booking.<br><br>This check box should always be selected in the following implementations.<br><br>• A workflow component sits between AP Project and the downstream ERP system.<br>• AP Project books directly to the ERP system, but is not creating fully posted invoices.<br><br>Because the system dynamically reads the live ERP purchase order history during line pairing, if two successive invoices reference the same purchase order, both can be paired to the same PO line/goods receipt. This is because the ERP purchase order history does not yet have the data from the first matched invoice.<br><br>This option is available only when "Do Line Pairing" is selected above. |
| Exclude Freight From MIRA Process | If selected, the value of any miscellaneous charges on the invoice are excluded from the calculation to determine if there is a one-to-one relationship between the invoice and purchase order.<br><br>This option is available only when "Do Line Pairing" is selected above. |
| Activate Log | If selected, the system writes a log file that contains trace entries for the line pairing operations.<br><br>This content is written to the standard Oracle WebCenter Forms Recognition log file. This option is available only when "Do Line Pairing" is selected above. |

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| Find SES with Invoice Number | If selected, the system uses the invoice number to help identify the correct service entry sheet or sheets by comparing it to the entry sheet acceptance reference number. |
| | This option is available only when "Do Line Pairing" is selected above. |
| Only Use Invoice Number To Find SES | If selected, the system only selects a service entry sheet or sheets if the invoice number matches the entry sheet acceptance reference number. |
| | This option is available only when "Do Line Pairing" is selected above. |

## Material Number Settings

This table can be used to define format strings for the extraction of a material number at line item level.

| Parameter | Description |
|---|---|
| Index | The index ID that is given to each format string used to generate material number candidates. The value must be unique for each entry. |
| Format | The format string that is used to generate candidates for the field. This must be entered as a simple expression. |
| | For example, "33########## " matches a material number that starts with 33 and is then followed by ten digits. |
| Ignore Characters | The list of characters that may appear in a material number candidate that the system ignores when generating candidates. This list is not comma-separated. |
| | For example, " [ ]". |

## Misc Charge Settings Group

The miscellaneous charge settings are separated into two distinct configuration sets, Misc Charge Categories and the Misc Charge Settings.

**Misc Charge Categories**

This table can be used to configure the identification and processing of invoice miscellaneous charges.

| Parameter | Description |
|---|---|
| Index | The unique index of the miscellaneous charge category. |
| Type | A short description of the miscellaneous charge, such as FREIGHT or CUSTOMS. |
| Code | The single character miscellaneous charge category code. |
| Header Field | This is a comma-separated list of field names assigned to the miscellaneous charge category. A field may not be assigned to more than one category. |
| Alias | The comma-separated list of identifying phrases that the system uses to recognize miscellaneous charges at line item level via the item description. |
| Negative Alias | The comma-separated list of forbidden phrases that prevent assignment to the miscellaneous charge category if they appear in the line item description. |
| Line Type | If populated, the system creates a line item for the aggregate value of all charges found on the document belonging to this category. The line item is assigned the line type configured using this setting. |
| Always Book To Unplanned | If selected, the system handles all charges found on the document that belong to this miscellaneous charge category as unplanned freight. |
| Always Book To Planned | If selected and line pairing is successful for all lines on the invoice, the system attempts to book all miscellaneous charges that belong to this category to a relevant planned condition on the purchase order line items used during line pairing. |
| Valid Conditions | A comma-separated list of relevant planned condition types that correspond to the miscellaneous charge category. |
| Always Book To GL Account | If selected, the system creates a general ledger account entry for the aggregate value of all miscellaneous charges that belong to this category. |

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| Book To Unplanned If No Planned | If selected, the system will process all miscellaneous charges belonging to this category as unplanned freight if no relevant planned conditions are available on the purchase order line items matched to during line pairing. |
| Book To GL Account If No Planned | If selected, the system creates a general ledger account entry for the aggregate value of all miscellaneous charges that belong to this category if no relevant planned conditions are available on the purchase order line items matched to during line pairing. |
| GL Account | The default general ledger account code that is used for miscellaneous charge general ledger entries, for that category. |
| Get Cost Object From PO Line | If selected, the cost object information for a general ledger account entry is taken from the purchase order line item to which the first invoice line item is paired. |
| Default Cost Center | The default cost center used for miscellaneous charge general ledger entries. |
| Default Profit Center | The default profit center that is used for miscellaneous charge general ledger entries. |
| Default Tax Code | The default tax code that is used for miscellaneous charge general ledger entries. For countries and ERP systems that use tax jurisdictions, the corresponding tax jurisdiction code is read from the first paired invoice line, and indicates the ship-to address for the goods. |

**Misc Charge Settings**

These settings allow you to configure the rules and look-ups used in miscellaneous charge processing.

| Parameter | Description |
|---|---|
| Unplanned Threshold | The maximum permitted value of unplanned freight. This setting is used in conjunction with **Block If Over Threshold**. |
| Block If Over Threshold | If selected and the total of unplanned freight exceeds the set threshold, the system sets a payment block on a created invoice document. |

| Block Code | The block code that is applied to an invoice for reasons of excessive unplanned freight.<br><br>This setting is displayed only if **Block If Over Threshold** is selected above. |
|---|---|
| Third Party Freight Code | This specifies the miscellaneous charge category code to be used for third party freight invoices. |
| Handle Misc Charges For Services | If selected, the miscellaneous charge processing logic is also applied to invoices that relate to service purchase orders. |
| Validate From DB | If selected, the system looks in a database to determine the correct general ledger coding for a miscellaneous charge. |
| Use External Table | If selected, the system uses an external table for the miscellaneous charge account coding look-up. If cleared, the standard AP Project table is used which you can maintain in **Global Settings > Misc Charge Account Master Data**.<br><br>This option is available only when **Validate From DB** is selected above. |
| SQL Connection Group | The SQL connection group that specifies the external miscellaneous charge database connection string as set in **Global Settings > Database Settings**. If no connection group is specified, the system uses group 1.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |
| DB Table Name | The name of the database table that contains the GL coding strings that are used for miscellaneous charges.<br><br>This option is available only when **Validate From DB** and **Use External Table** are selected above. |

## Payment Method Settings

These settings relate to the payment method and its relationship to bank account requirements.

| Parameter | Description |
|---|---|
| Bank Methods | The comma-separated list of payment methods that indicate a bank transfer.<br><br>This corresponds to the "PaymentMethods" field in BRWVendorMaster. |

| Account Currency Not Required | If selected, the system does not require the bank account currency to match the invoice currency in order to select a bank account number. However, bank accounts in the vendor master that do contain a currency and match the currency of the invoice, take priority in the bank account selection. |
| --- | --- |
| Validate Bank Account | This flag is used to activate the bank account validation.<br><br>The bank account validation is used in cases where the vendor only has one bank account defined on the vendor master data. If one only bank account is found, the bank account number is copied automatically into the bank account field. If this default bank account number can be found on the document, the bank account status field is set to **CONFIRMED**. If it cannot be found, the bank account status field is set to **UNCONFIRMED**. You can select the **Stop Invalid Account** check box if you want invoices with unconfirmed default bank accounts to stop in Verifier.<br><br>At time of document export, any invoice with an unconfirmed default bank account is parked. In the XML, CSV and database export, the **UnconfirmedBankAccount** field in the invoice header is populated with a value that you configure using the **Unconfirmed Export Value** parameter. |
| Stop Invalid Account | If selected, any invoice with an unconfirmed default bank account is stopped in Verifier. The user can either change the bank account status field to **CONFIRMED** if the bank account is on the document, or they can validate the unconfirmed bank account status if the bank account does not appear on the document.<br><br>**Note:**<br>This setting only appears if the **Validate Bank Account** check box is selected. |
| Unconfirmed Export Value | This is the value that is exported into the **UnconfirmedBankAccount** field of the invoice header for XML, database and CSV export if the invoice has an unconfirmed default bank account.<br><br>**Note:**<br>This setting only appears if the **Validate Bank Account** check box is selected. |

| Convert Terms To Code | If selected, the system converts any extracted payment terms to its corresponding payment terms code. |
|---|---|
| Terms Relevant For NO-PO | If selected, the system performs the dynamic payment terms selection at time of document export for NO-PO invoices if Enable Dynamic Payment Terms Selection is also selected. IF Stop In Verifier If Cannot Convert Terms is also selected, a NO-PO document will stop in Verifier if payment terms have been extracted, but they cannot be converted to a code. |
| Terms Relevant To PO | If selected, the system performs the dynamic payment terms selection at time of document export for PO invoices if Enable Dynamic Payment Terms Selection is also selected. If Stop In Verifier If Cannot Convert Terms is also selected, a PO document will stop in Verifier if payment terms have been extracted, but they cannot be converted to a code. |
| Stop In Verifier If Cannot Convert Terms | If selected, the document stops in Verifier if payment terms have been extracted, but cannot be converted to a payment terms code. |
| Enable Dynamic Payment Terms Selection | If selected, the system performs the dynamic payment terms selection at time of document export. |

## PO Number Settings

The PO number settings are separated into two distinct configuration sets, PO Number Formats and PO Number Validation.

**PO Number Formats**

This table allows you to configure the format strings used to identify a purchase order number.

| Parameter | Description |
| --- | --- |
| Index | The index ID that is given to each format string used to generate purchase order number candidates. The value must be unique for each entry. |
| Format | The format string for a possible purchase order number. Multiple formats can be entered per profile ID, with one per index. The format must be entered as a regular expression. |
| | The "#" character is a wildcard that represents any number. The "@" character represents any alpha character. |
| | For example, "45########" indicates a purchase order number as a ten-digit number beginning with 45. "@@#####" finds a purchase order number that has two alphabetic characters followed by 5 digits. It is recommended to define these strings as precisely as possible to ensure that the correct value is located. |
| Ignore Characters | A list of allowed characters that may appear in a purchase order number. For example, a hyphen, forward slash, or a period. |
| | This list does not need comma separation. |

**PO Number Validation**

These settings allow you to configure purchase order validation.

| Parameter | Description |
| --- | --- |
| Max Word Count | The maximum number of OCR words that are permitted for the purchase order number. It is recommended to set this value to 3. |
| | This allows for the following. |
| | For example, "45 0000 0020" and "12345 - OP" are both purchase order number candidates, where each value separated by a space is also recognized as an individual |

| | |
|---|---|
| | OCR word. A hyphen is considered a separate OCR word, regardless of the geometric distance to neighboring values on either side. |
| Restrict to First Page Only | If selected, the system only extracts a purchase order number if it appears on the first page of the document. |
| Set Company Code From PO | If selected, the system overwrites any existing content in the company code field with the company code that is derived from the purchase order. |
| Keep Case Sensitive | If selected, the system retains lower case characters in extracted purchase order numbers. |
| Is Workday PO | If selected, the system does not clean up a prefix of "PO" from an extracted purchase order number, as this prefix is commonly used in Workday. |
| Validate From DB | If selected, the extracted purchase order number is validated against a database table. |
| Read PO Header via User Exit | If selected, the purchase order header details are read using a custom lookup in `UserExitReadPODetails.` |
| Use Stored Procedure | If selected, the PO header details are retrieved from a database using a stored procedure. This option is available only when "Validate From DB" is selected above. |
| Stored Procedure Name | The technical name of the stored procedure used to retrieve the PO header details. This option is available only when "Validate From DB" and "Use Stored Procedure" are selected above. |
| Stored Procedure Parameters | A comma-separated list of stored procedure parameter indexes from defined stored procedure settings relevant to calling the above stored procedure. This option is available only when "Validate From DB" and "Use Stored Procedure" are selected above. |

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| SQL Connection Group | The SQL connection group that specifies the purchase order database connection string as set in Global Settings > Database Settings. If no connection group is specified, the system uses group 1.<br><br>This option is available only when "Validate From DB" is selected above. |
| DB Table Name | The name of the database table that contains the purchase order header information. This setting is mandatory for database validation where no stored procedure is used.<br><br>This option is available only when "Validate From DB" is selected above. |
| Use PO Partition | If selected, the purchase order database lookup uses a purchase order partition. Purchase order partitions are set against the client in the Client Settings > Client Configuration. This option is available only when "Validate From DB" is selected above. |
| PO Partition Column | The PO Partition ID as specified in Global Settings > Partition Settings > PO Number Partition Settings.<br><br>This option is available only when "Validate From DB" and "Use PO Partition" are selected above. |
| DB PO | The name of the database table field that holds the purchase order number.<br><br>This option is available only when "Validate From DB" is selected above. |
| DB Vendor ID | The name of the database table field that holds the vendor ID for a given purchase order. This setting is mandatory for database validation.<br><br>This must be set to the column for the internal vendor ID that the ERP system uses.<br><br>This option is available only when "Validate From DB" is selected above. |
| DB Site ID | The name of the database table column that holds the order from vendor site ID. This column is mandatory if site IDs are used.<br><br>This option is available only when "Validate From DB" is selected above. |
| DB Currency | The name of the database table column that holds the purchase order document currency. This setting is optional.<br><br>This option is available only when "Validate From |

| | |
|---|---|
| | DB" is selected above. |
| DB Company Code | The name of the database table column that holds the company code of the purchase order.<br><br>**Note:** This is mandatory for JD Edwards purchase orders.<br><br>This option is available only when Validate From DB is selected above. |
| DB Payment Terms | The name of the database table column that holds the payment terms set on the purchase order. |
| DB Status | The name of the database table column that holds the status of the purchase order. For example, released, suspended, closed and so on.<br><br>This option is available only when "Validate From DB" is selected above. |
| DB Doc Type | The name of the database table column that holds the purchase order document type.<br><br>**Note:** This is mandatory for JD Edwards |
| DB Business Unit | The name of the database table column that holds the business unit.<br><br>**Note:** This is mandatory for Peoplesoft purchase orders.<br><br>This option is available only when "Validate From DB" is selected above. |
| PO Key Includes Company Code | If selected, the single purchase order unique key in the PO header database lookup table consists of both the purchase order number and the company code.<br><br>**Note:** This option should not be selected for JD Edwards purchase orders.<br><br>This option is available only when "Validate From DB" is selected above. |
| Use Default PO Site ID | If selected, the system uses a default site ID if no site ID is available in the purchase order header. |

| | |
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| Priority PO Site ID | This is the priority purchase order site ID. If **Use Default PO Site ID** is selected and no site ID is available in the purchase order header, the priority PO site ID is used as long as it exists in the vendor data for the purchase order vendor. If it does not exist, the default PO site ID is used. |
| Default PO Site ID | This is the default purchase order site ID. It is used if **Use Default PO Site ID** is selected, no site ID is available in the purchase order header, and no priority PO site ID is found. |
| JDE PO | This must be selected if you use JD Edwards purchase orders. |
| JDE PO Types | The comma-separated list of purchase order document types that indicate a JD Edwards purchase order.<br><br>This option is available only when "Validate From DB" and "JDE PO" are selected above. |
| PeopleSoft PO | This must be selected if you use Peoplesoft purchase orders. |
| PeopleSoft Business Units | The comma-separated list of purchasing business units for Peoplesoft purchase orders.<br><br>This option is available only when "Validate From DB" and "PeopleSoft PO" are selected above. |
| Service PO Types | The comma-separated list of purchase order document types that indicate a service purchase order. |
| Service PO Item Categories | The comma-separated list of item categories and line types at the purchase order line item level that indicate a service. |
| Service PO Prefixes | The comma-separated list of purchase order prefixes that exclusively identify a service purchase order. |
| Service PO UOMs | The comma-separated list of units of measure at the purchase order line item level that identify a service purchase order. |
| Check Service Unit Price | If selected, the system considers a purchase order line to be for a service if all of the following are true.<br><br>- The unit price is 1<br><br>The quantity ordered is equal to the line item total |

| | |
|---|---|
| Stop ERS PO | If selected, the system sends a purchase order to Verifier for all ERS/self-billing purchase orders. |
| Stop ERS PO in Verifier | If selected, the system does not allow a purchase order to pass Verifier if it is marked as an ERS/self-billing purchase order. |
| kip Duplicate PO Check | If a database lookup is activated and the purchase order number exists more than once in the purchase order header table, the document is sent to Verifier. The user may choose to accept the PO in Verifier, but line pairing is not carried out.<br><br>If selected, the system does not reject a purchase order if a duplicate record is found in the purchase order number header table. Instead, the system uses the first purchase order found, and line pairing is carried out as usual. |

## Profile Settings

These settings show details for the current processing profile.

| Parameter | Description |
|---|---|
| Profile Name | The name of the current processing profile. Update as necessary. |
| Profile Description | The description of the current processing profile. Update as necessary. |

## Tax Settings

The tax settings are divided into two separate categories, Tax Configuration and Tax Jurisdiction Codes.

**Tax Configuration**

These settings allow you to activate and configure the VAT Compliance Checking and Automatic Tax Code Determination features.

| Parameter | Description |
|---|---|
| Primary Rates | A comma-separated list of expected tax rates.<br><br>Populating this list is optional, but it does assist AP Project in finding the correct tax value on the document. Values matching the primary rate are prioritized over values entered as secondary rates. |

| Secondary Rates | A comma-separated list of expected tax rates. Populating this list is optional, but it does assist AP Project in finding the correct tax amount on the document. |
|---|---|
| Activate VAT Compliance Check | If selected, the system activates the VAT compliance check. |
| VAT Check Company Code Exceptions | A comma-separated list of company codes that are excepted from the VAT registration number compliance rule. If the **Activate VAT Compliance Check** check box is not selected, then the check will only be carried out for company codes in this list. |
| Vendor VAT Check Only | If selected, the system only requires the VAT registration number of the vendor if VAT is being charged on the invoice. |
| Vendor VAT Check Company Code Exceptions | A comma-separated list of company codes excepted from the **Vendor VAT Check Only** option. If the V**endor VAT Check Only** check box is not selected, then the check will only be carried out for company codes in this list. |
| Check VAT Cross Border | If selected, the system requires a vendor VAT registration number and bill-to VAT registration number for EU cross-border transactions where no VAT is charged. |
| Cross Border Company Code Exceptions | A comma-separated list of company codes excepted from the EU cross border VAT registration number check. If the **Check VAT Cross Border** check box is not selected, then the check will only be carried out for company codes in this list. |
| Activate Tax Code Determination | If selected, the system performs automatic tax code determination at time of line pairing. |
| Always Use PO Tax Code | If selected, the system assigns the purchase order tax code to the invoice line item. This option is available only when **Activate Tax Code Determination** is selected above. |
| Always Use Calculate Tax Flag | If selected, the system requires the ERP system to calculate the tax amount rather than using the tax amount extracted from the invoice. This option is available only when **Activate Tax Code Determination** is selected above. |

| | |
|---|---|
| Tax Flag Exception Company Codes | A comma-separated list of company codes that are excepted from the calculate tax flag rule. If the **Always Use Calculate Tax Flag** check box is not selected, the calculate tax flag is only used for the company codes in this list.<br><br>This option is available only when **Activate Tax Code Determination** and **Always Use Calculate Tax Flag** are selected above. |
| Validate From DB | If selected, the system performs a look-up to the tax table to determine the invoice line item tax code for countries that do not use tax jurisdictions.<br><br>This option is available only when **Activate Tax Code Determination** is selected above. |
| Use Tax Partition | If selected, the tax partition ID is used when searching for the tax code in the database table. This value is specified in the **DB Table Name** option above.<br><br>Tax partitions allow tax code data relating to all clients to co-exist in the same database table. This alleviates administrative burden of maintaining multiple tax code tables if multiple clients are used.<br><br>The tax partition ID is set in the **Tax Partition** option in the **Client Settings > Client Configuration** for the relevant client. Therefore, when the system reads the tax table to retrieve the tax codes for the invoice company code country, the client tax partition ID is also used to ensure that the correct set of records for the client is selected.<br><br>Export fails if no Tax Partition value is specified. Also, the system fails to retrieve any tax codes, and invoice line tax coding is not successful.<br><br>This option is available only when **Activate Tax Code Determination** and **Validate From DB** are selected above. |
| Use External Tax Table | If selected, the system uses an external table for the tax code look-up. If cleared, the standard AP Project table is used which you can maintain in **Global Settings > Tax Code Master Data**.<br><br>This option is available only when **Activate Tax Code Determination** and **Validate From DB** are selected above. |

| | |
|---|---|
| SQL Connection Group | The SQL connection group specifying the tax code database connection string as set in the **Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.<br><br>This option is available only when **Activate Tax Code Determination** and **Validate From DB** are selected above. |
| DB Table Name | The name of the tax code look-up database table for countries that do not use tax jurisdictions.<br><br>This option is available only when **Activate Tax Code Determination**, **Validate From DB**, and **Use External Tax Table** are selected above. |
| Derive Ship To From Company Code | If selected, the system will use the company code location as the ship-to location. This option can be used instead of a plant look-up for countries without tax jurisdictions. This option must not be used if the same processing profile is also used to process invoices relating to countries with tax jurisdictions.<br><br>This option is available only when **Activate Tax Code Determination** is selected above. |
| Check For ICMS Tax | ICMS is a form of sales tax used on Brazilian Nota fiscal documents.<br><br>If selected, the system attempts to identify this tax amount on incoming documents and applies validations to this field.<br><br>If cleared, it is assumed that the client is not processing Brazilian Nota fiscal documents. |
| Read Plant From DB | If selected, the system performs a look-up to a database to retrieve information about the plant. |
| Use External Plant Table | If selected, the system uses an external table for the plant look-up. If cleared, the standard AP Project table is used which you can maintain in **Global Settings > Plant Master Data**.<br><br>This option is available only when **Read Plant From DB** is selected above. |

| | |
|---|---|
| Plant SQL Connection Group | The SQL connection group that specifies the external plant database connection string, as set in the **Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| DB Plant Table | The name of the external database table that contains plant information.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| DB Plant | The name of the column in the plant database table that contains the plant ID.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| DB Plant Country | The column name in the external plant database table that contains the plant country.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| DB Plant State | The column name in the plant database table that contains the plant state location.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| DB Plant Tax Jur Code | The column name in the plant database table that contains the tax jurisdiction code associated with the plant location.<br><br>This option is available only when **Read Plant From DB** and **Use External Plant Table** are selected above. |
| Extract Tax Into VAT Table | If selected, the VAT table is used for the extraction and validation of tax. The **AmountTax, PST, HST, CGST, SGST, ICMS**, and **AmountSubtotal** fields are deactivated. |

| | |
|---|---|
| Check VAT Rates | If selected, the system checks that the content of the '**VAT Rate**' column in the VAT table exists for the country where VAT is applied. The system sets the VAT rate column to invalid if the rate cannot be found.<br><br>The check is only carried out if all of the following hold true.<br><ul><li>The VAT compliance check is activated.</li><li>The VAT table is used to capture the document tax information.</li><li>A vendor VAT registration number is read from the document.</li><li>The vendor is marked as belonging to an EU member country.</li></ul>The country where VAT is applied is derived from the first two characters of the vendor VAT registration number, which represent the VAT country. If this is not available, the vendor's country of origin is used.<br><br>The valid VAT rates are read from the VAT rates column in the country table configured in Country Settings and are presented as a comma separated list.<br><br>The comma-separated list need not include a VAT rate of zero as this is always accepted. |
| Extract HST Separately | If selected, Harmonized Sales Tax will be captured in the HST tax field as opposed to the **AmountTax** field. |
| CN Password Specials | A list of special characters that are permitted in the password block for domestic VAT invoices used in mainland China. The password should only consist of the digits 0-9, and the six special characters listed within this field. By default, the +<>-*/ characters are specified.<br><br>This field is configurable so additional special characters can be added if the government standards change in the future.<br><br>The system rejects the password field if it contains characters that are not included here. |

| CN Password Valid Lengths | A comma-separated list of the valid lengths for a password block that appears on a domestic VAT invoice used in mainland China. |
| | By default, the values are 84,108. This means that a captured password must be either 84 or 108 characters in length. This reflects the current government standard, but the field is configurable in case this changes in the future. |
| Enable India Compliance Check | If selected, the system activates the seven India-specific tax compliance fields on the dynamic Verifier form. These fields are IndiaPANNumber, IndiaHSN, IndiaStateCode, IndiaPlaceOfSupply, IndiaTaxInvoice, IndiaOFR and IndiaAmountInWords. When processing an invoice where tax is charged, and the company code and vendor countries are set to IN for India, the system marks any of the seven fields as invalid if they are not extracted, or have not been populated by the Verifier user. |

**Tax Jurisdiction Codes**

This table allows you to configure tax codes assigned to paired lines during line pairing for countries that use tax jurisdictions.

| Parameter | Description |
| --- | --- |
| Index | The numeric tax code index. |
| Tax Code | The tax code. |
| Country | The tax code country. |
| If Tax | The tax code that is assigned to the invoice line item if tax is charged on the invoice and the purchase order line item tax code matches Tax Code. |
| If No Tax | The tax code that is assigned to the invoice line item if no tax is charged on the invoice and the purchase order line item tax code matches Tax Code. |
| Vendor State | A comma-separated list of relevant order-from vendor states where a state-specific tax code must be selected. If left blank, the state specific exception extends to all vendor states as long as Ship To State is populated. |

| | |
|---|---|
| Ship To State | A comma-separated list of relevant ship-to states where a state-specific tax code must be selected. If left blank, the state specific exception extends to all ship-to states as long as Vendor State is populated. |
| If Tax State | The tax code that is assigned to the invoice line item if tax is charged on the invoice, the purchase order line item tax code matches Tax Code and the combination of order-from vendor and ship-to states constitutes a state-specific exception. |
| If No Tax State | The tax code that is assigned to the invoice line item if no tax is charged on the invoice, the purchase order line item tax code matches Tax Code and the combination of order-from vendor and ship-to states constitutes a state-specific exception. |
| Pay Tax As Billed | Indicator for a pay-as-billed tax code. If any invoice line item is assigned this type of tax code, the system will book the invoice using the tax amount specified on the vendor invoice. |
| Short Pay If Tax | Indicator for a short-pay tax code. If all invoice lines are assigned a short-pay tax code, the system will deduct the tax from the invoice total. |
| Account Assignment Categories | A comma-separated list of purchase order line account assignment categories that require Tax Code to be set as a default if the purchase order line item does not have a tax code. |

## Unit Of Measure Settings Group

This group separates the unit of measure options into two distinct groups, Unit of Measure Settings and Unit of Measure Types.

**Unit Of Measure Settings**

These settings are used to configure the database lookup for unit of measure conversion that may occur during line pairing.

| Parameter | Description |
|---|---|
| Use External Table | If selected, the system performs the unit of measure conversion against an external table. If cleared, the standard AP Project table is used that you can maintain in **Global Settings > UOM Conversion Master Data**. |

| | |
|---|---|
| SQL Connection Group | The SQL connection group that specifies the database connection string for the external unit of measure conversion table database. If no connection group is specified, the system uses group 1.<br><br>This option is available only when **Use External Table** is selected above |
| DB Table Name | The name of the external unit of measure conversion database table. This setting is mandatory for unit of measure conversion database lookups.<br><br>This option is available only when **Use External Table** is selected above |
| DB Material No | The technical name of the column in the unit of measure conversion table that represents the item material number.<br><br>This option is available only when **Use External Table** is selected above |
| DB Base UOM | The technical name of the column in the unit of measure conversion table that represents the material base unit of measure.<br><br>This option is available only when **Use External Table** is selected above |
| DB Numerator | The technical name of the column in the unit of measure conversion table that represents the numerator component of the unit of measure conversion ratio.<br><br>This option is available only when **Use External Table** is selected above |
| DB Denominator | The technical name of the column in the unit of measure conversion table that represents the numerator component of the unit of measure conversion ratio.<br><br>This option is available only when **Use External Table** is selected above |
| DB External UOM | The technical name of the column in the unit of measure conversion table that represents the external unit of measure read from the invoice.<br><br>This option is available only when **Use External Table** is selected above |

**Unit Of Measure Types**

This table contains the mappings between the naming conventions that the ERP system and the invoice vendor use for units of measure.

| Parameter | Description |
|-----------|-------------|
| Index | The unit of measure index. |
| ISO Code | The unit of measure ISO-Code or the internal ERP system format for the UOM. |
| Alias | The comma-separated list of aliases that may be used on an invoice to represent this unit of measure. |

## Vendor Settings

These settings control the validation of the vendor ID field.

| Parameter | Description |
|-----------|-------------|
| Validate From ASSA | If selected, the vendor ID is validated against the Associative Search Engine vendor pool. |
| Check Condition Vendors | If selected, an alternate vendor ID is allowed for a purchase order-based invoice if it matches a vendor held within a condition record. For example, planned freight behind a purchase order line. |
| Alpha Num Site Separator | The special character used to separate a vendor ID and site ID in the unique ID column in the vendor master data source. |
| Ignore PO Vendor | If selected, the system always uses the vendor determined by the Associative Search Engine, rather than defaulting to the remit-to vendor set on the purchase order. This means that it is no longer a requirement for the PO and invoice vendor to match and you do not need to select an invalid reason. |

| | |
|---|---|
| Use ASSA If PO Vendor Invalid | If selected, the system uses the vendor determined by the Associative Search Engine if none of the vendors on the purchase order can be validated against the document. |
| | If the system extracted vendor can be validated, it will be displayed in the vendor ID field, and the invalid reason will automatically be set to "PO VENDOR <> INVOICE VENDOR." If the system determined vendor cannot be validated, it will still be displayed in the field, but will be set to invalid. The invalid reason will not be changed. |
| | This parameter only takes effect if "Ignore PO Vendor" is cleared. |
| Always Use PO Vendor SiteID | If selected, the system sets the site ID during automatic extraction based on the site ID on the purchase order header. |
| Default Country | This setting is used to specify a default country for the vendor if one cannot be determined from the vendor master data. |
| | This should be a two-character ISO-code, such as United States = US, United Kingdom = GB, or Germany = DE. |
| Use Bill To Based Vendor Extraction | If selected and a bill-to name field is found on the invoice, the system dynamically modifies the search area for the invoice vendor to include the following areas. |
| | - The area of the first page of the document above where the bill-to name is detected. |
| | - The bottom ten percent of the first page of the document. |

| | |
|---|---|
| Refine Vendor Extraction | If selected, the system manipulates the weights of the vendor candidates. It adds additional confidence if the vendor name, the vendor street address, the vendor zip code, the vendor VAT registration number and the vendor SIRET ID can be found on the document. <br><br> The weighting adjustments are as follows. <br><br> • For Zip only = +10% <br> • For Zip + Vendor Name = +20% <br> • For Zip + VAT Reg = +20% <br> • For Zip + Street Name = +20% <br> • For Zip + Street Name + Vendor Name = +30% <br> • For Zip + Street Name + VAT Reg = +30% <br> • For Zip + Street Name + VAT Reg = +30% <br> • For Zip + Street Name + VAT Reg + Vendor Name = +40% <br><br> An additional 20% is added to any of the above if the value in the Vendor Identifer column can be found on the document or, for French invoices, if the SIRET ID is found. |
| Check for Alternate Payees | If selected, this activates the alternate payee functionality. |
| Check Vendor Name for NO-PO | If selected, the system will not validate the vendor ID field automatically for a NO-PO document unless either the vendor name or the vendor VAT registration number can be found. |
| Set to invalid if NO-PO change | If selected, the vendor ID field is set to invalid automatically if a Verifier user sets the invoice type field to NO-PO and presses Enter. |

## Global Settings

Global settings are configurable using the Solution Configuration Manager and apply to all clients and profiles.

### ASE Settings

This table allows you to configure the Associative Search Engine for use with the vendor, employee, and company code fields.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| Index ID | The unique index ID for each Associative Search Engine field. |
| Class Name | The name of the class. The only valid value for this option is "Invoices." This is because configuring Associative Search Engine fields for other classes is not supported through the Solution Configuration Manager. |
| Field Name | The technical name of the Associative Search Engine field. For example, `CompanyCode`. |
| Alpha Numeric | If selected, the key field for the pool record is alpha-numeric. If cleared, the field is assumed to be numeric. This must be set correctly in order to generate the pool correctly. |
| Pool Relative | If selected, the system looks for the pool folder in the same directory as the project file. |
| Pool Path | The UNC path to the pool directory if it is not in the same directory as the project file. |
| Pool Directory | The name of the pool directory. |
| Pool Name | The name of the pool. |
| File Relative | If selected, the system looks for the pool import CSV file in the same directory as the project file. |
| Import Path | The UNC path to the pool import CSV file if it is not in the same directory as the project file. |
| Import File Name | The name of the CSV file that is used to build the pool. |
| Import ODBC DSN | The user DSN that represents a connection to the database that holds the data that is used to create the pool. |
| Import ODBC Select | The select statement that returns all rows from the database table. |
| Import ODBC User | The user name to access the database. |
| Import ODBC Encrypted Password | The encrypted user password to access the database. |

| | |
|---|---|
| Auto Import Option | The source from which the pool is created via the Oracle WebCenter Forms Recognition Runtime Server (RTS). This can be set to ODBC or FILE. If set to NONE, the pool is not updated automatically by RTS. |
| First Page Only | If selected, search is limited to the first page of a document. This means that if the field is not on the first page, it is not found during extraction. |
| Zone A Left | Searches a percentage of page A starting from the left margin. |
| Zone A Width | Searches a specified width of page A. |
| Zone A Top | Searches a percentage of page A starting from the top margin. |
| Zone A Height | Searches a specified height of page A. |
| Zone B Left | Searches a percentage of page B starting from the left margin. |
| Zone B Width | Searches a specified width of page B. |
| Zone B Top | Searches a percentage of page B starting from the top margin. |
| Zone B Height | Searches a specified height of page B. |

## Custom Extraction Profiles

Extraction profiles are used to define the extraction behavior for any Custom Fields (1-5) in your project. They control how field candidates are extracted, analyzed and evaluated. The following settings are available.

- Analysis Profiles
- Evaluation Profiles
- Extraction Profiles

**Analysis Profiles**

This table allows you to define one or more format strings for the value you want to

extract. The following column settings are available.

| Parameter | Description |
|---|---|
| | |

| | |
|---|---|
| Analysis Profile ID | The unique ID given to the analysis profile. |
| Index ID | The index ID given to each format string that is used to generate candidates for the field.<br><br>The "Index ID" is unique per "Analysis Profile ID." |
| Compare Type | The compare type used to generate candidates based on the format string. The following options are available for this setting.<br><br>    • `SIMPLE`. Indicates that the format is a simple expression.<br>    • `REGULAR`. Indicates that the format is a regular expression.<br>    • `TRIGRAM`. Indicates that the trigram method is used to find candidate based upon the format string.<br>    • `LEVEN`. Indicates that the Levenshtein method is used to find candidates based upon the format string.<br>    • `STRINGCOMPARE`. Indicates that the String Compare method is used to find candidate based upon the format string. |
| Format | The format string used to generate candidates for the field. |
| Ignore Characters | A list of characters that are allowed to appear in a candidate at any position. The system should be tolerant of these characters when generating candidates.<br><br>For example, hyphens or periods. This list does not need to be comma-separated. |

**Evaluation Profiles**

This table allows you to configure candidate field labels used to drive the extraction of custom

fields. The following column settings are available.

| Parameter | Description |
|---|---|
| Evaluation Profile ID | The unique ID given to the evaluation profile. |
| Index ID | The index ID given to each field label that is used to evaluate candidates for the field.<br><br>The "Index ID" is unique per "Evaluation Profile ID." |
| Context | A word or phrase that is used to help identify the correct candidate for the field result. |
| Ignore Characters | A list of characters that are allowed to appear in a candidate at any position. The system should be tolerant of these characters when generating candidates.<br><br>For example, hyphens or periods. This list does not need to be comma-separated. |
| Strong | If selected, the specified keyword or phrase is considered a strong indicator of the correct candidate. |

**Extraction Profiles**

This table allows you to configure the extraction profiles used for custom

fields 1 to 5. The following column settings are available.

| Parameter | Description |
|---|---|
| Extraction Profile ID | The unique ID for this extraction profile. |
| Description | The profile description. |
| Analysis Profile ID | The analysis profile ID that is used to generate candidates for the field. Entries here correspond to the "Analysis Profile ID" setting within Global Settings > Custom Extraction Profiles > Analysis Profiles. |
| Evaluation Profile ID | The evaluation profile ID that is used to evaluate candidates for the field. Entries here correspond to the "Evaluation Profile ID" setting in the Global Settings > Custom Extraction Profiles > Evaluation Profiles. |
| Evaluation Distance | This represents the fuzzy factor that the system uses when searching for keywords or phrases in the evaluation profile. This value ranges between zero and one, where zero requires an exact match, and one accepts values that do not match at all. |
| Base Weighting | The base weight that is given to all candidates generated for the field, and is expressed as a percentage. Use this setting when only a few candidates are generated for a field (for example, where you are looking for a fixed phrase), and these generated candidates are considered valid extraction results. |
| Overwrite With Search String | When selected, the field result is overwritten with the string compare or Levenshtein search string that is used to generate the candidate. |
| Remove No Number candidates | When selected, any candidates that do not contain at least one numeric character are removed from the list of available candidates. |
| Distance | The fuzzy factor that the system uses when generating candidates. This value ranges between zero and one, where zero requires an exact match, and one accepts values that do not match at all. |
| Max Word Count | This specifies the maximum number of OCR words that are permitted to form a candidate for the field. |
| Max Word Gap | This specifies the maximum gap in millimeters that is allowed to exist between OCR words, so that they are included as part of a generated candidate. |
| Max Candidate Len | This value expresses the maximum length of a candidate in millimeters. Any candidates that exceed this length are ignored. |

| | |
|---|---|
| Case Sensitive | If selected, the system generates candidates in a case sensitive manner based on the format strings entered in the field analysis profile. |
| Keep Spaces | If selected, any spaces between OCR words are preserved in the generated candidate text. |
| Use Regions | If selected, candidate generation is restricted to specific regions on a document. |
| Use First Page | If selected, the system generates candidates on the first page of a document only. |
| First Top | Expressed as a percentage, this setting defines the top-most area on the first page of a document where candidates may be generated.<br><br>A value of zero would start at the top of the page. A value of 20 would start 20% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero.<br><br>In order for this setting to work, "Use First Page" must also be selected. |
| First Bottom | Expressed as a percentage, this setting defines the bottom-most area on the first page of a document where candidates may be generated.<br><br>A value of zero would start at the bottom of the page. A value of 80 would stop 80% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero.<br><br>In order for this setting to work, "Use First Page" must also be selected. |
| First Left | Expressed as a percentage, this setting defines the left-most area on the first page of a document where candidates may be generated.<br><br>A value of zero would start at the left of the page. A value of 20 would start 20% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero.<br><br>In order for this setting to work, "Use First Page" must also be selected. |
| First Right | Expressed as a percentage, this setting defines the right-most area on the first page of a document where candidates may be generated.<br><br>A value of zero would start at the left of the page. A value of 80 would start 80% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero.<br><br>In order for this setting to work, "Use First Page" must also be selected. |
| Use Subsequent Page | If selected, the system generates candidates for all pages between the first and last page of the document.<br>In order for this setting to work, "Use Regions" must also be selected. |
| Subsequent Top | Expressed as a percentage, this setting defines the top-most area on the subsequent page of a document where candidates may be generated.<br><br>A value of zero would start at the top of the page. A value of 20 would start 20% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |

| | |
|---|---|
| Subsequent Bottom | Expressed as a percentage, this setting defines the bottom-most area on the subsequent page of a document where candidates may be generated. |
| | A value of zero would start at the bottom of the page. A value of 80 would stop 80% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Subsequent Left | Expressed as a percentage, this setting defines the left-most area on the subsequent page of a document where candidates may be generated. |
| | A value of zero would start at the left of the page. A value of 20 would start 20% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Subsequent Right | Expressed as a percentage, this setting defines the right-most area on the subsequent page of a document where candidates may be generated. |
| | A value of zero would start at the left of the page. A value of 80 would start 80% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Use Last Page | If selected, the system generates candidates on the last page of a document. |
| | In order for this setting to work, "Use Regions" must also be selected. |
| Last Top | Expressed as a percentage, this setting defines the top-most area on the last page of a document where candidates may be generated. |
| | A value of zero would start at the top of the page. A value of 20 would start 20% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Last Bottom | Expressed as a percentage, this setting defines the bottom-most area on the last page of a document where candidates may be generated. |
| | A value of zero would start at the bottom of the page. A value of 80 would stop 80% of the way down the length of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Last Left | Expressed as a percentage, this setting defines the left-most area on the last page of a document where candidates may be generated. |
| | A value of zero would start at the left of the page. A value of 20 would start 20% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |
| Last Right | Expressed as a percentage, this setting defines the right-most area on the last page of a document where candidates may be generated. |
| | A value of zero would start at the left of the page. A value of 80 would start 80% of the way across the left of the page. A value that exceeds 100 is automatically set to 100. A value of less than zero is automatically set to zero. |

## Custom Settings

This table allows you to create custom settings for use within the solution

user exits. The following types of settings available.

- Single settings
- Indexed settings

**Single settings**

The following columns are available.

| Parameter | Description |
|---|---|
| Group Name | The name of the parameter group. |
| Parameter Name | The name of the parameter. |
| Parameter Type | The parameter type. This can be one of the following types.<br><br>- "BOOL - a boolean value of either "True" or "False"<br>- "INT - an integer value<br>- "VL - any other string value |
| Value | The value of the parameter. |

**Indexed settings**

The following columns are available.

| Parameter | Description |
|---|---|
| Group Name | The name of the parameter group. |
| Parameter Name | The name of the parameter. |
| Index ID | The index ID of the parameter. |
| Parameter Type | The parameter type. This can be one of the following types.<br><br>- "BOOL - a boolean value of either "True" or "False"<br>- "INT - an integer value<br>- "VL - any other string value |
| Value | The value of the parameter. |

## Database Settings

This table is used to configure database connections used within the

solution. The following column settings are available.

| Parameter | Description |
| --- | --- |
| Index ID | The index ID. |
| Connection String | The connection string for the SQL connection group ID. |
| Encrypted Password | The encrypted password for the SQL connection group ID.<br><br>For more information, refer to the AP Project Password Encryption section. |

## Display Text Settings

These settings define the display texts for field labels, invalid reasons, field drop-downs and dialog boxes.

**Document Type Text Settings**

This table allows you to configure the drop-down options presented to a user within the Verifier application for the Document Type field. Do not change the existing content of this table. However, you can add new rows that reference an existing Text Element ID to support translations for additional languages.

| Parameter | Description |
| --- | --- |
| Text Element ID | The ID for the text element. This must be set to either '1' for 'INVOICE' or '2' for 'CREDIT'. |
| Language ID | The two character language ISO-code for the document type text, for example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. |
| Display Text | The display text for the language specified in the LanguageID column. |

**Field Text Settings**

This table allows you to configure the field and column labels for different languages that are presented to a user within the Verifier application. You can add new rows to reference an existing Text Element ID to support translations for additional languages. For text elements relating to custom fields, these must be created with a TextID from 900 upwards.

| Parameter | Description |
| --- | --- |
| Text Element ID | The unique ID for the text element. |

| | |
|---|---|
| Language ID | The two character language ISO-code for the field text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre-configured. |
| Display Text | The display text for the language specified in the LanguageID column. |

**General Text Settings**

This table allows you to configure the text displays used in dialog boxes.

| Parameter | Description |
|---|---|
| Text Element ID | The unique ID for the text element. |
| Language ID | The two character language ISO-code for the text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre-configured. |
| Display Text | The display text for the language specified in the Language ID column. |

**Invalid Reason Text Settings**

This table allows you to configure the invalid reason texts that are presented to a user within the Verifier application for the Invalid Reason field. You can add new rows that correspond to an existing or custom Text Element ID to support translations for additional languages.

| Parameter | Description |
|---|---|
| Text Element ID | The unique ID for the text element. |
| Language ID | The two character language ISO-code for the invalid reason text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre- configured. |
| Display Text | The display text for the language specified in the LanguageID column. |

**Invoice Type Text Settings**

This table allows you to configure the drop-down options presented to a user within the Verifier application for the Invoice Type field. Do not change the existing content of this table. However, you can add new rows that reference an existing Text Element ID to support translations for additional languages.

| Parameter | Description |
|---|---|
| Text Element ID | The unique ID for the text element. |
| Language ID | The two character language ISO-code for the invoice type text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre- configured. |
| Display Text | The display text for the language specified in the Language ID column. |

**Payment Method Text Settings**

This table allows you to configure the drop-down options presented to a user within the Verifier application for the Bank Account Status field. You can use this table to change the existing display texts and you can also add new rows that reference an existing Text Element ID to support translations for additional languages.

| Parameter | Description |
|---|---|
| Text Element ID | The unique ID for the text element. |
| Language ID | The two character language ISO-code for the payment method text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre-configured. |
| Display Text | The display text for the language specified in the **Language ID** column. |

**PO Type Text Settings**

This table allows you to configure the drop-down options presented to a user within the Verifier application for the PO Type field. Do not change the existing content of this table. However, you can add new rows that reference an existing Text Element ID to support translations for additional languages.

| Parameter | Description |
|---|---|
| Text Element ID | The unique ID for the text element. |

| | |
|---|---|
| Language ID | The two character language ISO-code for the PO type text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre- configured. |
| Display Text | The display text for the language specified in the Language ID column. |

## Document Type Formats

This table allows you to specify words and phrases that may appear on an incoming document that help identify a document as a Credit Memo.

For example, CREDIT NOTE, CREDIT MEMO, AVOIR, or GUTSCHRIFT.

The following column settings are available.

| Parameter | Description |
|---|---|
| Index | The unique index for the document type format. |
| Format | The format string for words that identify a document as a credit note. The Levenshtein compare method is used here. |
| Ignore Characters | The list of characters that the system ignores in the corresponding format string. For example, a hyphen, comma, or period. |

## Error Message Settings

This table allows you to configure the system error messages that are displayed in Verifier , or written to the AP Project log file.

The following column settings are available.

| Parameter | Description |
|---|---|
| Error Number | The error message number. You can add new error messages using error number 900 onward. |

| Parameter | Description |
|---|---|
| Language ID | The two character language ISO-code for the error message text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre-configured. |
| Message | The error message text. |

## General Settings

These settings are used to give a name to your project and to control general solution

behavior. The following settings are available.

| Parameter | Description |
|---|---|
| Project Name | The name of the project. |
| Version | The project version number. |
| Client Name | The default client name. |
| Verifier Form Style | The name of the color scheme applied to the Verifier form. The option is BW. This is the Oracle WebCenter Forms Recognition logo color Scheme. <br><br> If any other setting is applied (including blank), then the system displays the default Verifier color scheme, such as gray form with valid fields marked in green and invalid fields marked in red. |
| Verifier Text | The default two character language ISO-code of the Verifier form labels for the application being configured. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre- configured. |
| Use Dynamic Verifier Form | If selected, the system will use the Dynamic Verifier form. |
| Review State | The RTS state used for documents sent for supervisor review. |
| Read Settings From DB | If selected, the AP Project settings are read from the database. <br><br> This check box is selected by default. |
| SQL Connection Group | The numeric reference to the SQL connection group which represents the database in which the AP Project configuration tables are created. |

| Dynamic Debug | If selected, advanced system logging and tracing is activated for the solution. |
|---|---|
| Batch in Database | This must be selected if batches are stored within the Oracle WebCenter Forms Recognition platform database.<br>This check box is selected by default. |
| Batch SQL Connection Group | The numeric reference to the SQL connection group which represents the Oracle WebCenter Forms Recognition platform database.<br>This must be set to '01', '02', and so on. |
| Activate Vendor Filtering | If selected, this activates use of vendor partitions. |
| Vendor Filter Column | The case-sensitive name of the database column in the vendor master table that contains the partition ID. |
| Activate Employee Filtering | If selected, this activates use of employee partitions. |
| Employee Filter Column | The case-sensitive name of the database column in the employee master table that contains the partition ID. |
| Buffer Client Settings | Select this option to enable client buffering. This means that configuration settings are not reloaded for a document if the previous document belonged to the same client.<br>It is not recommended to use this option in a production system. |
| Set Batch Priority From RTS | If selected, the batch priority is determined by the import priority setting of the RTS instance that performs document import. The priority setting against the client is not used. |
| ActivateEfficientMemoryStorage | Select this option to activate efficient memory storage for the document settings. This stores the document settings against named property UserStrings_0 in the workdoc, rather than in the tmpSettings table. |

## Import Settings

These settings are used to map values contained within the image filename to corresponding fields within AP Project.

The following settings are available.

| Parameter | Description |
|---|---|
| URN | The document unique reference number. |
| Batch Name | The name of the batch assigned by a third-party system. |
| Scan Date | The document scan date. No validation is carried out for this field. |
| Priority Flag | The document priority flag. |
| Invoice Type | The document invoice type, such as PO or NO-PO. |
| Destination Archive | The document destination archive. |
| Company Code | The invoice company code. |
| Input Source | The document input source, such as SCAN, EDI, or EMAIL |
| Client ID | The document client ID. This value must be mapped in a multi-client project. If the value is not mapped, the configuration set associated with client zero is used. |
| Location ID | The document location ID. Use this field to hold the BPO operation location ID that is relevant for the document. For example, the ID of a shared service center. |
| External Batch ID | The external batch ID. |
| Transaction ID | The transaction ID. |
| Transaction Type | The transaction type. |
| Separator | The separator used to separate data elements within the image filename. If this value is left blank, the separator defaults to an underscore. |
| Priority Flag Yes | The value that denotes a positive setting for the priority flag. |
| Date Format | The format for dates contained within the document filename. The options for this value are DDMMYYY, MMDDYYY, or YYYYMMDD. |
| Import Client From DB | If selected, the system performs a look-up to a client ID table using the document filename/URN. |
| SQL Connection Group | The SQL connection group specifying the client ID look-up database. If no connection group is specified, the system uses group 01. |

| Client Key | The value used by the system as the key to look up a client ID from the client ID look-up table. |
|---|---|
| | If set to FILENAME, key will be set to the original image filename without the file path and file extension. |
| | If set to URN, the key will be set to the document URN mapped to the "URN" field. |
| DB Table Name | The name of the database table holding the relationship between the document filename/URN and the client ID. |
| DB URN | The technical name of the column in the database table above that holds the document filename/URN. |
| DB Client ID | The technical name of the column in the database table above that holds the corresponding client ID. |

## Information Messages

Information messages appear in Verifier during document correction. The settings are divided into two sections.

- Information Settings
- Information Message Settings

**Information Settings**

These are general settings associated with the Verifier information message box

configuration. The following settings are available.

| Parameter | Description |
|---|---|
| Dialog Header | This is the text displayed at the information box title bar. |
| Disable MIRA Popup | If selected, this disables the dialog box that informs the user that line items are not required because there is a one-to-one match between the invoice and the purchase order. |
| Disable Currency Popup | If selected, this disables the dialog box that allows the user to choose whether the invoice currency should be overwritten with a currency derived from the vendor master data or the purchase order. This dialog box only appears when the vendor or the purchase order is changed. |

**Information Message Settings**

This table allows you to configure the information messages that appear in Verifier. **Important** You should only change the text associated with each message, not the IDs. The following column settings are available.

| Parameter | Description |
|---|---|
| Information Message ID | The information message ID. |
| Language ID | The two character language ISO-code for the information message text. For example, 'EN' is English, 'DE' is German, 'and CN' is Chinese. AP Project ships with English and Chinese languages pre-configured. |
| Message | The information message. Within the information message, text symbols [PON], [VEN] and [CUR] are used to represent the current purchase order number, vendor ID and currency respectively. |

## Invalid Reasons

The configuration of invalid reasons is divided into two areas.

- Invalid Reason Settings
- Invalid Reason Display Text

**Invalid Reason Settings**

These are the default settings associated with the invalid reason field. The following settings are available.

| Parameter | Description |
|---|---|
| Default Text | The default invalid reason. For example, NONE. |
| Default Export Code | The export code associated with the default invalid reason. For example, 0. |

**Invalid Reason Display Text**

This table allows you to configure the invalid reasons that may be selected by a Verifier user during document processing.

The following column settings are available.

| Parameter | Description |
|---|---|
| Index | This is a read-only ID that represents the invalid reason. |
| Rule | The rule ID for the invalid reason. The rule governs how Verifier behaves when a particular invalid reason is selected.<br><br>The following rules are available:<br><br>- `SETVENDORTOVALID`. Sets the vendor field to valid.<br>- `SETPOTOVALID`. Sets the purchase order number field to valid. No line pairing is carried out.<br>- `ALLOWNONPOVENDOR`. Allows a vendor ID to pass even if it is unconnected to the purchase order, but only as long as the vendor ID exists in the master table.<br>- `SETAMOUNTSTOVALID`. Sets the amount fields and the table to valid. No line pairing is carried out.<br>- `THIRDPARTYFREIGHT`. Sets the vendor number field to valid as long as the vendor exists, and processes the document according to the third-party freight rules during line pairing.<br>- `SETVENDORANDPOTOVALID`. Sets the purchase order and vendor number fields to valid. No line pairing is carried out.<br>- `NONVATCOMPLIANT`. Sets the local VAT amount, exchange rate, VAT table, vendor VAT registration number, and bill-to VAT registration number fields to valid.<br>- `STOCKINVOICE`. Sets the purchase order number field to valid. Line pairing is still carried out based on purchase orders added programmatically in UserExitLinePairingPOs.<br>- `ZEROVALUEINVOICE`. Permits a zero total to pass in Verifier.<br>- `SETLINEITEMSTOVALID`. Sets the line items to valid. No line pairing is carried out.<br>- `SETINVOICETOVALID`. Sets the vendor ID, PO number and all document amount fields to valid. No line pairing or VAT compliance checking is carried out. |

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| | |
|---|---|
| Verifier Display | The invalid reason text displayed in Verifier. |
| Export Code | The invalid reason code exported by AP Project if the "Invalid Reason" field is set. |

## Master Data

**Company Code Master Data**

The company code master data allows you to configure the company codes used by the solution. The following settings are available.

| Parameter | Description |
|---|---|
| Company Code Partition | This is the company code partition ID that you have registered in **Global Settings > Company Code Partition Settings**. |
| Company Code | This is the unique ID for the company code. This column is mandatory. |
| Currency | This is the three character ISO-code for the currency used by the company code. |
| Country | This is the two character ISO-code that represents the tax country. This column is mandatory. |
| VAT Reg No | This is a comma separated list of VAT registration numbers used by the company. This column is optional. |

**Country Master Data**

The country master data allows you to configure the countries used by the

solution. The following settings are available.

| Parameter | Description |
|---|---|
| Country | This is the two character ISO-code that represents the country. |
| EU Tax Member | This flag indicates whether the country participates in the European Union VAT directive. |
| Currency | This is the three character ISO-code for the primary currency of the country. |
| Country Name | This is the name of the country. |
| VAT Rates | This is a comma separated list of tax rates used nationwide within the country. |

| | |
|---|---|
| Non EU Tax Group | This is the name of the non-EU tax group that the country belongs to. The value entered here is ignored if the EU member check box is selected. |
| Relevant For Dynamic Terms | This flag indicates whether the country is relevant for dynamic payment terms selection. |

**Currency Master Data**

This currency master data allows you to configure the recognition and properties of the currencies used within the solution. The system can only extract a currency that is registered in this table.

The following column settings are available.

| Parameter | Description |
|---|---|
| Index | The currency index. |
| ISO Code | The currency ISO code for the currency settings group. |
| Alias | A comma-separated list of aliases for the currency. For example, Pounds Sterling for GBP, U.S. Dollars or U.S. funds for USD, and Swiss Francs for CHF. If any items on this list are found on the document then the extracted invoice currency is set to the "ISO Code" value above for the currency listed. |
| Amount Prefix | The comma-separated list of values that may precede or follow an amount on the invoice that represents the currency. For example, US$ would be the prefix for US$1000.00. |
| Symbol | The symbol associated with the corresponding currency. **Important** This value must be a special character and not a single letter. |
| Country | The country associated with the currency symbol above. It can be left blank if the currency is used by multiple countries, such as the Euro. If the symbol for the currency settings group is found on the document, and that symbol is unique across all currency settings groups, and the vendor country matches the country held in this option, then the value held in "ISO Code" above is extracted as the invoice currency. |

| | |
|---|---|
| Tolerance Group | The tolerance group for the currency. |
| | The values for this option are defined in the Global Settings > Tolerance Settings. |

**Misc Charge Account Master Data**

The miscellaneous charge account coding master data allows you to configure the way you want miscellaneous charges to be posted to general ledger accounts.

The following settings are available.

| Parameter | Description |
|---|---|
| Misc Charge Acc Partition | This is the miscellaneous charge account coding partition ID that you have registered in **Global Settings > Misc Charge Account Partition Settings**. |
| Company Code | This is the company code. This column is mandatory. |
| Category | This is the miscellaneous charge category. This column is mandatory. |
| Plant | This is the plant. If you do not wish to specify a plant, you must enter a space in this column. |
| Line Type | This is the line type. If you do not wish to specify a line type, you must enter a space in this column. |
| GL Account | This is the general ledger account you want to use for the miscellaneous charge account posting. This column is mandatory. |
| Cost Center | This is the cost center you want would to use for the miscellaneous charge account posting. |
| Profit Center | This is the profit center you want to use for the miscellaneous charge account posting. |
| Tax Code | This is the tax code you want to assign to the miscellaneous charge coding line. If you do not wish to specify a tax code, you must enter a double asterisk (*') here. |

**Plant Master Data**

The plant master data allows you to configure the plants used by the solution. The following settings are available.

| Parameter | Description |
|---|---|
| Plant Partition | This is the plant partition ID that you have registered in **Global Settings > Plant Partition Settings**. |
| Plant | This is the unique ID for the plant. This column is mandatory. |
| State | This is the two character ISO-code for the state where the plant is located. |
| Country | This is the two character ISO-code for the country where the plant is located. This column is mandatory. |
| Tax Jur Code | This is the tax jurisdiction code for the area where the plant is located. This column is optional. |

**Tax Code Master Data**

The tax code master data allows you to configure the tax codes you want the system to assign to paired invoice lines for countries without tax jurisdictions.

The following settings are available.

| Parameter | Description |
|---|---|
| Tax Partition | The is the tax partition ID that you have registered in **Global Settings > Tax Partition Settings**. |
| Country | This is the two character ISO-code that represents the tax country. This column is mandatory. |
| Ship To | This is the two character ISO-code that represents the country where goods were shipped to, or services performed. This column is mandatory. |
| Ship From | This is the two character ISO-code that represents the country from which the goods were shipped. This column is mandatory. |
| Service | Flag to indicate whether the tax code record is relevant for service only. |
| Vendor ID | This is the vendor ID for the tax record. This column is optional. |

| | |
|---|---|
| Material | This is the material number for the tax record. This column is optional. |
| Material Group | This is the material group for the tax record. This column is optional. |
| Percentage | This is the percentage rate for the tax code. If you do not want to set a percentage, the value must be set to 999. |
| Recovery Percentage | This is the percentage of the tax that can be recovered from the tax authorities. This value defaults to **100**. |
| India In State | Flag to indicate whether the tax record is relevant for in-state transactions for India. |
| Tax Code | This is the tax code that you would like the system to assign to an invoice line in the tax situation described by this tax record. You can leave this value blank if you do not want the system to assign a code. |

**UOM Conversion Master Data**

The unit of measure conversion master data allows you to configure the ratios between different units of measure for a given material. This information is used during line pairing.

The following settings are available.

| Parameter | Description |
|---|---|
| UOM Partition | This is the UOM partition ID that you have registered in **Global Settings > Unit Of Measure Conversion Partition Settings**. |
| Material | This is the material number for the unit of measure conversion record. This column is mandatory. |
| Base UOM | This is the base unit of measure for the material. It must be entered as an ISO-code. This column is mandatory. |
| Numerator | The is the numerator component for the unit of measure conversion record. It must be entered as a numeric value greater than zero. |
| Denominator | The is the denominator component for the unit of measure conversion record. It must be entered as a numeric value greater than zero. |

| | |
|---|---|
| UOM | This is the external unit of measure. This column is mandatory. |

## Partition Settings

For some types of look-ups, AP Project supports a scenario where multiple sets of data are held within the same database table or data source. For example, use of a PO number partition allows the system to work with a master purchase order table that contains purchase order data provided from multiple ERP systems.

These multiple data sets are distinguished using partitions, and the types of partitions supported are as follows.

- Vendor Partitions
- Employee Partitions
- PO Number Partitions
- Tax Partitions
- Company Code Partitions
- Plant Partitions
- Miscellaneous Charge Account Coding Partitions
- Unit Of Measure Conversion Partitions

**Company Code Partition Settings**

This table contains the company code master data partitions that are active in the solution. You must register a company code partition in this table before you can assign it to a client.

The following column settings are available.

| Parameter | Description |
|---|---|
| Company Code Partition | The unique ID of the company code data partition. It must be entered as an integer. |
| Description | The partition details. |

**Employee Partition Settings**

This table contains the employee partitions active within the solution. An employee partition must be registered in this table before it can be assigned to a client.

The following column settings are available.

| Parameter | Description |
|---|---|
| Employee Partition | The unique employee partition ID. It must be entered as an integer. |
| Description | The partition details. |

**Misc Charge Account Partition Settings**

This table contains the miscellaneous charge account coding partitions that are active in the solution. You must register a miscellaneous charge account coding partition in this table before you can assign it to a client.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| Misc Charge Acc Partition | The unique ID of the miscellaneous charge account coding partition. It must be entered as an integer. |
| Description | The partition details. |

**Plant Partition Settings**

This table contains the plant master data partitions that are active in the solution. You must register a plant partition in this table before you can assign it to a client.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| Plant Partition | The unique ID of the plant data partition. It must be entered as an integer. |
| Description | The partition description. |

**PO Number Partition Settings**

This table contains the purchase order data partitions that are active in the solution. You must register a purchase order partition in this table before you can assign it to a client.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| PO Partition ID | The unique ID of the purchase order data partition. It must be entered as an integer. |
| Description | The partition description. |

**Tax Partition Settings**

This table contains the tax partitions active within the solution. A tax partition must be registered in this table before it can be assigned to a client.

The following column settings are available.

| Parameter | Description |
|---|---|
| Tax Partition ID | The unique ID of the tax data partition. It must be entered as an integer. |
| Description | The partition description. |

**Vendor Partition Settings**

This table contains the vendor partitions active within the solution. A vendor partition must be registered in this table before it is assigned to a client.

The following column settings are available.

| Parameter | Description |
|---|---|
| Vendor Partition | The unique ID for the vendor partition. It must be entered as an integer. |
| Description | The partition description. |

**UOM Partition Settings**

This table contains the unit of measure conversion partitions active within the solution. A unit of measure conversion partition must be registered in this table before it is assigned to a client.

The following column settings are available.

| Parameter | Description |
|---|---|
| UOM Partition | The unique ID for the UOM partition. It must be entered as an integer. |
| Description | The partition description. |

## Profile Group Settings

Profile groups are used to group multiple processing profiles together for ease of assigning to areas of applicable solution functionality.

The configuration of profile groups is divided into two areas.

- Profile group definition
- Assigning processing profiles to profile groups

**Profile Group Definition**

This table contains the profile groups that exist within the system. A profile group must be registered in this table before it can be used.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| Profile Group ID | The unique profile group ID. |
| Description | A short description of the profile group. |

**Assign Processing Profiles to Profile Groups**

This table is used to assign individual processing profiles to a profile group. Each row represents one assignment.

The following column settings are available.

| Parameter | Description |
| --- | --- |
| Profile Group ID | The profile group ID. |
| Profile ID | The ID of the processing profile assigned to the profile group. |

## Payment Terms Settings

These settings allow you to configure payment terms.

**Payment Terms Profile Settings**

These settings allow you to configure a payment terms profile.

| Parameter | Description |
| --- | --- |
| Payment Terms Profile ID | This is the payment terms profile ID. |
| Description | This is the description of the payment terms profile. |

**Payment Terms Configuration**

These settings allow you to configure a set of payment terms codes for each payment terms profile.

| Parameter | Description |
| --- | --- |
| Payment Terms Profile ID | This is the payment terms profile ID. |
| Payment Terms Code | This is the payment terms code. |
| Description | This is the payment terms code description. |

| Priority | This is the payment terms code priority where 1 represents the highest priority. A priority of 0 means that the terms are not considered during the dynamic payment terms selection process at time of document export. |
|---|---|
| Days 1 | This is the first discount period in days |
| Percentage 1 | This is the first discount percentage. |
| Days 2 | This is the second discount period in days. |
| Percentage 2 | This is the second discount percentage. |
| Days 3 | This is the third discount period in days. |

## Reporting Settings

These settings allow you to activate and configure reporting.

| Parameter | Description |
|---|---|
| Connect To Reporting DB | If selected, solution reporting is activated. |
| SQL Connection Group | The SQL connection group representing the connection to the reporting database. |
| Reporting In Designer | If selected, the system will write data into the reporting database for documents processed or analyzed in the Oracle WebCenter Forms Recognition Designer Module.<br><br>This options is provided for testing purposes and must not be used in a production system. |
| Reporting DB Document Table | The name of the document header table in the reporting database. |
| Reporting DB Field Table | The name of the document field table in the reporting database. |
| Reporting DB History Table | The name of the document history table in the reporting database. |
| Reporting DB Image Table | The name of the document image table in the reporting database. |
| Store Image In Reporting Tables | If selected, the document image will be written into the reporting database image table at time of document export. |

| | |
|---|---|
| Activate Line Item Reporting | If selected, line item reporting is activated. |
| Reporting Key | This setting defines the type of unique reference assigned to each document record in the reporting |
| | database.<br>If set to FILENAME, the unique reference is set to the original image filename without the file path and file extension.<br>If set to URN, the unique reference is set to the document URN mapped in Global Settings > Import Settings. |
| Archive URL | The mask for the URL associated with a document link. XXXXX denotes the part of the URL that the system substitutes with the unique archive document ID to form a valid URL for document retrieval. |
| Storage Directory | The path to the directory which is used as a repository to store images subsequent to document export. |

## Search Field Mapping

These settings allow you to map columns in the vendor and employee master data sources to the corresponding column names used internally within AP Project. If you are using the Associative Search Engine for both the vendor and employee, the technical column names in the vendor and employee master data must be the same for the same item of data.

| Parameter | Description |
|---|---|
| ID | The AP Project ASE column name that represents the unique identifier for a row in the data extract. If you are using table BRWVendorMaster, this value is held in the IndexID column.<br>For ERP systems where a vendor at a unique address is represented simply by a vendor ID, the unique identifier for a row in the vendor master can be set to the vendor ID.<br>For ERP systems where a vendor at a unique address is represented by a combination of the vendor ID and the site ID, the unique identifier must be set to the following.<br>VendorID~SiteID<br>The delimiter (~ in the previous example) is configurable using **Alph Num Site Separator** in Processing Profile > Vendor Settings.<br>If your unique identifier contains a site ID, you must also map the column names used for the site ID and external vendor ID.<br>If you are using a vendor partition, the unique identifier must be prefixed by |

| | |
|---|---|
| | the partition ID number and a hyphen as shown below. PartitionID-VendorID~SiteID You must also map the column name used for the partition ID. |
| Site ID | The AP Project ASE column name denoting the vendor site ID. This must only be mapped if the site ID is used within the unique identifier for the row. |
| Name | The AP Project ASE column name denoting the vendor name. |
| Address 1 | The AP Project ASE column name denoting the first line of the vendor's address. |
| Address 2 | The AP Project ASE column name denoting the second line of the vendor's address. |
| City | The AP Project ASE column name denoting the vendor's city of origin. |
| Zip | The AP Project ASE column name denoting the vendor zip/postal code. |
| State | The AP Project ASE column name denoting the vendor's state/region. |
| Country | The AP Project ASE column name denoting the vendor's country of origin. |
| PO Box | The AP Project ASE column name denoting the vendor's PO Box. |
| PO Box Zip | The AP Project ASE column name denoting the postal/zip code that relates to the vendor's PO box. |
| EU Member | The AP Project ASE column name denoting whether the vendor's country of origin is a member of the European Common VAT Framework. |
| Currency | The AP Project ASE column name denoting the currency for the vendor's country of origin. |
| Tax ID 1 | The AP Project ASE column name denoting the vendor primary tax ID. |
| Tax ID 2 | The AP Project ASE column name denoting the vendor secondary tax ID. |

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|---|---|
| Vat Reg No | The AP Project ASE column name denoting the vendor VAT registration number. Multiple VAT registration numbers must be presented as a comma-separated list if the vendor is VAT registered in more than one country. VAT registration numbers should contain the two-character country prefix, but this is not mandatory. |
| Tax Jur Code | The AP Project ASE column name denoting the vendor's tax jurisdiction code (US). |
| Tel No | The AP Project ASE column name denoting the vendor's telephone number. |
| Invoice Type | The AP Project ASE column name denoting whether the vendor is permitted to submit a NO-PO invoice. |
| Payment Methods | The AP Project ASE column name denoting the vendor's payment methods. |
| Payment Terms | The AP Project ASE column name denoting the vendor's payment terms. |
| Bank Details | The AP Project ASE column name denoting the vendor's bank account details. This is a colon-separated list that uses the following format.<br><br>`BankAccount,SortCode,ERPBankAccountCode`<br><br>A sortcode is the equivalent of a routing number in the US. |
| Withholding Tax Details | The AP Project ASE column name denoting the vendor's withholding tax details. This must be a colon- separated list in the following format.<br>CompanyCode,WithholdingTaxType,WithholdingTaxCode |
| Company Codes | The AP Project ASE column name denoting a comma-separated list of company codes for which the vendor is valid. |
| Utility Flag | The AP Project ASE column name denoting whether the vendor is a utility vendor. |
| POR Subscriber No | The AP Project ASE column name denoting the vendor's Post Office Reference number as used in Switzerland. |
| External Vendor ID | The AP Project ASE column name denoting the vendor's external ID, such as the supplier number as used in Oracle Financials.<br>This must be mapped if a site ID is used within the unique identifier for the row. |

| | |
|---|---|
| External Site ID | The AP Project ASE column name that represent the vendor's external site ID. |
| Siret ID | The AP Project ASE column name that represents the vendor SIRET ID number, as assigned to French vendors. |
| Vendor Identifier | The AP Project ASE column name that represents a unique vendor identifier, such as a Chinese tax registration number. |
| Partition ID | The AP Project ASE column name that represents the vendor partition ID. This must be mapped if vendor partitions are used within the solution. |
| EU Member Alias | The value that denotes a positive identification of the vendor as a member of the European Common VAT Framework. |
| Custom1 | The AP Project ASE column name that represents an item of custom vendor information. |
| Custom 2 | The AP Project ASE column name that represents an item of custom vendor information. |
| Custom 3 | The AP Project ASE column name that represents an item of custom vendor information. |
| Custom 4 | The AP Project ASE column name that represents an item of custom vendor information. |
| Custom 5 | The AP Project ASE column name that represents an item of custom vendor information. |

## Stored Procedure Settings

This table allows you to define and configure stored procedure parameters that can be used for the look-ups to the purchase order header and line item database tables.

The following column settings are available.

| Parameter | Description |
|---|---|
| Index | The stored procedure parameter index. |
| Parameter Name | The name of the stored procedure parameter. This value is mandatory for each stored procedure parameter. |
| Parameter Type | The stored procedure parameter type. Possible options are BOOLEAN, INT, DATE, DOUBLE, VARCHAR and |

| | UNKNOWN. |
|---|---|
| Parameter Size | This setting specifies the maximum length allowed for a parameter type of VARCHAR. If no value is entered, the system will use a default length of 50. |
| Parameter Value | This setting is used to assign a value to the parameter. You can either enter a fixed value or the technical name of an AP Project field such as PONumber or CompanyCode. Field names are case sensitive. |
| Parameter Direction | Select "I" if it is an input parameter or "O" for an output parameter. |

## Substitution Rules

This table allows you to configure substitution rules applied to relevant text fields at time of data export.

The following column settings are available.

| Parameter | Description |
|---|---|
| Substitution Rule | The read-only substitution rule ID. |
| Original | The segment or string of text that is replaced. |
| Replace | The segment or string that replaces the "Original" text if found in the string. |

## Tolerance Settings

This table allows you to configure the tolerances that are applied during the mathematical validation of the invoice amount fields. Each row in the table represents a tolerance group.

A tolerance group can be assigned to a currency in **Global Settings > Currency Master Data**. Each group has a group code and a set of three tolerances that control the permitted deviations at header level, line item level, and for tax validations. You can also use the tolerance group to flag currencies that do not use a currency sub-unit.

The following column settings are available.

| Parameter | Description |
|---|---|
| Index | The tolerance group index. |
| Header Tolerance | The tolerance value used for the invoice header amounts. |
| Table Row Tolerance | The tolerance value used for each individual line item. |

| | |
|---|---|
| Tax Tolerance | The tolerance value used for each row in the VAT table and also for comparing the invoice tax amount with the system calculated tax amount, based on the line item tax codes. |
| No Decimal Places | It is recommended to select this check box for tolerance groups that are assigned to currencies that do not have a sub-unit such as a cent or a penny. Two examples of such currencies are the Hungarian Forint and the Japanese Yen. The check box controls the automatic formatting of the amount extracted. |
| | If selected and an amount of 10.400 is extracted, then the amount will be formatted to 10400. If not selected, the amount remains as 10.400. An amount of 10.40 remains the same irrespective of whether the check box is selected or not. |

## User Management

This table allows you to set up and configure active system users, their authorization level and

preferences. The following settings are available.

| Parameter | Description |
|---|---|
| User ID | The user ID. This can be a Windows domain user name, a Windows short name, or an AP Project user name. |
| Client Group | The client group that the user is assigned to. |
| Authority Level | The standard AP Project role assigned to the user. <br><br>• VER. The standard Verifier user. <br>• SET. The standard Verifier user with permission to change verifier settings <br>• SLV. The SET + ability to use the supervised learning function. <br>• SLM. The SLV + ability to review and promote vendor learnsets to the global project. <br>• ADM = Administrator <br>• AEB. Server user that performs automatic import using the import API. <br><br>All users have the standard filter role. |

| Requires Review | If selected, all documents verified by the user move to a review state for quality control. |
|---|---|
| Relevant For ALM | If selected, documents verified by this user are relevant for addition to the ALM learnset. |
| Domain | The Windows domain for Windows-based authentication. |
| Encrypted Password | The encrypted password for the user. For more information, refer to the AP Project Password Encryption section. |
| Primary Group Name | The Verifier user primary group name (for example, Admin). Use this name to associate a user to a predefined group of Verifier settings. If the primary group name does not exist, the system will create it automatically. |
| Language Code | The Verifier language preference for the Dynamic Verifier form. Use the two character ISO-code for the language, for example, 'EN' for English or 'CN' for Chinese. |

### Vendor Force Verify Settings

This table contains a list of vendors whose invoices are required to stop in Verifier. This functionality can be an activated globally, or just for a specified processing profile group.

The following column settings are available.

| Parameter | text |
|---|---|
| Vendor Partition ID | The unique ID for the vendor partition. |
| Vendor ID | The vendor ID. |
| Vendor Name | The name of the vendor. |
| Set As Profile Specific | If selected, the force verify applies only to a vendor invoice if the current processing profile is a member of the specified profile group. If cleared, the force verify applies globally to all invoices receives from the vendor specified. |
| Profile Group ID | The profile group ID. |

## Export Settings

These settings effect how documents and batches are exported.

The following export setting categories are available per export profile.

- Export Mapping
  - CSV Export Configuration
  - GL Export Mapping
  - Header Field Export Mapping
  - Line Item Export Mapping
  - Tax Export Mapping
- Export Options

## Export Mapping

The following export mapping settings are available:

- CSV Export Configuration
- GL Export Mapping
- Header Field Export Mapping
- Line Item Export Mapping
- Tax Export Mapping

**CSV Export Configuration**

This table controls the CSV file output format. You can configure the system to output multiple CSV files per document. Each row in the table represents the configuration for a single CSV file.

| Parameter | Description |
|---|---|
| Index | The CSV file index. |
| Output File | If selected, the system outputs a CSV file according to the specified configuration settings. |
| Combined File Per Batch | If selected, the system will output one CSV file per batch. If output is required on a per batch basis, the output file is created with a .TMP extension until the last document in the batch is exported successfully. It is not possible to output a combined file per batch unless the RTS instance carrying out the document import has a document grouping setting of either 1 folder-per-batch or 1 batch-per-subdirectory. |

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|---|---|
| Filepath | Specifies the location of an alternate export directory for the CSV file group. |
| | If left blank, the main export directory set against the RTS instance that carries out document export is used. If no export directory is configured against the RTS instance, the default export directory configured in the Export Settings > Export Options. If an override export path has been configured in the export settings, this path takes priority over all other paths. If this value is blank, or a specified directory does not exist, the CSV file export fails. |
| Filename | The naming convention for the CSV file if it is output on a document-by-document basis. |
| | If set to FILENAME, the CSV filename is set to the original image filename without the file path and file extension. |
| | If set to URN, the CSV filename is set to the document URN mapped in Global Settings > Import Settings. |
| | This setting does not apply if you have selected the **Combined File Per Batch** check box as the name of the file will be derived from the Oracle WebCenter Forms Recognition batch number. |
| File Type | The file extension for the output file. If left blank, .CSV is used by default. |
| File Prefix | The file prefix for the output file. |
| Separator | The separator that is used in the CSV file line. Based on user input, the system automatically cleanses any extracted data using this separator. It does this in order to maintain a consistent number of columns in the output. Illegal separators include the period, forward slash, and a backslash. |
| | The chosen separator must be entered manually in the format configuration for each format line and line item configuration parameter. |
| Date Format | The desired date output format. If no entry is made, the system defaults to the output date format configured in the Processing Profile Configuration Settings > Date Settings. |
| | If no entry is available in either locations, the default value of "DDMMYYYY" is used. |
| Date Separator | The separator that is used in conjunction with the date format setting above. |
| | For example, if the date format above is "MMDDYYYY" and a hyphen is entered as the separator in this parameter. If the extracted date is "2nd November 2009," then the output is "11-02-2009." |

| | |
|---|---|
| Invoice Type | The filter applied to the CSV file so that output is controlled by the "Value Invoice Type" field. If this value is set to PO, the CSV file is only written if the invoice type is PO. If this value is set to NPO, the CSV file is only written if the invoice type is NO-PO. |
| Output Image | If selected, the original document image is output to the same directory as the CSV file. The document image relates to the original image "Filename" and "Filetype." |
| Format Line 1 - 5 | This parameter controls the format of each row that is output to the CSV file. Up to five rows can be output per CSV file.<br><br>For example, to output the TIFF name, the invoice number (1234) and the vendor number (ABC) are separated by a colon. The setting should contain the following.<br><br>`<%TNM>:<%INO>:<%VID>`<br><br>This value produces the following:<br><br>`myFile.tif:1234:ABC`<br><br>Additional text can also be included in the format. For example,<br><br>`File=<%TNM>|InvoiceNumber=<%INO>|Vendor ID=<%VID>`<br><br>would produce the following:<br><br>`File=myFile.tif|Invoice Number=1234|VendorID=ABC`<br><br>The structure of output in the CSV file is presented by the following symbols:<br><br>• <%TNM>. The name of the original imported file without a file path.<br>• <%TNF>. The name of the original imported file |

|  |  |
|---|---|
|  | without the file path or a file extension.<br><br>• <%TND>. The name of the original imported file with the export directory file path.<br><br>• <%SDT>. The scan date in the format configured in the Processing Profile Configuration Settings > Date Settings.<br><br>• <%BNM>. The Batch Name.<br><br>• <%EID>. The employee ID.<br><br>• <%EFN>. The employee first name.<br><br>• <%ELN>. The employee last name.<br><br>• <%DTP>. The document type, such as INVOICE or CREDIT.<br><br>• <%ITP>. The invoice type, such as PO or NO- PO.<br><br>• <%IDT>. The invoice date.<br><br>• <%INO>. The invoice number.<br><br>• <%TAX>. The invoice tax amount.<br><br>• <%WTX>. The invoice withholding tax amount.<br><br>• <%DCT>. The invoice discount amount.<br><br>• <%MSC>. The invoice miscellaneous charge amount.<br><br>• <%CUR>. The invoice currency.<br><br>• <%TOT>. The invoice total.<br><br>• <%PST>. The Provincial Sales Tax/QST amount.<br><br>• <%HST>. The Harmonized Sales Tax amount.<br><br>• <%ICM>. The ICMS tax amount.<br><br>• <%PON>. The PO Number.<br><br>• <%URN>. The Unique Reference Number.<br><br>• <%VID>. The vendor ID.<br><br>• <%IVD>. The internal Vendor ID.<br><br>• <%SID>. The site ID.<br><br>• <%VNM>. The vendor name.<br><br>• <%BTO>. The bill-to name.<br><br>• <%CCO>. The company code.<br><br>• <%POR>. The Payment Order Reference Number (POR).<br><br>• <%PSN>. The Payment Order Subscriber |

| | |
|---|---|
| | Number.<br>• <%KID>. The Payment Reference.<br>• <%ACC>. The Account Number.<br>• <%BAC>. The Bank Account Number.<br>• <%BCD>. The Bank Account Code.<br>• <%PRI>. The Priority Flag.<br>• <%EXC>. The Exchange Rate.<br>• <%IVR>. The Invalid Reason.<br>• <%ICD>. The Invalid Reason Code.<br>• <%LNK>. The Document Link.<br>• <%ERP>. The ERP document key.<br>• <%EPT>. The ERP system PO type.<br>• <%BSU>. The business unit.<br>• <%DEL>. The delivery note.<br>• <%DLD>. The delivery date.<br>• <%DUE>. The due date.<br>• <%ISR>. The ISR retention amount.<br>• <%IBN>. The IBAN Number.<br>• <%BIC>. The BIC / Swift code.<br>• <%REF>. Your ref.<br>• <%CNC>. Mainland China VAT invoice code.<br>• <%CNP>. Mainland China VAT invoice password.<br>• <%VVT>. Vendor VAT registration number.<br>• <%BVT>. Bill-to VAT registration number.<br>• <%MXU> . Mexican UUID number.<br>• <%CDA>. Brazilian Chave De Acesso number<br>• <%CGT>. CGST amount (India)<br>• <%SGT>. SGST amount (India)<br>• <%PMT>. Payment terms<br>• <%PTC>. Payment terms code<br>• <%TFC>. Workday total freight charges<br>• <%TOC>. Workday total other charges<br>• <%UBA>. Unconfirmed bank account flag |
| Line Item | This parameter controls the format of line item entries that are output to the CSV file. If left blank, no line item detail is |

output. One row is added to the CSV file for each line item. To output the PO number, the PO line item number, and the total, this parameter should be set as follows.

<%LPO>_<%LPL>_<%LTO> The available literals are as follows.

- <%LNO>. The invoice line item number.
- <%LPO>. The PO number.
- <%LPL>. The PO line item.
- <%LDS>. The PO line description.
- <%LMN>. The material number.
- <%LMG>. The material group.
- <%LQT>. The quantity.
- <%LUM>. The order unit of measure.
- <%LUP>. The unit price.
- <%LPU>. The order price unit of measure.
- <%LQU>. The quantity in order price unit of measure.
- <%LTO>. The line item total.
- <%LTC>. The tax code.
- <%LTJ>. The tax jurisdiction code.
- <%LFV>. The freight vendor ID.
- <%LGN>. The goods receipt document number.
- <%LGY>. The goods receipt document year.
- <%LGI>. The goods receipt document item number.
- <%LSN>. The service entry sheet number.
- <%LSI>. The service entry sheet item number.
- <%LSD>. The subsequent debit/credit indicator.
- <%LLT>. The line type.
- <%LCD>. The charge code.
- <%LCI>. The charge code ID.
- <%LDL>. The AP Project line item.
- <%LPT>. The plant.
- <%LTY>. The ERP purchase order type.

|  |  |
|--|--|
|  | - <%LBU>. The ERP purchasing business unit.<br>- <%LCC>. The company Code.<br>- <%LTR>. The VAT/tax rate.<br>- <%LSP>. The Workday spend category.<br>- <%LDN>. The delivery note number.<br>- <%LTA>. The Workday tax applicability reference |

**GL Export Mapping**

You can use these settings to select and configure general ledger line item fields for XML and database export.

| Parameter | Description |
|---|---|
| Field Name | The name of the field. |
| XML Tag | The tag that represents the field when added to the exported XML file. If this setting is left blank, the field is not exported. |
| DB Column Name | The technical name of the target field in the export database table as configured in the "DB GL Items Table" option in Export Settings > Export Options. |

**Header Field Export Mapping**

You can use these settings to select and configure document header fields for XML and database export.

| Parameter | Description |
|---|---|
| Field Name | The name of the field. |
| XML Tag | The tag that represents the field when added to the exported XML file. If this setting is left blank, the field is not exported. |
| DB Column Name | The technical name of the target field in the export database table as configured in the DB Header Table option in Export Settings > Export Options. |

| | |
|---|---|
| Max DB Column Length | The maximum field length to be written to the database. For example, if an invoice number is extracted as '1234567890' and this parameter is set to 5, the system will write '12345' to the target database field. A value of 0 means that the output is not truncated.<br><br>This setting does not apply to standard export fields that are either dates amounts, quantities or rates. It does apply to all custom fields irrespective of the type. |

**Line Item Export Mapping**

You can use these settings to select and configure line item fields for XML and database export.

| Parameter | Description |
|---|---|
| Field Name | The name of the field. |
| XML Tag | The tag that represents the field when added to the exported XML file. If this setting is left blank, the field is not exported. |
| DB Column Name | The technical name of the target field in the export database table as configured in the Line Items Table option in Export Settings > Export Options. |
| Max DB Column Length | The maximum field length to be written to the database. For example, if an item description is extracted as 'Widget Class A' and this parameter is set to 8, the system will write 'Widget C' to the target database field. A value of 0 means that the output is not truncated.<br><br>This setting does not apply to standard export fields that are either dates amounts, quantities or rates. It does apply to all custom fields irrespective of the type. |

**Tax Export Mapping**

You can use these settings to select and configure tax line item fields for XML and database export.

| Parameter | Description |
|---|---|
| Field Name | The name of the field. |
| XML Tag | The tag that represents the field when added to the exported XML file. If this setting is left blank, the field is not exported. |

| | |
|---|---|
| DB Column Name | The technical name of the target field in the export database table as configured in the "DB Tax Table" field in Export Settings > Export Options. |

## Export Options

These settings allow you to activate and configure the solution export options.

| Parameter | Description |
|---|---|
| Export Profile Name | The export profile name. |
| Description | The export profile description. |
| Redo All Exports | If selected, the system carries out all export options that are activated, even if that export has been carried out before.<br><br>For example, four export options are activated. Of these four, three are completed and the last one fails.<br><br>If the document is re-exported, all four export options will be carried out again.<br><br>If cleared, only those export options that failed are carried out. |
| Output Standard Results File | If selected, the system outputs a standard results file into the export directory. The file extension is set to .txt. |
| Filename | The name of the standard results file.<br>If set to FILENAME, the name of the standard results file will be set to the original image filename without the file path and file extension.<br><br>If set to URN, the name of the standard results file will be set to the document URN mapped in Global |
| | Settings > Import Settings.  The file extension used is TXT. |
| Designer Testing Export Path | The UNC path to the export directory that is used for testing purposes in the Designer module. |
| Override Export Path | The UNC path to the export directory that takes priority over any path configured on the export RTS instance. |

| | |
|---|---|
| Output Tiff File | If selected, the system outputs a TIFF file of the document image to the export directory. |
| Tiff Name | This setting controls the name of the output TIFF file.<br><br>If set to FILENAME, the name of the TIFF file will be set to the original image filename without the file path and file extension.<br><br>If set to URN, the name of the TIFF file will be set to the document URN mapped in Global Settings > Import Settings.<br><br>This setting is available only when "Output Tiff File" is selected. |
| Tiff DPI | This specifies the DPI of the output tiff image, such as 300. The default TIFF resolution is 300 DPI.<br><br>This setting is available only when "Output Tiff File" is selected. |
| Tiff Format | The compression format for the output TIFF file. The following compression options are available.<br><br>• G4FAX = Grade 4 compression - CCITT Group 4 fax encoding<br>• G3FAX = Grade 3 compression - CCIT Group 3 fax encoding<br>• LZWFAX = LZW Compression - Lempel- Ziv-Welch compression<br>• HUFFAX = HUF Compression - CCITT Group 3 1-Dimensional Modified Huffman run length encoding<br><br>By default, the compression is set to "G4FAX."<br>This setting is available only when "Output Tiff File" is selected. |
| Redact Invoice Number | If selected, the system redacts the invoice number on an outputted TIFF image. |
| Output PDF | If selected, the system outputs a searchable PDF file for each document. |
| PDF Name | This setting controls the name of the output PDF file.<br><br>If set to FILENAME, the name of the PDF file will be set to the original image filename without the file path and file extension.<br><br>If set to URN, the name of the PDF file will be set to the document URN mapped in Global Settings > Import Settings.<br><br>This setting is available only when "Output PDF" is selected. |
| Custom Export | If selected, user exit UserExitCustomExport becomes active. |
| Export To DB | If selected, the document data is exported to a database. |

| | |
|---|---|
| SQL Connection Group | The SQL connection group that represents the database connection string to the target export database as configured in Global Settings > Database Connection Settings. If no connection group is specified, the system uses group 1. The target header and line item tables must exist in the same database.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Key | The key that is used for each new database record inserted into the header table.<br><br>If set to FILENAME, the key will be set to the original image filename without the file path and file extension.<br><br>If set to URN, the key will be set to the document URN mapped in Global Settings > Import Settings.<br><br>Before inserting a new record, the system deletes any existing records with the same key.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Header Table | The name of the table in the database where the header fields are inserted.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Header Key | The name of the column in the header export database table that represents the key field for the header record.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Header Operation | The operation that is performed on the database record. If set to INSERT, the system inserts a new record. If set to UPDATE, the system updates an existing record with the same database key. There is no default setting.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Line Items Table | The name of the database table into that the invoice line item information is written. The line item database export always occurs as an INSERT, and any existing lines for the same document record are deleted first.<br><br>This setting is available only when "Export To DB" is selected. |
| DB Line Items Key | The name of the column in the line item export database table that, along with the header level key, represents the key field for each invoice line item record. This is typically set to the invoice line item number, such as 1,2,3, and so on.<br><br>This setting is available only when "Export To DB" is selected. |

| DB GL Items Table | The name of the database table where general ledger account line entries are written. |
| --- | --- |
| | This setting is available only when "Export To DB" is selected. |
| DB GL Items Key | The name of the column in the general ledger export database table that, along with the header level key, represents the key field for each general ledger record. This is typically set to the general ledger item number, such as 1,2,3 and so on. |
| | This setting is available only when "Export To DB" is selected. |
| DB Tax Table | The name of the database table where tax table line entries are written. |
| | This setting is available only when "Export To DB" is selected. |
| | If this value is empty, the Tax item export is not triggered. |
| DB Tax Key | The name of the column in the tax export database table where, along with the header level key, represents the key field for each tax line item record. This is typically set to tax item number, such as 1,2,3 and so on. |
| | This setting is available only when "Export To DB" is selected. |
| DB Status Exported | The value or code that indicates that a document is successfully exported from AP Project. |
| | This setting is available only when "Export To DB" is selected. |
| Output XML File | If selected, the system outputs an XML file to the export directory configured on the RTS export instance. If this is not configured then the XML export will fail and the document will be sent to Verifier. |
| XML Filename | This setting controls the name of the XML output file. If set to FILENAME, the name of the XML file will be set to the original image filename without the file path and file extension. If set to URN, the name of the XML file will be set to the document URN mapped in Global Settings > Import Settings. This setting is available only when Output XML File is selected. |
| XML File Type | The file extension that is applied to the XML file. For example, XML for ".xml" and TXT for ".txt" file extensions. |
| | This setting is not mandatory. However, if left blank, the file extension defaults to XML. |
| | This setting is available only when Output XML File is selected. |

| | |
|---|---|
| XML Encoding Header | The XML file coding header that forms the first line in the XML file. |
| | For example, setting the value to `<xml version="1.0" encoding="UTF-16"?>` produces an XML file that supports non-Western characters, such as those from the Russian, Greek and Chinese alphabets. |
| | This setting is available only when Output XML File is selected. |
| XML File Header | The value of the file header tag in the XML file, such as "`<MyFileHeader>`". |
| | This setting is available only when Output XML File is selected. |
| XML Invoice Header | The value of the tag that marks the invoice header section in the XML file. |
| | For example, "`<InvoiceHeader>`". |
| | This value defaults to `InvHeader` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML Line Items Header | The value of the tag that marks the line items section in the XML file. For example, "`<LineItems>`". |
| | This value defaults to `InvLines` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML Line Items Tag | The value of the tag that marks each individual line item in the XML file. For example, "`<LineItem>`". |
| | This value defaults to `LINE` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML GL Lines Header | The value of the tag that marks the general ledger account line items section in the XML file. For example, "`<GLLines>`". |
| | This value defaults to `GLLines` if no value is specified. |
| | This setting is available only when Output XML File is selected. |

| | |
|---|---|
| XML GL Lines Tag | The value of the tag that marks each individual general ledger account line item in the XML file. For example, " `<GLLine>`". |
| | This value defaults to `GLLine` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML Tax Header | The value of the tag that marks the tax line items section in the XML file. For example, "`<VATLines>`". |
| | This value defaults to `TaxLines` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML Tax Tag | The value of the tag that marks each individual tax line in the XML file. For example, " `<VATLine>`". |
| | This value defaults to `TAXLINE` if no value is specified. |
| | This setting is available only when Output XML File is selected. |
| XML Status Exported | Value or code that indicates that a document is successfully exported from AP Project. |
| | This setting is available only when Output XML File is selected. |
| Output CSV File | The master switch for all CSV file output. |
| | If cleared, the system does not output any configured CSV files referenced in the Export Settings > Export Mapping > CSV Export Configuration. This is true even if the local switch for a CSV file group is selected. |
| Delivery Note Separator | The single character separator for the output of multiple delivery note numbers if the delivery notes table is activated and the "Extract Delivery Notes Into Table" check box is selected in Processing Profile > Invoice Number Settings. This applies to database, XML and CSV file output. |
| PD Function Name | The name of the RTS function module that the system calls during document export to send the invoice data to `ProcessDirector`. |
| | This setting is available only when "Export to PROCESS DIRECTOR" is selected. |

| | |
|---|---|
| Use Generic ProcessDirector Function | If selected, the integration to ProcessDirector occurs using the ProcessDirector generic function module.<br>This setting is available only when "Export to PROCESS DIRECTOR" is selected. |
| Generic ProcessDirector Function Name | The name of the ProcessDirector generic function module that is called.<br>This setting is available only when "Export to PROCESS DIRECTOR" and "Use Generic ProcessDirector Function" are selected. |
| Generic Mapping ID | The mapping schema that is used by the ProcessDirector generic function module.<br>This setting is available only when "Export to PROCESS DIRECTOR" and "Use Generic ProcessDirector Function" are selected. |
| Late Archive Via ProcessDirector | If selected, late archiving occurs using the generic ProcessDirector function module.<br>This setting is available only when "Export to PROCESS DIRECTOR" and "Use Generic ProcessDirector Function" are selected. |
| Late Archive As PDF | If selected, a document is converted to a PDF for late archiving.<br>This setting is available only when "Export to PROCESS DIRECTOR" and "Late Archive Via ProcessDirector" are selected. |
| PDF Temp Directory | The temporary export directory that is used by the system to convert a document to a PDF for late archiving via ProcessDirector.<br>This setting is available only when "Export to PROCESS DIRECTOR," "Late Archive Via ProcessDirector," and "Late Archive As PDF" are selected. |
| Output OCR XML File | If selected, the system will export an OCR XML file for each document. |
| OCR XML File Key | This controls how the OCR XML output file is named.<br>If set to FILENAME, the name of the OCR XML file will be set to the original image filename without the file path and file extension.<br>If set to URN, the name of the OCR XML file will be set to the document URN mapped in Global Settings |

| | |
|---|---|
| | > Import Settings.<br><br>This setting is available only when "Output OCR XML File" is selected. |
| OCR XML File Type | The file extension that is added to the OCR XML file. If no file type is specified, XML is used.<br>This setting is available only when "Output OCR XML File" is selected. |
| OCR XML Header | This is the XML file encoding header value that is used as the header line in the OCR XML file.<br>This setting is available only when "Output OCR XML File" is selected. |
| Include Candidate Information | If selected, candidate information is written to the OCR XML file for each of the extraction fields.<br>This setting is available only when "Output OCR XML File" is selected. |

## Client Settings

A client is the highest level of organizational unit within AP Project. Clients are assigned processing profiles, export profiles, instructions profiles, partitions and individual documents.

All documents that do not have a client explicitly assigned are assigned to client 0. Client 0 is the solution base client and it cannot be deleted within Solution Configuration Manager.

The following settings are available.

| Parameter | Description |
|---|---|
| Client ID | The unique ID of the client expressed as an integer. |
| Processing Profile ID | The ID of the processing profile that is assigned to the client. The profile controls what fields are extracted and how they are validated.<br>More than one client may share the same processing profile ID if the extraction and validation requirements are identical. |
| Export Profile ID | The ID of the export profile that is assigned to the client. The export profile ID controls how data is exported for that client.<br>More than one client may share the same export profile ID if the export requirements are identical. |
| Client Name | The name of the client. This data is written into the reporting database for each document assigned to the client. |

| Instructions Profile ID | The ID of the instructions profile that is available for a user to view in Verifier. |
|---|---|
| Force Verify | If selected, all documents for this client are routed to Verifier irrespective of validity status. |
| Client Group | The ID of the client group. This is an integer value that can be set by the system administrator.<br><br>The client group controls how users are assigned access to documents for a specific client. |
| Requires Review | If selected, documents assigned to the client are subject to supervisor review. |
| Vendor Partition | The ID of the vendor master data partition that is used by a client.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Vendor Partitions**. |
| Employee Partition | The ID of the employee master data partition that is used by a client.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Employee Partition Settings**. |
| PO Partition | The ID of the purchase order data partition that is used by a client.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > PO Number Partition Settings**. |
| Tax Partition | The ID of the tax partition in the tax look-up table that is used by a client during automatic tax code determination for countries with tax jurisdictions.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Tax Partition Settings**. |
| Company Code Partition | This is the ID of the company code partition in the standard company code look-up table that is used by a client performing database validation for a company code.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Company Code Partition Settings**. |

| | |
|---|---|
| Misc Charge Acc Partition | This is the ID of the partition in the miscellaneous charge account coding table that is used by a client during the booking of miscellaneous charges to general ledger accounts.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Misc Charge Account Partition Settings**. |
| Plant Partition | This is the ID of the plant partition in the standard plant look-up table that is used by a client performing a database look-up for the plant data.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > Plant Partition Settings**. |
| UOM Partition | This is the ID of the UOM partition in the standard unit of measure conversion table that is used by a client during line pairing.<br><br>Entries here must correspond to an entry in **Global Settings > Partition Settings > UOM Partition Settings**. |
| Priority | When documents are imported into AP Project, they are placed into batches and each batch is assigned a priority. This priority controls the order by which the runtime server component of AP Project processes the batches, and also the order in which the documents appear in the Verifier application. |
| Priority Scale | The priority scale runs from 1 to 9, with 1 having the highest level of priority.<br><br>If this field is populated with 1, it means that all batches containing documents from this client are accorded a priority of 1. |
| PaymentTermsProfileID | The ID of the payment terms profile that is assigned to the client.<br><br>More than one client may share the same payment terms profile ID if the payment terms codes used are identical. |

## Instruction Settings

These instruction settings enable you to provide additional information to a Verifier user that can help them process documents for effectively.

### Instructions Profile Settings

These settings are instructions that can be added to Verifier as a button. When the button is pressed, instructional text is displayed to the user. This text helps them process documents for a specific client.

| Parameter | Description |
|---|---|
| Profile Name | The instructions profile name. |
| Instructions | The instruction text. |

## Project Configuration Packets

As you configure your project, almost every change you make in the Solution Configuration Manager is written to a packet. If you have one or more AP Project installations where you want exact or similar behavior, you can use these packets to reduce configuration effort for those installations.

Within the Solution Configuration Manager, you can manage packets in the following ways.

- Export a project configuration packet to an external file
- Import a project configuration packet from an external file

### Export a Project Configuration Packet

If you have multiple AP Project installations that require similar configurations, it is possible to use the same project configuration packet for multiple installations. Once you have exported a project configuration packet, it is possible to import it into another AP Project installation.

To export a project configuration packet, complete the following steps.

1. From the Solution Configuration Manager menu, select **Export Project Configuration**. The **Export Project Configuration** page is displayed.

2. In the **Location** group, the **Package Migrate Location** specifies where the export is saved. This is a read-only option. This is set during installation.

3. From the **Package Selection** group, select your **Package**, **Version**, and then **Project**. A list of packets is displayed.

4. Select one or more packets from the list and then click **Migrate selected packets**. The packets are saved in the location listed above.

### Import a Project Configuration Packet

If a new AP Project installation has similar requirements to an existing installation, it is possible to

import its project configuration packet to minimize the effort required to get the new installation up and running. Before you can import a project configuration packet, it must first be exported.

To import a project configuration packet, complete the following steps.

1. From the Solution Configuration Manager menu, select **Import Project Configuration**. The **Import Project Configuration** page is displayed along with the **Import Location**.

2. In the **Packet Selection** group, select the **Package**, **Version**, **Source Project**, and **Target Project**.
   A list of packets is displayed.

3. Select one or more packets and then click **Import Selected Packets**. The selected packets are imported into the selected **Target Project**.

## Settings Excluded from Standard Migration Packets

You can choose to exclude certain settings in the AP Project migration packet if they contain user settings or passwords that vary from one environment to another. If these settings are not relevant in every environment, you can choose not to migrate them.

The following settings are not included in the standard Solution Configuration Manager migration packets.

**Global Settings** > **Database Settings**

These settings contain information about the database connections per environment.

**Global Settings** > **User Management**

These settings contain information about the configured users and their passwords.

**Global Settings** > **ASE Settings**

These settings contain the CSV file locations that are used for the various database lookups.

**Export Settings** > **Export Options**

These settings contain information about the various export

settings. **Export Settings** > **Export Mapping** > **CSV Export Configuration** These settings contain the file path

for CSV export.

When a user clicks **Save** after modifying on of the above settings, the Solution Configuration Manager displays a message confirming that the data is saved, but not added to the migration packet.

# Appendix A: Deactivating ASE fields

This section describes the steps required to deactivate Associative Search Engine fields within the project file.

## Delete the Associative Search Engine field settings

To delete the Associative Search Engine setting for a specific field, complete the following steps in Solution Configuration Manager.

1. Select the project you want to use.
2. Select **Global Settings** from the **Settings** drop-down.
3. Within the **Global Settings** hierarchy tree, navigate to the **ASE Settings** node. The Associative Search Engine configuration table is then displayed.
4. Locate the row for the field you wish to deactivate.
5. Highlight the row using the check box on the left-hand side.
6. Click the **Delete** button.
7. Save the changes.

## Switch off the Associative Search Engine field

To switch of the ASE field, complete the following steps.

1. Using the Oracle WebCenter Forms Recognition Designer module, open the **<project>.sdp** file.
2. Navigate to the class that holds the definition of the field, and then to the field.
   Display the field properties.
3. In the Available analysis engine list, select **No Analysis Engine**.
4. Save the changes and close the file.

# Appendix B: Intercompany Vendors

Intercompany invoices arise in instances where different subsidiaries of the same group of companies are invoicing one another. This is prevalent in large multinational corporations where a substantial proportion of the daily invoice volume can represent this type of transaction.

Intercompany invoices need to be handled separately from regular third-party invoices. The reason is that the presence of bill-to address information on a third-party invoice, coupled with the presence of intercompany vendor addresses in the vendor extract, can skew the recognition rates of third-party vendors. Therefore, the system could potentially propose an intercompany vendor as the best vendor for a third-party invoice because the intercompany vendor details represent a good fit to the bill-to address details provided on the invoice.

To avoid this issue, the solution provides a dedicated Intercompany class.

## Vendor extracts

If intercompany invoices are processed, then two vendor extract files need to be provided; one that contains only third-party vendors, and another that contains only intercompany vendors.

The third-party vendor extract file is set up in the normal manner. The intercompany vendor extract file is set up in the same way, except that it is mapped to the VendorASSA field on the intercompany class level.

## Configure the intercompany classification

The instructions in this section are optional. If they are not completed, all intercompany invoices are classified to the Invoices class, and stop in Verifier because the system is unable to find the correct vendor. If this occurs, you must reclassify each intercompany invoice manually.

The following examples provide guidelines for classification depending on your client circumstances. Select the appropriate classification strategy based on the following information.

- The volume of intercompany invoices.
- The variety of intercompany invoice formats.
- The extraction success on intercompany invoices through the generic learnset.
- The degree of document separation at time of scanning.

## Example 1

In this example, intercompany invoices are separated from third-party vendor invoices at the point of scan. If intercompany invoices are separated from third-party vendor invoices, and are scanned using a different scan job, use this method to classify them using the correct class.

If this applies to your business environment, you can use a script in the UserExitPostClassify user exit script to force the document to the intercompany node, thus guaranteeing 100 percent correct classification to the extent that the document was scanned correctly. In the event of a mis-scan, the document is classified to the Invoices class and a user has to reclassify it to the intercompany class manually.

The fnGetFileName function provides a simple method for extracting the filename without the file path and file extension. The name of the intercompany class is case sensitive and is always referred to as Intercompany.

## Example 2

You process a significant volume of intercompany invoices but there are only a handful of different formats.

If the number of intercompany invoice formats total five or less, then an example of each format can be added directly to the classification learnset for the Intercompany class using the layout classification engine. It is recommended that you add at least three examples of each format.

It is not necessary to train a corresponding extraction learnset for the intercompany class as the class automatically inherits the extraction training from the prepackaged learnset held at the invoices class level.

However, if the generic extraction is not delivering acceptable extraction results, you can create an extraction learnset exclusively for the intercompany invoices at the intercompany level using the Normal Train Mode in the solution Designer module.

It is not possible to use the supervised learning workflow feature in conjunction with the intercompany classes. You can create and amend the intercompany classes only through the Designer module.

## Example 3

You process a significant volume of intercompany invoices and there are a wide variety of different formats.

Large, multinational organizations with different subsidiaries or suborganizations located around the globe may experience high volumes of intercompany invoices in a multitude of different invoice formats.

If this is the case, then you must create new intercompany subclasses under the existing intercompany class to accommodate the different format examples required to build a classification learnset.

Depending on volumes and the success of extraction using the generic learnset, it may be advantageous to create a dedicated extraction learnset for each format. There is no restriction on the number of subclasses you can create though it is recommended that each has a title indicative of the formats of documents it is designed to handle.

# Appendix C: E-Business Suite Database Views

## Introduction

The AP Packaged Project is delivered preconfigured to perform lookups and validations against an E-Business Suite database containing four read-only views, which are described later in this section.

## Creating the Views in the E-Business Suite Database

The four views that are configured in the AP Packaged Project are not standard views in the E-Business Suite database and must be created before they can be used by the project. An SQL script file is provided with the project to achieve this, which is located at:

*<Installation Folder>***\Projects\AP Project 3520\DB Scripts\WFR_AP_EBS_Views_Create.sql**
This script is provided as an aid to simplify the implementation of the AP Packaged Project in environments where the customer uses Oracle E-Business Suite as their ERP system, and may be modified as necessary to meet customer requirements. It is not part of the WebCenter Forms Recognition product. For implementations that use an ERP system other than E-Business Suite; it is the responsibility of the customer to provide the appropriate data in a format that can be used by the project.

It is assumed that a schema that will be used by WebCenter Forms Recognition (typically called **AXF**) has already been created in the EBS database, and if this is not the case, this should be done prior to executing the script. The script will create the four views in the **APPS** schema of the EBS database and will grant *SELECT* privileges on them to the **AXF** schema to use them through synonyms.

Simply execute the script file using SQL*Plus or SQL Developer connected to the E-Business Suite as the **APPS** user. During the script execution, you will be prompted to enter the password for the **APPS** user, as well as the username and password for the schema to which you want to grant privileges to perform lookups against the views. This is typically a user called **AXF**, but any schema can be used as preferred.

**Note:** Because the username and password for the schema will potentially be entered into the project configuration file in plain text it is highly recommended that you use a schema that does not provide UID access to the EBS tables.

## The XX_OFR_PO_HEADER_V View

This view provides header-level purchase order data that can be used for PO number validation as described in *BRWPON section*.

The view defined in the script provided with the AP Packaged Project excludes incomplete purchase orders from the results.

| Column Name | Type | Description |
|---|---|---|
| PO_HEADER_ID | NUMBER | Contains the internal ID of the purchase order header. |
| PO_NUMBER | VARCHAR2(20) | Contains the purchase order number.<br>If PO number validation is enabled, this column should be mapped to the *DBPO* parameter in the *BRWPON section*. |
| VENDOR_ID | NUMBER | Contains the internal ID of the vendor that the purchase order was issued to.<br>If PO number validation is enabled, this column should be mapped to the *DBVendorID* parameter in the *BRWPON section*. |
| VENDOR_SITE_ID | NUMBER | Contains the ID of the vendor site that the purchase order was issued to.<br>If PO number validation is enabled, this column should be mapped to the *DBSiteID* parameter in the *BRWPON section*. |
| STATUS | VARCHAR2(4000) | Contains the approval status of the purchase order.<br>If PO number validation is enabled, this column should be mapped to the *DBStatus* parameter in the *BRWPON section*. |
| APPROVED_FLAG | VARCHAR2(1) | Contains a flag value indicating whether the purchase order has been approved. In the E-Business Suite database, this column will typically contain a **Y** if the PO is approved, otherwise it will be blank. |
| CURRENCY_CODE | VARCHAR2(15) | Contains the three-character ISO currency code for the currency that the purchase order was issued in.<br>If PO number validation is enabled, this column should be mapped to the *DBCurrency* parameter in the *BRWPON section*. |
| PO_TYPE | VARCHAR2(25) | Contains a value identifying what type of purchase order was issued, for example **STANDARD**, **BLANKET**, etc.<br>If PO number validation is enabled, this column should be mapped to the *DBDocType* parameter in the *BRWPON* section. |
| CREATION_DATE | DATE | Contains the date that the purchase order was created. |
| ORG_ID | NUMBER | Contains the organization ID or company code for the organization that issued the purchase order.<br>If PO number validation is enabled, this column should be mapped to the *DBCompanyCode* parameter in the *BRWPON* section. |
| ORG_NAME | VARCHAR2(240) | Contains the name of the organization or company that issued the purchase order. |
| ORG_ID_NAME | VARCHAR2(281) | Contains a concatenation of the organization ID and name in the format:<br>*<org_id> <org_name>* |

## The XX_OFR_PO_LINES_V View

This view provides line-level purchase order detail, and can be used for line pairing, as described in *Section: Configure Line Pairing*.

| Column Name | Type | Description |
|---|---|---|
| PO_DISTRIBUTION_ID | NUMBER | Contains the internal distribution ID for the purchase order line. |
| PO_HEADER_ID | NUMBER | Contains the internal ID of the corresponding purchase order header. |
| VENDOR_ID | NUMBER | Contains the internal ID of the vendor that the purchase order was issued to. |
| PO_NUMBER | VARCHAR2(20) | Contains the purchase order number.<br><br>This column should be mapped to the *DBPO* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| PO_LINE_ID | NUMBER | Contains the internal ID of the purchase order line. |
| ITEM_DESCRIPTION | VARCHAR2(240) | Contains the item description for the purchase order line.<br><br>This column should be mapped to the *DBDESCRIPTION* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| MATERIAL_NUMBER | VARCHAR2(25) | Contains the material number for the purchase order line.<br><br>This column should be mapped to the *DBMATERIALNO* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| UNIT_OF_MEASURE | VARCHAR2(25) | Contains the unit of measure for the purchase order line.<br><br>This column should be mapped to the *DBUOM* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| UNIT_PRICE | NUMBER | Contains the unit price for the purchase order line.<br><br>This column should be mapped to the *DBUNITPRICE* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| QUANTITY_ORDERED | NUMBER | Contains the quantity ordered for the purchase order line.<br><br>This column should be mapped to the *DBPOQUANTITY* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| LINE_TOTAL | NUMBER | Contains the total price for the purchase order line. This is the result of the calculation:<br>*<unit_price> * <quantity_ordered>*<br><br>This column should be mapped to the *DBPOTOTAL* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| QUANTITY_RECEIVED | NUMBER | Contains the quantity that has been received for the purchase order line.<br><br>This column should be mapped to the *DBTOTALQUANTITYDELIVERED* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |

| Column Name | Type | Description |
|---|---|---|
| QUANTITY_INVOICED | NUMBER | Contains the quantity that has already been invoiced for the purchase order line.<br><br>This column should be mapped to the *DBTOTALQUANTITYINVOICED* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| ORG_ID | NUMBER | Contains the organization ID or company code for ship-to organization. |
| BUSINESS_UNIT | VARCHAR2(25) | Contains the business unit segment from the GL code combination.<br><br>This column should be mapped to the *DBBUSINESSUNIT* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| LINE_NUM | NUMBER | Contains the number of the purchase order line as it appears on the purchase order.<br><br>This column should be mapped to the *DBLINE* parameter in the *Configure Line Pairing section* if the *GetPOLinesFromDB* parameter is set to **True**. |
| PURCHASE_BASIS | VARCHAR2(30) | Contains the purchase basis of the line item, for example, **GOODS** or **SERVICES**, etc. |

## The XX_OFR_SUPPLIERS_V View

This view provides supplier information, and can be used to create the Vendor ASSA data pool, as described in Section: *Configure ASA Section in the <project>.ini File*.

| Column Name | Type | Description |
|---|---|---|
| VENDOR_INDEX | VARCHAR2(81) | Contains a unique vendor identifier, in the format:<br>*<vendor_id>~<vendor_site_id>*<br>This column should be identified as the ID column when configuring the Vendor ASSA pool, as described in Appendix: Configure the Vendor ID Field without Using Partition. It should also be mapped to the *ID* parameter in the *Configure the BRWSRC Table section*. |
| VENDOR_ID | NUMBER | Contains the internal ID for the vendor.<br>This column does not need to be mapped in the *Configure the BRWSRC Table section*. |
| VENDOR_NAME | VARCHAR2(240) | Contains the name of the vendor.<br>This column should be mapped to the *Name* parameter in the *Configure the BRWSRC Table section*. |
| VENDOR_NUMBER | VARCHAR2(30) | Contains the external ID for the vendor.<br>This column should be mapped to the *ExternalVendorID* parameter in the *Configure the BRWSRC Table section*. |
| VENDOR_SITE_ID | NUMBER | Contains the site ID for the vendor site.<br>This column should be mapped to the *SiteID* parameter in the *Configure the BRWSRC Table section*. |
| ADDRESS_LINE1 | VARCHAR2(240) | Contains the first line (street) of the address for the vendor site.<br>This column should be mapped to the *Address1* parameter in the *Configure the BRWSRC Table section*. |

| Column Name | Type | Description |
|---|---|---|
| ADDRESS_LINE2 | VARCHAR2(240) | Contains the second line (street) of the address for the vendor site.<br>This column should be mapped to the *Address2* parameter in the *Configure the BRWSRC Table section*. |
| CITY | VARCHAR2(60) | Contains the city for the vendor site.<br>This column should be mapped to the *City* parameter in the *Configure the BRWSRC Table section*. |
| STATE | VARCHAR2(60) | Contains the state, county or region for the vendor site.<br>This column should be mapped to the *State* parameter in the *Configure the BRWSRC Table section*.<br>For states in the US, this should be expressed as the 2-character state identifier. |
| POSTAL_CODE | VARCHAR2(80) | Contains the postcode or zip code for the vendor site.<br>This column should be mapped to the *Zip* parameter in the *Configure the BRWSRC Table section*. |
| COUNTRY | VARCHAR2(100) | Contains the country for the vendor site.<br>This column should be mapped to the *Country* parameter in the *Configure the BRWSRC Table section*.<br>This should be expressed as the 2-character ISO country code. |
| VAT_REGISTRATIO N | VARCHAR2(80) | Contains the VAT registration number for the vendor site, if applicable.<br>This column should be mapped to the *VATRegNo* parameter in the *Configure the BRWSRC Table section* if VAT number compliance validation is enabled, as described in *Appendix: Configuring the VAT Number Compliance Check*. |
| VENDOR_TYPE | VARCHAR2(30) | Contains a flag that identifies the type vendor type for the site. This can be used to identify a utility vendor by configuring the *UtilityFlag* parameter in the *Configure the BRWSRC Table section* with the column name, and the *UtilityAlias* parameter in the *BRWNUM section* with the value in this column that identifies a utility vendor. For example:<br>NUM_VL_UtilityAlias=UTILITY<br>SRC_VL_UtilityFlag=VENDOR_TYPE |
| INVOICE_TYPE | VARCHAR2(5) | Contains a value indicating whether the vendor site is expected to issue PO-based invoices, or whether they can legitimately issue invoices that do not reference a purchase order.<br>This column can be mapped to the *InvoiceType* parameter in the *Configure the BRWSRC Table section* if required. |
| CURRENCY_CODE | VARCHAR2(15) | Contains the 2-character ISO currency code to identify the currency that the vendor site will issue invoices in.<br>This column can be mapped to the *Currency* parameter in the *Configure the BRWSRC Table section*. |
| ORG_ID | NUMBER | Contains the organization ID or company code of the organization that the vendor site relates to. |
| ORG_NAME | VARCHAR2(240) | Contains the name of the organization that the vendor site relates to. |
| ORG_ID_NAME | VARCHAR2(281) | Contains a concatenation of the organization ID and name in the format:<br>*<org_id> <org_name>* |
| SITE_NAME | VARCHAR2(15) | Contains the name of the vendor site. |

## The XX_OFR_INVOICES_V View

This view provides historical header-level invoice information. It can be used for invoice number format validation as described in *BRWNUM section*, and also for checking for duplicate invoices as described in *Section: Duplicate Invoice Number Checking*.

| Column Name | Type | Description |
|---|---|---|
| VENDOR_ID | NUMBER(15) | Contains the internal ID of the vendor who issued the invoice. <br><br> Where invoice number format validation is enabled, this column should be mapped to the *VendorID* parameter in the BRWNUM section. <br><br> Where duplicate invoice number detection is enabled, this column should be mapped to the *CDIDBSupplierID* parameter in the *WFR section.* |
| VENDOR_SITE_ID | NUMBER(15) | Contains the site ID of the vendor site that issued the invoice. <br><br> Where duplicate invoice number detection is enabled, this column should be mapped to the *CDIDBSupplierSite* parameter in the *WFR section.* |
| INVOICE_ID | NUMBER(15) | The internal ID of the invoice. <br><br> Where invoice number format validation is enabled, this column should be mapped to the *RecID* parameter in the *BRWNUM section.* |
| INVOICE_NUMBER | VARCHAR2(50) | The invoice number as provided by the vendor and as stated on the invoice. <br><br> Where invoice number format validation is enabled, this column should be mapped to the *InvoiceNumber* parameter in the *BRWNUM section*. <br><br> Where duplicate invoice number detection is enabled, this column should be mapped to the *CDIDBInvoiceNumber* parameter in the *WFR section.* |
| INVOICE_DATE | DATE | The date that the invoice was issued by the vendor, as stated on the invoice. |
| INVOICE_TYPE | VARCHAR2(25) | The type of invoice. For standard invoices, this value is typically **STANDARD**, and for credit notes, it is typically **CREDIT** in an E-Business Suite database. <br><br> Where invoice number format validation is enabled, values found in this column should be mapped to the *InvoiceAlias* and *CreditAlias* parameters in the *BRWNUM section*. |
| ORG_ID | NUMBER(15) | The ID of the organization or company code that the invoice was issued to. <br> Where duplicate invoice number detection is enabled, this column should be mapped to the *CDICBCompanyCode* parameter in the *WFR section.* |