

Kofax Invoice Processing Agility

Administrator's Guide

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Table of Contents

Preface.....	13
Related Documentation.....	13
Training.....	13
Getting help for Kofax products.....	14
Chapter 1: Overview.....	15
Project configuration.....	17
Invoice processing solution.....	18
Document workflow.....	18
Invoice Processing Agility in an Azure environment.....	19
User management in an Azure environment.....	20
Invoice Processing Agility export in an Azure environment.....	20
Chapter 2: Settings.....	21
Edit the Settings page.....	24
Settings in an Azure environment.....	24
Chapter 3: Solution Configuration Manager.....	26
Data input controls.....	26
Sets of settings in tabular format.....	27
Open the Solution Configuration Manager.....	29
Profiles.....	30
Profile Settings overview.....	30
Add a profile for Profile Settings.....	31
Amount Settings.....	32
Bill-To Settings group.....	33
Company Code.....	33
Currency Settings.....	34
Date Settings.....	36
Document Type Settings.....	37
Field Settings.....	37
Invoice Number Settings.....	40
Invoice Type Settings.....	43
Line Item Table Settings.....	44
Line Pairing Settings.....	46
Material Number Settings.....	56
Misc Charge Settings group.....	57

Payment Method Settings.....	60
PO Number Settings.....	60
Profile Settings.....	64
SAP Configuration.....	64
Tax Settings.....	69
Unit Of Measure Settings group.....	75
Vendor Settings.....	77
Global Settings overview.....	78
ASE Database Settings.....	79
Country Settings.....	80
Currency Settings.....	81
Custom Extraction Profiles.....	82
Custom Settings.....	87
Database Connection Settings.....	88
Document Type Formats.....	89
Error Message Settings.....	89
General Settings.....	89
Import Settings.....	90
Information Messages.....	91
Invalid Reasons.....	92
Partition Settings.....	93
Stored Procedure Settings.....	95
Substitution Rules.....	95
Tolerance Settings.....	96
User Management.....	96
Export Settings overview.....	97
Add a profile for Export Settings.....	98
Export Mapping.....	99
Export Options.....	104
Client Settings overview.....	110
Client Settings.....	110
Add a client.....	112
Instruction Settings overview.....	112
Add a profile for Instruction Settings.....	113
Instructions Profile Settings.....	113
Project configuration packets.....	114
Export a project configuration packet.....	114
Import a project configuration packet.....	114

Settings excluded from standard migration packets.....	115
Chapter 4: User authorization.....	116
When a session times out.....	116
Resource Groups.....	117
Resource Group permissions.....	118
Clients and Client Groups.....	118
Manage users via the Solution Configuration Manager.....	119
Add a user entry.....	121
Copy a user entry.....	122
Delete a user entry.....	122
Manage users via Kofax TotalAgility.....	123
Manage resource groups via Kofax TotalAgility.....	124
Chapter 5: Custom scripts and User Exit overview.....	125
Custom scripts in Transformation Designer.....	125
Implement User Exit assemblies.....	126
Install User Exit assembly to GAC.....	127
User Exits.....	127
AbortSAPReadPO.....	128
AccountNumberValidate.....	128
AlternatePayeeValidate.....	128
AmountMiscPostEvaluate.....	128
CellTextFormatting.....	129
CheckBankAccount.....	129
CompanyCodeValidate.....	129
CreateSAPDocument.....	130
CSVFile.....	130
CSVFileLine.....	130
CustomExport.....	131
DBHeaderExport.....	131
DeliveryDateValidate.....	132
DocumentTypeValidate.....	132
DocumentValidate.....	132
DueDateValidate.....	133
EditDocumentWebLink.....	133
EmployeeIDValidate.....	133
ExportFailure.....	133
ExportSuccess.....	134
FilterEmployeeSearch.....	134

FilterVendorSearch.....	134
InvoiceDateValidate.....	135
InvoiceNumberValidate.....	135
LinePairingPOs.....	135
MexicanUUIDValidate.....	135
OCRXMLOutput.....	136
PONumberPostEvaluate.....	136
PONumberValidate.....	136
PopulateSAPAccountAssignment.....	137
PostClassify.....	137
PostExtract.....	137
PostLinePairing.....	137
POValidateStart.....	138
POVendorValidate.....	138
PreLinePairing.....	138
PreMaterialLinePairing.....	139
ReadPurchaseOrder.....	139
ReadSAPAccountAssignment.....	140
ReadVendorAddress.....	140
RejectPOForLinePairing.....	140
SAPArchiving.....	141
SAPConditions.....	141
SAPPostingFailure.....	142
SAPPostingRetry.....	143
SendToSAPProcessDirector.....	143
SendToSAPProcessDirectorGeneric.....	144
SetDocFlags.....	144
SetEntrySheetNumber.....	144
SetReferenceForEntrySheet.....	145
SetSAPPassword.....	145
SetTolerance.....	145
SetVendorCountry.....	146
TextFieldFormatting.....	146
ValueCheck.....	146
VoidDocumentExport.....	146
XMLOutput.....	147
Project data structures.....	147
LineData structure.....	148

POKey structure.....	150
TaxData structure.....	151
Address structure.....	151
Tolerance structure.....	154
Flags structure.....	154
AccountingData structure.....	155
ClientData structure.....	157
CountryData structure.....	157
FieldSettings structure.....	158
WithholdingTax data structure.....	159
API overview.....	160
Project context.....	160
API logs.....	160
Configuration access.....	160
Database access.....	161
SAP access.....	162
API troubleshooting.....	162
Chapter 6: Document ingestion.....	163
Scan form for documents.....	163
Email document ingestion.....	164
File system ingestion.....	165
Image type and resolution conversion.....	167
Image rendition.....	168
Add image rendition.....	168
Chapter 7: Project fields.....	169
Account Number.....	169
Alternate Payee.....	169
Bank Account / Bank Account Code.....	169
BIC.....	170
Bill-To Name.....	170
Company Code.....	171
Currency Field.....	171
Custom Fields.....	172
Delivery Date.....	172
Delivery Note.....	173
Discount.....	173
Document Type.....	173
Due Date.....	174

Employee ID.....	174
Employee Name.....	174
Exchange Rate / Local VAT Amount.....	175
Freight Amount.....	175
Harmonized Sales Tax.....	176
IBAN.....	176
ICMS Tax Amount.....	176
Invalid Reason.....	177
Invoice Code CN.....	180
Invoice Date.....	181
Invoice Number.....	182
Invoice Type.....	182
Withholding Tax Amount / ISR Retention (Mexico).....	183
Line Item Detail.....	184
Mexican UUID Number.....	186
Misc. Amount.....	186
Net Amount 1.....	187
Password CN.....	188
Payment Order Reference Number / Subscriber Number.....	188
Payment Reference.....	188
PO Extension.....	189
PO Type.....	189
Provincial Sales Tax.....	190
Purchase Order Number.....	190
Tax Amount 1.....	191
Tax Fields.....	192
Total.....	193
Vendor ID / Site ID / Internal Vendor ID.....	193
Vendor VAT Registration Number / Bill-To VAT Registration Number.....	194
Your Ref.....	195
Chapter 8: Project and field configurations.....	196
Activate and deactivate fields.....	196
Activate a field.....	196
Deactivate a field.....	196
Apply a country filter to a field.....	197
Alternative Payees.....	197
Activate the Alternate Payee field.....	198
Alternate Payee functionality.....	198

Automatic tax determination and validation.....	199
Configure the Custom Fields.....	199
Custom Fields example.....	200
Configure the Invoice Type field.....	205
Invoice Type based on Purchase Order Number.....	205
Invoice Type without Purchase Order.....	206
Invoice Type from filename.....	207
Configure the Vendor ID field.....	207
Configure a Vendor and Site ID field.....	208
Configure the VAT number compliance check.....	208
Activate VAT compliance.....	209
Configure VAT extraction.....	209
Configure VAT compliance validation.....	210
Configure the VAT rate check.....	210
Configure cross-border EU VAT registration number checks.....	210
Document Variants.....	211
Create document variants.....	211
Update Document Variants.....	212
Document Variants for copied profiles.....	213
Intercompany vendors.....	213
Configure Intercompany classification.....	214
Purchase order number validations.....	215
Standard purchase order numbers.....	215
Configure purchase order number validations.....	215
Validate purchase order vendor against a document.....	216
Configure invoice currency to match purchase order.....	216
Configure padding for extracted PO numbers.....	216
Configure alternate PO number validation.....	217
Configure PO line item validation.....	217
Configure database validations using stored procedures.....	219
Assign parameters to a purchase order header stored procedure.....	220
Purchase order stored procedures in Oracle.....	220
ReadPurchaseOrder User Exit.....	221
Purchase order partitions.....	227
JD Edwards purchase order numbers.....	229
PeopleSoft purchase order numbers.....	231
Add leading zeros to PO numbers for JD Edwards and PeopleSoft.....	232
Straight through processing.....	232

Configure SAP.....	233
Configure a connection to SAP.....	233
BAPI calls.....	233
Set up a SAP user ID.....	235
Troubleshoot SAP connection issues.....	236
Chapter 9: Validation configuration.....	237
Invoice classification.....	237
Invoice CN classification.....	237
Restrict database searches to region.....	238
Information messages.....	238
Invalid Reason text.....	239
Add Invalid Reason.....	239
Edit Invalid Reason text.....	240
Document rejection.....	240
Validation field labels.....	241
Modify field labels.....	241
Validation form modifications.....	242
Hide fields on validation form.....	242
Instructions.....	242
Add Instructions for a client.....	243
Chapter 10: Extraction online learning.....	244
Chapter 11: Line pairing.....	245
Line pairing for third-party freight invoices.....	246
Handle Miscellaneous Charges.....	247
Miscellaneous Charge Categories.....	248
Assign header fields to a Miscellaneous Charge Category.....	248
Assign line items to a Miscellaneous Charge Category.....	249
Post Miscellaneous Charges as a specific line type.....	249
Post Miscellaneous Charges as unplanned costs.....	249
Post Miscellaneous Charges to planned conditions.....	250
Post Miscellaneous Charges to a general ledger account.....	252
General ledger account code table.....	253
Third-party freight.....	254
Tax configuration for countries with tax jurisdictions.....	254
Basic tax configuration.....	255
Default purchase order tax code.....	256
Configure a state-dependent tax code.....	256
Tax configuration for countries with no tax jurisdictions.....	258

Tax table access sequence.....	259
Tax code validation.....	259
Tax table population.....	259
Tax code special cases.....	261
Unit of measure conversions.....	261
Configure the measurement conversion adjustments.....	262
Configure the percentage tolerance for measurements.....	262
Configure the unit of measure conversion table.....	263
Unit of measure triangulation.....	264
Configure the unit of measure aliases.....	265
GR-IV for non-SAP ERP databases.....	265
Line pairing for material invoices.....	266
Line pairing for service invoices.....	267
Line Pairing Correction activity.....	267
Line Pairing Correction decision.....	269
Chapter 12: Document export.....	271
Export configuration.....	272
Configure export to SAP.....	272
Activate the creation of SAP documents.....	273
Configure the creation of MM-LIV documents.....	273
Configure the creation of FI documents.....	273
Integrate with SAP workflows.....	274
Configure Line Pairing.....	275
Configure Line Pairing with SAP.....	275
Configure Line Pairing for material invoices.....	275
Configure Unit of Measure conversions.....	276
Configure Line Pairing for service invoices.....	276
Configure early archiving with SAP.....	277
Configure late archiving for SAP.....	277
SAP ArchiveLink.....	278
Export data to Process Director.....	279
Configure output to Process Director.....	279
Configure usage of the Process Director generic function.....	279
Invoice data passed to Process Director.....	279
Process Director and document archiving.....	280
Process Director returned values.....	283
Process Director standard User Exit.....	283
Process Director generic function User Exit.....	283

CSV export file creation.....	283
Add a CSV export file.....	284
Copy a CSV export file.....	284
Late archiving with mobius.....	284
Export User Exits.....	286
Possible export failures.....	287
Document management system integration.....	287
ERP system integration.....	288
SAP integration.....	288
Export error handling.....	289
MarkView export.....	289
Import EBS data for MarkView integrations.....	290
Debug logging.....	291
Chapter 13: Common logging.....	292

Preface

This guide is a supplement to the *Invoice Processing Agility Installation Guide* and contains information about configuring Invoice Processing Agility for your needs. This guide assumes that you have a thorough understanding of Windows standards, applications and interfaces, as well as Kofax TotalAgility.

This guide is for solution integrators who are configuring Invoice Processing Agility or who need more information on the available configuration possibilities.

Related Documentation

The full documentation set for Invoice Processing Agility is available from <https://docshield.kofax.com/Portal/Products/IPA/110-off8bue7sx/IPA.htm>.

In addition to this *Kofax Invoice Processing Agility Administrator's Guide*, the following documentation is available.

- The *Kofax Invoice Processing Agility Installation Guide* provides instructions for installing Invoice Processing Agility and integrating it with Kofax TotalAgility.
- *Help for Kofax Invoice Processing Agility Solution Configuration Manager* provides detailed information on how to configure Invoice Processing Agility for your environment.
- *Help for Kofax Invoice Processing Agility Scan* provides information on how to scan documents into Invoice Processing Agility.
- *Help for Kofax Invoice Processing Agility Validation* provides information about validating a document in Invoice Processing Agility.

Additional documentation about validating documents is available in the *Help for Kofax TotalAgility Validation*.

- *Help for Kofax Invoice Processing Agility Line Pairing Correction* provides use cases and examples for correcting a document that fails line pairing.
- *Help for Kofax Invoice Processing Agility PIX Correction* provides detailed information about how to navigate through PIX Correction. It also includes details about how to use PIX Correction when processing documents with Invoice Processing Agility.

Training

Kofax offers both classroom and computer-based training that will help you make the most of your Kofax TotalAgility solution. Visit the Kofax website at <http://www.kofax.com> for complete details about the available training options and schedules.

Getting help for Kofax products

Kofax regularly updates the Kofax Support site with the latest information about Kofax products.

To access some resources, you must have a valid Support Agreement with an authorized Kofax Reseller/ Partner or with Kofax directly.

Use the tools that Kofax provides for researching and identifying issues. For example, use the Kofax Support site to search for answers about messages, keywords, and product issues. To access the Kofax Support page, go to www.kofax.com/support.

The Kofax Support page provides:

- Product information and release news
Click a product family, select a product, and select a version number.
- Downloadable product documentation
Click a product family, select a product, and click **Documentation**.
- Access to product knowledge bases
Click **Knowledge Base**.
- Access to the Kofax Customer Portal (for eligible customers)
Click **Account Management** and log in.

To optimize your use of the portal, go to the Kofax Customer Portal login page and click the link to open the *Guide to the Kofax Support Portal*. This guide describes how to access the support site, what to do before contacting the support team, how to open a new case or view an open case, and what information to collect before opening a case.

- Access to support tools
Click **Tools** and select the tool to use.
- Information about the support commitment for Kofax products
Click **Support Details** and select **Kofax Support Commitment**.

Use these tools to find answers to questions that you have, to learn about new functionality, and to research possible solutions to current issues.

Chapter 1

Overview

Invoice Processing Agility is a solution that automates data entry for invoices and credit notes.

Invoice Processing Agility also includes processes for tax determination and validation, automatic general ledger account coding, and solutions reporting.

In most cases, changes to the Invoice Processing Agility project in Transformation Designer are required. This is because your organization may have specific requirements that are not available in the out-of-the-box solution.

The following guidelines should be met when customizing your project. These guidelines ensure that any customizations are still available in future versions of Invoice Processing Agility.

Tip Keep notes of all changes made to a project. This is so that you can manually redo them if necessary, or to confirm if a future upgrade and merge are successful.

- It is important that you do not delete, move, or rename the following.
 - Classes
 - Field Groups
 - Fields
 - Locators

If you delete one of these items and then add it back, the internal ID is no longer the same, so the item does not behave as it should.

- All new Classes, Field Groups, Fields, or Locators should have a name that will not conflict with future releases of the solution. For example, add the "Custom_" prefix to all new items.
- Do not remove any Databases, Dictionaries, Recognition Profiles, Table Models, or other dependent settings.
- You can modify Recognition Profiles by adding an additional language.
- Add script below the marking line that says `'Modify script only below this line.` Any modifications above this line can cause problems with the package and are not included in a future merge.
- In script, refer to lookup fields and other items by their name and not by their index IDs. This is because the indexes can change and the names are not likely to change.

You can upgrade from Invoice Processing Agility 1.1.0 to the next released version while maintaining the customizations to the Invoice Processing Agility process. The Invoice Processing Agility product activities are presently implemented as sub-processes. These activities are automatically upgraded to the new package that is installed.

You must not modify any processes, business rules, or forms with the exception of the following artifacts.

- **Classification Group**
 - InvoiceProcessingAgility
- **Document Group**
 - InvoiceProcessingAgility
- **Forms**
 - CaptureDocument_Scan
 - GeneralWorkQueue
 - Invoices_Validation
 - RescanRejectedDocs_Re Scan_Scan
 - XMLDisplay
 - IPA_SessionTimeout
- **Processes**
 - CaptureDocument
 - ParkNAIDocuments
 - PostLinePairing

You cannot modify the following artifacts.

- **Business Rules**
 - BR_GetDynamicResource
 - BR_IPA_ClientSettings
 - BR_IPA_UserExits
 - BR_LoggingSetting
- **Forms**
 - InvoiceProcessingAgility_Validation_Validation
 - IPA_Settings
 - Workspace_Logon
 - Workspace_Header
 - Workspace_Logoff
 - Workspace_Logon_Windows_Authentication
 - IPA_MessageBox
 - IPA_LinePairingCorrection
 - ParkExportFailedDocuments_EXPORT FAILED_Scan
 - PIXCorrection
 - IPA_SessionTimeout
 - ParkLPRFailedDocuments_LINE PAIRING FAILED_Scan
 - ParkPIXFailedDocumentsXML PROCESSING FAILED
 - RestartWWWPublishingService
 - RestartWWWPScoreWorkerKTS
- **Processes**
 - ApplyDocumentVariant

- IPAServerVariables
- AssignToTextExtensions
- BusinessRules
- ContentSoftDelete
- ContentStatusUpdate
- DocumentExport
- DumpAddressFiles
- ForceVerify
- GetFileImportData
- GetScannedAndEmailData
- HandleRejectedDocuments
- InvoiceProcessingAgility
- ParkLPRFailedDocuments
- RescanRejectedDocs
- PIXCorrection
- LinePairingCorrection
- LinePairingExecution
- LinePairing_SplitFolder
- PIXProcessing
- ParkExportFailedDocuments
- ParkPIXFailedDocuments
- PostValidation
- Resources
- SaveDocumentTextExtensions
- SendDocumentToContent
- SetFileImportValues
- Update MarkView Companies
- Update MarkView Employees
- Update MarkView Vendors
- Validation

Invoice Processing Agility can be integrated with almost any environment.

Project configuration

Project requirements are configured in the Invoice Processing Agility [Solution Configuration Manager](#). With this solution, you can configure of the following components:

- Set up clients and client-specific settings
- Business rules relating to predefined data fields and document scope
- Connection settings to Oracle eBusiness Suite

- Connection settings to SAP R/3, version 4.6c and higher
- 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 displayed in Validation
- Tax code validation and determination

Invoice processing solution

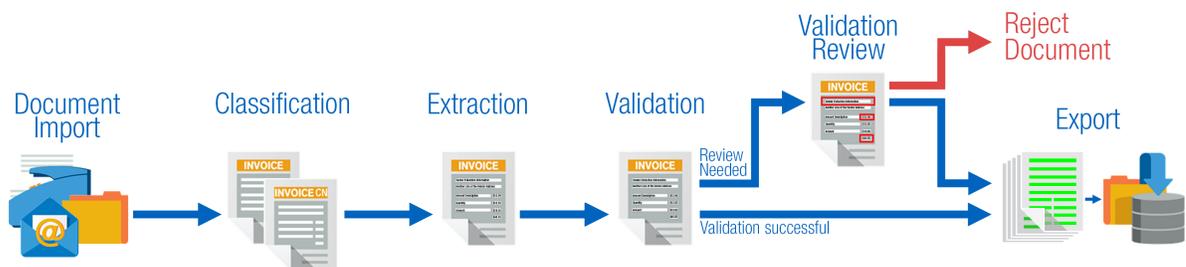
Invoice Processing Agility supports the following document types:

- Vendor invoices
- Vendor credit memos
- Third-party freight invoices

Any additional document types are configured as new document classes with the solution. For example, statements of travel or expense forms.

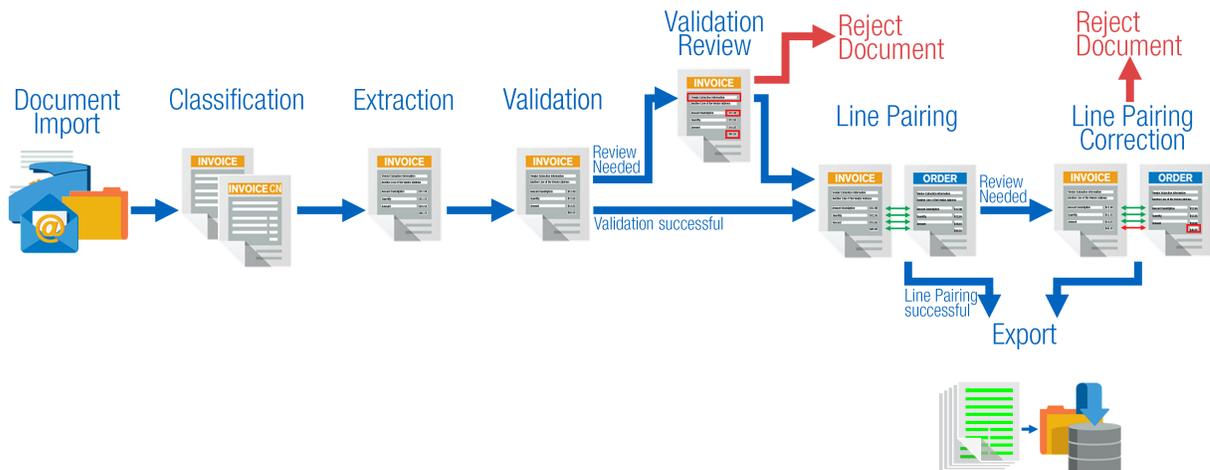
Document workflow

Documents are processed by Invoice Processing Agility in the following order. In this basic workflow, any documents that are successfully classified and extracted are exported immediately. Only those documents that fail validation are sent to the Validation user module. The Validation user can validate or reject a document. All validated documents are then exported. All rejected documents are sent for further processing.



However, when Line Pairing is involved, the workflow changes. When documents do not require Validation, or after they are successfully validated, the documents are sent for Line Pairing. Successful

documents are exported, while documents with errors are sent for Line Pairing Correction. The Line Pairing Correction user can fix these issues or reject a document. The corrected documents are exported while rejected documents are sent for further processing.



Invoice Processing Agility in an Azure environment

You can deploy Invoice Processing Agility into an Azure hosted Kofax TotalAgility environment. However, there are some limitations using this method of deployment over a traditional installation.

- User exits are not supported.
- SAP, Oracle, and MarkView integrations are not supported.
- PIX is not supported so this means that you cannot process electronic XML invoices.
- ERP data such as purchase order or company data, is provided by an ERP connector only.
- Exporting to Process Director is not supported.
- You cannot use Invoice Processing Agility integrated user management or client group assignments.
- Some Solution Configuration Manager settings are not available for configuration.

- PDF Generation is not supported.
- Document Export is not supported.
- Windows Authentication is not supported.

If you choose to use this deployment method, the Solution Configuration Manager is installed in the on-premises environment. A set of database scripts and a Kofax TotalAgility package is provided for installation into the cloud.

Since no assemblies can be installed on the Azure server, the package includes the following.

- The IPA.dll that contains all dependencies needed to run Invoice Processing Agility in the cloud.
- The Transformation Designer project that contains everything needed to run Invoice Processing Agility in the cloud.

User management in an Azure environment

When Invoice Processing Agility is configured to run in an Azure environment, user management differs from a typical installation.

Instead of managing users using the Solution Configuration Manager [User Management settings](#), users are maintained within Kofax TotalAgility.

Scan and Validation users are created and maintained within the Kofax TotalAgility users and groups. However, since PIX is not supported in the cloud, there is no option to add PIX Correction permissions.

Invoice Processing Agility export in an Azure environment

In an Azure environment, export from Invoice Processing Agility is different. Instead, a Kofax TotalAgility Integration server exports into the on-premises environment. For example, export into a file system directory.

Chapter 2

Settings

You can view and update several Invoice Processing Agility configuration settings on the [Settings](#) page.

The options available on this page are different if you are using Invoice Processing Agility in and [Azure environment](#).

Note You must be a member of the IPA Administrators [resource group](#) in order to have access to this page and the Solution Configuration Manager.

You can configure information, such as the configuration database connection string, the database connection password, and the [Solution Configuration Manager](#) variable.

The configuration database is used to perform activities, such as extraction, validation, export, and line pairing within Invoice Processing Agility. Solution Configuration Manager enables you to update the configuration database tables.

The options on the **Settings** page are saved to the Kofax TotalAgility server variable. For more information, refer to the *Kofax TotalAgility Help*.

The following settings are available.

Solution Configuration Manager

Use this group to configure the connection to the Solution Configuration Manager website and has the following options.

URL

The URL for the Solution Configuration Manager.

Launch SCM

Launches the Solution Configuration Manager in a separate browser tab or window.

Save SCM Settings

Saves the settings for this group.

Client Database

Use this group to configure the connection to the Invoice Processing Agility configuration database.

Connection String

This is the connection string needed to connect to the Invoice Processing Agility configuration database.

Save Client Database Settings

Saves the Invoice Processing Agility configuration database settings and updates the Kofax TotalAgility server variables.

Any changes to this group requires a restart of the following services.

- Kofax TotalAgility Core Worker
- Kofax Transformation Server
- World Wide Web Publishing Service

User Exits

Use this group to configure the [user exits](#) if you are using custom scripts.

Note All of the user exit fields are optional.

The group has the following options.

Extraction Assembly

This is the strong name of the assembly that contains the user exit implementations for extraction. A strong name is not just a DLL name and resembles something like `UserExitExtraction, Version=1.0.0.0, Culture=neutral, PublicKeyToken=3057196b1314d857, processorArchitecture=MSIL`. When you store the user exit settings, a plausibility test is done and an error is raised if the passed value does not look like a strong name.

Extraction Class

This is the fully qualified name of the class that implements the `ICustomInitializer` interface within the extraction assembly.

Validation Assembly

This is the strong name of the assembly that contains the user exit implementations for validation. A strong name is not just a DLL name and resembles something like `UserExitValidation, Version=1.0.0.0, Culture=neutral, PublicKeyToken=3057196b1314d857, processorArchitecture=MSIL`. When you store the user exit settings, a plausibility test is done and an error is raised if the passed value does not look like a strong name.

Validation Class

This is the fully qualified name of the class that implements the `ICustomInitializer` interface within the validation assembly.

Save User Exit Settings

Saves the user exit settings and update the Kofax TotalAgility server variables.

Any changes to this group requires a restart of the following services.

- Kofax TotalAgility Core Worker
- Kofax Transformation Server
- World Wide Web Publishing Service

Logging

Use this group to configure how Invoice Processing Agility logging behaves for your installation. This group has the following options.

Directory

The name of the Invoice Processing Agility logging directory. You can set the logging directory to a local drive location of your choice.

Log level

Choose a log level from one of the following options.

- "Error." Records error events.
- "Warning." Records potentially harmful situations.
- "Info." Records informational messages that highlight the progress of the application at a detailed level.
- "Debug." Records fine-grained informational events that are used to troubleshoot and debug the application.

[Log files](#) are generated based on the level of logging selected here.

Log files count

The maximum number of log files that can be generated. If you set this to 50, then 50 log files can be created, which can have a collective size of 5MB. If the 50th log file exceeds the 5MB limit, then the first log file is deleted.

Save Logging Settings

Click to save the logging directory settings.

Help

Use this group to modify the location of the help when using offline files. Do not edit this path otherwise.

Help Base URL

Since the help for Invoice Processing Agility is hosted, the default value for the base URL is <https://docshield.kofax.com/>.

Important Do not make changes to this field unless you are configuring offline help. For more information about configuring offline help, see the *Invoice Processing Agility Installation Guide*.

Save Help Settings

Saves the Help settings.

PIX

Use this group to configure the connection to PIX after it is installed. These settings are required only when you are processing XML documents. For more information on installing PIX, see the *Invoice Processing Agility Installation Guide*.

Note The PIX settings must be configured after PIX is installed. You can install PIX on the same server as Kofax TotalAgility. Alternatively, you can install PIX Client and PIX Server together on a separate server, or separately on different servers.

These settings are empty when support for electronic invoices is not required.

Web client URI

Enter the PIX Web client in Kofax TotalAgility. This variable is dependant on how PIX is installed.

Web server URI

Enter the PIX Web server variable Kofax TotalAgility, by entering information, such as the port and the protocol (HTTP or HTTPS) used.

Save PIX Settings

Saves the PIX settings.

Edit the Settings page

You can open and edit the [Settings](#) page by following these steps.

1. Open the Solution Configuration Manager.
2. Open the Invoice Processing Agility Workspace.
3. From the menu, click **IP Agility**.
You can view **IP Agility** only if you are in the [IPA Administrators resource group](#).
A submenu is displayed.
4. From the submenu, select **Settings**.
The **Settings** page is displayed.
5. Edit the settings as necessary.

Settings in an Azure environment

The Settings page in an Azure environment differs from that in a [typical environment](#). The following settings are available in an Azure environment.

Solution Configuration Manager

Use this group to configure the connection to the Solution Configuration Manager website and has the following options.

URL

The URL for the Solution Configuration Manager.

Launch SCM

Launches the Solution Configuration Manager in a separate browser tab or window.

Save SCM Settings

Saves the settings for this group.

Client Database

Use this group to configure the connection to the Invoice Processing Agility configuration database.

Connection String

This is the connection string needed to connect to the Invoice Processing Agility configuration database.

Note This string is completely masked when entered.

Save Client Database Settings

Saves the Invoice Processing Agility configuration database settings and updates the Kofax TotalAgility server variables.

Logging

Use this group to configure how Invoice Processing Agility logging behaves for your installation. This group has the following options.

Log level

Choose a [log level](#) from the options in the list.

View Log Messages

Click to open a list of log messages that include the date and time, thread, log level, and a messages.

Use the Level filter to select the minimum log level displayed. Use the Thread filter to limit the results to a specific thread.

A maximum of 50 log entries is listed per page. Use the Previous and Next to navigate between pages. Use Refresh button to refresh the log entries from the database.

Save Logging Settings

Click to save the logging settings.

Chapter 3

Solution Configuration Manager

This tool provides configuration settings that control how Invoice Processing Agility behaves.

Note A number of the Solution Configuration Manager settings are pre-configured in an Azure environment. As a result of this, some settings are not displayed.

You can [open](#) the Solution Configuration Manager via the [Settings](#), but only if you are a member of the IPA Administrators [resource group](#) in Kofax TotalAgility.

The settings available in the Solution Configuration Manager are separated into global settings and profile-specific settings. A profile directly relates to a client, so having profile-specific settings ensures that you can configure different behavior for different clients.

For example, if the invoices for one client never include three fields that are typically on other client invoices, there is no point extracting and validating these fields for that one client. You can remove these three fields from this client, but keep them for the other clients that do require them.

Global settings apply across all of Invoice Processing Agility. Changes made to the following global settings apply to all profiles.

- [Global Settings](#)
- [Client Settings](#)

[Profile-specific settings](#) apply only to the selected profile. The following profile-specific settings categories are available, and each group has its own unique profile.

- [Profile Settings](#)
- [Export Settings](#)
- [Instruction Settings](#)

Data input controls

Configuring the Solution Configuration Manager means inputting data into many 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 select or clear an option. Depending on the selection, additional options may become available.
- Radio 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.

Sets of settings in tabular format

Some of the settings in the Solution Configuration Manager are displayed in tabular format. This means that they allow multiple sets of settings for a single category.

For example, it is possible to have more than one field, so the [Field Settings](#) are displayed in tabular format with multiple fields. Each row represents a field and the settings for that field are displayed in the various columns of the table.

Similarly, you can have multiple profiles. As a result, the [Profile Settings](#) are in tabular format where each row represents a unique profile.

Because of this, you can manage these tabular sets of settings in the following ways.

- [Add a new set of settings](#) to a table.
- [Modify a set of settings](#) in a table.
- [Copy](#) and then modify an existing set of settings in a table.
- [Reset any modifications](#) made to a table.
- [Delete an unwanted set of settings](#) from a table.

Add a Set of Settings to a Table

When Invoice Processing Agility is first installed, many settings that are displayed in a table already have existing content. In most cases, it is not recommended to modify this text in any way, as the mappings or values might be used elsewhere.

Instead of modifying existing content, you can add additional sets of settings to these tables by following these steps.

1. Select your **Project** from the list.
A second list of "Settings" is displayed.
2. Select the desired **Settings** from the list.
If the selected "Settings" require a "Profile," an additional list is displayed. If no profile is needed, a list of settings is displayed.
3. Optionally, select a **Profile** from the list.
A set of settings is displayed for that profile.
4. Select a specific settings in the left pane that is displayed in tabular format.
A table is displayed.
5. Scroll down to the bottom of the table until you see the **Insert** row.
6. Edit the empty row with your desired settings and press **Insert**.
A new row is added to the table.
7. Click **Save**.
Your added row is now saved as part of the table.
8. Optionally, add, [copy](#), [modify](#), [reset](#), or [delete](#) additional settings, or close the Solution Configuration Manager.

Modify a Set of Settings in a Table

In a lot of cases, it is not recommended to modify existing settings in a table. However, you may want to make changes to your own added settings.

You can modify a set of settings in a table by following these steps.

1. Select your **Project** from the list.
A second list of "Settings" is displayed.
2. Select the desired **Settings** from the list.
If the selected "Settings" require a "Profile," an additional list is displayed. If no profile is needed, a list of settings is displayed.
3. Optionally, select a **Profile** from the list.
A set of settings is displayed for that profile.
4. Select a specific settings in the left pane that is displayed in tabular format.
A table is displayed.
5. Scroll through the table until you locate the row you are modifying.
6. Edit the row with your desired settings and press **Save**.
Your changes are saved as part of the table.
7. Optionally, [add](#), [copy](#), modify, [reset](#), or [delete](#) additional settings, or close the Solution Configuration Manager.

Copy a Set of Settings in a Table

If you need to add a set of settings to a table, but there is already a row that has similar settings, you do not need to create the row from scratch. Instead, you can copy and then edit an existing row in the table by following these steps.

1. Select your **Project** from the list.
A second list of "Settings" is displayed.
2. Select the desired **Settings** from the list.
If the selected "Settings" require a "Profile," an additional list is displayed. If no profile is needed, a list of settings is displayed.
3. Optionally, select a **Profile** from the list.
A set of settings is displayed for that profile.
4. Select a specific settings in the left pane that is displayed in tabular format.
A table is displayed.
5. Scroll through the table until you see the row you are copying and select the left-most check box beside that row.
This selects the row so it can be copied.
6. Scroll down to the bottom of the table and press **Copy Data**.
An additional row is added to the table and all unique ids and indexes are incremented accordingly.
7. Modify the copied row with your desired settings and click **Insert**.
Your copied row is now saved as part of the table.
8. Optionally, [add](#), [copy](#), [modify](#), [reset](#), or [delete](#) additional settings, or close the Solution Configuration Manager.

Reset Modifications to a Table

If you have made any unsaved changes to a table, you can reset the table return to a previous state. If you have saved your settings, this is not possible.

You can reset any unsaved modifications to a table by following these steps.

1. While in the Solution Configuration Manager, click **Reset** to restore the table to its most recently saved state.
Any unsaved changes are lost.
2. Optionally, [add](#), [copy](#), [modify](#), or [delete](#) additional settings, or close the Solution Configuration Manager.

Delete a Set of Settings from a Table

In many cases, it is not recommended to delete existing settings from a table. You can however, remove any settings added by you or a colleague.

You can delete a set of settings from a table by following these steps.

1. Select your **Project** from the list.
A second list of "Settings" is displayed.
2. Select the desired **Settings** from the list.
If the selected "Settings" require a "Profile," an additional list is displayed. If no profile is needed, a list of settings is displayed.
3. Optionally, select a **Profile** from the list.
A set if settings is displayed for that profile.
4. Select a specific settings in the left pane that is displayed in tabular format.
A table is displayed.
5. Scroll through the table until you see the row you are deleting and select the left-most check box beside that row.
This selects the row so it can be deleted.
6. Scroll down to the bottom of the table and press **Delete**.
The selected row of settings is deleted from the table.
7. Optionally, [add](#), [copy](#), [modify](#), [reset](#), or delete additional settings, or close the Solution Configuration Manager.

Open the Solution Configuration Manager

1. Open the Invoice Processing Agility Workspace.
2. From the menu, click **IP Agility**.
You can view **IP Agility** only if you are in the [IPA Administrators resource group](#).
A submenu is displayed.
3. From the submenu, select **Settings**.
The **Settings** page is displayed.
4. Click **Launch SCM**.

The Solution Configuration Manager opens.

Profiles

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.

Validation and formatting profile

This profile corresponds to the settings that are configured in the **Solution Configuration Manager > Profile Settings**.

If you have multiple clients that require the same extraction, validation, and formatting requirements, set up a [validation and formatting-specific profile](#) with the necessary configuration and then assign it to multiple clients.

Export profile

This profile corresponds to the settings that are configured in the **Solution Configuration Manager > Export Settings**.

If you have multiple clients that require the same export settings, set up an [export-specific profile](#) with the necessary configuration and then assign it to multiple clients.

Instruction profile

This profile corresponds to the settings that are configured in the **Solution Configuration Manager > Instruction Settings**.

If you have multiple clients that require the same instruction settings, set up an [instruction-specific profile](#) with the necessary configuration and then assign it to multiple clients.

Profile Settings overview

You can configure several settings for a specific profile. This means that you can create multiple profiles, each with different settings.

Each profile has a single set of values for these settings. You can [add](#) additional profiles if necessary.

The following profile setting categories are available per profile.

- [Amount Settings](#)
- [Bill-To Settings](#)
 - [Bill-To Formats](#)
 - [Bill-To Settings](#)
- [Company Code](#)
- [Currency Settings](#)
- [Date Settings](#)
- [Document Type Settings](#)

- [Field Settings](#)
- [Invoice Number Settings](#)
- [Invoice Type Settings](#)
- [Line Item Table Settings](#)
- [Line Pairing Settings](#)
- [Material Number Settings](#)
- [Misc Charge Settings](#)
 - [Misc Charge Categories](#)
 - [Misc Charge Settings](#)
- [Payment Method Settings](#)
- [PO Number Settings](#)
 - [PO Number Formats](#)
 - [PO Number Validation](#)
- [Profile Settings](#)
- [SAP Configuration](#)
- [Tax Settings](#)
 - [Tax Configuration](#)
 - [Tax Jurisdiction Codes](#)
- [Unit of Measure Settings](#)
 - [Unit of Measure Settings](#)
 - [Unit of Measure Types](#)
- [Vendor Settings](#)

Add a profile for Profile Settings

You can create a 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 is appropriate for a specific client, additional profiles are allowed.

You can add a validation and formatting profile to your project, by following these steps.

1. Open the Solution Configuration Manager.
2. Select a **Project** from the list.
An additional **Settings** list is displayed.
3. From the **Settings** list, select **Profile 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 is available.
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 easiest if you just accept the one provided as it is the next unique number in the sequence, provided by the Solution Configuration Manager.

7. Enter a short **Profile Name** that is easy to remember.
8. Enter some helpful information about the profile in the **Profile Description**.
9. Click **Save**.

A new profile for your validation and format settings is available in the **Profile** list above, but only when you select the **Profile Settings**.

This profile is now available for all of the [Profile Settings](#) categories.

Amount Settings

These settings specify the format string and what characters are ignored for a valid amount.

Invoice Processing Agility recommends that the following default value is used.

```
Format=#[2-10] Ignore=,.'-_$£€
```

However, you can slightly modify the string to include additional ignore characters to cover a wider variety of currency symbols.

Format

This is a simple expression that defines the format of an amount. For more information on Simple Expressions, see the *Transformation Designer Help*.

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.

This is set to `,.'-_$£¥*^€` by default.

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 Validation are deactivated.

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 Settings group

The bill-to settings are separated into two distinct configuration sets. The settings are profile-specific, so there is only a single instance. However, there can be multiple formats for a single profile.

- [Bill-To Formats](#)
- [Bill-To Settings](#)

Bill-To Formats

Configure possible format strings for recognizing bill-to names on an invoice. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

Index

The index for the bill-to name format. This is unique for each profile ID.

Format

The format string for a 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 the Random House UK Office, 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.

Bill-To Settings

This specifies how format strings for possible bill-to names are configured, and how they appear in the bill-to name field.

Distance

Enter a value between 0 and 1 representing the fuzzy tolerance that is applied when finding a match to the formats configured in the [Bill-To Formats](#).

Company Code

These settings indicate how the company code is located and validated. Depending on whether or not you validate the country code using SAP or another database, different settings are available.

Important These options are not available in the Azure cloud environment.

Validate From SAP

When selected, the company code is validated against SAP.

Validate From DB

When selected, the company code is validated against a database.

SQL Connection Group

The SQL connection group that specifies the company code database connection string. If no connection group is specified, the system uses group 01.

It is configured via the **Solution Configuration Manager > Global Settings > Database Settings**.

This setting is available only when Validate From DB is selected above.

DB Table Name

The name of the company code database table.

This setting is mandatory for database lookups. This setting is available only when Validate From DB is selected above.

Use PO Partition

If selected, the company code database lookup uses a purchase order partition. Purchase order partitions are set against the client in the **Solution Configuration Manager > Client Settings > Client Settings**.

This setting is available only when Validate From DB is selected above.

PO Partition Column

Enter the PO Partition ID that is specified in the **Solution Configuration Manager > Global Settings > Partition Settings > PO Number Partition Settings**.

This setting is available only when Validate From DB and Use PO Partition are selected above.

DB Column Name

The name of the column in the company code database table that holds the valid company codes.

This setting is mandatory for database lookups. This setting is available only when Validate From DB is selected above.

DB Country

The name of the column in the company code database table that holds the country where the company is legally based.

This setting is available only when Validate From DB is selected above.

DB Currency

The name of the column in the company code database table that holds the currency for the company code.

This setting is available only when Validate From DB is selected above.

DB VAT Reg Nos

The 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, the database field contains a comma-separated list.

This setting is available only when Validate From DB is selected above.

Currency Settings

These are settings for the invoice currency.

Depending on your selections, different settings are displayed. If a field is displayed in certain circumstances, that information is listed below.

Dollar Sign Is USD

If this field is enabled, no currency is identified on the invoice, but a \$ sign is found in the OCR text, the currency is set to USD.

This option is cleared by default.

Default PO Currency

If selected and no currency is identified on the invoice, the system uses the same currency as the purchase order.

This option is selected by default.

Default Vendor Currency

If selected and no currency is identified on the invoice, the system uses the same currency as the vendor country of origin.

This option is selected by default.

Note The Default Vendor Currency value overrides the Default PO Currency when both options are selected.

Validate From SAP

If enabled, the currency field is validated against SAP during Validation. You cannot select this field and Validate From DB at the same time.

Important This option is not available in the Azure cloud environment.

Validate From DB

If enabled, the currency field is validated against a database during Validation. You cannot select this field and Validate From SAP at the same time.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the currency database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This setting is available only when Validate From DB is selected above.

DB Table Name

The currency found on the document is validated against this named database table. This setting is mandatory for database lookups.

This setting is available only when Validate From DB is selected above.

DB Column Name

The name of the column in the database table containing the valid currency code. This setting is mandatory for database lookups.

This setting is available only when Validate From DB is selected above.

Activate Extended Validation

When selected, extended validation is performed on the extracted currency result.

The extended validation compares the system-extracted currency to the following, in the order specified.

1. Permitted global currencies. See the Global Currencies setting below.
2. The vendor currency if present in the vendor extract.
3. The currency associated with the vendor country of origin.
4. The currency of the company code.
5. The currency associated with the company code country.

If the invoice currency does not match any of the above, then the currency is set to invalid and must be corrected in Validation. Errors caused by missing, incomplete or incorrect configuration in connection to company code and country lookups also set the currency field to invalid.

User input in Validation is excluded from the above checks and are assumed to be correct.

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.

Validation Format

The date format that is displayed during Validation. Choose from:

- DMMYYYY
- MMDDYYYY

This is set to "MMDDYYYY" by default.

Export Format

The output date format for export. This setting applies to database output and all flat file exports. Choose from:

- DMMYYYY
- MMDDYYYY

This is set to "MMDDYYYY" by default.

Export Separator

The separator that is used when exporting a date value.

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.

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.

Delivery Date Includes Ship Date

If selected, this expands the scope of delivery dates to also include ship dates. This means that dates with label indicating a shipping date, such as "Shipped" are also extracted.

This option is cleared by default.

Document Type Settings

These are the settings that relate to the document type field.

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.

This is set to "0.17" by default.

Stop All Credits

If selected, all documents identified as a credit memo are sent to Validation for manual review.

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.

This option is cleared by default.

Field Settings

These settings determine which fields are active for a given profile. It also includes their field types and validation settings. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

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.

A common value for this setting is INVOICES.

Important When adding new fields, you must use uppercase for the Class Name.

Field Name

The name of the Invoice Processing Agility field that is used in Transformation Designer and appears on the Validation form. If you add settings for a custom field, enter the Transformation Designer field name here.

Note Do not change the standard field names. This causes problems with the Transformation Designer form and other configuration settings.

Validation Label

The field label for error descriptions on the Validation form.

Active

If selected, the field is active for a profile. This means that the field is extracted and displayed in Validation.

Required in Server

If selected, and no value for the field is extracted in Transformation Server, the field is invalid.

Required in Validation

If selected, the field is mandatory in Validation. This means that an empty field is invalid.

It is possible to mark a field Required in Server but not as Required in Validation. This forces the user to confirm all empty fields.

You cannot select Required in Validation without selecting Required in Server first.

Country Filter

The comma-separated list of country ISO-codes that marks a field mandatory for specific countries.

This setting is used in conjunction with Required In Server and Required In Validation settings. 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.

- AMOUNT
- DATE
- TEXT
- TABLE

Force Validation

When selected, a field is always marked as invalid and sent to Validation 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

Select the field substitution rule from the list for text fields.

Substitution rules are configured in the **Solution Configuration Manager > Global Settings > [Substitution Rules](#)**.

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.

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 end result is "56789."

Substring Length

The length of a substring.

Remove Leading Zeros

If selected, any leading zeros are removed from an extracted text value.

Decimal Places

The number of decimal places for an amount field.

Negative Type

Controls the output during export if the extracted value for an amount field is less than zero.

Choose one of the following settings.

1. This value means that the minus sign appears after the amount, such as 100.00-.
2. This value means that the minus sign appears before the amount, such as -100.00.
3. The value means that the minus sign does not appear, but the related value appears in parentheses.
For example, 1 (100.00)

Output For Zero

The amount value that is output during export if a zero value is found.

Substitute Value if Over 0

The amount value that is output during export for an extracted amount value that 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.

If future dates are not permitted, set the column value to zero. To disable the check, set the value to -1. In Validation, 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.

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.

If past dates are not permitted, set the value to zero. To disable the check entirely, set the column value to -1.

In Validation, 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 Validation.

In Validation, the user can pass any value as long as it is a valid date.

Field Mask

A comma-separated list of characters allowed in the 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.

Extraction Profile ID

Use this for custom fields that are set up to use the configurable extraction feature. The content of this column corresponds to an "Extraction Profile ID" value that is configured in the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Extraction Profiles**.

A value of zero means that no configurable extraction is required for this field.

Invoice Number Settings

These settings enable you to configure the formatting and validation options available for the invoice number field. Several options are displayed or hidden depending on the selected settings. These are indicated below.

Remove Korean Invoice Number

If selected, the system blanks out any extracted invoice numbers for a Korean language document.

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 the "UtilityFlag" value found in the "Vendor.CSV" database.

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 Validation for confirmation.

Validate From DB

This indicates if the invoice number is validated against previous invoice numbers from the same vendor.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the invoice number history database connection string that is set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This option is available only when Validate From DB is selected above.

DB Table Name

The name of the invoice number history database table.

This option is available only when Validate From DB is selected above.

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 an Invoice Processing Agility 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 **Solution Configuration Manager > Client Settings > Client Settings**. Also, if the invoice number history table is updated during 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 Column" setting below.

If this option is selected and no vendor partition is set in the **Solution Configuration Manager > Client Settings > Client Settings**, the system raises an error.

Note 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.

This option is available only when Validate From DB is selected above.

Partition Column

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.

If vendor partitions are used and this column is blank, the system raises an error message and sends the document to Validation.

This option is available only when Validate From DB and Use Vendor Partition is selected above.

Vendor ID

The column in the database table that contains the vendor number. This setting is mandatory. This option is available only when Validate From DB is selected above.

Rec ID

The column in the database table that contains the record ID. This setting is mandatory if the invoice number history table is updated on export. This option is available only when Validate From DB is selected above.

Invoice Number

The column in the database table that holds the invoice number. This setting is mandatory. This option is available only when Validate From DB is selected above.

Document Type

The column in the database table that represents a document type of either invoice or credit. This setting is mandatory. This option is available only when Validate From DB is 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. 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. 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 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.

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.

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.

This option is available only when Validate From DB is selected above.

Correct OCR Misreads

If selected, the system tries to repair two specific OCR issues if found in the extracted invoice number.

For example, if the number "1" is extracted and it should be the letter "l." Also, if the number "0" is mistaken for the letter "O." No other OCR issues are handled.

This option is available only when Validate From DB is selected above.

Check Sequencing

If selected and the vendor supplies numeric invoice numbers, then when compared against the vendor history, the system does not consider prior invoice numbers if they are ahead by more than 100.

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. If selected, it means that an invoice cannot process straight through if it has an Invoice Number that is below the "Sequencing Limit."

So, if "0500" is extracted as the Invoice Number, and the Invoice History table contains "0605," then the 0500 Invoice Number is marked as invalid because it is below the Sequencing Limit. If the Invoice Number is 0507, the value is valid.

For example, invoice number 1500 is read from an invoice. In the history table, invoice numbers 1598, 1599, 1600 and 1601 are present.

This logic does not apply to processing documents that have an Invoice Number that is more than the sequencing limit. This feature focuses only on older invoices.

The sequence limit in the above example is set to "100" and is configurable in the "Sequencing Limit" parameter below.

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.

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 value that an extracted invoice number requires for a confident value. The number represents a percentage. For example, a value of "20" means an invoice number alternative must be "20%" confident in order to be accepted.

This check is carried out by the system if the invoice number history check is not in use.

Invoice Type Settings

These configuration settings determine the invoice type field. They also indicate if a document is a purchase order (PO) or a non-purchase order (NPO).

Default

This value indicates whether the default invoice type is a purchase order or a non-purchase order. Select one of the following:

- PO
- NPO

If the invoice type exists in the image filename and this has been mapped to the Invoice Type setting in the **Solution Configuration Manager > 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.

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 that represents a purchase order invoice. This value is held in the document filename or in the vendor extract. For example, MM.

NPO Value

The value that represents a non-purchase order invoice. This value is held in the document filename or in the vendor extract. 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 in a validation database or SAP system, 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 input is present in the purchase order number field. This is true if the value is extracted by Transformation Server or entered manually by a Validation user.

Line Item Table Settings

These settings control invoice line item data validation. Depending on what options are selected, different settings are available.

Extract Line Items

If selected, line items are extracted.

If cleared, line items are not required for any document.

Skip For Service

If selected, line items are not be mandatory for invoices relating to a service purchase order.

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.

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.

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 relating to a multiple line item purchase order. All line items are limits (category 1) or category 9, where a goods receipt based invoice verification is not set.

If cleared, the system requires the user to enter line items for the above mentioned purchase order types. They enter a description and total only.

This setting is available only when Extract Line Items is selected above.

Skip For NO PO

If selected, line items are not mandatory for non-purchase order invoices.

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.

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.

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.

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.

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.

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.

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.

This setting is available only when Extract Line Items is selected above.

Validate UOM from DB

If selected, the system validates UOMs against an external database.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the UOM database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This setting is available only when Validate UOM from DB is selected above.

DB Table Name

The name of the database table that contains the UOM information.

This setting is available only when Validate UOM from DB is selected above.

DB UOM reference values

The UOM database column.

This setting is available only when Validate UOM from DB is selected above.

Validate UOM from MarkView

If selected, the system validates UOMs against a MarkView database.

Important This option is not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the UOM database connection string that refers to the MarkView database. This is set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This setting is available only when Validate UOM from MarkView is selected above.

Line Pairing Settings

These options configure how line pairing is carried out.

Get PO Lines From SAP

If selected, the purchase order line item information is read from SAP.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

Convert Quantity From SAP

If selected, 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 lookup to the SAP material master. This looks for the purchase order material in question and obtains the conversion ratio between the deviating units of measure if available.

If a ratio is found, the invoice quantity is converted to reflect the PO unit of measure. If a ration is not found, the line is not paired successfully.

This option is available only when "Get PO Lines from SAP" are selected above.

Get PO Lines From DB

If selected, the purchase order line items are read from a database.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the purchase order database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

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.

This option is available only when Get PO Lines from DB is selected above.

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 name of the stored procedure that retrieves the purchase order lines from the database.

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 **Solution Configuration Manager > 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 setting is mandatory if the Use PO Partition setting is selected in the **Solution Configuration Manager > Profile 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.

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.

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.

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.

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.

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.

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 indicates if this purchase order is intended for the Evaluated Receipt Settlement (ERS) process. If this column contains any value a PO is considered an ERS. The opposite is true if the column is blank.

This option is available only when Get PO Lines from DB is selected above.

Convert Quantity From DB

If selected, the system performs a lookup using the unit of measure conversion setting in the **Solution Configuration Manager > Profile Settings > Unit Of Measure Settings**. This lookup occurs if the unit of measure captured on the invoice line does not correspond to the purchase order unit of measure in the paired line. This means that the conversion ratio cannot be calculated mathematically based upon the PO line item details and the PO history.

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.

Enable Matching to GR Lines

Select this option to support goods receipt lines for line matching.

This option is available only when Get PO Lines from DB is selected above.

DB GR-IV Flag

The name of the database column that indicates whether or not GR-IV is enabled.

This option is available only when Enable Matching to GR Lines is selected above.

GR-IV Indicator

Value that indicates that GR-IV is enabled or not. For example, if the database column with the GR-IV flag contains an X, this indicates that GR-IV is enabled.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Lines Table Name

The name of the database table that contains GR line information.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Lines Stored Procedure

The name of the stored procedure that reads GR lines.

This option is available only when Use Stored Procedure and Enable Matching to GR Lines are selected above.

DB GR Lines Stored Procedure Parameters

The parameters for the stored procedure.

This option is available only when Use Stored Procedure and Enable Matching to GR Lines are selected above.

DB GR PO

The name of the database column that holds the PO number.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR PO Line

The name of the database column that holds the PO line.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Quantity

The name of the database column that holds the delivered quantity.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Total

The name of the database column that holds the total amount of delivered goods.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Quantity Invoiced

The name of the database column that holds the quantity that is already invoiced.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Total Invoiced

The name of the database column that holds the amount that is already invoiced.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Doc No

The name of the database column that holds the GR document number.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Doc Item

The name of the database column that holds the GR document line number/item number.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Doc Year

The name of the database column that holds the GR document year. This entry is optional.

This option is available only when Enable Matching to GR Lines is selected above.

DB Delivery Note Number

The name of the database column that holds a delivery note number / shipment number.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Invoicing Status

The name of the database column that holds the status of an invoice. This can be used as an alternative if DB GR Quantity Invoiced or DB GR Total Invoiced are not available.

This option is available only when Enable Matching to GR Lines is selected above.

DB GR Open Invoicing Status Value

The values that indicate that the GR line is still open for booking incoming invoices. You can provide multiple values as a comma-separated list.

This option is available only when Enable Matching to GR Lines is selected above.

Get PO Lines via User Exit

If selected, purchase order line item details are retrieved via a custom lookup in [ReadPurchaseOrder](#).

Important This option is not available in the Azure cloud environment.

Do Line Pairing

If selected, line pairing is carried out during extraction.

When selected, other options are available.

Enable Line Pairing Correction

If selected, and the invoice is not fully allocated, the document is sent for manual correction.

This option is available only when Do Line Pairing is selected above.

Do Line Pairing For Service

If selected, line pairing is carried out for invoices that relate to a service purchase order.

This option is available only when Do Line Pairing is selected above.

Multi Pairing To Single PO Line

If selected, the system pairs multiple lines on an invoice for the same material, to a single line on the purchase order.

This option is available only when Do Line Pairing is selected above.

Check For Multiple POs

When selected, a single invoice is compared to see if it contains more than one purchase order.

This option is available only when Do Line Pairing is selected above.

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.

- BROWN HATS
- brown hats
- BROWN or HAT

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 use a value of "30" for this setting.

Note The invoice line item description must be at least 5 characters long 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.

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 for 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 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 alternatives.

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. This is due to a high correlation on the amount fields.

If set to 10, the system does 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, the system takes any possible unit of measure differences into account when comparing the invoice quantity to the purchase order quantity.

It is recommended that you select this option for implementations involving SAP.

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 following criteria are met.

- If the PO unit of measure differs from the PO price unit of measure.
- The invoice unit of measure and the PO price unit of measure are the same.

It is recommended that you select this setting for implementations involving SAP.

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 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 external delivery note number set against an ERP goods receipt is given priority when the following criteria are met.

- Pairing an invoice line to a good receipt line.
- 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.

Only Use Delivery Number To Find GR

In order for this setting to work, also select the Find GR With Delivery Number option.

If selected, the system only pairs an invoice line against a goods receipt line if the external delivery note number for the ERP goods receipt is be found on the invoice. If the goods receipt in the ERP system has no external delivery note number set against it, the line is be paired.

This option is available only when Do Line Pairing is selected above.

Require PO Details For Multiple Materials

This indicates if the pool of purchase order line items contain more than one line for the same material. If so, the system finds a referenced purchase order number or a purchase order line item number on the document. This is so that the system knows which purchase order line to pair with the invoice line.

If selected, and no PO details are found on the invoice, then the line item is paired.

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 that are already fully invoiced, during line pairing. Fully invoiced is defined as the quantity invoiced to date, being equal or greater than the quantity originally ordered.

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.

- An invoice line is paired to a purchase order line.
- The quantity of invoiced to date is equal to the delivered to date quantity.
- The delivered to quantity is greater than zero.
- The invoice unit price adjustment is less than half of the original unit price on the purchase order.

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.

- When line pairing against purchase orders that have multiple open lines for the same material.
- Lines are set for goods receipt based invoice verification when there are multiple open goods receipts.

This does not apply when:

- A referenced purchase order or line is at line item level.
- A delivery note number or values and quantities can distinguish the correct purchase order line or goods receipt for booking.

This parameter should always be selected in the following implementations.

- A workflow component sits between Invoice Processing Agility and the downstream ERP system.
- Invoice Processing Agility books directly to the ERP system, but is not creating fully posted invoices.

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. If the two purchase orders are not successive, the second invoice is not matched to the same document because the PO line/goods receipt are no longer available.

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.

This option is available only when Do Line Pairing is selected above.

Activate Log

If selected, the system writes additional log messages with trace entries for the line pairing operation. These entries also cover the automatic tax code determination procedure.

This content is written to the standard Invoice Processing Agility IPA_CoreWorker.log file for on premise installations. For Azure environments, this content is logged in the database and viewed using the Log Viewer form.

This option is available only when Do Line Pairing is selected above.

Find SES with Invoice Number

If selected, the system attempts to select one or more SAP service entry sheets. This selection is based on a comparison between the invoice number and the acceptance reference number on the entry sheet.

This option is available only when Do Line Pairing is selected above.

Important This option is not available in the Azure cloud environment.

Only Use Invoice Number To Find SES

If selected, the system only attempts to select one or more SAP service entry sheets during line pairing. This selection is based on a comparison between the invoice number and the acceptance reference number on the entry sheet.

This option is available only when Do Line Pairing is selected above.

Important This option is not available in the Azure cloud environment.

Park If SES Value Less Than Invoice Value

If selected and data export involves creating documents in SAP, this setting forces the document to park rather than post, but only if the value of the invoice goes over the value of any of the booked SAP service entry sheets.

This option is available only when Do Line Pairing is selected above.

Important This option is not available in the Azure cloud environment.

Enforce Line Level Pairing

Forces line pairing to use approaches that look at individual lines only.

This option is available only when Do Line Pairing is selected above.

Material Number Settings

These settings define how a material number is configured. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

ID

The index ID that is given to each format string used to generate material field alternatives. The value must be unique for each entry.

Format

The format string that is used to generate alternatives for the field.

For example, "33##### " matches a material number that starts with 33 and is then followed by ten digits.

For more information on Simple Expressions see the *Transformation Designer Help*.

Ignore Characters

The list of characters that may appear in a material number alternative that the system ignores when generating alternatives. This list is not comma-separated.

For example, "[] . ."

Misc Charge Settings group

The miscellaneous charge settings are separated into two distinct configuration sets. The settings are profile-specific, so there is only a single instance. However, there can be multiple categories for a single profile.

- [Misc Charge Categories](#)
- [Misc Charge Settings](#)

Misc Charge Categories

Use these settings to configure specific processing behavior for different types of miscellaneous charges. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

Index

The miscellaneous charge index. This is unique for each category.

Type

The miscellaneous charge type, such as FREIGHT or CUSTOMS.

Code

The internal code for a charge group.

Header Field

This is a comma-separated list of field names that contain miscellaneous charges for the selected profile.

Alias

The comma-separated list of identifying strings that the system uses to recognize miscellaneous charges. These charges are specified at the line item level along with the article description.

Line Type

The ERP system line type for the charge group.

Always Book To Unplanned

If selected, the system handles all charges found on the document that belong to the charge group, as unplanned miscellaneous charges.

Important This option is not available in the Azure cloud environment.

Always Book To Planned

If selected, the system attempts to book all miscellaneous charges that belong to the charge group, to a planned charge on the purchase order.

Important This option is not available in the Azure cloud environment.

Valid Conditions

A comma-separated list of conditions that represent the charge type.

Important This option is not available in the Azure cloud environment.

Always Book To GL Account

If selected, the system creates a general ledger account entry for all miscellaneous charges that belong to the charge group.

Book To Unplanned If No Planned

If all of the following are true:

- Always Book To Planned is selected.
- Book To Unplanned If No Planned is selected.
- No conditions or line type are found on the purchase order.
- Charges belonging to this charge group are found on the invoice.

Then the system handles these charges as unplanned.

Book To GL Account If No Planned

If the following are true:

- Always Book To Planned is selected.
- No conditions or line type are found on the purchase order.
- Charges belonging to this charge group are found on the invoice.

Then the system handles these charges as unplanned.

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 that completes the general ledger entry for the miscellaneous charge is read from a paired purchase order line item. The cost object is either a cost center, an internal order, or a project. The system reads this from the first paired invoice line that has one of these cost object assignments.

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 are used to configure the identification and handling of miscellaneous charges. For example, freight, customs charges, or fuel charges.

Some options are displayed only if specific settings are selected. These settings are indicated below.

Unplanned Threshold

The invoice maximum value that the sum of all unplanned miscellaneous charges can reach before the system takes a course of action.

Important This option is not available in the Azure cloud environment.

Block If Over Threshold

If selected and if the total sum of all unplanned miscellaneous charges on the invoice exceeds the value defined in Unplanned Threshold, the system sets a block on an invoice. This means that the payment is blocked in the ERP system.

Important This option is relevant only if you are using SAP.

Important This option is not available in the Azure cloud environment.

Block Code

The block code that is applied to an invoice for reasons of excessive unplanned miscellaneous charges. This setting is displayed only if Block If Over Threshold is selected above.

Third Party Freight Code

The block code that is applied to an invoice if it has excessive unplanned miscellaneous charges.

Read SAP PO Conditions

If selected, the system reads the planned condition records on the purchase order in SAP.

Important This option is not available in the Azure cloud environment.

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 entry for a miscellaneous charge.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the miscellaneous charge database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This setting is displayed only if Validate From DB is selected above.

DB Table Name

The name of the database table that contains the GL coding strings that are used for miscellaneous charges. If there is a value in the POPartition column then the results are filtered for the current client.

This setting is displayed only if Validate From DB is selected above.

Payment Method Settings

These settings relate to the payment method and its relationship to bank account requirements.

Bank Methods

The comma-separated list of payment methods that indicate a bank transfer and the requirement for a bank account.

This corresponds to the "PaymentMethods" field in the Vendor.CSV database.

Account Currency Not Required

If selected, the system does not require a bank account 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.

PO Number Settings

The PO number settings are separated into two distinct configuration sets. The validation settings are profile-specific. This means that there is only a single instance of settings. The PO number formats on the other hand, allow multiple instances per profile. The result is a table of settings.

- [PO Number Formats](#)
- [PO Number Validation](#)

PO Number Formats

These settings define purchase order number formatting for extraction. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

Index

The index ID that is given to each format string used to generate purchase order number alternatives. 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 "#" 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.

For more information on Simple Expressions see the *Transformation Designer Help*.

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 control the purchase order number validation. It also controls how service purchase orders are identified. Depending on what options are selected, different settings are available. Each setting below indicates if it is only available under certain circumstances.

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 alternatives, 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.

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.

Validate From SAP

If selected, the purchase order number field is validated against SAP during Validation.

Important This option is not available in the Azure cloud environment.

Validate From DB

If selected, the extracted purchase order number is validated against a database table.

In addition, the extracted purchase order must exist in the database table. Also, the vendor identified on the invoice must be the vendor on the purchase order. In an Oracle implementation, the invoice site ID address does not have to be the same as the PO order-form vendor site ID.

In all other cases, the purchase order number field is set to invalid.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

Read PO Header via User Exit

If selected, the purchase order header details are found using a custom lookup in [ReadPurchaseOrder](#).

Important This option is not available in the Azure cloud environment.

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.

SQL Connection Group

The SQL connection group that specifies the purchase order database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

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.

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 **Solution Configuration Manager > Client Settings > Client Settings**.

This option is available only when Validate From DB is selected above.

PO Partition Column

The PO Partition ID as specified in the **Solution Configuration Manager > Global Settings > Partition Settings > PO Number Partition Settings**.

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.

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.

This must be set to the internal vendor ID that the ERP system uses.

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 purchase order document currency. This setting is optional.

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.

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.

This option is available only when Validate From DB is selected above.

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.

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.

Note This is mandatory for JD Edwards purchase orders only.

This option is available only when Validate From DB is selected above.

DB Business Unit

The name of the database table column that holds the business unit.

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.

Tip Do not select this option for JD Edwards implementations.

This option is available only when Validate From DB is selected above.

JDE PO

If selected, the purchase order is assumed to belong to JD Edwards.

JDE PO Types

The comma-separated list of purchase order document type that indicate a JD Edwards purchase order.

This option is available only when Validate From DB and JDE PO are selected above.

PeopleSoft PO

If selected, the purchase order is assumed to belong to PeopleSoft.

PeopleSoft Business Units

The comma-separated list of business unites for PeopleSoft invoices.

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 exclusively identify a service purchase order.

Stop ERS PO

If selected, the system sends a purchase order to Validation for all ERS/self-billing purchase orders.

Stop ERS PO in Validation

If selected, the system does not allow a purchase order to pass Validation if it is marked as an ERS/self-billing purchase order.

Skip Duplicate PO Check

If a database lookup is activated and the purchase order number exists more than once in the purchase order header table, a document is sent to Validation. The user may choose to accept the PO in Validation, but line pairing is not carried out.

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 selected profile. A profile must be registered before it can be assigned to a client.

Profile Name

The name of the selected profile. Update as necessary.

Profile Description

The description of the selected profile. Update as necessary.

SAP Configuration

This setting determines if your project connects to SAP. In order for this to work, you must be using SAP version 4.6c or newer.

Important These options are not available in the Azure cloud environment.

Depending on the options selected below, different settings become available.

Connect To SAP

If selected, Invoice Processing Agility connects to SAP.

Application Server

The name or IP address of the SAP application server. Use this only when load balancing is not required. This option is available only when the Connect To SAP option is selected above.

System Number

The two digit SAP system number for connections. Use this only when load balancing is not required. This option is available only when the Connect To SAP option is selected above.

Language

The two character language code for the SAP logon language. This option is available only when the Connect To SAP option is selected above.

Client

The three-digit SAP client number. This option is available only when the Connect To SAP option is selected above.

Message Server

The SAP message server. Use this only when load balancing is not required. This option is available only when the Connect To SAP option is selected above.

Group Name

The SAP group name. Use this only when load balancing is not required. This option is available only when the Connect To SAP option is selected above.

System Name

The three-character SAP system name. Use this only when load balancing is not required. This option is available only when the Connect To SAP option is selected above.

SAP Router

The SAP router web path. This option is available only when the Connect To SAP option is selected above.

User

The SAP logon user name. This can be set within the project file for additional security. This option is available only when the Connect To SAP option is selected above.

Password

The SAP logon user password. You can set this via the [SetSAPPassword](#) user exit. Alternatively, leave this field blank and supply an encrypted password in the Encrypted SAP Password setting below. This option is available only when the Connect To SAP option is selected above.

Encrypted SAP Password

The encrypted password for the SAP logon. As you type in this password, the individual characters are displayed as expected. However, when you click **Save**, the password is encrypted and the encrypted password is displayed. This option is available only when the Connect To SAP option is selected above.

PO Lookup

The name of the SAP [BAPI/RFC](#)-enabled function module used to lookup the purchase order. The interface of the function should match [BAPI_PO_GETDETAIL](#). This option is available only when the Connect To SAP option is selected above.

Invoice Post

The name of the SAP `BAPI`/`RFC`-enabled function module used to post an invoice. The interface of the function should match `BAPI_INCOMINGINVOICE_CREATE`.

This option is available only when the Connect To SAP option is selected above.

FB60 Invoice Post

The name of the SAP `BAPI`/`RFC`-enabled function module used to post an FI invoice via `FB60`. The interface of the function should match `BAPI_ACC_INVOICE_RECEIPT_POST`.

This option is available only when the Connect To SAP option is selected above.

FB60 Invoice Park

The name of the SAP `BAPI`/`RFC`-enabled function module used to park an FI invoice via `FB60`/`FV60`. The interface of the function should match `BAPI_INCOMINGINVOICE_PARK`.

This option is available only when the Connect To SAP option is selected above.

Invoice Park

The name of the SAP `BAPI`/`RFC`-enabled function module used to park an invoice. The interface of the function should match `BAPI_INCOMINGINVOICE_PARK`.

This option is available only when the Connect To SAP option is selected above.

Company Lookup

The name of the SAP `BAPI`/`RFC`-enabled function module used to lookup the purchase order. The interface of the function should match `BAPI_COMPANYCODE_GETDETAIL`.

This option is available only when the Connect To SAP option is selected above.

Entry Sheet Lookup

The name of the SAP `BAPI`/`RFC`-enabled function module used to lookup the service entry sheet for `SR-IV` purchase orders. The interface of the function should match `BAPI_ENTRYSHEET_GETDETAIL`.

This option is available only when the Connect To SAP option is selected above.

RFC Read Table Function

The name of the SAP `RFC`-enabled function that is used to perform SAP lookups. This should have the same interface as `RFC_READ_TABLE`. If no function is specified, `RFC_READ_TABLE` is used by default.

This option is available only when the Connect To SAP option is selected above.

Create SAP Documents

If selected, an SAP document is created during export. The system default is to try and post the invoice in SAP.

This option is available only when the Connect To SAP option is selected above.

Log SAP Export

If selected, tracking statements are added to the log file. These entries show data that passes to and from calls to the SAP document posting and parking `BAPIS`.

This option is available only when the Connect To SAP option is selected above.

Always Park Invoice

If selected, the system will always parks the invoice in SAP and never attempts a post.

This option is available only when the Connect To SAP option is selected above.

Park Invoice

If selected, parked invoices can be created in the event where a posted MM document cannot be created.

This option is available only when the Connect To SAP option is selected above.

Park With Lines

If selected, parked invoices are created with line item information found during the line pairing operation.

This option is available only when the Connect To SAP option is selected above.

Always Park FI

If selected, non-purchase order invoices (FI) are always parked.

This option is available only when the Connect To SAP option is selected above.

Park FI To FB60

If selected, documents are parked to FB60 using the custom [Z_BW_FI_INVOICE_PARK](#) SAP function.

This option is available only when the Connect To SAP option is selected above.

Park MM If Downpayment

If selected, the system parks an MM invoice if the vendor has a down payment against it.

This option is available only when the Connect To SAP option is selected above.

MM Invoice Doc Type

The SAP document type for MM invoices, such as "RE" or "RN."

This option is available only when the Connect To SAP option is selected above.

FI Invoice Doc Type

The SAP document type for FI invoices, such as "KR."

This option is available only when the Connect To SAP option is selected above.

MM Credit Doc Type

The SAP document type for MM credit memos, such as "RE" or "RN."

This option is available only when the Connect To SAP option is selected above.

FI Credit Doc Type

The SAP document type for FI credit memos, such as "KG."

This option is available only when the Connect To SAP option is selected above.

Activate SAP Failure User Exit

If selected and the solution export involves creating a document in SAP, the export fails automatically if no SAP document is created beforehand.

The [SAPPostingFailure](#) user exit is available for a developer to create their own alternative export if the SAP posting/parking fails without sending the document to a failed export status.

This option is available only when the Connect To SAP option is selected above.

Read Entry Sheet

If selected, the system reads the service entry sheet details from SAP.

Important This option must be selected if the implementation involves SR-IV purchase orders, or there are multiple account assignments on non SR-IV purchase orders.

This option is available only when the Connect To SAP option is selected above.

Valid Fiscal Markup Conditions

A comma-separated list of valid SAP condition types that indicate a fiscal markup. If the system books an invoice line to a purchase order line that has a condition in this list behind it, the system creates two invoice lines. For these lines, the amount is pro-rated based on the condition value, in relation to the total order value of the purchase order line.

This option is available only when the Connect To SAP option is selected above.

Create Link To External Archive

If selected, the link to the image in an external third-party archive is added as an attachment to a posted or parked invoice.

This option is available only when the Connect To SAP option is selected above.

Destination Archive

The SAP archive or content repository ID as displayed in SAP transaction OAC0. This represents the archive where the image resides in an early archiving scenario, or the image that needs archived in a late archiving scenario.

If the archive ID varies dramatically depending on the document, rather than processing that document, the destination archive ID is mapped from the image filename via the **Solution Configuration Manager > Global Settings > Import Settings**.

If a destination archive retrieved from the filename can be obtained through the mapping in the **Solution Configuration Manager > Global Settings > Import Settings**, it overrides this setting.

This option is available only when the Connect To SAP option is selected above.

Archive Via SAP

Select this in a late archiving scenario where Invoice Processing Agility is responsible for placing the image into an archive via SAP. The following prerequisite is mandatory.

- The archiving function is installed on the client SAP system.

This option is available only when the Connect To SAP option is selected above.

Archive As PDF

If selected, the system archives a document as a PDF, regardless of the original document file type.

This option is available only when the Connect To SAP and Archive Via SAP options are selected above.

SAP Archiving Function

The name of the SAP RFC enabled function module provided by Invoice Processing Agility. It is used to archive the image into the destination archive. This is used in the late archiving scenario.

This option is available only when the Connect To SAP and Archive Via SAP options are selected above.

Activate SAP Archiving User Exit

If selected, the system runs the code in the [SAPArchiving](#) user exit in order to archive the image via SAP, instead of the standard system function. A destination archive is needed for this to occur, either derived from the filename mapping in the **Solution Configuration Manager > Global Settings > Import Settings**, or the value in the Destination Archive setting above.

The Archive As PDF and SAP Archiving Function settings above do not apply if the user exist is being used.

This option is available only when the Connect To SAP and Archive Via SAP options are selected above.

MM Invoice Object

The SAP workflow document type that is used for MM invoices when creating an invoice attachment, such as "MMILOGINV."

This option is available only when the Connect To SAP option is selected above.

MM Credit Object

The SAP workflow document type used for MM invoices when creating an invoice attachment, such as "MMILOGCRD."

This option is available only when the Connect To SAP option is selected above.

FI Invoice Object

The SAP workflow document type used for FI invoices when creating an invoice attachment, such as "FIINVOICE."

This option is available only when the Connect To SAP option is selected above.

FI Credit Object

The SAP workflow document type used for FI invoices when creating an invoice attachment, such as "FICREDIT."

This option is available only when the Connect To SAP option is selected above.

Always Send Withholding Tax

If selected, withholding tax information is always be sent to SAP via the `BAPI` call at the time of export, regardless if a withholding tax amount has been captured from the document. If more than one active withholding tax code exists on the vendor master, the document is parked.

This option is available only when the Connect To SAP option is selected above.

Convert WBS Elements

If selected, the system converts the external WBS element retrieved from the lookup, to the purchase order account assignment in SAP, to the internal WBS element required for invoice posting.

The call to SAP uses `RFC_READ_TABLE`, although this can be changed using the RFC Read Table Function setting above. This parameter is called once per WBS element that needs converted. Hence, for an invoice with multiple account assignments with multiple WBS elements, it will be called once per WBS element.

This option is available only when the Connect To SAP option is selected above.

Downpayment SGL Codes

This is a list of the single character SAP special general ledger indicators that are used to denote a downpayment. The list does not need to be separated by any special characters. This field displays a common value 'A' by default.

This option is available only when the Connect To SAP option is selected above.

Tax Settings

The tax settings are divided into two separate categories. The configuration settings are a profile-specific set of options that aid tax code extraction. For each profile, multiple tax jurisdiction codes are allowed.

- [Tax Configuration](#)
- [Tax Jurisdiction Codes](#)

Tax Configuration

These settings relate to tax extraction as well as automatic tax code determination for invoice creation.

The list of settings here can differ depending on what options are selected. If selecting an option displays additional settings, that information is included below.

Primary Rates

A comma-separated list of expected tax rates.

This list is optional, but does assist Invoice Processing Agility to find 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.

This list is optional, but does assist Invoice Processing Agility to find the correct tax value on the document.

Activate VAT Compliance Check

If selected, the system activates the VAT registration number compliance check. This means that if value added tax is charged on an invoice, the vendor and bill-to company VAT registration numbers are mandatory.

If VAT is charged in a currency that differs from the local currency of the addressed company code, then the exchange rate and/or local VAT amount fields are also mandatory.

VAT Check Company Code Exceptions

A comma-separated list of company codes that are excepted from the VAT registration number compliance rule.

Vendor VAT Check Only

If selected, the system requires the VAT registration number of the vendor, and not the registration numbers of the vendor and the bill-to party.

Vendor VAT Check Company Code Exceptions

A comma-separated list of vendor company codes that are excepted from the VAT registration number compliance rule. The behavior of this field depends on whether the Activate VAT Compliance Check option is selected above.

If Activate VAT Compliance Check is cleared, then any company codes listed here are excluded from the VAT check. If Activate VAT Compliance Check is not selected, then only company codes specified here are checked.

Check VAT Cross Border

If Vendor VAT Check Only is selected, then for the company codes listed, both the vendor and bill-to VAT registration numbers are mandatory.

Alternatively, if Vendor VAT Check Only is cleared, then only the vendor VAT registration number is mandatory for invoices belonging to the company codes listed here.

The cross-border VAT registration number check operates independently of the vendor-only VAT check.

Cross Border Company Code Exceptions

A comma-separated list of company codes that are excepted from the EU cross border VAT registration number check.

If Check VAT Cross Border is selected, then, for the company codes listed against this parameter, the cross-border VAT registration number check is not carried out. If Check VAT Cross Border is cleared, then the cross-border VAT registration number check is only carried out for invoices belonging to company code specified in this list.

Activate Tax Determination

If selected, the system activates the tax determination and validation feature. Otherwise, no tax code allocations or validations are carried out.

Validate Tax Amount

This applies to SAP implementations only.

If selected, the system validates the calculated tax amount using the tax codes found in the total tax amount from the invoice. If this amount is outside the Tax Tolerance set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**, the document is parked in SAP.

This option is available only when Activate Tax Determination is selected above.

Always Use PO Tax Code

If selected, the system uses the tax code extracted from the purchase order.

This option is available only when Activate Tax 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 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.

This option is available only when Activate Tax Determination is selected above.

Validate From DB

If selected, tax codes are derived and/or validated against a database table. Do not use this table for countries where tax jurisdictions apply. For example, the US, Brazil, and Canada.

This option is available only when Activate Tax Determination is selected above.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group specifying the tax code database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This option is available only when Activate Tax Determination and Validate From DB are selected above.

DB Table Name

The name of the tax code database table.

This option is available only when Activate Tax Determination and Validate From DB are 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.

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.

The tax partition ID is set in the Tax Partition option in the **Solution Configuration Manager > Client Settings > Client Settings** 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.

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.

This option is available only when Activate Tax Determination and Validate From DB are selected above.

Check For ICMS Tax

ICMS is a form of sales tax used on Brazilian Nota fiscal documents.

If selected, the system attempts to identify this tax amount on incoming documents and applies validations to this field.

If cleared, it is assumed that the client is not processing Brazilian Nota fiscal documents.

This option is available only when Activate Tax Determination is selected above.

Derive Ship To From Company Code

If selected, the ship-to country is set to the same value as the company code country.

This option is available only when Activate Tax Determination is selected above.

Read Plant From SAP

If selected, the system reads plant information from SAP to determine the ship-to location of the goods, for tax calculation purposes.

This option is available only when Activate Tax Determination is selected above.

Important This option is not available in the Azure cloud environment.

Read Plant From DB

If selected, the system reads plant information from a database to determine the ship-to location of the goods, for tax calculation purposes.

This option is available only when Activate Tax Determination is selected above.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

Use Tax Partition

If selected, the tax partition ID is used when accessing the plant table. Entries are loaded if they have a tax partition that matches the tax partition for the current client.

The tax partition ID is set in the Tax Partition option in the **Solution Configuration Manager > Client Settings > Client Settings** for the relevant client.

This option is available only when Read Plant From DB is selected above.

DB Tax Partition

Enter the Tax Partition database column name that holds the Tax Partition ID. The Tax Partition ID is specified in the **Solution Configuration Manager > Global Settings > Partition Settings > Tax Partition Settings**.

This option is available only when Read Plant From DB and Use Tax Partition are selected above.

Plant SQL Connection Group

The SQL connection group that specifies the plant database connection string, as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This option is available only when Activate Tax Determination and Read Plant From DB are selected above.

DB Plant Table

The name of the database table that contains plant information.

This option is available only when Activate Tax Determination and Read Plant From DB are selected above.

DB Plant

The name of the column in the plant database table that contains the plant ID.

This option is available only when Activate Tax Determination and Read Plant From DB are selected above.

DB Plant Country

The column name in the plant database table that contains the plant country.

This option is available only when Activate Tax Determination and Read Plant From DB are selected above.

DB Plant State

The column name in the plant database table that contains the plant state location.

This option is available only when Activate Tax Determination and Read Plant From DB 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.

This option is available only when Activate Tax Determination and Read Plant From DB are selected above.

Activate VAT Based Tax Processing

If selected, the Provincial Sales Tax,, Harmonised Sales Tax, and ICMS fields are deactivated and fields NetAmounts 0-4, TaxAmounts1-4, and TaxRate 1-4 are used instead.

If you are using this option, ensure that these fields are set to Active in the **Solution Configuration Manager > Profile Settings Settings > Field Settings**

Extract HST Separately

If selected, Harmonised Sales Tax is captured in the Harmonised Sales Tax field as opposed to the TaxAmount1 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.

This field is configurable so additional special characters can be added if the government standards change in the future.

The system rejects the password field if it contains characters that are not included here.

CN Password Valid Length

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.

Tax Jurisdiction Codes

These settings configure tax code behavior for countries that use tax jurisdictions during automatic tax determination. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

Index

The numeric tax code index.

Tax Code

The tax code for the tax code settings group.

The settings group used for countries where tax jurisdictions exist, such as in the US, Brazil, and Canada. In these countries, the tax code indicates if an item is taxable or tax exempt. It also indicates the processing instruction, such as self assessment.

For other countries, use the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration** and the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Jurisdiction Codes** for automatic tax code determination and validation.

Country

The group tax code country, such as US or CA.

If Tax

If there is tax on an invoice, and the purchase order line item tax code is set in Tax Code, and the company code country is the value in Country, then this value is the tax code for the invoice line.

If No Tax

If there is no tax on an invoice, and the purchase order line item tax code is set in Tax Code, and the company code country is the value in Country, then this value is the tax code for the invoice line.

Vendor State

A comma-separated list of vendor states that trigger a state-dependent tax code selection.

Ship To State

A comma-separated list of ship-to states that trigger a state-dependent tax code selection.

If Tax State

The tax code used if:

- The vendor is from a state listed in Vendor State.
- The vendor goods are shipped to a state listed in Ship To State.
- Tax is charged on the invoice.

If both Vendor State and Ship To State are populated, then the vendor state must be in the vendor state list, and the ship-to state must be in the ship-to state list. Otherwise, If Tax State code is used.

If No Tax State

The tax code used if:

- The vendor is from a state listed in Vendor State.
- The vendor goods are shipped to a state listed in Ship To State.
- No tax is charged on the invoice.

If both Vendor State and Ship To State are populated, then the vendor state must be in the vendor state list, and the ship-to state must be in the ship-to state list. Otherwise, the If No Tax State code is used.

Pay Tax As Billed

If selected and a tax amount is found on the invoice, and any of the invoice line tax codes are set to a Tax Code value, the system books the tax amount as billed on the invoice. It does not allow the system to calculate it automatically.

Short Pay If Tax

If a tax amount is found on the invoice, and all invoice line item tax codes belong to a group that have this selected, then the invoice is booked minus the tax.

Account Assignment Categories

A comma-separated list of purchase order line account assignment categories.

If no tax code is present in the purchase order line, and the company code country is equal to the value held in Country, and the purchase order line has an account assignment present in this list, then the tax code held in Tax Code is the default value as the purchase order line item tax code.

Unit Of Measure Settings group

This group separates the unit of measure options into two distinct groups. The settings are profile-specific and the types can have multiple values.

- [Unit Of Measure Settings](#)
- [Unit Of Measure Types](#)

Unit of Measure Settings

These settings configure the database lookup parameters that are used for unit of measure conversion that may occur during line pairing.

Important These options are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the database connection string for the unit of measure conversion table database. If no connection group is specified, the system uses group 1.

DB Table Name

The name of the unit of measure conversion database table. This setting is mandatory for unit of measure conversion database lookups.

Use PO Partition

If selected, the unit of measure conversion database lookup uses a purchase order partition. Purchase order partitions are set against the client in the **Solution Configuration Manager > Client Settings > Client Settings**.

PO Partition Column

Enter the unit of measure database column name that holds the PO partition ID. The PO partition ID is set in the **Solution Configuration Manager > Global Settings > Partition Settings > PO Number Partition Settings**.

This setting is mandatory if the Use PO Partition setting is selected.

DB Material No

The technical name of the column in the unit of measure conversion table that represents the item material number.

DB Base UOM

The technical name of the column in the unit of measure conversion table that represents the material base unit of measure, such as the destination unit of measure.

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.

DB Denominator

The technical name of the column in the unit of measure conversion table that represents the denominator component of the unit of measure conversion ratio.

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 where the conversion takes place.

Unit of Measure Types

These settings contain mapping information between a unit of measure and how it appears, or an invoice to a unit of measure ISO-code as used by a downstream ERP system. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

Important These options are not available in the Azure cloud environment.

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 the unit of measure may appear under on the invoice for this UOM.

Vendor Settings

These settings validate an extracted vendor number.

Validate From ASE

Indicates whether an extracted vendor ID is validated against a database locator or the Vendor Extract. For the best results, select this setting.

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.

This setting is relevant for installations involving SAP.

Alpha Num Site Separator

The special character used to separate a vendor ID and site ID in the unique ID column in the database referenced by the database locator.

Ignore PO Vendor

If selected, the system always uses the vendor determined by the system, rather than defaulting to the remit-to vendor set on the purchase order. If selected, it is no longer necessary for the purchase order vendor to be found on the document for the purchase order to be set to valid. Instead, both values are obtained and validated independently of one another. However, an otherwise invalid vendor can be set to valid if it is corroborated by the vendor on the purchase order.

Therefore, the invalid reasons for PO VENDOR <> INVOICE VENDOR and THIRD PARTY FREIGHT no longer apply.

Use ASE If PO Vendor Invalid

If selected, the system evaluates the vendor extracted by the system, if none of the vendors on the purchase order can be validated against the document.

If the system extracted vendor can be validated, this is 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 is displayed in the field, but is set to invalid. The content of the invalid reason field does not change.

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

If no country column is available in the vendor extract used by the Vendor From ASE field or the value in the country column is blank, a default country for all vendors can be specified here.

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 alternatives. 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.

Invoice Processing Agility increases the weights of the database locator that extracts the vendor as follows.

- For Zip only = +10%
- For Zip + Vendor Name = +20%
- For Zip + VAT Reg = +20%
- For Zip + Street Name = +20%
- For Zip + Street Name + Vendor Name = +30%
- For Zip + Street Name + VAT Reg = +30%
- For Zip + Street Name + VAT Reg = +30%
- For Zip + Street Name + VAT Reg + Vendor Name = +40%

For French vendors, an additional 20% is added to any of the above if the SIRET ID is found on the document, or a unique vendor identifier.

Check for Alternate Payees

If selected, this activates the alternate payee functionality for the corresponding profile ID.

Check Vendor Name for NO-PO

If selected, the system does not allow a vendor ID to validate automatically unless either the vendor name or the vendor VAT registration number is found on the document. This applies to all documents except purchase order invoices where a valid purchase is found and Ignore PO Vendor is cleared.

Global Settings overview

Global configuration settings are configurable using the Solution Configuration Manager and are not dependent on a client or profile. These settings control how different global aspects of your project behave.

The following settings categories are available.

- [ASE Database Settings](#)
- [Country Settings](#)
- [Currency Settings](#)
- [Custom Extraction Profiles](#)
 - [Analysis Profiles](#)
 - [Evaluation Profiles](#)
 - [Extraction Profiles](#)
- [Custom Settings](#)
- [Database Connection Settings](#)

- [Document Type Formats](#)
- [Error Message Settings](#)
- [General Settings](#)
- [Import Settings](#)
- [Information Messages](#)
 - [Information Message Settings](#)
 - [Information Settings](#)
- [Invalid Reasons](#)
 - [Invalid Reason Settings](#)
 - [Invalid Reason Display Text](#)
- [Partition Settings](#)
 - [Employee Partition Settings](#)
 - [PO Number Partition Settings](#)
 - [Tax Partition Settings](#)
 - [Vendor Partition Settings](#)
- [Stored Procedure Settings](#)
- [Substitution Rules](#)
- [Tolerance Settings](#)
- [User Management](#)

ASE Database Settings

These are global settings for the vendor, employee, and company code database lookups.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Index ID

The unique index ID for each database locator field.

Class Name

The name of the class. The only valid value for this option is Invoices. This is because configuring database locators for other classes is not supported through the Solution Configuration Manager.

Field Name

The technical name of the database locator. For example, `DB_CompanyCode`.

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.

Country Settings

These settings are independent of clients and profiles. They enable the system to point to a lookup table that contains information about which countries are part of the EU and their local currencies. These settings also help to automatically determine tax codes.

Important These options are not available in the Azure cloud environment.

The following settings are available.

Validate From DB

If selected, the country is validated against a database.

SQL Connection Group

The SQL connection group that specifies the country database connection string, as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This option is available only when Validate From DB is selected.

DB Table Name

The country database table name. This setting is mandatory for database lookups.

This option is available only when Validate From DB is selected.

DB Country

The name of the country database table column with the country key.

This option is available only when Validate From DB is selected.

DB Currency

The name of the country database table column with the country currency.

This option is available only when Validate From DB is selected.

DB EU Member

The name of the country database table column that indicates if a country is an EU state member.

This option is available only when Validate From DB is selected.

DB Name

The name of the country database table column with the full name of the country in English.

This option is available only when Validate From DB is selected.

DB VAT Rates

The name of the country database table column with the VAT rates.

This option is available only when Validate From DB is selected.

Currency Settings

These are settings for the invoice currency.

Depending on your selections, different settings are displayed. If a field is displayed in certain circumstances, that information is listed below.

Dollar Sign Is USD

If this field is enabled, no currency is identified on the invoice, but a \$ sign is found in the OCR text, the currency is set to USD.

This option is cleared by default.

Default PO Currency

If selected and no currency is identified on the invoice, the system uses the same currency as the purchase order.

This option is selected by default.

Default Vendor Currency

If selected and no currency is identified on the invoice, the system uses the same currency as the vendor country of origin.

This option is selected by default.

Note The Default Vendor Currency value overrides the Default PO Currency when both options are selected.

Validate From SAP

If enabled, the currency field is validated against SAP during Validation. You cannot select this field and Validate From DB at the same time.

Important This option is not available in the Azure cloud environment.

Validate From DB

If enabled, the currency field is validated against a database during Validation. You cannot select this field and Validate From SAP at the same time.

Important This option and all of its dependent settings are not available in the Azure cloud environment.

SQL Connection Group

The SQL connection group that specifies the currency database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1.

This setting is available only when Validate From DB is selected above.

DB Table Name

The currency found on the document is validated against this named database table. This setting is mandatory for database lookups.

This setting is available only when Validate From DB is selected above.

DB Column Name

The name of the column in the database table containing the valid currency code. This setting is mandatory for database lookups.

This setting is available only when Validate From DB is selected above.

Activate Extended Validation

When selected, extended validation is performed on the extracted currency result.

The extended validation compares the system-extracted currency to the following, in the order specified.

1. Permitted global currencies. See the Global Currencies setting below.
2. The vendor currency if present in the vendor extract.
3. The currency associated with the vendor country of origin.
4. The currency of the company code.
5. The currency associated with the company code country.

If the invoice currency does not match any of the above, then the currency is set to invalid and must be corrected in Validation. Errors caused by missing, incomplete or incorrect configuration in connection to company code and country lookups also set the currency field to invalid.

User input in Validation is excluded from the above checks and are assumed to be correct.

Global Currencies

A comma-separated list of permitted global currencies.

This is set to USD, EUR by default.

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 alternatives are extracted, analyzed and evaluated. The following settings are available.

- [Analysis Profiles](#)
- [Evaluation Profiles](#)
- [Extraction Profiles](#)

Analysis Profiles

These settings define formats for generating alternatives for the [Custom 1 to Custom 5](#) extraction fields. Each set of formats is referred to as an analysis profile.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The table has a composite key that is formed by the combination of the Analysis Profile ID and the Index ID. This is because alternatives may be generated using multiple format strings.

Analysis profiles are assigned to extraction profiles via the Analysis Profile ID setting in the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > [Extraction Profiles](#)**.

The following column settings are available.

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 alternatives for the field.

The Index ID is unique per Analysis Profile ID.

Compare Type

The compare type used to generate alternatives bas on the format sting. The following options are available for this setting.

- **SIMPLE**. Indicates that the format is a simple expression.
- **REGULAR**. Indicates that the format is a regular expression.
- **TRIGRAM**. Indicates that the trigram method is used to find alternative based upon the format string.
- **LEVEN**. Indicates that the Levenshtein method is used to find alternatives based upon the format string.
- **STRINGCOMPARE**. Indicates that the String Compare method is used to find alternative based upon the format string.

For more information on these comparison types, refer to the *Transformation Designer Help*.

Format

The format string used to generate alternatives for the field.

Ignore Characters

A list of characters that are allowed to appear in an alternative at any position. The system should be tolerant of these characters when generating alternatives.

For example, hyphens or periods. This list does not need to be comma-separated.

Evaluation Profiles

These settings are used to extract alternatives for the field labels as part of the [Custom 1 to Custom 5](#) extraction fields. Each set of keywords and phrases is referred to as an evaluation profile.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The table has a composite key formed by the combination of the Evaluation Profile ID and the Index ID. This is because alternatives may be evaluated using multiple keywords and phrases.

Evaluation profiles are assigned to extraction profiles via the Evaluation Profile ID setting in the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Extraction Profiles**.

The following column settings are available.

Evaluation Profile ID

The unique ID given to the evaluation profile.

Index ID

The index ID given to each format string that is used to generate alternatives for the field.

The Index ID is unique per Evaluation Profile ID.

Content

A word or phrase that is used to help identify the correct alternative for the field result.

Ignore Characters

A list of characters that are allowed to appear in an alternative at any position. The system should be tolerant of these characters when generating alternatives.

For example, hyphens or periods. This list does not need to be comma-separated.

Strong

If selected, the specified keyword or phrase increases the chances of an alternative being found.

Extraction Profiles

These settings are used to define field extraction profiles as part of the configurable [Custom 1 to Custom 5](#) fields. Once defined, an extraction profile is subsequently assigned to a custom field in the **Solution Configuration Manager > Profile Settings > Field Settings**, using the Extraction Profile ID setting.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

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 alternatives for the field.

Entries here correspond to the Analysis Profile ID setting in the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Analysis Profiles**.

Evaluation Profile ID

The evaluation profile ID that is used to evaluate alternatives for the field.

Entries here correspond to the Evaluation Profile ID setting in the **Solution Configuration Manager > 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 alternatives generated for the field, and is expressed in a percentage.

Use this setting when only a few alternatives are generated for a field, and these generated alternatives are considered valid extraction results.

Overwrite With Search String

When selected, the field result is overwritten with the string compare or Levenstein search string that is used to generate the alternative.

Remove No Number Alternatives

When selected, any alternatives that do not contain at least one numeric character are removed from the list of available alternatives.

Distance

The fuzzy factor that the system uses when generating alternatives.

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 an alternative 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 alternative.

Max Word Len

This value expresses the maximum length of an alternative in millimeters.

Any alternatives that exceed this length are ignored.

Case Sensitive

If selected, the system generates alternatives based on the format strings entered in the field analysis profile. These are case sensitive.

Keep Spaces

If selected, any spaces between OCR words are preserved in the generated alternative text.

Use Regions

If selected, alternative generation is restricted to specific regions on a document.

In order for this setting to work, Use Regions must also be selected.

Use First Page

If selected, the system generates alternatives 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 alternatives 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.

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 alternatives 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.

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 alternatives 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.

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 alternatives 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.

In order for this setting to work, Use First Page must also be selected.

Use Subsequent Page

If selected, the system generates alternatives for all pages between the first and last page of the document.

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 alternatives 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.

Subsequent Bottom

Expressed as a percentage, this setting defines the bottom-most area on the subsequent page of a document where alternatives 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 alternatives 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 alternatives 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 alternatives 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 alternatives 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 alternatives 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 alternatives 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 alternatives 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

These are the custom settings for the parameters used in Invoice Processing Agility.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Parameter Name

The parameter name.

Parameter Type

The parameter type. This can be one of the following types.

- `BOOL` - a boolean value of either True or False
- `INT` - an integer value
- `VL` - any other string value

Parameter Value

The value of the parameter that corresponds to the Parameter Type.

Database Connection Settings

These are the settings for the SQL or Oracle connection strings that are used by Invoice Processing Agility.

Important These options are not available in the Azure cloud environment.

The various database connection strings are entered here and can be used for the various purposes. For example, you can use the database connection strings defined here as follows.

- Export to database
- Database lookups

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

You can add additional table rows as necessary.

The following column settings are available.

Connection Group ID

The connection group ID.

Connection String

The connection string for the SQL connection group ID.

Encrypted Password

The encrypted password for the SQL connection group ID.

As you type in a password in the Connection String, the characters are displayed exactly as typed. When you save your changes, the password text is masked with asterisks and the Encrypted Password field is populated with the encrypted password value automatically.

Document Type Formats

These settings specify words 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.

These settings are client and profile independent. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

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. For more information on this comparison method, see the *Transformation Designer Help*.

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 is a list of error messages that are displayed in Validation, or written to the Invoice Processing Agility log file. This is a global table and is independent of the client or profile.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Error Number

The error message number.

Message

The error message text.

You can add new error messages using error number 900 onward.

General Settings

These are the settings for documents imported from the file system. They contain the global project settings that are used for solution reporting. These are stored against all database records created when documents are processed through the project.

The following settings are available.

Project Name

The name of the project. This is used to identify the application that is configured.

Version

The project version number.

Client Name

The application is configured for the named client.

Buffer Client Settings

Select this option to enable the client buffering.

Since client settings and its profile data are loaded for every document that is processed, it is possible to buffer client settings. This means that new client settings are loaded only when the client of the current document differs from the previous document client. If you process several documents for a specific client, the settings are buffered.

Ignore PDF Text Layer

If selected, OCR is performed on a PDF and those OCR results are used for extraction, regardless of the PDF having its own built-in text layer. When cleared, the build-in text layer of a PDF is used for extraction instead. This option is cleared by default.

Import Settings

These are the settings for document import. They contain the mapping of values contained within the image filename and the corresponding fields in Invoice Processing Agility. The parameters in this section enable data transfers between Invoice Processing Agility and an upstream system.

Filename components should be separated by a configurable separator, such as an underscore.

The following settings are available.

URN

The document unique reference number.

Scan Date

The document scan date.

Invoice Type

The document invoice type, such as PO, NO PO, and Automatic.

Destination Archive

The document destination archive.

Company Code

The invoice company code.

Input Source

The document input source, such as SCAN, EDI, or EMAIL that is populated automatically.

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 the client zero is used.

Batch Name

The name of the batch.

Language ID

The two character language ISO-code of the imported document.

If this option is set to EN, or an unsupported language, the default FineReader Page Recognition Profile in Transformation Designer is used to perform OCR. This profile is configured to process English and Digits.

In addition to English, the following languages are supported; CN (Chinese), JP (Japanese), KR (Korean), TH (Thai), GR (Greek), and RU (Russian).. There is a corresponding recognition profile for each of above languages, which means that documents are extracted with their language-specific recognition engine.

For more information on recognition and recognition profiles, see the *Transformation Designer Help*.

Separator

The component filename separator. If this value is left blank, the separator defaults to an underscore.

Date Format

The format for the date contained within the document filename. The options for this value are MMDDYYYY or YYYYMMDD.

Information Messages

Information messages appear during Validation. Because there are so many different types of messages that can appear, these are separated into smaller groups of settings as follows.

- [Information Message Settings](#)
- [Information Settings](#)

Information Message Settings

These settings contain the information messages that appear in Validation.

Important You should only change the text associated with each message, not the IDs.

This is a global table and is independent of the client or profile. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Information Message ID

The information message ID.

Message

The information message. Within the information message, text symbols [VEN] and [CUR] are used to represent the current vendor ID and currency, respectively. In addition, [PON] represents the purchase order number.

Information Settings

These settings control the Validation information message box configuration. This is a global table that is independent of the client or profile.

The following settings are available.

Disable MIRA Popup

If selected, this disables the Validation window 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, the system does not prompt the Validation user that the currency is about to be overwritten with the vendor or purchase order default currency. This occurs only when the vendor or the purchase order is changed.

Invalid Reasons

There are many different invalid reasons that can be specified automatically or by a Validation user. As a result, these are separated into the following smaller categories.

- [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.

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

These settings hold the invalid reasons that may be set by a Validation user during production. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Index

This is a read-only ID that represents the invalid reason.

Rule

The rule ID for the invalid reason. The rule governs how Validation behaves when a particular invalid reason is selected.

The following rules are available:

- SETVENDORTOVALID. Sets the vendor field to valid.
- SETPOTOVALID. Sets the purchase order number field to valid.

However, no line pairing is carried out.

- **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.
- **SETAMOUNTSTOVALID.** Sets the amount fields and the table to valid.

However, no line pairing is carried out.

- **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.
- **SETVENDORANDPOTOVALID.** Sets the purchase order and vendor number fields to valid.

However, no line pairing is carried out.

- **NONVATCOMPLIANT.** Sets the local VAT amount, exchange rate, vendor, and bill-to VAT registration number fields to valid.
- **STOCKINVOICE.** Sets the purchase order number field to valid.

Line pairing is still carried out based on purchase orders set in the [LinePairingPOs](#).

- **ZEROVALUEINVOICE.** Permits a zero total to pass in Validation.

Validation Display

The invalid reason message displayed in Validation.

Export Code

The invalid reason code exported by Invoice Processing Agility if the Invalid Reason field is set.

Partition Settings

Invoice Processing Agility supports multiple sets of different types of data within a single project file. These multiple sets of data are called partitions, and several types of partitions are supported as follows.

- [Employee Partition Settings](#)
- [PO Number Partition Settings](#)
- [Tax Partition Settings](#)
- [Vendor Partition Settings](#)

Employee Partition Settings

These settings are used by the database locator that populates the Employee ID. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Employee Partition

The unique employee partition ID.

Description

The partition details.

PO Number Partition Settings

These settings list the purchase order data partitions that are active in the project. These settings are only relevant if the Validate From DB option is selected in the **Solution Configuration Manager > Profile Settings > PO Number Validation**.

You must register a purchase order partition in this table before you can assign it to a client.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

PO Partition ID

The unique ID of the purchase order data partition.

Description

The partition description.

Tax Partition Settings

This is a list of the tax partitions active within the project. A tax partition must be registered in this table before it can be assigned to a client. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Tax Partition ID

The unique ID of the tax data partition.

Description

The partition description.

Vendor Partition Settings

This is a list of the vendor partitions that are active for a project. A vendor partition must be registered in this table before it is assigned to a client. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Vendor Partition

The unique ID for the vendor partition.

Description

The partition description.

Stored Procedure Settings

These settings are where purchase order lookups are defined. See the **Use Stored Procedure** option in both **Solution Configuration Manager > Profile Settings > PO Number Validation** and the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table..

The following column settings are available.

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 include BOOLEAN, INT, DATE, DOUBLE, and VARCHAR. For any other entries, such as a blank entry, the UNKNOWN type is used.

Parameter Size

This setting only applies if the Parameter Type is set to VARCHAR above.

In this case, this setting specifies the maximum length allowed. If this setting is left blank, or contains zero or a non-numeric entry, a default size of 50 is used.

Parameter Value

The definition of the parameter. You can specify one of the following field technical names.

- PONumber
- CompanyCode

Note These are case sensitive and must match the field names exactly.

Parameter Direction

Select I if you want the parameter direction as input. Select "O" for output.

Substitution Rules

These settings contain a list of rules for substitution values in an extracted or user-entered text field. Substitution rules are assigned to text fields via the "Substitution Rule" setting in the **Solution Configuration Manager > Profile Settings > Field Settings**. These settings are applied during export, and not during extraction or validation. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

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

These settings control the tolerances that are used to validate extracted values. They are independent of clients and profiles.

These tolerances can be set against currencies in the **Solution Configuration Manager > Global Settings > Currency Settings**. 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. It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

Index

The tolerance group index.

Header Tolerance

The tolerance value for the invoice header amounts in the invoice currency.

Table Row Tolerance

The tolerance value for each individual line item in the invoice currency.

Tax Tolerance

The tolerance value for comparing the invoice tax amount with the system calculated tax amount, based on the line item tax codes.

No Decimal Places

If selected, currencies assigned to this tolerance group are not allowed decimal places.

This is appropriate for currencies where a single unit of that currency is the smallest currency unit in current use.

For example, if there are no active cent or penny subunits, such as the Japanese Yen or the Hungarian Forint. If a value of 10.400 is extracted and the currency is set to Hungarian Forints (HUF), and HUF has this value selected, then the value is formatted to 10400.

If the value is cleared, the value in the above example is formatted to 10.40. However, if 10.40 is extracted, then the formatting will stay at 10.40.

User Management

These settings contain a list of active users for the system, as well as their authorizations. These settings are client and profile independent.

Important These options are not available in the Azure cloud environment.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following column settings are available.

User ID

The user ID.

This can be a Windows domain user name, a windows short name, or a Kofax TotalAgility user name.

Client Group

The client group that the above user belongs.

Domain

The Windows domain for Windows-based authentication.

Password

If Windows authentication is not used, this is the password string for the user. This password is used to create the Kofax TotalAgility resource, and means that password changes are made through the TotalAgility Designer.

For more information about passwords and their required format, see *Kofax TotalAgility Help > System Settings > Settings*.

Scan Resource

Select if you want the user to scan for document ingestion for the selected Client Group.

Validation Resource

Select if you want the user to process documents in Validation for the selected Client Group.

LPR Correction Resource

Select if you want the user to process documents in Line Pairing Line Pairing Correction for the selected Client Group.

PIX Correction Resource

Select if you want the user to process documents with PIX Correction user interface for the selected Client Group.

Important When a user is added to Invoice Processing Agility, it is added to Kofax TotalAgility automatically, in the Invoice Processing Agility Resources category..

However, the reverse behavior is not true. If a user is deleted from the Kofax TotalAgility Invoice Processing Agility Resources that user is not deleted from Invoice Processing Agility User Management. Instead, delete the user manually.

Export Settings overview

These settings effect how documents and batches are exported. These settings are profile-specific, so in order to edit these settings, a profile must be selected from the drop-down list in the header.

Important These options are not available in the Azure cloud environment.

Each profile has a single set of values for these settings. You can [add](#) additional profiles if necessary.

The following export setting categories are available per profile.

- [Export Mapping](#)
 - [CSV Export Configuration](#)
 - [GL Export Mapping](#)
 - [Header Field Export Mapping](#)
 - [Line Item Export Mapping](#)
 - [Tax Export Mapping](#)
- [Export Options](#)

Add a profile for Export Settings

You can create a profile for export settings 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.

You can add an export profile to your project, by following these steps.

1. Open the Solution Configuration Manager.
2. Select a **Project** from the list.
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 is available.
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 easiest if you just accept the one provided as it is the next unique number in the sequence, provided by the Solution Configuration Manager.
7. Enter a short **Profile Name** that is easy to remember.
8. Enter some helpful information about the profile in the **Profile Description**.
9. Click **Save**
A new profile is available in the **Profile** list above, but only visible when you select the **Export Settings**.
This profile is now available for all of the [Export Settings](#) categories.

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

These settings control 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.

Important These options are not available in the Azure cloud environment.

Index

The CSV file index.

Output File

If selected, the system attempts to output a CSV file according to the specified configuration settings.

Filepath

Specifies the location of an alternate export directory for the CSV file group.

If left blank, the main export directory set against the Transformation Server instance that carries out document export is used. If no export directory is configured against the Transformation Server instance, the default export directory configured in the **Solution Configuration Manager > Export Settings > Export Options**. 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. This can be set to URN. This names the file according to the component of the image filename mapped in **Solution Configuration Manager > Global Settings > Import Settings**. If left blank, or set to anything else, the filename is set to the same name as the document filename.

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 **Solution Configuration Manager > Profile 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.

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.

```
<%TNM>:<%INO>:<%VID>
```

This value produces the following:

```
myFile.tif:1234:ABC
```

Additional text can also be included in the format. For example,

```
File=<%TNM>|InvoiceNumber=<%INO>|Vendor ID=<%VID>
```

would produce the following:

```
File=myFile.tif|Invoice Number=1234|VendorID=ABC
```

The structure of output in the CSV file is presented by the following symbols:

- <%TNM>. The name of the original imported file without a file path.
- <%TNF>. The name of the original imported file without the file path or a file extension.
- <%TND>. The name of the original imported file with the export directory file path.
- <%SDT>. The scan date in the format configured in the **Solution Configuration Manager > Profile Settings > Date Settings**.
- <%BNM>. The batch name.
- <%EID>. The employee ID.
- <%EFN>. The employee first name.
- <%ELN>. The employee last name.
- <%DTP>. The document type, such as INVOICE or CREDIT.
- <%ITP>. The invoice type, such as PO or NO-PO.
- <%IDT>. The invoice date.
- <%INO>. The invoice number.

- <%TAX>. The invoice tax amount.
- <%WTX>. The invoice withholding tax amount.
- <%DCT>. The invoice discount amount.
- <%MSC>. The invoice miscellaneous charge amount.
- <%CUR>. The invoice currency.
- <%TOT>. The invoice total.
- <%PST>. The Provincial Sales Tax/QST amount.
- <%HST>. The Harmonized Sales Tax amount.
- <%ICM>. The ICMS tax amount.
- <%PON>. The PO Number.
- <%URN>. The unique Reference Number.
- <%VID>. The vendor ID.
- <%IVD>. The internal Vendor ID.
- <%SID>. The site ID.
- <%VNM>. The vendor name.
- <%BTO>. The bill-to name.
- <%CCO>. The company code.
- <%POR>. The Payment Order Reference Number (POR).
- <%PSN>. The Payment Order Subscriber Number.
- <%KID>. The Payment Reference.
- <%ACC>. The account Number.
- <%BAC>. The bank Account Number.
- <%BCD>. The bank Account Code.
- <%EXC>. The exchange Rate.
- <%IVR>. The invalid Reason.
- <%ICD>. The invalid Reason Code.
- <%LNK>. The Document Link.
- <%ERP>. The ERP document key.
- <%EPT>. The ERP system PO type.
- <%BSU>. The business unit.
- <%DEL>. The delivery note.
- <%DLD>. The delivery date.
- <%DUE>. The due date.
- <%ISR>. The ISR retention amount.
- <%IBN>. The IBAN number.
- <%BIC>. The BIC / Swift code.
- <%REF>. Your ref.
- <%CNC>. Mainland China VAT invoice code.
- <%CNP>. Mainland China VAT invoice password.
- <%VVT>. Vendor VAT registration number.

- <%BVT>. Bill-to VAT registration number.
- <%MXU>. Mexican UUID number.

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.
- <%LST>. The SAP condition type.
- <%LSS>. The SAP condition step number.
- <%LSC>. The SAP condition count.
- <%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 Invoice Processing Agility line item.
- <%LPT>. The plant.
- <%LTY>. The ERP purchase order type.
- <%LBU>. The ERP purchasing business unit.
- <%LCC>. The company Code.

- <%LTR>. The VAT/tax rate.

GL Export Mapping

These settings map general ledger line item fields into corresponding fields in the XML file or columns in a database.

Important These options are not available in the Azure cloud environment.

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 the **Solution Configuration Manager > Export Settings > Export Options**.

Header Field Export Mapping

Use these settings to map header export fields into field in the XML file or columns in a database.

Important These options are not available in the Azure cloud environment.

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 the **Solution Configuration Manager > Export Settings > Export Options**.

Line Item Export Mapping

Use these settings to map line item fields in the XML File or columns in a database.

Important These options are not available in the Azure cloud environment.

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 the **Solution Configuration Manager > Export Settings > Export Options**.

Tax Export Mapping

Use these settings to map tax line item fields into the XML file or columns in a database.

Important These options are not available in the Azure cloud environment.

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 option in the **Solution Configuration Manager > Export Settings > Export Options**.

Export Options

These settings relate to the Invoice Processing Agility data export options.

Important These options are not available in the Azure cloud environment.

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 activate, even if that export has been carried out before.

For example, four export options are activated. Of these four, three are completed and the last one fails. In order to successfully export the document, all four export options are performed again.

If cleared, only those export options that failed are carried out.

Default Export Path

The UNC path to the export directory that is used as the default, if no export directory is set in Transformation Server.

Note It is recommended to select this option only for testing purposes.

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. If set to URN, this names the file according to the component of the image filename mapped in the **Solution Configuration Manager > Global Settings > Import Settings**. If left blank, or set to anything else, the filename is set to the same name as the document filename.

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.

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.

- G4FAX = Grade 4 compression - CCITT Group 4 fax encoding
- G3FAX = Grade 3 compression - CCIT Group 3 fax encoding
- LZWFAX = LZW Compression - Lempel-Ziv-Welch compression
- HUFFAX = HUF Compression - CCITT Group 3 1-Dimensional Modified Huffman run length encoding

By default, the compression is set to G4FAX.

This setting is available only when Output Tiff File is selected.

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. If this is set to URN, it names the file according to the component of the image filename mapped in the **Solution Configuration Manager > Global Settings > Import Settings**. If left blank, or set to anything else, the filename is set to the same name as the document filename.

This setting is available only when Output PDF is selected.

Export To DB

If selected, the extracted data is written to a database during document export.

SQL Connection Group

The SQL connection group that specifies the export database connection string as set in the **Solution Configuration Manager > Global Settings > Database Connection Settings**. If no connection group is specified, the system uses group 1. The header and line item tables must exist in the same database.

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. If this is set to URN, the portion of the filename mapped to the URN setting in the **Solution Configuration Manager > Global Settings > Import Settings** is used. Any other value or a blank entry uses the entire document filename. Before inserting a new record, the system deletes any existing records with the same key.

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.

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.

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.

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.

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.

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 VAT 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 Invoice Processing Agility. 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 Transformation Server export instance. If no directory is configured, then the default export path parameter is used. If this is not configured then the XML export fails and the document is sent back to the Kofax TotalAgility Work Queue with the EXPORT FAILED Activity Name.

XML Filename

This setting controls the name of the XML output file. This can be set to URN, and this names the file according to the component of the image filename mapped in the **Solution Configuration Manager > Global Settings > Import Settings**. If left blank, or set to anything else, the filename is set to the same name as the document filename.

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 text .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 Invoice Processing Agility.

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 **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**. This is true even if the local switch for a CSV file group is selected.

Export to PROCESS DIRECTOR

If selected, the document is sent to the Process Director workflow in SAP. For the SAP connection, the Process ID details are configured in the **Solution Configuration Manager > Profile Settings > SAP Configuration**.

PD Function Name

The name of the Process Director 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 Process Director occurs using the Process Director generic function module.

This setting is available only when Export to PROCESS DIRECTOR is selected.

Generic ProcessDirector Function Name

The name of the Process Director generic function module that is called.

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 Process Director generic function module.

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 Process Director function module.

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.

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 Process Director.

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, output from the OCR XML file is required.

OCR XML File Key

The key that is used for the OCR XML export. It controls the how the XML output filenames are named. It also indicates how the SOURCE_ID column is populated in the ProcessIT interface table of the Oracle database.

If this is set to URN, the portion of the image filename mapped to the URN setting in the **Solution Configuration Manager > Global Settings > Import Settings** is used. If the value is blank or any other value, the entire document filename is used.

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.

This setting is available only when Output OCR XML File is selected.

OCR XML Encoding Header

The value that is used as the header line in the OCR XML file.

This setting is available only when Output OCR XML File is selected.

Include Candidate Information

If selected, alternative information is written to the OCR XML file for each of the extraction fields.

This setting is available only when Output OCR XML File is selected.

Export to MarkView

If selected, the extracted data and image are exported from Invoice Processing Agility into MarkView using the settings below.

MarkView Connection Group

The SQL connection group that specifies the MarkView database connection string as set in the **Solution Configuration Manager > Global Settings > Database Settings**.

Also note that the connection string needs to start with `Provider=OraOLEDB.Oracle;` For example:

```
Provider=OraOLEDB.Oracle;User Id=[user]; password=[password];Data Source=[serverName]:[port]/[serviceName];
```

This setting is available only when Export to MarkView is selected above.

MarkView Import API Username

The unique user name to log on to MarkView. This is different from the user name used for the database connection string.

This setting is available only when Export to MarkView is selected above.

MarkView Import API Password

The unique password used to log on to MarkView. This is different from the password used for the database connection string.

As you type in this password, the individual characters are displayed as expected. However, when you click **Save**, the password is encrypted and the encrypted password is displayed.

This setting is available only when Export to MarkView is selected above.

Send to AP Agility

Select this option to send your results to Accounts Processing Agility for further processing.

Client Settings overview

A client is different to a profile, but a client must also be linked to a profile.

A client represents a vendor, payee, or any other organization that you deal with on a regular basis. This is also where details about how a client is processed are stored.

Specific details about the client is configured in the [Client Settings](#).

Client Settings

All documents that do not have a client mapped to them are mapped to the default client (Client ID 0) in the Solution Configuration Manager.

It is not possible to remove the default Client with ID 0. This is because it could break mappings to the default client and the mapped documents would display errors during processing. It is possible to delete all other clients, with the exception of the default client.

It is also possible to [add](#) a client as required.

It is possible to add multiple entries for these settings. As a result, the settings are displayed in a table.

The following settings are available.

Client ID

The unique ID of the client. This is a read-only integer value that is applied when a client is first added.

Profile ID

The ID of the profile that is assigned to the client. The profile controls what fields are extracted and how they are validated.

More than one client may share the same 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.

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 a client.

Instructions Profile ID

The ID of the profile that is displayed during Validation.

It is possible to add a button to the Validation for that displays specific processing instructions for a particular client.

Force Validation

If selected, all documents for this client are routed to Validation, including those that have no issues.

If cleared, only those documents that require attention are routed to Validation.

Bypass Validation

If selected, and there are no fields that require validation on a document that belongs to this client, the document is separated from the rest of its job and sent to the next activity without appearing in Validation. This makes little difference if a job contains a single document. However, if your job contains 10 documents, but 8 of them do not require validation, these documents are split from the two that require validation with straight-through processing.

If cleared, all documents in a job are sent to Validation even if only one requires manual validation.

Client Group

The ID of the client group. This is an integer value that can be set by the system administrator.

The client group is how users are assigned access to documents for a specific client.

Vendor Partition

The ID of the vendor master data partition that is used by a client.

Entries here must correspond to an entry in **Solution Configuration Manager > Global Settings > Partition Settings > Vendor Partitions**.

Employee Partition

The ID of the employee master data partition that is used by a client.

Entries here must correspond to an entry in **Solution Configuration Manager > Global Settings > Partition Settings > Employee Partition Settings**.

PO Partition

The ID of the purchase order data partition that is used by a client.

Entries here must correspond to an entry in **Solution Configuration Manager > Global Settings > Partition Settings > PO Number Partition Settings**.

Tax Partition

The ID of the tax partition that is used by a client during automatic tax code calculations where standard **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration** settings are used.

Entries here must correspond to an entry in **Solution Configuration Manager > Global Settings > Partition Settings > Tax Partition Settings**.

Add a client

When you encounter a new client, you can add them to the list of supported clients. This ensures that this client is given the necessary priorities and settings that are appropriate for its documents.

You can add a client by following these steps.

1. Select a **Project** from the list.
An additional "Settings" list is now available.
2. Select **Client Settings** from the **Settings** list.
A table of existing clients is displayed.
3. Select the left most check box beside an existing client that has similar settings to the new client. If there is not a suitable client, select the client with ID 0.
4. Click **Copy Data** at the bottom of the table.
The "Insert" row is populated with a copy of the database
5. In the **Insert** row, modify the individual [client settings](#) as needed.
6. Click **Save**.
The new client is saved to the list.

Instruction Settings overview

These instruction settings enabled you to provide additional information to a Validation user that can help them process documents for effectively.

Each profile has a single set of values for these settings. You can [add](#) additional profiles if necessary.

The following settings are available.

- [Instruction Profile Settings](#)

Add a profile for Instruction Settings

You can create a profile for your instruction settings in the Solution Configuration Manager. This profile can then be shared between multiple clients, enabling instruction 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.

You can add an instruction profile to your project, by following these steps.

1. Open the Solution Configuration Manager.
2. Select a **Project** from the list.
An additional **Settings** list is displayed.
3. From the **Settings** list, select **Instruction 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 is available.
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 easiest if you just accept the one provided as it is the next unique number in the sequence, provided by the Solution Configuration Manager.
7. Enter a short **Profile Name** that is easy to remember.
8. Enter some helpful information about the profile in the **Profile Description**.
9. Click **Save**.
A new profile is available in the **Profile** list above, but only visible when the **Instruction Settings** are selected.
This profile is now available for all of the [Instruction Settings](#) categories.

Instructions Profile Settings

These settings are instructions that can be added to a Validation form 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.

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 Invoice Processing Agility installations where you want exact or similar behavior, you can use these packets to configure other Invoice Processing Agility installations with minimal effort.

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 Invoice Processing Agility 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 Invoice Processing Agility installation.

You can export a project configuration packet by following these 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. For more information about configuring this path, see *Edit the Web.config File* in the *Invoice Processing Agility Installation Guide*.
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 Invoice Processing Agility 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](#).

You can import a project configuration packet by following these 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 Invoice Processing Agility 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 Connection 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 Database Settings

These settings contain the CSV file locations that are used for the various database lookups.

Profile Settings > Content Settings > Content Integration

These settings contain the necessary information to connect to the PCR server, if you are using one.

Profile Settings > SAP Configuration

These settings contain information about the SAP server, username, and password. These settings are necessary only if you are using SAP.

Export Settings > Export Options

These settings contain information about the various export settings. In addition, they contain the export path, MarkView username, and password. If you are not using MarkView, the MarkView-specific settings are not required.

Export Settings > Export Mapping > CSV Export Configuration

These settings contain the file path for CSV export.

When a user clicks **Save** after modifying one of the above settings, the Solution Configuration Manager displays a message confirming that the data is saved, but not added to the migration packet.

Chapter 4

User authorization

User authorization for Invoice Processing Agility is configurable in two ways.

1. Add users with the Solution Configuration Manager [user management](#) settings
2. Add users with the Kofax TotalAgility [resources](#)

Use the Kofax TotalAgility resources if you use Windows authentication or you are using Invoice Processing Agility in an Azure environment.

You can use the Solution Configuration Manager user management settings for any authentication method, including Windows authentication. However, if you are using Invoice Processing Agility in an Azure environment, the user management settings are not available.

User access is granted on a client-basis as well as a functionality basis, utilizing Kofax TotalAgility [resource groups](#). Because of this, it is possible to configure a user account so that it accesses multiple clients, each with different functionality. This flexibility enables you to customize your solution to fit the needs of your customers and users.

In order to configure individual user access, it is first necessary to set up your [clients and client groups](#), and then the individual user entries. This can be done via the [user management settings](#) in the Solution Configuration Manager or through Kofax TotalAgility [resources](#).

By default, only members of the IPA_A administrators resource group have access to the Solution Configuration Manager. This prevents unauthorized users from changing the configuration settings. This is configured in Kofax TotalAgility. For more information, see the *Kofax TotalAgility Help*.

The Solution Configuration Manager is also accessible when Kofax TotalAgility is hosted in a secure environment. In such a scenario, a few configuration changes are needed to ensure that the authentication service calls, as well as other functionality, work as expected. For more information, refer to the *Invoice Processing Agility Installation Guide*.

If a Solution Configuration Manager user session times out, the user must access the **Settings** page again and click the **Launch SCM** button. This triggers the custom authentication process and opens the Solution Configuration Manager window.

When a session times out

If the Invoice Processing Agility Work Queue encounters a session timeout and you click the "Log in" link, you are redirected to the Kofax TotalAgility Work Queue.

You can return to the **Settings** page on the Invoice Processing Agility Work Queue by following these steps.

1. On the top menu of the Kofax TotalAgility Work Queue, click **IP Agility**.
A submenu is displayed.
2. From the submenu, select **Settings**.
The **Settings** page is displayed.

Resource Groups

When Invoice Processing Agility is installed, several resource groups are created automatically in Kofax TotalAgility. These resource groups cover the overall functionality of Invoice Processing Agility. The resource groups are as follows.

`IPA_Administrators`

Enables its members to access the Solution Configuration Manager and configure Invoice Processing Agility settings.

`IPAResourceGroup_Scan`

Enables its members to scan documents for document ingestion.

`IPAResourceGroup_Validation_<ClientID>`

Enables its members to resolve extraction problems via the Validation module for documents belonging to the relevant Client Group.

`IPAResourceGroup_LPRCorrection_<ClientID>`

Enables its members to resolve line pairing problems via the Line Pairing Correction module for documents belonging to the relevant Client Group.

`IPAResourceGroup_PIXCorrection_<ClientID>`

Enables its members to resolve XML mapping problems via the PIX Correction module for documents belonging to the relevant Client Group.

Note PIX is not supported if you are running Invoice Processing Agility in an Azure Environment. As a result, any PIX Correction resource groups are not available.

`IPAResourceGroup_ValidationResources`

This is a collective group. Members of the following resource groups are granted permissions to this collective group automatically.

- `IPAResourceGroup_Validation_<ClientGroupID>`
- `IPAResourceGroup_LPRCorrection_<ClientGroupID>`
- `IPAResourceGroup_PIXCorrection_<ClientGroupID>`

Note PIX is not supported if you are running Invoice Processing Agility in an Azure Environment. As a result, any PIX Correction resource groups are not available.

Resource Groups for Invoice Processing Agility are typically created using the Solution Configuration Manager by adding a new client group. However, the administrator can also [maintain users](#) and [resource groups](#) from Kofax TotalAgility. For more information on managing resources see the *Help for Kofax TotalAgility*.

Resource Group permissions

The `IPA_Administrators` resource group requires that the following permissions are enabled in the TotalAgility Designer.

- Read/Write access for Resource
- Read/Write access for CaptureDesign
- Read/Write access for MaintainServer

A member of the `IPAResourceGroup_Scan` resource group only, requires the following permissions in the TotalAgility Designer.

- Reject documents
- Delete documents
- Split documents
- Merge documents
- Rotate pages

A member of the `IPAResourceGroup_ValidationResources` resource group only, requires the following permissions in the TotalAgility Designer.

- Reject documents
- Modify/Read documents
- All other batch-editing operations

If a user is a member of both the `IPAResourceGroup_Scan` resource group and the `IPAResourceGroup_ValidationResources` resource group, they require the following permissions in the TotalAgility Designer.

- Reject documents
- Delete documents
- Split documents
- Merge documents
- Rotate pages
- Modify/Read documents
- All other batch-editing operations

Clients and Client Groups

A client provides a way of individualizing how a document is processed for that client. Your project can contain multiple clients, and the configuration of each client can differ.

A client group is a parameter that is applied to a client. This parameter is then assigned to a user. Client groups are important, because that is how a user is given permissions to perform various tasks.

Tip Multiple clients can be assigned to a single client group.

If a client is assigned to a new client group, the following resource groups are created automatically.

- IPAResourceGroup_Validation_<ClientGroupID>
- IPAResourceGroup_LPRCorrection_<ClientGroupID>
- IPAResourceGroup_PIXCorrection_<ClientGroupID>

Note PIX is not supported if you are running Invoice Processing Agility in an Azure Environment. As a result, any PIX Correction resource groups are not available.

You can [add](#) a client via **Solution Configuration Manager > Client Settings**.

Manage users via the Solution Configuration Manager

In order for a user to have access to Invoice Processing Agility, one option is to add a user to **Solution Configuration Manager > Global Settings > User Management**. An individual user can have multiple entries in the User Management table. This is because an entry is specific to a single client group, and a User might have access to multiple client groups.

Note If you are using Invoice Processing Agility in an Azure environment, User Management is not available. Instead, you can manage your Azure users in Kofax TotalAgility.

For more information on the various settings available in this table, see [User Management](#).

There is no mapping to the IPA_Administrators resource group in User Management because this permission is needed in order for a user to access the Solution Configuration Manager. These permissions are enabled in Kofax TotalAgility.

When a user is added to the **Solution Configuration Manager > Global Settings > User Management** table, that user is also assigned a specific Client ID and any combination of the following resources.

- Scan Resource
- Validation Resource
- LPR Correction Resource
- PIX Correction Resource

The combination of Client ID and resources determines what documents are processed, and how, by the corresponding user.

For example, a new user called "b_bruce" is added to the **Solution Configuration Manager > Global Settings > User Management** table. The Client Group for this user is set to 1 and the Scan Resource and LPR Correction Resource options are selected. A corresponding user entry for "b_bruce" is added to the following Kofax TotalAgility resource groups.

- IPAResourceGroup_Scan
- IPAResourceGroup_LPRCorrection_1

You want the same user to process documents for a different client in Validation. This is accomplished by adding a second entry for "b_bruce" in the **Solution Configuration Manager > Global Settings > User Management** table. This time, the Client Group is set to 3 and the Validation Resource option is selected. In this instance, "b_bruce" is added to the following Kofax TotalAgility resource group.

- IPAResourceGroup_Validation_3

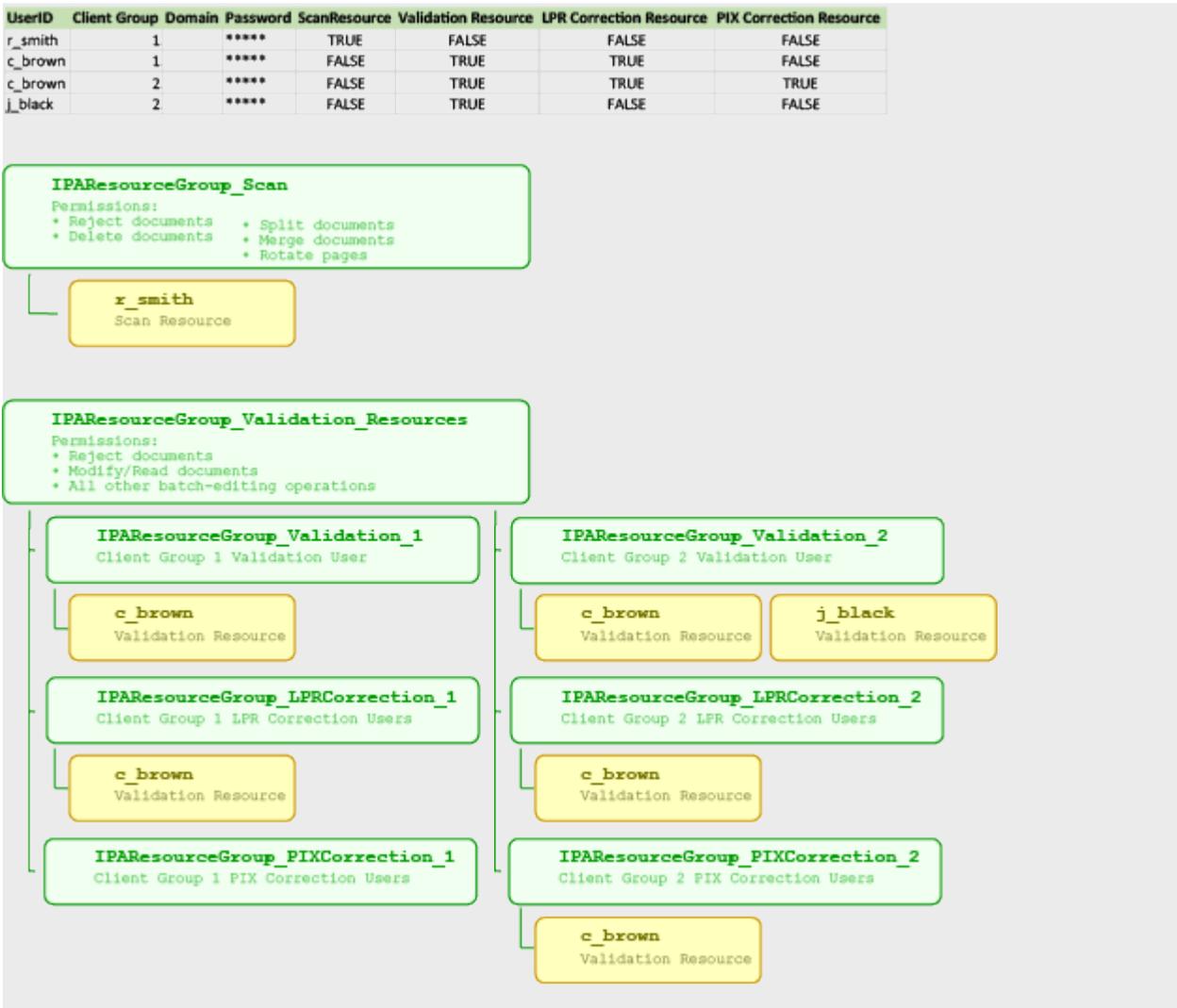
Note If a resource group for a specific client is not present in Kofax TotalAgility when a user is added in Invoice Processing Agility, that resource group is created automatically.

After a user is created, its details are saved in Kofax TotalAgility and the Client Settings database table.

Important If a user is deleted from the TotalAgility Invoice Processing Agility Resources, it is not removed from Invoice Processing Agility automatically. As a result, manually remove the user from the **Solution Configuration Manager > Global Settings > User Management** table.

Example: User Authorization Example

The following example shows three users and how they are distributed between client groups and resource groups.



Add a user entry

It is possible to add a user entry in the **Solution Configuration Manager > Global Settings > User Management** table.

However, before you add a user entry, it is important to know which **client group** you want to use for that entry. Because of this, it is best to **add your clients** before adding your users.

You can add a user entry by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > User Management**.
3. Enter a **User ID**.

There can be other entries for this same User ID, but with different client groups and permission selections.

4. Select a **Client Group** from the list.

If you are not sure which Client Group to select, refer to your clients in **Solution Configuration Manager > Client Settings**.

5. If you are using Windows-based authentication, enter the **Domain**.
You do not need to enter a Password if you are using Windows-based authentication.
6. If you are not using Windows-based authentication, enter a **Password**.
You do not need to enter a Domain if you are not using Windows-based authentication.

Note Passwords are not saved in the Invoice Processing Agility configuration database. If you are not using Windows-based authentication, you need to change passwords through the Kofax TotalAgility Resources module.

7. Select one or more of the following options to determine what the new user can do for the specified Client Group.
 - a. Select **Scan Resource** if you want the user to scan documents.
 - b. Select **Validation Resource** if you want the user to process documents using Validation for the selected **Client Group**.
 - c. Select **LPR Correction Resource** if you want the user to correct line pairing errors for the selected **Client Group**.
 - d. Select **PIX Correction Resource** if you want the user to process documents using PIX Correction for the selected **Client Group**.
8. **Insert** your new user.
The user is created and they are added to the corresponding user groups in Kofax TotalAgility for the selected Client ID and resources.
9. Optionally, add another user entry.

Copy a user entry

If there is already a user entry for a specific User ID, you can copy that entry and then edit the settings as necessary, rather than create a new entry from scratch.

You can copy a user entry by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > User Management**
3. Locate the entry that you are copying and select the checkbox on the left of the row.
4. Click **Copy Data**.
A duplicate record is added to the list of entries.
5. Select the new **Client Group**.
6. Select or clear the resources as necessary.
7. **Insert** your new user.
A new entry for that User ID is now available.

Delete a user entry

The table in the **Solution Configuration Manager > Global Settings > User Management** can have multiple entries for a single user. If you no longer want to keep one of the entries because you do not want

a particular user to have the specified access, you can delete that user entry from the table. However, it is not possible to delete a user entry for a user that is currently logged on to Solution Configuration Manager or Kofax TotalAgility.

Note If you delete a user entry that is the only user assigned to a client group, the corresponding client's resource groups are deleted as well.

You can delete an entry in the user table by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > User Management**.
3. Locate and select the user you are deleting.
4. After deleting a user from the User Management section, Solution Configuration Manager calls the `RemoveResourceFromGroup` service to remove the resource from the Kofax TotalAgility resource groups.
5. Based on the resource group to which the new user belongs, it is removed from a Kofax TotalAgility resource group.
 - a. If the user belongs to the `IPAResourceGroup_Scan` resource group in Kofax TotalAgility, does not belong to the "Scan Resource" resource group in the Solution Configuration Manager, and this is the only row in the User Management section with this User ID, use `RemoveResourceFromGroup` to remove the resource.
 - b. If the user belongs to the `IPAResourceGroup_Validation_<ClientGroupID>` resource group in Kofax TotalAgility and does not belong to the "Validation Resource" resource group in the Solution Configuration Manager, use `RemoveResourceFromGroup` to remove the resource.
 - c. If the user belongs to the resource group `IPAResourceGroup_LPRCorrection_<ClientGroupID>` in Kofax TotalAgility and does not belong to the "LPR Correction Resource" resource group in the Solution Configuration Manager, use `RemoveResourceFromGroup` to remove the resource.
6. If this is the only row in the User Management section with this User ID, Solution Configuration Manager calls the `DeleteResource` service in the Kofax TotalAgility API to delete the resource.

Important If a user is manually deleted from one of the Invoice Processing Agility Resource categories in Kofax TotalAgility, that user not removed automatically from the corresponding category in Invoice Processing Agility. If this happens, perform the above steps to remove the user from that Invoice Processing Agility category.

Manage users via Kofax TotalAgility

Instead of using the **Solution Configuration Manager > Global Settings > User Management** to manage your users, you can use Kofax TotalAgility. This is common when using Windows Authentication.

Also, if you are using Invoice Processing Agility in an Azure environment, users must be maintained within Kofax TotalAgility. This is because the Solution Configuration Manager in an Azure environment does not allow for user management.

Each user who uses Invoice Processing Agility must be a member of one of the Invoice Processing Agility [resource groups](#). This enables them to perform the various tasks related to each resource group.

For example, if a user processes invoices in Validation they must be a member of the `IPAResourceGroup_Validation_<ClientID>` resource group.

A user can be a member of multiple resource groups.

You can configure these resource groups in one of the following locations in Kofax TotalAgility.

- **TotalAgility Designer > Resources**
- **TotalAgility Workspace > Administration > Manage Resources**

For more information on how to add or manage a resource in Kofax TotalAgility, see the *Help for Kofax TotalAgility*.

Manage resource groups via Kofax TotalAgility

When Invoice Processing Agility is first installed, there are two main Resource Groups. These groups however, have no permissions assigned by default. As a minimum, specific [permissions](#) are required for the various resource groups.

Note If you are using Invoice Processing Agility in an Azure environment adding users manually is the only method available. This is because **Solution Configuration Manager > Global Settings > User Management** is not available in this type of environment.

You can configure manual access permissions by following these steps.

1. Launch the TotalAgility Designer.
2. Select **System Settings**.
The **Manage** page is displayed.
3. From the **Access Permissions** group, select **Capture**.
The **Access Permissions - Capture** page is displayed.
4. From the **Consume** panel, click **Resources**.
A list of all resources configured in Kofax TotalAgility are displayed.
5. From the **Resources** list, select **InvoiceProcessingAgility**.
The list of resources is filtered to include only those related to Invoice Processing Agility.
6. From the **Resources** panel, drag-and-drop a resource group into the **Resource** field.
The list of settings and users is displayed.
7. Update the various permissions based on requirements.
8. Click **Save**.
9. Optionally, repeat steps 6 to 8 for additional resource groups.

Chapter 5

Custom scripts and User Exit overview

The Invoice Processing Agility user exit framework provides extension points that enable you to plug in custom business logic to various actions. For example, this includes custom validation logic, modifying loaded data such as vendor addresses or purchase orders, or modifying data before export.

Custom business logic is provided with a .NET assembly and needs to be installed to the global assembly cache. Before implementing a user exit, delegates must be implemented and registered within your custom functionality.

Important Some parts of the code are running on a 32-bit process, while others are running via a 64-bit process. Specifically,

- Extraction is executed by a 32-bit process.
This includes identifying potential alternatives for fields and adding weights to those alternatives.
- Validation, line pairing, and export are all executed by 64-bit processes.

Because of this, you can register two different user exit assemblies. One for extraction and then another for validation, line pairing, and export.

Most user exits are executed either during extraction only or during validation, line pairing, or export only. However, there are some user exits that are executable at any point during processing. As a result, you can implement all of your user exits in a single assembly so that the assembly is used for both cases as long as the following are met.

- The assembly is compiled as an MSIL assembly.
- The assembly has no dependencies to any 32-bit or 64-bit assemblies.

Custom scripts in Transformation Designer

If you customize any of the scripts in the Invoice Processing Agility project, ensure that you place your modifications below the `' Modify script only below this line!` indicator.

Adding your customization below this line ensures that your changes are retained after upgrading to a new version of Invoice Processing Agility. Any content added above this line is lost when Invoice Processing Agility is upgraded.

Implement User Exit assemblies

In order to make use of the available user exits, you must first implement the user exit assemblies by following these steps.

1. Create a new project for a .NET class library.
2. Include references to the following assemblies.
 - ICAL.ComponentAccess
 - ICAL.Framework
 - ICAL.Invoices

Note These assemblies are located in the Assemblies directory of your Invoice Processing Agility installation files.

3. If you are using SAP, add references to the following assemblies.
 - ICAL.Framework.SAP
 - ICAL.Invoices.SAP
4. If you are using an Oracle database, add references to the following assemblies.
 - ICAL.Framework.Oracle
5. Sign your new assembly.
This is necessary for installation to the global assembly cache.
6. Create a class that implements `ICAL.Invoices.Custom.ICustomInitializer`.
7. Implement the `Initialize(ProjectContext)` method.
8. Within the `Initialize(ProjectContext)` method, register your user exits in the `UserExitsRegistry` that is available as the `ProjectContext` property.
You can implement and register as many user exits as are required.
9. Compile your assembly and give it a meaningful name such as `UserExitAssembly.dll`.
A DLL file is generated with the provided name.
10. [Install](#) it to the global assembly cache.

Example: Modify Vendor Addresses

You want to modify vendor addresses after that are loaded from the vendor pool or database. To do this, implement and register the `ReadVendorAddress` delegate and then:

```
using ICAL.ComponentAccess;
using ICAL.Invoices;
using ICAL.Invoices.Data;
using ICAL.Invoices.Custom;

namespace UserExits
{
    public class MyUserExits : ICustomInitializer
    {
        public void ReadVendorAddress(IField field,
            string vendorId, IVendorAddress vendorAddress)
        {
            // your code here
        }
    }
}
```

```
public void Initialize(ProjectContext ctx)
{
    ctx.UserExits.ReadVendorAddress = ReadVendorAddress;
}
}
```

Install User Exit assembly to GAC

After compiling your assembly, it needs installed to the global assembly cache (GAC) before it is usable. Even though you can use a tool like gacutil to install the DLL file, it is recommended that you use the provided `Install2GAC.exe` tool to install your assembly to the GAC.

You can install your assembly DLL to the GAC by following these steps.

1. Copy the **UserExit** folder that is included with your installation files to the machine where you are installing the assemblies.
This folder contains the `Install2GAC.exe` tool.
2. Copy your recently [implemented](#) User Exit Assembly dll file to the **UserExit** folder that you copied in the previous step.
3. Open a command line with administrative privileges and enter the following.

```
Install2GAC.exe <YourUserExitAssembly>.dll
```

Press **Enter**.

Your user exit assembly is installed to the GAC.

4. Optionally, if your assembly has any dependencies to additional third-party assemblies, install those assemblies to the GAC as well.
5. Edit the server variables in TotalAgility Designer

Depending on whether you register an assembly for the 32-bit extraction phase, or the 64-bit validation, line pairing, and export phase, you need to set **one** of the following combinations in the InvoiceProcessingAgility category.

- IPAMUserExitExtractionAssembly and IPAMUserExitExtractionClass
- IPAMUserExitValidationAssembly and IPAMUserExitValidationClass

The IPAMUserExitExtractionAssembly and IPAMUserExitValidationAssembly must contain the strong name of your assembly. For example, IPAMUserExitDemo, Version=1.0.0.0, Culture=neutral, PublicKeyToken=6a3a0087b9ef9c25, processorArchitecture=MSIL.

The IPAMUserExitExtractionClass and IPAMUserExitValidationClass must contain the name of the class that implements the ICustomeInitializer interface.

User Exits

The user exits, along with their calling points and suggested uses are as follows.

AbortSAPReadPO

This is a delegate of type `UserExitAbortSAPReadPO` and has the following parameters.

- `string PONumber`
- `int POItemCount`
- `int POHistoryItemCount`
- `ref bool poTooLarge`

This user exit is called at the start of line pairing, immediately after a purchase order is read from SAP. It enables a developer to abort line pairing for export performance purposes if the SAP purchase order has too many line items or too many goods. The `int POItemCount` parameter contains the total number of PO items, and `int POHistoryItemCount` contains the total number of items in the SAP PO history table.

This user exit is available during export processing only.

AccountNumberValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the account number field validation event.

This user exit is available during validation processing only.

AlternatePayeeValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the alternate payee field validation event.

This user exit is available during validation processing only.

AmountMiscPostEvaluate

This is a delegate of type `UserExitAmountMiscPostEvaluate` and has the following parameters.

- `IWorkdoc doc`
- `ICandidateList candidateList`

This is used to evaluate the weighting of alternatives for a miscellaneous charge in the `AmountMiscellaneous` field. This is done in a manner that is appropriate for the project implementation where the desired contents of the field can change depending on client requirements.

This user exit is available during extraction processing only.

CellTextFormatting

This is a delegate of type `UserExitCellTextFormatting` and has the following parameters.

- `IWorkdoc doc`
- `object worktext`
- `IFieldSettings fs`
- `ITable table`
- `int row`
- `string columnName`
- `ref bool valid`
- `ref string error`
- `IClientData client`

This user exit is called for each table cell in the Line Items table that is activated and set to type TEXT. This user exit can be used by a developer to create custom validation and formatting routines for the table cell.

The `IFieldSettings fs` value is the field settings object that contains the defined configuration for the table cell. The `ITable` is the line items table object. The `int row` is the row index for a table cell. The `string columnName` is the technical name of the column name of the line item. The `ref bool valid` is the flag that indicates if a cell is valid or not. The `ref string error` is an error message for a cell.

This user exit is available during validation processing only.

CheckBankAccount

This is a delegate of type `UserExitCheckBankAccount` and has the following parameters.

- `IWorkdoc doc`
- `IVendorAddress address`
- `string currency`

The user exit is called during the bank account check when the system searches for the appropriate bank account based upon the content of the document and the bank records present in the vendor master data. This user exit enables a developer to customize alternative logic for the bank account selection.

The `IVendorAddress` import parameter contains the details of the vendor that is related to the bank account records. The vendor currency is passed to the user exit via the `string currency` parameter.

This user exit is available during validation processing only.

CompanyCodeValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`

- `ref bool valid`

This user exit is available during validation processing only.

CreateSAPDocument

This is a delegate of type `UserExitCreateSAPDocument` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData[] taxData`
- `AccountingData[] glData`
- `bool post`
- `bool completeTax`
- `object bapiHeader`
- `bool abort`

Additional parameters for this user exit can be specified for the BAPI call to SAP that is used to create an invoice. The BAPI interface used matches the interface from [BAPI_INCOMINGINVOICE_CREATE](#).

BAPI parameters passed at header level are populated via the `oBAPIHeader` object. This is passed as an instance of `SAP.Middleware.Connector.IRfcStructure`.

The `bool post` indicates if the invoice is posted or parked. This is provided for information purposes only and the parameter cannot be changed. The parameter `bool completeTax` controls if the BAPI parks an invoice with any gathered tax data.

If document creation in SAP needs to be aborted, parameter `bool abort` should be set to TRUE.

This user exit is available during export processing only.

CSVFile

This is a delegate of type `UserExitCSVFile` and has the following parameters.

- `IWorkdoc doc`
- `ref string recordText`
- `string key`

This user exit is called for each header line that is output to the CSV file, and used to map custom user literals to their desired value counterparts. For example, to include a custom field in the CSV file output.

The parameter `ref string recordText` contains the text of the current line that is written to the file and `string key` is the CSV index group number for the file being processed.

This user exit is available during export processing only.

CSVFileLine

This is a delegate of type `UserExitCSVFileLine` and has the following parameters.

- `IWorkdoc doc`

- `LineData lineData`
- `ref string recordText`
- `string key`

This user exit is called for each line item output to the CSV file. It can also map custom user literals to their desired value counterparts. For example, to include a custom line item component in the CSV file output.

The parameter `ref string recordText` contains the text of the current line that is written to the file, and `string key` is the CSV group index number for the file that is processing. The `LineData lineData` parameter is also passed in, containing details of the current line that is output. If there are multiple line items, this parameter is passed once per line item.

This user exit is available during export processing only.

CustomExport

This is a delegate of type `UserExitCustomExport` and has the following parameters.

- `IWorkdoc doc`
- `string exportPath`
- `string docLink`
- `LineData[] lineData`
- `AccountingData[] glData`
- `TaxData[] taxData`
- `bool linesRequired`
- `VendorAddress address`
- `Data.DocumentFlags flags`

Use this user exit for custom export modules, such as custom flat files or custom database updates.

If an error is encountered, an `ExportException` is thrown.

This exit is called only for documents that are not rejected. Special handling for rejected non-invoice documents is handled by the [VoidDocumentExport](#) user exit.

This user exit is available during export processing only.

DBHeaderExport

This is a delegate of type `UserExitDBHeaderExport` and has the following parameters.

- `string iniFileKeyName`
- `IWorkdoc doc`
- `string docLink`
- `ref string fieldValue`

This user exit enables a developer to add custom header fields to the standard database export function, or to change the value of an existing field.

A row must be added to **Solution Configuration Manager > Export Settings > Export Mapping > Header Field Export Mapping** in order to designate the mapping between the export field and the column name of the invoice header database table where the field is written.

The `string iniFileKeyName` parameter indicates the Field Name as configured in the **Solution Configuration Manager > Export Settings > Export Mapping > Header Field Export Mapping**.

For example, if the Field Name setting is set to "MyField," then `string iniFileKeyName` is also set to "MyField."

The `string fieldValue` parameter is the value that is exported to the database.

The `string docLink` parameter is the link to the image of the document, and could be a file path of a URL.

This user exit is available during export processing only.

DeliveryDateValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the delivery date field validation event.

This user exit is available during validation processing only.

DocumentTypeValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit is called at the end of document type validation for the Invoices class. This user exit can be used to set the valid flag of the document type depending on whether it is an invoice or credit note.

This user exit is available during validation processing only.

DocumentValidate

This is a delegate of type `UserExitDocumentValidate` and has the following parameters.

- `IWorkdoc doc`
- `ref bool valid`

This user exit is called from the Invoices class script level. It can be used to code in additional document level validations and activities.

This user exit is available during validation processing only.

DueDateValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the invoice due date field validation event.

This user exit is available during validation processing only.

EditDocumentWebLink

This is a delegate of type `UserExitEditDocumentWebLink` and has the following parameters.

- `ref string webLink`
- `string docID`

This user exit enables a developer to manipulate the document web link that is exported downstream.

The current web link is passed into the user exit using the `ref string webLink` parameter, and this may be changed to meet your business needs. The current unique document ID is passed in the `string docID` parameter and cannot be changed.

This user exit is available during export processing only.

EmployeeIDValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the employee ID field validation event.

This user exit is available during validation processing only.

ExportFailure

This is a delegate of type `UserExitExportFailure` and has the following parameter.

- `IWorkdoc doc`

This user exit is called when an export fails for the document that is processed.

This user exit is available during export processing only.

ExportSuccess

This is a delegate of type `UserExitExportSuccess` and has the following parameter.

- `IWorkdoc doc`

This user exit is called when it is known that all selected exports are successful for the document being processed.

This user exit is available during export processing only.

FilterEmployeeSearch

This is a delegate of type `UserExitFilterAddressSearch` and has the following parameters.

- `Iworkdoc doc`
- `ICandidate candidate`
- `IVendorAddress address`
- `ref string display`
- `ref bool reject`

This user exit offers the same functionality as `FilterVendorSearch` described below, except that it relates to the employee field.

This user exit is available during extraction processing as well as validation processing.

FilterVendorSearch

This is a delegate of type `UserExitFilterAddressSearch` and has the following parameters.

- `Iworkdoc doc`
- `ICandidate candidate`
- `IVendorAddress address`
- `ref string display`
- `ref bool reject`

This user exit enables a developer to filter the list of vendors shown in the vendor search facility. They can also change the information that is displayed. This user exit can also be used to remove vendors that the system should not consider as the correct vendor, or to adjust alternative confidences that are under consideration as the correct vendor.

The `ICandidate candidate` parameter is the vendor alternative object.

The `IVendorAddress address` parameter is the vendor address structure.

Note The `ref string display` parameter is not required for Invoice Processing Agility.

The `ref bool reject` parameter 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.

This user exit is available during extraction processing as well as validation processing.

InvoiceDateValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the invoice date field validation event.

This user exit is available during validation processing only.

InvoiceNumberValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add additional validation and formatting restrictions against the invoice number field.

For example, your business rule states that if an extracted invoice number is longer than 16 characters, the system should only format it so the last 16 characters are retained.

This user exit is available during validation processing only.

LinePairingPOs

This is a delegate of type `UserExitLinePairingPOs` and has the following parameters.

- `IWorkdoc doc`
- `ref IPOKey[] POs`

This user exit provides functionality to edit the list of purchase orders that are considered during the line pairing operation. New purchase orders may also be added based on criteria that may be coded within the user exit.

If an error is encountered, an `ExportException` is thrown.

This user exit is available during export processing only.

MexicanUUIDValidate

This is a delegate of type `UserExitFieldValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`

This user exit enables you to add custom validation logic to the Mexican UUID number field validation event.

This user exit is available during validation processing only.

OCRXMLOutput

This is a delegate of type `UserExitOCRXMLOutput` and has the following parameters.

- `IWorkdoc doc`
- `XmlDocument xmlDoc`

This user exit enables a developer to edit the body of the OCR XML file.

This user exit is called once the XML document is completed for output, but before it is written out to the export directory. The XML document is passed into the user exit via the `XmlDocument xmlDoc` parameter.

This user exit is available during export processing only.

PONumberPostEvaluate

This is a delegate of type `UserExitPONumberPostEvaluate` and has the following parameters.

- `IcandidateList candidateList`
- `IWorkdoc doc`

This user exit has a custom routine that is added to re-evaluate the weighing of alternatives for the purchase order number field. For example, you can check for their existence in an external database.

This user exit is available during extraction processing only.

PONumberValidate

This is a delegate of type `UserExitPONumberValidate` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`
- `PurchaseOrder po`

This user exit is used for custom purchase order number validations. It is called after the purchase order number is validated against a database table.

Note If the purchase order details are read from a database, the line item array is not be populated if line pairing is disabled.

This user exit is available during validation processing only.

PopulateSAPAccountAssignment

This user exit enables you to map custom fields in the account assignment data structure and send them to the account assignment fields in a BAPI that creates an SAP document.

For example, `BAPI_INCOMINGINVOICE_CREATE`.

This user exit is called once for each account assignment line passed to SAP.

This user exit is available during export processing only.

PostClassify

This is a delegate of type `UserExitPostClassify` and has the following parameter.

- `IWorkdoc doc`

This user exit is called immediately after a document is classified.

This user exit is available during extraction processing only.

PostExtract

This is a delegate of type `UserExitPostExtract` and has the following parameter.

- `IWorkdoc doc`

This is used to set any custom field defaults, or to re-evaluate any extracted fields.

This user exit is available during extraction processing only.

PostLinePairing

This is a delegate of type `UserExitPostLinePairing` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData[] taxData`
- `bool linesRequired`

This user exit is called after line pairing and automatic tax determination functions are completed during document export, but before any data outputs are carried out.

It gives the developer an opportunity to look at the line pairing results that are held in the `ILineData[] lineData` array and to make any changes or additional customizations that are required.

If the `bool linesRequired` parameter is set to `TRUE`, line items are exported for the document being processed.

This user exit is available during extraction processing only.

POValidateStart

This is a delegate of type `UserExitPOValidateStart` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`
- `ref bool exit`
- `IPOKey poKey`
- `IvendorAddress address`

This user exit is 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 `IVendor Address` structure. This contains the full details of the current vendor.

Also included is the `IPOKey` structure, whose contents may be changed if required.

This user exit is available during validation processing only.

POVendorValidate

This is a delegate of type `UserExitPOVendorValidate` and has the following parameters.

- `IWorkdoc doc`
- `IPOKey poKey`
- `IVendorAddress address`
- `IClientData client`
- `ref bool vendorOK`

This user exit is called on the server side only if a purchase order vendor is validated automatically by the system. It enables a developer to reject the validated purchase order vendor based upon custom criteria. To reject the purchase order vendor, the `ref bool vendorOK` parameter should be `FALSE`.

This user exit is available during validation processing only.

PreLinePairing

This is a delegate of type `UserExitPreLinePairing` and has the following parameters.

- `IWorkdoc doc`
- `IClientData client`
- `IVendorAddress address`
- `List<PurchaseOrder> purchaseOrders`
- `List<TaxInfo> taxInfo`

This user exit is called during document export immediately before the line pairing process and after the purchase order information is read.

This user exit enables a developer to apply custom logic or to modify the purchase order data and tax information that is returned.

This user exit is available during export processing only.

PreMaterialLinePairing

This is a delegate of type `UserExitPreMaterialLinePairing` and has the following parameters.

- `IWorkdoc doc`
- `List<POLine> poLines`
- `ref double poTotal`
- `ref double grTotal`

This user exit is called prior to material line pairing. It is not called for the pairing of service line items.

The `List<POLine> poLines` parameter contains the purchase order lines that are available for pairing.

The `ref double poTotal` parameter contains the total value of all purchase orders that are considered during line pairing.

The `ref double grTotal` parameter contains the total outstanding value of all purchase order numbers that are considered during line pairing. For example, the value of total goods received against all purchase orders, minus the value of the total invoice receipt against all purchase orders.

Note This user exit can be used to skip the MIRA process of line pairing by setting the `ref double poTotal` and `ref double grTotal` parameters both to zero, although this is not recommended.

This user exit is available during export processing only.

ReadPurchaseOrder

This is a delegate of type `UserExitReadPurchaseOrder` and has the following parameters.

- `IWorkdoc doc`
- `IPOKey poKey`
- `bool includeLineData`

This user exit is called during purchase order number validation from both the Transformation Server and the Validation sides, as well as during document export, prior to line pairing. This user exit enables a developer to implement a custom purchase order number lookup using a web service instead of using the standard options.

This user exit is available during validation and export processing only.

Note The old `ReadPODetails` user exit has been marked as obsolete and will be removed in a future release.

ReadSAPAccountAssignment

This is a delegate of type `UserExitReadSAPAccountAssignment` and has the following parameters.

- `IWorkdoc doc`
- `IAccountingData accountAssignment`
- `object bapiAccount`

This user exit enables custom field mappings within the SAP account assignment structure to a Invoice Processing Agility data structure.

The `object bapiAccount` is an instance of `SAP.Middleware.Connector.IRfcStructure`.

The user exit is called once for each account assignment line read from SAP. These custom fields can later be passed back to SAP when a document is created using the [PopulateSAPAccountAssignment](#) user exit.

This user exit is available during export processing only.

ReadVendorAddress

This is a delegate of type `UserExitReadVendorAddress` and has the following parameters.

- `IField field`
- `string vendorId`
- `IVendorAddress vendorAddress`

This user exit is called each time the details for a vendor are read from the vendor pool. It enables the developer to amend or add new parameters to the address array.

The user exit cannot be called if the vendor details are already read and loaded into the local cache.

For example, the client is 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 use exit to convert a 3-character code to a 2-character code.

This user exit is available during extraction processing as well as validation and export processing.

RejectPOForLinePairing

This is a delegate of type `UserExitRejectPOForLinePairing` and has the following parameters.

- `IWorkdoc doc`
- `object dbPOHeaderRecordSet`
- `object bapiPOHeader`
- `IPOKey poKey`
- `ref bool reject`
- `bool isSAP`

This user exit enables you to reject an SAP purchase order or database purchase order for inclusion in line pairing, based on custom criteria. For example, information contained within the purchase order header.

If the purchase order is rejected, then the `ref bool reject import` parameter should be set to TRUE.

The object `dbPOHeaderRecordSet` is given as an instance of `System.Data.Common.DbDataReader`.

The object `bapiPOHeader` is the purchase order header data object retrieved from using the purchase order BAPI lookup, and given as an instance of `SAP.Middleware.Connector.IRfcStructure`.

For purchase order header data read from a database, the object `dbPOHeaderRecordSet` object should be used.

To determine which method is used to retrieve the purchase order header, the `bool isSAP` parameter is included in the user exit interface. This parameter is set to TRUE if the purchase order comes from SAP. The value is set to FALSE if the purchase order comes from a database.

This user exit is available during export processing only.

SAPArchiving

This is a delegate of type `UserExitSAPArchiving` and has the following parameters.

- `IWorkdoc doc`
- `string destinationArchive`
- `ref string archiveDocID`

This user exit is used to call a custom function that carries out image archiving using SAP.

In order to call this user exit, select the Archive via SAP setting in the **Solution Configuration Manager > Profile Settings > SAP Configuration**.

If archiving is not successful, an `Export Exception` is thrown and a specific error reason is displayed.

If archiving is successful, the `ref string archiveDocID` parameter is populated with the archive document ID generated for the newly archived image.

The `string destinationArchive` import parameter contains the repository archive ID for where the image is stored.

This user exit is available during export processing only.

SAPConditions

This is a delegate of type `UserExitSAPConditions` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `IConditionData[] condData`
- `IMiscCharges miscCharge`
- `ref int materialLineCount`

- `ref bool condAllotted`
- `ref string description`

This user exit is called during the miscellaneous charge handling procedure of the line pairing routine for a very specific situation.

The user exit is called only if all of the following are true:

- Material line pairing is successful.
- The type of miscellaneous charge being processed is configured and booked against conditions on a SAP purchase order.
- The number of available conditions to book against is exactly equal to the number of instances of that miscellaneous charge type read from the invoice. For example, two itemized freight amounts on the invoice and two conditions relating to freight against the paired lines on the purchase order.
- The total value of the miscellaneous charge type is different to the total value of the SAP conditions that relate to that charge type.

In this circumstance, it is not clear to the system which instance of the miscellaneous charge should go to which condition. Therefore, this user exit adds custom business logic that forces a decision.

If no business logic is added and this scenario arises, then line pairing fails because the miscellaneous charge cannot be allocated.

The `ILineData` array structure contains successfully paired lines.

The `IConditionalData` array structure contains conditions for the miscellaneous charge type.

The `IMiscCharges` is the single line structure that contains details of the miscellaneous charge that is processed. The `miscCharge` property of this structure is a sub-array that contains the individual amounts read from the invoice relating to this miscellaneous charge type.

The `lngMaref int materialLineCount` is the number of material lines in the `ILineData` structure.

This user exit is available during export processing only.

SAPPostingFailure

This is a delegate of type `UserExitSAPPostingFailure` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData taxData`
- `ref string docKey`
- `IVendorAddress address`
- `bool linesRequired`
- `object sapReturn`

This user exit is called if the `ActivateSAPFailureUserExit` option is selected in the **Solution Configuration Manager > Profile Settings > SAP Settings** and a SAP document fails to park or parking is not allowed. Under these circumstances, export fails and the document is sent to Validation.

In this user exit, a fall back export may be implemented that can output a flat file or update a database if a document cannot be created.

If the fall-back export cannot be performed, an `ExportException` is thrown with a reason for the failure. If this variable is not set, the export fails silently with the outward appearance of success.

If another SAP document is created in this user exit, the newly created SAP document number is passed to the `ref string docKey` interface parameter.

The `IVendorAddress` structure parameter contains the invoice vendor details and the `bool linesRequired` flag indicates if the document is relevant for line item export.

This user exit is available during export processing only.

SAPPostingRetry

This is a delegate of type `UserExitSAPPostingRetry` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData taxData`
- `ref bool retry`
- `object sapReturn`

This user exit is called when a SAP document fails to post. It provides the ability to change the parameters passed to SAP based on the error message returned by the initial failure , so that the document posts on a second attempt.

The `ref bool retry` Interface parameter should be set to `TRUE` to attempt posting again.

The reason why a document post fails is held in the `object sapReturn` array.

This user exit is available during export processing only.

SendToSAPProcessDirector

This is a delegate of type `UserExitSentToSAPProcessDirector` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData taxData`
- `AccountingData[] glData`
- `object bapi`
- `ref bool abort`

This user exit is where additional parameters are specified for the `BAPI` call to SAP. This call is used to send an invoice to Process Director using the `RFC_DATA_SUBMIT` function module.

`BAPI` parameters are passed at header level and are populated via the `object bapi` object. Line data is added by manipulating the Invoice Processing Agility `ILineData`, `AccountingData` and `ITaxData` arrays.

If the export to Process Director is aborted, the `ref bool abort` parameter should be set to `TRUE`.

This user exit is available during export processing only.

SendToSAPProcessDirectorGeneric

This is a delegate of type `UserExitSendToSAPProcessDirectorGeneric` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `ITaxData[] taxData`
- `IAccountingData[] glData`
- `object bapi`
- `ref bool abort`

This user exit has additional parameters that are specified for the BAPI call to SAP that is used to send an invoice to `ProcessDirector` using the generic function module `/EBY/PDBO_RFC_DATA_RECEIVE`.

BAPI parameters that are passed are populated via the `object bapi` object. If the export to Process Director is aborted, the `ref bool abort` parameter should be set to `TRUE`.

This user exit is available during export processing only.

SetDocFlags

This is a delegate of type `UserExitSetDocFlags` and has the following parameters.

- `IWorkdoc doc`
- `IDocumentFlags flags`

This user exit enables you to set the properties on the `IDocumentFlags` object based on a custom set of requirements.

This user exit is available during extraction processing as well as validation and export processing.

SetEntrySheetNumber

This is a delegate of type `UserExitSetEntrySheetNumber` and has the following parameters.

- `IWorkdoc doc`
- `ref string entrySheetNo`

This user exit enables a developer to pass a service entry sheet number using the `ref string entrySheetNo` parameter for use during line pairing.

This user exit is available during export processing only.

SetReferenceForEntrySheet

This is a delegate of type `UserExitSetReferenceForEntrySheet` and has the following parameters.

- `IWorkdoc doc`
- `ref string reference`
- `double serviceValue`

This user exit applies to SAP implementations only. This user exit is called during the line pairing routine when the system is attempting to select the correct service entry sheet to post the invoice against.

You can select the service entry sheet based on a comparison between the service entry sheet external reference set in SAP and the invoice number. To activate this functionality, select the Find SES With Invoice Number option in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

This user exit is provided so that the invoice number can be substituted with something else in order to help identify the right service entry sheet. For example, a delivery note number can be used.

The current reference value is automatically populated with the invoice number and is held in the `ref string reference` interface parameter.

The `double serviceValue` parameter contains the total amount of the service.

This user exit is available during export processing only.

SetSAPPassword

This is a delegate of type `UserExitSetSAPPassword` and has the following parameter.

- `ref string password`

It is possible to configure the SAP password in the **Solution Configuration Manager > Profile Settings > SAP Settings**. This user exit enables you to set the password in script so that the password is not exposed as plain text in the configuration settings.

The password is set by configuring the input and output value of the `ref string password` parameter.

This user exit is available during validation and export processing only.

SetTolerance

This is a delegate of type `UserExitSetTolerance` and has the following parameters.

- `Tolerance tolerance`
- `IWorkdoc doc`

This user exit allows greater flexibility for setting the tolerance for amount fields that are cross-validated mathematically within Invoice Processing Agility. 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.

This user exit is available during extraction processing as well as validation and export processing.

SetVendorCountry

This is a delegate of type `UserExitSetVendorCountry` and has the following parameters.

- `ref string country`
- `IWorkdoc doc`

This user exit allows a country to be set for field formatting and validation. For example, use this to determine if the country filter is being used or if a vendor has been found in a specific country.

To set the country, the `ref string country` import parameter is set to the two-character ISO-code for the country in question.

This user exit is available during validation processing only.

TextFieldFormatting

This is a delegate of type `UserExitTextFieldFormatting` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ref bool valid`
- `FieldSettings fieldSettings`
- `IClientData clientData`

This user exit is used to apply custom formatting and validations to TEXT fields. This enhances the standard validation and formatting settings that are configurable in the **Solution Configuration Manager** > **Profile Settings** > **Field Settings**.

This user exit is available during validation and export processing only.

ValueCheck

This is a delegate of type `UserExitValueCheck` and has the following parameters.

- `IField field`
- `IWorkdoc doc`
- `ICandidate candidate`

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 alternative, and is provided as a window for a developer to insert script to disqualify illegal alternatives for the invoice number or invoice date.

This user exit is available during extraction processing only.

VoidDocumentExport

This is a delegate of type `UserExitVoidDocumentExport` and has the following parameters.

- `IWorkdoc doc`

- `string exportPath`
- `string docLink`

When documents are rejected during Validation with the Not an invoice reason, they are parked in the `ParkNAIDocuments` process and never reach export. The `VoidDocumentExport` user exit provides flexibility so that these documents do not fall through the cracks. For example, this user exit can be used for reporting or you can send the document to another user for further processing.

If an error is encountered, an `ExportException` is thrown.

This user exit is available during export processing only.

XMLOutput

This is a delegate of type `UserExitXMLOutput` and has the following parameters.

- `IWorkdoc doc`
- `ILineData[] lineData`
- `IAccountingData[] glData`
- `ITaxData[] taxData`
- `XmlDocument xmlDoc`

This user exit is available so you can add custom fields to the XML output file. The XML output file is divided into the following sections.

- Document attributes such as class name and scan date.
- Line item details such as quantity and unit price.
- Invoice header details such as invoice number and date.
- General Ledger Coding such as GL account and cost center.

This user exit is called by the core application code once for the document header, once for the invoice header, once for each standard line item, and once for each general ledger coding line item.

The `ILineData[] lineData` array parameter contains the standard line items, and the `IAccountingData[] glData` array parameter contains the general ledger coding lines.

This user exit is available during export processing only.

Project data structures

Invoice Processing Agility uses internal data structures between functions and subroutines. You can use some of these data structures in user exit scripts and in some instances, these structures are defined as a parameter in the interface.

The following data structures are available:

- `LineData` structure
- `POKey` structure
- `TaxData` structure
- `Address` structure

- [Tolerance](#) structure
- [Flags](#) structure
- [AccountingData](#) structure
- [ClientData](#) structure
- [CountryData](#) structure
- [FieldSettings](#) structure
- [WithTaxData](#) structure

LineData structure

The `LineData` structure contains the line item details that are exported.

This structure is based on the document line item extraction results, but it may deviate from this depending on the line pairing results.

For example, a single line on an invoice corresponds to more than one line item on a purchase order. This structure also is based on how miscellaneous invoice charges are handled.

The `LineData` structure is present in the following user exits:

- [CustomExport](#)
- [XMLOutput](#)
- [CSVFileLine](#)
- [PreMaterialLinePairing](#)
- [PostLinePairing](#)
- [SAPPostingRetry](#)
- [SAPPostingFailure](#)
- [SendToSAPProcessDirector](#)

The elements that are part of this structure are as follows.

Structure Element	Type	Description
InvoiceDocItem	Integer	The invoice line item number from 1-n.
PONumber	String	The purchase order number, and is populated only if line pairing is successful for this item.
POItem	String	The purchase order line item number. It is populated only if line pairing has been successful for this item.
DE_CRE_IND	X or blank	The subsequent debit or credit indicator that indicates is the line item is a subsequent debit of a 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 the 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	The invoice line item quantity.

Structure Element	Type	Description
ItemAmount	Double	The invoice line item total.
POUnit	String	The order unit of measure and it is populated with the purchase order line item order unit measure if the line item has been paired.
PO_PR_UOM	String	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	The invoice line item quantity expressed in the order price unit of measure.
TaxCode	String	The invoice line item tax code, and it is populated using the tax determination procedure if a line item is paired.
TAXJURCODE		The invoice line tax jurisdiction code. It represents the downstream ERP system ID for the tax office where taxes are paid for this line item. This is used in countries that have tax jurisdictions for their sales tax. It is populated only if the line item is paired.
Unit_Price	Double	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. If the line item is paired, this description appears 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 unsuccessful for any lines, or was not carried out, the description is set to THIRD PARTY FREIGHT, SERVICE and MIRA respectively.
MaterialNo	String	Invoice line item material number. 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.
TaxRate	String	Invoice line item tax rate. 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. This is lifted from the purchase order line item to which an invoice line is paired.
CHARGECODE	String	Invoice line item charge code. This is lifted from the purchase order line item to which an invoice line is paired.

Structure Element	Type	Description
CHARGECODEID	String	Invoice line item charge code ID. This is lifted from the purchase order line item to which an invoice line is paired.
MATERIALGROUP	String	Material group. This is lifted from the purchase order line item to which an invoice line is paired.
DistillerLine	String	Original Invoice Processing Agility line item number. The original line item number in the Invoice Processing Agility table field, as viewed in Validation where the invoice line was drawn. This will always be populated for unpaired line items and is a 1-based, not a zero-based index.
PLANT	String	Plant ID. This is lifted from the purchase order line item with which an invoice line is paired.
COMPANYCODE	String	Company code that corresponds to a line item. This is lifted from the purchase order when an invoice line is paired.
POTYPE	String	This is populated when line pairing is successful for this item.
BUSINESSUNIT	String	This is populated when line pairing is successful for this item.
MISCCHARGE	X or blank	X indicates that this is a miscellaneous charge line item. The flag is blank if the system has identified the line as a non misc-charge item.

POKey structure

The **POKey** structure contains the elements that comprise the unique key used to identify a single purchase order. The structure is used in [LinePairingPOs](#) and is defined using the parameters in the following table.

The **POKey** structure is present in the following user exits:

- [LinePairingPOs](#)
- [POValidateStart](#)
- [ReadPurchaseOrder](#)
- [POVendorValidate](#)
- [RejectPOForLinePairing](#)

The elements that are part of this structure are as follows.

Structure Element	Type	Description
POPartition	String	The PO partition ID assigned to the client.
PONUMBER	String	The purchase order number.

Structure Element	Type	Description
COMPANYCODE	String	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	The purchase order number extension. This field contains the additional key required to identify a purchase order uniquely.

TaxData structure

The `TaxData` structure holds the tax amounts that are relevant for each tax code.

It is populated if automatic tax determination is activated and successful, all lines have been paired and tax is not required to be calculated by the downstream ERP system. It is used in the interfaces of the following user exits.

- [CustomExport](#)
- [XMLOutput](#)
- [CreateSAPDocument](#)
- [PostLinePairing](#)
- [SAPPostingFailure](#)
- [SAPPostingRetry](#)
- [SendToSAPProcessDirector](#)

The elements that are part of this structure are as follows.

Structure Element	Type	Description
TaxCode	String	The ERP system tax code.
TaxAmount	Double	The tax amount.
TaxRate	Double	The tax rate as a percentage. For example, 20 signifies 20%.
TaxBase	Double	The invoice amount to which the tax applies.
ExtractLine	Integer	The original line number (1-based index) of the VATTable where the value is captured. This value is set only if the <code>TaxData</code> structure is populated based on the content of the VAT table.

Address structure

This structure contains data elements that are associated with a particular vendor. For example, the vendor ID, the vendor name, the vendor address details, along with any other vendor information.

The amount of data available depends on what is in the vendor extract.

This structure is used in the following user exits.

- [CustomExport](#)
- [FilterVendorSearch](#)
- [ReadVendorAddress](#)
- [POValidateStart](#)
- [SAPPostingFailure](#)
- [POVendorValidate](#)
- [CheckBankAccount](#)
- [PreLinePairing](#)
- [FilterEmployeeSearch](#)

The elements that are part of this structure are as follows.

Structure Element	Type	Description
NAME	String	The name of the vendor.
Address1	String	The vendor street address line 1.
ADDRESS2	String	The vendor street address line 2.
ZIP	String	The vendor zip code or postal code.
ID	String	The unique vendor ID. The unique ID from the point of view of the data extract, where each row must have a unique reference. This is not the unique vendor ID from the point of view of the ERP system if a site ID is also used.
SITEID	String	The vendor site ID.
ExternalSiteID	String	The external site ID.
AlternatePayee	String	The party that receives payment for an invoice.
PermittedPayee	String	A list of parties that are configured to receive payment for an invoice.
TELNO	String	The vendor telephone number.
CITY	String	The vendor city.
STATE	String	The vendor state. For U.S. addresses, the state code is expected here, such as CA = California, or VA = Virginia.
COUNTRY	String	The vendor country. This is a two character ISO-code for the country, such as US = United States of America, DE = Germany, GB = United Kingdom.
POBOX	String	The vendor Post Office (PO) box number.
POBOXZIP	String	The zip code or postal code associated with the vendor Post Office (PO) box.
EUMEMBER	Boolean	The boolean indicator that denotes whether the vendor belongs to an EU member state country.

Structure Element	Type	Description
VATREGNO	String	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	The vendor tax ID 1.
TAXID2	String	The vendor tax ID 2.
TAXJURCODE	String	The ID of the tax office where the vendor is based.
Currency	String	The vendor currency.
INVOICETYPE	String	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. 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 settings in the Solution Configuration Manager > Profile Settings > Invoice Type Settings .
PAYMENTMETHODS	String	The comma-separated list of payment method codes appropriate for the vendor.
BANKDETAILS	String	The vendor bank account details. This should be a colon-separated list in the following format: BankAccount, SortCode, ERPBankAccountCode A sort code is the U.S. equivalent of a routing number.
IBAN	String	The vendor international bank account number.
UTILITYFLAG	String	The indicator as to whether the vendor is a utility vendor.
PORSUBNO	String	The vendor POR subscriber number used only for Switzerland.
EXTERNALID	String	The ERP system vendor ID if a site ID is used.
ACCOUNTGROUP	String	The ERP system vendor account group.
COMPANYCODES	String	The comma-separated list of company codes that are valid for the vendor.
SIRETID	String	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	The unique vendor identifier code, such as a Chinese tax number.
PARTITIONID	String	The vendor partition ID.
Custom1 through Custom5	String	These fields are used to store additional information about the vendor that is specific to your needs.

Tolerance structure

The `Tolerance` structure holds a series of limits the system uses when performing mathematical validations on the amounts read from the invoice.

The tolerance limits are set by the tolerance group assigned to the invoice currency. The tolerance structure is used in the interface for the `SetTolerance` user exit.

The elements that are part of this structure are as follows.

Structure Element	Type	Description
HEADERTOLERANCE	Double	The maximum amount by which the document header amounts, such as total = tax + freight + sum of line items/ Net Amount 1 are allowed to deviate from one another before the system marks them as being invalid.
TABLEROWTOLERANCE	Double	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.

Flags structure

This structure contains a range of Boolean indicators for document validation that you can use to determine which field items are relevant for export.

This structure is used in the following user exit.

- `CustomExport`

The elements that are part of this structure are as follows.

Structure Element	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 settings in the Solution Configuration Manager > Profile Settings > Line Item Table Settings determine if line items are required under what circumstances.
INVALID	Boolean	This flag is set to TRUE if the user has selected the INVOICE AMOUNTS DO NOT ADD UP invalid reason in Validation.

Structure Element	Type	Description
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 in Validation.
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 in Validation.
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: <ul style="list-style-type: none"> Line item extraction is switched off for the project. The line items table field is not selected in the Solution Configuration Manager > Profile Settings > 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. The vendor has been identified as a utility vendor and line items are not required for utility vendors.

AccountingData structure

The `AccountingData` structure is used to hold general ledger coding strings relevant to the invoice.

It is populated at time of data export if miscellaneous charges are present on the document, and output is required as a general ledger account entry. It is used in the following user exits:

- [CustomExport](#)
- [CreateSAPDocument](#)
- [XMLOutput](#)
- [ReadSAPAccountAssignment](#)
- [PopulateSAPAccountAssignment](#)

The `GLData` global project array, which is based on this structure, may be populated for either XML or database output in [PostLinePairing](#).

The elements that are part of this structure are as follows.

Structure Element	Type	Description
INVOICE_DOC_ITEM	Integer	The general ledger coding string line item number from 1-n.
PONumber	String	The purchase order number.
POItem	String	The purchase order line item number.
GLAccount	String	The general ledger account number.
CompCode	String	The coding string company code.
DB_CR_IND	String	The debit/credit indicator.
COSTCENTER	String	The cost center.
SERIAL_NO	String	The serial number.
PROFIT_CTR	String	The profit center.
WBSElem	String	The work breakdown structure element.
ProfitSegNo	String	The profit segment number.
CoArea	String	The controlling area.
CmntItem	String	The commitment item.
FundsCtr	String	The funds center.
BusArea	String	The business area.
CostObject	String	The cost object.
FuncArea	String	The functional area.
FUND	String	The fund.
RefDate	String	The reference date.
ORDERID	String	The internal order number.
SubNumber	String	The sub number.
NETWORK	String	The project network.
ACTIVITY	String	The project activity.
RLEstKey	String	The real estate key.
AssetNo	String	The asset number.
SDDoc	String	The sales order document number.
SDocItem	String	The sales order document item number.
TaxCode	String	The tax code.
TaxJurCode	String	The tax jurisdiction code.
ItemAmount	Double	The coding string amount.

Structure Element	Type	Description
QUANTITY	Double	The quantity.
POUnit	Double	The order unit of measure relating to the Quantity element.
PO_PR_UOM	Double	The order price unit of measure.
PERCENT	Double	The distribution percentage.
SheetNo	String	The service entry sheet number.
CUSTOM1 to CUSTOM5	String	These are custom account assignment fields that can be used by a developer.

ClientData structure

The `ClientData` data structure holds element details for the current client.

It is passed explicitly as an interface parameter in the `TextFieldFormatting` user exit, but is generally available through `ProjectContext.Settings.ClientData`. An instance of `ProjectData` is provided when you initialize the user exit assembly.

The elements that are part of this structure are as follows.

Structure Element	Type	Description
CLIENTID	String	The client ID.
PROFILEID	String	The profile ID assigned to client.
EXPORTPROFILEID	String	The export profile ID assigned to client.
FORCEVERIFY	Boolean	If set to TRUE, all documents assigned to this client are sent to Validation for manual review.
CLIENTGROUP	String	The group to which the client is assigned.
CLIENTNAME	String	The client name.
INSTRUCTIONS_PROFILEID	String	The instructions profile ID assigned to client.
VENDORPARTITION	String	The vendor partition ID assigned to client.
EMPLOYEEPARTITION	String	The employee partition ID assigned to client.
POPARTITION	String	The PO partition ID assigned to the client.
TAXPARTITION	String	The tax partition ID assigned to the client.

CountryData structure

The `CountryData` structure holds the basic settings for a country.

`CountryData` is obtained via the `ProjectContext.CountryDataLookup`.

The elements that are part of this structure are as follows.

Structure Element	Type	Description
COUNTRY	String	The country ISO-code ID.
EUMEMBER	Boolean	The flag to indicate whether the country is a member of the European Union.
CURR	String	The local currency of the country.
NAME	String	The name of the country.

FieldSettings structure

This structure holds details associated with a given field as read from the **Solution Configuration Manager > Profile Settings > Field Settings**.

The structure is used as a parameter in `TextFieldFormatting` user exit.

The elements that are part of this structure are as follows.

Structure Element	Type	Description
FIELDNAME	String	The field name.
VerifierLabel	String	The field Validation label.
ACTIVE	Boolean	The field active flag.
RequiredInRTS	Boolean	The denotes whether the field is required in Transformation Server.
RequiredInVerifier	Boolean	The denotes whether field entry is mandatory in Validation.
COUNTRYFILTER	String	The comma-separated list of countries that control whether the field is mandatory or not.
FIELDTYPE	String	The field type.
FORCEVERIFY	Boolean	The force verify indicator.
DEFAULTVALUE	String	The field default value.
DEFAULTIFNOTHINGEXTR	SubstitutionRule	The field default if no value is extracted automatically.
SubstitutionRule	String	The field substitution rule.
MINLENGTH	Integer	The field minimum length.
MAXLENGTH	Integer	The field maximum length.
RIGHTJUSTIFY	Boolean	The indicator as to whether the field must be right-justified if a pad character is used.
PADCHAR	String	The padding character.
REMOVEALLSPECIALS	Boolean	The flag to indicate whether special characters must be removed.
REMOVEBLANKS	Boolean	The flag to indicate whether blank spaces must be removed.

Structure Element	Type	Description
KEEPCERTAINSPECIALS	String	The list of special characters that must be retained.
REMOVESTARTEND	Boolean	The flag to indicate whether special characters must be removed from the start and end of the string.
SUBSTRINGSTARTPOS	Integer	The substring start position.
SUBSTRINGLENGTH	Integer	The substring length.
REMOVELEADINGZEROS	Boolean	The flag to indicate whether leading zeros must be removed from a string.
DECIMALPLACES	Integer	The number of decimal places for an exported amount.
NEGATIVETYPE	Integer	The negative type code.
OUTPUTFORZERO	String	The export value if an amount field is zero.
SUBSTITUTEVALUEIFOVERO	String	The export value if an amount is greater than zero.
FUTUREDAYS	Integer	The number of days that an extracted date is permitted to be in the future.
NODAYSINPAST	Integer	The number of days that an extracted date is permitted to be in the past.
DateOnlinInCurrentMonth	Boolean	The flag to indicate whether the date should only be in the current month.
FIELDMASK	String	The list of valid field masks for text fields.
ExtractionProfile	ExtractionProfile	The extraction profile ID (for custom fields 1-5).

WithholdingTax data structure

The `WithholdingTax` data structure is used to hold withholding tax data to be passed to SAP.

The `WHTax` array, which is based on this structure, may be populated in `PostLinePairing` if custom withholding taxes need to be passed using the standard SAP export. This overrides any automatic population of the withholding tax data that the system would otherwise perform, which is triggered by a value not equal to zero in the `AmountWithholdingTax` field.

The elements that are part of this structure are as follows.

Structure Element	Type	Description
SplitKey	String	The withholding tax split key used to group together multiple types of withholding tax. For a single entry, this must be set to 1.
TaxType	String	The SAP withholding tax type.
TaxBase	String	The SAP withholding tax base amount, such as the proportion of the invoice amount to which the withholding tax applies.
TaxCode	String	The SAP withholding tax code.
TaxAmount	String	The SAP withholding tax amount.

API overview

The following sections provide suggestions on how to address several typical tasks using the Invoice Processing Agility application programming interface (API).

Project context

`ProjectContext` provides access to the following.

- User exit registry (`UserExits`)
- Client configuration (`Settings`)
- Logger (`Log`)
- Database connection factory and pool (`DatabaseConnectionFactory`)
- Various data access objects. Such as purchase orders, country data, tax data, and many others.

Note The settings for some properties depend on the current client. For example the data access objects. The current client depends on the document that is currently being processed. The next document client configuration settings and data access objects may be different. Because of this, it is recommended not to cache any of this information.

An instance is passed as a parameter to the `Initialize` method of your `ICustomInitializer` implementation. It is recommended that you keep a reference in the class because it is likely that this instance is needed by one or more of your user exit implementations.

API logs

In order to write custom log messages to the log file, use the `ILogger` instance assigned to the `Log` property of `ProjectContext`.

`ILogger` provides methods for logging the various log levels, such as `Debug`, `Info`, `Warn`, and `Error`.

Configuration access

You can access the client configuration using the `Settings` property of the `ProjectContext`. `Settings` holds an instance of `IProjectSettingsStore`.

Configuration settings are organized into groups. In order to access a setting you need the group name and the key within that group. For example, to check if SAP-based validation for PO numbers is activated, you would request `ValidateFromSAP` from the `PON` group.

In most cases you have to access simple settings. These settings must be one of the following types.

- string*
- boolean*
- double
- int*
- long

- byte
- char

*Invoice Processing Agility mostly uses string, bool and int settings. The other settings are rarely used.

It is recommended that you use one of the convenience methods to access simple properties. For example,

- `string GetStringSetting(string groupName, string keyName, string defaultValue = null)`
- `bool GetBooleanSetting(string groupName, string keyName, bool defaultValue)`
- `int GetIntSetting(string groupName, string keyName, int defaultValue)`

The default value is returned if the requested setting does not exist.

In rare cases you might need to access dictionary settings. Use the following syntax.

```
IDictionary<string, ISettingSimple> GetDictionarySetting(string groupName, string keyName)
```

A dictionary contains further settings that are accessible by keys.

For example, to get the connection string for the SQL connection group 1, you need to call:

```
string connectionString = settings.GetDictionarySetting("SQL", "CONNECTIONSTRING")["1"].GetStringValue();
```

Database access

Invoice Processing Agility provides a database framework that is basically a thin layer on top of `.NET System.Data.Common.DBConnection`.

The `ProjectContext.DatabaseConnectionFactory` property contains a reference to a `DatabaseConnectionFactory` from the `ICAL.Framework.Database` namespace. Use this to obtain an instance of an `IDatabaseConnection` for a given connection string. `IDatabaseConnection` contains methods for executing queries and other statements. For more information on this, please refer to the *Invoice Processing Agility API documentation*.

Invoice Processing Agility organizes SQL connections in connection groups. Connection groups are configured in **Solution Configuration Manager > Client Settings**, and these connection groups are referenced in several other settings where a connection string is required.

It is recommended that you use the `ICAL.Invoices.Utils.DBUtils` to obtain connections for a connection group. For example, to get a connection to the database that is used for purchase order number validation, you can call,

```
IDatabaseConnection con = dbUtils.GetConnectionByGroupName("PON", "SQLConnectionGroup");
```

SAP access

In order to access SAP, ensure that the `ICAL.Framework.SAP` and `ICAL.Invoice.SAP` assemblies are referenced by your project. These assemblies have a dependency to the SAP connector for .NET that must be installed separately.

To access the SAP system that is configured in your client configuration, you can use the following code:

```
using ICAL.Framework.SAP;
using ICAL.Invoices.SAP;
...
SAPComponentFactory sapComponentFactory =
    ctx.SAPComponentFactory as SAPComponentFactory;
SAPConnectionFactory connectionFactory =
    sapComponentFactory.SAPConnectionFactory;
ISAPConnection con = connectionFactory.GetSAPConnection();
```

Note The `SAPComponentFactory` property in `ProjectContext` is only set if `ICAL.Invoices.SAP` and all of its dependencies are loaded successfully. If there is an issue, the `SAPComponentFactory` property is set to null.

Once the SAP connection is successful, you have an instance of `ISAPConnection` that references the SAP system that is configured for the current client. Use this as an entry point to create requests for SAP. For more information on this, please refer to the *Invoice Processing Agility API documentation*.

API troubleshooting

If you cannot load your custom assembly for any reason, error messages with the necessary information should be included in the Invoice Processing Agility log files. There are two types of errors that are logged.

- The assembly or type cannot be loaded.
This indicates that the assembly or one of its dependencies has not been installed into the GAC.
- The configured class does not implement the `ICustomInitializer` interface.
When this error occurs, review your implementation and make sure to register the correct class.

User exits are executed in the following processes.

- Extraction is performed within an `ExtractionProcess.exe` process.
Logging output goes into one of the `IPA_Extraction` log files.
- Validation is either performed by Transformation Server or when it is done in IIS by a user during Validation.
 - To debug validation in Transformation Server that is part of the `Kofax.CEBPM.CPUServer.ServiceHost.exe` process, review the `IPA_TransformationServier` log file.
 - To debug validation in IIS that is part of the `w3we.exe` process, review the `IPA_Web` log file.
- Line pairing and export are executed by the Kofax Core Worker Service.
To debug this, attache to the `Agility.Server.Core.WorkerService.exe` process. Logging output goes to the `IPACoreworker` log file.

Chapter 6

Document ingestion

Before you can process documents, you need to import them. During import, also known as ingestion, metadata from the documents is required for downstream processing. The metadata is populated in different ways for different ingestion methods. This metadata is created during ingestion and then made available for export.

The following methods of ingestion are supported.

- [Scan paper documents](#)
- [Email imported documents](#)
- [File system imported documents](#)

In addition, you can do the following to help document processing.

- [Image type and resolution conversion](#)
- [Image rendition](#)

Scan form for documents

Use this form to scan physical paper documents or electronic document images for processing. The form has the following options.

Client

Select the client from the list.

The value for this option is set to "Client 0" by default.

Invoice Type

The possible values for this option are as follows:

- Auto Detect

When selected, the project automatically detects whether an invoice is a purchase order or not.

This is the default value for this option.

- PO

If selected, the scanned documents are all assigned the PO invoice type.

- Non-PO

If selected, the scanned documents are all assigned the Non-PO invoice type.

Language ID

When the scan form is opened, this option is set to Default. This means that the default FineReader Page Recognition Profile is used to perform OCR during production.

If the documents you are processing are using a non-Latin character set, choose from the following supported languages; CN (Chinese), JP (Japanese), KR (Korean), TH (Thai), GR (Greek), and RU (Russian). For each of these languages, a language-specific recognition engine is available. Depending on the language selected, the corresponding recognition engine performs OCR during production. Using the specialized recognition engines ensures better recognition results that would not be possible using the default language option.

These language-specialized recognition profiles are installed alongside the project when you install Invoice Processing Agility. For more information about recognition engines, see the *Help for Kofax TotalAgility Transformation Designer*.

Email document ingestion

Invoice Processing Agility supports email attachment documents. Documents that are attached to emails can be gathered and processed by your project. The available [Import Settings](#) determine how a document is import using email import.

When you process an email document attachment, the following data is stored for each document.

Client ID

By default, you cannot change the value for this setting. The default Client 0 is automatically assigned. However, it is possible to add an additional process to the ingestion process map that determines the Client ID. For example, if a client name is included in the subject line of an email. You can configure a database lookup that uses that client name to determine the Client ID.

Company Code

A standard extraction field and is configured via the **Solution Configuration Manager > Profile Settings > Company Code** settings.

However, Invoice Processing Agility enables you to preset the Company Code if it is known at the time of ingestion. You can do this by specifying a value in the **Solution Configuration Manager > Global Settings > Import Settings**.

URN

A unique identifier for a document in another system. For example, Filenet. If the URN is not provided as part of the ingestion, the system populates with field with the Kofax TotalAgility Document ID.

Filename

The original document filename if applicable. If this name is not provided as part of the ingestion, the system populates this field with the Kofax TotalAgility Document ID.

Scan Batch Name

The name of the scan batch if an external scan application is used. If this is not provided as part of the ingestion, the system populates this field with the Kofax TotalAgility Job ID.

Scan Date

The time that a batch is scanned, if an external can application is used. If this is not provided, the Current Date value is used.

Invoice Type

This is a standard extraction field, and is configured via the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.

Kofax TotalAgility enables you to preset the invoice type if the customer chooses to manually sort invoices by PO and NO-PO.

If however, you want a more dynamic solution, you can map mailbox names to an invoice type. This is done by mapping the Invoice Type Invoice Processing Agility Process Variable based on the mailbox name.

Input Source

This field stores the method of ingestion for a document. In the case of a scanned paper document, this value is "Email."

In addition to the above data, files ingested via email can also include XML data. If XML data is included with a document, this is stored in the document for later parsing with PIX.

File system ingestion

Documents that are on your file system can be gathered and processed by your project. For the best results, ensure that your document filenames contain the necessary information required for processing. This is especially true if you want to parse the filename for various values.

When you process file system documents, the following data is stored for each document.

Client ID

The Client ID must be part of the document filename. The system retrieves the Client ID by parsing the filename.

This is done by editing the value of the Client ID setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

Company Code

A standard extraction field, and is configured via the **Solution Configuration Manager > Global Settings > Import Settings**.

However, Invoice Processing Agility enables you to preset the Company Code if it is known at the time of ingestion.

The Company Code can be part of the file name. The system retrieves the Company Code by parsing the filename.

This is done by editing the value of the Company Code setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

URN

A unique identifier for a document in another system. For example, Filenet. If the URN is not provided as part of the ingestion, the system populates with field with the Kofax TotalAgility Document ID.

The URN can be part of the filename. The system retrieves the URN by parsing the filename.

This is done by editing the value of the URN setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Filename

The original document filename if applicable. If this name is not provided as part of the ingestion, the system populates this field with the Kofax TotalAgility Document ID.

The original filename is stated in the import folder.

Scan Batch Name

The name of the scan batch if an external scan application is used. If this is not provided as part of the ingestion, the system populates this field with the Kofax TotalAgility Job ID.

The Scan Batch Name can be part of the filename. The system retrieves this value by parsing the filename.

This is done by editing the value of the Client ID setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

Scan Date

The date when a batch is scanned when using an external scan application.

The Scan Date can be part of the filename. The system retrieves this value by parsing the filename. The date cannot contain any separators and it must match the format specified in the Date Format option in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

Invoice Type

This is a standard extraction field, and is configured via the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.

Kofax TotalAgility enables you to preset the invoice type if the customer chooses to manually sort invoices by PO and NO-PO.

If however, you want a more dynamic solution, the Invoice Type can be part of the filename. The system retrieves this value by parsing the filename. If you are using this solution, the format of the Invoice Type must match the values configured in the Invoice Type setting in the **Solution Configuration Manager > Global Settings > Import Settings**.

Destination Archive

This is an SAP-specific field that specifies the archive where the imported documents are exported.

This archive can be part of the filename and the system retrieves this value by parsing the filename.

This is done by editing the value of the Destination Archive setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

Input Source

This field stores the method of ingestion for a document. In the case of a file system document, the default value of this field is FILE.

The Input Source can also be part of the filename and the system can retrieve this value by parsing the filename.

This is done by editing the value of the Input Source setting that is found in the **Solution Configuration Manager > Global Settings > Import Settings**.

Important If the filename does not include this element, no value is returned.

Language ID

The language can be part of the filename, based on whatever component is specified in the **Solution Configuration Manager > Global Settings > Import Settings**.

The Language code must be uppercase, and only the following languages are supported; CN (Chinese), JP (Japanese), KR (Korean), TH (Thai), GR (Greek), and RU (Russian). If you want to use English, leave the language component blank.

For each of these languages, a language-specific recognition engine is available. Depending on the language selected, the corresponding recognition engine performs OCR during production. Using the specialized recognition engines ensures better recognition results that would not be possible using the Default language option.

If you enter an unsupported language, leave the component blank, or do not use this option, the default FineReader page recognition engine performs recognition during production.

Image type and resolution conversion

Invoice Processing Agility is able to process non-300 DPI images and PDF documents. Because of this, Invoice Processing Agility can handle documents from multiple external sources.

Invoice Processing Agility includes the two following Scan/VRS profiles for processing image types and resolution conversion. These Scan/VRS profiles are applied in an Image Processing Activity prior to classification and extraction.

- IPA with VRS

VRS settings are enabled for this profile. It is used when a document is ingested from Scan.

- IPA without VRS

VRS settings are not enabled for this profile. It is used when a document is ingested from File or Email. These documents are ingested as the original document.

Note Both the Scan/VRS profiles mentioned above convert the incoming image to a 300 DPI bitonal TIFF, irrespective of the source.

Image rendition

Rendition is used in Invoice Processing Agility to keep a copy of the originally ingested document, such as a PDF, a 200 DPI, or a color TIFF, when the `ImageProcessing` activities are performed.

The `ImageProcessing` activities in the main process convert all documents to 300 DPI b/w TIFF images.

The original document is stored in the rendition.

Add image rendition

The image rendition needs to be manually added to the system and named as Original.

You can add image rendition by following these steps.

1. Open TotalAgility Designer.
2. Navigate to **System Settings**.
3. Select **Page Renditions**.
4. If no rendition is available, define one and name it **Original**.

Chapter 7

Project fields

This chapter provides details about the standard fields that are provided with the Invoice Processing Agility solution. It also explains how each field is validated and formatted.

Account Number

The account number field has a unique identification number for a client from the vendor point-of-view.

This field is mandatory and is configurable for use instead of the invoice number for invoices from utility vendors. This is done in the **Solution Configuration Manager > Profile Settings > Field Settings**.

This field is populated if the system configuration is set to skip invoice number extraction for utility vendors.

The value in the vendor master extract column contains the positive value for a utility vendor and is specified in the **Solution Configuration Manager > Profile Settings > Invoice Number Settings** with the desired profile selection.

In all other cases, the field is not mandatory.

Alternate Payee

This field is a supplementary field to the [Vendor ID](#). It represents the party that receives invoice payments, and is not necessarily the vendor listed on the invoice. This payee must be on a list of pre-defined permitted payees for the extracted Vendor.

You can activate or deactivate this field via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also configure formatting and validation settings with these settings.

Examples of how this field is configured are found in the [Alternative Payees](#) section.

Bank Account / Bank Account Code

The bank account number captures where the vendor wants to be paid.

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

The bank account is populated based on the Bank Details option that is mapped and populated in the vendor master database.

You can configure formatting and validation settings for these fields via the **Solution Configuration Manager > Profile Settings > Field Settings**.

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 bank details are found, the first matching bank account number and the corresponding bank account code are copied into the fields.

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

It is possible to limit bank account identification to only those vendors that require payment through bank transfer.

BIC

The BIC or SWIFT code is an internationally assigned code to identify a unique banking institution.

Use this code in partnership with [IBAN](#) numbers to indicate payment details through a bank transfer.

Invoice Processing Agility attempts to extract a BIC code on the document in conjunction with an IBAN number.

You can choose whether or not to extract the BIC field via the **Solution Configuration Manager > Profile Settings > Field Settings**.

Bill-To Name

This field represents the name of the invoice recipient.

This field is used to check that the incoming document is intended for a valid company within a client organization.

The system administrator can specify words and phrases that define a valid format for the Bill-to name via the **Solution Configuration Manager > Profile Settings > Bill-To Formats**. At runtime, the system extracts the full Bill-To name.

If no format anchors are specified or an appropriate anchor is missing, no value is extracted for the field and all documents are sent to Validation.

The system administrator can also specify the Distance in the **Solution Configuration Manager > Profile Settings > Bill-To Settings**. This controls the tolerance applied when finding a Bill-To match based on the above format.

Company Code

This field represents a unique ID for a company that receives invoices.

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

By default, there is no formatting for this field.

You can configure whether this field is mandatory in the **Solution Configuration Manager > Profile Settings > Field Settings**.

This field is determined by one of the following methods:

- Map a component in the document file name as referenced in the **Solution Configuration Manager > Global Settings > Import Settings**, if it is set at the point of scan.
- Use a database locator that references an Associative Search Database that points to a CSV extract of the master company code data. This is modified in the **Solution Configuration Manager > Global Settings > Import Settings**.
- 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 during the previous methods.

You can check the validity of manual entries in this field against a database or a downstream ERP system, as required. This is configured in the **Solution Configuration Manager > Profile Settings > Company Code**.

Currency Field

This field contains the ISO-code of the invoice currency. If the entry does not match an ISO-code, the entry is converted automatically, but only if there is a corresponding entry specified in the Alias option in the **Solution Configuration Manager > Global Settings > Currency Settings** option.

At first, Invoice Processing Agility attempts to extract the currency from the invoice. If no currency is captured or no currency appears on the invoice, you can configure the currency to match either the vendor or the purchase order country of origin.

Note It is common for domestic transactions to omit the currency.

Configuration settings determine whether the currency field is mandatory or not. This is set in the **Solution Configuration Manager > Profile Settings > Field Settings**.

It is also configurable whether user input should be validated against a database or the downstream ERP system. This is configured by selecting one of the Validate From DB or Validate From SAP options in the **Solution Configuration Manager > Profile Settings > Currency Settings**. If you choose to validate from a database, additional settings are displayed so that you can map your database to these settings.

If the client provides an Oracle or SQL Server database, Invoice Processing Agility can provide an SQL script to create a fully populated table of all world currencies and their associated countries.

Within the configuration, it is also possible to configure the currency symbols and terms that are associated with specific currencies. For example, pounds, sterling, and £, are all associated with GBP. However, the \$ symbol can be associated with USD, CAD, AUD, NZD and more. In this case, more information is needed to narrow down the specific currency.

You can add additional currencies, aliases, and associated countries via the **Solution Configuration Manager > Global Settings > Currency Settings**.

However, if you process documents that have a \$, and these documents are always in USD, you can select the Dollar Sign Is USD option in the **Solution Configuration Manager > Profile Settings > Currency Settings**. This means that the \$ is always interpreted as USD.

During production, if the corresponding currency symbol is found, and this symbol is unique to one particular currency, then that currency is selected. Terms take priority over currency symbols. Additionally, the higher the currency is on the list in the system configuration, the greater the weight the system assigns to that currency.

If the currency symbol is ambiguous, then the vendor country of origin is used to find the currency ISO-code. This is possible only if the currency is specified for that vendor in the Vendor.csv database.

For example, the \$ symbol is found on the document, but no further reference is made to the actual currency. If the vendor of this document is from Canada, the currency is set to CAD.

During Validation, if the user changes the Vendor ID, a message is displayed with information about the currency. They can then press OK to accept the change in currency, or Cancel to go back and change the Vendor ID.

Custom Fields

There are five custom fields that are available for addition extraction or data entry, and these fields can be different for each profile. The fields are called Custom 1 through Custom 5.

Use these fields if you have extra extraction values that are not covered by the Invoice Processing Agility solution.

You can enable or disable these fields via the **Solution Configuration Manager > Profile Settings > Field Settings**.

If enabled, there is no default extraction, validation, or formatting defined for these fields. These fields are also not exported. Because of this, you can decide how best to use these fields by [configuring](#) them via the Solution Configuration Manager.

Delivery Date

This field captures the delivery date for the goods or services stated on the invoice.

This field is displayed in Validation if selected in the **Solution Configuration Manager > Profile Settings > Field Settings**. This is also where this field is formatted and validated.

Delivery Note

This field captures the vendor delivery note number if one is found on the invoice.

Extracted delivery note numbers are formatted and validated based on the **Solution Configuration Manager > Profile Settings > Field Settings**.

Discount

This field captures a discount given by the vendor. If this field has a value, it is used in the invoice **Total** calculation.

This field is not mandatory but the system converts and extracted value to a valid amount and uses this value in the following validation calculation that is applied against all amount fields.

```
Invoice Total = Line item total + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

If line items are not mandatory then the amount fields can also be validation with the following formula.

```
Invoice Total = Net Amount 1 + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

Where **total tax** is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for the above calculations is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings** and the system applied the tolerance based on the tolerance group linked to the currency of the invoice.

Document Type

This field indicates if the incoming document is an invoice or a credit memo.

The value for this field is populated during document extraction. If the value is not confident or incorrect, it can be modified by the Validation operator.

The project administrator can provides words or phrases for a credit memo that can influence the value in this field. This is done by editing the **Solution Configuration Manager > Global Settings > Document Type Formats**.

There are only two possible values for this field.

- INVOICE
- CREDIT

By default, there is no formatting for this field. This is because the value for this field is a finite list of types and these require no formatting.

If the Stop All Credits option is selected in the **Solution Configuration Manager > Global Settings > Document Type Settings**, and the value extracted for this field is CREDIT, the document requires manual validation and is sent to Validation.

Due Date

This field captures the due date for payment.

This field is active if selected in the **Solution Configuration Manager > Profile Settings > Field Settings**. This is also where this field is formatted and validated.

Employee ID

This field contains the identification number for the user name of an employee found on the document.

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

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

You can configure whether this field is extracted in the **Solution Configuration Manager > Profile Settings > Field Settings**.

The value for this field is determined by the Invoice Processing Agility database locator and its associative search database that is pointing to a CSV file extract of the master employee data. If no matching value is found, the document is sent to Validation. In order for the value entered during Validation to be valid, it must be present in the master employee data.

Employee Name

The data in this field is the name associated with the Employee ID in the Employee.CSV database, if you are using it.

This field can represent the following.

- The person who made the order with the vendor.
- The primary contact for the vendor. For example, the person who receives deliveries.

This field value is populated by the results of an Invoice Processing Agility database locator, if configured.

Exchange Rate / Local VAT Amount

These fields do not have automatic extraction.

If one or both of these fields is required for VAT compliance checking, the Validation user must provide values manually

The VAT compliance check is activated in the **Solution Configuration Manager > Profile Settings > Tax Configuration**. If activated then the exchange rate or VAT amount in local currency must be entered if VAT is being charged in a currency that is not the local currency of the country where the VAT is levied.

The system converts any extracted value for VAT amount to a valid amount using a period as the decimal separator.

The exchange rate is the value that ensures the same tax amount is charged in the local currency.

During export, only the exchange rate is passed downstream.

Freight Amount

This field captures a freight charge specified by the vendor at the header level. Freight is typically captured at the line-item level.

This field is not usually mandatory, but the system converts any extracted value to a valid amount using a period as the decimal separator. The system uses this value in the validation calculation applied against all amount fields. It uses the following formula:

```
Invoice Total = Line item total + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

If line items are not mandatory, then the amount fields can also be validated with the following formula:

```
Invoice Total = Net Amount 1 + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for the above calculations is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**, and the system applies the tolerance based on the tolerance group that is linked to the currency of the invoice.

If line pairing is set to occur during extraction, the system gathers all invoice freight amounts, both in this field and also at the line item level, and processes them. This is modified in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**. Standard options for processing include booking the freight as a planned or unplanned delivery cost, or creating a special general ledger entry against the invoice.

Harmonized Sales Tax

This is a type of sales tax (`HarmonisedSalesTax`) adopted by many Canadian provinces that combine the traditional Goods and Services Tax (GST) and Provincial Sales Tax (`ProvincialSalesTax`) into a single tax amount.

This field is activated via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also provide formatting and validation settings here.

The `HarmonisedSalesTax` can be stated on an invoice on top of GST and `ProvincialSalesTax` as a tax in its own right. This means that the system needs to capture all three tax components for an invoice to pass.

If the **Extract HST Separately** setting in the **Solution Configuration Manager > Profile Settings > PO Number Settings > Tax Settings > Tax Configuration** table is selected, the `TaxAmount1` field is used for GST and the `HarmonisedSalesTax` field is used for the harmonized sales tax value.

If the above setting is cleared, the `TaxAmount1` field collects the Harmonized Sales Tax value and the `HarmonisedSalesTax` field is always zero. In addition, if both GST and Harmonized Sales Tax are present on a document, it is routed to Validation so that the tax values can be reviewed and then corrected as necessary.

During invoice amount validation, the values of `HarmonisedSalesTax`, `ProvincialSalesTax`, and the regular tax field, are added together in the background to form the total tax liability of an invoice. During document export, the tax amount is the sum of the regular tax field, the `HarmonisedSalesTax`, and the `ProvincialSalesTax` fields.

IBAN

This number represents the international bank account number invoice payment. It is extracted by the system in partnership with the BIC code.

You can configure whether this field is active or not via the **Solution Configuration Manager > Profile Settings > Field Settings**.

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 Validation.

ICMS Tax Amount

ICMS tax is a form of sales tax that is applied to material items in Brazil. When extracted, the system converts this to a valid amount using a period as the decimal separator.

This tax appears on a Brazilian Nota Fiscal invoice as a standalone tax value that cannot be validated as a regular sales tax. This is because the line item amounts on the invoice already include this tax.

Invoice Processing Agility captures the total ICMS tax amount in the ICMS field. The regular `TaxAmount1` field is used to capture the IPI tax amount.

If the system identifies an invoice as a Brazilian Nota Fiscal, this field is mandatory. If no value for this field is extracted, the document is sent to Validation as invalid.

An extracted ICMS tax value, or one entered by a user manually, is validated mathematically under the following circumstances.

- More than one line item is extracted on the invoice.
- The ICMS tax value is greater than zero.

If both of these conditions are met then the ICMS tax value must be equal to the sum of the values extracted in the VAT Amount column of the line item table. If no VAT amount at line item level is extracted, then the system tries to extract a VAT rate to determine the VAT amount. If this cannot be done, the document is sent to Validation for a user to either correct the ICMS tax amount or enter the line level ICMS tax amounts in the VAT amount column.

During export, the ICMS tax amount is added to the total invoice tax value but is also stored in its own field. If line items are relevant for export, the line level unit prices and totals are output without including the ICMS tax.

Activate the **ICMS Tax** field in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

Invalid Reason

This field contains a list of possible exceptions that can prevent the Validation user from completely correcting a document.

The system default is set to NONE, but a Validation user may change this value when they encounter a particular exception, so that the document can be processed outside of Validation.

The following table contains a list of the invalid reasons that are installed with Invoice Processing Agility.

Invalid Reason	Usage	Effect
INVOICE AMOUNTS DO NOT ADD UP	The user selects this invalid reason if the invoice is not mathematically correct and the figures do not add up within the specified tolerances.	Rule: SETAMOUNTSTOVALID. All amount fields and all line items are set to valid. Line pairing is not carried out. If activated, the VAT registration compliance check is not carried out.

Invalid Reason	Usage	Effect
MISSING/INVALID PO	The user selects 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.	<p>RULE: SETPOTOVALID.</p> <p>The purchase order number field is set to valid. In the Solution Configuration Manager > Profile Settings > Line Item Table Settings, you can decide whether line items are still required or not.</p> <p>Line pairing is not carried out at the time of document export.</p> <p>If activated, the VAT registration compliance check is not carried out.</p>
MISSING/INVALID VENDOR & PO	The user selects this invalid reason if both the vendor and the purchase order are invalid or do not exist.	<p>Rule: SETVENDORANDPOTOVALID.</p> <p>The vendor ID, the PO number, and like items are all set to valid.</p> <p>Line pairing is not carried out at the time of document export.</p> <p>If the Invoice Processing Agility export event is configured to create documents in a downstream ERP system, document export fails.</p> <p>No vendor details are exported.</p> <p>If activated, the VAT registration compliance check is not carried out.</p>
NON VAT COMPLIANT	<p>The user selects this invalid reason if the vendor has not complied with EU regulations that state that, if value added tax is to be charged, then both VAT registration numbers of the vendor and bill-to-party must be stated on the invoice.</p> <p>The country prefixes of the VAT registration numbers must also be identical.</p>	<p>Rule: NONVATCOMPLIANT.</p> <p>The vendor VAT registration number, bill-to VAT registration number, local VAT amount, and exchange rate fields are set to valid.</p> <p>Document export runs as normal with the invalid reason and its associated code being passed to the downstream system.</p>
PO VENDOR <> INVOICE VENDOR	The user selects this invalid reason if they want to pass a different vendor ID to what is set against the purchase order.	<p>Rule ALLOWNONPOVENDOR.</p> <p>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.</p>
STOCK INVOICE	<p>The user selects this invalid reason for PO invoices where the vendor legitimately does not quote a purchase order number on the document.</p> <p>For example, invoices that use retrospective purchase orders.</p>	<p>Rule: STOCKINVOICE.</p> <p>The PO number field is allowed to pass blank but all other fields require completion as normal. Instead, the purchase order number is decided programmatically during document export through the following user exits if line pairing is required.</p> <ul style="list-style-type: none"> • PONumberValidate • LinePairingPOs

Invalid Reason	Usage	Effect
THIRD PARTY FREIGHT	The user selects this invalid reason if the invoice is from a third-party freight vendor, quoting the material purchase order from another vendor where they have not been set up as the vendor responsible for freight.	<p>Rule: THIRDPARTYFREIGHT.</p> <p>The vendor ID field is set to valid as long as the vendor exists and line items are not required in Validation.</p> <p>During line pairing, the net amount of the invoice is posted to unplanned delivery costs, condition records, or to a general ledger account, depending on the rules for the miscellaneous charge category assigned to third-party freight vendors as specified in the Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Settings.</p>
VENDOR ADDRESS INVALID	The user selects 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.	<p>Rule: SETVENDORTOVALIE.</p> <p>The vendor ID field is set to valid. In the Solution Configuration Manager > Profile Settings > Line Item Table Settings, you can decide whether line items are required or not.</p> <p>If the Invoice Processing Agility 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.</p> <p>Line pairing is not carried out at the time of document export.</p> <p>If activated, the VAT registration compliance check is not carried out.</p> <p>No vendor details are exported.</p>

Invalid Reason	Usage	Effect
VENDOR NOT FOUND	The user selects this invalid reason if the invoice vendor cannot be found using the vendor search function. This applies to both PO and NO-PO invoices.	<p>RULE: SETVENDORTOVALID.</p> <p>The vendor ID field is set to valid.</p> <p>In the Line Item Table Settings of the Solution Configuration Manager Solution Configuration Manager profile settings, you can decide whether line items are required or not. If you configure an Invoice Processing Agility 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.</p> <p>Line pairing is not carried out at the time of document export. If activated, the VAT registration compliance check is not carried out. No vendor details are exported.</p> <p>For a purchase order invoice, if a vendor does not exist in the Vendor Search pool, then this is a configuration issue.</p> <p>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)."</p> <p>For a NON-PO invoice, the Vendor is set to valid and remains valid.</p>
ZERO VALUE INVOICE	The user selects this invalid reason if the invoice has a legitimate zero amount for the total.	<p>Rule: ZEROVALUEINVOICE.</p> <p>This permits a zero value invoice total to pass as long as the overall invoice is in balance.</p>

Note With the exception of the PO VENDOR <> INVOICE VENDOR, NON VAT COMPLIANT, THIRD PARTY FREIGHT, and STOCK INVOICE reasons, line pairing is not carried out during document export for other reasons.

The **Solution Configuration Manager > Global Settings > Invalid Reason Display Text** enables 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.

Invoice Code CN

This field is used for domestic VAT invoices on Mainland China. It refers to the ten digit numeric code that habitually appears in the top-left hand corner of the document.

This field is optional depending on whether or not the client is using the system to capture data relevant to the Golden Tax invoices validation process. You can enable it via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also provide formatting and validation settings here.

Invoice Date

By default, this field is mandatory for all documents.

The system automatically formats the invoice date that is found on the document into the designated Validation output format. The Validation output format can be set to DD/MM/YYYY, MM/DD/YYYY, or YYYY-MM-DD. You can configure the output format by modifying the **Solution Configuration Manager > Profile Settings > Date Settings**.

How the extracted date is parsed relies on the mapping of the vendor country of origin in the vendor master database. This mapping handles ambiguous dates based on country-specific settings.

For example, an invoice date of 06/02/2007 is found on a document. It is not immediately clear whether this means June 02 or February 06. Checking the vendor country code reveals that the vendor is located in the UK, so the date is February 06, 2007.

If a date is entered manually in Validation, the necessary formatting is applied immediately. For example, if the format is MM/DD/YYYY and the user enters 28/02/2009, the system automatically formats the date to 02/28/2009.

The system can be configured to invalidate the invoice date in the following circumstances:

- The date is more than X days in the future.
The **Future Days** option in the **Solution Configuration Manager > Profile Settings > Field Settings**.
- The date is not in the current month.
- The Date Only In Current Month option in the **Solution Configuration Manager > Profile Settings > Field Settings**.
- The date falls more than X days prior to the current date. X is configurable.
- The No Day In Past option in the **Solution Configuration Manager > Profile Settings > Field Settings**.

Note Machine and local user settings play no part in Invoice Processing Agility and how it handles dates.

User input for this field is not subject to the above validation checks as long as the date entered meets the required output format.

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

The system can handle dates expressed in the Gregorian calendar and the Japanese Emperor calendar. The system also supports the Thai Buddhist calendar.

Invoice Number

The invoice number is a unique identifier for a document, from the point-of-view of the supplier.

If this is a required field, the invoice number may be marked as invalid if a value is extracted under the following circumstances:

- OCR errors are detected in one or more of the characters where the confidence level falls below the required minimum. The default minimum value is set to 50 percent.
- The system finds more than one alternative and the confidence is below the required minimum. The default minimum value is 10 percent.
- The system finds more than one alternative, but those alternatives are closer than the minimum distance needed to declare a clear winner. The minimum default value required between the best and second best alternatives is 10 percent.
- The format of the invoice number, in terms of its length and the sequence of alphabetic and numeric characters, does not match the invoice numbers stored in the invoice number validation table for that same vendor.

In addition, you can specify how many successful matches are needed for a successful invoice number extraction. This check is not performed in Validation if a change is made because user input is assumed as correct.

During 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 memos, the system accounts for the document type when performing this check.

The **Solution Configuration Manager > Profile Settings > Invoice Number Settings** provide options to skip invoice number validation in favor of an account number. Configuration options for the field entry in these settings control how the invoice number is formatted.

The following settings can be configured in **Solution Configuration Manager > Profile Settings > Field Settings**:

- Remove all special characters from an extracted invoice number.
- Remove special characters if they appear at the start or end of the invoice number.
For the best results, ensure that this option is always enabled.
- Retain a specified set of special characters only.
- Remove spaces from an invoice number.
- Remove any leading zeroes from the invoice number.

This feature encourages a standard invoice number format that can increase the success of a duplicate invoice detection routine in the downstream process.

Invoice Type

This field indicates if an invoice is a purchase order (PO) or a non-purchase order (NO-PO).

The invoice type determines the following:

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

You can configure a default value for this field in the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.

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

Further configuration options are available for the following:

- Overwrite a NO-PO and set it to PO if a purchase order number is found.
- Overwrite the default value based on an attribute in the ERP vendor database that indicates if NO-PO invoices from this vendor are permitted.
- Overwrite the default value based on a component of the image file names set by the scanning software, where PO and NO-PO invoices are sorted up-front and scanned using different scan job.

There is no formatting required for this field. This is because the available values are a fixed list.

For validation, the following are taken into account:

- If the document type is PO, line items are mandatory and must be present.
- If the **Skip For Service** option is selected in **Solution Configuration Manager > Profile Settings > Line Item Table Settings**, then line items are not mandatory. If this option is cleared, line items are mandatory only for material purchase orders.
- If the document type is PO, a PO Number is mandatory.
- If the document type is NO-PO, line items are ignored and the PO Number is set to always valid.
- If the **Set to PO If PO Populated** option is selected in the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**, a PO Number is accepted. This is because the presence of a PO Number changes the Invoice Type from a NO-PO to a PO invoice.
- If the **Skip For No PO** option is selected in the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**, line items are not mandatory for NO-PO invoices.

Withholding Tax Amount / ISR Retention (Mexico)

The withholding tax amount fields capture the portion of the invoice total that is withheld by the client for legal reasons and not paid back to the vendor.

The ISR Retention (Impuestos sobre la Renta) field is used to capture the ISR retention component to withhold tax. This field can appear on Mexican invoices. The IVA retention component is captured in the regular withholding tax field.

These fields are not mandatory but the system converts any extracted values to a valid amount and uses these values in the validation calculation applied against all amount fields. It uses the following formula.

```
Invoice Total = Line item total + total tax + freight - discount - withholding tax -  
ISR retention
```

If line items are not mandatory, the amount fields can also be validated using the following formula.

```
Invoice Total = Net Amount 1 + total tax + freight - discount - withholding tax - ISR Retention
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for the above calculations is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings** and the system applies the tolerance based on the tolerance group lined to the currency of the invoice.

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

Line Item Detail

Invoice Processing Agility attempts to capture information at the line item level. Any amounts are converted to a valid amount using a period as the decimal separator.

The following line item fields are supported.

Line Item Field	Description
Quantity	The quantity of the line item.
Unit Price	The unit price of the line item.
Line Total	The total price of the line item.
PO	Purchase order number related to the line item. This is populated automatically by the line pairing routine when the invoice line is successfully paired to a line on the purchase order.
Line	Purchase order line item related to the invoice line item. This is populated automatically when the invoice line is paired with a line on the purchase order.
Material Number	Material number associated with the invoice line item. If the captured material number is the material number from the point of view of the client, then this is used to facilitate the line pairing function. For line item detail captured at the generic level, valid formats for the material number can be specified in the Solution Configuration Manager > Profile Settings > Material Number Settings .
Description	Invoice line item description.
UOM	Unit of measure expressed in the invoice quantity. For line item detail captured at the generic level, valid formats for the material number are specified in the Solution Configuration Manager > Profile Settings > Unit of Measure Settings Group > Unit of Measure Settings .

Line Item Field	Description
UofQ (Price Unit)	<p>The number of units grouped for a unit price.</p> <p>For example, if a line item has 5000 units that are invoiced at 100 dollars per 1000 units, then the line item total is 500 dollars. In this case, the price unit is 1000.</p> <p>For certain values, there are several expressions that are recognized as synonyms for those values, and the values are substituted accordingly. Specifically, when the terms C, CENT, HP, and HUNDRED are extracted, they are recognized as a value of 100.</p> <p>Also, the terms M, TH, MLF, MT, 1.000, 1,000, THOUSAND, THOU, TST, TPC, MILLE, 1000.0, 1000.0, MFT, POUR1000, MI, MIL, DUIZEND, 1.000M, and 1,000M all represent a value of 1000.</p> <p>The default is set to 1 for this field.</p>
Discount	Discount given by the vendor against the quoted unit price. This field can represent a discount expressed as a percentage that is subtracted from the quoted unit price. This field must be populated if the unit price captured is not the net unit price of any discounts.
Category	<p>Miscellaneous charge category applied to the invoice line item based on the extracted line item description.</p> <p>This field is set by the system automatically, based on the setting specified in the Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories.</p> <p>This field cannot be changed by a Validation user.</p>
VAT Rate	<p>Tax percentage rate applied to the invoice line item. If a valid value is captured, the field value 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 is not between 0 and 100, it is blanked out. Additionally, if automatic tax determination is activated and tax codes are 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.</p> <p>To increase extraction of tax rates, valid rates must be specified against the primary and secondary rate parameters in the Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration.</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>Note The system is not able to extract custom vendor tax rate codes at the line item level and then perform a conversion to an actual percentage rate.</p> </div>
VAT Amount	<p>VAT amount applied to the invoice line item.</p> <p>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.</p>

The **Solution Configuration Manager > Profile Settings > Line Item Table Settings** control the following requirements.

- 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 totals is required for invoices relating to a service purchase order.
- Line items are required if the purchase order has not been released.

- Line items are required for the MIRA scenario. This is when there is a one-to-one relationship between invoice and purchase order. For example, 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 have not yet been invoiced.
- Line items are required if either the VENDOR NOT FOUND or MISSING/INVALID PO invalid reasons are selected by the user in Validation.
- 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 regardless of content.

Each line item in a table is valid if any of the following calculations are true.

1. $\text{Line Item Total} = (\text{Quantity} * \text{Unit Price}) / \text{UofQ})$
2. $\text{Line Item Total} = (\text{Quantity} * (\text{Unit Price} - \text{Discount})) / \text{UofQ})$
3. $\text{Line Item Total} = (\text{Quantity} * (\text{Unit Price} - (\text{Unit Price} * \text{Discount} / 100))) / \text{UofQ})$

The tolerance of the above calculation is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**.

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

Mexican UUID Number

This field is an invoice number that is provided by the Mexican SAT authorities. It appears as a standard field on electronic documents. It is 36 characters long and must be captured for government reporting purposes.

You can activate or deactivate this field via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also provide formatting and validation settings here.

Extraction of this field is optional and the [MexicanUUIDValidate](#) user exit supports custom field formatting and validation requirements.

Misc. Amount

By default, there is no automatic extraction for this field. You can configure extraction to meet your needs.

This field captures a non-freight miscellaneous charge that is configured for a vendor at the header level.

For example, charges like a fuel surcharge, an administration charge, a customs charge, or a pallet charge are considered miscellaneous charges. The system is also able to extract miscellaneous charges at the line item level.

This field is not usually mandatory, but the system converts any extracted value to a valid amount using a period as a decimal separator. The system uses this value in the validation calculated against all amount fields. The calculation is described in the following formula:

```
Invoice Total = Line item total + total tax + freight + miscellaneous charge - discount
- withholding tax - ISR Retention
```

If line items are mandatory, then the amount fields are validated with the following formula:

```
Invoice Total = Net Amount 1 + total tax + freight + miscellaneous charge - discount -
withholding tax
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for these calculations is configured in the **Solution Configuration Manager > Global Settings > Tolerance Settings**. The system applies the tolerance based on the tolerance group linked to the currency of the invoice.

If line pairing is configured to occur during document export, the system gathers all miscellaneous charges, both in this field and at the line item level, and processes them in accordance with the settings for charges as specified in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**. Standard options for processing include booking the miscellaneous charge as a planned or unplanned cost or creating a special general ledger entry against the invoice.

If the client requires each type of miscellaneous charge to be handled in a different manner, then it needs to be determined which specific charge the miscellaneous charge header field represents. The corresponding mapping between this field and charge type needs to be made in the system configuration settings.

The Validation user can enter any other miscellaneous chargers that appear as line items in the table.

Net Amount 1

This field captures an invoice subtotal amount and it forms part of the invoice [Total](#).

This field is usually not mandatory, but the system converts any extracted value to a valid amount using a period as a decimal separator. The system uses this value in the validation calculation applied against all amount fields. It uses the following formula:

```
Invoice Total = Line item total + total tax + freight + miscellaneous charge - discount
- withholding tax - ISR Retention
```

If line items are not mandatory and are not captured, then the amount fields are calculated with the following formula:

```
Invoice Total = Net Amount 1 + total tax + freight + miscellaneous charge - discount -
withholding tax - ISR Retention
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for these calculations is configured in the **Solution Configuration Manager > Global Settings > Tolerance Settings**. The system applies this tolerance based on the tolerance group linked to the currency of the invoice.

Password CN

This field is used for domestic VAT invoices on Mainland China and refers to the encrypted 4-line coding block that appears in the top-right hand quadrant of the invoice document. You can enable or disable this field via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also provide formatting and validation settings here.

You can configure the permitted lengths and allowed special characters for this field by modifying the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

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.

Invoice Processing Agility extracts both the POR number and the Subscriber number values from the document and places it in their respective fields. These numbers are typically found on domestic invoices supplied by Swiss vendors.

During export, the POR number is passed downstream when the one of following criteria are met.

- The vendor has a POR subscriber number that is mapped and available in the vendor master data extract.
- A POR subscriber number is found on a document.

Important The POR subscriber number in the vendor master takes priority over a POR subscriber number extracted from the invoice.

Formatting and validation settings are configured via the **Solution Configuration Manager > Profile Settings > Field Settings**.

Payment Reference

This field captures vendor payment references specified on an invoice. This field is not mandatory.

The payment reference is used in Finland, Sweden, Denmark, and Norway. For example,

- In Norway, this is known as the KID number.
- In Sweden, this is known as the OCR number.
- In Denmark, this is known as the FIK number.
- In Finland, this is known as the VITTE number.

By default, this field is deactivated in the **Solution Configuration Manager > Profile Settings > Field Settings**. You can activate it as necessary.

If enabled, a value for this field is extracted for all countries listed in the "Country Filter" option in the **Solution Configuration Manager > Profile Settings > Field Settings**. This is also where any formatting or validation settings are applied to these fields.

PO Extension

The PO Extension field is populated in implementations involving JD Edwards or PeopleSoft only.

In JD Edwards implementations, this field contains the [purchase order type](#).

In PeopleSoft implementations, this field contains the purchasing business unit.

PO Type

This field indicates if an extracted purchase order relates to materials or services.

The default system value is MATERIAL but is it possible to change this to SERVICE via the Solution Configuration Manager. You can change the default value based on the following purchase order characteristics:

- Purchase order document type.
- Line type or item category of the purchase order lines.
- The unit of measure on the purchase order lines.
- The extracted purchase order number prefix.

For example, if service purchase orders all begin with 52 and a value of 523456 is extracted as the purchase order number, then 52 is the server PO prefix.

The value of the PO Type field determines if line items are required. It determines if only the total of each line item and a description is required, as well as how the system handles the invoice during the line pairing event at document export. If a service PO is detected using the PO Line item type or line item unit of measure, then all purchase order lines identified as SERVICE must meet the above conditions.

PO line item retrieval is configured in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**. Select and configure one of the following options.

- If your line items are stored in SAP, select Get PO Lines From SAP and then configure the other options SAP options.
- If your line items are stored in a database, select Get PO Lines from DB and then configure the other database options.
- If your line items are available through a user exit, select Get PO Lines via User Exit and then configure the other user exit options.

There is no formatting for this field because the possible options are a fixed list.

For validation, the following are true:

- If the PO Type is set to MATERIAL, line items are mandatory.
- If the PO Type is set to SERVICE, line items are not mandatory.

This configuration provides the best results. However, if it is possible to modify the configuration settings so that SERVICE purchase orders extract line items. You can do this by clearing the **Skip For Service** option in the **Solution Configuration Manager > Profile Settings > Line Item Table Settings**.

Note Changing this configuration may result in extracted line items that have no purpose. Only clear this option when absolutely necessary.

The PO Type is extracted from the purchase order in accordance with the configuration settings in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**. The field cannot be changed by a Validation user.

Provincial Sales Tax

This field captures the Provincial Sales Tax (`ProvincialSalesTax/QST`) component of Canadian tax.

The system attempts to extract the `ProvincialSalesTax/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/HarmonisedSalesTax` component of Canadian tax. The system converts any extracted value to a valid amount using a period as the decimal separator.

During the mathematical validation of the invoice amounts, both the `ProvincialSalesTax/QST` and regular invoice tax amounts are added together in the background to form a total tax liability of the invoice. During document export, the tax amount exported is the sum of the regular tax field and the `ProvincialSalesTax` field, even though the `ProvincialSalesTax` component is available separately.

For example, if an invoice has a `GST/HarmonisedSalesTax` component of 40 CAD and `ProvincialSalesTax/QST` of 10 CAD, the total tax amount is 50 CAD and the `ProvincialSalesTax/QST` amount is exported as 10 CAD.

Purchase Order Number

If activated, this field is mandatory for all invoices where the invoice type is PO. This is, unless an appropriate invalid reason is selected by a Validation user during Validation.

The system only extracts a purchase order if it matches a valid format. Valid formats are specified in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Formats**.

Further configuration options enable the validation of this field against a database table or against a downstream ERP system. If this is set, the purchase order must exist in that system. These configuration options are available in the Solution Configuration Manager under the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.

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. It is possible to configure the system to consider and validate the vendor ID and purchase order number independent of each other. This is done

by selecting the **Ignore PO Vendor** option in the **Solution Configuration Manager > Profile Settings > Vendor Settings**.

Within the Kofax TotalAgility Validation activity, the user may change the purchase order or vendor. 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 list. 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.

If the new purchase order is not released and the system does not require line items to be mandatory under this circumstance, a message displays informing the Validation 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, and the system does not require line items to be mandatory under this circumstance, a message displays informing the Validation user. For example, the MIRA scenario.

If the purchase order number is missing or invalid, the Validation user selects an appropriate invalid reason from the drop-down list to progress the invoice through the rest of the process.

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 the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**. However, the system handles this at the time of line pairing. From the point of view of extraction and operation in Validation, only a single purchase order number is required.

Tax Amount 1

This field captures all tax fields that make up the total invoice tax amount. This amount makes up part of the overall [Invoice Total](#).

For example, a combination of US Sales and Use tax and European VAT. It can also capture Canadian GST/Provincial Sales Tax amounts as well as Brazilian IPI tax amounts.

For some Canadian invoices, [Provincial Sales Tax](#) and GST are combined into a dedicated [Harmonized Sales Tax](#) field. This happens when the Extract HST Separately option is selected in **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

Since Harmonised Sales Tax is just the sum of Provincial Sales Tax and GST, if the Extract HST Separately option is selected, the sum of Provincial Sales Tax and GST are extracted in the Harmonized Sales Tax field. Otherwise, Harmonized Sales Tax is extracted in the TaxAmount1 field.

Important Provincial Sales Tax is extracted only if the recognized vendor is identified as a Canadian vendor.

The system converts an extracted value to a valid amount. These amount settings are configured in the **Solution Configuration Manager > Profile Settings > Amount Settings**. The formatted amount is used in the validation calculation applied against all amount fields using the following formula.

```
Invoice Total = Line item total + total tax + freight - discount - withholding tax -
ISR Retention
```

If line items are not mandatory, the amount fields can also be validated with the following formula.

```
Invoice Total = Net Amount 1 + total tax + freight - discount - withholding tax - ISR
Retention
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The total tax is set to the value of the tax amount field plus the amount captured in the Provincial Sales Tax field. Brazilian ICMS tax is not included in this calculation. The tolerance for the above calculations is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**, and the system applies the tolerance based on the tolerance group linked to the invoice currency.

If line pairing is configured to execute during extraction, the system attempts to determine how the tax is stored in the downstream ERP system.

If the invoice vendor is Canadian and Provincial Sales Tax (Provincial Sales Tax/QST) is captured in the Provincial Sales Tax field, the tax amount exported is the sum of the contents of both the tax field and the Provincial Sales Tax and the Harmonized Sales Tax fields.

If the invoice is a Brazilian Note Fiscal, and ICMS tax is read from the document in the ICMS tax field, then this ICMS tax amount is also added to the total invoice tax amount that is exported.

Tax Fields

You can configure the system so that it extracts several tax-related values. The system converts these tax values to a valid amount using a period as a decimal separator.

By default, the following fields are used in most solutions.

- Net Amount 1. This field contains the subtotal of all amounts on the document that use Tax Rate 1.
- Tax Amount 1. This field contains the amount of tax applied to Net Amount 1.

If you are processing European invoices, or invoices with VAT, then you can activate the following additional fields as required.

- Net Amount 0. This field contains the extracted amounts on the document that have a tax rate of zero.
- Net Amount 2-4. These fields contain the extracted amounts on the document that have other tax rates.
- Tax Rate 1-4. These fields contain the tax rates for their corresponding Net Amounts.
- Tax Amount 2-4. These fields contain additional tax amounts for their corresponding Net Amounts.

If you want to use any of the disabled VAT-related fields, activate them via the **Solution Configuration Manager > Profile Settings > Field Settings**.

Once these fields are active, you must also enable the Activate VAT Based Tax Processing option in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

Each group of fields is subject to a mathematical calculation. For example,

```
Tax Amount = Net Amount * (Tax Rate / 100)
```

In terms of the mathematical check applied to all amounts captured from the invoice, [Net Amount 1](#) is calculated from the sum of the taxable amounts. The overall invoice tax is calculated from the sum of the Tax Amounts.

The tolerance applied to all of these mathematical checks is based on the tolerance group assigned to the invoice currency. This is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**.

Total

This field contains the total amount due for payment on the current invoice. This field and all other amount fields are extracted using the Amount Group Locator. This locator also extracts basic tax fields. For more information on the Amount Group Locator, see the *Transformation Designer Help*.

This field is mandatory unless a Validation user applies an Invalid Reason to the field. For example, the INVOICE AMOUNTS DO NOT ADD UP invalid reason explains why this field is blank. When an invalid reason is applied, a blank value is allowed and the invoice is forced through processing. If no invalid reason is selected, the field is mandatory and cannot have a value of zero.

When all of the amounts extracted and added together, this is the Invoice Total.

The system converts any extracted value to a valid amount and uses this value in the following validation calculation that is applied against all amount fields.

```
Invoice Total = Line item total + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

If line items are not mandatory then the amount fields are validated with the following formula.

```
Invoice Total = Net Amount 1 + total tax + freight + miscellaneous charge - discount - withholding tax - ISR Retention
```

Where `total tax` is the total amount of all taxes on the document. This can include Tax Amount and any other country-specific tax fields.

The tolerance for the above calculations is set in the **Solution Configuration Manager > Global Settings > Tolerance Settings**. The system applies the tolerance based on the tolerance group linked to the currency of the invoice.

Vendor ID / Site ID / Internal Vendor ID

Invoice Processing Agility employs a database locator to find the invoice vendor. Multiple instances of vendor master data, each referred to as a vendor partition, are also supported by the solution.

By pointing Invoice Processing Agility to an extract of the client vendor master, created from the `BRWVendormaster`, 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 is the correct vendor, the field is marked invalid and the document is sent to Validation. The Validation user can either choose to accept this vendor or they can select an alternative using the vendor search facility in the Validation application.

If the Validation user knows the Vendor ID, they can enter it manually in the validation form. In most cases, this value validates successfully when the user presses Enter. The exception to this is 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. This field can be omitted if either of the following Invalid Reasons are selected during Validation.

- VENDOR NOT FOUND
- MISSING/INVALID VENDOR & PO

For purchase order invoices, the vendor is usually found on the purchase order. However, this setting can be disabled by selecting the **Ignore PO Vendor** option in the **Solution Configuration Manager > Profile Settings > Vendor Settings**. This means that the vendor that Invoice Processing Agility finds on the invoice takes precedence.

For ERP systems that use a vendor ID and a site ID, the vendor ID component is used only in Validation and the vendor pay-to site does not have to match the value on the purchase order. The automatic extraction of the vendor looks at a specific location on a document.

The Site ID cannot be entered manually in Validation. Instead, it is populated through the chosen result of the vendor search.

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

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

Invoice Processing Agility 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 Validation module displays the external vendor ID but the system stores the internal vendor ID in the internal vendor ID field so that both values are available for export downstream.

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. This law states that if value added tax is charged, the vendor must state their VAT registration number as well as the VAT registration number of the bill-to party on the invoice.

Invoice Processing Agility is able to carry out this compliance check automatically if VAT compliance checking is activated in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

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 sent to Validation so that the missing data is entered manually. For the data to be accepted, both sets of VAT registration numbers must have the same ISO-code country prefix.

The bill-to company VAT registration number must be available through the company code validation in the **Solution Configuration Manager > Profile Settings > Company Code**.

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.

Your Ref

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

Configure whether this field is active or not via the **Solution Configuration Manager > Profile Settings > Field Settings**. You can also specify formatting and validation settings here.

Chapter 8

Project and field configurations

Activate and deactivate fields

Active fields are extracted, formatted, validated, and appear on the Validation form when there is a problem with that field. Deactivated fields are not even extracted, so they never appear on the Validation form.

In some cases, it is necessary to activate a field in order to use it for a project. In others, it is necessary to deactivate a field so that it is not processed. This ensures that you maximize system performance for projects where some fields are not needed.

- [Activate](#) a field
- [Deactivate](#) a field

Activate a field

Some fields are disabled by default. This is because not all fields available are required in every project. As a result, uncommon fields, or fields that are not often required, are deactivated.

You can activate a field by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
A table of fields and their settings are displayed.
3. Scroll through the fields until you find the one that is deactivated and select **Active**.
4. **Save** your changes.
The field is now active.

Deactivate a field

By default, some fields are active that are not needed for your specific solution.

As a result, you can deactivate a field by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
A table of fields and their settings are displayed.
3. Scroll through the fields until you find the one that is deactivated and clear **Active**.
4. Click **Save**.

The field is now deactivated.

Apply a country filter to a field

Depending on the country where an invoice originates, some fields required by Invoice Processing Agility are either optional or mandatory.

For example, for Danish, Swedish, Finnish, or Norwegian invoices, the payment reference field needs to stop in Validation when no value is extracted. This is not the case for invoices from other countries.

The country filter enables you to define whether or not a field is required based on the invoice country.

Within **Solution Configuration Manager > Profile Settings > Field Settings**, the CountryFilter column is 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.

Alternative Payees

An alternative payee is a party that receives payment for an invoice, but this party is not the same the supplier of the goods and services.

The Invoice Vendor Identification functionality includes the option to specify an alternative payee.

For example, if an invoice is processed for vendor 1000 and an alternative payee of 2000 is specified, then the invoice is created in the downstream ERP system against vendor 1000. However, 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 alternative payees is tightly defined in the vendor master data. At the time of invoice entry, a user may only specify an approved alternative payee that is set up against the invoice vendor. Possible alternate payees for a vendor are known as permitted payees. Alternate payees exist as vendor records in the vendor master data in their own right. However, 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 profile ID.

An alternate payee is activated in either the **Solution Configuration Manager > Profile Settings > Field Settings** or in the **Solution Configuration Manager > Profile Settings > Vendor Settings**.

If you configure an alternate payee in the **Solution Configuration Manager > Profile Settings > Field Settings**, the Alternate Payee field is activated in the project. This field is included as a supplementary field to the vendor ID on the Validation screen. However, the field only functions in relation to the settings in the **Solution Configuration Manager > Profile Settings > Field Settings**, effectively becoming an extra free text field that can be used as necessary. The `AlternatePayeeValidate` user exit is also available for any custom validation logic.

If you configure an alternate payee in the **Solution Configuration Manager > Profile Settings > Field Settings** as well as the **Solution Configuration Manager > Profile Settings > Vendor Settings**, then

the Alternate Payee field is available and its standard functionality is activated. Activating an alternate payee in the **Solution Configuration Manager > Profile Settings > Vendor Settings** without configuring an alternate payee in the **Solution Configuration Manager > Profile Settings > Field Settings** has no effect. This is because the alternate payee is a supplementary field to the vendor ID. The Vendor ID must also be an active field in the profile.

Activate the Alternate Payee field

You can activate the alternate payee field by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
A table of fields is displayed for all classes.
3. Scroll down until you find the **Alternate Payee** field for the relevant class.
4. Scroll to the right and select the **Active** setting in the same row.
5. **Save** your changes.

Alternate Payee functionality

If the alternate payee functionality is active, a vendor is identified by either the Associative Search Engine or found on a purchase order. The system then checks to see if the identified vendor has an assigned permitted payee. If a permitted payee is assigned and found on the invoice, then this payee is copied to 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 Validation for review.

In Validation, 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 list is available on the Validation form.

An alternate payee will only be 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. If there is no record, then no name and address details are displayed in Validation. If a payee is entered that is not in the list of permitted payees, a message is displayed 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 their associated vendor. For this reason, it is not possible to have permitted payees spanning multiple partitions.

Configure Alternate Payee validation

You can configure an alternative payee for validation by following these steps..

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Vendor Settings**.
3. Select **Check For Alternate Payees**.
4. **Save** your changes.

Assign Permitted Payees to vendors

You can assign permitted payees to vendors, by following these steps.

1. Open the **Vendor Master** database table.
2. In the **Permitted Payee** column, enter the permitted payees as a comma-separated list. For example, 2000,4000.
3. **Save** your changes.

Automatic tax determination and validation

The Invoice Processing Agility solution incorporates an automatic tax 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. This means that manual rework in the ERP system is not required.

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

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

Configure the Custom Fields

There are several predefined format locators that you can use for customization. The first five locators, FL_Custom1 through FL_Custom5, extract alternatives for the field value. These fields are configured via the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Analysis Profiles**.

In addition, there are five locators for evaluation, FL_EvalCustom1 through FL_EvalCustom5, that extract alternatives for the field label. These locators are configured via the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Evaluation Profiles**.

With these locators, the distance between the extracted field values and their labels are analyzed. The various alternatives are weighed and the best alternative is assigned to the field.

Note Do not edit these format locators in Transformation Designer. Doing so means that you cannot upgrade to a newer version in the future. Use the Solution Configuration Manager for all configuration of these fields.

In order to configure one or more custom fields, the following information is needed.

- Activate one or more of the custom fields in the **Solution Configuration Manager > Profile Settings > Field Settings**.
- Enter a label string into the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Evaluation Profiles**.

- Enter a format string into the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Analysis Profiles**.

Custom Fields example

In this example, you have four clients. Client 1 and 4 want the name of the CEO exacted from their documents. Since this is not a field included in the solution, a custom field is needed. Client 2 does not require any changes, so custom fields are not needed. Client 3 wants to extract the Waste Electrical and Electronic (WEEE) registration numbers on their documents, so custom fields are also needed.

In this scenario, different profiles are needed.

- Profile 0 - Field Custom 1 is not active.
- Profile 1 - Field Custom 1 is active and the [Extraction Profile ID](#) is set to 1.
- Profile 2 - Field Custom 1 is active and the Extraction Profile ID is set to 2.

With the above profiles, Clients 1 and 4 use Profile 1, Client 2 uses Profile 0, and Client 3 uses Profile 2.

1. [Create the necessary profiles and clients.](#)
2. [Configure an extraction profile for the CEO extraction.](#)
3. [Configure an extraction profile for the WEEE registration number.](#)

Configure profiles and clients for Custom Fields

In this example, you have four different clients, each with their own requirements. Because of this, it is necessary to create four clients and three profiles. The lower number of profiles is because Client 1 and Client 4 both have the same requirements for CEO extraction, so they can share a profile.

Important For this example, it assumes that you have only the default client and profiles. If this is not the case, the client and profile numbers may differ from your solution.

You can configure clients and profiles for custom fields by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings** and select a **Profile** from the list.
3. Click **Copy Profile**.
The Copy Profile window is displayed.
4. The **Profile ID** is pre-populated with a unique ID. Do not change this unless necessary.
5. Enter a **Profile Name** and **Profile Description**.
6. Click **Save**.
The **Select a packet window** is displayed unless you are using an existing packet.
7. If the window is displayed, select a packet and enter a description and then click **Save**.
An information window is displayed indicating a successful save.
8. Click **Close**.
Your newly created profile is now visible in the Profile list.
9. Repeat the previous steps one more time, until you have three profiles.
10. Navigate to the **Solution Configuration Manager > Client Settings**.
11. Select a client and then click **Copy Date**.

A copy of the selected client is added to the Insert row, with a unique Client ID.

12. Modify the settings as necessary, select the appropriate **Profile ID**, and then click **Insert**.
For this example. Clients 1 and 4 use Profile ID 1, Client 2 users Profile ID 0, and Client 3 uses Profile ID 2.
13. Repeat the previous two steps to create two additional clients.
14. Click **Save**.
An information window is displayed indicating a successful save.
15. Click **Close**.
You now have four clients and three profiles as follows.
 - Client 1 is set to use Profile 1.
 - Client 2 is set to use Profile 0.
 - Client 3 is set to use Profile 2.
 - Client 4 is also set to use Profile 1.

Configure CEO extraction profile

Now that you have all of the profiles and clients in place, it is time to configure the individual fields to extract data. In this example, you are extracting the name of the CEO from a document. Typically, the name of a CEO is a first and last name. This means that a string between five and 50 characters should work.

Also, there are two possible labels. The labels are usually CEO or Geschäftsführer (CEO in German).

Important For this example, it assumes that you have created the [example clients and profiles](#). If this is not the case, the client and profile numbers may differ from your solution.

You can configure an extraction profile by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Extraction Profiles**.
3. Select the default Extraction Profile and click **Copy Data**.
The copied profile data is entered into the Insert row.
4. Edit the **Analysis Profile ID** and change it to **1**.

Note At this time, there is not an Analysis Profile with this ID, but it is created it in subsequent steps.

5. Edit the Evaluation Profile ID and change it to **1**.

Note At this time, there is not an Evaluation Profile with this ID, but it is created it in subsequent steps.

6. Click **Insert**.
7. Click **Save**.
8. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Analysis Profiles**.
9. Select the default Analysis Profile and click **Copy Data**.

The copied profile data is entered into the Insert row.

10. Set the **Analysis Profile ID** to **1**.

This should be the default value if you have no other Analysis Profiles.

11. Set the **Index ID** to **1**.

Note Multiple Analysis Profiles can have the same Index ID. This ensures that a single Analysis Profile can have multiple formats.

12. Select **Simple** from the **Compare Type** list.

13. Enter @ [5-50] into the **Format** field.

This simple expression finds a string that is between five and 50 characters long. This should account for most names.

14. Enter . , ; into the **Ignore Characters** field.

This means that these characters are ignored and not included in the extracted value.

15. Click **Insert**.

16. Click **Save**.

17. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Evaluation Profiles**.

18. Select the default Evaluation Profile and click **Copy Data**.

The copied profile data is entered into the Insert row.

19. Set the **Evaluation Profile ID** to **1**.

This should be the default value if you have no other Evaluation Profiles.

20. Set the **Index ID** to **1**.

21. Enter **CEO** into the **Context** field.

22. Enter . , ; into the **Ignore Characters** field.

23. Leave the **Strong** field cleared.

24. Click **Insert**.

25. Select your newly created Evaluation Profile and click **Copy Data**.

The copied profile data is entered into the Insert row.

26. Set the **Evaluation Profile ID** to **1**.

This should be the default value if you have no other Evaluation Profiles.

27. Set the **Index ID** to **2**.

28. Enter **Geschäftsführer** into the **Context** field.

29. Enter . , ; into the **Ignore Characters** field.

30. Leave the **Strong** field cleared.

31. Click **Insert**.

32. Click **Save**.

33. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.

Ensure that you select the correct Profile. In this example, it should be Profile 1, as configured [previously](#).

A table of fields and their settings are displayed.

34. Scroll down the list of fields until you find **Custom 1**, and select **Active**.

35. Scroll all the way to the right, and select **1** for the **Extraction Profile ID**.

36. Click Save.

The Custom 1 field that extracts the CEO name is now configured for Profile 1 and Clients 1 and 4.

Configure WEEE registration extraction profile

Now that you have all of the profiles and clients in place, it is time to configure the individual fields to extract data. In this example, you are extracting the WEEE registration number. These registration numbers are typically comprised of a two-character country code followed by 6 to 8 digits. For this example, we will stick to English and German.

Important For this example, it assumes that you have created the [example clients and profiles](#). If this is not the case, the client and profile numbers may differ from your solution.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Extraction Profiles**.
3. Select an Extraction Profile and click **Copy Data**.
The copied profile data is entered into the Insert row.
4. Edit the **Extraction Profile ID** and change it to **2**.
5. Edit the **Analysis Profile ID** and change it to **2**.

Note At this time, there is not an Analysis Profile with this ID, but it is created in subsequent steps.

6. Edit the Evaluation Profile ID and change it to **2**.

Note At this time, there is not an Evaluation Profile with this ID, but it is created in subsequent steps.

7. Click **Insert**.
8. Click **Save**.
9. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Analysis Profiles**.
10. Select the default Analysis Profile and click **Copy Data**.
The copied profile data is entered into the Insert row.
11. Set the **Analysis Profile ID** to **2**.
This should be the default value if you have no other Analysis Profiles.
12. Set the **Index ID** to **1**.

Note Multiple Analysis Profiles can have the same Index ID. This ensures that a single Analysis Profile can have multiple formats.

13. Select **Simple** from the **Compare Type** list.
14. Enter **EN#[6-8]** into the **Format** field.
15. Enter **. , ;** into the **Ignore Characters** field.
This means that these characters are ignored and not included in the extracted value.
16. Click **Insert**.

17. Click **Save**.
18. Select the default Analysis Profile and click **Copy Data**.
The copied profile data is entered into the Insert row.
19. Set the **Analysis Profile ID** to **2**.
This should be the default value if you have no other Analysis Profiles.
20. Set the **Index ID** to **2**.

Note Multiple Analysis Profiles can have the same Index ID. This ensures that a single Analysis Profile can have multiple formats.

21. Select **Simple** from the **Compare Type** list.
22. Enter **DE# [6-8]** into the **Format** field.
If you have multiple languages, you can use a different Compare Type and enter a more complicated format. For example, use Regular to enter a complicated regular expression.
23. Enter **. , ;** into the **Ignore Characters** field.
This means that these characters are ignored and not included in the extracted value.
24. Click **Insert**.
25. Click **Save**.
26. Navigate to the **Solution Configuration Manager > Global Settings > Custom Extraction Profiles > Evaluation Profiles**.
27. Select the default Evaluation Profile and click **Copy Data**.
The copied profile data is entered into the Insert row.
28. Set the **Evaluation Profile ID** to **2**.
This should be the default value if you have no other Evaluation Profiles.
29. Set the **Index ID** to **1**.
30. Enter **WEEERegNo** into the **Context** field.
31. Enter **. , ;** into the **Ignore Characters** field.
32. Leave the **Strong** field cleared.
33. Click **Insert**.
34. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
Ensure that you select the correct Profile. In this example, it should be Profile 2, as configured [previously](#).
A table of fields and their settings are displayed.
35. Scroll down the list of fields until you find **Custom 1**, and select **Active**.
36. Scroll all the way to the right, and select **2** for the **Extraction Profile ID**.
37. Click **Save**.
The Custom 1 field that extracts the WEEE registration number name is now configured for Profile 2 and Client 3.

Configure the Invoice Type field

The Invoice Type field represents whether the invoice is related to a purchase order or not. This controls whether the purchase order number and line item fields are mandatory, and how the document is handled at the point of export.

The system configuration determines the initial setting for this field, as well as how the circumstances under which this default setting must be changed. These settings are located in the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.

The following topics are three typical business requirements that use the Invoice Type field in different ways.

- [Invoice Type based on Purchase Order Number](#)
- [Invoice Type without Purchase Order](#)
- [Invoice Type from filename](#)

Invoice Type based on Purchase Order Number

You can configure a project so that the Invoice Type is determined based on whether a purchase order number is found on the document or not. In addition, it is also possible to change the Invoice Type based on whether it exists in the purchase order validation database or SAP system.

Because of this flexibility, you can switch the Invoice Type from NO-PO to PO if that purchase order exists in the PO validation database/SAP system. This is true even if the Invoice Type was previously set as a NO-PO because the purchase order does not appear on the document.

You can configure your project to populate the Invoice Type based on the purchase order number by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.
3. Select one of the following scenarios and configure your **Invoice Type Settings** accordingly.
 - To set the Invoice Type as a **NO-PO** if a purchase order cannot be found on a document, enter the following:

Setting	Value
Default Value	NPO
Set By Vendor	Cleared
Set By Vendor Co Code Exceptions	Leave blank
PO Value	MM
NPO Value	FI
Set To PO If PO Found	Selected
Set To PO If Valid PO Found	Cleared

- To set the Invoice Type as a **PO** based on whether it exists in the purchase validation database/SAP system, enter the following:

Setting	Value
Set To PO If PO Found	Cleared
Set To PO If Valid PO Found	Selected
Set To PO If PO Populated	Cleared

Note If the Invoice Type is always set to **PO** if the purchase order number field has content, then select **Set To PO If PO Populated**. This contradicts the settings in the table above.

Invoice Type without Purchase Order

You can configure your project so that the Invoice Type defaults to a PO, but is then switched to a NO-PO when no purchase order number is found, but the vendor is permitted to supply invoices without a purchase order.

You can configure your project in this way by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.
3. Configure your settings as follows:

Setting	Value
Default Value	PO
Set By Vendor	Selected
Set By Vendor Co Code Exceptions	Leave blank
PO Value	MM
NPO Value	FI
Set To PO If PO Found	Selected
Set To PO If Valid PO Found	Cleared

4. **Save** your changes.
5. Navigate to **Solution Configuration Manager > Profile Settings > Invoice Type Settings**.
6. Map **PO Value** and **NPO Value**.

In the example above, the system expects that the database locator finds either MM or FI. In the vendor master extract, the field denoting the invoice type is determined based on business rules and can typically be set as follows.

- The vendor industry key, NO-PO invoices typically come from utility, car hire, and hotel vendors.
- Whether the vendor has a purchasing view created.
- The vendor account group.
- The vendor classification.

7. Set the **Set By Vendor Co Code Exceptions** setting to 1000,2000.

This restricts the vendor invoice type determination on a company-code by company-code basis.

Note If the Set By Vendor setting is selected and the invoice is meant for company codes 1000 or 2000, then the system does not apply the vendor invoice type preference. If the Set By Vendor setting is cleared, then the system applies the vendor invoice type preference only if the invoice is meant for company codes 1000 or 2000.

8. **Save** your changes.

Invoice Type from filename

You can configure your project so that the Invoice Type is determined at the point of scan because it is passed through the document filename.

You can configure your project in this way by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Invoice Type Settings** and apply the following values.

Option Name	Value
Default Value	PO
Set By Vendor	Cleared
Set By Vendor Co Code Exceptions	N/A
PO Value	MM
NPO Value	FI
Set To PO If PO Found	Cleared
Set To PO If Valid PO Found	Cleared
Set To PO If PO Populated	Cleared

3. Click **Save**.
Your changes to the values is saved.
4. Navigate to the **Solution Configuration Manager > Global Settings > Import Settings**.
5. Set the value of the **Invoice Type** option to either **MM** or **FI**, depending on your requirements.
This setting represents the underscore-separated component of the document filename where the invoice type is passed in from the scanning step.
6. **Save** your changes.

Configure the Vendor ID field

Invoice Processing Agility uses a database locator to determine the vendor ID and populate the vendor fields. In order for this to work, each vendor must be located at a single address, and must have a unique identifier.

Configuration options are available to ensure compatibility with downstream Enterprise Resource Planner (ERP) systems for the following scenarios.

- A standard vendor ID is used.

- A single vendor at a single address is indicated by both a vendor ID and site ID in tandem.
- An external and an internal vendor ID field is used.

You can configure the Vendor ID field as follows.

- [Configure a Vendor and Site ID field](#)

Configure a Vendor and Site ID field

Use the instructions in this section if you have a single vendor at a single address that is represented in the downstream ERP system by a combination of a vendor ID and a site ID. Invoice Processing Agility permits the use of a composite key within the vendor file extract, so the two values need to be within a single column.

The formula for combining the Vendor ID and the Site ID is as follows.

```
Unique Identifier = VendorID + [Separator] + Site ID
```

For example, if the vendor ID is A12345, the Site ID is 1000D, and the designated separator is a hyphen (-), then the Vendor Extract file must have the following in the unique identifier column.

```
A12345-1000D
```

The nominated separator is specified within the Alph Num Site Separator option in the **Solution Configuration Manager > Profile Settings > Vendor Settings**. An error is displayed if this configuration is not followed, or more than one separator is found as part of a single unique identifier.

Therefore, in the `BRWVendorMaster` table, the following columns are required.

- A column representing the combined unique identifier.
- A column representing the site ID.

Configure the VAT number compliance check

Invoice Processing Agility provides a VAT registration number compliance check to satisfy EU legal requirements. This applies to invoices that charge value added tax only.

This requirement states that, if VAT is charged on a document, the vendor must quote not only their own VAT registration number (the vendor VAT registration number), but also the VAT registration number of the invoiced party (the bill-to VAT registration number).

Both VAT registration numbers must be valid for the same country, and this is why VAT is generally most prevalent on domestic invoices.

If the VAT compliance check is [activated](#), Invoice Processing Agility sends a document to Validation if all of the following are true.

- Tax is charged on the document.
- Both the vendor and the invoiced company are based in an EU member state country.
- One or both of the VAT registration numbers are not present on the document, are not captured automatically, or do not share the same country prefix. The system can be configured to require the VAT registration number of the vendor only.

Also, if VAT is charged, the currency of the invoice must be the local currency of the country whose VAT rates are applied. For example, if a German vendor issues an invoice charging UK VAT, then the invoice currency must be UK pounds sterling (GBP). If the invoice is issued in the German currency of Euros/ EUR, then the invoice must quote either of the following.

- The UK pounds sterling equivalent of the VAT amount, such as the local VAT amount.
- The exchange rate at the time of invoice issue, between UK pounds sterling and Euros.

Invoice Processing Agility detects these and requires the user to enter either a local VAT amount or an exchange rate if no value is captured automatically. This check is carried out when a pair of valid VAT registration numbers are found. The currency of the company code is used as the currency in which either the invoice or the local VAT is quoted.

If VAT Based Tax Processing is enabled to capture 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 following topics provide more details about configuring VAT number compliance check.

- [Activate VAT compliance](#)
- [Configure VAT extraction](#)
- [Configure VAT compliance validation](#)
- [Configure the VAT rate check](#)
- [Configure cross-border EU VAT registration number checks](#)

Activate VAT compliance

You can configure your project so it runs a VAT compliance check by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
3. Select **Activate VAT Compliance Check**.
4. **Save** your changes.

Configure VAT extraction

You can enable both vendor and bill-to VAT registration numbers by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
3. Select **Activate VAT Compliance Check**.
4. Optionally, enter one or more comma-separated company code in the **VAT Check Company Code Exceptions** setting.
5. **Save** your changes.
6. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
7. Ensure that `BAPI_COMPANYCODE_GETDETAIL` is defined in the **Company Lookup** setting.

8. **Save** your changes.
9. Navigate to the **Solution Configuration Manager > Profile Settings > Company Code** and configure the settings as required.
10. **Save** your changes.

Configure VAT compliance validation

You can configure VAT Compliance validation by following these steps.

1. **Open** the Solution Configuration Manager.
2. Open the **Solution Configuration Manager > Profile Settings > Company Code**.
3. Edit the settings as needed and then **Save** your changes.
4. Open the **Solution Configuration Manager > Global Settings > Country Settings**.
5. Edit the settings as needed and then **Save** your changes.
6. Optionally, to limit the VAT requirement to only check the VAT registration number of the vendor, open the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
7. Ensure that **Activate VAT Compliance Check** is selected.
Several additional VAT fields are displayed.
8. Select **Vendor VAT Check Only**.
An additional field is displayed.
9. In the **Vendor VAT Check Company Code Exception** field, enter a comma-separated list of company codes.
These are the only company codes that have their vendor VAT checked.
10. **Save** your changes.
The **Tax Configuration** changes are saved.

Configure the VAT rate check

To configure the VAT rate check, complete the following steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
3. Select **Activate VAT Compliance Check**.
4. **Save** your changes.
5. Navigate to the **Solution Configuration Manager > Global Settings > Country Settings**.
6. Ensure that the country lookup is configured and that the **DB VAT Rates** setting is mapped to the appropriate database column that contains the country VAT rates.
7. **Save** your changes.

Configure cross-border EU VAT registration number checks

For cross-border EU transactions, a vendor may apply a zero-rate on the value added tax (VAT) charged on their invoice. However, they must specify both the VAT registration number and the customer VAT

registration number on the document. The customer is obliged to calculate and declare the VAT at their local rate to the local tax authorities, as if the purchase had been made from a domestic vendor.

You can configure the cross-border EU VAT registration number checks, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
3. Ensure that **Activate VAT Compliance Check** is selected.
Several additional tax settings are displayed.
4. Select **Check VAT Cross Border**.
5. Optionally, if there are company codes that do not require the cross-border VAT check, enter the company codes as a comma-separated list into the **Cross Border Company Code Exceptions** setting.

The system sends a document to Validation if all of the following conditions are true.

- Zero tax is charged.
- Both the vendor and company code are from different EU countries.
- The vendor has a VAT registration number populated in the vendor extract.
- Either the vendor or VAT registration number or the bill-to VAT registration number is missing, or has not been captured from the document.

Document Variants

Document variants are how Kofax TotalAgility determines what fields are extracted and displayed during Validation.

Document variants are Invoice Processing Agility profile-specific, so multiple profiles means that you need multiple document variants.

You can manage document variants as follows.

- [Create](#) document variants by editing the active fields for a profile.
- [Update](#) document variants for all profiles, in bulk.

Create document variants

When Invoice Processing Agility is first installed, there is a default client and associated profile. There is not however, a document variant for this profile.

Since a document variant is required to determine which fields are displayed during validation, it is necessary to create a document variant.

Even though document variants are part of Kofax TotalAgility, do not edit them in the TotalAgility Designer. Instead, an automatic mapping is in place so any changes made to the **Solution Configuration Manager > Profile Settings > Field Settings** for a specific profile are automatically updated in the corresponding document variants.

You can create a document variant for a profile by following these steps.

1. **Open** the Solution Configuration Manager.
2. From the **Settings** list, select **Profile Settings**.
A list of available profiles is displayed.
3. Select a **Profile** from the list.
A list of profile-specific settings is displayed.
4. From the list of settings, select **Field Settings**.
After a few moments, a list of fields is displayed for the selected profile.
5. For each field listed, select or clear the **Active** option.
Selected/Active fields are extracted and displayed in Validation. Cleared/Deactivated fields are not displayed in Validation.
6. Click **Save**.
If you activated fields for both the **Invoices** and the **InvoicesCN** classes, a document variant is created for each class in Kofax TotalAgility, specific to the selected profile. If you activate fields for the **Invoices** class and deactivate the **InvoicesCN** fields, a single document variant is created for the **Invoices** class only.

Note If you need the **InvoicesCN** class, ensure that the necessary fields are active. If no fields are active, the corresponding fields are not available during Validation, as no document variant is available.
7. Optionally, select a different profile and repeat the above steps to create document variants for additional profiles.
8. Close the Solution Configuration Manager.

Update Document Variants

If you make changes to multiple profiles in Invoice Processing Agility, you can use the **Update Document Variants** button on the **Configure Project** page in the Solution Configuration Manager. A document variant is created for any new Invoice Processing Agility profile in Kofax TotalAgility. If a document variant already exists, it is updated.

You can further refine these document variants by editing the **Solution Configuration Manager > Profile Settings > Field Settings** for a specific profile. Activating or deactivating individual fields means that those fields are either hidden or displayed when a document for the corresponding profile is processed.

You can update document variants for a profile, by following these steps.

1. On the Solution Configuration Manager home page, click **Configure Project**.
2. On the **Configure Project** page, select the project package from the **Project** list.
3. Select **Profile Settings** from the **Settings** list.
4. Click **Update Document Variants**.

When you click this button, the Solution Configuration Manager loops through the distinct Profile IDs within **Field Settings** for the configuration database associated with the project. For each Profile ID, Solution Configuration Manager updates or creates the `IPAVariant_Invoices_<ProfileID>` and the `IPAVariant_InvoicesCN_<ProfileID>` document variants accordingly.

Document Variants for copied profiles

When you create a new profile using the **Copy Profile** button, the copied profile contains the same settings as the original profile. This includes which fields are active for both the Invoices and InvoicesCN classes.

At the time of copy, document variants are created in Kofax TotalAgility for this new profile for both the Invoices and InvoicesCN classes.

However, if the copied profile has no Active fields for the InvoicesCN class, then only the document variant for the Invoices class is created.

Intercompany vendors

Intercompany invoices exist when 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 are handled separately from regular third-party invoices. The reason is that the presence of bill-to or ship-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 proposes 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, there are two configuration elements in Invoice Processing Agility.

- The vendor master database has an Intercompany column that indicates whether a vendor is or is not an Intercompany vendor. When set to True, a vendor is considered an Intercompany vendor.
If you are using Intercompany invoices, ensure that the relevant database entries are set to True. All others should be False.
- There is an Intercompany class in the Transformation Designer project that is trained against your Intercompany vendors.

Once these are both configured, a document is processed as follows.

1. The document is classified as either an Intercompany invoice or a standard invoice.
2. If the document is an Intercompany invoice, the Vendor Master is filtered so that only vendors that have the Intercompany flag is set to True are available for vendor extraction.
For non-Intercompany invoices, the Vendor Master is filtered so that only vendors that have the Intercompany flag set to False are available for vendor extraction.
3. At this time, an Intercompany document is reclassified back to an invoice and extraction is performed.
The temporary classification as Intercompany is simply to filter the Vendor data.
4. All fields are extracted and the document is sent to Validation if any of the extraction results are not confident.

If an Intercompany invoice is incorrectly classified as a regular invoice, the vendor search is likely to fail. The Validation user must perform the vendor search manually and select the relevant vendor.

Note If you are using MarkView, there is no functionality within MarkView to differentiate the vendor type. If you have invoices that include Intercompany vendors, create your own method of identifying which vendors are Intercompany vendors.

Configure Intercompany classification

It is necessary to configure this type of classification only if you process Intercompany invoices. If you are processing Intercompany databases and you do not configure Intercompany classification, all documents are classified as Invoices or InvoicesCN and end up in Validation. This is because the system is unable to find the correct vendor.

If you are processing Intercompany invoices, it is necessary to train the Intercompany class in Transformation Designer with as many documents as possible. For more information about Transformation Designer and classification, see the *Transformation Designer Help*.

You can configure the Intercompany class and train it for classification by following these steps.

1. Open the Transformation Designer.
2. From the **Project** tab, click **Open Project**.
The **Open Project** window is displayed.
3. From the **Select category** group, select the **InvoiceProcessingAgility** category.
The **Select project** area is updated.
4. Select the **Intercompany** class.
If you have the default Transformation Designer layout, the **Intercompany** class settings are displayed in the **Details** pane.
5. In the **Documents** panel, open a document set that contains your Intercompany invoices.
For more information on managing document sets, see the *Transformation Designer Help*.
A Test Set is added that contains your Intercompany invoices.
6. Ensure that the **Intercompany** class is selected in the **Project Tree**.
7. In the **Documents** window, select the Intercompany invoices that are needed for training.
8. Right-click and select **Add to Training Set of Selected Class (Classification)**.
The selected documents are added to the **Classification Set** that is used for classification training.
9. In the Ribbon, select the **Process** tab.
The **Process** tab is displayed with several options.
10. In the **Train** section, click **Classification**.
The project is trained for classification, including the newly added documents for the Intercompany class.
11. **Release** the project.
All subsequently processed documents are classified as an Intercompany invoice or a regular invoice. Extraction is performed the same for both.

Purchase order number validations

Invoice Processing Agility 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. This different in organization requires an alternative approach to data validation that depends on the ERP system you are using.

By default, the following types of purchase order numbers are supported for database validation.

- Standard purchase order numbers that are used by SAP and Oracle e-Business Suite.
- JD Edwards purchase order numbers.
- PeopleSoft purchase order numbers.
- Purchase order numbers that are stored in an ERP system based on the order number and company code.

Purchase order number validations are configured per profile ID by using the **Solution Configuration Manager > Profile Settings > PO Number Settings > [PO Number Validation](#)**.

Purchase order line level configuration that is used as part of the line pairing is configured per profile ID in the **Solution Configuration Manager > Profile Settings > [Line Pairing Settings](#)**.

If you are using line pairing, both the header level validation and the line level validation must be configured in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation** option and the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

Standard purchase order numbers

Standard purchase order numbers are identified uniquely in the downstream ERP system using only the purchase order number. This means that the ERP system purchase order header table has a single key field called "Purchase Order Number."

For example, the following purchase order header table structure with sample data is arranged in the standard format.

PONUMBER	VENDORID	COMPANYCODE	POTYPE	CURRENCY
1928370	1000010	GB01	GD	GBP

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

Configure purchase order number validations

You can configure purchase order number validations by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > [PO Number Validation](#)**.

3. Edit these settings for your needs and then **Save** your changes.

Validate purchase order vendor against a document

In an environment where the invoice vendor must always be the same as the purchase order vendor, you can validate a purchase order vendor against a document by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Vendor Settings**.
3. Clear **Ignore PO Vendor**.
4. Clear **Use ASE If PO Vendor Invalid**.
5. **Save** your changes.
6. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
7. Edit the settings for your needs and then **Save** your changes.

Configure invoice currency to match purchase order

You can configure the invoice currency so that it matches that of the purchase order by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Currency Settings**.
3. Select **Default PO Currency**.
4. **Save** your changes.
5. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
6. Edit the settings for your needs and then **Save** your changes.

Configure padding for extracted PO numbers

You can configure padding for an extracted purchase order number with leading zeros so that it matches data held in the purchase order header table.

You can configure padding for extracted purchase order numbers by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
3. Scroll down in the table of fields until you find the **PONumber** field. Scroll to the right and configure the following settings.
 - a. Enter a value of 10 for the **MaxLength** setting.
 - b. Select the **RightJustify** setting.
 - c. Enter a value of 0 for the **Pad Character** setting.
4. **Save** your changes. .

The purchase order validation can also be extended to include data held at the line item level.

Configure alternate PO number validation

Alternative PO numbers refer to numbers where a unique purchase order is identified in the purchase order header table. This is a combination of the PO number and the company code. You can configure the system to use alternative PO number validation by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
3. Select **Validate From DB**
Several database options are displayed.
4. Select **PO Key Includes Company Code**.
5. Enter `PO_HEADER` in the **DB Table Name** setting.
6. Enter `PO` in the **DB PO** setting.
7. Enter `VENDOR_ID` in the **DB Vendor ID** setting.
8. Enter `COMPANY_CODE` in the **DB Company Code**.
9. **Save** your changes.

Configure PO line item validation

The system uses purchase order line item information to assess whether the purchase order type is MATERIAL or SERVICE, assuming this information is held at line item level. The system also assesses whether the invoice is a MIRA, where there is a one-to-one relationship between net invoice value and total purchase order value found during line pairing.

Note The structure of the purchase order line item database table varies depending on the ERP system.

You can configure purchase order line item validation by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Edit the settings as needed and then **Save** your changes.
4. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
5. If the purchase order line item is a service, set the **Service PO Types** setting to SERVICE.
6. To ensure that the purchase order type determines the order unit of measure, enter a comma-separated list of the units of measure in the order that you want them to appear in the **Service PO UOMs** setting.
7. **Save** your changes.
8. Optionally, if you are using SAP purchase order line items, navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
9. Select **Get PO Lines From SAP**.
10. **Save** your changes.

Additional LPR table mappings

The following table contains sections that can be mapped. It also describes when these mappings are beneficial.

Column	Description
DBMATERIALGROUP	<p>This column represents the material group of the purchase order line item material.</p> <p>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.</p>
DBTAXCODE DBTAXJURCODE	<p>These two columns represent the tax information that is set when the purchase order was originally raised.</p> <p>For countries that do not use tax jurisdictions, the tax code informs the ERP system how to handle tax for line items. Some countries that do not use tax jurisdiction because tax rates are set by the government at a national level, such as within the European Union. The tax code uses the percentage rate of tax that is charged, as well as describing if an item is a service, it is tax-exempt, or it is zero-rated because it is a cross-border transaction. Under these circumstances, tax jurisdiction is not used.</p> <p>For countries that do not use tax jurisdictions, the tax code informs the ERP system whether the item is subject to tax or not. Some countries that do use tax jurisdictions have tax rates that are set at a local level such as in the US, Canada, India, and Brazil. The accompanying tax jurisdiction code, which is the identification number of a specific tax office, represents the actual percentage rate information.</p> <p>These columns are only mapped if the automatic tax determination feature is used.</p>
DBPUOM	<p>This column represents the order price unit of measure. This is the unit of measure that is associated with the unit price for the purchase order line item.</p> <p>It may differ from the regular unit of measure that is associated with the order quantity on the purchase order line.</p>
DBTOTALQUANTITYDELIVERED DBTOTALVALUEDELIVERED DBTOTALQUANTITYINVOICED DBTOTALVALUEINVOICED	<p>These four columns provide Invoice Processing Agility with purchase order line item history data. This is so that the system knows exactly what has been invoiced and goods-receipted to date, both in terms of quantities and overall values.</p> <p>It can be extremely beneficial to the success rate of the line pairing operation 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.</p>

Column	Description
DBPLANT	<p>The plant is a code set in the client ERP system that represents the physical location where the purchase order line goods are delivered, or where a service is performed. For example, it could represent a warehouse or an office building.</p> <p>The plant column can be mapped to pass data to a downstream ERP system for each paired line item, but the system will require the information if either:</p> <ul style="list-style-type: none"> • The invoice includes a miscellaneous charge. Miscellaneous charges are output as general ledger account entries and is driven by the plant on the purchase order. • The automatic tax code determination feature is used, and the country of the invoice company code cannot be used to determine where the goods were delivered. <p>The specific address details relating to each plant code is read from SAP. Settings in the Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration control the appropriate data source.</p>
DBCHARGECODE DBCHARGECODEID	<p>These two columns are available for implementations involving Oracle e-Business Suite, where the charge code and charge code ID information need brought into Invoice Processing Agility, and then passed back out for each line item where line pairing has succeeded.</p>

Configure database validations using stored procedures

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 can improve data security. The stored procedure should be written to return a record set in the same way as a regular SQL select statement. The system can be configured to use a custom stored procedure for both purchase order header and line item validations.

You can configure database validations to use a stored procedure by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
3. Select **Use Stored Procedure**.
4. Enter the custom stored procedure name in the **Stored Procedure Name** setting.
5. Select the relevant connection group from the **SQL Connection Group** setting.
6. **Save** your changes.
7. Navigate to **Solution Configuration Manager > Global Settings > Stored Procedure Settings**.
8. Set the formal interface parameter name in the stored procedure to represent an Invoice Processing Agility field. Each of the following parameters is assigned a type, and if that type is VARCHAR, a length is assigned as well.
 - BOOLEAN
 - INT
 - DATE
 - DOUBLE
 - VARCHAR

Note The parameter value, if set to represent a field, is case sensitive and must be the technical name of the field, such as `PONumber`, `CompanyCode`, `DocumentType`, `Total`, and so on. If the value entered is not the technical name of a field, the system assumes it is a hard-coded value. Input parameters passed to the stored procedure, such as the values passed from Invoice Processing Agility, should have a direction of `I`. Output parameters coming from the stored procedure have a direction of `O`. If the direction is missing or invalid, the parameter is considered as an output parameter.

9. **Save** your changes.

Once the parameters are defined, assign them to the corresponding purchase order header stored procedure.

Assign parameters to a purchase order header stored procedure

You can assign parameters to a purchase order header stored procedure by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
3. Select **Use Stored Procedures**.
Several stored procedure settings are now available.
4. Enter a value into the **Stored Procedure Parameters** setting that represents the assigned purchase order line numbers. For example, 1, 2, or 3.
5. **Save** your changes.
6. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
7. Ensure that **Do Line Pairing** is selected.
Several line pairing settings are now available.
8. Ensure that both of the **Get PO Lines From DB** and **Use Stored Procedure** settings are selected.
These selections display additional stored procedure settings.
9. Set the **Stored Procedure Parameters** value to match the value entered in step 4 above.
10. **Save** your changes.

Purchase order stored procedures in Oracle

When using an Oracle database, the following format requirements are needed when creating stored procedures to retrieve purchase order header data and purchase order line data. These requirements are not necessary when using a different database type, such as SQL Server.

Specifically, the parameter must include the `SYS_REFCURSOR` parameter type with direction `OUT` at the end of the parameter list in the stored procedure. Without this, the stored procedure does not work as expected.

The following example shows an example using this syntax.

```
CREATE OR REPLACE PROCEDURE uspGetPOHeaderData(PO_IN IN VARCHAR2, cursorParam OUT
SYS_REFCURSOR)
IS
BEGIN
OPEN cursorParam FOR
```

```

SELECT Distinct PO as spPO
      ,VENDORID as spVendor_ID
      ,SITEID as spSite_ID
      ,COMPANYCODE as spCompany_Code
      ,CURRENCY as spCurrency
      ,DOCTYPE as spPO_Type
      ,BUSINESSUNIT as spPlant
FROM BW_POHEADER_DATA
WHERE PO = PO_IN;
END;

```

Important Do not include this procedure in the **Solution Configuration Manager > Global Settings > Stored Procedure Settings** configuration.

ReadPurchaseOrder User Exit

The `ReadPurchaseOrder` user exit is available so a developer can code an alternative method of retrieving purchase order details, such as a web service. This user exit returns an instance of `PurchaseOrder` along with the header data and PO lines.

To activate the user exit, select the Read PO Header Via User Exit setting in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**, for the required profile ID. If you also want to use this user exit to retrieve purchase order line item details, select the Read PO Lines Via User Exit option.

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. If the user exit reads the purchase order header, that user exit must also read the line items. The `bool includeLineData` user exit parameter is set to TRUE if the profile is configured to read line items. It notifies the developer that the line item data needs read. If line items are not needed, but are retrieved anyway, they are ignored by the system.

The user exit is called when a purchase order number is validated on both the server side and in Validation. The user exit is also called during document export. This is in order to retrieve the current purchase order details for line pairing. During validation only header data is requested, so `includeLineData` is set to False. During line pairing the full data is required, so it is called with `includeLineData = true`.

The key of the purchase order retrieved is passed to the function using the `IPOKey poKey` import parameter. The `IPOKey poKey` has the following structure:

Structure Element	Type	Description
PONUMBER	String	The formatted purchase order number that is queried.
COMPANYCODE	String	The invoice company code. This value is only populated if the company code forms part of the key that identifies a unique purchase order.
POEXTENSION	String	Contains the JDE PO document type or the PeopleSoft business unit. It depends on whether the profile is configured for JD Edwards or PeopleSoft PO types respectively.

Within the user exit, the developer uses the details provided by the `IPOKey poKey` structure to query the external system. If the profile ID is also required then it is available in the `ProfileID` component of the Client structure, which is also passed into the user exit.

If the client profile is configured to use a purchase order data partition, the partition ID for the profile is also passed into the user exit via the `POPartition` component of the Client structure. This is done in tandem with checking that the profile is set up to use partitions for the purchase order data. For example,

```
if(projectContext.Settings.GetBooleanSetting("PON","UsePOPartition", false))
```

If a technical error occurs when performing a purchase order data source lookup, the `poReadError` setting should contain an appropriate message. If this value is not blank, a purchase order opens in Validation and the error is displayed. During export, if the `poReadError` has a message specified, the export fails and the document is sent back to the Kofax TotalAgility Work Queue with the EXPORT FAILED Activity Name. This error is later written to the export instance log file and displayed to the Validation user against the invoice number field.

If the lookup to the external data source is successful, but the purchase order cannot be found, the `poNotFound` import parameter should be True. This ensures that the document opens in Validation with an appropriate error message. However, if this occurs during import, the export does not entirely fail.

Note It is not recommended to set an error in `poReadError` if the purchase order does not exist in the data source.

If the profile ID is configured to look for multiple purchase orders, documents can get stuck during document export. The `poReadError` message should be reserved for the exclusive handline of technical configuration or connectivity issues.

If the purchase order header can be read but the purchase order line items cannot be extracted, then the `poNotFound` setting may can be set to TRUE if a document needs to remain in Validation until the line items become available. If the flat is set to False, then the purchase order number is accepted during validation, but it is not possible to carry out line pairing during document export. This does not however, cause document export to completely fail.

If multiple records are returned for the purchase order header lookup, indicating that duplicate purchase orders exist in the external data source, the `duplicatePO` parameter should be TRUE. Doing so will activate the standard purchase order duplicate handling, but only if the Skip Duplicate PO Check setting is cleared in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.

Once data is successfully retrieved, the components of the `POHeader` structure and the `POLineItems` array are populated. The following table defines the structure of the purchase order header (`POHeader`) and explains what components are mandatory and those that are optional. It also provides hints for populating each component.

Structure Element	Mandatory?	Type	Description
DOCTYPE	No	String	The purchase order document type. It is populated if the <code>POType</code> field is set as the SERVICE.

Structure Element	Mandatory?	Type	Description
COMPANYCODE	No	String	The purchase order company code. This needs populated if the profile configuration is set to default a company code based on the purchase order number lookup.
VENDORID	Yes	String	The PO order-from vendor. If this 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 Validation. If this issue occurs during export, export fails and the document is sent back to the Kofax TotalAgility Work Queue with the EXPORT FAILED Activity Name
SITEID	Yes, if the document profile uses a site ID.	String	The site ID for the purchase order vendor. 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 Validation. If this occurs during export, export fails and the document is sent back to the Kofax TotalAgility Work Queue with the EXPORT FAILED Activity Name
CURR		String	The purchase order currency. This component is populated if the configuration profile of the document is set to default a currency of the purchase order. This field is also required before line pairing occurs.
RELEASEFLAG		String	The purchase order release flag. If purchase orders in the downstream ERP system are configured so that invoices are not processed until the purchase order is released, and the purchase order is currently not released, then this field is populated with a value. Under all other circumstances, it is left blank. Populating this field with a value notifies the Validation user that the PO has not been released. During export, line pairing is not performed.
DOCCOND		String	The ID of the group of SAP condition records that belong to the purchase order.
DOCCOND		String	The remit-to vendor ID. If both the order-from and a remit-to vendor are present on the purchase order, the remit-to vendor takes priority and is displayed to the Validation user and exported.
STAUS		String	The purchase order document status.

Structure Element	Mandatory?	Type	Description
EXRATE		String	<p>The exchange rate between the purchase order currency and the local currency of the purchase order company code. This is a factor that is multiplied against the purchase order totals in order to convert from the purchase order currency to the company code currency.</p> <p>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 is set to 0.1.</p> <pre>10 CNY (total in PO currency) * 0.1 (exchange rate) = 1 GBP (total in company code currency)</pre> <p>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.</p>

The following table describes the structure of the purchase order line items array (`poLineItems`). It also explains which of the components are mandatory and which are optional. In addition, the table 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	The purchase order line item number. This identifies a unique purchase order line item from a purchase order. The system raises a configuration error if the field is left empty. As a result, the purchase order number field is set to invalid and the document sent to Validation. If this occurs during export, export fails and the document is sent back to the Kofax TotalAgility Work Queue with the EXPORT FAILED Activity Name
MATERIALNO	No	String	The purchase order line item material number.
MATERIALGROUP	No	String	The purchase order line item material group.
DESCRIPTION	No	String	The purchase order line item description.
POQUANTITY	No		The line item order quantity.
UOM	No	String	The purchase order line item quantity unit of measure.
UNITPRICE	No	Double	The line item unit price.
PUOM	No	String	The purchase order line item price unit of measure.
PRICEUNIT	No	String	The purchase order line item price unit. If this value is not populated, the system input a default value of 1.
TOTAL	No	Double	The line item order total.
TAXCODE	No	String	The purchase order line item tax code. For the best results, populate this field when the automatic tax determination feature is being used.
TAXJURCODE	No	String	The purchase order line item tax jurisdiction code that represents the ID of the tax office relevant to the location where the purchase order item is used. Tax jurisdiction codes are typically used in the US or countries where sales/use tax rates are set in law at the provincial level, as opposed to a fixed rate 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	The total quantity already delivered for a purchase order line item.

Structure Element	Mandatory?	Type	Description
TOTALVALUEDELIVERED	No	Double	The total value of the goods already delivered for a purchase order line item.
TOTALQUANTITYINVOICED	No	Double	The total quantity that is already invoiced for a purchase order line item.
TOTALVALUEINVOICED	No	Double	The total value of the goods already invoiced for the purchase order line item.
ITEMCATEGORY	No		The purchase order line item category. This is populated if a document profile is configured to determine whether the <code>POType</code> is <code>SERVICE</code> . This is based on purchase order line item categories.
PLANT	No	String	The ID of the purchase order line item plant (i.e. where the goods are to be delivered). This should be populated if the automatic tax determination feature is activated as it specifies the ship-to state/country for the purchase order line item.
CARGECODE	No	String	The purchase order line item charge code.
CHARGECODEID	No	String	The purchase order line item charge code ID.
ERS	No	Boolean	This flag is set to <code>TRUE</code> if the purchase order line item is marked for <code>ERS</code> (Evaluated Receipt Settlement). If the Stop ERS PO setting is selected in the Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation for the document profile, the invoice is rejected and sent to Validation. For <code>ERS</code> purchase orders, no paper invoice is expected as it is processed electronically as part of an <code>EDI</code> -type transaction.
GRIV	No	Boolean	A SAP-specific flag that is set to <code>TRUE</code> if the purchase order line item is set up for goods receipt based invoice verification.
SRIV	No	Boolean	A SAP-specific flag that is set to <code>TRUE</code> if the purchase order line item is set up for service based invoice verification.
MULTIPLEACCOUNTASSIGNMENT	No	String	indicates whether a purchase order line item is set up with a multiple account assignment. This should be left blank if no multiple account assignment exists.

Structure Element	Mandatory?	Type	Description
ACCOUNTASSIGNMENTCATEGORY	No	String	The purchase order line item account assignment category. It is populated if the automatic tax determination feature is used and the default tax code is configured based on purchase order line item account assignment category.

A suggested overview of the process flow in a script is as follows:

1. Connect to the purchase order header data source and then query using the key provided in `POKey`.
2. If a connection or configuration issue occurs, set the `readError` parameter to an appropriate error message and exit.
3. If the purchase order does not exist in the data source, set the `duplicatePO` setting to `TRUE` and exit.
4. If multiple purchase order headers are extracted, set the `duplicatePO` to `TRUE`, and exit.
5. Populate the `POHeader`.
6. If the `readPOLines` parameter is set to "False," exit at this point.
7. Connect to the purchase order line item data source and then query using the key provided in `POKey`.
8. If a connection or configuration error occurs, set the `poReadError` value to an appropriate error message and then exit.
9. If no line item data exists for the purchase order, the `poNotFound` flag is set to `True`. This is optional depending on project requirements.
10. Loop through the line items extracted and then copy the data into the `POLineItems` array.
11. Exit the subroutine.

If a custom validation is also required within the user exit, but the user may still accept the purchase order, then a new stop can be inserted between steps three and four above. This step passes as `readError` error message, but only if both `export` and `projectContext.ProjectData.IsVerifier` are `False`.

```
if(!export && !projectContext.ProjectData.IsVerifier) { poReadError = "Custom..."; }
```

Purchase order partitions

Purchase order partitions enable you to house all database-based purchase order number validation within a single set of database tables. For example, if an Invoice Processing Agility project involves 100 clients. Each client provides their own set of purchase order data. This data is held in a single set of tables that use purchase order partitions to ensure that the data is not confused between clients.

Register the PO data partition

You can register a new purchase order data partition by following these steps.

1. [Open](#) the Solution Configuration Manager.

2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Partition Settings**.
3. In the Insert row, add a unique **PO Partition ID**.
This value must be an integer.
4. In the same Insert row, add a relevant **Description** for the above partition ID.
This is optional, but its name should provide enough information to indicate what it represents. If the name is not sufficient, provide a description with more information.
5. Click **Insert**.
A new record with the above settings is added to the table of purchase order number partition settings.
6. **Save** your changes.

Assign PO data partition ID to client

Assign the purchase order data partition ID to the client by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Client Settings > Client Settings**.
3. For the client you are updating, select the ID of the newly registered partition in the **PO Partition** setting.
The values available are configured in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
4. **Save** your changes.

Activate the PO data partition

You can activate the purchase order data partition, by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
3. Select the **Validate From DB** setting.
Several additional options are now available.
4. Select the **Use PO Partition** setting.
The "PO Partition Column" setting is now available.
5. In the **PO Partition Column** setting, enter the technical name of the purchase order header database table column that represents the partition ID.
6. **Save** your changes.

Map partition ID column for 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 that represents the partition ID must also be mapped.

You can map the partition ID column for purchase order line item data by following these steps.

1. **Open** the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

3. Assuming that both **Do Line Pairing** and **Get PO Lines From DB** are selected, enter the technical name of the purchase order header database column in the **DB PO** setting.
If purchase order lines are required for PO Number Validation, the **Do Line Pairing** option may be cleared.
4. **Save** your changes.
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.

JD Edwards purchase order numbers

Standard purchase order number validation should be when a purchase order number is guaranteed to be unique across all company numbers, purchase order types, and suffixes. JD Edwards purchase orders differ from standard purchase orders. JD Edwards ERP system identifies a purchase order uniquely in the "F4311" purchase order header table using the following four keys.

- PONUMBER
- COMPANYCODE
- POTYPE
- POSUFFIX

Multiple records in the `PO_HEADER` table can have the same purchase order number. Because of this, database queries must account for other key fields.

Important Invoice Processing Agility currently supports the company code and purchase order type columns. It does not suppose the purchase order suffix.

When a purchase order number is extracted, the system automatically separates the purchase order number and the purchase order type. This is done on the server side as well as in Validation when the whole value is entered into the purchase order number field, and if the purchase order type is the first or last two characters of the value. The purchase order type is placed into a mandatory purchase order extension field.

In instances where the purchase order type is always a constant such as "OP," the JD Edwards configuration is not appropriate. In these instances, an alternate approach that uses the purchase order number and the company code to perform a lookup in the purchase order header table is needed. As the company code field forms part of the key for reading the purchase order, it cannot default from the purchase order. The company code is usually found as part of the image filename from the scanning processes. The filename is stored in the `IMP` section of the system configuration. This is the most effective method of finding the company code. However, as an alternative, you can use the company code from the bill-to details on the invoice.

Activate PO number validation for JD Edwards

You can activate validation of a purchase order number against a JD Edwards table schema by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Select the **JDP PO** option.
4. Select the **Validate From DB** option.

Several database specific settings are now available.

5. Enter the following values for the corresponding settings:

Setting	Value
DB Table Name	PO_HEADER
DB PO	PO
DB Vendor ID	VENDOR_ID
DB Company Code	COMPANY_CODE
DB Doc Type	PO_TYPE

Note The system displays an error message if the mapping is incomplete or incorrect.

6. **Save** your changes.

Configure JD Edwards PO number format

On the purchase order field on the invoice, the system expects the vendor to include the purchase order number and the purchase order type. You can configure the JD Edwards purchase order number formats by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Formats** for the desired profile., set the following parameters.
3. Insert a new row by adding values to the following settings:
 - Index
 - Format
 - Ignore Characters

For example, if Format is set to 10####OP, the system looks for a six-digit number that begins with 10 and ends with OP.

In this example, system automatically corrects the purchase order number so that it ends with OP.

4. Optionally, insert a second **Format**.
5. **Save** your changes.
6. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
7. Select **JDE PO**.
An additional JD Edwards settings is displayed.
8. In the **JDE PO Types** setting, add OP to the value.
If there is already a value entered, use a comma between values because this is a comma-separated list of JD Edwards purchase order types.
9. **Save** your changes.

PeopleSoft purchase order numbers

The PeopleSoft ERP system uses a double key to identify a unique purchase order number in the PS_PO_HDR purchase order header table. 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

PeopleSoft uses a vendorID/site ID combination to identify a unique single vendor a single address. The PeopleSoft ERP table references for these are VENDOR_ID and Vndr_LOC.

Additionally, the purchase order header table does not contain a company code. The general PeopleSoft equivalent of the company code is the payables business unit. The payable business unit (company code) is set in one of the following ways:

- Configured in the **Solution Configuration Manager > Global Settings > Import Settings**.
- Extracted using a database locator that is based on the bill-to details on the invoice.

Activate PO validation for PeopleSoft

You can activate purchase order validation for the PeopleSoft ERP system, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
3. Ensure that **Validate From DB** is selected.
Additional database settings are displayed.
4. Add the following values for the specified settings.

Setting	Value
DB Table Name	PO_HEADER
DB PO	PO_NUMBER
DB Vendor ID	VENDOR_ID
DB Company Code	COMPANY_CODE
DB Business Unit	BUSINESS_UNIT

5. Select **PeopleSoft PO**.
6. **Save** your changes.

Note An error message is displayed if any of the settings in the table above have incorrect or missing values.

Configure PeopleSoft PO number format

In the purchase order field on the invoice, the system expects the vendor to include the purchase order number and the purchasing business unit.

You can configure PeopleSoft purchase order number formats, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Formats**.
3. Optionally, modify an existing purchase order format.
4. Optionally, enter Index, Format, and Ignore Characters values into the empty row at the bottom of the table and press **Insert**.
For example, if Format is set to 10####BWARE, the system looks for a six digit number that begins with 10 and ends with BWARE.
A new row is added to the table of purchase order formats.
5. **Save** your changes.
6. Navigate to the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.
7. Optionally, add any relevant PeopleSoft purchase order types into the **PeopleSoft Business Units** setting.

Add leading zeros to PO numbers for JD Edwards and PeopleSoft

It is possible to configure the system to pad an extracted purchase order number with leading zeroes, so it better matches data held in the purchase order header table.

You can add leading zeroes to a purchase order number, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
3. In the table of fields, scroll down until you locate the **PONumber** field.
4. Enter a **Max Length** of 10.
5. Select **Right Justify**.
6. Enter the **Pad Character** as 0.
This means that if 1002334 is extracted from the invoice, the system formats the purchase order number so the value becomes 0001002334.

Straight through processing

This is when a document passes through Invoice Processing Agility without a need for user intervention. This happens when all documents in a folder are successfully extracted and validated, bypassing manual validation altogether. Straight through processing ensures that documents are processed as quickly as possible.

There are, however, settings in the Solution Configuration Manager that stop straight through processing altogether.

The following settings force a document to go to Validation, even when that document is fully valid.

- The Force Verify option in the **Profile Settings** > **Field Settings**.
If this option is selected, all documents with this field are sent to Validation, even those documents that are fully valid.
- The Stop All Credits option in the **Profile Settings** > **Document Type Settings**.
If this option is selected, all credit memo documents are sent to Validation, even those documents that are fully valid.
- The Force Verify option in the **Client Settings** > **Client Settings**.
If this option is selected, all documents for the specified client are routed to Validation for review, even those documents that are fully valid.

Important Use these settings only when necessary as they stop straight through processing. If documents do not need validation, sending them to Validation unnecessarily increases processing time.

Configure SAP

You can integrate Invoice Processing Agility with SAP and implement it in an environment where invoices are created in SAP.

Invoice Processing Agility integrates with SAP using Business Application Programming Interface (BAPI) technologies. A BAPI is a function module in SAP that is called from an external system. The external system passes data to the BAPI through a defined interface. The BAPI carries out a function, such as creating an invoice, and the output is returned back to the calling system. For example, a BAPI function creates the unique ID of an invoice that has just been created. The call to the BAPI occurs synchronously.

Invoice Processing Agility has the following route for invoking BAPI calls within SAP.

- [Using a direct login to SAP](#).

Configure a connection to SAP

You can configure a connection to SAP, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager** > **Profile Settings** > **SAP Configuration**.
3. Select **Connect To SAP**.
4. If the connection to SAP is using Unicode, select **Use Unicode Connection**.
5. **Save** the changes.

BAPI calls

The names of the BAPI calls are pre-configured in the system with the following parameters. You can change the functions to use alternative BAPIs, such as wrapper functions that carry out an additional task,

as long as the interface for the alternate BAPI is the same, or it contains the same parameters as the original BAPI as a subset.

PO Look Up

BAPI_PO_GETDETAIL

Invoice Post

BAPI_INCOMINGINVOICE_CREATE

FB60 Invoice Post

BAPI_ACC_INVOICE_RECEIPT_POST

FB60 Invoice Park

Z_BW_PARK_FI_INVOICE

Invoice Park

BAPI_INCOMINGINVOICE_PARK

Company Lookup

BAPI_COMPANYCODE_GETDETAIL

Entry Sheet Lookup

BAPI_ENTRY SHEET_GETDETAIL

If a function is not set against the RFC Read Table Function setting, the SAP standard `RFC_READ_TABLE` function module is used.

Configure BAPI calls using a direct login

In order for the system to communicate with SAP using a direct login, the following prerequisites are required.

- The SAP GUI must be installed on servers where Invoice Processing Agility is running, including Validation workstations.
- Register the `wdtfuncs.ocx` control that comes bundled with the installation of the SAP GUI on each machine.
- Configure the servers that are running Invoice Processing Agility to recognize the SAP system.

You can configure the BAPI calls, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
3. Set the following parameters that are appropriate for your environment. These specify the language and authentication details for the connection.
 - Language
 - Client
 - SystemName
 - User
 - Password
 - EncryptedPassword
4. If you do not use load balancing, set the **Application Server** setting to the IP address of your SAP server. Set the **System Number** setting to 00.

5. If you are using load balancing, set the **Message Server** setting to your SAP URL and then set the **Group Name** setting to PRD.
6. If a SAP router string is used, set the **SAP Router** setting to blank (no value).

Set up a SAP user ID

Invoice Processing Agility requires a valid SAP user ID and password in order to log on to the downstream SAP system. A custom user is created in the client SAP system for this purpose. The custom user must be of the communication type. The decimal separator preferences for this user must be set to a period.

If you are already using SAP to process invoices, apply the roles assigned to a standard AP clerk to the custom user ID. These roles must include, as a minimum, authorizations that allow the posting and parking of invoices, the ability to read purchase order data, and the ability to connect to SAP using RFC.

SAP does not provide a standard role, and you must create this role. This role must have the authorization objects listed below assigned as a minimum.

Allowing RFC access

This is mandatory. The authorization objects are `S_RFC`, including function groups `RFC1`, `SYST`, `RFCH`, `SDTX`, `BAPT`, `MRM_BAPI`, `SOC3`, `SOA1`, `BREL`, `ACC4`, `0002`, `MLBO`, `OPTB` and `MEWP`.

Reading PO data

This is mandatory. The authorization objects are `M_BEST_WRK`, `M_BEST_EKG`, `M_BEST_EKO`, `M_BEST_BSA`. Set these for activity 03 (display). Apply restrictions in terms of plants, documents types, purchasing groups and purchasing organizations, as required.

Creating MM-LIV invoices

This is optional. The authorization object is `M_RECH_WRK`. Set this for activity 01 (create). Apply plant restrictions, as required.

Reading PO conditions

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `VA (KONV)` and `MA (EKBZ)`.

Posting & parking FI invoices via FB 60

This is optional. The authorization objects are `F_BKPF_BUK` and `F_BKPF_KOA`. Set these for activity 01 (create) and 77 (preliminary post). Set the restrictions in terms of company codes and account types as required, but the account type must at least include K (vendor). If the `Z_BW_PARK_FI_INVOICE` custom supplied function module is used to park documents, then you must also add the function group where it was created, to the `S_RFC` function group restrictions.

Looking up unit of measure conversions

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `MA (MARM)`.

Reading plant data

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `MCOR (T001W)`.

Reading company code data

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `FC01 (V_T001)`.

Reading currency data

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `FC00 (TCURC)`.

Late archiving via SAP

This is optional. If you are using Invoice Processing Agility to archive an image when it is exported to SAP using the custom function `Z_BW_LATE_ARCHIVE`, then add the function group where it was created to the `S RFC` function group restrictions.

Reading downpayments for MM invoice vendors

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `FA (LFC3)`.

Converting work breakdown structures from external to internal format

This is optional. The authorization object is `S_TABU_DIS`. Set this for activity 03 (read only). Set the authorization group restriction to `CA (for PRPS)`.

Troubleshoot SAP connection issues

If Invoice Processing Agility is unable to connect to SAP, error messages are reported back to the user through the field error descriptions in Validation. Additional information regarding silent connection failures is available in the Invoice Processing Agility log file.

Further details are available in a SAP-specific `dev_rfc.trc` log file that is written to the same directory as the Invoice Processing Agility project file.

Chapter 9

Validation configuration

You can configure various aspects of how the validation form appears in Validation.

The most common changes include the following

- [Invoice classification](#)
- [Invoice CN classification](#)
- [Edit information messages](#)
- [Add, edit or remove invalid reasons](#)
- [Edit field labels](#)
- [Restrict database searches to regions](#)
- [Document rejection](#)

In addition to the above changes, you can modify how a field is validated or formatted. Refer to [Project field configuration](#) for more information on each field and its settings.

Invoice classification

By default, invoice documents are classified to the Invoices class in Invoice Processing Agility.

Invoice CN classification

Invoices are classified to the Invoices class in Invoice Processing Agility by default. However, Chinese VAT related invoices are classified to a separate InvoicesCN class.

This is done because we use the extraction methods from the Transformation Designer to extract the Chinese VAT documents.

The InvoicesCN class is configured and trained with the layout classifier to classify the Chinese VAT invoices. You can find the 29 sample documents used to train the layout classifier in the classification set within the InvoicesCN class.

The fields are populated with the InvoicesCN extraction methods and then the document is reclassified to the Invoices class. This is done so that a single validation form can be used by both classes. The [Document Variants](#) control whether specific Chinese and Chinese VAT invoices fields are displayed.

Non-VAT Chinese invoices are extracted using the standard Invoices class.

Restrict database searches to region

For regular Invoice documents, you can restrict what parts of a document are searched by the vendor search and the employee search. This is done via the **Solution Configuration Manager > General Settings > ASE Database Settings**. You can restrict the search to the first page, or to a specific region.

For the InvoicesCN class however, there are no settings in the Solution Configuration Manager to restrict the database searches to a specific page or region. Because of this, if you want to restrict the search area, you can edit the corresponding database locator in Transformation Designer. For more information on configuring regions for database locators, see the *Transformation Designer Help*.

Information messages

Information messages are displayed to the Validation user when they encounter a specific scenario. These messages prompt the user to take an action so that the document is successfully validated.

These messages are listed in the **Solution Configuration Manager > Global Settings > Information Messages > Information Messages Settings**.

Note Do not delete any of these messages. They are configured for specific scenarios, and deleting a message can cause problems in Validation. Similarly, there is no point in adding messages with a new Information Message ID to this list because there is nothing configured to use that new message.

By default, the information messages are provided in English only.

The following list explains each message and the circumstances when they are displayed in Validation.

Currency will be changed to [CUR], click OK to accept

This message is displayed when the currency field value is configured to come from the vendor or purchase order, but the user enters a new vendor or purchase order with a different currency.

The message dynamically displays the new currency symbol and if the user clicks OK, the value in the currency field is updated.

Invoice is a 1-1 match to the PO, hence line items are not required

This message is displayed when the line items on the invoice exactly match those on the purchase order. When this occurs, no line pairing is required.

PO has not been released, hence line items are not required

This message is displayed when the purchase has not been released. This means that the purchase order has not been approved to be sent out to the vendor. Because of this, it is impossible to post an invoice against a purchase order, so there is no point capturing line items as no document can be created.

This message appears only for SAP integrations.

Vendor ID will be changed to [VEN], click OK to accept

This message is displayed when a Validation user enters a new or different purchase order, and the system is configured to extract the vendor from the purchase order. This message ensures that the user agrees to this change.

Multiple records found on PO [PON], click OK to continue with this PO

This message appears when the purchase order has multiple matching records in the PO header table, and the Skip Duplicate PO Check option is not selected, in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Validation**.

Vendor [VEN] has no permitted payees - alternate payees will be removed

This message is displayed when a vendor has no configured permitted payees, but there is an alternate payee listed in the validation form. Any values listed are deleted.

Vendor [VEN] has permitted payees assigned. Do you wish to enter an alternate payee?

This message is displayed when a vendor has permitted payees configured, but none are selected. Clicking Yes enables a user to choose an alternate payee from a list of permitted payees.

No vendor ID has been entered.

This message is displayed when a vendor ID is missing and the user attempts to specify an alternate payee. This is not possible without selecting a vendor first.

No details available for vendor [VEN]

This message is displayed when there is no information available for the specified vendor.

No permitted payees available for vendor [VEN]

This message is displayed when the specified vendor has no configured permitted payees.

Invalid Reason text

When a Validation user is validating a document, there is a field called Invalid Reason that enables the user to select a reason from a list of pre-defined values. This reason indicates why a Validation user cannot successfully validate a document.

Each message is mapped to a static list of reasons. Each reason can be mapped to one or more message. Because of this flexibility, additional messages can be added as needed.

You can [add](#) to this list or [edit](#) an existing message.

Add Invalid Reason

The system is pre-configured with several invalid reasons. These reasons are selected by a Validation user if they cannot validate a document.

If the existing list of reasons is not comprehensive enough for your needs, you can add additional reasons by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > Invalid Reasons > Invalid Reason Display Text**.

A list of messages and their corresponding rules is displayed.

3. In the **Insert** row, do the following.
 - a. Select a **Rule** from the list.
 - b. Enter a **Validation Display** value.

This message appears in the Invalid Reason list during Validation.

- c. Enter an **Export Code**.

This is the code that is exported when this Invalid Reason is selected.

- d. Click **Insert**

The new invalid reason is added to the row and the Index field is populated automatically.

4. Click **Save**.

Your new Invalid Reason is available for selection in Validation.

Edit Invalid Reason text

If one of the default Invalid Reason texts is not suitable for your needs, you can edit that text by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Global Settings > Invalid Reasons > Invalid Reason Display Text**.

A list of messages and their corresponding rules is displayed.

3. Locate the existing invalid reason you are modifying.
 - a. Optionally, select a different **Rule**.
 - b. Optionally, edit the **Validation Display**.
 - c. Optionally, modify the **Export Code**.

4. Click **Save**.

Your changes are saved and the updated reason is available for selection in Validation.

Document rejection

If a user cannot process a document, but it does not fit into the scenarios covered by [invalid reasons](#), the user can reject the document so that it does not impede further processing.

For example, if a document is illegible, blank, or not an invoice, there is no point selecting an invalid reason. None of the invalid reasons can handle these situations, so as an alternative, the user can reject the document. Once rejected, the document is sent to a process that deals with the problem associated with the selected rejection reason.

A user can select one of the following reasons from the list.

- [NAI] This is not an invoice
- [PIX] Document requires *PIX Correction*
- [GEN] Scan quality issue
- [GEN] Document needs to be re-scanned
- [GEN] Document not legible
- [CHN] Document is a Chinese VAT document

These reasons all begin with prefixes and there are pre-defined processes for these prefixes.

By default, the [NAI] prefix only has a dummy process defined. This enables you to customize the behavior of rejected [NAI] documents for your specific needs. For example, you can configure a process to delete a document flagged as [NAI]. Alternatively, you can configure a process that moves the [NAI] document to a specific directory, or save it in a database. For more information on creating and configuring a process, see the *Kofax TotalAgility Help*.

Selecting the [PIX] prefix sends each document to PIX Correction. An operator, different from the Validation user, corrects the mapping and then sends the document back for processing. This rejection reason is selected by a Validation user when the PIX mapping is either incorrect or incomplete. It is recommended to select the [PIX] reason when the GENERATED FROM XML stamp is on a document and the fields are populated with incorrect data.

Selecting the [GEN] process sends a document to a special Re-Scan process. Here, a new job is created where the user can perform tasks to ensure the document is successfully processed. For example, users can unreject the document, delete a page, or even replace a page. After this step is complete, the documents are sent to a new job, where Invoice Processing Agility treats them as if they were just scanned, and they are processed like any other job.

Selecting the [CHN] prefix sends the document back to the Transformation Server where automatic classification is skipped because the document is assigned to the Invoice_CN class. The document is then re-extracted and sent to Validation once more.

If a user enters a custom reason, it is treated in the same way as the [GEN] prefix.

It is possible to add additional reasons to the `IPA_RejectionReasons` category. However, any additional reason must begin with either [NAI], [PIX], or [GEN]. This is because processes are defined for these prefixes only.

Validation field labels

Each field on the validation form has a default label that is displayed to the Validation user. It is possible to modify these labels if they do not suit your needs.

However, if you modify any of the labels, it is important that the new label is easily understood by the Validation user.

If the label for a field on your documents is an acronym, you can modify the label so that it spells out the acronym.

Modify field labels

You can edit a field label by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.
A list of fields and their corresponding properties is displayed.
3. Scroll through the list of fields until you find the field that you are editing.
4. Enter a new value in the **Validation Label** for that field.
5. **Save** your changes.

Your changes are saved.

6. Optionally, edit another field label.

Validation form modifications

If you do not want one or more fields to appear on the validation form, you can configure this in the Solution Configuration Manager only.

Important Do not make changes to the validation form in Transformation Designer. Doing so will break compatibility, which means that you cannot upgrade Invoice Processing Agility when a newer version becomes available.

All fields that are selected, are displayed on the form. Similarly, all fields that are cleared, are hidden. If an entire section of the validation form is cleared, that entire section is hidden.

Because fields are configured for each profile, it is possible to display some fields for one client, and [hide](#) them for another client.

Hide fields on validation form

If there are one or more fields that you do not want displayed during Validation, you can hide them so that they do not appear. Hiding fields is common if your invoices do not contain certain fields that Invoice Processing Agility provides.

You can hide fields on your validation form by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Field Settings**.

A table of all available fields is displayed.

3. In the table of fields, scroll down until you find the field you are hiding.
4. Clear the **Active** option for that field.

All fields where the **Active** option is selected, are displayed on the Validation form.

Clearing the **Active** setting hides the specified field from the Validation user.

5. Optionally, repeat these steps for additional field.
6. Click **Save**.

Your changes are saved and the selected fields are no longer displayed during Validation.

Instructions

You can provide detailed processing instructions to Validation users using Instructions. This information helps them process documents for a specific client.

Instructions can be as simple as basic instructions for the Validation user. They can also be complex instructions on how to deal with a specific scenario for an individual client.

For example, a client is not happy with how their documents are processed. This is because there have been several mistakes when fields are re-keyed which caused problems downstream. The following Instructions are provided for this client.

"This is a high priority client. Please double-check any re-keyed fields to ensure that there are no mistakes."

Once [added](#), this information is available in the Instructions section at the top of the validation form.

Because this feature is client-specific, each client requires a profile. If a new client is added, or an existing client has no profile, you can [add a profile](#). A profile can have more than one client.

Add Instructions for a client

You can add Instructions by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager** > [Instruction Settings](#).
The Profile list is displayed.
3. Select the **Profile** that corresponds to the client that needs instructions.
The Instruction Profile Settings are displayed.
4. Enter your text in the **Instructions** field.
5. Click **Save**.
Your changes are saved and the specified text is displayed in the Validation Instructions pane when a document for that client is next processed.
6. Optionally, repeat the above steps to add instructions for a different profile.

Chapter 10

Extraction online learning

The following header fields are trainable and are supported by extraction online learning.

- Invoice Number
- Invoice Date
- Due Date
- Delivery Date
- Delivery Note
- Total
- Postage (Freight)
- Discount
- NetAmount0-4
- TaxRate1-4
- TaxAmount-1-4

When Invoice Processing Agility is first installed, the out-of-the-box extraction of the trainable fields is not perfect. However, because these fields are trainable, the extraction of these fields can improve over time. This happens automatically whenever a Validation user makes changes to one of the trainable fields. That document with the modified fields is added to the extraction training set so that the next time a document from that vendor is processed, the extraction results improve. Subsequent training documents are collected until extraction for that vendor is consistent and successful.

For example, an invoice for a new Vendor is processed, but it has the Invoice Date and Invoice Number in the top-left corner. All other documents that are successfully processed have these fields in the upper-right corner. During extraction, both Invoice Date and Invoice Number are successfully extracted, but their location means that their confidence is low. As a result, this document is routed to Validation so that a user can review these fields. After the Validation user has confirmed these fields, that document is copied to the extraction training set. The next time a document is processed for that vendor, it is extracted with more confidence. This is because training documents are used during extraction to improve results.

For more information about Online Learning and how to maintain and train documents, refer to "Extraction Online Learning" in the *Help for Transformation Designer*.

Note If you are using Kofax TotalAgility 7.5.0 or a later version, consider using the Limited to Online Learning access mode for Transformation Designer. This restricts a user to activities required for online learning management only. All other configuration settings are disabled. For more information on this access mode, refer to the *Help for Kofax TotalAgility Designer*.

Chapter 11

Line pairing

Invoice Processing Agility is able to reconcile invoice line items with the corresponding line items on a purchase order using line pairing.

This is a critical operation for creating a complete purchase order related invoice in the downstream enterprise resource planning (ERP) system. This is needed because ERP systems require a purchase order line item number for each invoice line entered. Typically, a purchase order line item number does not appear on vendor invoices and, when they do, they are not always stated correctly. Invoice Processing Agility is able to overcome this and derive the correct purchase order line item number automatically through comparing the extract invoice line item data with what is available on the purchase order. You can also use the Vendor ID to enhance your extraction results if the purchase order number is not confidently found on the document.

Invoice Processing Agility uses a fuzzy search to perform the down-to-the-line item description level. Without this step, even though the document may pass straight through Validation 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 order numbers 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, line pairing can also perform the following functions:

- Perform checks to ensure that the invoice quantity is booked in the correct unit of measure and that the convert to purchase order unit of measure is correct.
- Reconcile the invoice data to blanket and service purchase orders in the ERP system.
- Handle the posting of invoice miscellaneous charges, such as freight and customs charges, in accordance with client business rules.
- 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.

To read the purchase order and goods receipt data required for line pairing, Invoice Processing Agility can point to a purchase order database or a flat file extract that contains purchase order line item data.

Note The flat file extract option is intended for demonstration purposes only and should not be used in a live production environment.

Line pairing operates differently depending on whether the invoice purchase order is for materials or services.

Line pairing is not carried out if any of the following circumstances occur:

- Line pairing is deactivated in the Solution Configuration Manager.
- Line item extraction is deactivated in the Solution Configuration Manager.
- The invoice type is NO-PO.
- The document type is CREDIT and line item extraction is deactivated for credit memos.
- The purchase order type is SERVICE and line pairing is deactivated for service purchase orders.
- The vendor is a utility vendor and line item extraction is switched off for utility vendors.
- The Validation user selects VENDOR NOT FOUND as the invalid reason and line item extraction is deactivated for that invalid reason.
- The Validation user has selected one of the following invalid reasons:
 - MISSING/INVALID PO
 - MISSING/INVALID VENDER and MISSING/INVALID PO
 - INVOICE AMOUNTS DO NOT ADD UP
- The purchase order is not released and line item extraction is deactivated for unreleased purchase orders.
- All lines on the purchase order are fully invoiced and the system is configured to ignore completed purchase order lines.
- A purchase order used for line pairing has a duplicate record in the purchase order header database and duplicates are not allowed.

The settings that control line pairing are found in two sections of the Solution Configuration Manager Profile Settings.

1. [Line Pairing Settings](#)
2. [Line Item Table Settings](#)

Line pairing for third-party freight invoices

Within Invoice Processing Agility, a third-party freight invoice refers to a very specific business scenario where 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.

Invoice Processing Agility handles freight invoices that do not fall into this category as regular invoices. It handles the following scenarios:

- The identified vendor is not the material vendor that raised the purchase order, 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 in Validation.

Invoice Processing Agility 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 **Solution Configuration Manager > Profile settings > Misc Charge Settings > [Misc Charge Settings](#)**.

Handle Miscellaneous Charges

Miscellaneous charges refer 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 code.

Miscellaneous charges can appear at both the header and at item level on an invoice.

At the header level, Invoice Processing Agility provides two fields for this purpose.

1. Postage
2. AmountMiscellaneous

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 Invoice Processing Agility drawing on the system configuration settings applied in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**.

The handling of miscellaneous charges is dependent on the business rules of the client. The configuration options within the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories** permit the following.

1. Miscellaneous charges booked against planned condition types on the purchase order. (SAP only)
2. Miscellaneous charges booked as unplanned delivery costs. (i.e. a single, header-level amount field within the downstream ERP system)
3. Miscellaneous charges booked as a separate invoice line item with a specific line type. (Oracle Financials)
4. Miscellaneous charges booked as a direct general ledger account entry.

These events occur during the line pairing operation carried out during document export. Line pairing must be activated in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings** table for miscellaneous charge processing to occur. If line pairing is deactivated, then any miscellaneous charges that appears on the invoice are output in the same format that they are extracted.

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.

The following topics provide more details about miscellaneous charges.

- [Miscellaneous charge categories](#)
- [Assign header fields to a miscellaneous charge category](#)
- [Assign line items to a miscellaneous charge category](#)
- [Post miscellaneous charges as a specific line type](#)
- [Post miscellaneous charges as unplanned costs](#)
- [Post miscellaneous charges to planned conditions](#)

- [Post miscellaneous charges to a general ledger account](#)
- [General ledger account code table](#)
- [Third-party freight](#)

Miscellaneous Charge Categories

Miscellaneous charge categories are configured in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**.

Each row in the table for a profile ID represents a miscellaneous charge category. The category denotes the type of miscellaneous charge, such as freight, a customs charge, and so on.

The number of categories that are configured depends on how you want to process these charges. Also, the number of miscellaneous charge categories is driven by the number of different processes that 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, then there must be as many miscellaneous charge categories as the number of possible general ledger codes to book them against. For example, account 1000 is used for freight; account 2000 for customs charges; account 3000 for pallet charges, and so on.

Within each group, a code and name is assigned to each miscellaneous charge category. In the Validation screen, if a line item belongs to a particular miscellaneous charge category, the code set for that group in the system configuration is copied into the category column for that particular line item.

Assign header fields to a Miscellaneous Charge Category

Each miscellaneous charge category can be assigned fields either at the header or line item level.

In the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**, the Header Field setting controls the mapping between a header field and the miscellaneous charge category.

The two standard header fields available for mapping are `Postage` and `AmountMiscellaneous`. A sample configuration for mapping the freight field to the freight category for profile 0 - Default is as follows.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage

More than one header field can be mapped to a single miscellaneous charge category using comma separation as seen in the following table.

Setting	Value
Header Field	Postage, AmountMiscellaneous

Note The name of the header field is not case sensitive.

Assign line items to a Miscellaneous Charge Category

The assignment of line items to a miscellaneous charge occurs using the extracted line item description.

In the Alias column, a comma-separated list of keywords are entered to indicate that the line item belongs to the miscellaneous charge group. The following table shows an example for Profile 0 - DEFAULT.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT

Post Miscellaneous Charges as a specific line type

If the business rule for processing charges belonging to the miscellaneous charge category involves booking them as a specific line type in the downstream ERP, then the required line type must be entered in the Line Type setting.

For example, if the ERP line type for freight is FRT, then the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories** must be populated as follows.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT

If the line type value is populated, this overrides any further handling settings applied to the miscellaneous charge group. During export, the miscellaneous charge is outputted as a line item.

Post Miscellaneous Charges as unplanned costs

If the business rule for processing charges that belong to the miscellaneous charge category involves booking them as an unplanned cost in the downstream ERP system, then this is configured using the Always Booked To Unplanned setting.

For example, the following table contains the values for the columns in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT

During export, the total value of all miscellaneous charges in every category that requires unplanned delivery cost handling are passed to an export database field into the "Postage" field as configured in the **Solution Configuration Manager > Export Settings > Export Mapping > Header Field Export Mapping**.

Post Miscellaneous Charges to planned conditions

Planned conditions are used in implementations involving SAP. When the purchase order is raised, if the buyer is expecting additional charges, they add these charges as condition records into the pricing behind the purchase order line items that are affected. Each condition record has a code that is an SAP condition type, a quantity, and a value. The condition type denotes the type of miscellaneous charge from an SAP point of view.

During manual invoice entry, these condition records manifest themselves as proposed invoice lines that the user can post the charges against.

To configure a miscellaneous charge category to post the charge against condition records on the SAP purchase order, select the Read SAP PO Conditions setting in the **Solution Configuration Manager > Profile settings > Misc Charge Settings > Misc Charge Settings**. Also, the relative Always Book To Planned setting must be selected in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**. In addition, the relevant SAP condition types that represent specific charge types are entered as a comma separated list in the "Valid Conditions" setting. The list of relevant condition types for each type of miscellaneous charge is provided by the client.

An example for freight would be as follows.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT
Line Type	
Always Book To Unplanned	FALSE
Always Book To Planned	TRUE

Setting	Value
Valid Conditions	FRB1, FRB2, FRA1, FRA2

The line pairing routine only books miscellaneous charges to conditions if line pairing is completely successful for all other material items on an order. If multiple conditions exist, or multiple instances of the same condition type exist across all purchase order lines being invoiced, the system calculates a value for these conditions based on their corresponding invoice line values, and the invoice [Net Amount 1](#).

If line pairing is successful for all material line items and no conditions exist on the purchase order, or no conditions exist for the miscellaneous charge category, then two options are available to post the miscellaneous charge. You can post this as an unplanned charge or as a general ledger entry.

If the charge must be booked to conditions, and none are available, the charge must be booked as unplanned charges. The charge configuration must be as displayed in the following table.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT
Line Type	
Always Book To Unplanned	FALSE
Always Book To Planned	TRUE
Valid Conditions	FRB1, FRB2, FRA1, FRA2
Always Book To GL Account	FALSE
Book To Unplanned If No Planned	TRUE
Book To GL Account If No Planned	FALSE

If the charge must be booked to conditions, and none are available, the charge must be booked as a general ledger entry. The charge configuration must be as displayed in the following table.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT
Line Type	
Always Book To Unplanned	FALSE
Always Book To Planned	TRUE

Setting	Value
Valid Conditions	FRB1, FRB2, FRA1, FRA2
Always Book To GL Account	FALSE
Book To Unplanned If No Planned	FALSE
Book To GL Account If No Planned	TRUE

Please refer to the relevant sections for details on how the system books the miscellaneous charge as an unplanned cost or as a general ledger account entry.

- [Post miscellaneous charges as unplanned costs](#)
- [Post miscellaneous charges to a general ledger account](#)

Post Miscellaneous Charges to a general ledger account

If you are posting miscellaneous charges to a general ledger account, the system creates a separate general ledger entry for each miscellaneous charge.

A general ledger entry 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, or a project.
- A tax code.

To determine the general ledger account code, the system looks into a custom database table. If an entry exists for the invoice company code and the miscellaneous charge code, then this is the general ledger account code that the system uses. If no entry exists, or the Validate From DB option is selected in the **Solution Configuration Manager > Profile settings > Misc Charge Settings > Misc Charge Settings**, then the default general ledger code for the miscellaneous charge group is used.

The cost object is determined as follows.

- If the Get Cost Object From PO Line setting is selected in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories**, the cost object is lifted from the first paired invoice line that uses either a cost center, a profit center, an internal order, or a project.
- If a profit center or cost center exists in the custom table, this is used as the cost object.
- The default cost center/profit center in the Default Cost Center / Default Profit Center columns in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories** is used.

The tax code is determined as follows.

- If an entry exists in the custom table for the invoice company code and miscellaneous charge category, this tax code is used.
- The tax code is lifted from the first paired invoice line item.
- The tax code set in the Default Tax Code setting in the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories** is used.
- 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 passes a blank tax code and a blank tax jurisdiction code downstream.

If the custom table lookup is activated but communication does not succeed either due to missing or incorrect configuration or database unavailability, the document export fails.

A sample configuration for posting miscellaneous charges as general ledger entries is shown in the following table. This must be entered as a row into the **Solution Configuration Manager > Profile Settings > Misc Charge Settings > Misc Charge Categories** for the selected profile ID.

Setting	Value
Index	1
Type	FREIGHT
Code	F
Header Field	Postage
Alias	FREIGHT, DELIVERY, CARRIAGE, UPS, TRANSPORT
Line Type	
Always Book To Unplanned	FALSE
Always Book To Planned	FALSE
Valid Conditions	
Always Book To GL Account	TRUE
Book To Unplanned If No Planned	FALSE
Book To GL Account If No Planned	FALSE
GL Account	1000
Get Cost Object From PO Line	TRUE
Default Cost Center	1000
Default Profit Center	2000
Default Tax Code	I0

With the above configuration, if the custom table is not used, the system books the miscellaneous charge as a general ledger entry using general ledger account 1000, with the cost object and tax code from the first paired invoice line. If no cost object exists against the first paired invoice line, then cost center 1000 and profit center 2000 are used. If no tax code exists against the first paired invoice line, tax code I0 is used.

General ledger account code table

To facilitate posting freight as general ledger account entries, a look-up table is available so that specific general ledger account codes, cost objects and tax codes can be assigned on a company code basis and a plant basis by incorporating the purchase order line type, if required.

The following table contains an example for populating the table for company code GB01, plant 1000, line type A and miscellaneous charge category F.

Company Code	Category	Line Type	Plant	GLAccount	CostCenter	Profit Center	TaxCode
GB01	F	A	1000	1000	2000	3000	10

The company code, plant, line type, and category columns are mandatory and form the unique key for each record in the table.

If the general ledger account, cost object and tax codes are to be set at a company code level rather than a plant level, a space is required in the plant column. If no line type is used, a space is also required in the line type column.

The system accesses the table according to the following sequence.

1. By company code, plant, and line type.
2. By company code and line type.
3. By company code and plant.
4. By company code alone.

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.

Third-party freight

In Invoice Processing Agility, a third-party freight invoice refers to a very specific business scenario where an invoice is received from a vendor billing for freight, yet that vendor legitimately quotes the purchase order number of another vendor, such as the material vendor. The freight charge is booked against the purchase order from this other material vendor.

Freight invoices that do not fall into this category are handled as regular invoices.

During line pairing, the system books the net value of the invoice against the material vendor purchase order. The booking uses the rules set against the miscellaneous charge group assigned to third-party freight vendors set in the **Solution Configuration Manager > Profile settings > Misc Charge Settings > Misc Charge Settings**. The table specifies where the rules are configured and indicates which miscellaneous charge group has been assigned a code of F.

If the rule is set to post as unplanned, the system also creates a zero-value debit invoice line against the first line item of the purchase order belonging to the material vendor.

If the rule is set to post against planned condition types on the purchase order, these condition types must be goods receipted.

Tax configuration for countries with tax jurisdictions

This chapter contains the steps for completing the tax configuration section for ERP systems and countries that use tax jurisdiction codes. If tax jurisdiction codes are used, the system requires the following items per invoice line in order to create the invoice.

- The invoice line item tax code.

- The invoice line item tax jurisdiction code.

This ERP system configuration is applied at the country level, such as the US, Canada, India and Brazil. Under this, the tax rate is calculated based on the part of the country where the item was bought or consumed and the tax jurisdiction code represents the rate of tax applied to the purchase. The tax code represents whether the item is taxable or nontaxable and acts as an instruction on how the ERP system must process the tax.

Often the rates connected to tax jurisdiction codes are held within a specialist tax application external to the ERP system, such as Vertex or Taxware. Tax jurisdictions are configured by profile ID in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Jurisdiction Codes**.

The following topics provide more details about tax jurisdictions:

- [Basic tax configuration](#)
- [Default purchase order tax code](#)
- [Configure a state-dependent tax code](#)

Basic tax configuration

This section includes a sample configuration for a US-based company. In this example, each line on the purchase order read from the ERP system is allotted a tax code. Code I0 denotes a tax-exempt item and code I4 denotes that the item is taxable.

When the invoice arrives, it is for a single-line item. The line pairing routine successfully identifies that line item and the system proceeds to acquire the tax code. In this example, the following are four basic scenarios for acquiring the tax code.

- If the purchase order line has a tax code of I0, and no tax is charged on the invoice, the system uses tax code I0 for the invoice line.
- If the purchase order line has a tax code of I0, and the vendor is charging tax, then the tax code remains at I0 for the invoice line. The vendor is short-paid the tax they are billing, such as the total amount of the invoice is the total amount minus the total tax amount.
- If the purchase order line has a tax code of I4, and no tax is charged on the invoice when tax is expected, then the system uses a tax code for the invoice line that self-assesses the use tax for payment to local tax authorities (code U1).
- If the purchase order line has a tax code of I4, and tax is charged on the invoice, the invoice line tax code remains at I4, and the tax is paid to the vendor as billed.

For Profile 0 - DEFAULT, the following three tax group entries are created in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Jurisdiction Codes**.

Index	Tax Code	Country	Pay Tax As Billed	Short Pay If Tax
1	I0	US	Cleared	Selected
2	I4	US	Selected	Cleared
3	U1	US	Cleared	Selected

The tax jurisdiction code passed to the invoice line item must always be set to the tax jurisdiction code set against the purchase order line item. If the invoice has multiple line items, the vendor is only short paid the tax, if tax is billed. All tax codes selected for the invoice lines carry a short-pay instruction.

If the invoice has multiple line items, the vendor is charging tax, and any single invoice line item tax code carries an instruction to pay the tax as billed, then the system books the entire invoice tax amount to the ERP system using the tax code in question.

For implementations involving SAP, the header level calculate tax flag is checked in all instances except when an instruction to pay tax as billed exists.

Default 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.

You can enable the system to default a tax code based on the purchase order line account assignment category, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Jurisdiction Codes**.
3. In the **AccountAssignmentCategories** field, for a specific Tax Code, add assignment categories as a comma-separated list for the desired tax code.
4. Optionally, modify an existing row in the table by amending the comma-separated list of tax codes to the **Account Assignment Categories** setting.
5. Optionally, add a new row to the list of tax jurisdiction codes and provide a comma-separated list of tax codes to the **Account Assignment Categories** setting.
6. **Save** your changes.

Configure a state-dependent tax code

You can configure a specific tax code for a specific ship-to state.

The following examples provide configuration options for various scenarios.

1. If the purchase order line tax code is I4, but should change to U1 if no tax is charged, unless the vendor is based in California where the code IU is used instead, then the **Tax Jurisdiction Codes** are configured as follows.

Setting	Value
Index	2
TaxCode	I4
Country	US
IfTax	
IfNoTax	U1
VendorState	CA
ShipToState	
IfTaxState	
IfNoTaxState	IU

Setting	Value
PayTaxAsBilled	True
ShortPayIfTax	False
AccountAssignmentCategories	

2. If the purchase order line tax code is I4, but should change to U1 if no tax is charged, except if the ship-to stat is Texas where the code IU is used instead, then the **Tax Jurisdiction Codes** are configured as follows.

Setting	Value
Index	2
TaxCode	I4
Country	US
IfTax	
IfNoTax	U1
VendorState	
ShipToState	TX
IfTaxState	
IfNoTaxState	IU
PayTaxAsBilled	True
ShortPayIfTax	False
AccountAssignmentCategories	

3. If the purchase order line tax code is I4, but should change to U1 if no tax is charged, except is the vendor and the ship-to are both in Virginia where the code IU is used, then the **Tax Jurisdiction Codes** are configured as follows.

Setting	Value
Index	2
TaxCode	I4
Country	US
IfTax	
IfNoTax	U1
VendorState	VA
ShipToState	VA
IfTaxState	
IfNoTaxState	IU
PayTaxAsBilled	True
ShortPayIfTax	False

Setting	Value
AccountAssignmentCategories	

To configure state-dependent tax codes, complete the following steps:

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Jurisdiction Codes**.
3. Using the above examples as a guidelines, enter the values that are relevant for your needs.
4. **Save** your changes.
5. Navigate to the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.
6. Select **Read Plant From DB**. option, and point it to a populated data source in the table. Several plant database settings are displayed.
7. Map the following plant database settings:
 - Plant SQL Connection Group
 - DB Plant Table
 - DB Plant
 - DB Plant Country
 - DB Plant State
 - DB Plant Tax Jur Code
8. **Save** your changes.

Note If both **Vendor State** and **Ship To State** are populated, then only that combination triggers the use of the **If Tax State** or the **If No Tax State** codes.

Tax configuration for countries with no tax jurisdictions

Invoice Processing Agility uses a lookup table that validates tax codes for purchase order based invoices before posting them to a downstream ERP system. This is ideal for countries where the tax rate is determined by a tax code, rather than an associated tax jurisdiction code as used in the US, Canada, and Brazil.

The tax table is installed in an Oracle or SQL Server database using an install SQL script.

The tax table activation for a profile ID is configured in the **Solution Configuration Manager > Profile Settings > Tax Settings > Tax Configuration**.

The following topics provide more details about tax jurisdictions:

- [Tax table access sequence](#)
- [Tax code validation](#)
- [Tax table population](#)
- [Tax code special cases](#)

Tax table access sequence

At runtime, Invoice Processing Agility 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. It is also not carried out 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 and combination of ship-to and ship-from.
5. Check for combination of percentage, ship-to, ship-from, and service indicator.
6. Check for combination of ship-to, ship-from, and service indicator.
7. Check for combination of ship-to, ship-from, and tax percentage.
8. 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.

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.

Tax code validation

Once tax codes for all invoice lines are determined, the system uses the percentage rate against each tax code to compare what the tax must be, using those codes against what has actually been billed on the invoice. This validation is not carried out in cases where foreign tax is charged.

If the amounts are beyond the configured tolerance limit, the invoice is parked.

If the ship-from country differs from the company code country for a single invoice line, it is allotted a foreign tax code. Then the entire tax amount on the invoice is booked to that tax code.

If the tax table contains no entries for the country of the invoice company code, no validation is carried out.

Tax table population

The following table is an example of a typical tax code table for the UK (Country Code = GB).

Country	TaxCode	VendorID	ShipTo	Ship From	Service	Material Group	Material No	Percentage
GB	V0		GB	GB				0
GB	V1		GB	GB				17.5
GB	V3		GB	EU				999

Country	TaxCode	VendorID	ShipTo	Ship From	Service	Material Group	Material No	Percentage
GB	V4		GB	EU	X			999
GB	V6		GB	GB				8
GB	V9		GB	GB				15
GB	VF		GB	XX				999
GB	V9		GB	GB				999

Using this configuration, the system behaves as follows for each record.

Note If it is a domestic transaction, and no tax is charged, then tax code V0 is always used.

1. 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.
2. If the goods are shipped from an EU member state country to the UK, then tax code V3 is always used.
3. 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.
4. If it is a domestic transaction, and tax at the rate of 8% was charged on the invoice, then tax code V6 is always used.
5. If it is a domestic transaction, and tax at the rate of 15% was charged on the invoice, then tax code V9 is always used.
6. 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.
7. If no specific item tax percentage is determined from the invoice, but it is a domestic transaction, then tax code V9 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 involves a new tax code (VS) that must be used in instances where a non-EU member state vendor submitted an invoice for a service provided outside the EU, and where tax was charged at 0%, then add the following entry to the tax table.

Country	TaxCode	VendorID	ShipTo	Ship From	Service	Material Group	Material No	Percentage
GB	VS		XX	XX	X			0

Equally, if a requirement arises 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	X			999

Tax code special cases

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.

- Allocate a specific tax code to a specific vendor irrespective of the type of transaction and the rate of tax charged.
- Allocate a specific tax code for a specific material irrespective of the rate of tax charged.
- 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 reclaimable, or only partially reclaimable. For example, when all goods and services provided by vendor 12345 are only 50% VAT reclaimable, then a 50% VAT reclaimable tax code (VR) must always be used.

The corresponding tax table entry should appear as indicated in the following table.

Country	TaxCode	VendorID	ShipTo	Ship From	Service	Material Group	Material No	Percentage
GB	VR	0000012345	GB	GB	X			999

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.

Unit of measure conversions

Units of measure appear at line item level on an invoice. They describe the magnitude of 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.

Invoice Processing Agility looks for a unit of measure when extracting the invoice line items. A designated column is included in the line items table for that reason. This is not a mandatory entry.

When exporting the line items, the unit of measure passed downstream for a paired line item is always the one that was lifted from the purchase order line. This is typically mandated by the downstream ERP system. Hence, if the invoice and purchase order units differ, the system needs to adjust the quantity, so that it is expressed in the purchase order unit of measure. This prevents the wrong quantity being booked.

The following topics provide more details about unit of measure conversions.

- [Configure the measurement conversion adjustments](#)
- [Configure the percentage tolerance for measurements](#)
- [Configure the IPA unit of measure conversion table](#)

- [Unit of measure triangulation](#)
- [Configure the unit of measure aliases](#)

Configure the measurement conversion adjustments

When exporting line items, the unit of measure passed for a paired line item is always the one that is lifted from the purchase order line. This is typically mandated by the downstream ERP system. Therefore, if the invoice and the purchase order units differ, then the system needs to express the quantity in the purchase order unit of measure. This prevents the wrong quantity being booked.

You can configure measurement conversion adjustments, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Ensure that **Do Line Pairing** is selected.
Additional settings are displayed.
4. Select **UOM Check**.
An additional unit of measure setting is displayed.
5. For a system with a purchase order line that has an order unit of measure as well as a price unit of measure, select **PUOM Check**.
6. **Save** your changes.

Configure the percentage tolerance for measurements

In the majority of cases, the system is able to perform quantity conversion, either because the units of measure are universal constants, or because the relationship is clear from a comparison of the invoice and purchase order quantities or pricing data.

You can configure a percentage tolerance so that the unit price is allowed to be less or greater than the purchase order unit price. This helps to recognize that a unit price corresponds to the same order price unit of measure.

If the system is unable to establish the conversion ratio, or if it is unable to confirm whether the quantity actually requires converting, the line is not paired. This is most likely in instances where the invoice and purchase order unit of measure differences are custom to a particular material and/or there are significant differences in the pricing.

For 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	Total
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 pounds (LBS).

Because price differences as illustrated in the example above, converting the invoice quantity from pounds to bags, does not occur with 100 percent certainty unless it is known how many LBS are in each bag of

that particular type of concrete. As such, the system fails the line pairing for this example under regular circumstances.

To mitigate this, there is a unit of measure conversion table, that if populated correctly, allows this example to succeed.

You can configure the percentage tolerance by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Ensure that **Do Line Pairing** is selected.
Additional line pairing options are displayed.
4. In the **PUOM Tolerance** field, enter a percentage value that represents your desired tolerance.
For the best results, set the value for this field to 10.
5. **Save** your changes.
The changes to the **Line Pairing Settings** are saved.

Configure the unit of measure conversion table

The Invoice Processing Agility Unit of Measure Conversion Table contains the conversion ratio between the base unit of measure and a custom unit of measure for a given material.

Note If a database connection cannot be established, or incorrect configuration/table entries are present, then document export does not fail, but the line item is not paired. If line pairing logging is activated, then any error and tracking messages are recorded in the Invoice Processing Agility log file.

During the conversion, the system performs a lookup using the external unit of measure read from the invoice and the material number read from the purchase order.

For example, the unit of measure is pounds (LBS) and the material number from the purchase order is 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 passes a quantity of 2, a unit of measure of BAG, and a total line item value of \$141.60 to the downstream ERP system.

You can configure the Invoice Processing Agility Unit of Measure Conversion table by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Ensure that **Do Line Pairing** is selected.
Additional line pairing options are displayed.

4. Ensure that **Get PO Lines from DB** is selected.
Additional database options are displayed.
5. Select **Convert Quantity From DB**.
6. **Save** your changes.
The changes to the **Line Pairing Settings** are saved.

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 ERP system of the construction company, 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.

$$\text{Base UOM Quantity} = \text{Invoice Quantity} * (\text{Numerator} / \text{Denominator}) = 900 * (1 / 15) = 60$$

When converting to the purchase order unit of measure, the following equation is used.

$$\text{Converted Quantity} = \text{Base UOM Quantity} * (\text{Denominator} / \text{Numerator}) = 60 * (1 / 20) = 3$$

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 the unit of measure aliases

You can configure groups per profile ID to convert the alias as it appears on the invoice to your standard ERP system ISO-code. To configure the unit of measure aliases, complete the following steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Unit of Measure Settings > Unit of Measure Types**.
3. In the **Alias** column, enter aliases that represent the ISO code for a particular measurement. For example, enter LB for LBS, enter Tonne,tonnes for TON, and so on.
4. Optionally, add additional ISO codes and their corresponding aliases via the **Insert** row.
5. **Save** your changes.

GR-IV for non-SAP ERP databases

Invoice Processing Agility supports goods received invoice validation (GR-IV) for SAP without additional configuration. This is because Invoice Processing Agility knows how to read the necessary data from SAP. Other ERP systems may or may not have GR-based invoice validation. In order to support matching to GR-lines in Invoice Processing Agility, additional configuration is required in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

When GR-IV is enabled and a line from an invoice is matched, two things occur.

1. A PO line from the purchase order is identified.
2. The lines to post to are identified. In the case of GR-IV, one or more GR lines from the PO line are identified.

For example, a buyer orders ten boxes of pens. The vendor ships this order in two shipments that are invoiced separately. The buyer receives six boxes of pens in the first shipment and then creates a goods receipt (GR) entry for the six boxes. If GR-IV is enabled, the entry for the six box delivery is booked to the GR line rather than the PO line.

The identification of the PO line happens entirely at the level of the PO line itself, and no GR lines are required for this. All of the necessary information is provided within the PO line.

You can configure your ERP database to support goods receipt invoice verification for line matching by following these steps.

1. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
2. Ensure that **Get PO Lines from DB** is selected.
Additional database-specific options are displayed.
3. Select **Enable Matching to GR Lines**.
Additional GR-IV database options are displayed.
4. Configure the GR-IV database options to point to your own database and goods received invoice lines.
5. Click **Save**.
Your changes are saved.
6. Optionally, repeat the previous steps for additional profiles.

Line pairing for material invoices

Invoice Processing Agility performs line pairing for all material purchase orders.

If the invoice relates to a material purchase order, the system takes three 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.

In the first step, the system looks at all of the purchase order line items. Based on the quantity, unit price, total, material number, and description read from the invoice for each line item, the system performs a fuzzy search against the purchase order data to identify the line that best fits the invoice details.

If a single line item is found within the tolerances specified in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**, with the sufficient distance from the next best alternative, then the system selects this as the purchase order line.

In the second step, the system checks if the purchase order line item identified in the first step, is configured in the ERP system to require a specific goods receipt. The purchase order line is set for the 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. It then selects one or more 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 invoices, then the system skips this check.

The third and final step ensures 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 disable this check if required.

The mapping between an extracted unit of measure and the ERP ISO-code for the same unit of measure is configured in the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.

If all three steps are successful then the invoice line item pairs successfully. The system subsequently repeats this operation for all line items on the invoice.

Line pairing for service invoices

The Invoice Processing Agility solution provides functionality for the handling of service invoices. Typically, for such invoices, line item detail is not extracted from the document because the line item breakdown provided by the vendor does not match the purchase order.

For example, a vendor providing consulting services provides a complete breakdown of all time and costs spent on an engagement, each item is an invoice line item. However, purchasing departments are inclined to raise a single line, blanket purchase order marked for "Consulting Services," and the net invoice amount is then booked against this single purchase order line.

The line pairing for service invoices adopts this approach and only functions if the purchase order comprises of a single line item.

It is common practice among many companies to reverse the quantity and unit price for a service line item on the purchase order for the following reasons:

- It is not necessary 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.
- It prevents a purchase order line from being fully invoiced with the difference posted to profit and loss.

Invoice Processing Agility 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 **Solution Configuration Manager > Profile settings > Misc Charge Settings > Misc Charge Settings**.

Line Pairing Correction activity

Invoice Processing Agility supports the pairing of invoice lines against purchase order lines, delivery notes, or service entry sheets. If line pairing fails on any line and the client is configured to enable Line Pairing Correction, the document requires manual correction within a Kofax TotalAgility activity. If Line Pairing Correction is not enabled or line pairing is successful, no manual correction is required. The line pairing setting can be set to false when you work with unpaired lines in a downstream system, such as Process Director or Enterprise Resource Planning.

The Kofax TotalAgility custom form or Line Pairing Correction screen enables manual correction of line item pairings.

This screen displays two tables: Lines Available to Book Against and Unallocated Items from Invoice. The Lines Available to Book Against table contains all the PO lines, goods receipts lines, service receipts lines, or planned miscellaneous charges that are available to allocate document invoice lines against. When line pairing is partially successful, the automatic allocations that the system is able to make, are marked as relevant for posting.

During Line Pairing Correction, the user marks the additional lines that were missed (thus marking them as relevant for posting), adjusting the quantity, total, tax code, and the subsequent debit flag, as appropriate.

The Lines Available to Book Against table displays the following fields.

- Index number (in the margin)
- Quantity to be posted
- Invoice line amount to be posted
- Tax code
- Subsequent Debit / Credit Flag
- Unit of measure
- Item description
- Purchase Order Number
- PO line item number
- Delivery note number

For any line that the user marks as relevant for posting, only the quantity, total, tax code, and the subsequent debit flag columns can be changed by the user. Also, the Apply Line column in this table can be edited by the user.

A second table on the form Unallocated Items from Invoice includes the unallocated lines from the invoice document. The user can select or clear the applied column denoting lines that are applied. This table displays the following fields.

- Image line number
- Quantity
- Unit price
- Line total
- Unit of measure
- Item description

All these fields listed above can be edited by the user. The unselected lines in the unallocated items list are deleted when the user saves the changes. The form also displays the following fields, among which only Unplanned Costs can be edited by the user.

- Total
- Tax total
- Unplanned costs
- Document type (i.e. Invoice or Credit)
- Vendor ID
- VendorName1

A mathematical validation occurs to ensure that the sum of the selected lines from the allocation table and the applied lines from the "Unallocated Items from Invoice" table tally with the (header level total - tax - unplanned costs) value to ensure that the invoice is in balance within a configurable threshold.

The configurable threshold is typically handled in the ERP system, but it is configurable via **Solution Configuration Manager > Global Settings > Tolerance Settings**.

The invoice image is also available for reference.

The Line Pairing Correction screen includes the following elements.

- Display Image button.
This opens the document image in a separate window.
- Complete button.
This validates the `Tax Total + Unplanned Costs + Sum of the Applied Line(s) from both tables = Total` calculation to see if it is within the configurable tolerance. If the document is out of balance, a message is displayed stating the out of balance amount. If the document is balanced, the system returns to the Activity list.
- Save button.
This saves the table data to the document and remains on the form.
- Cancel button.
This exits the form and returns to the Activity list. All changes are lost.
- Complete and Next button.
This validates the `Tax Total + Unplanned Costs + Sum of the Applied Line(s) from both tables = Total` calculation to see if it is within the configurable tolerance. If the document is out of balance, a message is displayed stating the out of balance amount. If the document is balanced, the system opens the next Activity assigned to the user.
- Currency text box.
This is a read-only field that displays the invoice document currency.
- Invoice Total text box.
This is a read-only field that displays the invoice document total amount.
- Tax Total text box.
This is a read-only field that displays the total invoice document header tax amount.
- Unplanned Costs text box.
This is an editable field that displays the total invoice document unplanned costs returned from the line pairing results. This field is editable so that a user can enter additional Unplanned Costs not available during line pairing.

Also, when an error occurs during line pairing, the document is sent to an exception queue with the LPR Exception Code rejection reason. For example, a document can be rejected when there is an error connecting to an ERP system or a database. An administrator can manually re-route the document for line pairing after correcting the issue.

Line Pairing Correction decision

Invoice Processing Agility enables manual correction of unpaired lines, so that the invoice can be posted to an Enterprise Resource Planning system.

The manual process for line pairing is configurable via the **Solution Configuration Manager > Profile Settings > [Line Pairing Settings](#)**.

Documents are sent to the Line Pairing Correction activity if all the following conditions are true.

- The document is an invoice.

- The document invoice type is PO.
- Line pairing is activated within Invoice Processing Agility.
- Invalid reasons, such as MISSING / INVALID PO, MISSING / INVALID VENDOR & PO, or INVOICE AMOUNTS DO NOT ADD UP, must be set for the document.
- Line item extraction is carried out for the document.
- The purchase order lines can be read from the data source.
- The purchase order lines are not all marked for deletion.
- The purchase order lines are not all fully invoiced if line pairing is configured not to consider fully invoiced purchase order lines.
- The reading of purchase order lines is not aborted using `UserExitAbortSAPReadPO`.
- The purchase order number is unique in the purchase order data source if the duplicate purchase order number check is activated.
- The purchase order is released.
- One or more invoice line items cannot be allocated.
- The line item correction screen is activated for the client.

If Line Pairing Correction is enabled and the invoice is not fully allocated, the document is sent for manual correction.

Documents that do not meet all the above requirements bypass the Line Pairing Correction Activity in the Invoice Processing Agility Process.

Documents that require Line Pairing are split out of their current folder during Line Pairing. This means that a single document is sent to Line Pairing Correction at a time and other documents continue processing.

Chapter 12

Document export

Document export is passing data out of Invoice Processing Agility and sending it to a downstream system. For example, sending the extracted document information to a database.

For documents classified as an Invoice, the following extraction methods are supported and performed in the order listed.

1. Export to SAP.
2. Export to Process Director for SAP.
3. PDF file output.
4. TIFF file output.
5. XML file output.
6. CSV file output.
7. Export to Database tables.
8. OCR XML file output.

The following extraction methods are then triggered in order for all classification types.

9. Custom Export via user exit.
10. Void Export via user exit.

Note Any rejected non-invoice documents are not exported.

You can configure your project so that one or more of these export methods are performed for each document. For example, you can export a PDF file, create an XML file output, and then export the document contents to a database.

If an export method fails, the document is suspended and none of the subsequent export methods are attempted. For example, your document is configured to export to a CSV file, export to a database, and export to an XML file. If the database is offline at the time of export, the CSV file export is successful, but when the export to database is attempted, the document is suspended. No attempt is made to create the XML file.

When the problem is corrected and a document is processed a second time, any previously successful export methods are skipped. Only those methods that are outstanding are performed. In the above example, both the database export and XML file export are attempted a second time.

You can enable the different export features in the **Solution Configuration Manager > Export Settings > Export Options**.

Some features require special mapping, such as XML export, database export, and CSV export. These mappings are configured in the **Solution Configuration Manager > Export Settings > Export Mapping**.

Export configuration

The basic settings for any export are configured in the **Solution Configuration Manager > Export Settings > Export Mapping > Export Options**.

Here, it is possible to configure the following export settings.

- The name of the file.
This is either the entire document image filename, or just the URN component.
- The file extension used.
- All XML section tags used within an XML output file, but not for OCR XML output.
- The format of any date fields within the file with an optional separator.
- The connection and table mappings for a database output.

The SAP export is not configured here in the Export Options settings. Instead, SAP output is configured in the **Solution Configuration Manager > Profile Settings > SAP Configuration**

For databases and XML export, the mapping of the extraction data is configured in the **Solution Configuration Manager > Export Settings > Export Mapping > Export Mapping**. These are separated into Header Field Export Mapping, Line Item Export Mapping, GL Export Mapping, and Tax Export Mapping.

For CSV export, it is possible to define multiple export files per exported document. This is configured in the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.

Configure export to SAP

The export of data to SAP occurs in the form of creating posted and parked invoice documents during the Invoice Processing Agility export event.

A parked document within SAP is one where the data is either incomplete or is not confirmed as correct, but sufficient data is provided to create the skeleton of a document that SAP can save in the database.

Parked documents in SAP have the following status.

- A for MIRO invoices.
- V for FB60 invoices.

This differs from other SAP partial-complete statuses, such as the following.

- "Saved as Completed" (status B)
- "Held" (status D).

Activate the creation of SAP documents

You can export the extracted invoice data from Invoice Processing Agility to SAP in order to create invoice documents in SAP.

You can activate the creation of SAP documents, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
3. Select **Create SAP Documents**.
4. **Save** the changes.

Configure the creation of MM-LIV documents

By default, if line pairing and automatic tax code validation are successful, then the system attempts to post the invoice. If either line pairing or automatic tax code validation fails, or an initial attempt to post the invoice is not successful, the document is parked.

Invoice Processing Agility always uses BAPI_INCOMINGINVOICE_CREATE to post MM-LIV invoices unless an alternative is specified. BAPI_INCOMINGINVOICE_PARK is used for parking MM-LIV invoices.

If line items are not available for parking, either because line pairing did not deliver any, or if the `Park With Lines` setting is not selected, the invoice is parked against the vendor ID. If a vendor ID is not available due to a `VENDOR_NOT_FOUND` invalid reason, the order-from vendor on the purchase order is used instead, if line pairing is activated. Additionally, if an MM-LIV invoice cannot be posted or parked, the document export fails.

You can configure the creation of MM-LV documents, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
3. To park and never post MM-LIV invoices, select **Always Park Invoice**.
4. To post but never park MM-LIV invoices, clear **Park Invoice**.
5. If document parking is allowed, clear **Park With Lines**.
This is because line items cannot be saved in a parked document.
6. **Save** the changes.

Configure the creation of FI documents

Invoice Processing Agility provides options to park FI invoices, either through the FB60 or MIRO SAP transactions, depending on your business needs.

Typically, parked FI documents are picked up by SAP workflow for coding and approval.

You can configure the creation of FI documents, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
3. To have all FI invoices parked, select **Park Invoice** and **Always Park FI**.

4. To post invoices using FB60 rather than MIRO using `BAPI_ACC_INVOICE_RECEIPT_POST`, select **Post FI To FB60**.
5. If your business needs FI documents parked using FV60, select **Park FI To FB60**.
6. **Save** the changes.

Integrate with SAP workflows

SAP has its own internal workflow engine, that includes standard workflow templates for many relevant accounts payable activities. For example, completing parked invoices, coding and approving FI invoices, and resolving line-level blocks on MM-LIV invoices. You can also develop your own workflows in SAP.

For implementations that do not utilize a third-party workflow, you can use the SAP workflow to complete invoice processing for documents where Invoice Processing Agility is unable to create a document that is ready for payment in SAP. This may be because it is an FI invoice and coding or approval is required, or because line pairing cannot be completed for an MM-LIV invoice, so the system must park it. In these cases, the documents are routed to users in SAP so that they can be completed at a later time.

An instance of SAP workflow is triggered by an event in SAP. This event can be document parking, or the line item on a posted MM-LIV invoice is blocked by SAP during the three-way match process.

The simplest way to integrate Invoice Processing Agility and SAP workflow is to leverage the workflow framework provided by SAP, and hang completion workflows from events that are generated when Invoice Processing Agility creates an incomplete document.

The following list details some example SAP events that are generated when Invoice Processing Agility creates an incomplete document.

PARKED

The SAP business object associated with this event is BUS2081 (MM-LIV document). This system event is raised automatically by SAP when an MM-LIV document is parked, such as, the document has a status of A.

BLOCKEDPRICE

The SAP business object associated with this event is BUS2081. This system event is raised automatically by SAP when one or more line items on a posted MM-LIV document are blocked during the three-way match process on grounds of price.

BLOCKEDQUANT

The SAP business object associated with this event is BUS2081. This system event is raised automatically by SAP when one or more line items on a posted MM-LIV document are blocked during the three-way match process on grounds of quantity.

CREATED

The SAP business object associated with this event is FIPP (parked FI document). This system event is triggered when an FI document is parked. The triggering of this event must be configured within the FI business framework in SAP (SAP transaction FIBF), and is done programmatically using `SWE_EVENT_CREATE_FOR_UPD_TASK`.

You are responsible for ensuring that the appropriate SAP workflows are available and are configured correctly. You can write a wrapper BAPIs that shares the same interface as `BAPI_INCOMINGINVOICE_PARK`, which subsequent to parking a document, triggers an instance of the appropriate SAP workflow.

Configure Line Pairing

The line pairing function supports reconciliation of invoice lines with purchase order line items. You can configure the following settings that are used in the line pairing operation, both for material and service purchase order types.

- Material purchase orders with or without GR-IV (blank item category on the PO line).
- Purchase orders using external service entry sheets with or without SR-IV (item category D).
- Blanket or limit purchase orders (item categories B or D).
- Internal planned services (item category D where goods receipt/an external service entry sheet is not required).

The line pairing routine is performed irrespective of whether the GR non-valuated flag is checked at the purchase order line item level.

The system supports multi-line versions for all of the purchase order types listed above. With the exception of purchase order lines that require external service entry sheets, the system also supports any combination of the above on a single purchase order.

Configure Line Pairing with SAP

You can configure line pairing with SAP, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Select **Do Line Pairing** and **Get PO Lines From SAP**.
4. **Save** the changes.

Configure Line Pairing for material invoices

If the PO Type of an invoice is "MATERIAL," the system executes the material line pairing routine. The material line pairing routine includes support for pairing to purchase order lines that are set for goods receipt-based invoice verification. Within the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**, there are additional options to control the behavior of line pairing in relation to selecting the correct goods receipt(s) once the purchase order line is determined.

You can configure line pairing for material invoices, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. If you want the system to select a single good receipt only, rather than combination of goods receipts, select **Pair To Single GR**.
4. If you are using a delivery note number and you want to select the goods receipt based on this, select **Find GR Using Delivery Note**.
5. **Save** the changes.

Configure Unit of Measure conversions

When Invoice Processing Agility creates an invoice line, the unit of measure used for each line item must be identical to the unit of measure used on the purchase order line that the invoice line is paired with. This means that if the vendor creates an invoice using a unit of measure other than the one used on the purchase order, the quantity invoiced must be converted to reflect the same physical quantity in the purchase order unit of measure.

The following prerequisites are required in order for lookup capability for SAP to perform the conversions if the correct ratios cannot be determined through any other means.

- The purchase order line item references a SAP material
- The unit of measure, as read from the invoice, is mapped to an SAP unit of measure (if different) in the **Solution Configuration Manager > Profile Settings > Unit of Measure Settings**.
- There is a conversion ratio present on the material master between the invoice unit of measure and the purchase order unit of measure

You can configure unit of measure conversions, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Select **Convert Quantity From SAP**.
4. **Save** the changes.

Configure Line Pairing for service invoices

If the PO Type is SERVICE for a given document, Invoice Processing Agility uses the service purchase order route during line pairing.

You can configure line pairing for service invoices, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
3. Select **Do Line Pairing For Service**.
4. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
5. Select **Read Entry Sheet**.
For example, select this option if a purchase order line has the D item category.
6. Navigate to the **Solution Configuration Manager > Profile Settings > Line Pairing Settings**.
7. To activate selection of service entry sheets using the invoice number, select **Find SES With Invoice Number**.
8. To select only entry sheets using the invoice number, select **Only Use Invoice Number To Find SES**.
9. To prevent the system from posting against service entry sheets that do not have sufficient value left upon them to absorb the amount of the invoice, select **Park If SES Value Less Than Invoice Value**. The document is then parked in SAP if document parking is activated.
10. **Save** the changes.

For line pairing to function against purchase orders that have more than one line item either of type limits or of type internal service, or a combination of both, clear **Skip For Multi Line Limits** in the

Solution Configuration Manager > Profile Settings > Line Pairing Settings. In Validation, the user is usually required to complete any un-extracted line item data (description and total only) that is subsequently used during line pairing.

Configure early archiving with SAP

Early archiving configuration indicates to the system which part of the filename denotes the unique ID of the image as allocated by the image archive.

An ID must be embedded within the image filename and separated by an underscore. The part of the filename that represents the ID is specified in the `Client ID` parameter in the **Solution Configuration Manager > Global Settings > Import Settings**, with the word **COMPONENT** followed by a number that indicates the client ID's position in the filename.

For example, processing an image using the following components has an ID embedded in the filename as follows.

```
12345_2_20120901.tif
```

The first component of the filename is 12345, the second component and ID is 2, and the third component is 20120901. The `Client ID` parameter in the **Solution Configuration Manager > Global Settings > Import Settings** is configured as follows.

```
IMP_VL_ClientID=COMPONENT2
```

The final step to complete the configuration is to set up the linking process between the document in the [archive](#), and the posted/parked document in SAP.

Configure late archiving for SAP

You can configure late archiving for SAP by using the following scenario in Invoice Processing Agility.

- [Configure archiving to an external DMS using SAP.](#)

Configure archiving to an external DMS using SAP

Use this scenario if the destination document management system is connected to SAP, and it is possible to archive images into that archive through the SAP front end. Archives connected to SAP are viewed with the OACO transaction.

You can configure archiving to an external DMS using SAP, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration.**
3. Enter the location of the destination archive in the **Destination Archive** option.
4. Enter the name of the `Z_BW_LATE_ARCHIVE` function in the **SAP Archiving Function** option.
It is necessary that the `Z_BW_LATE_ARCHIVE` function is installed as an RFC-enabled function module within the target SAP system
5. Alternatively, select **Activate SAP Archiving User Exit** to code a custom archiving routine using an alternate custom function within SAP.
6. [Configure](#) the link to use SAP ArchiveLink.

SAP ArchiveLink

Invoice Processing Agility provides the following method for generating an image link for documents created during SAP export.

- [Configuring SAP ArchiveLink](#)

Configure SAP ArchiveLink

When a user views the attachment, SAP communicates with the document management system and retrieves the archived image.

Use the following configuration steps if your image archive system is connected to SAP using SAP ArchiveLink. Within SAP, a list of connected archives are viewable using the OAC0 SAP transaction. The archive system requires sufficient configuration on the SAP side so that it is possible to retrieve and display an image in the SAP front end.

You can configure a link to use an SAP ArchiveLink, by following these steps.

1. Open the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
3. Select **Create Link To External Archive**.
4. Set the **Destination Archive** setting to the destination archive ID.
SAP archive IDs are codes that represent document management systems that are connected to SAP. These codes are typically two characters in length.
5. Navigate to the **Solution Configuration Manager > Global Settings > Import Settings** and map **Destination Archive** as a component of the image filename.
6. **Save** the changes.
7. Navigate to the **Solution Configuration Manager > Profile Settings > SAP Configuration**.
8. Change the following settings:
 - Set the MM Invoice Object setting to MMILOGINV.
 - Set the MM Credit Object setting to MMILOGCRED.
 - Set the FI Invoice Object setting to FIIINVOICE.
 - Set the FI Credit Object setting to FIICREDIT.

Note When creating the link, Invoice Processing Agility uses the workflow document type that is appropriate for the combination of document and invoice type.

9. **Save** the changes.
10. Ensure that SAP is configured to accept the combinations of archive IDs and SAP workflow document types.

Export data to Process Director

Process Director is a packaged accounts payable workflow solution for SAP. Invoice Processing Agility includes a standard integration so that documents are sent to the Process Director module in SAP for further processing when exported.

Configure output to Process Director

Output to Process Director is activated in the **Solution Configuration Manager > Export Settings > Export Options** by selecting the Export to PROCESS DIRECTOR option.

Data is sent to Process Director through a remote function call to SAP. The remote function module that is used is included in the Process Director SAP installation, and is called `/COCKPIT/RFC_DATA_SUBMIT`. This function module is configured in the **Solution Configuration Manager > Export Settings > Export Options** by editing the PD Function Name value.

The SAP connection that is used is specified in the **Solution Configuration Manager > Profile Settings > SAP Configuration**. Select **Connect To SAP** for any connection to take place.

Configure usage of the Process Director generic function

You can also submit data to Process Director by using the generic function module. This module is an API supplied as part of Process Director and can accept cross-application data. The advantages of using the generic function module are that there is no fixed data structure in terms of available fields that are passed, and the function also includes a late archiving feature.

If the generic function is used, then ensure that both the **Export to PROCESS DIRECTOR** and **Use Generic ProcessDirector Function** are selected in the **Solution Configuration Manager > Export Settings > Export Options**. It is also necessary to configure the function module name by entering it into the **Generic ProcessDirector Function Name** option. For example, `/EBY/PDBO_RFC_DATA_RECEIVE`.

In addition, set the **Generic Mapping ID** to the correct mapping ID. This is the name of the schema created within Process Director that contains the mapping between the fields passed via the generic function module to the fields within Process Director. The export fails if no mapping ID is set.

The mapping ID is passed to the generic function via the `IC_MAPID` import parameter. Additional import parameters `IC_OBJ` and `IC_ENV` are set to `IV` and `02` respectively. If necessary, you can modify these parameters using the `SendToSAPProcessDirectorGeneric` user exit.

Invoice data passed to Process Director

The following list provides an overview of the invoice data that Invoice Processing Agility passes to Process Director without any configurations, using both the standard and the generic function module.

The names of the structure, table, or node are listed below along with the names of the corresponding text extensions that are populated.

I_STR_HEADER

COMP_CODE, CURRENCY_SAP, INVOICE_IND, DOCTYPE, PSTNG_DATE, REF_DOC_NO, PAYMT_REF, DOC_DATE, GROSS_AMOUNT, PMNTTRMS, KURSF, DIFF_INV, VENDOR_NO, PO_NUMBER, SGTXT, PMNT_BLOCK, BVTYP, ESRNR, ESRRE, DEL_COSTS, SHEET_NO.

Standard function only - EC_ARC_ID, EC_DBC_ID, E_ARC_OBJ.

I_STR_HEADER > I_TAB_ITEM

PO_NUMBER, PO_ITEM, QUANTITY, ITEM_AMOUNT, INVOICE_ITEM, TAX_CODE, TAXJURCODE, REF_DOC, REF_DOC_IT, REF_DOC_YEAR, SHEET_NO, SHEET_ITEM, COND_TYPE, COND_COUNT, COND_ST_NO, FREIGHT_VEN, TBTKZ, ITEM_TEXT.

I_STR_HEADER > I_TAB_TAX

TAX_CODE, TAX_AMOUNT, TAX_RATE.

I_STR_HEADER > IT_PROCESSLOG (invalid reasons)

TYPE, NUMBER, ID, MESSAGE_V1.

I_STR_HEADER > I_TAB_ACCOUNT

GL_ACCOUNT, NET_AMOUNT, SHKZG, COMP_CODE, TAX_CODE, TAXJURCODE, COSTCENTER, ORDERID, PROFIT_CTR, WBS_ELEMENT, NETWORK, NETWORK_OP, SALES_ORD, S_ORD_ITEM, BUS_AREA.

Process Director and document archiving

Document archiving is mandatory within Process Director because the subsequent work item created in the Process Director workflow requires an image attachment.

There are two available archiving options.

- [Early archiving](#)
- [Late archiving](#)

Early archiving with Process Director (standard function)

Early archiving is where a document image is already archived by the time its document is exported by Invoice Processing Agility. Because of this, Process Director requires the image details in order to create a link between the archived image and the work item in the Process Director workflow.

For the early archiving scenario using the standard function module, Process Director requires the archive image information for all documents it receives. The archive image information includes the following.

- The archive document ID
- The archive ID
- The SAP workflow document type

If any of these are absent, the document is not sent to Process Director and data export fails.

If you use early archiving, the archive document ID must be passed as part of the image filename, and the component of the filename that represents the archive document ID must be mapped as the document URN in the **Solution Configuration Manager > Global Settings > [Import Settings](#)**.

You have two options to determine the archive ID.

- To set the archive ID on a document-by-document basis, it must be included as a component of the image filename and mapped to the **Destination Archive** parameter in the **Solution Configuration Manager > Global Settings > Import Settings**.
- To set the archive ID on a profile-by-profile basis, the **Destination Archive** parameter in **Solution Configuration Manager > Profile Settings > SAP Configuration** must be set to the desired archive ID.

Note A document-specific archive ID takes priority over a profile-specific archive ID.

The population of the interface for early archiving within the standard function module is as follows.

I_STR_HEADER

The text extensions populated are EC_ARC_ID, EC_DBC_ID, and E_ARC_OBJ.

Early archiving with Process Director (generic function)

For early archiving using the generic function module, the following archive information is required.

- The archive document ID
- The archive ID
- The SAP workflow document type

If any of these are absent, the document is not sent to Process Director and data export fails.

The archive document ID must be passed as part of the image filename. The component of the filename that represents the archive document ID needs to be mapped as the document URN in the **Solution Configuration Manager > Global Settings > Import Settings**.

There are two possible ways to determine the archive ID.

- To set the archive ID on a document-by-document basis, it must be included as a component of the image filename and mapped to the **Destination Archive** parameter in the **Solution Configuration Manager > Global Settings > Import Settings**.
- To set the archive ID on a profile-by-profile basis, the **Destination Archive** parameter in the **Solution Configuration Manager > Profile Settings > SAP Configuration** must be set to the desired archive ID.

Note A document-specific archive ID takes priority over a profile-specific archive ID.

SAP workflow document types for MM/FI invoices and credit memos are also configurable in the **Solution Configuration Manager > Profile Settings > SAP Configuration** using parameters **MM Invoice Doc Type**, **FI Invoice Doc Type**, **MM Credit Doc Type**, and **FI Credit Doc Type**.

The population of the interface for early archiving within the generic function module is as below.

IT_ARC_HDR

The text extensions populated are ARC_DOC_ID, ARCHIV_ID, and AR_OBJECT.

Late archiving with Process Director

Late archiving is where a document image is exported along with the invoice data to Process Director and is archived afterwards.

Note Late archiving is available for use with the generic function only.

The late archiving option is available for use with the generic function only.

To activate late archiving, select **Late Archive Via ProcessDirector** in the **Solution Configuration Manager > Export Settings > Export Options**. At the time of export, Invoice Processing Agility loads the image file, converts it into hexadecimal, and sends it to the generic function via the "IT_ARC_OBJ" table. Each table row consists of a maximum of 1024 hexadecimal pairs, and each hexadecimal pair representing one byte of the file.

Documents are archived as TIFF images. It is possible to change this to PDF format by selecting **Late Archive As PDF** in the **Solution Configuration Manager > Export Settings > Export Options**. Activating this setting results in late archiving for every PDF document. Specify a temporary directory in the **PDF Temp Directory** option. This directory is used by Invoice Processing Agility to create a temporary PDF file for the converted image, before that image is passed to Process Director.

If the temporary directory is not configured or the document cannot be written to this location, then document export fails.

Late archiving also requires the following information.

- The archive ID
- The image document type (file extension)

The archive ID can be configured either as a component of the document filename mapped to **Destination Archive** in the **Solution Configuration Manager > Global Settings > Import Settings**, or in the **Destination Archive** option in the **Solution Configuration Manager > Export Settings > Export Options**. The former always takes priority, if available. If no archive ID can be determined, the export fails.

The document type, which is the image file extension, is determined by the system automatically and no configuration is required. This is subsequently used in Process Director to determine what document type is used in the SAP workflow.

The specific parameters populated within the generic function module relating to late archiving are as follows.

IT_ARC_HDR

The text extensions populated are ARCHIV_ID, DOCUMENT_TYPE, BINLENGTH, FIRSTLINE, and LASTLINE.

IT_ARC_OBJ

The text extension populated is LINE.

Process Director returned values

When a document is successfully received by Process Director using either the standard or the generic function, it is assigned a work item ID number. This is returned back to Invoice Processing Agility where it is stored in an internal text extension called `tmpPDWorkItemID`.

If Process Director is able to create a document in SAP immediately, this document number is also returned to the Invoice Processing Agility text extension `ERPDOCNO`. The document number is not passed back if the generic function module is used.

If a work item cannot be created in Process Director, the export fails and diagnostic information is written into the Invoice Processing Agility Coreworker log file. Diagnostic information is also written into the log file if a document cannot be posted immediately.

Process Director standard User Exit

The `SendToSAPProcessDirector` user exit is available to pass additional data to the Process Director remote function module at header level.

Within the user exit interface, the `oBAPI` parameter represents the connection as the whole; `oBAPIHeader` represents the header data `I_STR_HEADER` interface.

If the user exit `blAbort` parameter is selected, the call to the Process Director is aborted. This is the same as a document failing document export in Invoice Processing Agility.

Process Director generic function User Exit

The `SendToSAPProcessDirectorGeneric` user exit is available to pass additional data to the Process Director generic remote function module. It is called just before the actual call to SAP, after all data structures are populated by the standard system.

Within the user exit interface, the `oBAPI` parameter represents the connection as the whole, and is referenced by the BAPI tables and structures.

If the user exit `blAbort` parameter is selected, the call to the Process Director is aborted. This is the same as a document failing document export in Invoice Processing Agility.

CSV export file creation

There are several settings that determine what exports are used for your project. These settings are profile-specific, which means that each client can have a different configuration. Also, it is possible to add multiple configurations so that there is more than one file.

The following settings are configured in the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.

- The destination output directory for a configured CSV export.
- Whether a CSV export file is written out for PO invoices, NON-PO invoices, or both.
- The file extension of the export file.

- The name of the file along with an optional file prefix.
The entire document image filename, or just the URN component is used.
- Whether a copy of the original image is also written to the output directory.
- The format of any date fields within the file with an optional separator.
- The fields output and the order of those fields in the file to a maximum of five lines.
- Whether line items are output and what line item detail is included.

Add a CSV export file

If you want to add an export file, you can do this by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.
A list of existing exports is displayed.
3. Edit the settings as required.
4. Click **Insert**.
A new line is added to the table with a unique Index.
5. Click **Save**.
Your changes are saved.
6. Optionally, add another output file or [copy](#) an existing output file.

Copy a CSV export file

If an export file already exists that is quite similar to what you need, you can copy it rather than creating one from scratch.

You can copy an existing export file by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.
A list of existing exports is displayed.
3. Locate the export output file you are copying, select its left-most check box, and click **Copy Data**.
A row is added to the table that is a duplicate of the selected output file.
4. Modify the copied row as needed.
5. Click **Save**.
Your changes are saved.
6. Optionally, [add](#) or copy another output file.

Late archiving with mobius

Late archiving hands a document image to a downstream archiving system and is performed during document export.

Invoice Processing Agility can generate a Mobius-compliant list file for import into the Mobius archiving solution during document export.

You can configure late archiving with Mobius, by following these steps.

1. [Open](#) the Solution Configuration Manager.
2. Navigate to the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.
3. Add a new entry to this table and enter the following values and then click **Insert**.

Setting	Value
Index	Enter the next integer in the sequence
Output File	Selected
Combined File Per Batch	Selected
Filepath	\\myMachine\MobiusImportF1
File Name	Leave blank
File Type	TXT
File Prefix	F1
Separator	Leave blank
Date Format	Leave blank
Date Separator	Leave blank
Invoice Type	NPO
Output Image	Selected
Format Line 1	REPORT-ID=FIDOC
Format Line 2	FILE=<%TND>,TYPE=TIF,"SECTION=<%ERP>"
Format Line 3	TOPIC-ID=SCANDOC,"TOPIC-ITEM=<%TNF>"
Format Line 4	TOPIC-ID=COMPCODE,"TOPIC-ITEM=<%CCO>"
Format Line 5	TOPIC-ID=VDRLINK,"TOPIC-ITEM=<%ERP>"
Line Item	Leave blank

4. Optionally, add additional entries for PO and NO-PO invoices, each in different directories if required.
5. In the List file, populate the `SAPVDRLINK` topic ID with the details of any documents created in SAP.

Note The document export fails if the Mobius list file cannot be written to the directory specified.

6. **Save** your changes. .
7. Navigate to the **Solution Configuration Manager > Export Settings > Export Mapping > CSV Export Configuration**.
8. Select **Output CSV File** to generate this list file for the export profile ID.
9. **Save** your changes. .

Export User Exits

In addition to the [export methods](#) and their settings in the Solution Configuration Manager, the following [user exits](#) are available so that you can further customize your export settings.

CSVFile

Use this user exit if you want to customize the configured CSV output on a header level. For example, to include additional fields to the export file.

CSVFileLine

Use this user exit if you want to customize the configured CSV output on a header level. For example, to include additional columns to the export file.

XMLOutput

Use this user exit to add custom fields to the XML output file.

OCRXMLOutput

Use this user exit if you want to edit the body of the OCR XML file.

DBHeaderExport

Use this user exit to add custom header fields to the standard database export function, or to change the value of an existing field.

SentToSAPProcessDirector

Use this user exit to specify additional parameters for the [BAPI](#) call to SAP when an invoice is sent to Process Director using the `RFC_DATA_SUBMIT` function module.

SendToSAPProcessDirectorGeneric

Use this user exit to specify additional parameters for the BAPI call to SAP when an invoice is sent to the Process Director generic function module `/EBY/PDBO_RFC_DATA_RECEIVE`.

ExportFailure

Use this user exit to implement features for a failed export.

ExportSuccess

Use this user exit to implement features for a successful export.

SAPPostingFailure

Use this user exit to implement any features if the SAP document failed to park or if parking is not allowed.

SAPPostingRetry

Use this user exit to change the parameters passed to SAP based on the error message for a second attempt to post.

CustomExport

Use this user exit to implement your own kind of export. Not that this user exit cannot be configured anywhere. It is called when it is implemented.

VoidDocumentExport

Note that this user exit is not triggered by default by Invoice Processing Agility. It is meant for customizing the ParkNAIDocument process that you can implement.

Possible export failures

In some cases, it is not immediately obvious why an export fails. The following are some of the reasons why an export fails.

- The system cannot read the Invoice Processing Agility Tax Table so the system cannot determine the tax code.
- The system needs to export the TIFF image to a designated directory but does not have write access to that directory.
- The system needs to export a PDF to a designated directory but does not have write access to that directory.
- The system needs to create an Invoice Processing Agility results file in a designated directory but does not have write access to that directory.
- The system needs to create a CSV output file in a designated directory but does not have write access to that directory.
- An export needs written to a database but the database insert or update is unsuccessful.
- The system needs to create an XML file in a designated directory but does not have write access to that directory.
- The system needs to do line pairing but connectivity issues arise when trying to read purchase order data or service entry sheet data.
- A custom export fails.
- Export to Process Director for SAP fails.
- An unexpected error occurs.

Document management system integration

Invoice Processing Agility supports integration with document management systems (DMS) in both the early and late archiving scenarios.

During early archiving, the image is archived prior to reaching Invoice Processing Agility. In this scenario, Invoice Processing Agility requires a copy of the archived image with the unique archive document ID embedded into the document file name. Settings in the **Solution Configuration Manager > Global Settings > Import Settings** define whether this unique archive document ID constitutes the entire file name or a component of that file name. During document export, the archive document ID is passed downstream through the Invoice Processing Agility URN field.

During late archiving, the image is archived after it is processed in Invoice Processing Agility. The standard CSV file output can be configured to produce an import file compliant with Oracle ECM.

ERP system integration

Integration to downstream ERP systems with Invoice Processing Agility is possible via the following interfaces:

- Flat file transfer
- Export to database staging tables

The various export options can be activated in the **Solution Configuration Manager > Export Settings > Export Mapping > [Export Options](#)**.

SAP integration

BAPIs/functions calls can be used by Invoice Processing Agility.

The RFC calls used by Invoice Processing Agility use the following SAP functions:

BAPI_PO_GETDETAIL

Retrieves details for a given purchase order number.

BAPI_INCOMINGINVOICE_CREATE

Creates a posted MM or FI invoice.

BAPI_INCOMINGINVOICE_PARK

Parks an MM or FI invoice.

BAPI_ACC_INVOICE_RECEIPT_POST

Posts an FI invoice.

RFC_READ_TABLE

Executes a select statement on a standard SAP table as the user has the necessary permissions. This function is used as follows:

- Validate currency entered by a users against SAP.
- Retrieve the purchase order line conditions and their respective vendors for posting miscellaneous charges and handling third-part freight invoices.
- Read plant data from SAP.

Aside from the purchase order line conditions, a database lookup alternative is available to minimize RFC communication with SAP.

ARCHIV_CONNECTION_INSERT

Creates a link between an SAP document and an image in an external archive.

Z_BW_LATE_ARCHIVE

If late archiving is required, this custom function archives an image via SAP to an external archive.

BAPI_COMPANYCODE_GETDETAIL

Retrieves the details for a given company code.

Z_BW_PARK_FI_INVOICE

This function has the same interface as the [BAPI_INCOMINGINVOICE_PARK](#) function. It creates a parked FI invoice or credit memo as it was entered manually through the `FV60` SAP transaction. SAP does not provide an equivalent so this must be installed if you want to park FI invoices via `FV60`.

BAPI_TRANSACTION_COMMIT

Commits changes to the SAP database once a document is created.

BAPI_TRANSACTION_ROLLBACK

Rolls back changes in the SAP database if document creation fails.

BAPI_ENTRY SHEET_GETDETAIL

Reads service entry sheet data from SAP.

It is used during the line pairing operation for all purchase orders that are set for service-based invoice verification (SR-IV) to read the entry sheet line item data. It is also used for non service-based invoice verification purchase orders to check for a multiple account assignment.

The call to this BAPI can be disabled in the system configuration if required. If however, you disable this function, the system will not be able to complete line pairing against SR-IV purchase orders. In addition, the system is unable to pose against a non-SR-IV purchase order if the entry sheet has multiple account assignments.

Export error handling

If one or more documents fail document export, these documents are removed from the job and the successful documents continue on with their processing.

The failed documents are rejected and sent to the `ExportFailed` queue. In this manual step, an operator reviews the documents and resolves the problem based on the error message. For example, a group of documents failed because the export database was unavailable. The operator can Complete the folder when the database becomes available.

After the export failure reason is resolved, the operator marks the folder as "Complete." This unrejects all of the documents and send them to the Export activity again.

MarkView export

The MarkView export settings are primarily used to configure export of invoices to MarkView.

The Invoice Processing Agility configuration database utilizes the vendors stored in EBS to match invoices against known vendors, validate POs, and pair PO lines.

A Kofax TotalAgility process is scheduled to copy the vendor data from EBS to the Invoice Processing Agility Vendor table.

Take the following into consideration when configuring MarkView export.

- 64-bit Oracle Data Access Components (ODAC) 11.2.0.2.1 or 12.1 must be installed on all Kofax TotalAgility servers.

- There are three MarkView job schedules to update vendor, company, and employee data that must be enabled and run before the `AddressData2CSV` job.
 - Update MarkView Vendors
 - Update MarkView Companies
 - Update MarkView Employees
- You must update the `@profileID` and `@sqlConnectionGroup` parameters in the **UpdateMarkView.sql** script and then execute the script.
- The PO number format must be added in the **Solution Configuration Manager > Profile Settings > PO Number Settings > PO Number Formats**.
- Configure EBS for automatic tax calculation.
- Service invoices/blanket POs are not supported.

Import EBS data for MarkView integrations

You can configure Invoice Processing Agility for PO and Company lookups by following these steps.

1. Update the Invoice Processing Agility configuration database.
 - a. In **Solution Configuration Manager > Global Settings > Database Settings**, create an Oracle Connection for the MarkView database using OLEDB.
Enter a unique **Connection Group Index ID** and a **Connection String**. The connection string can be as follows.

```
Provider=OraOLEDB.Oracle;User Id=user; password=pwd;
Data Source=serverName.company.com:1522/vis01;
```
 - b. **Save** your changes.
 - c. Navigate to **Solution Configuration Manager > Export Settings > Export Options**.
 - d. Enter a value for the **Description**.
For example, Marview export.
 - e. Clear **Output PDF**.
 - f. Select **Export to MarkView**.
 - g. Select the MarkView database connection string index.
This value is defined in the **Solution Configuration Manager > Global Settings > Database Settings**.
 - h. Enter a value for the **UserName** and **Password**.
 - i. Locate the `Database_Scripts\Update\UpdateMarkView.sql` script from the installation zip file.
 - j. Edit the `UpdateMarkView.sql` script with the `@profileID` and the `@sqlConnectionID` from step 1.1, and execute the script.
This creates a list of company codes with associated information, such as company names, addresses etc, updates the required XML export settings, and configures PO lookups.
2. Activate the Company job schedule in **TotalAgility Designer > System Settings > Job Schedules > Category: InvoiceProcessingAgility > Update MarkView Companies**.
 - a. Select **Yes** to lock this item for modification.

b. Set **Active** to **Yes**.

c. Click **OK** to save.

The Company Codes from MarkView are synchronized and available in Invoice Processing Agility.

3. Activate the Vendor job schedule in **TotalAgility Designer > System Settings > Job Schedules > Category: InvoiceProcessingAgility > Update MarkView Vendors**.

a. Select **Yes** to lock this item for modification.

b. Set **Active** to **Yes**.

c. Click **OK** to save.

The Vendors from MarkView are synchronized and available in Invoice Processing Agility.

4. Activate the Employee job schedule in **Kofax TotalAgility > System Settings > Job Schedules > Category: InvoiceProcessingAgility > Update MarkView Employees**.

a. Select **Yes** to lock this item for modification.

b. Set **Active** to **Yes**.

c. Click **OK** to save.

d. Ensure that the `AddressData2CSV` job schedule runs after the `Update MarkView Vendors`, `Update MarkView Company Code`, and `Update MarkView Employees` job.

This job schedule creates the CSV files in the location configured in the **Solution Configuration Manager > Global Settings > ASE Database Settings**.

The Employee data from MarkView is synchronized and available in Invoice Processing Agility.

Debug logging

If the `IPALOGLEVEL` is set to `Debug`, additional files for extra debugging are created in the `IPALOGDIR/MarkView` folder.

Chapter 13

Common logging

Invoice Processing Agility uses a common log structure to record information, warnings, and errors. This helps administrators to troubleshoot issues easily.

Logging in Invoice Processing Agility is available from both Kofax TotalAgility and the Transformation Server. Logging can be done for various activities in Invoice Processing Agility, such as export, validation, or configuration.

Invoice Processing Agility logs the following types of information.

- Logging level
- Process ID
- Thread ID
- Timestamp
- Message

Logging in Invoice Processing Agility can be configured with two server variables.

- Logs are written to the `IPALogDir` directory. You need to create this directory if it is not configured.
- The minimum level used is `IPALogLevel`.

The following log files are created.

- `IPA_CoreWorker.log`
- `IPA_TransformationServer.log`
This is generated by the Transformation Server and contains details from the validation phase.
- `IPA_Web.log`
- `IPA_Extraction.log`
This is generated by the Transformation Server and contains details from the extraction phase.

Note Since the Transformation Server usually starts multiple extraction process instances and every extraction process instance uses its own log file, the log files for the extraction server have a number as a suffix, such as `IPA_Extraction1.log` or `IPA_Extraction2.log`.

The log files for the Transformation Server, that is `IPA_TransformationServer.log` and `Web`, that is `IPA_Web.log` can also have numbers as suffixes if multiple instances are running on a single machine.