ONESOURCE INDIRECT TAX INTEGRATION FOR SAP

USER GUIDE

PRODUCT VERSION 6.5.0.0

Document Version 1

THOMSON REUTERS™

© 2020 Thomson Reuters/ONESOURCE. All Rights Reserved. Proprietary and confidential information of Thomson Reuters. Disclosure, use, or reproduction without the written authorization of Thomson Reuters is prohibited. In compliance with the license agreements for the Open Source Libraries leveraged by Thomson Reuters, our customers can obtain copies of these libraries by contacting Technical Support at https://tax.thomsonreuters.com/support/onesource/indirect-tax/

The software documented within is Patent Pending in the United States.

DOCUMENT HISTORY

Version Number	Version Date	Summary
v1	March 2020	First version of this guide for ONESOURCE Indirect Tax Integration for SAP 6.5.0.0

Table of Contents

Introduction 1

Welcome to ONESOURCE Indirect Tax Integration for SAP 1
Who Should Read This Guide? 1
Prerequisites 2
Resources 3
Support Protocol 4
Style Conventions 4

Integration Overview 6

What is Integration for SAP Version 6? 6
Quick View of New Features 6
Benefits of Using ONESOURCE Indirect Tax 11
Seamless Integration 11
Accurate Tax Calculation 11
Auditing/Reporting 11
User Processes That Trigger Determination Tax Calculations 11

Architecture and Design Overview 12

The ONESOURCE Indirect Tax Suite 12
Glossary 15
The Data Integration Model: The Train Station Analogy 16

New Integration Features and Options for Setup 18

Look and Feel 19
All Configuration within SAP Tables 19
New ONESOURCE Menu within SAP 19
Use of New Authorization Objects and Roles 22
Core Function Improvements 25
Flexible use Between Modules of SAP-SD, MM, FI 25
Remove Limitations on Number of Tax Codes in SAP 25
Removal of Jurisdiction Code Methods 26
Removal of Limit on Attribute Mapping 26
Dynamic Creation of Tax Authority Conditions Within the Tax Calculation 26
Separate Tax Authority Lines for Freight 28
Document Level Calculation of Tax 28
Use of Calculation Schema in MM Purchasing 29
Data Mapping and Storage 29
New Flexible Field and Address Mapping 29
Performance Improvement with Dynamically Generated Code 30
New Support of Tax Data Storage For All Business Transactions 31
New Logic for the Assignment of General Ledger Accounts 32
Reporting 33
Use of SAP Standard Reports 33
Tax Data Report 34
New Log Report and Configurable Logging Methodology 37
The Developer's Log: A New Analysis tool 38
Special Functions 40
Support for Plants Abroad 40

Cash Discounts Processing 41
Cash Discounts On Legacy Documents 42
Deferred Taxes 42
Evaluated Receipt Settlements in A/P 43
Down Payment Processing 43
Consignment and Pipeline Processes 44
Service Entry Sheets In A/P 45
Partial Self-Assessment for Canada and Other Offsets 45
Additional Features 45
Buyer and Seller Role on FI Transactions 45
Mix of US Sales Tax and Use Tax Accrual on Same Invoice 46
Changing Ship-to/Ship-From Address at Invoice 47
Unplanned Delivery Charges in MIRO 50
Creating a New Address for the ADRC Table 52
US Pay as Billed Tax Without a Call to Determination 53
Audit Save Process: Explanation of the Journeys Used 55
Ability to Assign a Tax Code as Not Relevant to Determination Tax Call 56
Use of Tax Filters to Remove Certain Tax Codes 56
Summarization of Tax Data Within BSEG and BSET Tables 56
Use of Tax On Gross Amount (FB00 set up) 57
Tax Splitting in Mix of NVV and non-NVV lines 57
Clearing Header Tax Code on FI Transactions 58
Multiple Account Assignment on P.O and Optional Address Override Column 58

User Processes 61

Log Reader 61
Prerequisite 61
Accessing the Log Reader 61
Log Archive Feature 63
Data Popup Tool 66
Audit Database Report 73
Accessing the Audit Database Report 74
Audit Status Reprocess 76
Accessing the Audit Status Reprocess 76
Reconciliation Extract Report 78
Purpose and Benefits 78
Business Process 78
The Reconciliation Extract Process 78

SAP Transaction Samples 84

Sample Order-to-Cash Scenario 84
Processing a Sales Order 84
Displaying Accounting Document 90
Sample Purchase to Pay Scenarios 92
Processing a Purchase Order 92
Processing a MIGO Receiving Document 93
Processing a LIV Document 94
Displaying a LIV Document 96
Sample NON- PO Vendor Invoice 99
Processing a NON- PO Vendor Invoice 99
Display a Vendor Invoice 101
Standard SAP VAT Report 102
Running the Report 102
Report Configurations 104

Processing a Plants Abroad Stock Transport Order 107
Reviewing Tax Details in Table /IDT/D_TAX_DATA 117

Appendix 1: Other Features 119

Log Formatting 119
Prerequisite 119
XML Tools Plug-in for Notepad++ Install 119
Making Notepad++ your Default Text Editor 120
Reading a SAP Log File with the New Setup 121
Comparing Log Files 123
Using SOAMANAGER to Access Additional Error Messages Not Displayed in the Log 123
Tracking of Integration Release Version 126

INTRODUCTION

WELCOME TO ONESOURCE INDIRECT TAX INTEGRATION FOR SAP

Corporations using SAP as their Enterprise Resource Planning (ERP) system can simplify their worldwide Indirect Tax requirements by implementing ONESOURCE Indirect Tax Suite. The suite includes Determination, Integration for SAP, Reporting, and Compliance. The benefits provided by ONESOURCE Indirect Tax Suite are:

- Fast, accurate sales, use, consumer's use tax, and VAT results.
- Monthly tax rate and rules updates for over 175 countries.
- Integrated tax calculation with SAP minimizing user decisions and tax errors.
- Removal of the need to change SAP tax codes each time a rate/rule changes, eliminating business interruptions, and running out of tax codes in SAP.
- Complete audit database from which you can generate both standard and custom reports aswell as returns.

ONESOURCE Indirect Tax Integration for SAP 6.X is a totally new interface designed, built, and maintained by Thomson Reuters. It's a new global tax integration solution designed from the ground up with integration pointing into SAP ECC and HANA application modules as desired. It consists of a data collector, tax interface, and return process of tax results to the calling application with G/L integration in support of downstream SAP processes such as standard VAT reports and returns processing. It makes use of the SOAP (Simple Object Access Protocol) provided by SAP to communicate with ONESOURCE Indirect Tax Determination. The new Integration enables worldwide tax calculations, including VAT, US Sales and Use Tax, and other country-specific taxation.

The interface is entirely built within the SAP Development Workbench, including a user menu for all interface related configurations, setups, and reports. The interface has a new field mapping solution allowing a Tax Business Analyst to map SAP data to Determination and vice versa via a customization table, eliminating most of the user-exit coding of the past. Tax calculation logs can be accessed via a transaction with a search function from within SAP greatly simplifying tax setup, analysis, and troubleshooting.

WHO SHOULD READ THIS GUIDE?

If you are responsible for overseeing setting up ONESOURCE Indirect Tax Integration for SAP, you will need to coordinate help from the following people:

- SAP Business Systems Analyst
- SAP Configuration Consultant
- SAP Technical Resource (ABAP Programmer)
- SAP Security Contact
- Tax Professional

Make this guide available to each of these contributors to ensure you have a successful installation.

PREREQUISITES

For a seamless and successful deployment of Integration for SAP we highly recommend that you follow this sequence of documents:

1. *User Guide*
2. *Installation and Programmers Guide*
3. *Configuration Guides*

When working on Integration for SAP you must have a deep knowledge of the SAP tax features, covering all aspects of FI, MM, and SD and have spent significant time either as an expert configurator or consultant in these areas. Because the setup of tax integration with ONESOURCE Indirect Tax also includes technical work in the ABAP Workbench, such as data dictionary changes and ABAP coding, you must be able to understand and interpret these changes as well. We recommend that you assemble a team to implement this product because it requires both functional and technical input. Your team should include someone who thoroughly understands business requirements and processes, as well as someone who can implement the required software changes.

Please take the following into account before setting up the Integration for SAP:

- This guide assumes a fresh install of the Integration for SAP. Customers who are upgrading from a prior 5.x version of Integration should contact Thomson Reuters Indirect Tax.
- Minimum SAP system version must be ECC 6.0, EHP 5. Please see tested platforms by Thomson Reuters in Platform Information section.
- Minimum Determination version must be at 5.5 or greater due to the use of the Tax Code Qualifier function.
- It is assumed that the people who install, configure, and use the tax interface in SAP have some basic understanding of the overall ONESOURCE Indirect Tax Suite of products and how they interact with each other.

RESOURCES

Resource	Description
Customer Support	Look for answers in the Knowledge Base, or to open a support ticket.
User Guide	This is an overview of the architecture, basic business processes and touch points as they relate to Sales and Use tax, as well as VAT scenarios in FI, SD, and MM. The target audiences are the Business Systems Analysts, Consultants, and Tax Professionals who setup the taxprocesses in SAP.
Installation and Programmers Guide	This guide instructs on how to install the Integration for SAP. The target audience is the Basis person that will process the application of the transports to the SAP system and the ABAP programmers that will perform the required include statements within the user exits and other coding blocks. There is also discussion in this manual for the ABAP programmer regarding customization logic and how custom additions to the programs should be added to the system if needed in the future. This guide describes the supported combinations of operating systems, databases, and application servers/web containers. This guide lists the end-of-life dates for ONESOURCE Indirect Tax Integrations for SAP. Consult this guide to see which combinations of software we test with Integrations.
Configuration Guide SAP Tables	This guide instructs how to configure and setup SAP tables and processes to enable tax calculations to meet your unique requirements.
Configuration Guide ONESOURCE tables	This guide instructs how to configure and setup our ONESOURCE Indirect Tax tables and processes to enable tax calculations to meet your unique requirements.
Configuration Guide for Special Functions	This guide instructs how to configure and setup SAP and Integration tables and processes to enable tax calculations to meet your unique requirements for special functions within SAP such as Plants Abroad, Cash Discounts, Deferred Taxes, Service Entry Sheets, etc.

SUPPORT PROTOCOL

The ONESOURCE Indirect Tax Integration for SAP is built, maintained, and owned by Thomson Reuters Tax & Accounting Indirect Tax. The business unit has a dedicated group of SAP Business Systems Analysts, ABAP Programmers, and Quality Assurance people who have built this product. We follow SAP best practices, development standards, and strive to minimize the impact this solution will have on your SAP environment. With any 3rd party Add-On in SAP, the vendor providing the solution is responsible for support of that Add-On. In the case of an issue with the ONESOURCE Indirect Tax Integration for SAP please follow these simple steps to open a support ticket with Thomson Reuters:

1. Identify the potential issue and gather all necessary facts (log files, scenarios, configurations, screen prints).
2. Provide steps to reproduce the scenario leading to the issue.
3. Provide system environment information such as your SAP Version, EHP and SP level, as well as the Integration version.
4. Open a support ticket with Indirect Tax at https://tax.thomsonreuters.com/support/onesource/indirect-tax/.

STYLE CONVENTIONS

Style conventions are a guide to how to interpret information.

Bold text indicates most user interface elements, such as:

- Data you are expected to enter, such as in a text field
- Pages, buttons, tabs, and field names
- Dialog boxes, drop-down lists, selections within lists, and check box titles
- Windows
- Menu items

Italic text indicates the following:

- File and folder names
- Software programming terminology and executable files
- Document titles

CAPITALIZED text indicates keyboard commands, such as ENTER, or database components.

`Courier` text indicates command-line input/output.

<brackets> indicate user entry. For example, <host> indicates you should replace the text and angle brackets with your server name.

Book titles are shown in italics and sections within a book are in quotation marks, such as “Tips and Tricks” in the *ONESOURCE Indirect Tax User Guide*.

Indicates suggestions or additional, detailed information.

Indicates important text that should be carefully reviewed before proceeding.

INTEGRATION OVERVIEW

WHAT IS INTEGRATION FOR SAP VERSION 6?

Integration version 6 is a brand-new interface designed to significantly improve the user experience and dynamically expand current and future system capabilities for indirect tax calculations, reporting, and data mapping. The new platform moves away from the use of the SAP Standard Tax Interface and SAP JCo adapter to new functionality based on ABAP coding directly within ONESOURCE Indirect Tax's SAP registered namespace. Users are no longer limited by jurisdiction code based calculations and design originally written for the US and Canada sales tax structure. This provides far greater flexibility to meet challenging and ever changing global tax requirements and simplifies US and Canadian tax.

The new interface is designed with the global customer in mind and closely to SAP's structure and logic for global VAT processing. Users can take advantage of many standard SAP functions that are only made available with a non-jurisdiction based configuration. As future SAP features and functions become available to customers, the new design will likely avoid costly modifications to Integration programs.

Tax code usage within the new interface provides static assignment of tax codes based on downstream reporting and compliance needs without the requirement of assigning a tax rate, eliminating setup of different tax codes when tax rates change. This new logic allows the use of SAP standard reports and functions and avoids running out of possible tax code assignments. Support of a large number of global taxing authorities and historical rate changes are not an issue.

Users can now take advantage of standard VAT reports, plants abroad configuration, and many other standard SAP features that were a challenge or impossible with the prior jurisdiction code based interface. Exciting improvements have also been made to remove limitations on the summarization of taxing authorities, number of fields mapped to Determination requests and responses, and other key elements required for meeting current and future global tax challenges.

Below is a reference table of some of the many new features and functions that are now available with the new Integration design. Throughout the guides we will discuss in more detail each of the new features listed and further explain what opportunities are now available to the system user.

QUICK VIEW OF NEW FEATURES

Function	Description
All configuration within SAP tables	All configuration is now located in a separate ONESOURCE Indirect Tax SAP partner namespace of /IDT/.
New ONESOURCE user menu within SAP	New user menu allows access to Integration configuration tables, functions, logs, and reports directly within SAP.
Authorization objects for users and general administrator	SAP transaction codes now allow for access control to setup and configuration settings. Access to tax calculation logs and reports are secured by IDT authorization objects. This allows access control based on a company's own security protocol.

Function	Description
New flexible field and address mapping	New mapping is put in place to allow users to map request attributes and response fields from Determination directly with the use of tables. This simplifies the data mapping process and reduces the requirement of extensive ABAP coding. This was also updated in the 6.4.1.0 release to include major performance enhancements with the addition of dynamically generated internal code whenever a mapping line is changed or added. Table user interface has also been updated.
Tax data storage for all business transactions	A new table has been created to store data from Determination in SAP for downstream processes for all business processes calculating tax. This limits and ultimately will avoid appends to SAP KONV table. Tax details are stored for SD, MM, and FI transactions.
New tax code and account assignment using Determination Tax Code Qualifier	Tax code and account key logic used by SAP to assign the G/L account number are now established via Determination's Tax Code Qualifier function and the use of specific condition logic to assign the correct codes and G/L account based on reporting needs.
New log report and configurable logging methodology	Multi-level log configuration is now available within SAP and can be maintained by user, transaction code, and other conditions. Changes can be made on the fly without taking down Integration and stopping tax calculation. New flexible log viewer is provided for searching and displaying tax calculation logs to quickly troubleshoot taxing issues.
New log file delete/archive process	Menu option has been added to allow management of the log entries by deletion or download to zip file.
New Developer log report and configuration table	An additional log for developers has also been added as of release 6.4.1.0 which gives the developer additional views of the background processing with special features that can be turned on to aid in program debugging and system analysis, such as routes and journeys that were activated in the call and other analysis functions.
New Developer log delete function	Ability to delete old developer logs that were created for analysis and debug purposes.
New audit report	New audit report tracks and identifies any tax entries that have been posted to SAP General Ledger but have not updated the tax audit database. Report can also submit missing items for repost to audit.
Flexible use between modules of SAP i.e.: SD, MM, AR, AP, FI	SAP users on ECC 6.0 EHP5 or greater can now take advantage of SD, MM, and FI tax calculations. Ability to configure some or all modules as needed as well as combine usage of ONESOURCE Indirect Tax and SAP native tax calculation methods by module.
Removal of limit on number of tax codes	Use of multiple tax codes according to their taxing authority and reporting needs but still retain the rate structure changes within Determination without having to create additional codes for rate changes.

Function	Description
Removal of jurisdiction code method	Taxability now controlled by the address of the taxable entity and not by the assignment of a jurisdiction code.
Removal of limit on attribute mapping	Users are no longer limited by the number of fields they can map from SAP to the Determination request and the response from Determination back to SAP. Ability to map 40 attributes at both header and again at line item level.
Dynamic creation of tax lines removing limitation of 10 jurisdiction levels	External tax interface was limited to 10 jurisdiction levels for the summarization of tax authority information by level. This is now a dynamic process resulting in a possible number of 99 separately returned taxing authorities to the line item tax calculation. (SAP limited to 99)
Separate tax lines for freight	Ability to have separate tax authority lines on the conditions tab of documents for freight handling separate from the related expense line.
Authority text now displays on conditions tab	The name of the tax authority now displays on the conditions tab of the documents.
Per document calculation in all modules	Per document calculation in SD, MM, and FI allows for proper calculation of max tax scenarios common on US Sales Tax calculations.
Use of calculation schema in Purchasing	Use of the calculation schema in Purchasing provides document level calculation for max tax and other conditions as required.
Ability to use standard VAT reports	Removal of jurisdictional calculation method now provides the access and usability of many native SAP tax reports.
Standard SAP functionality now available with removal of jurisdictional method of calculation of tax.	Native SAP functions that are limited to non-jurisdictional calculations can now be made available for external tax calculations.
Improved cash discount processing	Improved transaction logic for calculation of tax on cash discounts taken at time of payment
Plants Abroad functionality	Ability to use Plants Abroad configuration with SAP standard configuration.
Tax Codes can be marked as non-tax relevant	Ability to mark certain tax codes as not relevant and prevent a call to Determination if desired.
New SOAP interface replacing SAP's External Tax Interface	The JCo Server and External Tax Interface have been replaced with SAP's Internet Communications Framework using SOAP and Determination's WSDL/XSD definition.
Down Payments processing	Ability to utilize the down payment process in SAP for both customer side and vendor side transaction including the request for down payment, down payment application, and transfer of the down payment to the customer/vendor open A/R and A/P accounts.
Tax based on entry of gross amount	FB00 entry to set tax based on entry of the gross amount has been reviewed and issues adjusted with calculation

Function	Description
	and return to audit.
Evaluated Receipt Settlement process	Tax calculation on MRRL and MRRS for creation of invoice in LIV based on the goods receipt transaction is now available using standard SAP processes.
Service Entry Sheets	Using Service Entry Sheets on purchase orders is now supported for tax calculation based on the Service Entry Sheet line items and transaction ML81N.
Deferred Tax Transfer	Ability to run the RFUMSV25 program with SAP standard configuration.
New Brazil Enablement	New functionality that allows the SAP Brazil Country version tables and logic to work with our Determination Tax Engine in a non-jurisdictional environment.
Unplanned Delivery Costs in MIRO	Tax call and logic supporting calculations on unplanned delivery charges on MIRO invoices entry.
Multiple Account Assignments to a Line Item in Purchasing and MIRO Invoice Entry	Ability to allocate a line item to multiple cost object assignment and calculate tax based on ship to address of the various multi-assignment lines including ability to override the address when needed at time of MIRO invoice entry.
Consignment and Pipeline settlements	Use of transaction MRKO for transfer of goods for consignment and pipeline.
New India Enablement	New fields and functionality that allows the SAP India Country version tables and logic to work with our Determination Tax Engine in a non-jurisdictional environment. Special note that due to status of SAP release and India government final approval, there will possibly be another patch release to adjust for late changes after our release date.
HANA port over	*Starting with the release of Integration for SAP version 6.4.3.0, the system has been adjusted for needed table maintenance so that it can be easily installed on HANA.*
Parked Document Processes	As of Integration 6.4.4.0 the functions for tax calls and log entries for parked document processes and transactions were reviewed and updated.
Tax Data Download Report	As of Integration 6.4.4.0 a new tax data download report has been written to replace the US Tax report in the integration reporting menu. The download report allows data to be extracted for Tax Data Table for improved and flexible use of transaction data for analysis and downstream reporting needs. New report is not limited to US only transactions.
BAPI support and new utility for BAPI	New support for a list of BAPI including utility for use with BAPI_ACC_DOCUMENT_POST

New logic can be added to the Integration with greater ease and less ABAP programming due to the structures, methodologies, and dynamic table offerings. This will aid system users and ABAP programmers in meeting your specific requirements that are not currently part of this release and provide a platform and process for incorporating these needs into standard product updates in the future.

BENEFITS OF USING ONESOURCE INDIRECT TAX

Enabling Determination to calculate tax for your SAP transactions results in the following key benefits:

SEAMLESS INTEGRATION

Once integrated, your tax professionals can continue to use SAP functionality without needing to learn new technology or processes. Determination automatically obtains a complete set of data elements necessary to perform the appropriate tax calculations, and then returns the results to SAP all without the need for manual intervention.

ACCURATE TAX CALCULATION

Determination is the premier solution for your Sales, Use Tax, and VAT needs. ONESOURCE Indirect Tax Determination provides these features:

- Integrates worldwide tax calculation
- Enables global visibility and real-time transactions
- Gives control of the data and decision-making to the tax professional
- Eliminates or minimizes IT involvement as tax authorities, rates, and rules change
- Provides a scalable, maintainable enterprise solution

Using ONESOURCE Indirect Tax as your global transaction tax management solution reduces costs, increases accuracy, and provides the flexibility you need to adapt to an ever-changing business taxation environment.

AUDITING/REPORTING

Tax calculations that are processed using Determination are stored in Determination audit tables. From this audit data, you can generate standard or customized reports based on any user-defined criteria. For example, you can create tax-by-authority reports or any other desired reports needed to satisfy your company's needs.

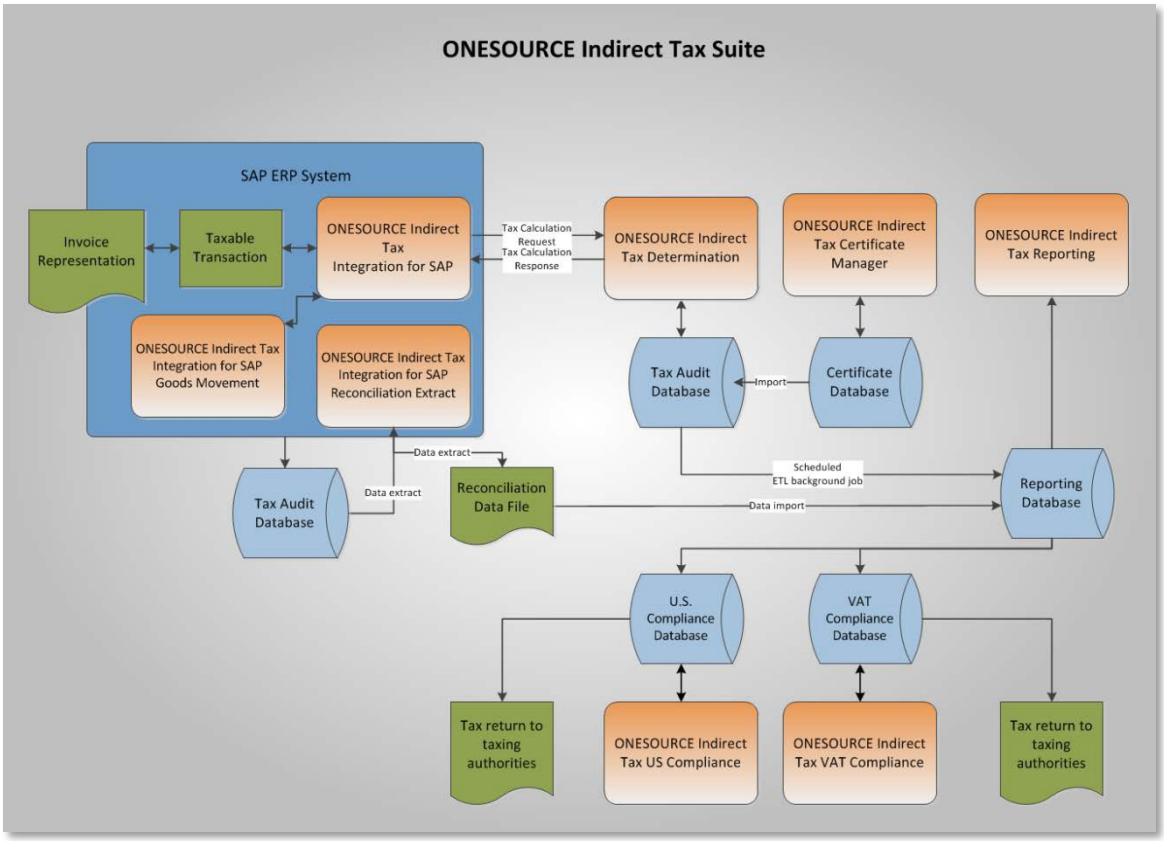
USER PROCESSES THAT TRIGGER DETERMINATION TAX CALCULATIONS

The *Installation and Configuration Guides* provide procedures needed to install and configure Integration to enable end-to-end tax calculation with Determination.
Once Determination is fully integrated with SAP, you can automatically generate correct tax results during the following actions:

- Procure to Pay; Purchase Orders, Logistic Invoice Verification with posting to AP, MIRO, Service Entry Sheets
- Order to Cash; Sales Order to Billing with posting to AR
- Processing FI module adjusting entries
- Cash discount application at time of payment
- Deferred tax transfer

ARCHITECTURE AND DESIGN OVERVIEW

THE ONESOURCE INDIRECT TAX SUITE



ONESOURCE Indirect Tax Suite of products is made up of the following components:

Integration:
ONESOURCE Indirect Tax Integration seamlessly connects your ERP system to Determination for tax calculations and appropriate return of tax results to the ERP for invoice printing and posting to the General Ledger. Integrations are developed and maintained in-house by a team of Thomson Reuters Business Systems Analysts, Developers, and Quality Assurance employees providing the most advanced tax engine determination capability and compliance returns processing globally. Our solution can be fully assimilated into any of your existing businesses, e-commerce, or financial systems using our open integration architecture. Tax calculation calls can be easily inserted into existing system workflows and processes to deliver real-time or batch solutions with accurate tax results.

Determination:
ONESOURCE Indirect Tax Determination enables companies to consolidate their global tax policy in one central location. All enterprise-wide applications can use a single scalable instance of Determination and still deliver business-specific tax policy across multiple-business systems. Fully integrated to all your financial applications, Determination enables the passing of transaction data from the financial system to the tax engine, and returns transaction taxes in real time for fast, reliable, and accurate indirect tax determination. We offer fully supported standard Oracle and SAP integrations, as well as custom integrations via our tax calculation web service.

Tax Certificate Manager:
ONESOURCE Indirect Tax Certificate Manager is a solution for the precise tracking, validating, and governing of exemption certificates. As part of ONESOURCE, it provides integration to our ONESOURCE Indirect Tax Determination software that allows for the export of customers and exemption certificates. ONESOURCE Indirect Tax Certificate Manager improves efficiency in all aspects of the burdensome exemption certificate lifecycle by reducing operating costs, mitigating risk, and increasing accuracy. ONESOURCE Indirect Tax Certificate Manager reduces audit exposure and assessments while empowering you with full control of the exemption certificate process to maintain Sarbanes-Oxley compliance.

Reporting:
ONESOURCE Indirect Tax Reporting software provides fast, accurate, and flexible reporting that's fully integrated with our ONESOURCE Indirect Tax global software suite to support your global compliance, reconciliation, and data analysis processes. An easy-to-use interface provides a library of over 40 production-ready reports that can deliver the most relevant data in a few simple clicks. Drill-down capabilities provide a way for you to quickly explore the underlying data details, all the way down to the lowest level individual authority taxes. Our summary-level or detail-level reports allow you to choose the type of report data that best meets your immediate tax data needs in the most efficient way possible.

Compliance for US:
Regardless of location or industry, Sales & Use Tax Compliance has the forms required to meet your needs. It provides over 600 signature-ready state and local returns that are facsimiles of the official forms. Returns and schedules include sales, seller's use, consumer's use, and rental tax forms for all applicable states, as well as the District of Columbia. Industry-specific food and beverage returns are also included. In addition, more than 70 electronic returns are available and accepted in over 25 states. Sales & Use Tax Compliance is one of the market leaders in e-filing support. Thomson Reuters continues to work directly with state taxing authorities to ensure full compliance for each state's unique electronic filing requirements. The software also goes beyond borders to include the returns required for tax compliance in both Canada and Puerto Rico.

Compliance for VAT:
ONESOURCE Indirect Tax's flexibility accommodates your distinct VAT compliance requirements, while maintaining a robust risk management framework. It enables automated data collection and entry in a number of ways to ensure data integrity from numerous data sources. We maintain and update the latest tax rules, which enable you to focus on your indirect tax compliance rather than the implications of changing regulations using our solution maps and your company's unique in-house knowledge into the compliance process. We can reduce risk and assist with succession planning. Our VAT compliance solution has in-built and maintained VAT logic, automated VAT returns from data taken directly from financial systems and has detailed exception reporting embedded in the ONESOURCE software. It has a full audit trail of data from the return back to the source, and HMRC-approved XML e-filing capability.

Goods Movement:
Newly updated Goods Movement product is now written within the Integration as an add-on for all of your US sales tax material and goods movement use tax accrual needs. The new version uses all the table tables and SOAP interface technology that was provided as part of Integration Version 6. This new menu driven version takes advantage of our entire new table mapping and menu features for you to batch process your goods movement entries as part of your month end accrual process. Tables allow you to configure all transaction movement types you desire to accrue as well as the use of the field mapping logic for adding additional data elements to the response and request data for the Goods Movement routes and journey paths.

GLOSSARY

The following terms may be helpful when implementing Integration:

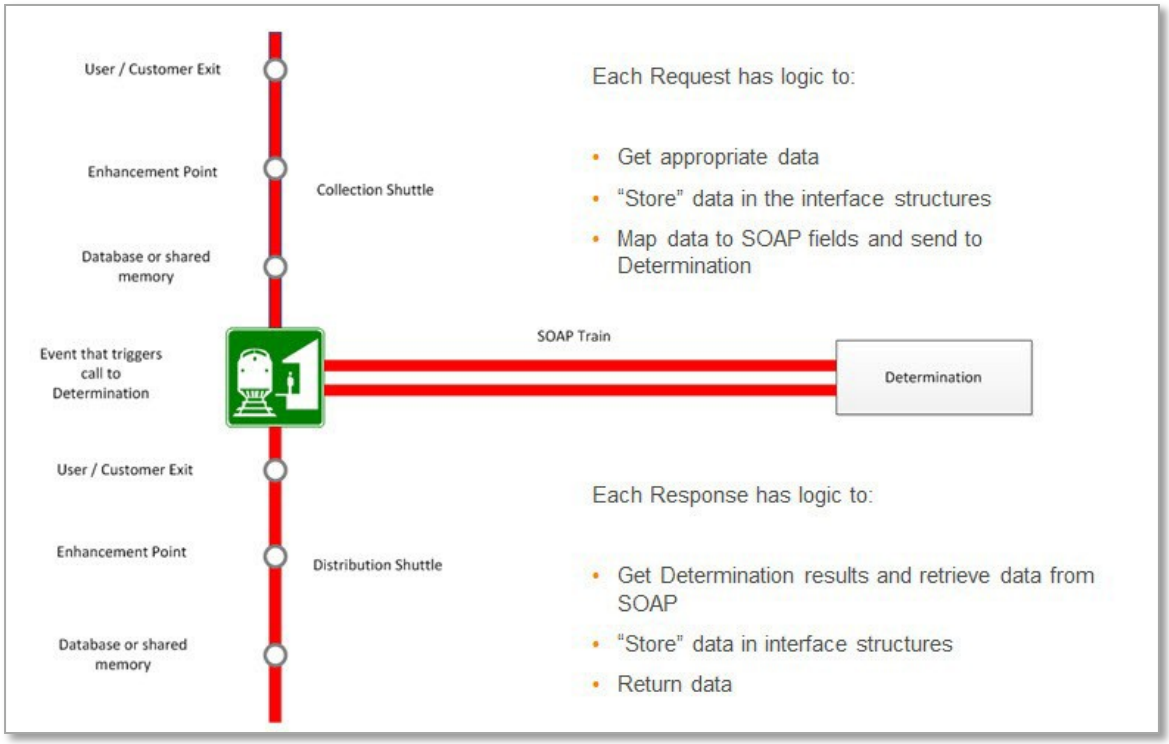
Term	Meaning
SOAP (Simple Object Access Protocol)	SOAP is a way to build connections between software applications across networks including the internet. It works very much like a Yahoo search, where you pass in a request and get a response from a server. SOAP requests and responses are in the form of XML messages.
WSDL (Web Services Description Language)	A WSDL describes a way to send messages to a software application and how to read the corresponding response.
XML (Extensible Markup Language):	XML is a messaging language that is relatively easy to read for both people and software.
Proxy	Within an SAP environment, a proxy is a representation of an outside application. Proxies can be generated from a WSDL. The proxy acts as if it is the outside application to the rest of the SAP environment. Any messages sent to the proxy are forwarded on to the outside application and responses from the outside application are returned through the proxy.
Pricing Procedure / Calculation Schema / Tax Procedure	A pricing procedure, calculation schemas, and tax procedures contain a list of conditions that form the spine of the pricing process. It must be correctly configured for the tax calculation process to work correctly.
Pricing Conditions / Tax Conditions	Pricing conditions are the vertebrae of the pricing procedure in SD and the calculation schema in Purchasing. Likewise, tax conditions are the vertebrae of the tax procedure as used by Logistics Invoice Verification and FI-AP/AR. Each pricing condition represents a step in the pricing process. Four pricing conditions must be correctly configured for the tax calculation process to work correctly in SD and Purchasing; a line item data collector condition, a Determination calling condition, and two conditions to place calculated tax data into the prices. For the tax procedure only the two conditions to place the calculated tax data into the system is required. (Exception in the case of Brazil taxes which require multiple tax conditions for assignment to the various tax authorities)
Group Conditions	Group conditions are pricing conditions that work at a whole document level instead of at a line item level as the other pricing conditions do. For this reason, they are very useful in calculating whole document taxes as required by many tax laws.
Condition Value Formulas / Scale Base Formulas	These are a type of user-exit that is part of a condition of a pricing procedure, tax procedure, or calculation schema.

THE DATA INTEGRATION MODEL: THE TRAIN STATION ANALOGY

To visualize the movement of data between SAP and Determination we have come up that uses the analogy of a train station and shuttle bus transportation system. Some of the new terminology that you hear us use within this analogy will become familiar to you as we use them again in describing various steps within the configuration processes and field mapping of the ONESOURCE Indirect Tax Integration for SAP.

The **Train Station** is the point at which the request data has been gathered and is ready to be sent to Determination on a **Train**, as well as the point where response data from Determination is being sent back and is ready for distributing to SAP transactions and tables. The Train Station is the event that triggers a SOAP call to and from Determination. The double red line represents the flow of the data to and from Determination (the Train).

The single red line on the top represents the path or **Collection Shuttle** that is used to gather data from the SAP system's various modules into the Determination request. Along the shuttle's route there are various points or shuttle stops that are executed to pick up data to go to Determination on the Train. These can include user/customer exits within ABAP programs, program enhancement points, or areas within the database or shared memory within SAP.



Likewise, on the **Distribution Shuttle** line, data is being returned to various points or shuttle stops that are executed to return data from the Determination Train. These can include user/customer exits within ABAP programs, program enhancement points, or areas within the database or SAP tables. The data

points are “picked up” or “dropped off” via the shuttle. How the data points are mapped (or assigned a seat on the shuttle) relates to the logic and procedures within the various Journeys and Routes.

A **Journey** is an object that handles the complexity inherent to a specific set of data that is sent to or received from Determination. A Journey includes logic to: pass data to/from SAP transactions, store the data, and move data from/to specific fields or seats on the Train. For a list of all the journeys and their use see the *Installation Guide* section on additional information on Journeys.

A **Route** is an object that handles the complexity inherent to a group of transactions. Think of it as the bus route that a shuttle takes from a given “side of town” to/from the Train Station. There can be many different routes to get to the Train Station. Sales, Group Billing, Group Purchasing are routes that handle the complexity specific to the SD Sales, SD Billing, and MM-Purchasing transactions, and user-exits. Other routes include Non-Group-Doc-AP, and Non-Group-Doc-AR, and Non-Group-Doc-LIV which handle the complexity inherent to a group of transactions in Accounts Payable, Accounts Receivable, and Logistics Invoice Verification. For a list of all of the routes and their use see the *Installation Guide* section on additional information on routes.

NEW INTEGRATION FEATURES AND OPTIONS FOR SETUP

This chapter covers some of the major new enhancements and features introduced with ONESOURCE Indirect Tax Integration for SAP version 6. As this version is a major change from previous versions we will explain some of the key features added here to provide a better understanding and the base for when you are reading the *Install Guide* and/or *Configuration Guide*. The following topics will be covered in this chapter:

Look and Feel 19
All Configuration within SAP Tables 19
New ONESOURCE Menu within SAP 19
Use of New Authorization Objects and Roles 22
Core Function Improvements 25
Flexible use Between Modules of SAP-SD, MM, FI 25
Remove Limitations on Number of Tax Codes in SAP 25
Removal of Jurisdiction Code Methods 26
Removal of Limit on Attribute Mapping 26
Dynamic Creation of Tax Authority Conditions Within the Tax Calculation 26
Separate Tax Authority Lines for Freight 28
Document Level Calculation of Tax 28
Use of Calculation Schema in MM Purchasing 29
Data Mapping and Storage 29
New Flexible Field and Address Mapping 29
Performance Improvement with Dynamically Generated Code 30
New Support of Tax Data Storage For All Business Transactions 31
New Logic for the Assignment of General Ledger Accounts 32
Reporting 33
Use of SAP Standard Reports 33
Tax Data Report 34
New Log Report and Configurable Logging Methodology 37
The Developer's Log: A New Analysis tool 38
Special Functions 40
Support for Plants Abroad 40
Cash Discounts Processing 41
Cash Discounts On Legacy Documents 42
Deferred Taxes 42
Evaluated Receipt Settlements in A/P 43
Down Payment Processing 43
Consignment and Pipeline Processes 44
Service Entry Sheets In A/P 45
Partial Self-Assessment for Canada and Other Offsets 45
Additional Features 45
Buyer and Seller Role on FI Transactions 45
Mix of US Sales Tax and Use Tax Accrual on Same Invoice 46
Changing Ship-to/Ship-From Address at Invoice 47
Unplanned Delivery Charges in MIRO 50
Creating a New Address for the ADRC Table 52
US Pay as Billed Tax Without a Call to Determination 53

Audit Save Process: Explanation of the Journeys Used 55
Ability to Assign a Tax Code as Not Relevant to Determination Tax Call 56
Use of Tax Filters to Remove Certain Tax Codes 56
Summarization of Tax Data Within BSEG and BSET Tables 56
Use of Tax On Gross Amount (FB00 set up) 57
Tax Splitting in Mix of NVV and non-NVV lines 57

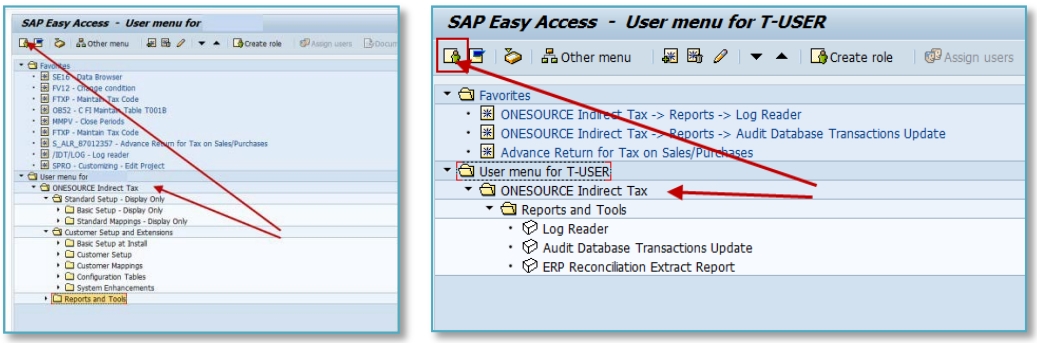
LOOK AND FEEL

ALL CONFIGURATION WITHIN SAP TABLES

All prior Integration versions were written using the SAP External Tax Interface which required the use of a middleware server to host the Integration using the JCo adapter. Because of this, all of the configurations and access to log files were contained outside of SAP on the separate server. Data was passed and updated by means of RFC calls between Integration and SAP. Now with the advent of our new SOAP based Integration all configuration and logs are located inside of SAP thus eliminating the need for interfacing hardware, RFC calls to Determination, and separate access. All configurations are now located in SAP partner namespace /IDT/ owned by ONESOURCE Indirect Tax. Access to view and manage the configuration tables is now contained within a separate User Menu in SAP and RFC calls are replaced by new SOAP interface technology. The ONESOURCE Indirect Tax Integration for SAP is shipped as a set of SAP transports to customers. Once installed all configurations and setups made in the customers system are included in transport objects and moved from Development to Test to Production, allowing for best practices and controls.

NEW ONESOURCE MENU WITHIN SAP

This menu is accessed through the User Menu (Ctrl+F10) and is only available to you if you have been granted access through your authorization profile to the correct user role. You will not see the ONESOURCE menu if you click on the standard SAP menu option.

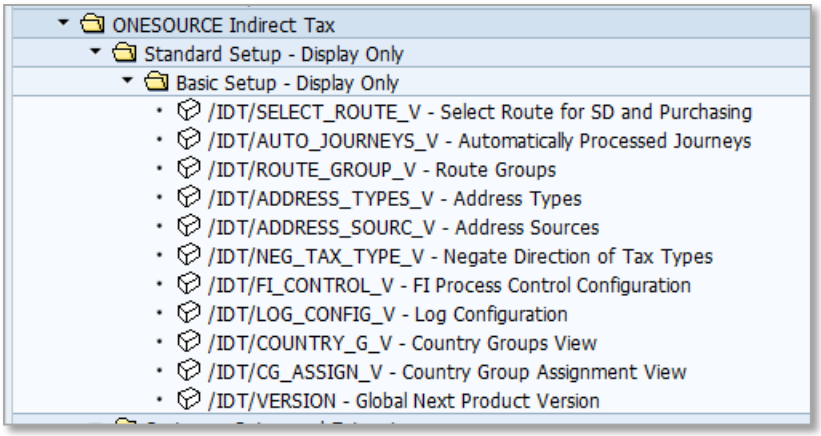


Menu as it displays for T-GENERAL role and T-USER Role

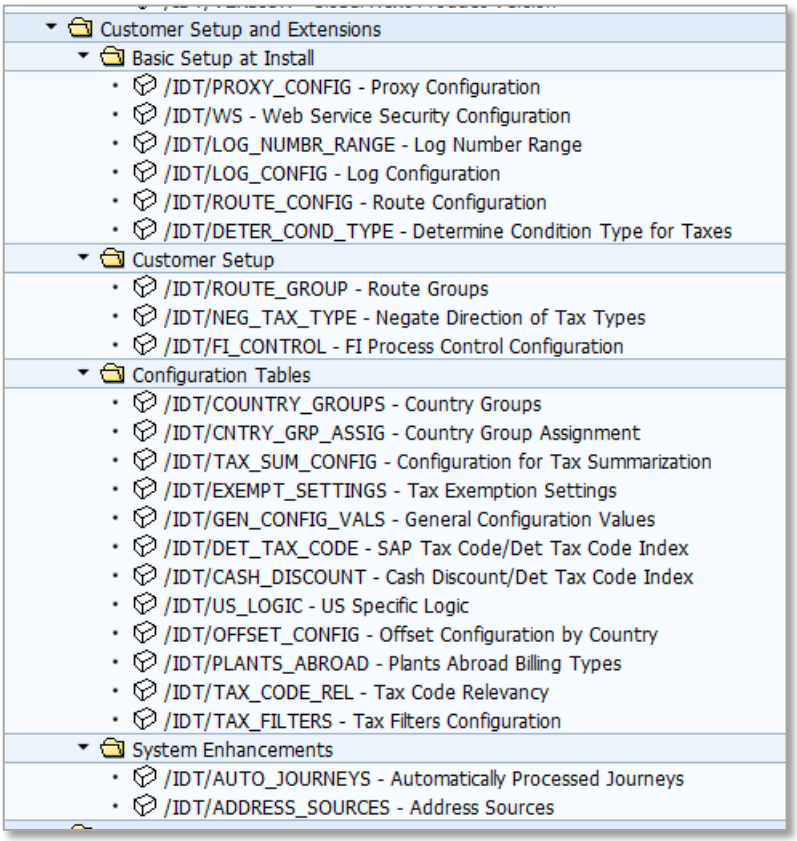
You may not be able to see the entire sub menu list that we display in the screenshot above as some of these will only be assigned to an administrator (General) role as opposed to a user role. The menu for ONESOURCE Indirect Tax is broken up into sub areas as shown above. Explanation of the sub menus is noted below:

- **Standard Setup – Display Only:** Within the new ONESOURCE Indirect Tax menu the first section is a list of table configurations that are provided as standard setup for Integration. The tables are intentionally view only and are not changeable by the system user. However, in most of those tables a matching table is provided further down in the menu, which gives the system user the ability to override or augment the configuration in the standard set up view. By segregating the standard set up from user additions and overrides we can provide better support to our users by our Professional Services and Customer Support teams. Segregating the tables will allow them to make quicker identification of problems for issue resolution. It also allows Thomson Reuters to deliver new functionality at a later point without negatively impacting customer's configurations and setups. They also allow the system user to quickly identify their additions in a separate area.

- **Basic Setup - Display Only:** Used to contain all of the standard setup tables that are provided as display only views (excluding the Standard Mapping tables.)



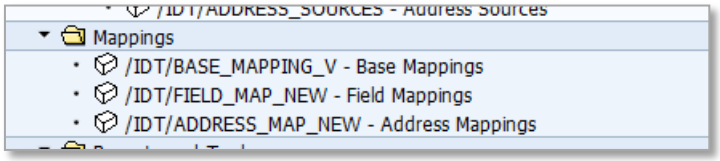
- **Customer Setup and Extensions:** This menu is used by you the user to access the ONESOURCE configuration tables that are stored in the /IDT/ namespace of SAP. The menu is broken down further into sub areas to organize the tables by configuration area or task. A system user role may only have display access to this area however an administrator role authorization will have ability to display, change, and create depending on the table's properties.



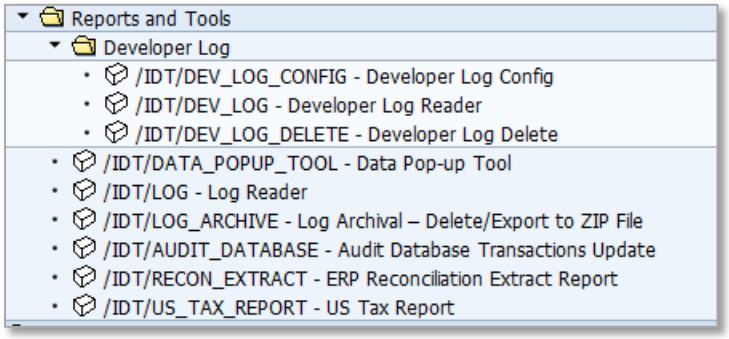
- **Basic Setup at Install**: Is used by the ABAP programmer that is doing the installation of the Integration software to set the proxy configuration and security pointing to the Determination calculation URL and create the number range that is needed for log entries in the system. It also contains the log configuration and tables that require special input after install of the initial transports like the route configuration table.
- **Customer Setup**: Is used by the Tax Business Analyst and contains table views for the customer to add to or override the standard view configuration tables that are noted in the standard view section.
- **Configuration Tables**: Is used by the Tax Business Analyst and contains all the tables that you will need to consider for configuration of your installation. In this section the tables only contain one view for customer input and do not have a standard view.
- **System Enhancements**: Is used in customizing functions when or if you need to create additional advanced program enhancements to accommodate additional Integration logic that is not already part of the standard product.

Instructions on how to use all of the configuration tables in this menu is included in *Configuration Guide ONESOURCE tables*.

- **Mappings:** This menu contains the field mapping and address mapping tables as well as the base mappings table. Prior to release 6.4.1.0 the field mapping table and address mapping table had separate views and transaction codes for standard items supplied with the system and customer additions for customization. The views were combined for performance improvements and user interface improvements.



- **Reports and Tools:** This menu is where we will establish the transaction codes for access to specific Log reports for tax transactions as well as any specialty reports that are created by ONESOURCE Indirect Tax. Other reports may be added to this menu in future releases of product updates.



Menu is normally displayed without the transaction code, however if you wish to see the transaction code with the menu item then go to: **Extra > Settings** and check the ***Display Technical Names*** option.

USE OF NEW AUTHORIZATION OBJECTS AND ROLES

With ONESOURCE Indirect Tax Integration being re-written in ABAP and included within SAP, new transaction codes have been created to access ONESOURCE transactions, tables, and reports. To make this task easier for the SAP system security manager we have several authorization objects that are used in our delivered reports. These authorization objects can be assigned by the security manager to roles to meet the company's access policies. Roles can be created for accessing the Integration setup and configuration processes by specific transaction codes or by granting access to all of them by including /IDT/* as a transaction code range.

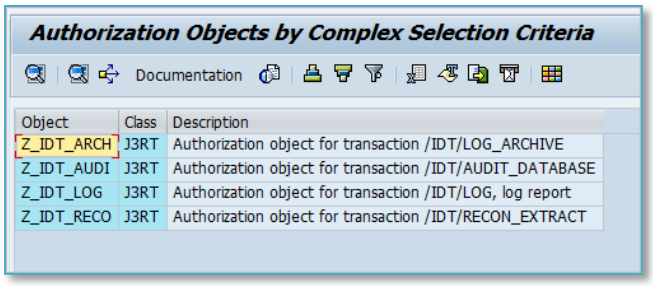
The new authorization objects are:

- Z_IDT_LOG – controls access to the Log Reader search and view function (transaction **/N/IDT/LOG**)

- Z_IDT_AUDI – controls access to the Audit Data Base Transaction Report utility (transaction **/N/IDT/AUDIT_DATABASE**) and the Audit Database Update utility **/IDT/UPDATE_AUDIT_DATABASE.**

- Z_IDT_ARCH – controls access to the Log Archive function (transaction**/N/IDT/LOG_ARCHIVE**)

- Z_IDT_RECO – controls access to the ERP Reconciliation Extract Report (transaction **/N/IDT/RECON_EXTRACT**)



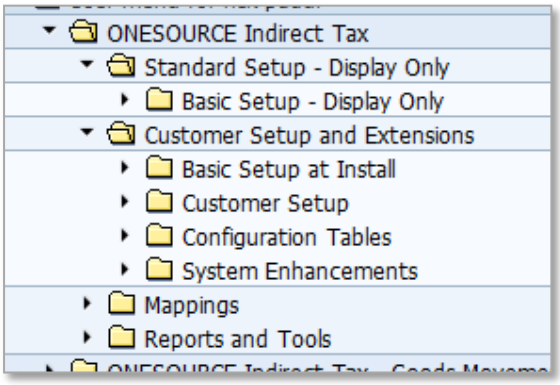
Object	Class	Description
Z_IDT_ARCH	J3RT	Authorization object for transaction /IDT/LOG_ARCHIVE
Z_IDT_AUDI	J3RT	Authorization object for transaction /IDT/AUDIT_DATABASE
Z_IDT_LOG	J3RT	Authorization object for transaction /IDT/LOG, log report
Z_IDT_RECO	J3RT	Authorization object for transaction /IDT/RECON_EXTRACT

All authorization objects use authorization field Company Code (BUKRS) as a check object.

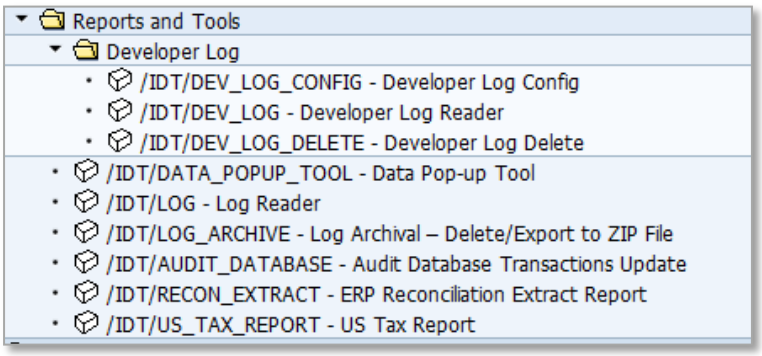
More details on the transaction codes implemented can be found in the *Installation and Programmers Guide*

In addition to the authorization objects we have provided two roles that can be added to a user profile.

/IDT/GENERAL contains all the IDT transactions codes and the full ONESOURCE User Menu. This would normally be given to users that oversee management of the system, configuration, and mapping.



/IDT/USER contains three menu options within the **Reports and Tools** menu and would normally be used by a system user that needs to review log reports, extract data for the reconciliation report, and update or review the audit database at month end for any transactions that posted to the G/L but did not go to the audit database.

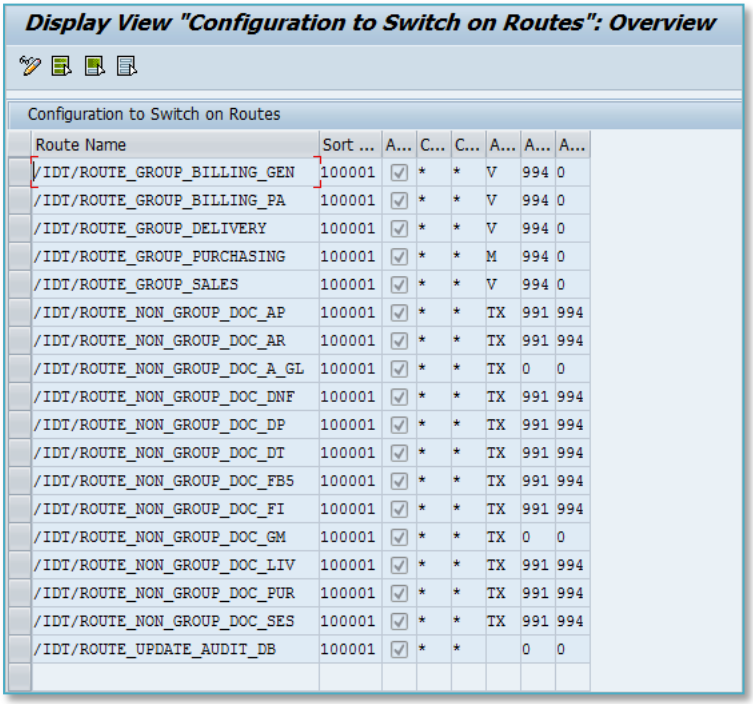


CORE FUNCTION IMPROVEMENTS

FLEXIBLE USE BETWEEN MODULES OF SAP-SD, MM, FI

With the new Integration configuration tables in SAP it is much easier to turn on or turn off various Journeys and Routes for the various modules of SAP. This provides the user maximum flexibility to use the new Integration for some modules while using standard SAP calculations for others. For example, you may wish to use ONESOURCE Indirect Tax for the SD Order to Cash process and A/R non-order based adjustments but elect to use standard SAP calculation methods for the Purchasing side of the house in MM and FI. To support the customer needs each configuration setting in the new interface has an "*Active*" option, allowing turning on or off certain areas of the product.

Transaction: **/N/IDT/ROUTE_CONFIG**



Display View "Configuration to Switch on Routes": Overview

Configuration to Switch on Routes

Route Name	Sort ...	A...	C...	C...	A...	A...	A...
/IDT/ROUTE_GROUP_BILLING_GEN	100001	☑	*	*	V	994	0
/IDT/ROUTE_GROUP_BILLING_PA	100001	☑	*	*	V	994	0
/IDT/ROUTE_GROUP_DELIVERY	100001	☑	*	*	V	994	0
/IDT/ROUTE_GROUP_PURCHASING	100001	☑	*	*	M	994	0
/IDT/ROUTE_GROUP_SALES	100001	☑	*	*	V	994	0
/IDT/ROUTE_NON_GROUP_DOC_AP	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_AR	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_A_GL	100001	☑	*	*	TX	0	0
/IDT/ROUTE_NON_GROUP_DOC_DNF	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_DP	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_DT	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_FB5	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_FI	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_GM	100001	☑	*	*	TX	0	0
/IDT/ROUTE_NON_GROUP_DOC_LIV	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_PUR	100001	☑	*	*	TX	991	994
/IDT/ROUTE_NON_GROUP_DOC_SES	100001	☑	*	*	TX	991	994
/IDT/ROUTE_UPDATE_AUDIT_DB	100001	☑	*	*		0	0

REMOVE LIMITATIONS ON NUMBER OF TAX CODES IN SAP

Tax calculations using standard SAP require the use of a two-digit tax code to track the tax application as well as the specific rate that is charged for the taxing authority. Unfortunately for many large SAP environments this means that there is a limited number of tax codes available and with the rate being tied to the code, a user must create a new tax code assignment whenever a tax rate changes in a given taxing authority. Many large enterprise structures are realizing that they are running out of tax codes because of this requirement when many company codes, country implementations, etc. are required for a globally based corporation.

With our new Integration approach, we have redesigned the tax code logic and removed the limitations that were part of the SAP External Tax Interface. Now a system user can use SAP Tax Codes according to their taxing authority and reporting needs, but without the need to store tax rates within SAP. Determination rates are used at the time of tax calculation and are dynamically returned to SAP and stored in the transaction. This gives the user the best flexibility to now utilize all of the standard functionality within SAP as well as run standard VAT and Intrastat reports.

REMOVAL OF JURISDICTION CODE METHODS

Our new Integration no longer utilizes the SAP External Tax Interface as its means to communicate between Determination and SAP. The original SAP interface was written with the assumption that it was for US tax calculations only and was thus written to only work with the jurisdiction code method that is not compatible with global VAT calculation logic. Our new Integration is designed to work for all countries without the use of jurisdiction codes and instead uses the master data address to establish the taxability of the document processed.
This means that the prior RFC call to verify the jurisdiction code is no longer used and that address data is now used to establish correct tax calculation. For US tax calculations it is highly recommended to provide a postal code including the geo-code, i.e. ZIP + 4. There are 3rd party software packages available on the market that can assist you with the process to add ZIP + 4 information and keep your address data up to date.

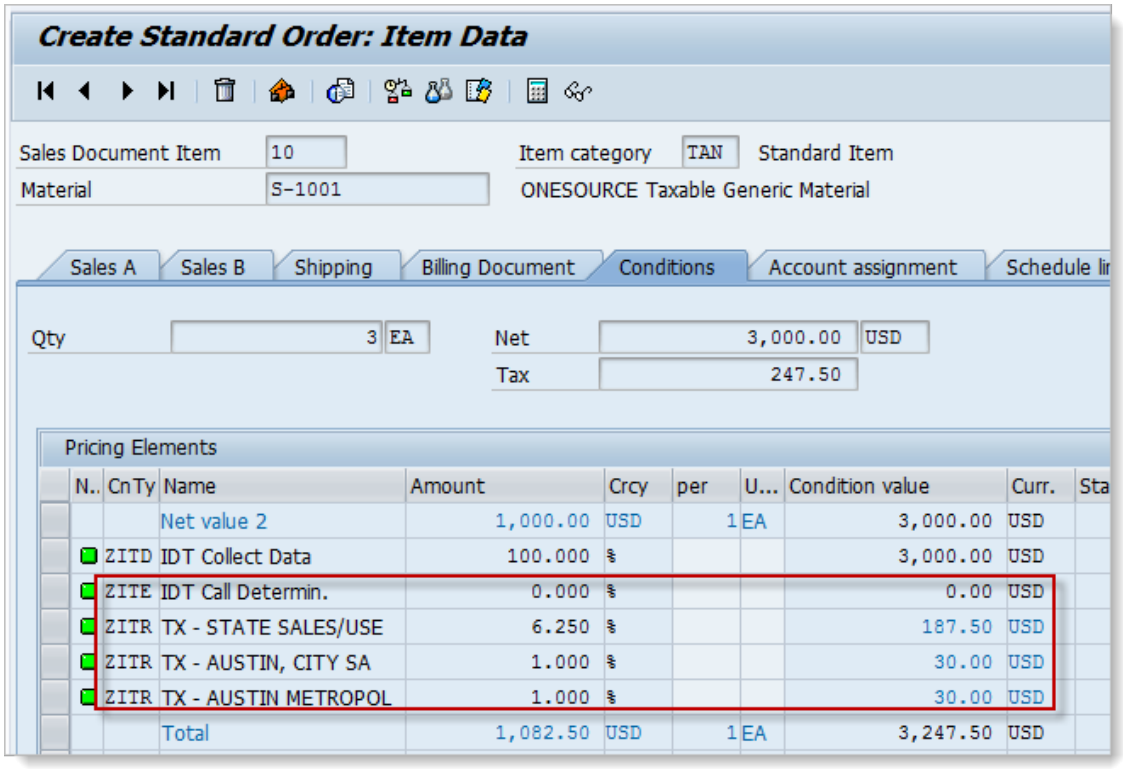
REMOVAL OF LIMIT ON ATTRIBUTE MAPPING

The SAP Standard Tax Interface RFC structure limited the use of User Attributes to the line level only. The new design now allows for both invoice and line level User Attributes 1 thru 40. You can now make use of 40 attributes at each level. These fields combined with the new flexible field mapping provide great means to meet your unique taxing requirements. Attributes 41 thru 50 are also made available in the table however they are reserved for use internally within ONESOURCE standard configuration and not available for user mapping. If a user attempts to map to Attribute 41 thru 50 they will not get an error within the customer field mapping table however the mapping will not be recognized and you will see an error message at the beginning of the XML log data as a notice to the user that the mapping was ignored.

DYNAMIC CREATION OF TAX AUTHORITY CONDITIONS WITHIN THE TAX CALCULATION

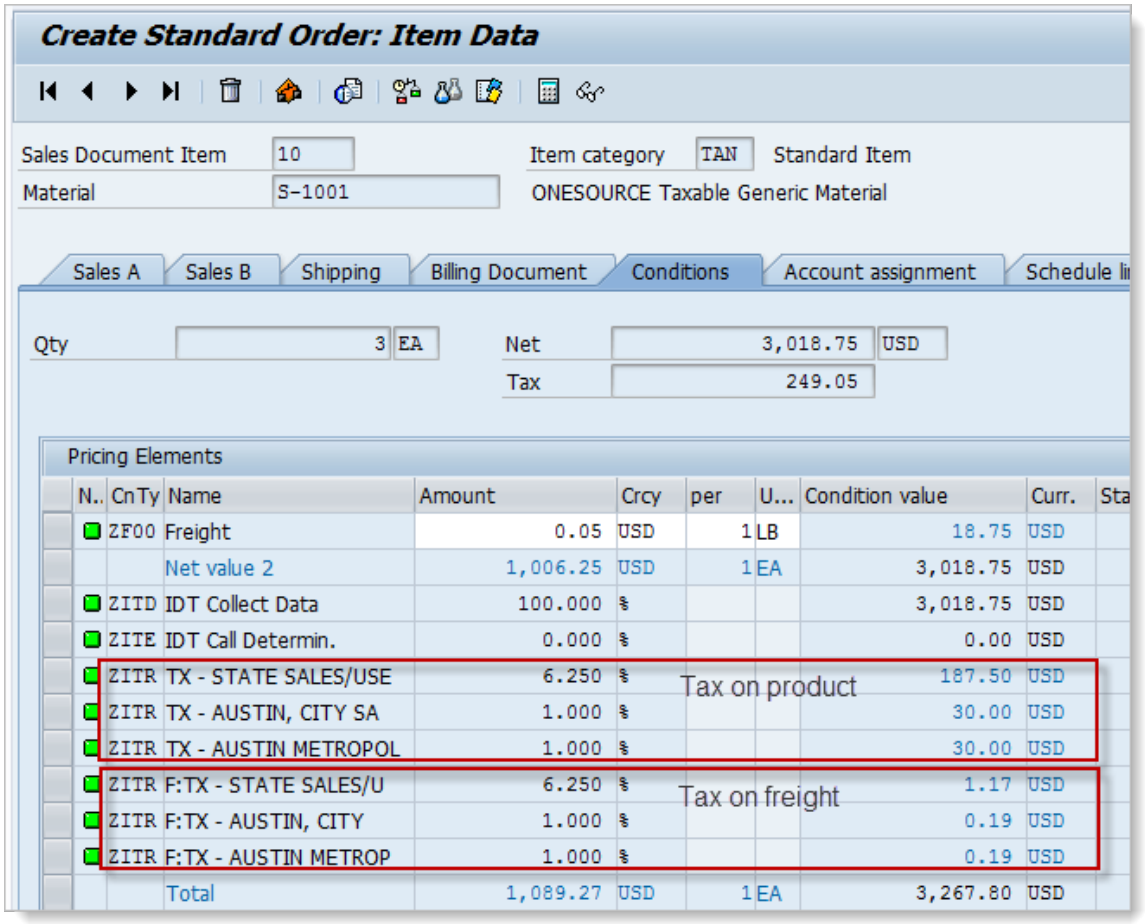
Prior to Integration 6 the tax procedure was restricted to ten jurisdiction levels within the tax procedure. Calculations that may have had several separate taxing authorities that were at the same jurisdiction level were combined in the reporting and account key assignment. Flexibility was limited. This logic was not conducive to complex VAT calculation and reporting schemas globally and a new approach was needed to resolve issues for Global VAT calculations as well as to provide greater details for US calculations.

A new dynamic process has been implemented that creates as many tax authority conditions based on the number of tax authority blocks returned in the XML response from Determination. This is achieved by including new dynamic condition types on the pricing procedure and tax procedures in SAP. Consult the SAP Pricing Procedure section of the *Configuration Guide SAP Tables* to see how this is done. Tax authorities are no longer combined based on their jurisdiction level and are reported individually. Each tax authority will be displayed in the price or tax procedure with the first 20 characters of the authority name.


Create Standard Order: Item Data
Sales Document Item 10
Item category TAN Standard Item
Material S-1001
ONESOURCE Taxable Generic Material
Sales A
Sales B
Shipping
Billing Document
Conditions
Account assignment
Qty 3 EA
Net 3,000.00 USD
Tax 247.50
Pricing Elements
N.. CnTy Name Amount Crcy per U... Condition value Curr. Sta
Net value 2 1,000.00 USD 1 EA 3,000.00 USD
ZITD IDT Collect Data 100.000 % 3,000.00 USD
ZITE IDT Call Determin. 0.000 % 0.00 USD
ZITR TX - STATE SALES/USE 6.250 % 187.50 USD
ZITR TX - AUSTIN, CITY SA 1.000 % 30.00 USD
ZITR TX - AUSTIN METROPOL 1.000 % 30.00 USD
Total 1,082.50 USD 1 EA 3,247.50 USD

SEPARATE TAX AUTHORITY LINES FOR FREIGHT

In the US, freight can be taxable or exempt from tax depending on various state requirements. With this release we now provide the ability to see separate freight tax authority details within the pricing conditions. A prepend to the authority name can be used to easily separate the freight authorities.



Sales order with Texas Sales tax detail and Texas freight lines with “F:” prepend in the authority name.

Special note that as of release 6.4.0.0 of Integration this same logic was added to the functions within the MIRO invoice verification process for freight amounts that are added to the invoice at time of invoice creation.

DOCUMENT LEVEL CALCULATION OF TAX

Some taxing authorities in the US and elsewhere may elect to use calculations that require the whole document view, such as use of max tax logic. This scenario was not easily supported in prior releases due to the need for document level calculation of tax rather than line item based calculation. With the

advent of this release we are now calculating taxes at the document level for all areas including SD, MM, FI so that US max tax scenarios can now be used for all calculations.

USE OF CALCULATION SCHEMA IN MM PURCHASING

You will notice that with this release of Integration we are now using the calculation schema pricing model for MM/PP tax calculations. This is a change from our old Integration and a requirement to take advantage of document level tax calculation for US and other taxing authorities that use max tax logic.

DATA MAPPING AND STORAGE

NEW FLEXIBLE FIELD AND ADDRESS MAPPING

Prior to the Global Next Integration 6.x, customers had to engage with implementation partners and/or their own internal IT resources to code field mappings in SAP provided user-exits. This process requires extensive effort by business analysts, programmers, and quality assurance specialists to add a simple field mapping - usually taking days if not weeks for just one mapping. In addition, comprehensive documentation is required to enable on-going support and maintenance of the mappings. Traditionally customers have user-exits exceeding thousands of lines of code. Our new flexible field mapping requires a one-line mapping for each field. The concept of mapping applies to SAP and Determination fields and address fields, enabling the possibility to map to and from any Determination field provided in the XML.

The Flexible Field Mapper tool allows for standard mappings to be delivered by Thomson Reuters to our clients while providing custom mappings which the customer can use to either augment the standard mappings or add their own unique mappings specific to their business needs.

In addition, the field mapper has three levels of mapping capabilities:

1. **Direct field mapping** from a source field to a target field; sources can either be SAP fields or Determination fields, depending on whether the data is being sent from SAP to Determination or vice versa. Organizational elements such as Company Code, Country Groupings, or Transaction Processes can be used to further segregate mappings.
2. **Simple Expressions** to further qualify when a mapping is relevant or not.
3. **Custom User-Exit Code** for mappings that are too complex to be done via field mappings. Although this is essentially the same as the user exit code additions that had to be done in the prior interface, this feature allows the code to be reference in this table giving a customer the ability to see all user exit code changes and field mappings in one visible and centralized location. This will make analysis and support by our Customer Support team easier if all custom code additions are completed and referenced in this manner.

The combination of the three levels of mapping into one centralized tool with the combination of standard mappings and custom mappings is one of the key features of this product.

PERFORMANCE IMPROVEMENT WITH DYNAMICALLY GENERATED CODE

New improvements within the new field mapping feature have been added as of release 6.4.1.0 with the addition of dynamically generated code. The 6.4.4.0 release also brought dynamic generated code to the new Address Sources table as well. Prior to this release the mapping table logic relied on a different set of code to convert the table mapping entries. This process is a first-generation development for the new field mapper logic however, was not efficient for large scale invoices. What was needed was a way to generate different code that was much faster and specifically tailored to the exact mapping line of the field mapper. To do this a new program was written. We are trying to duplicate the performance that can be achieved by coding unique field mapping programs for each customer, but in an automatic process. This new process makes the field mapper extremely efficient for the processing of large scale invoices that contain more than 1,000 lines. Users will now see a speed improvement from 10x to 100x within the field mapping function for large invoices being processed to and from Determination. The new dynamic code function greatly reduces processing time but does not change the user interface or function of the field mapper itself.

When a change to the field mapper/address source mapper is generated the system will create a transport request. This transport request will then be able to be released and moved to the next system for update of the field mapper table. Normally this process of field mapper table update would be done in the development system and then transported to a testing or QA system and tested before being moved to production. The update of the dynamic code that is used with the mapper is then re-generated at the time the new mapping is used for the first time after the change is made or transported to the target system. Users will experience a very small delay the first time a line is utilized while the code is regenerated and saved. This is like the time frame when a program is re-compiled after a change. This process ensures that the code being used on the transaction always correctly represents the corresponding field mapper line. Once the code is dynamically generated after the field mapper line change, it is stored and reused until the next change of the field mapper line item for that specific client and system.

Clean Up Program for Dynamically Generated Field Mapping Code

With the new dynamically generated code for the performance of the field mapping function, new code is created behind the scenes for each line of the field mapper. As changes are made to the field mapper the older code that was created from the prior change is still in the table but is no longer used as the new code updated is used instead. This can cause a build-up of old and outdated dynamically generated code that will need to be removed from the system to keep the system clean. There is a new program that you will need to run in background on a regular basis so as to clean up and remove the older code that is no longer being used.

Program name: **/IDT/DELETE_DYN_PROGRAMS**

We recommend that you have this program set up to run on a background job on a regular basis to keep your system clean of older dynamic code that has been replaced by new mappings. Depending on how frequently you are changing field mapping this will likely be once a month or if a lot of changes are being performed possibly once a week. The program does not have any selection criteria and would be simple to run and schedule by your IT staff.

Forexample, the two highlighted lines should be the only ones deleted after the program is run. You can see by this table that three entries exist for this journey and that the two highlighted are the older ones that need to be removed:

Data Browser: Table /IDT/D_DYN_PROG Select Entries 14

Cl.	Journey Name	Time Stamp	Program	FIELD_MAPS
400	/IDT/JOURNEY_AUDIT_UPD_DB_BILL	20,160,810,194,944.6230000	/IDT/GN_051MG3JM7JQNVDAJWZ1WJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_AUDIT_UPD_DB_GL	20,160,808,142,631.7790000	/IDT/GN_051MG3JM7JQNHECNDWN0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_CHECK_AUDIT_MESS	20,160,808,142,632.4030000	/IDT/GN_051MG3JM7JQNHECNDWOWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_FB05_COMPANY_ROLE	20,160,815,141,954.5520000	/IDT/GN_051MG3JM7JQOTCGQB5PWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_FB05_RESPONSE	20,160,815,141,955.2860000	/IDT/GN_051MG3JM7JQOTCGQB5U0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_HEADER_REQUEST	20,160,808,142,524.1350000	/IDT/GN_051MG3JM7JQNHDUDJTT0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_ITEM_REQUEST	20,160,808,142,524.7430000	/IDT/GN_051MG3JM7JQNHDUDJTV0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_ITEM_REQUEST	20,160,808,210,609.3340000	/IDT/GN_051MG3JM7JQNJNR09RY0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_ITEM_REQUEST	20,160,815,180,820.1650000	/IDT/GN_051MG3JM7JQOUCTN44MWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_FB05	20,160,815,141,953.1170000	/IDT/GN_051MG3JM7JQOTCGQB5N0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_REQUEST	20,160,808,142,555.3520000	/IDT/GN_051MG3JM7JQNHE1FALQWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_SERV_ENTR	20,160,808,153,749.5800000	/IDT/GN_051MG3JM7JQNHY7GWWO0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_STANDARD_RESPONSE	20,160,808,142,525.5540000	/IDT/GN_051MG3JM7JQNHDUDJTZWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_TAX_TAB_RESPONSE	20,160,808,142,526.1320000	/IDT/GN_051MG3JM7JQNHDUDJT}WJW	FF06020101028000343130330000000000030E000...

After running the program you can see it is deleting the correct entries and that the most current line for Journey_Item_Request is now the only one on the list:

Data Browser: Table /IDT/D_DYN_PROG Select Entries 12

Cl.	Journey Name	Time Stamp	Program	FIELD_MAPS
400	/IDT/JOURNEY_AUDIT_UPD_DB_BILL	20,160,810,194,944.6230000	/IDT/GN_051MG3JM7JQNVDAJWZ1WJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_AUDIT_UPD_DB_GL	20,160,808,142,631.7790000	/IDT/GN_051MG3JM7JQNHECNDWN0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_CHECK_AUDIT_MESS	20,160,808,142,632.4030000	/IDT/GN_051MG3JM7JQNHECNDWOWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_FB05_COMPANY_ROLE	20,160,815,141,954.5520000	/IDT/GN_051MG3JM7JQOTCGQB5PWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_FB05_RESPONSE	20,160,815,141,955.2860000	/IDT/GN_051MG3JM7JQOTCGQB5U0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_HEADER_REQUEST	20,160,808,142,524.1350000	/IDT/GN_051MG3JM7JQNHDUDJTT0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_ITEM_REQUEST	20,160,815,180,820.1650000	/IDT/GN_051MG3JM7JQOUCTN44MWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_FB05	20,160,815,141,953.1170000	/IDT/GN_051MG3JM7JQOTCGQB5N0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_REQUEST	20,160,808,142,555.3520000	/IDT/GN_051MG3JM7JQNHE1FALQWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_NG_ITEM_SERV_ENTR	20,160,808,153,749.5800000	/IDT/GN_051MG3JM7JQNHY7GWWO0JW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_STANDARD_RESPONSE	20,160,808,142,525.5540000	/IDT/GN_051MG3JM7JQNHDUDJTZWJW	FF06020101028000343130330000000000030E000...
400	/IDT/JOURNEY_TAX_TAB_RESPONSE	20,160,808,142,526.1320000	/IDT/GN_051MG3JM7JQNHDUDJT}WJW	FF06020101028000343130330000000000030E000...

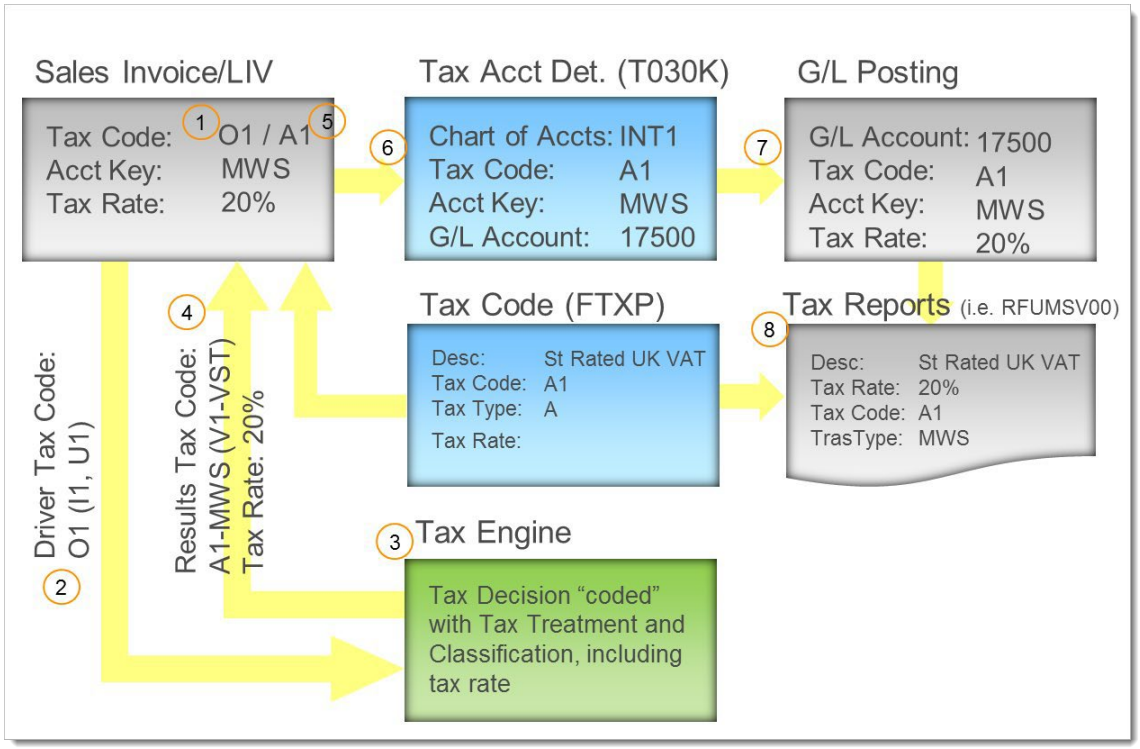
NEW SUPPORT OF TAX DATA STORAGE FOR ALL BUSINESS TRANSACTIONS

Prior to this version some tax details were stored in an append to table KONV in support of invoice printing and reporting. This design was limited to transactions using a pricing procedure. A new table /IDT/D_TAX_DATA was added as the primary place to store additional tax data returned from Determination in SAP for subsequent use in invoice printing, reporting, or other functions. Thomson Reuters has moved all standard mappings to use this new table. The table is updated for SD Orders, SD Invoices, MM Purchase Orders, MM-LIV, as well as for G/L (AP and AR) transactions. Customers can append the /IDT/D_TAX_DATA table with additional fields if desired. These appended fields will become automatically available for mapping using the field mapping solution.

NEW LOGIC FOR THE ASSIGNMENT OF GENERAL LEDGER ACCOUNTS

When posting to the SAP G/L all tax lines will need to have an appropriate tax G/L account assigned to them. In standard SAP this is done via the tax code and account key within the pricing/tax procedure for the condition record assigned. Table T030K is then used to map these two key fields to a G/L account for tax. It is our design to use as much as possible standard SAP functionality. It is a requirement that a tax result in the SAP G/L created by the new ONESOURCE Integration is represented the same way as it would be when created by native SAP process. This is to ensure downstream processes such as reporting and tax filing are not negatively impacted by our postings, as well as to be more robust when SAP would make changes to their system.

Our new design accomplishes this goal with the use of a driver tax code and the use of final tax codes and account key assignments. Final tax codes are assigned to the transaction using the Tax Code Qualifier feature in Determination and the ERP Tax Code field that is passed back from Determination to SAP.



1. A driver tax code is assigned in SAP to each transaction as a default.
2. This tax code triggers a tax call to Determination (O1 tax code in this sample).
3. Determination assesses the tax request data and determines proper taxability. An ERP Tax Code is assigned based on the Tax Code Qualifier conditions configured.
4. The tax code value is returned to SAP in the form of the ERP_TAX_CODE field on each Tax block. The ERP_TAX_CODE represents a concatenation of the SAP tax code and the SAP account assignment key. The account assignment key is now added to the transaction from the

Tax Code qualifier ERP Tax Code assignment. Prior to this new process the account assignment key was part of the original tax procedure logic.

5. The driver tax code (O1) is replaced with the values returned in the ERP_TAX_CODE field. An SAP tax code and account key will be assigned to each tax condition in the transaction.
6. At time of posting a document to the G/L, table T030K is evaluated to determine the proper G/L account using the tax code and account key from the transaction.
7. Posting to the G/L will store the tax code and account key as well as the tax rate in the proper SAP G/L tables in support of downstream processes.
8. When running a tax report, the tax code and account key combined with the tax rate stored for the transaction are used, in combination with the tax code text stored on the tax code itself.

For details on how to setup this process see the *Configuration Guide ONESOURCE tables*.

REPORTING

USE OF SAP STANDARD REPORTS

Standard SAP reports for VAT are written with logic that ignores company codes that are set to jurisdictional. Because of this and the prior Integration using the SAP External Tax Interface, the VAT reports were not useable. By no longer using jurisdiction-based taxing SAP provided VAT reports can now be utilized.

Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013

Selections

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 08:52:41 Date 12/29/2013
London Ledger 0L RFUMSV00/STEFANB Page 1

Output tax: Line items

CoCd	M	Year	Pstng Date	DocumentNo	Reference	Tx	Trs	Rate	Tax base amount	Output Tax Pay.	Gross amount	Output tax
2000	8	2013	08/01/2013	1400000135	0090001192	A1	MWS	20.000	1,000.00-	200.00-	1,200.00-	200.00-
2000	11	2013	11/01/2013	1800000052		A1	MWS	22.000	1,000.00-	220.00-	1,220.00-	220.00-
2000	11	2013	11/12/2013	1400000186	0090001393	A1	MWS	22.000	1,000.00-	220.00-	1,220.00-	220.00-
* 2000						A1			3,000.00-	640.00-	3,640.00-	640.00-
2000	8	2013	08/01/2013	1400000135	0090001192	A2	MWS	5.000	1,000.00-	50.00-	1,050.00-	50.00-
* 2000						A2			1,000.00-	50.00-	1,050.00-	50.00-
**2000									4,000.00-	690.00-	4,690.00-	690.00-

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 08:52:41 Date 12/29/2013
London Ledger 0L RFUMSV00/STEFANB Page 2

Output tax: Total

CoCd	Trs	Tx	Description	Rate	Tax base amount	Output Tax Pay.	Output tax	Not to be pd ov.
2000	MWS	A1	IDT GB Standard Output TAX	20.000	1,000.00-	200.00-	200.00-	
2000	MWS	A1	IDT GB Standard Output TAX	22.000	2,000.00-	440.00-	440.00-	
2000	MWS	A2	IDT GB Reduced Rate OutputTax	5.000	1,000.00-	50.00-	50.00-	
* 2000	MWS				4,000.00-	690.00-	690.00-	
**2000					4,000.00-	690.00-	690.00-	

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 08:52:41 Date 12/29/2013
London Ledger 0L RFUMSV00/STEFANB Page 3

Input tax: Line items

CoCd	M	Year	Pstng Date	DocumentNo	Reference	Tx	Trs	Rate	Tax base amount	Deduct.Input Tax	Gross amount	Input tax
2000	7	2013	07/23/2013	1900000135		V1	VST	20.000	1,000.00	200.00	1,200.00	200.00
2000	11	2013	11/01/2013	1900000187		V1	VST	22.000	1,000.00	220.00	1,220.00	220.00
* 2000						V1			2,000.00	420.00	2,420.00	420.00
**2000									2,000.00	420.00	2,420.00	420.00

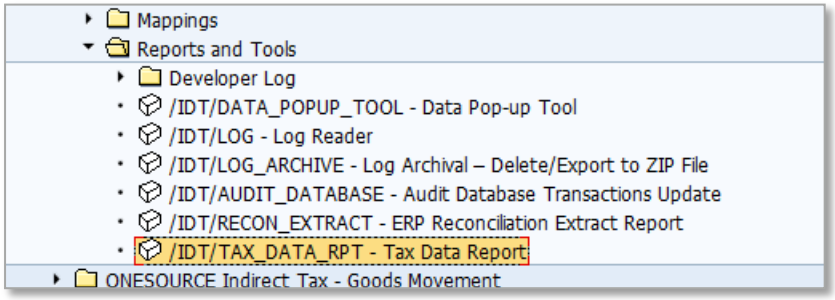
Example of transaction F.12 “S_ALR_87012357 - Advance Return for Tax on Sales/Purchases” report.

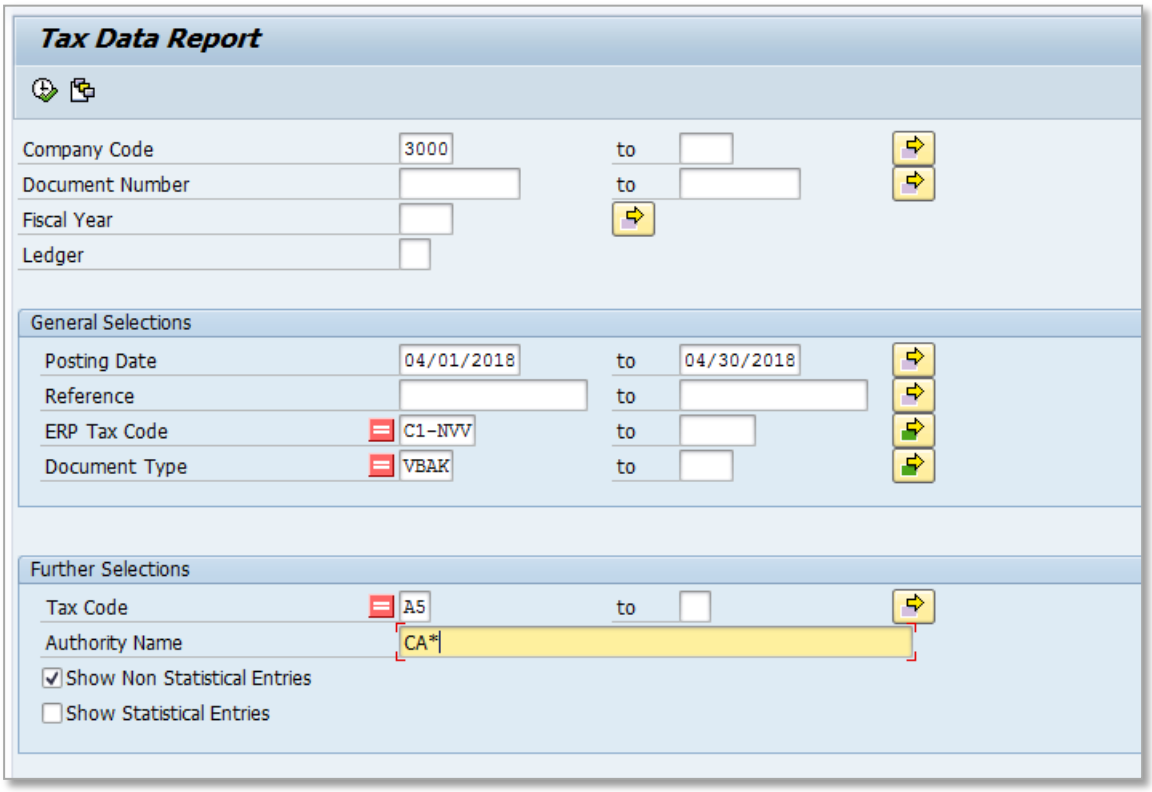
Due to the change of the US tax calculation away from jurisdiction-based tax calculation the US Sales Tax report will no longer apply. You can use the VAT report to get the same information now for US Sales Tax company codes.

TAX DATA REPORT

We just talked about how the VAT report was not useable in prior releases due to the use of jurisdiction code processing in Integration 5.x. Now in Integration 6.x we no longer use the jurisdiction code logic, so the VAT report is now utilized /accessible, and the US Tax report is broken. We have addressed this issue by making a new report that uses transaction data from /IDT/D_Tax_Data table. The report can also be selected by tax authority name so users can view and download data for downstream compliance reporting needs. This updated report is now available for use on all company codes within the Reports and Tools Menu. The report will first display with a limited display variant however users can create their own display variant to include many other fields into the report depending on their specific needs. User can also program the report by way of a BADI to select other fields or concatenate data for use in the report if the field is not currently available in our field selection list.

Transaction: **/N/IDT/TAX_DATA_RPT - Tax Data Report**





It is critical that you understand the data that is in the /IDT/D_TAX_DATA table as there are entries for vendor charged tax, entries for Sales Orders, Purchase Orders, etc., that are not applicable to entries that you would need for actual G/L postings of tax liabilities for compliance reporting. You will need to know what to exclude from your data selection options. For example:

- ***Document type VBAK for a sales order and EKKO for a purchase order should be excluded using the multiple selection button to exclude these values. Their entries are not postings to the general ledger.***
- ***Any ERP tax codes that have the NVV account key as the last three digits as these are vendor charged or non-recoverable items.***
- ***Any ERP tax codes that are assigned for deferred tax. (A5 in our example)***

Authority Name field will be important as a selection criterion for selecting entries by state if using US data. You can select all California data by using a selection of **"CA*"** (the two-digit abbreviation of the state followed by *) as all US state authorities start as XX- with the state abbreviation in the name.

The two check boxes for statistical entries are important as well. If using the data for compliance you would want to only show non-statistical entries. However, for other analysis you may want to see only the statistical or possibly both. The second button will help you do this.

The tax code field may be helpful in excluding deferred tax postings that are deferred and not due to be paid.

The last checkbox is used to switch between ALV Grid view of the report and list view.

We recommend that you run the report for only one US State at a time and save your selection screen entries as a variant so that you can easily re-run the report with a consistent set of criteria.

Selecting the fiscal year may not bring forward all your data as Billing and Sales Order transactions go to the tax data table with a blank fiscal year field due to the nature of SD document postings. We have adjusted for that somewhat in the program but recommend using the posting data selection to select data based on a date range.

Once you are past the selection screen and into the output results there is also the ability to set display variants to save your setting for field selection. This feature works that same as standard reports in SAP for field selection.

New fields were added to the tax data table for use on this report. Reminder: the fields are added as of this release and will not be populated for data that was transacted prior to the release being applied to your system.

Use of BADI for configuring additional fields for the report.

IDT/BADITAX_DATA_EXTRACT

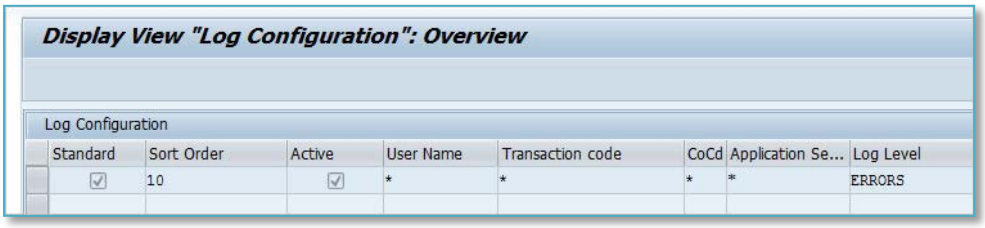
If by chance you are needing a field that is not in the selection drop down list of fields for the report or have a custom need to create a data element based on a concatenation, calculation, etc., we have provided a BADI that you can use. This will allow you to program what you need as an addition to the internal memory of the report and include it in the output. As an example, there is an issue with the gross amount column as it repeats the gross amount for multiple tax authorities. If you have five various tax authorities all charging a tax amount for a given line, then the gross amount is replicated five times and totaling this column would overstate the gross for the line item on the document by a factor of five. (data is at tax level rather than line level). This can be solved by creating a new field for the corrected gross amount that only shows the gross on the first tax block for the line item. This BADI is not populated for you but we have provided the example of the gross amount adjustment as this would be a very common issue for most customers. See optional BADI section of the *Installation and Programmers Guide* for the section on use of this BADI and the example code for the gross amount issue.

The old US Tax Report is no longer in the menu however the program was not removed and can still be accessed with the old transaction code if a user still wants the old report.

NEW LOG REPORT AND CONFIGURABLE LOGGING METHODOLOGY

This table gives you significant flexibility on the set up and use of tax calculation logs in the system. New with this Integration, the log reports are now in SAP and a user can locate and search the list of logs quickly and easily without exiting to a separate server location. You can define multiple logging levels based on company code, transaction code and user to tailor logging to each situation's needs. You can also make these changes on the fly in your live production system without interruption to tax calculation processes.

Transaction: **/N/IDT/LOG_CONFIG_V**



Display View "Log Configuration": Overview

Log Configuration

Standard	Sort Order	Active	User Name	Transaction code	CoCd	Application Se...	Log Level
☑	10	☑	*	*	*	*	ERRORS

The above image is the standard view of this table and has one default entry setting your system to error mode on all logs for all users and transactions, etc. You cannot modify this standard view of the table.

Transaction: **/N/IDT/LOG_CONFIG**

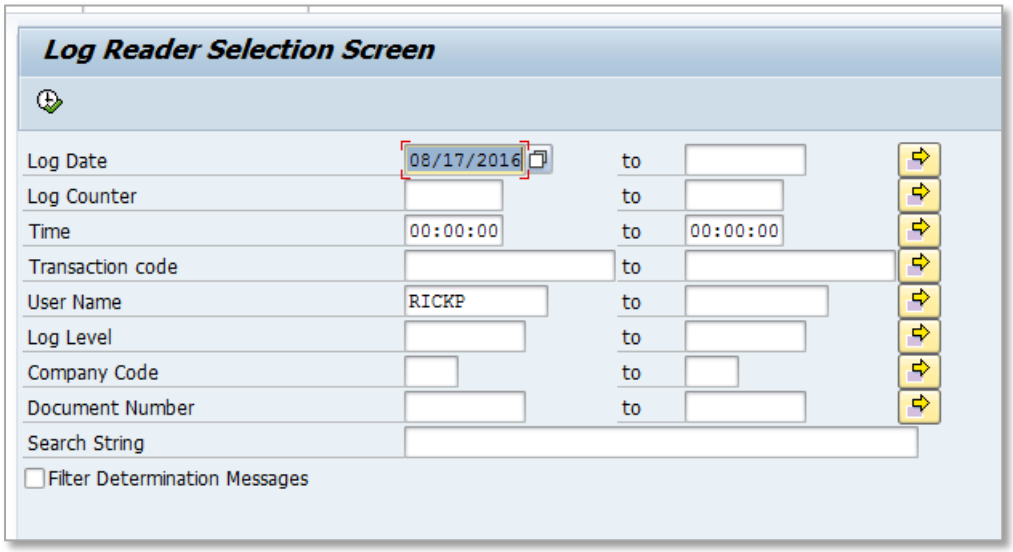
This view of the table allows the user to override or add to the log configuration. Making additions to this table no longer requires the user to stop processing on the tax calculations to re-start the server. Lines can be added and turned "ON" or "OFF" using the Active button without having to delete the line from the table. The customer has the added flexibility to be able to select debug level logging for a specific user, transaction code, company code, or application server or any combination thereof. This allows for maximum flexibility for logging option to manage the storage and processing demands on your production system while still getting the level of information you need to identify processing issues.

Once configured, logs are written to a /IDT/ owned logging table in a compressed format, and accessible via a flexible log search tool.

The Log Report

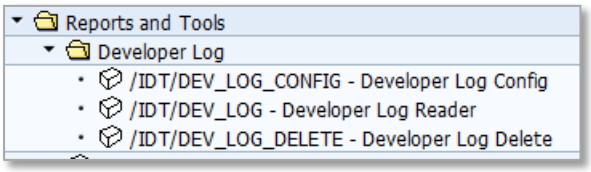
Transaction: **/N/IDT/LOG**

The log report tool will be discussed further down in this guide under Log Reader. It allows the user to search the log records based on various criteria and even search string logic and pull up a list of applicable logs. The users can then select a given log on the search list, double click on it, and view the XML log entries for the selected transaction. See copy of selection screen below.

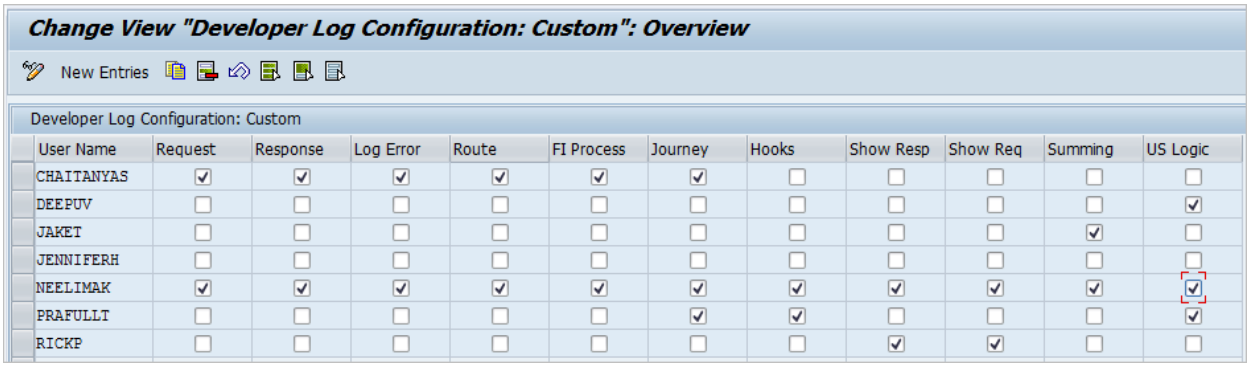


THE DEVELOPER'S LOG: A NEW ANALYSIS TOOL

Transaction: /N/IDT/DEV_LOG_CONFIG



A developer's log feature has been added that gives the programmer the ability to gain extra insight into the inner workings of the programs and function with the Integration for debugging issues or making custom enhancements. The log should never be activated in the live environment but can be used in the Dev or QA clients of SAP. Logs are saved for temporary reference and functions are available for the programmer to delete old logs from the files. The developer log has a configuration screen that allow a given user the ability to selectively turn on and off a variety of log functions based on what they need for debug analysis. Screenshot below shows the configuration screen and options.



User Name	Request	Response	Log Error	Route	FI Process	Journey	Hooks	Show Resp	Show Req	Summing	US Logic
CHAITANYAS	☑	☑	☑	☑	☑	☑	☐	☐	☐	☐	☐
DEEPUV	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑
JAKET	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐
JENNIFERH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
NEELIMAK	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
PRAFULLT	☐	☐	☐	☐	☐	☑	☑	☐	☐	☐	☑
RICKP	☐	☐	☐	☐	☐	☐	☐	☑	☑	☐	☐

User name of the programmer is entered to the first column and the report will only be run based on the transaction testing of the listed users. Features such as the full request log XML, response log XML, log

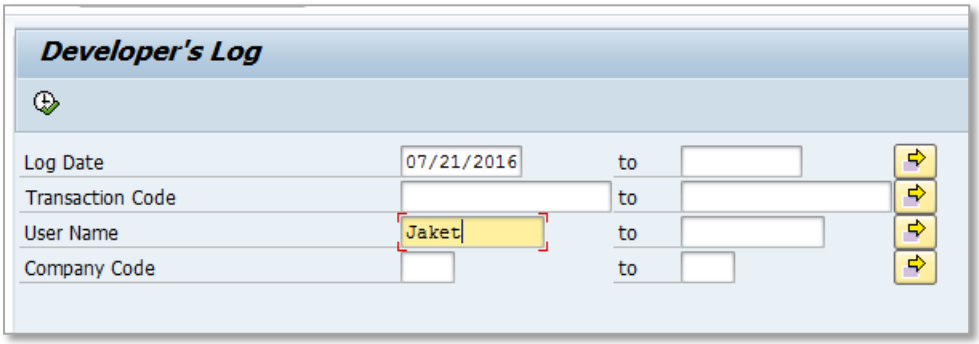
error messages, routes used in the transaction call, FI process used in the call, and journey used in the transaction call can be individually be activated so that they are displayed within the developer log data. The Hooks feature allows the developer to what hooks are being used in the program and where there might be an issue with a missing hook or a hook not processing correctly. The Show Req. (request) and Show Resp. (response) columns were added to record all changes to request and response fields per Journey.

New features may be added to this log at a later date and will display as additional columns on this selection screen. See *Installation and Programmers Guide* for more details

Developer Log Reader

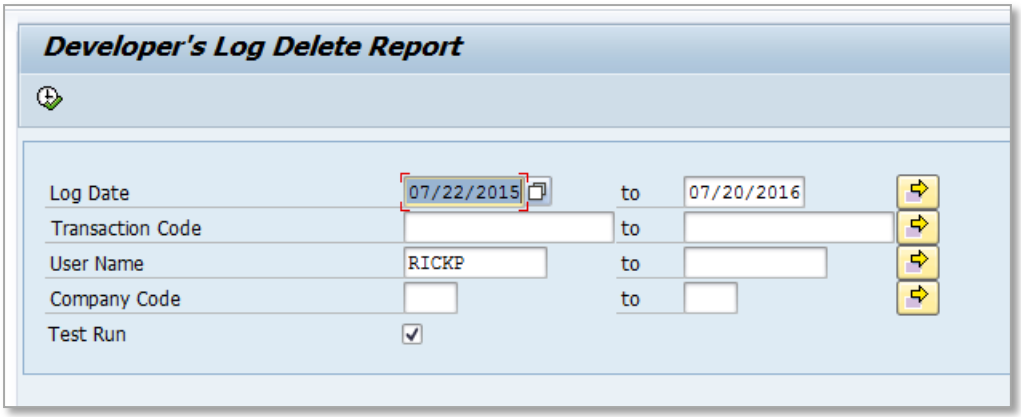
Transaction: /N/IDT/DEV_LOG

The log reader allows the developer to review and select the log they wish to view same as the normal log process



Developer Log Delete

Transaction: /IDT/DEV_LOG_DELETE



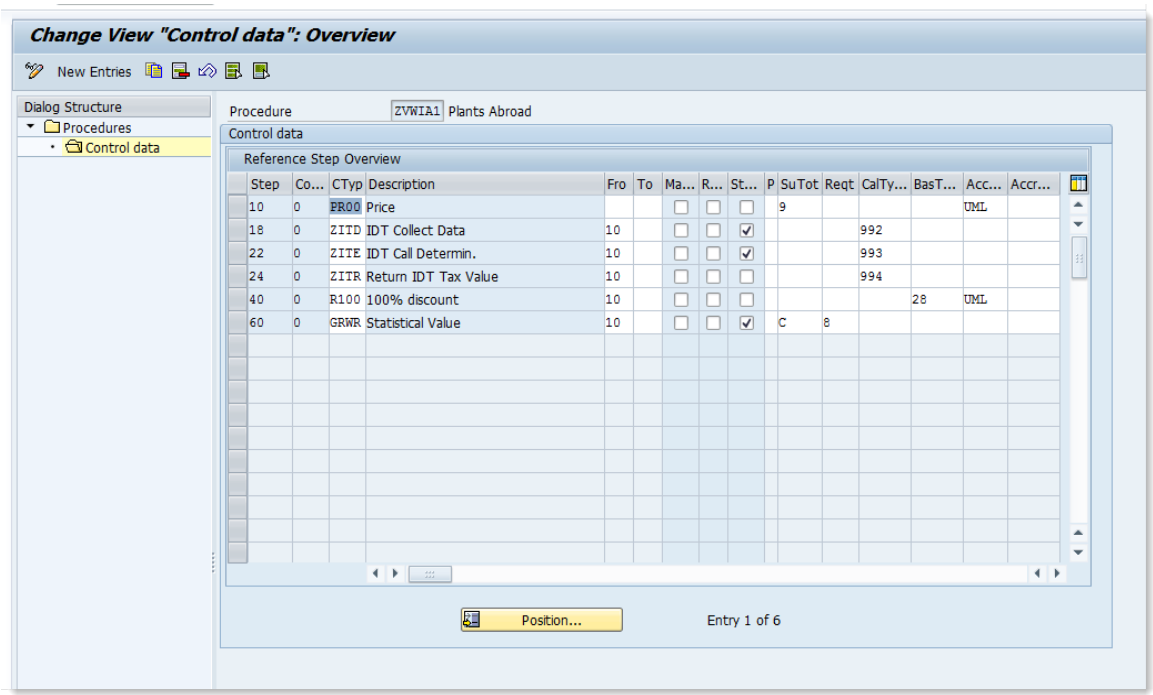
The developer log delete transaction will allow developers the ability to remove numbers of developer log entries from the files based on selection criteria such as username, transaction code, date range, and

company code. A test run button will give you a view of how many records were selected for deletion prior to removal. Uncheck the test run button to delete the records selected.

SPECIAL FUNCTIONS

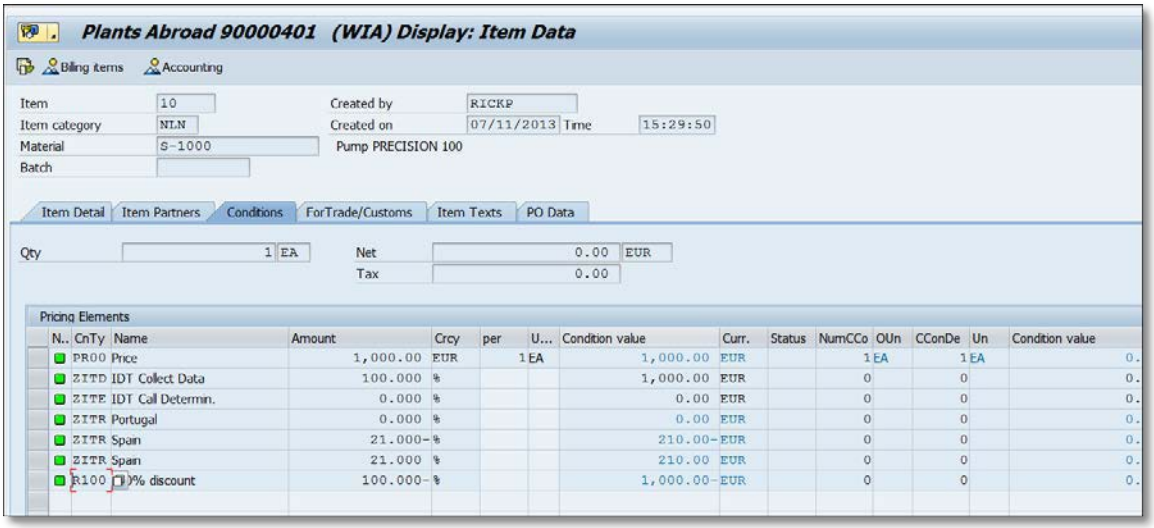
SUPPORT FOR PLANTS ABROAD

Plants abroad functionality could not be used combined with jurisdictional taxes, hence it didn't work with the SAP Standard Tax Interface based approach to VAT. The new tax interface enables tax calculations on Plants Abroad stock transport orders or other WIA based billings. This is achieved via configurations in the WIA pricing procedure. For more details on this feature see the *Configuration Guide* on Plants Abroad or a sample Processing a Plants Abroad Stock Transport Order in this document.



Step	Co...	CTyp	Description	Fro	To	Ma...	R...	St...	P	SuTot	Reqt	CalTy...	BasT...	Acc...	Accr...
10	0	PR00	Price			☐	☐	☐		9				UML	
18	0	ZITD	IDT Collect Data	10		☐	☐	☑				992			
22	0	ZITE	IDT Call Determin.	10		☐	☐	☑				993			
24	0	ZITR	Return IDT Tax Value	10		☐	☐	☐				994			
40	0	R100	100% discount	10		☐	☐	☐					28	UML	
60	0	GRWR	Statistical Value	10		☐	☐	☑		C	8				

Above screen illustrates the simple configuration of a Plants Abroad pricing procedure sample. The print screen below is an example of the conditions tab for a Plants Abroad billing document and includes both the buyer side and seller side VAT calculations on the stock transport order.



CASH DISCOUNTS PROCESSING

Depending on the country requirements the application of a payment on a cash discount invoice may require a calculation of VAT as an adjustment to the cash discount taken. Native SAP calculation process for this uses the tax code and account key from the original invoice to apply the VAT adjustment to the discount amount. An additional entry is then done via the F-28 cash application transaction or the F110 payment run in order to adjust the gross amount of the cash discount to a net amount and an accrual to the tax liability account for the VAT portion of the discount. This process is fairly straight forward for native SAP given that tax rates are directly tied to the tax code and not changeable. However, with the Determination feature to allow the tax rate to be a static date-driven code, (limiting the need for extra tax codes at time of rate change) the process becomes a bit more challenging. We address this in the new Integration by using the tax code and the tax rate from the original invoice, and process this as an override tax rate to avoid a wrong calculation if a rate change has occurred with the taxing authority between time of billing and cash application.

New table mapping of the tax code to the Determination override tax code is required to provide the new logic required to meet this challenge, as well as additional Tax Code Qualifier logic to assign this override calculation to the correct tax code and account key for reporting. The configuration required for this is noted in the *Configuration Guide ONESOURCE tables* *"Cash Discount Configuration Table".* The additional Tax Code Qualifiers needed for this process are in the *Configuration Guide* "*Cash Discount at Time of Payment: Additional Tax Code Qualifiers Needed".*

Special Note: When processing an enjoy transaction, (FB60, FB65, FB70, FB75, etc.) the TAX tab will not display the correct tax base and tax amounts per the Determination calculation if the scenario involves a net-of-tax calculation like what is done for GB. The SAP system will not reflect the reduced net base amount or the reduced tax amount but will instead revert to the total base amount including the cash discount within the TAX tab section of the document. VAT will display as the higher amount including the VAT on the cash discount. For a cash discount scenario for GB company code, you need to rely on the conditions tab as it will display the correct amounts per the net-of-tax calculation.

CASH DISCOUNTS ON LEGACY DOCUMENTS

If you are installing this version of Integration as an upgrade to your current SAP environment, then you will likely have documents in your open A/R or open A/P that have not been paid and contain a cash discount calculation. At time of payment these transactions will have used a tax code assignment logic that does not match the rules of assignment under this Integration. This will cause a conflict with our new logic and likely not process the tax adjustment on the recognized cash discount either by way of a wrong amount or hard error. Legacy documents will require special handling in one of several ways depending on the prior logic that was used to create them in your legacy system. For configuration instructions see the section of the *Configuration Guide* with this same heading. There you will see the various options and configuration settings required.

DEFERRED TAXES

Deferred Tax functionality could not be used combined with jurisdictional taxes; hence it didn't work with the SAP External Tax Interface based approach to VAT. The new tax interface enables tax calculations on Deferred Taxes based on SAP's native tax process and reports. This is achieved via configurations in the deferred tax code within SAP as well as other journey and route logic additions to Integration. For more details on this feature see the chapter "Deferred Taxes" in *Configuration Guide for Special Functions*.

The deferred tax process within the Integration has been designed to work with the F.38 RFUMSV25 program to transfer documents that have cleared the payment process from the deferred tax liability account to the target tax account. For assistance to the user we have identified the required configuration for deferred tax within the FI module of SAP such as tax code setup and deferred tax rules, as well as what is required within the Integration tables and Determination rules, mapping, and tax code qualifiers.

We have noticed that certain selection criteria used on the F.38 RFUMSV25 deferred tax transfer program can result in incorrect duplicate transfer entries. This is something that has occurred in our test systems that are running ECC 6.0 EHP 6 and 7 but only when trying to run the transfer program across multiple chart of accounts. We therefore require that you do not run F.38 across multiple chart-of-accounts and suggest only running the program for more than one company code if they are all using the same chart of accounts for each of the included company codes.

At this time, we have not fully implemented the new RFUMSV50 transfer program and recommend that you contact our Professional Services group if you need assistance with the newer program as it may be required for some country scenarios.

Tax Treatment Field

The Tax Treatment field in the Determination response to audit will be populated with a code of DI (Deferred Invoice) for entries that represent the posting to and from the initial deferred tax account. These lines are associated with the posting to the original SAP tax code used for the deferred tax

balance. Likewise, the entries that are posting to the final target tax account are using a tax treatment code of DP (deferred payment). They represent the posting to the final target tax account and are for the amounts that due to payment are now a tax liability to be paid to the taxing authority.

Reconciliation of Deferred Account and Amount due to Tax Authority

A system user can pull data from the Tax Data Table based on the line item entries having a tax treatment of DI and should be able to sum these entries up to see all the in and out posting to and from the deferred tax account. The sum of the entries with DI should in theory equal the balance in the deferred tax account. This process may be used for reconciliation of the deferred account. Posting entries in audit and in tax data table that have a tax treatment of DP should represent the amount of tax liability that is due to be paid to the tax authority.

Partial Payments on Deferred Tax Invoices

Partial payments made on deferred tax invoices should be able to be processed using the F.38 deferred tax transfer program. The partial payments will result in a transfer of the amount paid from the deferred tax account to the final tax liability account. Audit amounts should agree with the G/L posting entry for the partial payment transfer.

At this time, we have seen some issues on partial payments when there are multiple invoice lines using the same tax code. If you need to post partial payments with these documents the F.38 program may post the incorrect tax transfer amount based on the original line amount rather than the partial payment. A workaround is likely required. If you use partial payments on deferred tax invoices this issue can be avoided by setting the tax summarization table configuration to summarize tax lines at both the tax code and G/L account level. By doing this the lines on the invoice will be summarized into one tax line for the authority and the F.38 program will then handle the amount correctly and only transfer the partial payment amount to the target tax code.

EVALUATED RECEIPT SETTLEMENTS IN A/P

Tax processing for Evaluated Receipt Settlements (ERS) has been added to the system and is now available for tax calculations. ERS is the process of settling goods receipt automatically. The vendor invoices are posted automatically using transaction code MRRL (without actual paper invoice receipt from the vendor) in the system based on the information in the purchase order and goods receipt transaction. The settlement documents can be sent to the vendor automatically in print form, email, or fax. See section within the *Configuration Guide for Special Functions* on configuration set up.

DOWN PAYMENT PROCESSING

With release 6.3.0.0 down payment requests and down payment processing has been added within the Integration tax calculation process. Transaction codes as listed below in the following table are now

calculating tax. See SAP documentation for normal processing of this function. There are no additional steps to configuration except for the standard configuration as noted by SAP.

Process	Customer Down Payment	Vendor Down Payment
Down payment request	F-37 Customer Down Payment Request Note: use the final tax code as the input within the transaction. Do not use the driver tax codes for this process.	F-47 Vendor Down Payment Request Note: use the final tax code as the input within the transaction. Do not use the driver tax codes for this process.
Process down payment	F-29 Post Customer Down Payment. Can either process based on prior F-37 request or create as new. Note: use the final tax code as the input within the transaction. Do not use the driver tax codes for this process.	F-48 Post Vendor Down Payment. Can either process based on prior F-47 request or create as new. Note: use the final tax code as the input within the transaction. Do not use the driver tax codes for this process.
Process invoice billing	Same as normal processing using VA01, VF01 billing, FB70, FB75, etc	Same as normal processing using ME21N, MIGO, MIRO, FB60, FB65, etc
Transfer down payment to A/R or A/P account	F-39 Clear Customer Down Payment.	F-54 Clear Vendor Down Payment.
Clearing/payment of final invoice	Any of the normal transactions used for processing cash receipt against A/R such as F-28, etc.	Any of the normal transactions used for processing cash payment against A/P such as F-53, F110, etc.

CONSIGNMENT AND PIPELINE PROCESSES

Consignment and Pipeline transfer processes require the use of transaction code MRKO. MRKO transaction was modified to allow a tax call to Integration and calculation of tax on consignment transfers of inventory to the consignee. There are no additional configuration steps required for this other than the standard SAP configuration for consignment and pipeline sales processes. See SAP Library for documentation on required SAP configuration.

SERVICE ENTRY SHEETS IN A/P

Tax processing for Service Entry Sheets (SES) has been added to the system and is now available for tax calculations from the transaction code **ML81N**. SES is the basic process for the procurement of externally performed services. This basic process offers two basic ways of specifying services, **planned services** with description, quantity, and price and **unplanned services** with the setting of a value limit only. Once you enter and accept services in external services management, then it is same as a goods receipt posting when procuring materials which now creates a material document for the service entry sheet document. You can then execute invoice verification (LIV) from MIRO. Configuration can be set to calculate tax at the service level instead of at the PO line item level. See section within the *Configuration Guide for Special Functions* on configuration set up.

Multiple account assignment is also available on SES service lines with the tax calculation processed at the multiple account assignment level within the P.O. and **ML81N**.

When PO line item is utilizing Service Entry Sheet functionality with multiple account assignment, Integration now creates related lines and tax blocks as per quantity/percentage distribution in the POs SES account assignment tab. The ship-to addresses could be different due to different cost centers or other cost object assignments. Some customers may elect to include **ME21N** and **ML81N** functionality to override these addresses at time of entry with an address number from the ADRC address table much like the options we have also provided for line level as well as G/L account tab address override logic. See the *Programmers Guide* section of the *Installation and Programmers Guide* for optional addition of the added tab for address override.

PARTIAL SELF-ASSESSMENT FOR CANADA AND OTHER OFFSETS

Often with Canada taxes, a vendor may charge the Federal level GST but is not registered in a specific province to collect PST. In this situation the person receiving the invoice may be required to self-accrue the PST for their province. A new table /IDT/D_PART_SA has now been created to address the need for an offset posting to be created for the accrual of the required tax. This new table can be used for the self-accrual of Canada PST for various provinces, but it can also be used to establish other self-accrual entries in situations where the Determination has returned only one tax block and must be offset with another side to the entry. This was often handled in the past with the system user creating a custom authority and special rules to reverse the sign on the custom authority to post the credit to the tax liability account.
This new table can eliminate the use of a customer authority in such cases. See the *Configuration Guide for Special Functions* for further instruction on how to set up a second override/driver tax code and table entries for establishment of offset postings.

ADDITIONAL FEATURES

BUYER AND SELLER ROLE ON FI TRANSACTIONS

On FI transactions such as FB50 Determination requires a <COMPANY_ROLE> be set at the invoice level. The challenge is how do we determine that role in a FI document where there isn't a Customer or Vendor engaged?

One option is to look at the tax code; however, SAP uses tax codes at line level where the role in Determination is at invoice level. Integration looks at the first line with a tax code in SAP and uses field T007A-MWART to determine the role: (the field is part of the tax code configuration in transaction FTXP in the properties tab.)

V = Buyer
A = Seller

The "primary partner" structure within the FI journey includes a "Role" field. This field is populated in "default G/L" FI processes. In the Header Journey, when there is no customer or vendor within the transaction, this field will be used by default to set the Role (Buyer or Seller based on which tax code is assigned to the line).

Reminder that this logic will possibly trip you up if you forget to use the correct driver tax code that is applicable to the transaction. If you use an input tax driver tax code I1 on a FB70 Customer Invoice transaction the role will be incorrect, and your posting of tax will incorrectly post to the input tax account instead of output tax account. We recommend that you set default tax codes in your system for these transactions to prevent such user errors at time of invoice entry.

One exception to this rule however is when we are calculating the tax based on the US Special Logic table for US Sales Tax and accrual of Use Tax. In this scenario the taxes are calculated based on the correct role for the tax code based on this table configuration.

MIX OF US SALES TAX AND USE TAX ACCRUAL ON SAME INVOICE

Users need the ability to post US sales tax and US self-accrual of use tax using separate driver tax codes and process through to audit correctly. The company role in Determination is available only at the invoice level. As a result, a combination of tax codes between use tax and sales tax was not currently possible because the sales tax driver code would recognize the line as a seller role transaction and the use tax driver code would recognize the line as a buyer role. The mix of roles at the line level was not permitted. This has been fixed with a new journey that will split the transaction into two invoices using one as buyer role and one as seller role to capture both vendor-charged and self-accrual activities on the same document.
In order to do this a new journey /IDT/JOURNEY_US_SPECIAL_LOGIC2 was created that provides for two separate invoice level calculations to be passed to Determination much like the special logic that was created for both sides of a Plants Abroad stock transport order process. When you look at the calculation log using this new journey you will see within the request and again in the response to and from Determination two separate sections for the invoice: one using a buyer role and the second using the seller role. When the entry is posted for the G/L document the two invoices are combined into one single G/L document so that both the sales tax and use tax accrual can be processed correctly in a combined document.

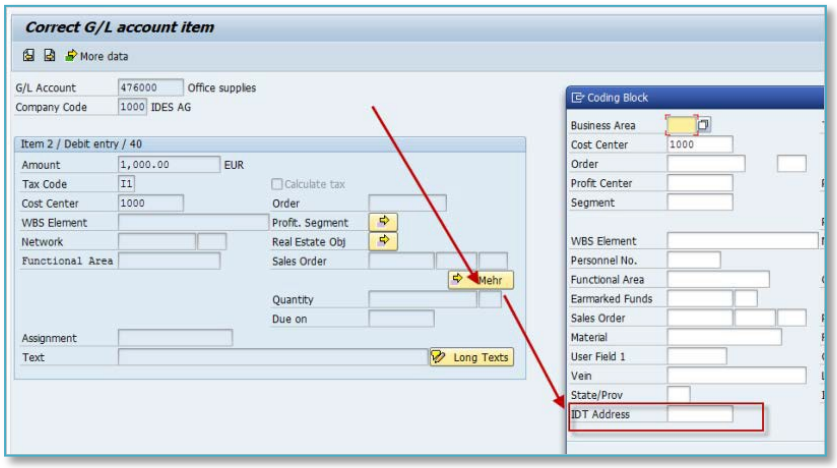
For an upgrade customer, the older journey /IDT/JOURNEY_US_SPECIAL_LOGIC has been replaced by the new /IDT/JOURNEY_US_SPECIAL_LOGIC2. You will need to review any custom configuration and make corrections to use only the new journey as the old version has been deleted as of release 6.3.0.0

CHANGING SHIP-TO/SHIP-FROM ADDRESS AT INVOICE

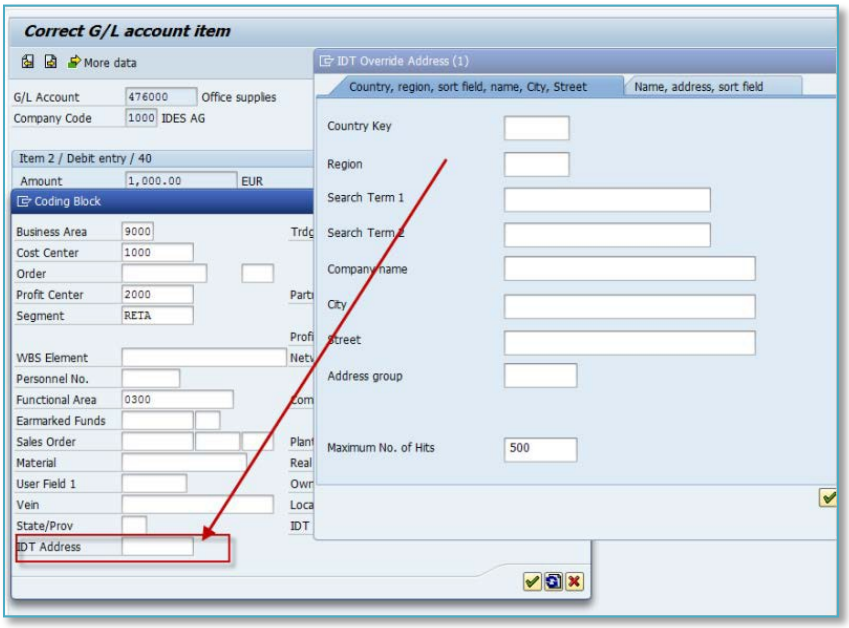
A new feature has been added to transaction FB60, FB65, FB70, FB75, FB01, and MIRO so that system users can adjust the ship-to or ship-from delivery address at time of invoice. A user can utilize this feature via the MORE DATA tab located on the line item detail screen or incorporate the new address field within the line item entry screen itself as a new column.

FB60, FB65, FB70, FB75, FB01

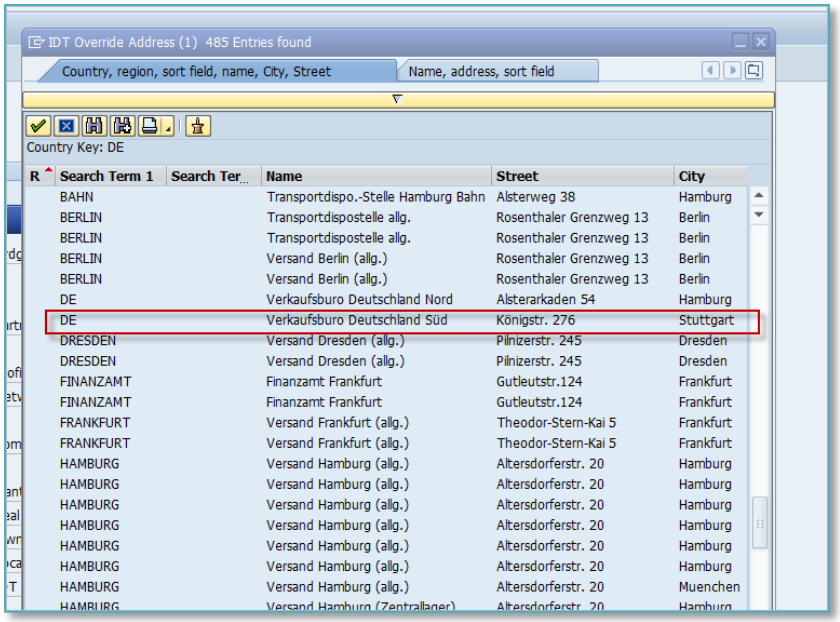
Within FB60, FB65, FB70, FB75, FB01 you can get to the new address field by double clicking on the line item. This will get you to the Correct G/L account item screen where you then click on the MORE DATA button. The Coding Block pop up screen will then display, and you can then do a search on the IDT ADDRESS field. Behind this address field is the ADRC table of addresses. You can search this table for applicable addresses and select the one that you need. This will populate the **IDT ADDRESS** field with the database number for this address and allow for it to be used within your tax calculation by overriding the ship-to address for the line item.



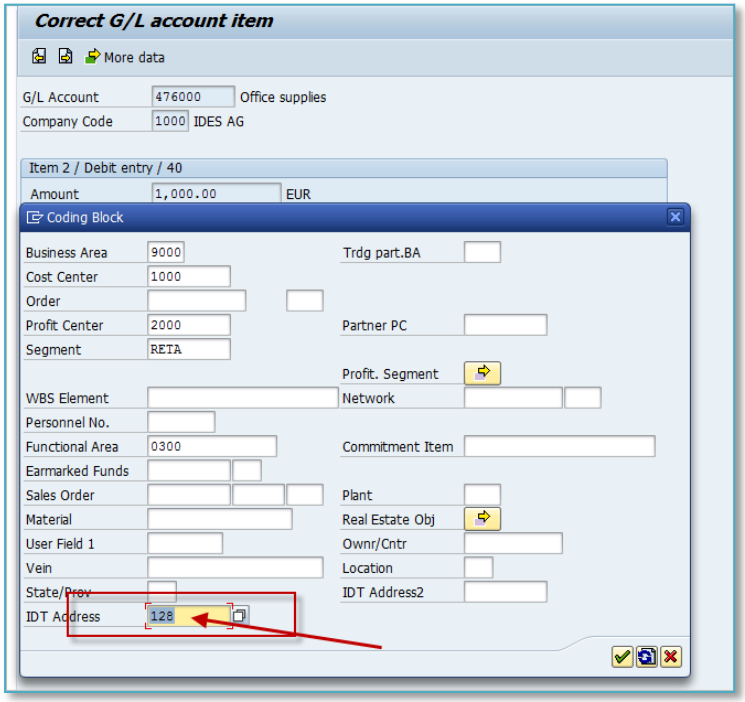
This screen shows the line item change screen and More Data button where the address field is located.



Click on the IDT Address field drop down to get the search screen for addresses in table ADRC.



Once you locate the desired address in the search screen double click on it to bring in the address number into the IDT Address field.



You will need to do some additional mapping in the field mapping table to enable this feature and map the override address for the request to Determination. See the *Configuration Guide ONESOURCE tables* section on *Field Mapping* for more information on required tasks.

Once the field has been updated on the invoice entry you can have the system make a call to Determination with the new address override. You should then see this new address information in the line item ship-to XML data within the request to Determination in the XML log for the transaction.

MIRO Process

The MIRO transaction is a bit different in that you do not have the ability to view the coding block within a More Data screen at the line item level. It is therefore a requirement that the new address field be set as a column within the line item entry screens or as an entirely new customer tab within the MIRO line item entry section of the transaction.

There are three places where this could possibly be added. Explanation is below:

Purchase Order Reference tab: Within the LIV invoice entry you will see the first tab as being the Purchase Order Reference. Here the item entered is referenced to a line item on the original purchase order. For this tab we have elected to add the address function using a BADI that activates the customer tab for users to enter custom fields. There are several ways that this can be added to your screen for the PO Reference data. Our recommended option is based on OSS note 1156325 which uses a BADI to add

the new tab and then add the field to the DRSEG table and map in our Integration. See *Configuration guide* for instructions on how to add with this method.

G/L item tab: This tab is used in MIRO to add additional charges to the invoice that are not referenced on the original purchase order. In such a situation the user may need to update the ship-to address on this line to be different than what was established on the order. A user would need to be able to pull in the new address field into the display variant that is used for the G/L tab of the invoice. We have included special instructions in “Appendix 1” of the *Configuration Guide* for creating this addition to your display variant on LIV entry.

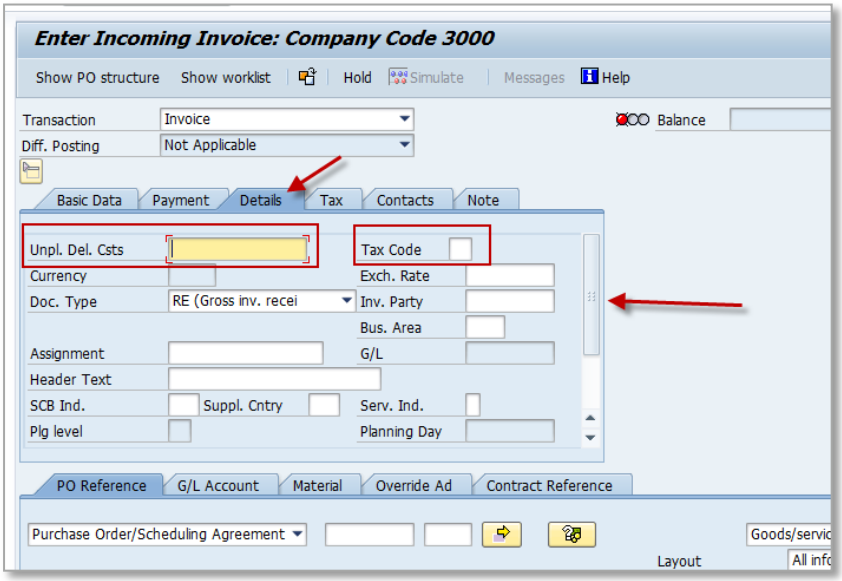
Material Tab: The Material Tab is another area where a user may enter a material number that is being charged on the vendor invoice that is not referenced on the purchase order line items. Again, like the G/L item tab the user would need to add this field to the display variant for the material tab. At this time, we have not added code to support the use of the Material Tab for the override address feature but will do so in a future release.

Note that in this configuration set up we have addressed the set-up of a ship to address option to change the ship to at time of invoice. This same process can also be implemented with the ship from address if desired.

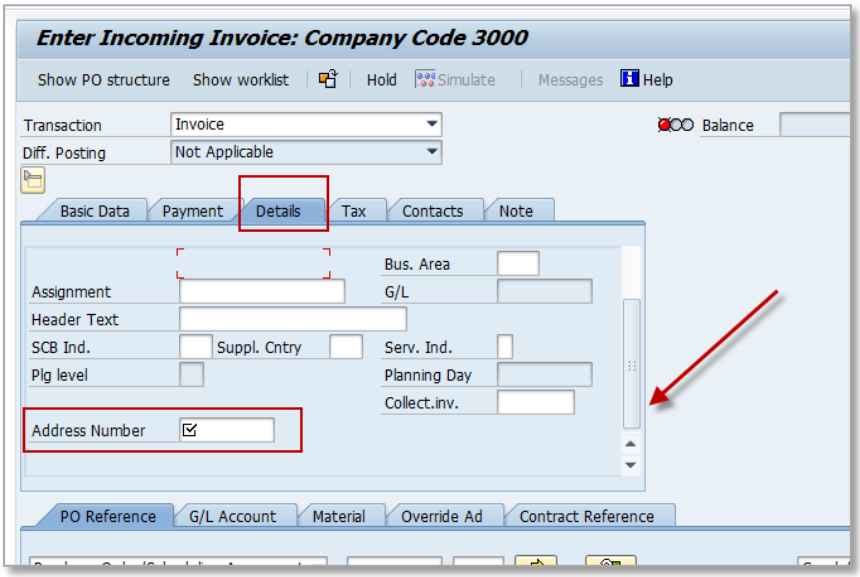
UNPLANNED DELIVERY CHARGES IN MIRO

Unplanned delivery charges are often incurred on a MIRO invoice transaction by entering the amount in the details tab of the invoice entry screen. Standard SAP with use of jurisdiction codes allows the user to override the taxability with entry of a separate jurisdiction code on this tab. With jurisdictional calculation turned off the jurisdiction code option goes away and users may still desire to override the tax address on this portion of the transaction. To address this issue, we have added functionality that will allow the user to input a separate tax code and address number on the details tab that will work together to adjust and calculate as a separate process the unplanned delivery charge tax. Configuration within SAP standard processes allows the user to direct the unplanned delivery charge to either a separate account number on the G/L or to allocate the amount to the various line items on the transaction. See additional configurations and set up that are required for this function within the *Configuration Guide ONESOURCE tables*. An example of the details tab field additions are shown below:

In the screenshot below, note that the details tab has a field for the unplanned delivery charge amount as well as a tax code assignment. This is at the top of the details tab. Note the scroll bar to the right is in the top position.



For a user to also access the special override access field you must first use the right scroll bar to move to the bottom of the viewing area of the tab. There you will see the additional address number feature that can be added to the screen much like the same function we discussed above on the use of an override address for regular line items in FB60, MIRO, etc.

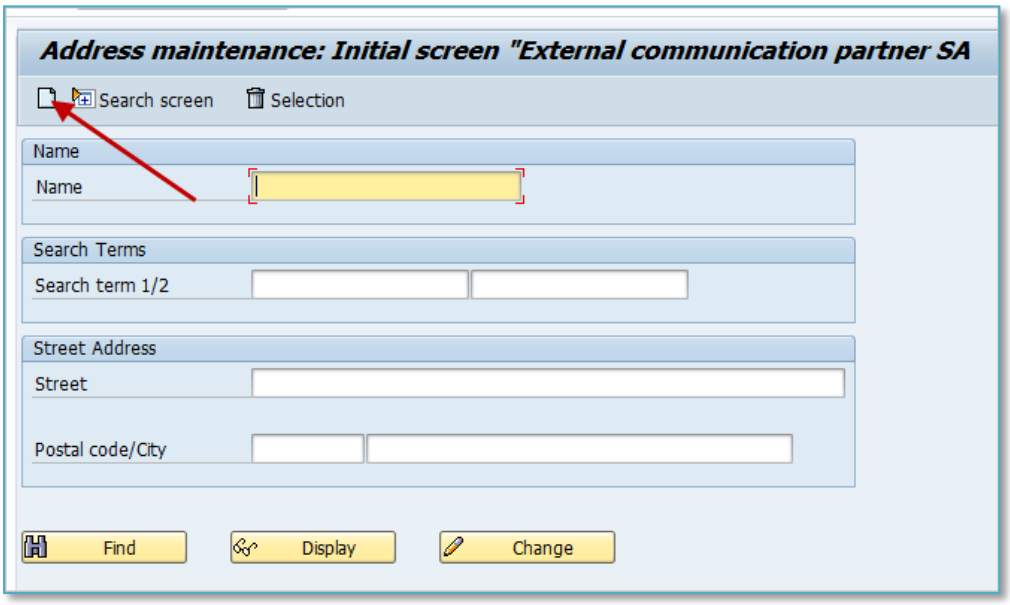


In this example you see the new address number field at the bottom of the scroll bar for the details tab. You have available the same search options in the drop-down view of this field in order to search for an address number from the ADRC table. Selecting or inputting an address number here in combination with the amount and tax code will tax the unplanned delivery charge and post it to the G/L based on your method selected within the SAP configuration for unplanned delivery charges. See *Configuration Guide for Special Functions* for further instructions for set up.

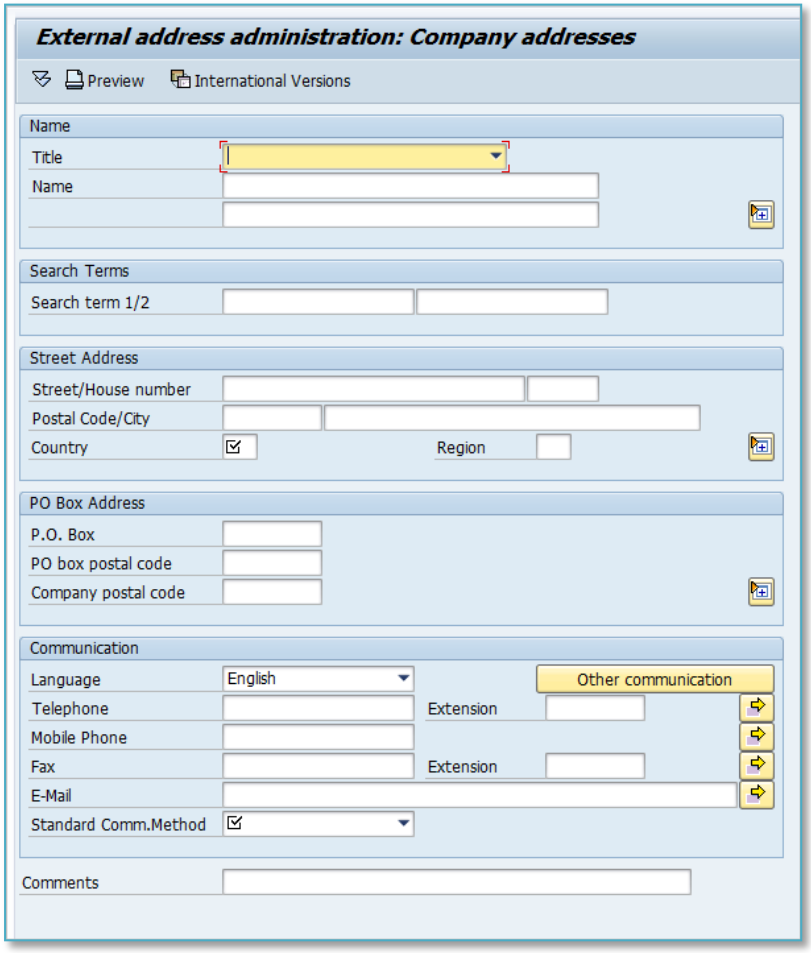
CREATING A NEW ADDRESS FOR THE ADRC TABLE

If in the process of searching for the desired address using the new **IDT ADDRESS** field, you do not find the address you desire it can be added to the table and then selected. This can be done while you are still in the invoice entry screen by creating a new session of SAP and then selecting the address transaction code.

Transaction code: **SOAD**



Select the create button to get to the entry screen.



Enter your new address and save the transaction. Then return to your other session and search for the new address number in the table and hit enter to add it to your line item data.

US PAY AS BILLED TAX WITHOUT A CALL TO DETERMINATION

Using ONESOURCE Indirect Tax to calculate your sales tax and VAT requirements on all FI documents requires the user to check the Calculate Taxes Button on the transaction. Doing this tells the system to make a call to Determination and bring back the correct tax calculation based on your configured tax policy as configured within SAP, ONESOURCE Integration, and Determination. If you attempt to process a VAT transaction without checking the Calculate Taxes button you will not get a correct tax entry on your accounting document and will likely have processing errors in your audit database that do not agree with the General Ledger. The use of the Calculate Taxes button is absolutely required with only one exception which is vendor charged sales tax in the U.S.

In the U.S. a vendor charged sales tax scenario does not make an entry to the Audit Database as the tax amount is not a liability of the buyer that must be posted to a tax liability account for future payment to a tax authority, and there is no posting to a tax recovery account. In this scenario the tax amount is

calculated and a posting is made to the Customer or Vendor account and offsetting posting to the expense or revenue account. No tax amount is accrued as you are paying the vendor directly.

Because of this, a system user may wish to process their incoming invoice from a vendor by automatically accepting the amount that the vendor has charged for US Sales Tax on the invoice rather than sending to Determination a request for a tax call. If the vendor has charged an amount that is different than the amount that would have been calculated by Determination, this process will allow you to avoid the out of balance issue on the invoice and pay based on the vendor charged amount. In this situation the system user is accepting the amount of tax charge without question and the burden of proof for the correct tax calculation lies in the hands of the vendor who is charging the tax.

In this scenario the user would enter the gross invoice amount and the tax amount as it is submitted on the vendor invoice. The calculate taxes button would not be checked and the system will then allocate the tax amount across the various line items on the invoice according to native SAP tax program logic without a request call to Determination. The amount of the tax will not be sent to the audit database or the IDT/D_TAX_DATA table. This can only be done at the header level and only for Vendor charged US Sales Tax.

If a system user is required to self-accrue a consumer use tax in the US then the calculate tax button is required and the user does not enter the tax amount in the taxes field, but instead allows the system to make a call to Determination and record the taxes per Determination content.

This feature will work for US vendor charged sales tax only if correct configuration has been done to the US special logic table /IDT/US_LOGIC. See the *Configuration Guide ONESOURCE tables* for correct configuration of this table.

Please note that this is not an automated process and requires manual entry. It cannot be used for automated entry of invoices now and is not intended to be a vendor charged tax automatic solution including partial accrual logic for differences, etc. Further enhancements to this function will come in a future release.

Use of Statistical lines in /IDT/D_TAX_DATA Table

When the invoice is entered without checking the Calculate Tax button and amounts are manually entered on the invoice the system will post to the audit database the tax liability amounts as they are posted from the G/L document. In addition to this posting based on the G/L document amounts, the Determination tax calculation amounts are also recorded as a statistical posting within the Tax Data Table, /IDT/D_TAX_DATA. You will see in the table a new field labeled “Statistical Flag” that is used to identify the amount as the Determination calculation amount that was not used in the GL transaction posting. This statistical line will allow the user to see and compare the amount differences between what was posted on the invoice and what Determination calculated as the tax amount. System users can use this statistical posting to analyze differences from the vendor charged amount. See copy of example screen print from the /IDT/D_TAX_DATA table below.

Data Browser: Table /IDT/D_TAX_DATA Select Entries 500

Table: /IDT/D_TAX_DATA
Displayed Fields: 7 of 7 Fixed Columns: 6 List Width 0250

Company Code	Fiscal Year	Document Type	Document Number	Doc Line Number	Statistical Flag	Authority Name
3000	2015	BKPF	1800000014	0000002		CA - STATE SALES/USE TAX
3000	2015	BKPF	1800000014	0000002	X	CA - STATE SALES/USE TAX
3000	2015	BKPF	1800000014	0000002		CA - LOS ANGELES COUNTY TRANSPORTATION COMMIS
3000	2015	BKPF	1800000014	0000002	X	CA - LOS ANGELES COUNTY TRANSPORTATION COMMIS
3000	2015	BKPF	1800000014	0000002		CA - LOS ANGELES COUNTY TRANSACTIONS AND USE
3000	2015	BKPF	1800000014	0000002	X	CA - LOS ANGELES COUNTY TRANSACTIONS AND USE
3000	2015	BKPF	1800000014	0000002		CA - BURBANK, CITY SALES/USE TAX
3000	2015	BKPF	1800000014	0000002	X	CA - BURBANK, CITY SALES/USE TAX
3000	2015	BKPF	1800000014	0000003		CA - STATE SALES/USE TAX
3000	2015	BKPF	1800000014	0000003	X	CA - STATE SALES/USE TAX
3000	2015	BKPF	1800000014	0000003		CA - LOS ANGELES COUNTY TRANSPORTATION COMMIS
3000	2015	BKPF	1800000014	0000003	X	CA - LOS ANGELES COUNTY TRANSPORTATION COMMIS
3000	2015	BKPF	1800000014	0000003		CA - LOS ANGELES COUNTY TRANSACTIONS AND USE
3000	2015	BKPF	1800000014	0000003	X	CA - LOS ANGELES COUNTY TRANSACTIONS AND USE
3000	2015	BKPF	1800000014	0000003		CA - BURBANK, CITY SALES/USE TAX
3000	2015	BKPF	1800000014	0000003	X	CA - BURBANK, CITY SALES/USE TAX
3000	2015	BKPF	1800000015	0000002		CA - STATE SALES/USE TAX

You will see that in this example the statistical lines are marked with “X” and the amounts per tax authority for each line that are from the G/L posting are marked as “BLANK” in the statistical flag field in the table. Now the statistical calculations coming from Determination are not displayed in the audit database as audit is a representation of the G/L document (US Sales tax amounts paid to the vendor are not a tax liability and therefore not posted to audit). Statistical postings are only shown in the /IDT/D_TAX_DATA table.

AUDIT SAVE PROCESS: EXPLANATION OF THE JOURNEYS USED

Updates to the audit database within Determination occur immediately after an entry that includes calculation of indirect tax, has been posted to the General Ledger. This process can be complex due to the varied types of transaction that are being processed including a wide variety of combined functions such as deferred tax, cash discounts, plants abroad, down payments, etc. To strengthen the program logic for this post to audit activity we have created three separate journeys that are used to post to audit. The journeys are designed for specific use given the details of the transaction. You will see these journeys as they are mapped in the /IDT/AUTO_JOURNEYS_V table in standard configuration. The journey name and function is noted below:

- /IDT/JOURNEY_AUDIT_SAVE assumes the calculate tax button has been checked and resends the last tax call so that it goes to audit. This is standard logic we’ve been using for a very long time and will not be changing.

- /IDT/JOURNEY_AUDIT_SAVE_FROM_GL includes deferred taxes, FB05 like transactions (including cash discounts). This logic has been around for a while and is designed to copy the amounts that are posted to the General Ledger lines and carry them forward to the audit database. This journey is used when the amounts posted to the G/L are likely coming from a prior transaction such as with a deferred tax transfer program.

- /IDT/JOURNEY_AUDIT_SAVE_TAX_UP will be used for all manual tax scenarios (calculate tax= “ “). To update the audit database, this will use the last tax calculation but will make changes to a

few fields like override amount, etc., and then send the data to audit. This is used for vendor charged tax override amounts and down payment transfer posting because the transaction removes the check on the calculate tax box as part of the transaction process. These transactions use data other than what was returned from the last Determination tax calculation.

ABILITY TO ASSIGN A TAX CODE AS NOT RELEVANT TO DETERMINATION TAX CALL

A new table is available to identify a given tax code as not relevant to tax. This will allow the user to prevent a call to Determination for the assigned tax code if exempt from tax handling.

Tax codes that are added to this table should be used like a driver tax code to tell the system the item as a whole is not relevant to a tax calculation. This is different than the use of a tax code that is brought back from a tax call as being exempt from tax after a call has already been completed by Determination. In such a case a user should have two different tax codes.

- One should be used via the tax code qualifier as an exempt tax amount or zero tax. Entries using an “Exempt” tax code will create a call and calculation in Determination that will go to audit along with other tax codes on the same transaction. They would not be included in this table. Such would be the case if a trans-editor sent a tax block for one tax authority as taxable and a second tax block on the line as exempt for another tax authority for possibly a regional, city, or district level tax.
- A tax code as Not Relevant to tax would be used on the line as a driver and would not make a call for the whole line item on the order. It would be used on this table to tell the system to not make a call at all for this item. No tax will be calculated and nothing is sent to the audit database for this line.

USE OF TAX FILTERS TO REMOVE CERTAIN TAX CODES

The tax filters table was added to the system with release 6.4.0.0 as a replication of the tax filters option that was provided in the prior 5.x Integration as part of the TaxMappings.xml and its Extension file. This was originally provided in order to filter out or remove from SAP a zero-rated tax result that was returned from Determination. Such zero-rated tax types as NL, ZC, ZE, ZR could be mapped to remove the additional tax block from the calculation. However, this removal only applied to the SAP side and would still carry over this zero-value block into the Determination audit data. As such it was only used to remove zero valued tax results. Tax filters can be configured based on several different criteria such as the tax code, tax type, authority name, and the authority UUID number.

SUMMARIZATION OF TAX DATA WITHIN BSEG AND BSET TABLES

SAP has a limit of 1000 lines on documents and users often have a need to summarize or consolidate like lines to maximize the size of the entry. To decrease the number of tax lines on a large order we have provided a new table that can be used to summarize the tax data lines on the accounting document for like information. This new table is a single customer view table located within the customer Configuration Tables menu. A user can summarize tax data lines for both the BSEG and BSET tables

based on General Ledger account, Tax Code, Account Key, and UUID tax authority. The table is part of the initial transport and is shipped blank for users to be able to configure.

We have also added an additional option for a user to be able to utilize a BADI to add additional custom logic to the summarization using additional ABAP programming. A user can use this new BADI to set limits on when to summarize based on number of tax lines, document types, etc. as they see fit. See *Configuration Guide for Special Functions* section on Summarization for required configuration steps and the *Installation and Programmers Guide* for more information about the BADI.

Currently this table will summarize BSEG and BSET table tax lines only for Purchasing and FI module transaction being posted to the General Ledger, but we have not extended this functionality to SD billing documents. The process will be extended to billing documents in a future release of the product. Currently SD billing documents follow standard SAP summarization processes.

USE OF TAX ON GROSS AMOUNT (FB00 SET UP)

Prior to release 6.3.0.0 we were not able to fully support the use of the gross tax calculation on A/P and LIV invoice transactions due to issues with the calculation and the way data was being returned to audit. Users need this function commonly for the calculation of tax on T&E card purchases entered via travel card billing processes. We have now made some adjustments to the Integration logic to correct for this so that the function can be used for pay-as-billed tax scenarios. Users needing to utilize the tax on gross calculation as supported by AP using FB00 transaction to adjust the calculation should take note however that this function will not work correctly in tandem with the new table and configuration process for self-accrual of Canada PST and other offset calculations. (See” Partial Self-Assessment for Canada and Other Offsets” section of this guide for more information on the new offset processing table.)

The current use of the tax off of gross assumes that all taxes on the order are being charged by the vendor on the invoice. Partial self-accrual for Canada PST, offsets used for Excise tax and other uses of the offset table would require a split-logic calculation between gross and net tax base amounts. Once Determination supports vendor charged tax scenarios including accrual adjustments, then this logic can be re-visited in Integration. Please consult with our Professional Services team if you have any questions or concerns in this area. Until this can be addressed in a future release, manual processes may need to be established for partial self- accrual when tax off gross method is used.

TAX SPLITTING IN MIX OF NVV AND NON-NVV LINES

When a vendor invoice has a mix of lines on it, some with recoverable taxes being debited to a tax recovery account (Non NVV account key) and other lines that are not recoverable and charged to an expense account (NVV account key) the allocation of the base and tax amounts are not allocated correctly on the various lines on the invoice. This is the result of the standard SAP allocation logic that is being used for the transaction and how SAP allocates amounts based on the tax base amount on the transaction in combination with the tax code. This is as opposed to an allocation based on the tax rate that has been applied. Some more complex calculation and allocations run into this issue because SAP logic assumes that a tax rate is consistent and tied to a specific tax code.

With our new integration the rate is not directly tied to the tax code but is calculated in Determination based on other fields and factors. To avoid some of these issues you need to take a step back and think of the situation as SAP logic would view it. We have found that the following work around is successful for proper allocations of the lines however it will likely require you to set up more specific tax codes than you originally anticipated: specifically, for countries with many state or province level authorities and tax rates.

If you are entering the invoice using a net amount entry and the Net Calculation is checked using FB00 settings, then the use of a driver tax code of I1 on the lines will allow the transaction to work correctly.
If you are entering the invoice using a Gross amount entry and the Net Calculation is not checked using FB00 settings, then you will need to use specifically assigned final tax codes on the various line items and avoid using driver tax codes on the transaction. Different tax codes would need to be assigned based on the underlying rates being different. For example, in the US, we recommend you try using separate tax codes for each State such as WA for Washington, CA for California, etc. instead of V1 for all the various State level taxes. Likewise, for Canada, separate tax codes for provincial level taxes are advised as the PST rate in one province is likely different than the PST in another province.

Calculations based on the entry of the gross amount are often likely coming from automated billings of travel card or purchase card programs that by their nature add another level of complexity to the tax code assignment process. In some of these cases the simple assignment of more tax codes for each state may not be enough to get proper allocation as desired. We recommend that you contact our Professional Services Group to discuss other possible options that could be utilized including additional custom allocation logic.

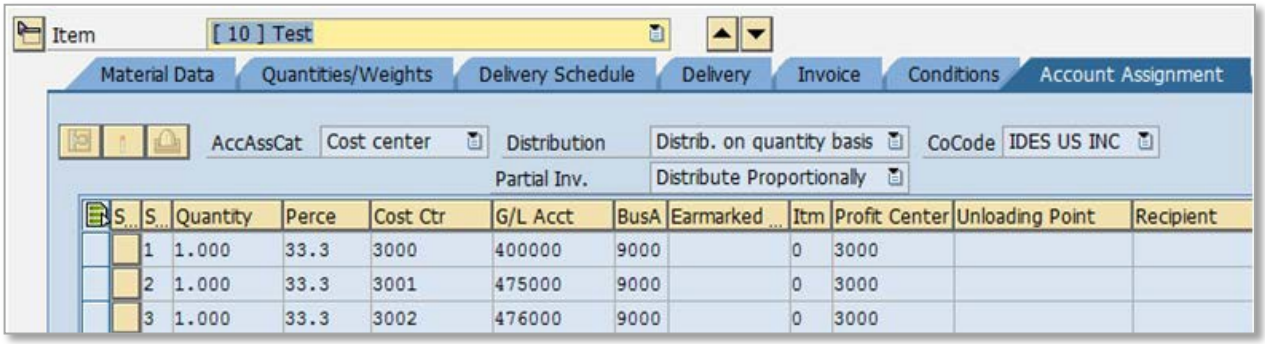
CLEARING HEADER TAX CODE ON FI TRANSACTIONS

When using a default driver tax code at the header level, sometimes the system will cause an error if the resulting lines do not also contain this code after calculation and TCQ assignment to the line items. This is an issue that can be encountered on FI based transaction codes such as FB60, FB65, FB70, FB75, etc. At the point in the program where the line items are updated to their final tax codes based on the TCQ assignment, the program was changed to then remove the default code from the header record to avoid system logic error.

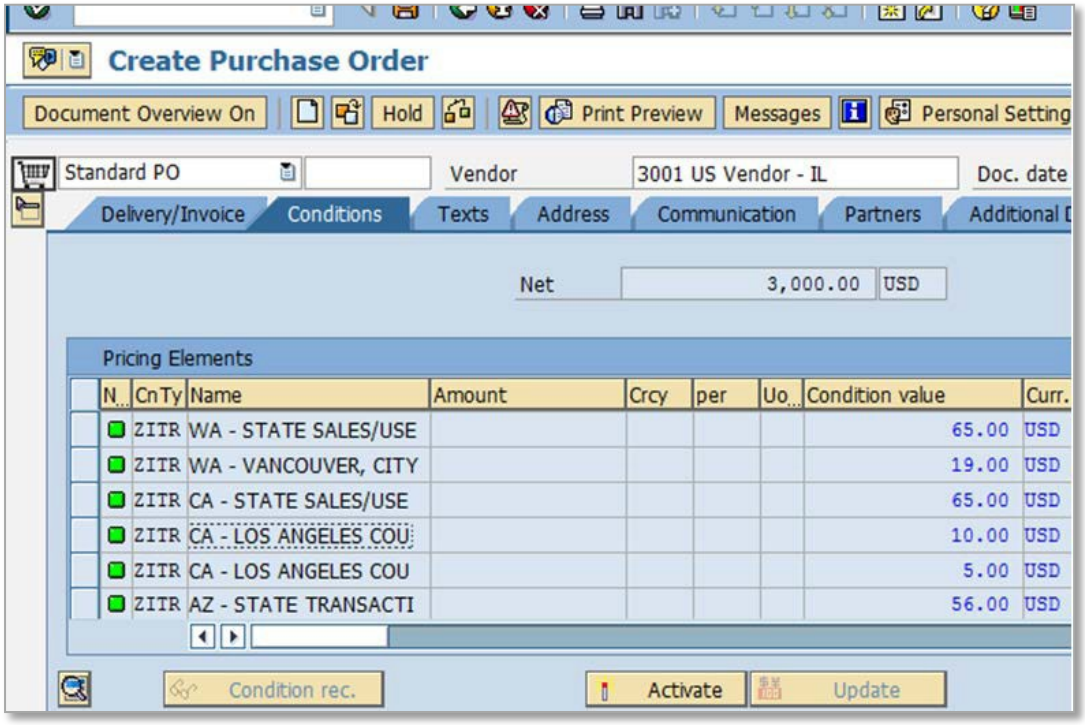
MULTIPLE ACCOUNT ASSIGNMENT ON P.O AND OPTIONAL ADDRESS OVERRIDE COLUMN

On a single line within a purchase order, a user may wish to assign multiple account assignments based on an allocation of either a quantity split or percentage split. Native SAP tax calculation procedures normally tax the line based on the cost object of the first assignment line of the multiple assignments and does not consider the addresses of the remaining assignment line items. System users often see this as a problem and desire that the calculation consider the correct cost center address for each of the lines and taxing the split the calculation individually based on all assignment lines in the table for the specified line. We have now as of release 6.4, added additional journey logic to accomplish this split and provide taxes for the line based on each of the multiple assignment lines. However, a user could wish to override this logic by providing an additional custom mapping that will override this logic based on the delivery address that is entered at the line item.
An example of the multiple line assignment and the resulting tax conditions is shown below to demonstrate the new logic.

Image showing a multiple account assignment tab on a P.O to allocate a single line



For example, the cost center 3000 is in Washington, 3001 in California, and 3002 is in Arizona. The resulting tax calculation as shown below demonstrates the multi assignment broken out and properly tax based on the correct address for each of the three assignments.



Users may also need to change or override the ship-to address that is used on a multiple account assignment line item at time of MIRO invoice processing. We have added additional functionality for this that a user may elect to add to their MIRO multiple assignment screen that will give them the ability to insert an address number from the ADRC address database that will override the address that is obtained from the assigned cost object master data address source. Additional modifications are required for this feature and full instructions on how to add the column to the screen as well as additional BADI and code insertions are all included in the *Programmers Guide* section of the *Installation and Programmers Guide*.

It is standard SAP native logic to not allow a valuated goods receipt on a multiple account assignment line item. This means that for a line on a PO that uses the multiple account assignment feature you will not get an accounting document at time of the MIGO transaction and no accrual will pass to the GR/IR account. The valuated transaction will not occur until the time of the invoice entry on the MIRO transaction upon invoice verification.

USER PROCESSES

This section outlines the main areas a SAP user would access while transacting business processes which calculate tax.

LOG READER

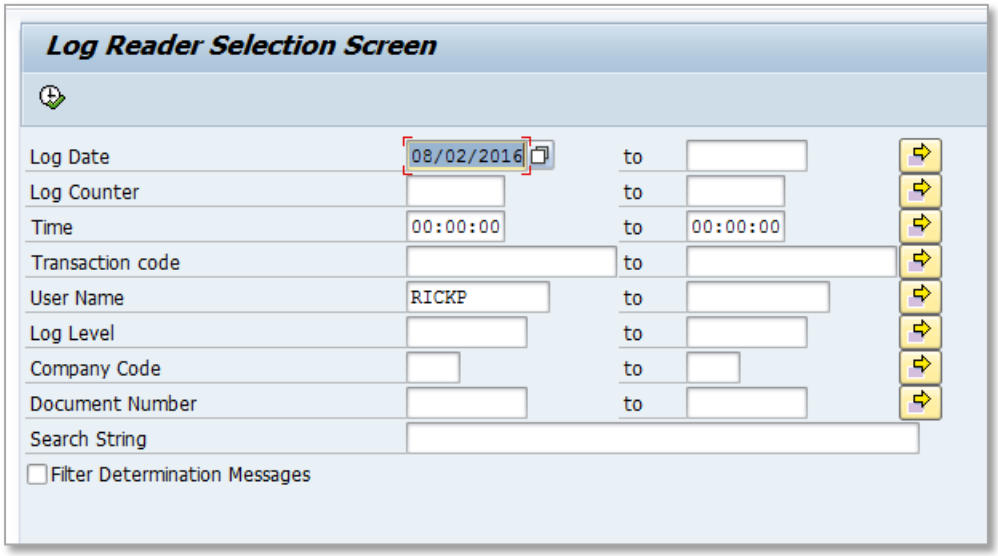
The new log reader report is used to assist you in analyzing what tax was calculated and why. It is a simple tool to search for a document that calculated tax and view the XML data sent to and received from Determination. As of release 6.2.0.0 the logs are now in a compressed format to reduce the size of the log table.

PREREQUISITE

For a document to be available in the log reader report logging must be enabled. See the *Configuration Guide ONESOURCE tables* for details on how to setup logging. If logging has been setup, but no document has been found, then most likely no tax call has been initiated by the process in question. Review the pricing analysis and see if the ZITD/ZITE conditions were fulfilled.

ACCESSING THE LOG READER

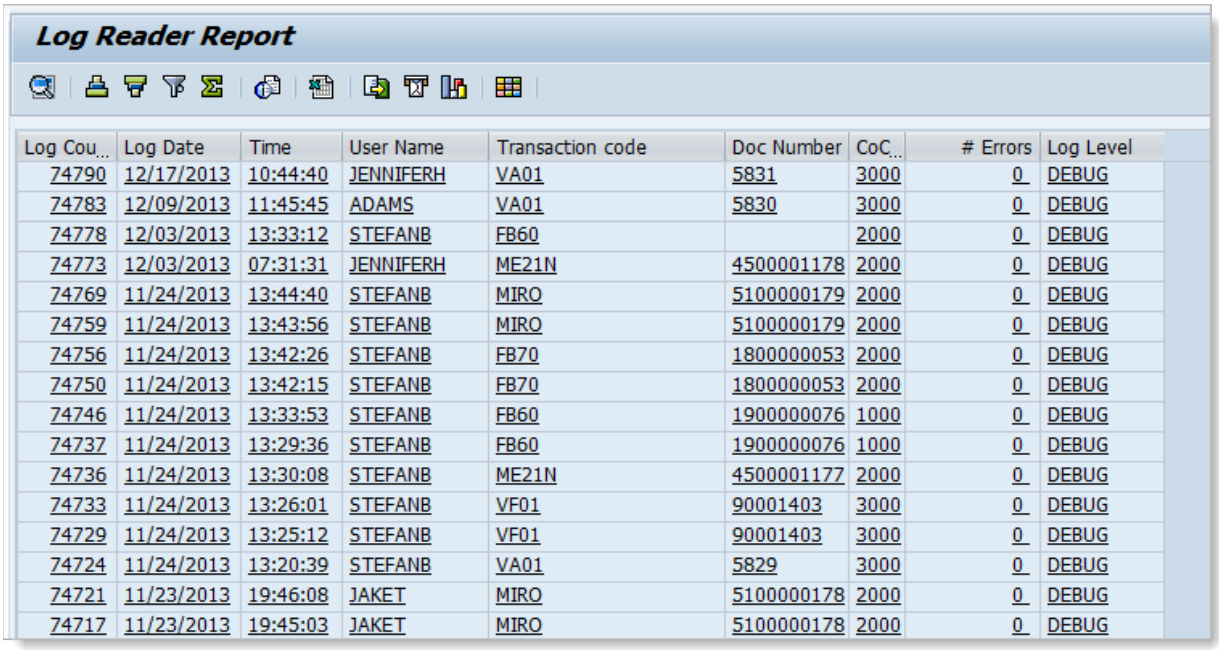
From the ONESOURCE Indirect Tax User Menu select **Reports > Log Reader**, or use transaction **/N/IDT/LOG.**



On the search screen shown above you can select log entries based on the following selection criteria.

Selection Option	Description
Log Date	The date or date range the transaction was entered.
Log Counter	The log number as assigned by the system. This can be helpful when sharing a log with another person, just provide them with the log number and they will be able to easily look it up.
Time	Time stamp when the log was created.
Transaction code	The transaction code used that created the log (VA01,ME21N, etc.).
User Name	Who created the transaction. It is the SAP logon username.
Log Level	Ability to narrow down log based on configured log levels (Debug/Error).
Company Code	Company code of the transaction.
Document number	The document number of the transaction. Only available if the transaction was saved to the SAP database.
String Search	Any data string that would be found in the XML data.
Filter Determination Messages	Feature allows user to filter out the many messages that show in the log from Determination or leave them in the display view of the log.

All search fields support SAP's extended search capabilities with search ranges, inclusions, exclusions, etc.



Log Reader Report

Log Cou...	Log Date	Time	User Name	Transaction code	Doc Number	CoC...	# Errors	Log Level
74790	12/17/2013	10:44:40	JENNIFERH	VA01	5831	3000	0	DEBUG
74783	12/09/2013	11:45:45	ADAMS	VA01	5830	3000	0	DEBUG
74778	12/03/2013	13:33:12	STEFANB	FB60		2000	0	DEBUG
74773	12/03/2013	07:31:31	JENNIFERH	ME21N	4500001178	2000	0	DEBUG
74769	11/24/2013	13:44:40	STEFANB	MIRO	5100000179	2000	0	DEBUG
74759	11/24/2013	13:43:56	STEFANB	MIRO	5100000179	2000	0	DEBUG
74756	11/24/2013	13:42:26	STEFANB	FB70	1800000053	2000	0	DEBUG
74750	11/24/2013	13:42:15	STEFANB	FB70	1800000053	2000	0	DEBUG
74746	11/24/2013	13:33:53	STEFANB	FB60	1900000076	1000	0	DEBUG
74737	11/24/2013	13:29:36	STEFANB	FB60	1900000076	1000	0	DEBUG
74736	11/24/2013	13:30:08	STEFANB	ME21N	4500001177	2000	0	DEBUG
74733	11/24/2013	13:26:01	STEFANB	VF01	90001403	3000	0	DEBUG
74729	11/24/2013	13:25:12	STEFANB	VF01	90001403	3000	0	DEBUG
74724	11/24/2013	13:20:39	STEFANB	VA01	5829	3000	0	DEBUG
74721	11/23/2013	19:46:08	JAKET	MIRO	5100000178	2000	0	DEBUG
74717	11/23/2013	19:45:03	JAKET	MIRO	5100000178	2000	0	DEBUG

Once a search has been defined and executed a results list is displayed. You will see the various logs that were selected. Note that some of the log entries are from an initial calculation prior to the transaction being saved. In those calls to Determination you will not see a referenced document number as the assignment of the document number has not occurred at that time.

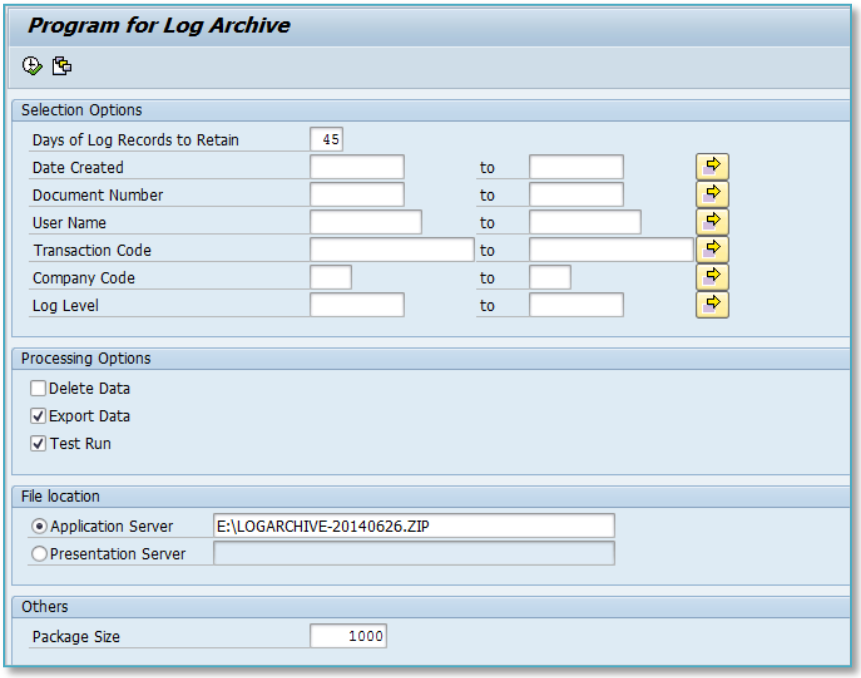
The errors column will display the number of any hard errors that are of a severity level 2 category that signals that there is a problem that prevented a tax calculation in Determination. Level 1 errors are warnings in nature and are not counted in this column.

By double clicking on a given line item in the list, the system will take you to the detailed XML log. For details on how to format logs quickly and easily see Appendix 1: Log Formatting.

LOG ARCHIVE FEATURE

The new Log Archive feature provides the user a way to manage the size of the log storage in SAP by giving the ability to archive logs to an offline file in a zip file format. A log deletion function is also provided. Users can select this option from the user REPORTS AND TOOLS menu or by scheduling the feature as a background job scheduled on a regular basis. Users can tell the program to delete or archive logs based on a set of selection criteria based on a designated number of days past. For example, running the report with 45 days would archive log files that are existing in the log table that were created greater than 45 days prior to the current system date. See copy of the selection screen below:

Transaction Code: **/N/IDT/LOG_ARCHIVE**



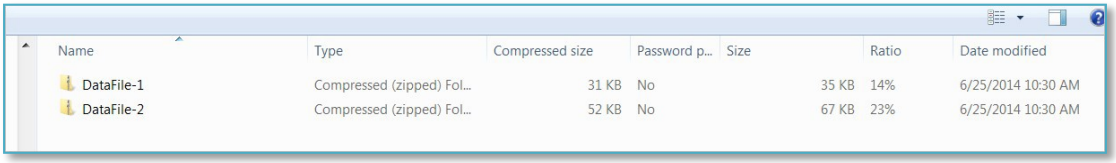
Selection Option	Description
Days of log Records to Retain	The number of days you want to keep in the log, taking all other items in the log earlier than this count into consideration for the process option.
Date Created	The day the log was created. Can use the multi selection option to select a date range or set of ranges. Must select either date created or the number of days to keep but you cannot select both. An error message will occur if both fields are selected.
Document Number	The document number of the log entry.
User Name	User who created the transaction. It is the SAP logon username.
Transaction Code	The transaction code used to create the log (VA01, ME21N, etc.).
Company Code	Company code of the transaction.
Log Level	Ability to narrow down the log based on configured log levels (Debug/Error).
Delete Data	Check box. If checked the records selected will be deleted. If **Test Run** button is also checked then it will not delete and only display number of logs selected for deletion.
Export Data	Check box. If checked the records selected will be only exported to a zip file on the server selected. If the **Test Run** button is also selected the export file will not be created but will display the number of logs selected for the export. To delete AND export the log data at the same time, then both boxes must be checked together. The export data check box selected by itself, will not remove the logs from the log file.
Test Run	Test run check box will run the selection and tell you how many logs were selected based on the other criteria. However, it will block the delete and the export data box selections if they are checked.
Application Server Path	The file path on your application server that you want to store the export file.
Presentation Server Path	The file path on your presentation server that you want to store the export file. Use either the application server or the presentation server but you cannot choose both. Jobs run in background must use the application server path.
Package Size	The number of logs you want to bundle into one zip file for export.

The user has the option to delete the selected log records, export them to a zip file, or to export a zip file and delete the records at the same time. If exporting to zip then the application/local server path becomes a required field. A user can also specify the option of package size desired for the export data to break the zipped file in to manageable parcels. If more records were selected than the package size the system will split the logs into several zip files that contain the number of logs requested in the package size. A second level zip file labeled DataFile-1, DataFile-2, etc. will be created as needed by the package size.

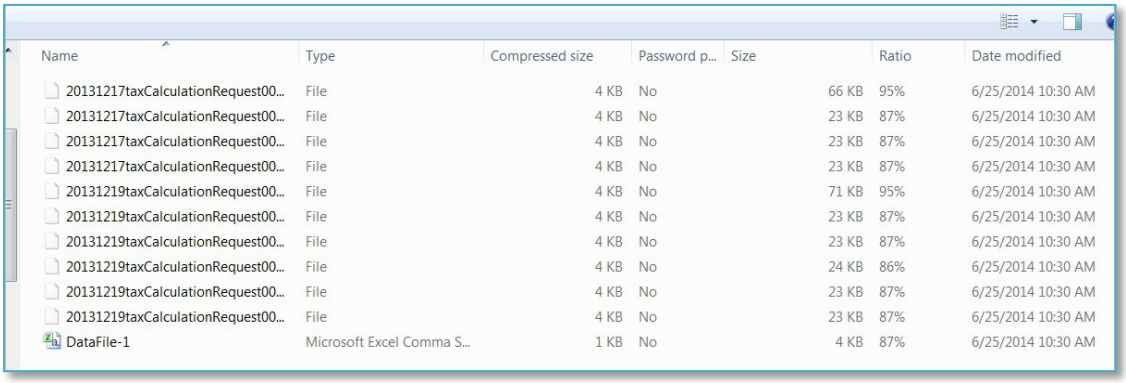
Make your selection criteria selections and run the report first in test mode. A report will come up in foreground mode showing you the number of logs that were selected for the delete or archive. You can then take the Test Run button off to then reprocess and update the file.

With this transaction code the process can be scheduled to be run in background as a regularly scheduled job. The test run button would not be used on this option and the job will immediately update the log files per the request.

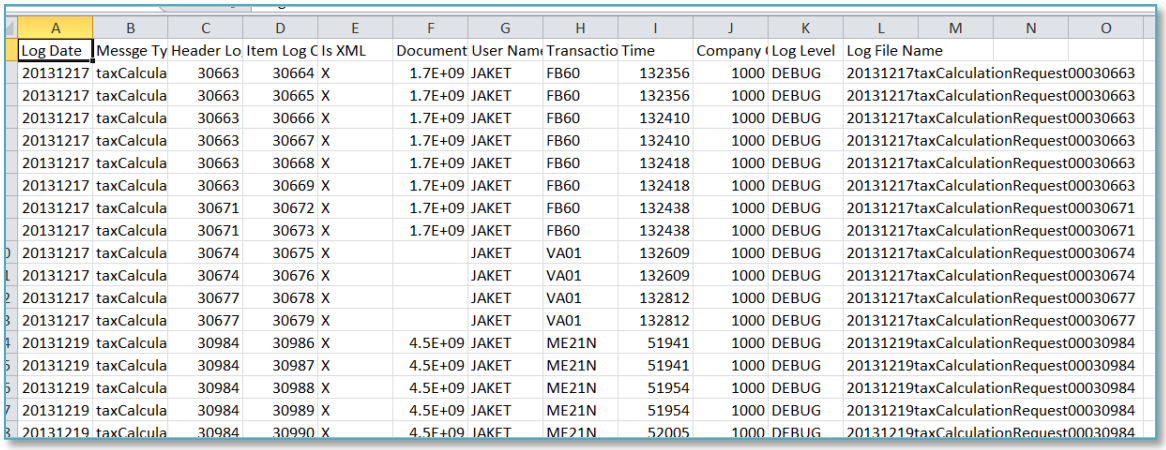
Logs that are sent to a log archive server location will be saved in a zip file format. The zip file will contain the number of logs selected or the package size (whichever is less) and at the end of the zip will be an excel worksheet that can be used as a log list or index. It will show the log numbers that were stored on the zip and other information on the log data.



Name	Type	Compressed size	Password p...	Size	Ratio	Date modified
DataFile-1	Compressed (zipped) Fol...	31 KB	No	35 KB	14%	6/25/2014 10:30 AM
DataFile-2	Compressed (zipped) Fol...	52 KB	No	67 KB	23%	6/25/2014 10:30 AM



Name	Type	Compressed size	Password p...	Size	Ratio	Date modified
20131217taxCalculationRequest00...	File	4 KB	No	66 KB	95%	6/25/2014 10:30 AM
20131217taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131217taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131217taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	71 KB	95%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	24 KB	86%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
20131219taxCalculationRequest00...	File	4 KB	No	23 KB	87%	6/25/2014 10:30 AM
DataFile-1	Microsoft Excel Comma S...	1 KB	No	4 KB	87%	6/25/2014 10:30 AM



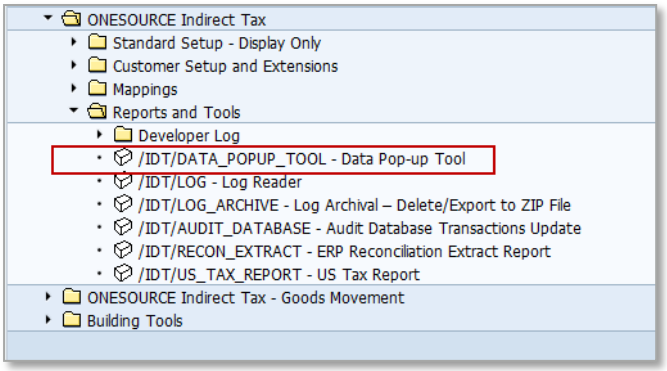
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Log Date	Messge Ty	Header Lo	Item Log C	Is XML	Document	User Nam	Transactio	Time	Company	Log Level	Log File Name			
20131217	taxCalcula	30663	30664	X	1.7E+09	JAKET	FB60	132356	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30663	30665	X	1.7E+09	JAKET	FB60	132356	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30663	30666	X	1.7E+09	JAKET	FB60	132410	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30663	30667	X	1.7E+09	JAKET	FB60	132410	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30663	30668	X	1.7E+09	JAKET	FB60	132418	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30663	30669	X	1.7E+09	JAKET	FB60	132418	1000	DEBUG	20131217taxCalculationRequest00030663			
20131217	taxCalcula	30671	30672	X	1.7E+09	JAKET	FB60	132438	1000	DEBUG	20131217taxCalculationRequest00030671			
20131217	taxCalcula	30671	30673	X	1.7E+09	JAKET	FB60	132438	1000	DEBUG	20131217taxCalculationRequest00030671			
20131217	taxCalcula	30674	30675	X		JAKET	VA01	132609	1000	DEBUG	20131217taxCalculationRequest00030674			
20131217	taxCalcula	30674	30676	X		JAKET	VA01	132609	1000	DEBUG	20131217taxCalculationRequest00030674			
20131217	taxCalcula	30677	30678	X		JAKET	VA01	132812	1000	DEBUG	20131217taxCalculationRequest00030677			
20131217	taxCalcula	30677	30679	X		JAKET	VA01	132812	1000	DEBUG	20131217taxCalculationRequest00030677			
20131219	taxCalcula	30984	30986	X	4.5E+09	JAKET	ME21N	51941	1000	DEBUG	20131219taxCalculationRequest00030984			
20131219	taxCalcula	30984	30987	X	4.5E+09	JAKET	ME21N	51941	1000	DEBUG	20131219taxCalculationRequest00030984			
20131219	taxCalcula	30984	30988	X	4.5E+09	JAKET	ME21N	51954	1000	DEBUG	20131219taxCalculationRequest00030984			
20131219	taxCalcula	30984	30989	X	4.5E+09	JAKET	ME21N	51954	1000	DEBUG	20131219taxCalculationRequest00030984			
20131219	taxCalcula	30984	30990	X	4.5E+09	JAKET	ME21N	52005	1000	DEBUG	20131219taxCalculationRequest00030984			

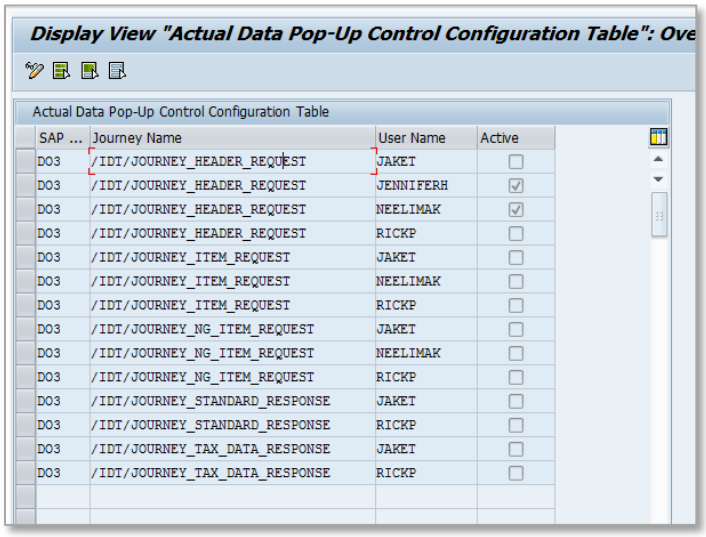
DATA POPUP TOOL

The Data Popup Tool is a new feature for users needing to do field mapping or debugging to determine which tables and fields are available and populated with data within the current transaction you are testing. It is a valuable tool to determine issues with a transaction or identify additional fields that will work for future or current field mapping. This tool is to be used only in a test environment as a tool for analysis of the transaction as it will interrupt the transaction and pop up within the transaction you are testing when a call is made to Determination for a tax calculation. There is a configuration table that you access to turn on the feature within the Reports and tools menu that will allow you to target the data based on a single journey or set of journeys that are used within the specific transaction, If multiple journeys are selected the screen will advance to the next journey once you get out of the current journey pop up and will continue to do so until you have gone through the list of journey that you selected and are used in the transaction,

Some transactions make many calls to Determination during the transaction: a ME21n Purchase Order is especially invasive in this respect and can cause the system to literally loop again and again through this pop-up feature and not let you out of the transaction. If this occurs, simply start a second session and change/ deactivate the popup tool and return to your prior session. Doing this delete process will allow you to proceed with the transaction without further issue. See screen shots below to access this feature, configure it, and view how it works.

Transaction Code: **/N/IDT/DATA_POPUP_TOOL**



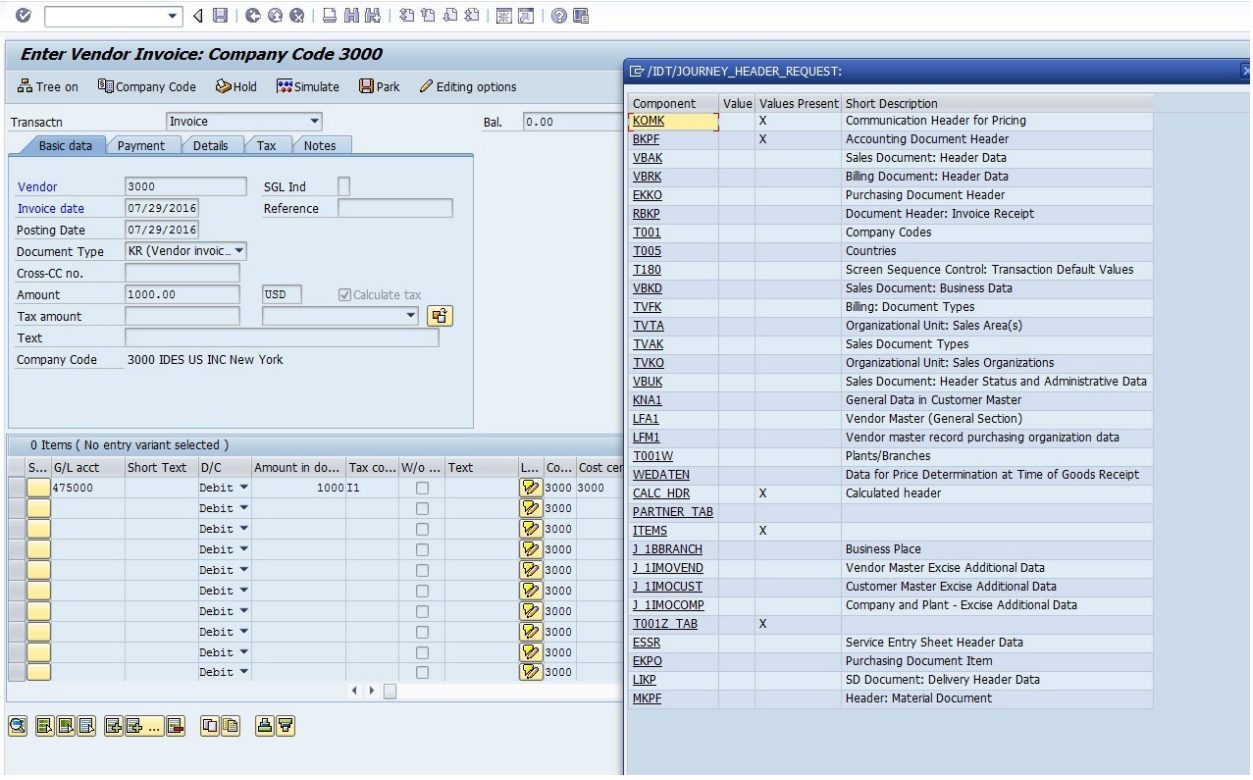


SAP ...	Journey Name	User Name	Active
DO3	/IDT/JOURNEY_HEADER_REQUEST	JAKET	☐
DO3	/IDT/JOURNEY_HEADER_REQUEST	JENNIFERH	☑
DO3	/IDT/JOURNEY_HEADER_REQUEST	NEELIMAK	☑
DO3	/IDT/JOURNEY_HEADER_REQUEST	RICKP	☐
DO3	/IDT/JOURNEY_ITEM_REQUEST	JAKET	☐
DO3	/IDT/JOURNEY_ITEM_REQUEST	NEELIMAK	☐
DO3	/IDT/JOURNEY_ITEM_REQUEST	RICKP	☐
DO3	/IDT/JOURNEY_NG_ITEM_REQUEST	JAKET	☐
DO3	/IDT/JOURNEY_NG_ITEM_REQUEST	NEELIMAK	☐
DO3	/IDT/JOURNEY_NG_ITEM_REQUEST	RICKP	☐
DO3	/IDT/JOURNEY_STANDARD_RESPONSE	JAKET	☐
DO3	/IDT/JOURNEY_STANDARD_RESPONSE	RICKP	☐
DO3	/IDT/JOURNEY_TAX_DATA_RESPONSE	JAKET	☐
DO3	/IDT/JOURNEY_TAX_DATA_RESPONSE	RICKP	☐

Once in the screen you will be able to change it to change mode and add lines to the table for your username and activate the journey. Currently the tool is available for the below list of journeys. More journeys will be added to this tool in the future and a drop-down list added for easier use. To deactivate a given journey, just return to the menu and turn off the active button. Journeys currently available include:

- ***Journey Header Request***
- ***Journey Item Request***
- ***Journey NG Item Request***
- ***Journey Standard Response***
- ***Journey Tax Data Response***

Next go to the desired transaction you wish to use this tool on and enter your data. When a call to Determination is made within the transaction the tool will activate and pop up the data for the first journey selected.



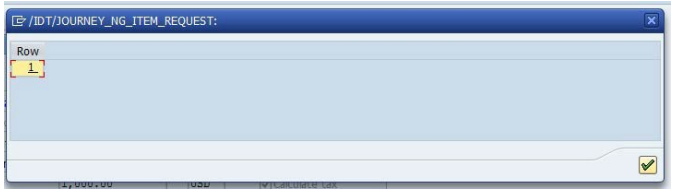
For example, we have done a FB60 invoice which will use the standard request, non-group line item request, standard response, and tax data table response journeys. You see in the screen shot above that the header request journey displayed and shows the list of tables. An X in the Values Present column tells you there is data available within this table for this given transaction.

Double click on one of the tables listed and the popup will take you one level down into the actual field names and data populate within this transaction.

/IDT/JOURNEY_HEADER_REQUEST:KOMK

Component	Value	Values Present	Short Description
MANDT	400	X	Client
BELNR			Sales and Distribution Document Number
KNUMV			Number of the document condition
VKORG			Sales Organization
VTWEG			Distribution Channel
SPART			Division
BZIRK			Sales district
VKGRP			Sales Group
BRSCH			Industry key
VKBUR			Sales Office
KONDA			Price group (customer)
KDGRP			Customer group
PLTYP			Price list type
ALAND	US	X	Departure country (country from which the goods are sent)
WKREG			Region in which plant is located
WKCOU			County in which plant is located
WKCTY			City in which plant is located
BUKRS	3000	X	Company Code
GSBER			Business Area
WERKV			Resale plant
HWAER			Local Currency
WAERK	USD	X	SD Document Currency
KURST			Exchange Rate Type
KURRF	0.00000		Exchange rate for FI postings
KURRF_DAT	00000000		Translation Date
KUNNR			Sold-to party
KNRZE			Payer
KUNRE			Bill-to party
KUNWE			Ship-to party
SPDNR			Forwarding agent
LIFNR	0000003000	X	Vendor Account Number
VRTNR	00000000		Sales employee
ZTERM			Terms of Payment Key
ZBD1P	0.000		Cash Discount Percentage 1
KAPPL	TX	X	Application
KALSM	ZTPUS	X	Procedure (Pricing, Output Control, Acct. Det., Costing,...)
PRSDT	20160729	X	Date for pricing and exchange rate
FBUDA	00000000		Date on which services rendered
FKDAT	00000000		Billing date for billing index and printout
ERDAT	00000000		Date on Which Record Was Created
AUDAT	00000000		Document Date (Date Received/Sent)
INCO1			Incoterms (Part 1)
INCO2			Incoterms (Part 2)
LAND1			Country of Destination
REGIO			Region (State, Province, County)
COUNC			County Code
CITYC			City Code
TXJCD			Tax Jurisdiction

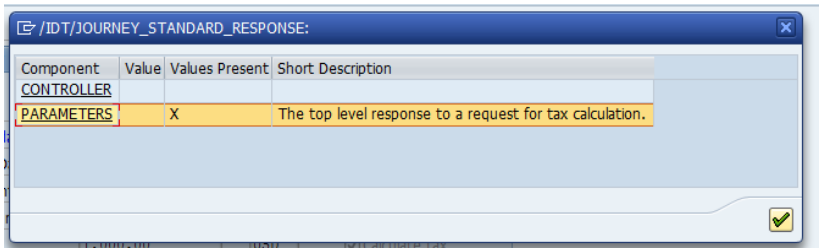
For example, on the KOMK table line. Notice the header of this screen shows the journey name and the table you selected. You see the actual data that was available by field name on this screen. This will aid in analysis by a Business Analyst as to what data is also available for further field mapping without the need to use complex program debugging tools. To return to the journey level simply use the “X” in the top right corner of this popup level to move one step back. You can then opt to select another table to view or X out of the journey. Exiting out of the journey will bring up the pop up for the next journey that was selected in the config if it is used in the transaction. Continue with the analysis tool until you go through all of the available journey screens at which point the tool will end until another call is made to Determination.



The item request journey screen will look a little different as it first shows the list of the row numbers at the line item level. Click to then select a line and go further down into the table detail for the line selected.

/IDT/JOURNEY_NG_ITEM_REQUEST::[ROW=1]

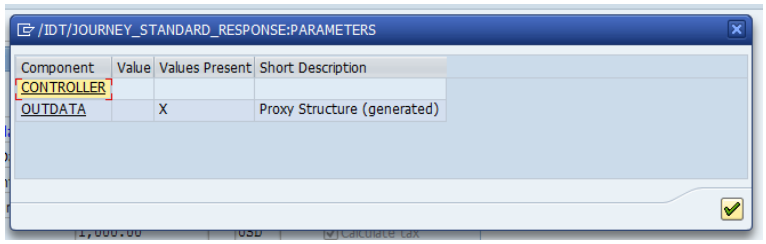
Component	Value	Values Present	Short Description
HDR		X	Header for field mapping data
KOMK		X	Communication Header for Pricing
BKPF		X	Accounting Document Header
VBAK			Sales Document: Header Data
VBRK			Reference Structure for XVBRK/YVBRP
EKKO			Purchasing Document Header
RBKPV			MRM_RBKPV
T001			Company Codes
T180			Screen Sequence Control: Transaction Default Values
TVFK			Billing: Document Types
TVTA			Organizational Unit: Sales Area(s)
TVAK			Sales Document Types
TVKO			Organizational Unit: Sales Organizations
VBUK			Reference structure for XVBUK/YVBUK
LFA1			Vendor Master (General Section)
KNA1			General Data in Customer Master
HDR_VBKD			Reference structure for XVBKD/YVBKD
BSEG		X	Accounting Document Segment
CALC_ITEM		X	IDT Item Calculated Fields
KOMP		X	Communication Item for Pricing
EKPO			Purchasing Document Item
PRICE_COND			KOMV structure plus index
VBAP			Sales Document: Item Data
VBRP			Billing Document: Item Data
TVAP			Sales Document: Item Categories
T001W			Plants/Branches
ITM_VBKD			Reference structure for XVBKD/YVBKD
VBUP			Reference Structure for XVBUP/YVBUP
VBAPF			Order Item Flow: Dynamic Division
MT06E			Material Master Fields: Purchasing
EINA			Purchasing Info Record: General Data
EINE			Purchasing Info Record: Purchasing Organization Data
EKKNU			Work Structure for Account Assignments in Purchasing Doc.-
MARA			General Material Data
MARC			Plant Data for Material
MARD			Storage Location Data for Material
MBEW			Material Valuation
MAKT			Material Descriptions
MVKE			Sales Data for Material
T163			Item Categories in Purchasing Document
DRSEG			MMCR_DRSEG structure
PARTNER_TAB			
J_1BBRANCH			Business Place
J_1IMOCOMP			Company and Plant - Excise Additional Data
J_1BSDICA			Sales Document Item Category table
ESLL			Lines of Service Package
LIPS			SD document: Delivery: Item data
CSKS		X	Cost Center Master Data
ESKN			Structure for Change Document: Generated by RSSCD000
ESKL			Change Document Structure: Generated by RSSCD000



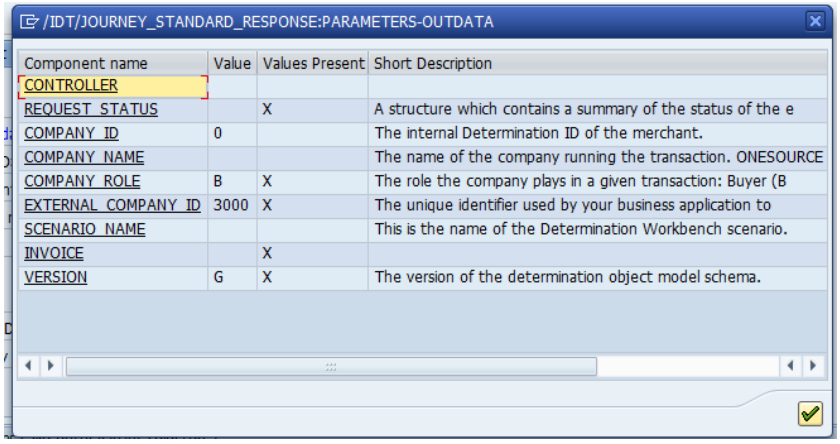
/IDT/JOURNEY_STANDARD_RESPONSE:

Component	Value	Values Present	Short Description
CONTROLLER			
PARAMETERS		X	The top level response to a request for tax calculation.

The standard response journey will look a little different as well.



Then to the outdata…

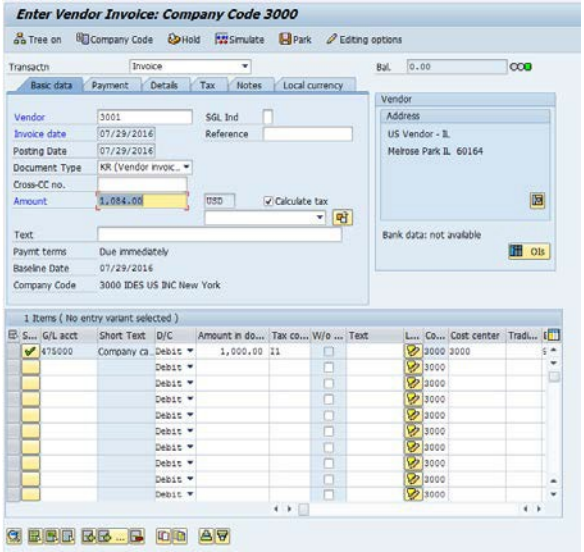


… and invoice level data…

/IDT/JOURNEY_STANDARD_RESPONSE:PARAMETERS-OUTDATA-INVOICE:[ROW=1]

Component name	Value	Values Present	Short Description
CONTROLLER			
REQUEST_STATUS		X	A structure which contains a summary
BASIS_PERCENT			A percentage of the gross amount of
CALCULATION_DIRECTION			There are three calculation directions,
CALLING_SYSTEM_NUMBER	400	X	A pass-through element that contains
COMPANY_ID	15	X	The internal Determination ID of the n
COMPANY_NAME	SAP US INC 3000	X	The name of the company running the
COMPANY_ROLE	S	X	The role the company plays in a given
CURRENCY_CODE	USD	X	The currency associated with a transac
CURRENCY_NAME	United States Dollar	X	The currency used for this invoice. Loc
MIN_ACCOUNTABLE_UNIT	0.01	X	Allows empty tags for decimal amounts
ROUNDING_PRECISION	2	X	Number of decimal places to round the
ROUNDING_RULE	1	X	The rounding rule from the TB_CURRE
CUSTOMER_NAME			The customer's name. Used in both V
CUSTOMER_NUMBER			The customer's number as passed in b
END_USER_NAME			Identifier of the user who made a char
EXTERNAL_COMPANY_ID	3000	X	The unique identifier used by your bus
FISCAL_DATE	2016-07-29	X	Stores a transaction by a fiscal date in
FUNCTIONAL_CURRENCY_CODE			Reserved for future use.
HOST_SYSTEM	DO3	X	The name of the ERP instance sending
INDATA			Contains batch level request fields as v
INVOICE_DATE	2016-07-29	X	The date of the invoice.Note: Determ
INVOICE_NUMBER			This number is passed through to the
IS_AUDIT_UPDATE			Indicates whether or not to permit au
IS_BUSINESS_SUPPLY			Indicates whether a supply is being us
IS_CREDIT			Indicates whether the current transac
IS_REPORTED			Controls whether the invoice being pr
IS_REVERSED			Indicates whether the current transac
MESSAGE			
NATURE_OF_TRANSACTION_CODE			Used in Intrastat reports in all countrie
ORIGINAL_INVOICE_NUMBER			This number enables a credit invoice t
STATISTICAL_PROCEDURE			A statistical indicator used for large ship
TOTAL_TAX_AMOUNT	84.00	X	Proxy Data Element (generated)
TRANSACTION_DATE	2016-07-29	X	The system date at the time the trans
UNIQUE_INVOICE_NUMBER	3000||S|2016	X	The unique identifier for this invoice, a
VENDOR_NAME	US Vendor - IL	X	The vendor's name. If this is a B2B tra
VENDOR_NUMBER	0000003001	X	The vendor's number. If this is a B2B t
VENDOR_TAX			The amount of tax charged by the Ve
USER_ELEMENT		X	
LINE		X	
ORIGINAL_DOCUMENT_ID			The original document id as shown on
ORIGINAL_DOCUMENT_ITEM			The original document item as shown
ORIGINAL_DOCUMENT_TYPE			The original document type as shown
ORIGINAL_INVOICE_DATE			The date of the original invoice. Used
ORIGINAL_MOVEMENT_DATE			The date of the original movement. Us
CUSTOMER_GROUP_NAME			Name of the Customer Group to use f
CUSTOMER_GROUP_OWNER			Name of the Company owning the Cus
TAX_SUMMARY			A summary of tax amounts and warnin

… and finally, back to the transaction.



Reminder that depending on the transaction you are testing you may need to start another session to deactivate the popup tool before you can exit your tested transaction scenario. If multiple calls to determination are invoked, the tool can possibly loop depending on the document.

AUDIT DATABASE REPORT

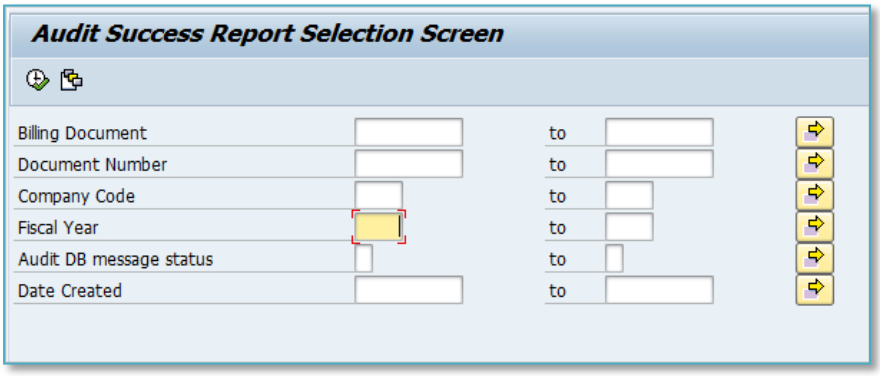
The purpose of this report is to ensure that all transactions posted to the SAP G/L with a tax implication are also posted to the Determination audit database. It is recommended to run this report frequently, at least during the period close process to ensure the two systems are synchronized. Once documents have been identified they can be reprocessed to Determination for inclusion in audit if not already sent successfully. You can both run the report and manually update records using the execute button for update, or you have the option to update records via a scheduled background job using the Audit Status Reprocess program which is discussed below.

Reminder that depending on the transaction you are posting for your month end close process you may have later transaction that you miss getting to the audit database. It is best to run the report one more time after all journal entries and batches have been posted for the month so that you pick up any late entries as part of the closing adjustments

Documents that show on the report as status N are likely parked documents that are not posted yet to the G/L and status F documents have failed to go to audit for some other technical error reason. You will have to manually correct these documents to get them to a status of S with another update run.

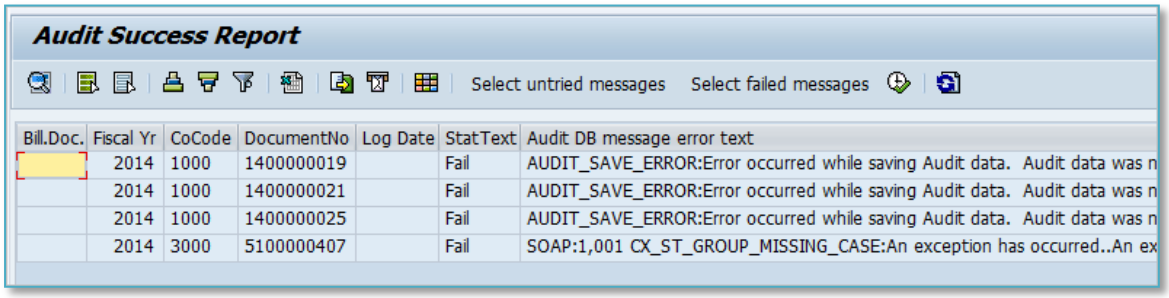
ACCESSING THE AUDIT DATABASE REPORT

From the ONESOURCE Indirect Tax User Menu select **Reports → Audit Database Transactions Update** or use transaction **/N/IDT/AUDIT_DATABASE**.



Selection Option	Description
Billing Document	The Sales Invoice (SD) document number. Can't be combined with Document Number and Fiscal Year.
Document Number	The G/L accounting document number (MM-LIV and FI). Can't be combined with Billing Document.
Company Code	Company code of the transaction.
Fiscal Year	The fiscal year the document was posted in. Relevant for MM-LIV and FI documents only.
Audit DB message status	Filter to select either: F – Failed transactions that didn't post successfully to Determination audit U – Untried transactions that never have been sent to Determination. N – Not posted to the G/L will not go to audit until G/L entry is posted. S – Transactions that have been successfully sent and audited in Determination Z – Zero value transaction that will not post to audit
Date Created	The date the entry was added to this table.

Sample of a report for **FAILED** transactions:

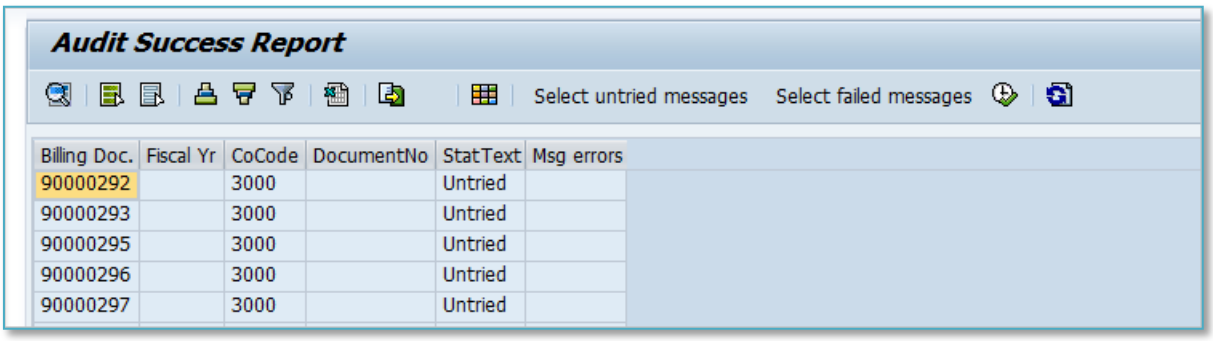


Bill.Doc.	Fiscal Yr	CoCode	DocumentNo	Log Date	StatText	Audit DB message error text
	2014	1000	1400000019		Fail	AUDIT_SAVE_ERROR:Error occurred while saving Audit data. Audit data was n
	2014	1000	1400000021		Fail	AUDIT_SAVE_ERROR:Error occurred while saving Audit data. Audit data was n
	2014	1000	1400000025		Fail	AUDIT_SAVE_ERROR:Error occurred while saving Audit data. Audit data was n
	2014	3000	5100000407		Fail	SOAP:1,001 CX_ST_GROUP_MISSING_CASE:An exception has occurred..An ex

From the report one can reprocess one transaction at a time, select all untried and/or failed messages, and then resubmit in bulk to Determination by using the audit update process within this report. If a transaction fails again it stays in the report, if it succeeds in auditing to Determination the status is changed to success.

It is recommended to schedule this report to run prior to period closing for F and U status and then reprocess them before closing the period.

To run the report and update the audit database you would run transaction code /IDT/AUDIT_DATABASE from the report menu first selecting any “U” status document. Note the button on the report menu for selecting untried documents. See example below



Billing Doc.	Fiscal Yr	CoCode	DocumentNo	StatText	Msg errors
90000292		3000		Untried	
90000293		3000		Untried	
90000295		3000		Untried	
90000296		3000		Untried	
90000297		3000		Untried	

After getting the list of untried documents that you need to post to audit then hit the **EXECUTE** button to run the update of the **UNTRIED** entries.

Run the report again for the same document numbers and verify that they have now changed from **UNTRIED** status to a status of “**SUCCESS**”. If the documents in question have not changed to a successful status then they may be in “**FAIL**” status which will require you to investigate errors on the document. Another possible status would be that they were changed to status of “N” as not posted to the G/L. If this occurs then you will need to go back to the billing process and attempt to post the document to accounting using transaction code VF02. If the document posts to accounting then retry the audit update transaction again.

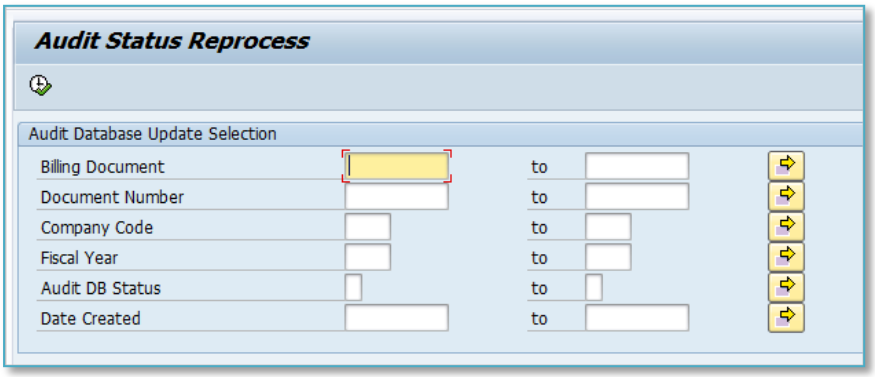
Prior to month end close you will want to check to make sure that all documents have posted to accounting and that the audit report shows them in "**SUCCESS**" status.

AUDIT STATUS REPROCESS

The purpose of this program is to fix documents that have been identified by the Audit Database Report via a background process, rather than manually in the foreground. The report also allows for fixing documents in status N – Not yet in G/L, something the online report doesn't allow for.

ACCESSING THE AUDIT STATUS REPROCESS

Use transaction **/N/SE38**, program **/IDT/UPDATE_AUDIT_DATABASE**.

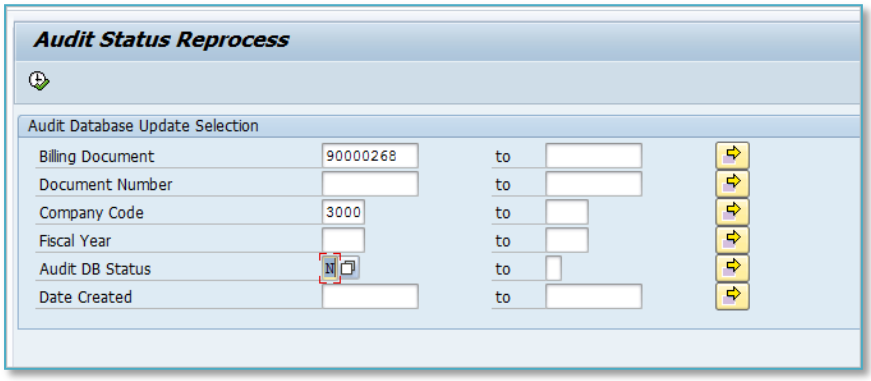


Selection Option	Description
Billing Document	The Sales Invoice (SD) document number. Can't be combined with Document Number and Fiscal Year.
Document Number	The G/L accounting document number (MM-LIV/FI). Can't be combined with Billing Document.
Company Code	Company code of the transaction.
Fiscal Year	The fiscal year the document was posted in. Relevant for MM-LIV and FI documents only.
Audit DB status	Filter to select either: F – Failed transactions that didn't post successfully to Determination audit U – Untried transactions that never have been sent to Determination. N – Not posted to the G/L will not go to audit until G/L entry is posted.
Date Created	The date the entry was added to this table.

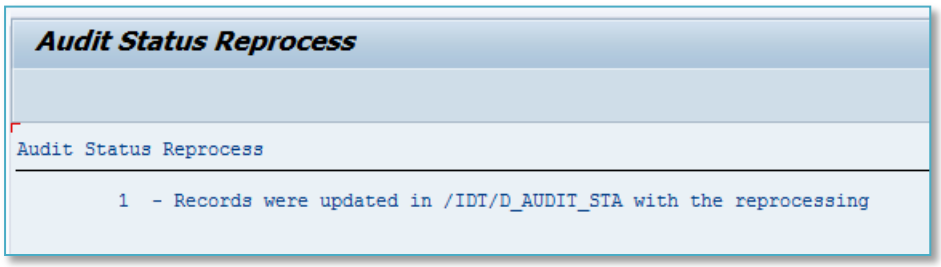
This report has no user interaction. It will run immediately and will update all selected documents!

It is recommended to schedule this report as a background job to run prior to period closing for F, U, and N status and then reprocess them before closing the period.

To run the report and update the database you will select the documents in question, and then execute the program.



Once run the following message will be displayed:



Documents in status N will be moved to status U. To post them to the Determination audit they have to be run a second time to get to status S.

Program **/IDT/UPDATE_AUDIT_DATABASE** uses the same authorization object as the Audit Database Report, Z_IDT_AUDI which uses authorization field Company Code (BUKRS) as a check object.

RECONCILIATION EXTRACT REPORT

The **ONESOURCE Indirect Tax Integration for SAP Reconciliation Extract** creates a file using payables, receivables, and FI transaction data from the SAP General Ledger**.** This file can then be imported into **ONESOURCE Indirect Tax Reporting** for use in the Reconciliation Report. The Reconciliation Extract report was first introduced as a separate product that could be added to Integration 5.x version as a separate transport. From the Integration 6.2 release this has now been included in the Integration transports as part of the standard product. The feature has been updated and adjustments have been made to include fields that are now contained within the new Tax_Data table.

The solution has been developed within the following features:

- Custom ABAP program in /IDT/ name space with a custom transaction to run it
- Selection screen to define what data to extract and where to save the output file
- Ability to run as a schedule background job

PURPOSE AND BENEFITS

The ONESOURCE Indirect Tax Integration for SAP Reconciliation Extract enables an organization using the ONESOURCE Indirect Tax Integration for SAP for their tax calculations to extract the necessary data from the SAP FI module to use in the ONESOURCE Indirect Tax Reporting ERP Document Reconciliation Report.

The Reconciliation Report in ONESOURCE Indirect Tax Reporting will compare the imported data from the SAP Reconciliation Extract with the data in Audit. The Reconciliation Report will indicate transactions missing in the ERP (SAP), transactions missing in Audit, as well as differences in tax amounts.

BUSINESS PROCESS

Transactions processed in the SAP systems Order to Cash (SD), Materials Management (MM), and Financial Accounting (FI) processes requiring indirect tax can call ONESOURCE Indirect Tax Determination for a tax calculation. At time of posting the calculate tax to the FI modules G/L accounts, a tax audit call is done to Determination for the applicable tax codes, and the tax liability information is stored in the audit database. A scheduled process (ETL) then moves that audit information over to ONESOURCE Indirect Tax Reporting. Customers wishing to compare the tax liabilities stored in the SAP G/L to the ones residing in the ONESOURCE Indirect Tax systems can run the Reconciliation process periodically, usually during month end close, to ensure results are as expected.

Prior to running the Reconciliation Extract Report there is one configuration step that you will need to complete. See the *Configuration Guide* Appendix 1 section for more information on the set up of the Application Server and Presentation Server defaults.

THE RECONCILIATION EXTRACT PROCESS

This section describes the process for executing the ONESOURCE Indirect Tax Integration for SAP Reconciliation Extract report and viewing the output.

To learn more about how to run the reconciliation process in Reporting logon to your Reporting system and click the **Help** icon , then navigate to **Global Reports & Analysis > ERP Reconciliation Report**.

Reconciliation Extract Transaction

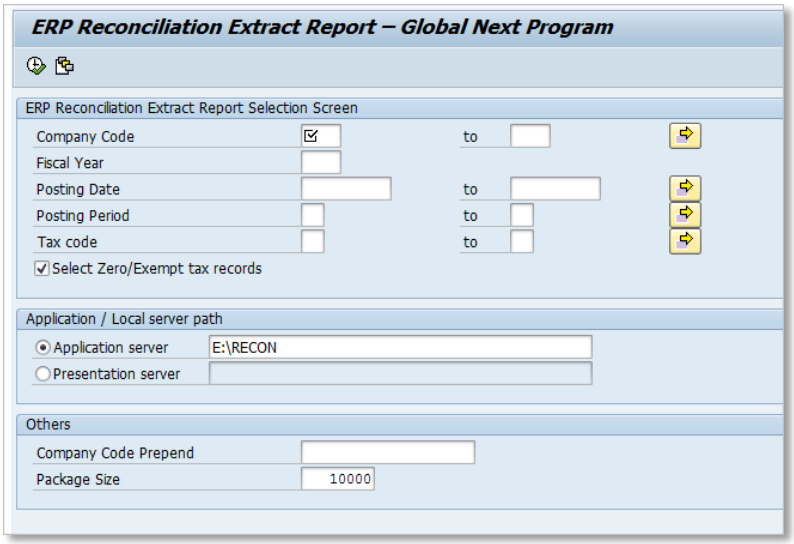
The Reconciliation Extract report is run to collect the G/L transaction data created in SAP. The report extracts G/L and tax data based on the report parameters. When run, an output file (saved as a .csv file) is created either on the Application Server directory or the user PC, it then has to be moved to the Reporting server to be imported into the ONESOURCE Indirect Tax Reporting.

For more information on saving and importing the .csv file, see the section *PREPARING DATA FOR THE ERP DOCUMENT RECONCILIATION REPORT* in the Reporting online help.

For more information on executing the report, *ERP Document Reconciliation*, see the section *ERP DOCUMENT RECONCILIATION* in the Reporting online help.

Running the Reconciliation Extract

To run the ONESOURCE Indirect Tax Integration for SAP Reconciliation Extract use transaction code: **/N/IDT/RECON_EXTRACT**



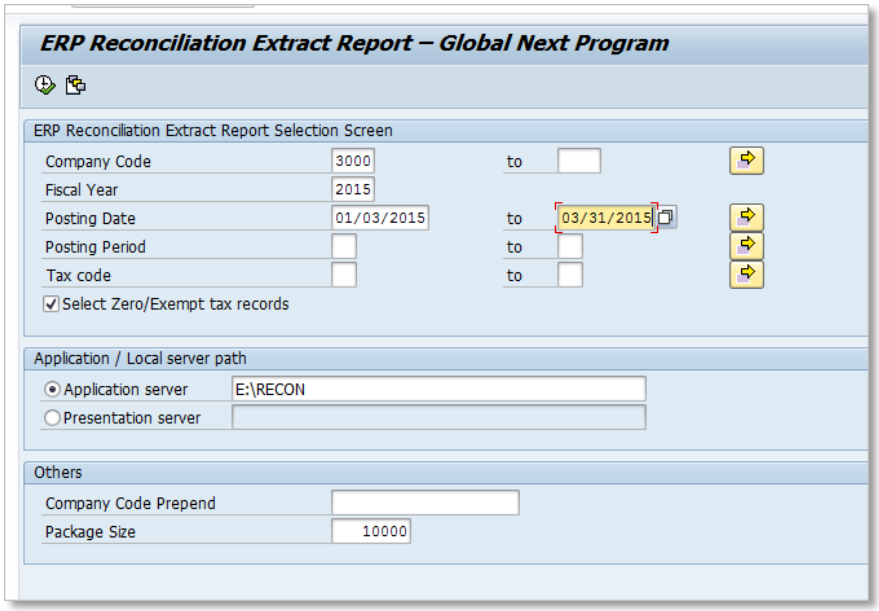
Authorization object F_BKPF_BUK is checked when executing the program to verify the user is allowed to access data for the given company codes.

On the selection screen enter the desired values for the extract scope in question. For an explanation of the selection screen options see the following table:

Parameter	Description
Company Code	The Company Codes to be selected during this extract. The user must be authorized to run data for the selected company codes (F_BKPF_BUK).
Fiscal Year	A valid Fiscal Year must be entered.
Posting Date	A fiscal posting date range can be selected; this is the date of the posting to G/L, not the document/invoice date of the original document.
Posting Period	Optionally enter a posting period month or range.
Tax Code	Option to include/exclude specific tax codes to be extracted. See special note for US transactions below.
Select Zero/Exempt tax records	If field is checked documents with zero tax value on the posted document are suppressed.
Application Server	Location for output files on the SAP application server, based on selected radio button option.
Presentation Server	Location when storing files on user's computer, based on selected radio button option.
Company Code Prepend	If set in the */IDT/GEN_CONFIG_VALS - General Configuration Values table*, option value **external_company_id_prepend**¸ then this must be set here as well.
Package Size	The number of lines to be included in one package.

For US company codes tax codes with a **Tax Category** of 0 "Sales Tax (Consumer Use Tax if needed)" must be excluded from the selection for ERP Reconciliation as they are not posting to Determination audit.

Once all values have been setup as desired the extract can be run:



A message will be displayed stating the number of records extracted and included in the file. If desired the selection can be saved as a **Variant** in SAP for later use in a scheduled **Batch Job** for monthly/quarterly automated processing.

Excluding Tax Codes From Export

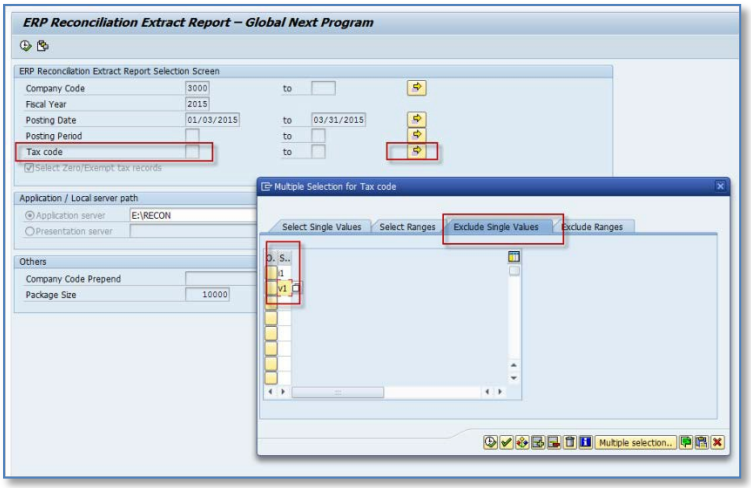
For US tax codes with a **Tax Category** of 0 “Sales Tax (Consumer Use Tax if needed)” must be excluded as they are not posting to audit. The taxes are collected by the seller and are not recorded as a further liability to the buyer. Usually these are the I1 driven tax codes. Please check in table /IDT/US_LOGIC - US Specific Logic for codes have a Tax Category of 0:

/IDT/US_LOGIC table:

SFCntryGrp	From Cntry	STCntryGrp	To country	Tx	Sort ...	A...	CoCd	Comp.Role	Tax category	O...	Offset Acc	Descrip
*	*	*	US	C1	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	
*	*	*	US	I1	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	*	*	US	U1	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	
*	*	*	US	V0	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	*	*	US	V1	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	*	*	US	ZZ	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	
*	US	*	US	C1	100010	☑	3000	Buyer	Consumer Use Tax	☑	NVV	
*	US	*	US	I1	100010	☑	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	US	*	US	U1	100010	☑	3000	Buyer	Consumer Use Tax	☑	NVV	
*	US	*	US	V0	100010	☑	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	US	*	US	V1	100010	☑	3000	Seller	Sales Tax (Customer Use Tax..	☐		
*	US	*	US	ZZ	100010	☑	3000	Buyer	Consumer Use Tax	☑	NVV	
US	*	*	US	C1	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	
US	*	*	US	I1	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
US	*	*	US	U1	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	
US	*	*	US	V0	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
US	*	*	US	V1	100010	☐	3000	Seller	Sales Tax (Customer Use Tax..	☐		
US	*	*	US	ZZ	100010	☐	3000	Buyer	Consumer Use Tax	☑	NVV	

To exclude tax codes from selection, click on the “Multiple selection” button in the selection screen next to the *Tax Code* field:

Now enter the values to be excluded in the *Excluding Single Values* or *Exclude Ranges* tab:



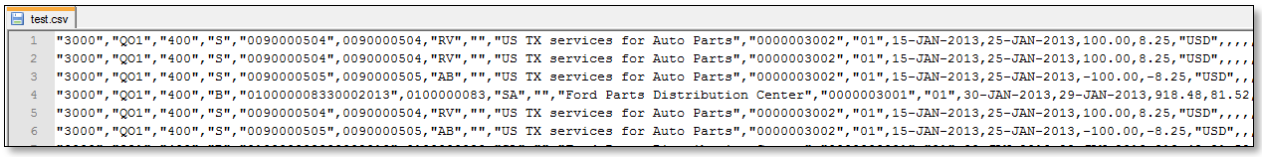
Output Details for Reconciliation Extract

Once the process is run a csv file has been created. The file is now ready to be imported into Reporting for reconciliation.

Output File Details

The output field list as returned in the comma separated “.CSV” file on to the Application server or Presentation server.

Do not open the CSV file in Excel or similar, only use a text file reader such as Notepad, Notepad++ or Text Pad. Excel will apply formatting to the CSV file which in turn corrupts the file for import into Reporting.



Enabling Custom Fields

The file format of the Reconciliation Report allows for five (5) user defined fields (UDF) as pass through elements. Companies wishing to use these fields can use custom code to set a value from SAP and extract it into one of the UDF’s. These values then will be imported into the Reporting reconciliation tables and show in the Reconciliation Report process.

A BADI /IDT/BADIRECON_EXTRACT has been provided as part of the SAP Reconciliation Report which can be implemented by the customers. The BADI method returns the 5 UDF’s in the structure /IDT/EXTRACT_UDF.

SAP TRANSACTION SAMPLES

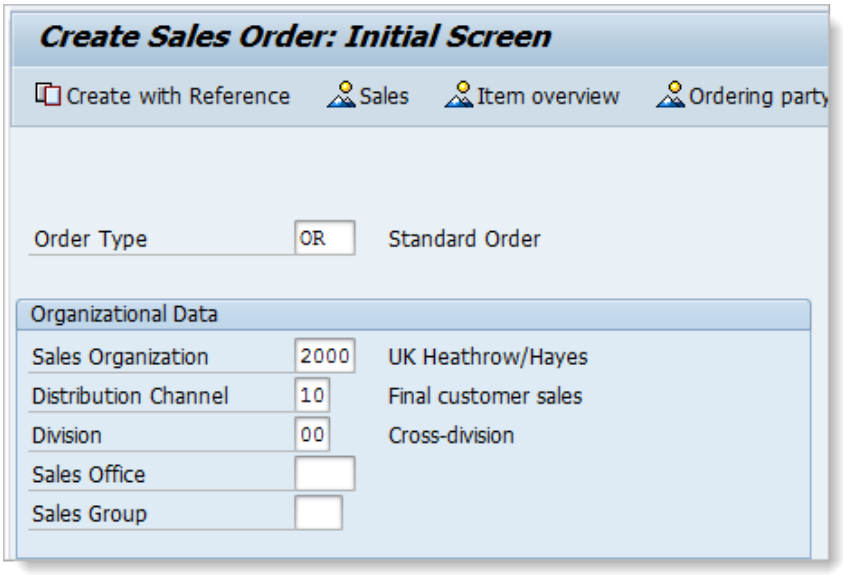
This chapter is intended to give the user a view and understanding of the basic document processing steps using ONESOURCE Indirect Tax Integration for SAP. We will walk you through the various transactions to give you a view of screen displays using the new Integration.

SAMPLE ORDER-TO-CASH SCENARIO

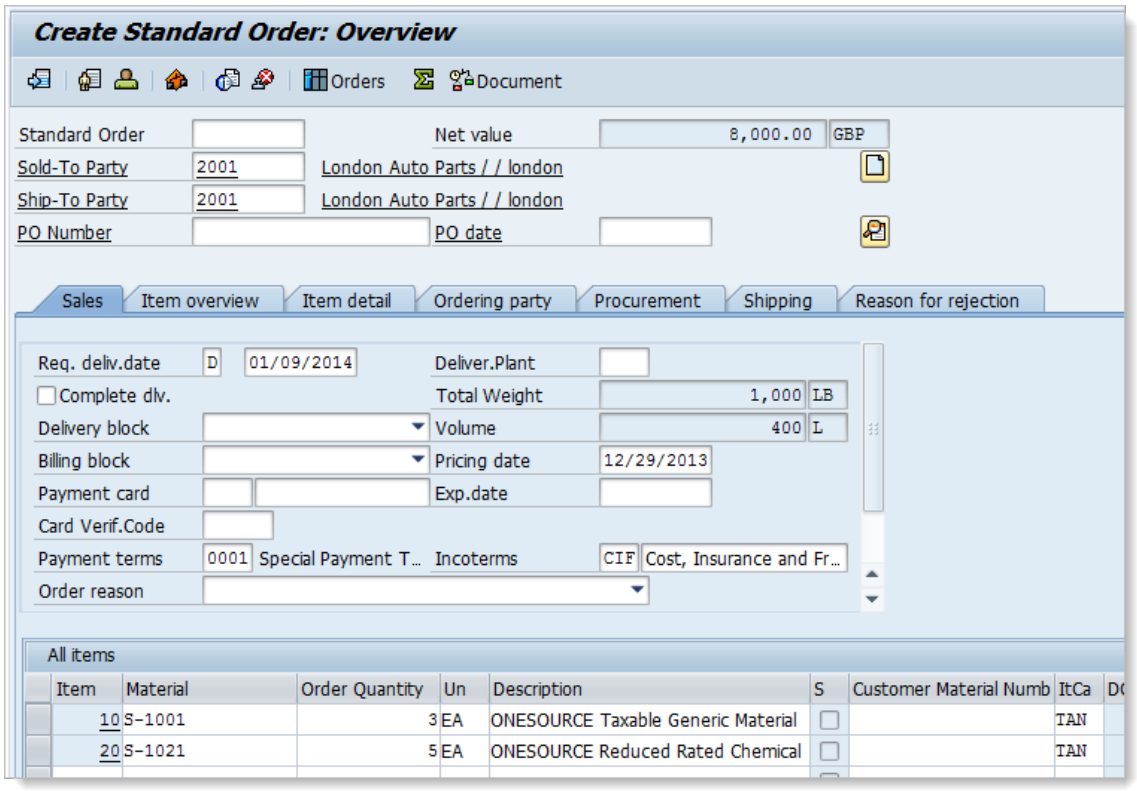
This section provides a simple example of the complete Order-to-Cash process once the ONESOURCE Indirect Tax Suite has been integrated with SAP.

PROCESSING A SALES ORDER

1. Transaction Code: **VA01**

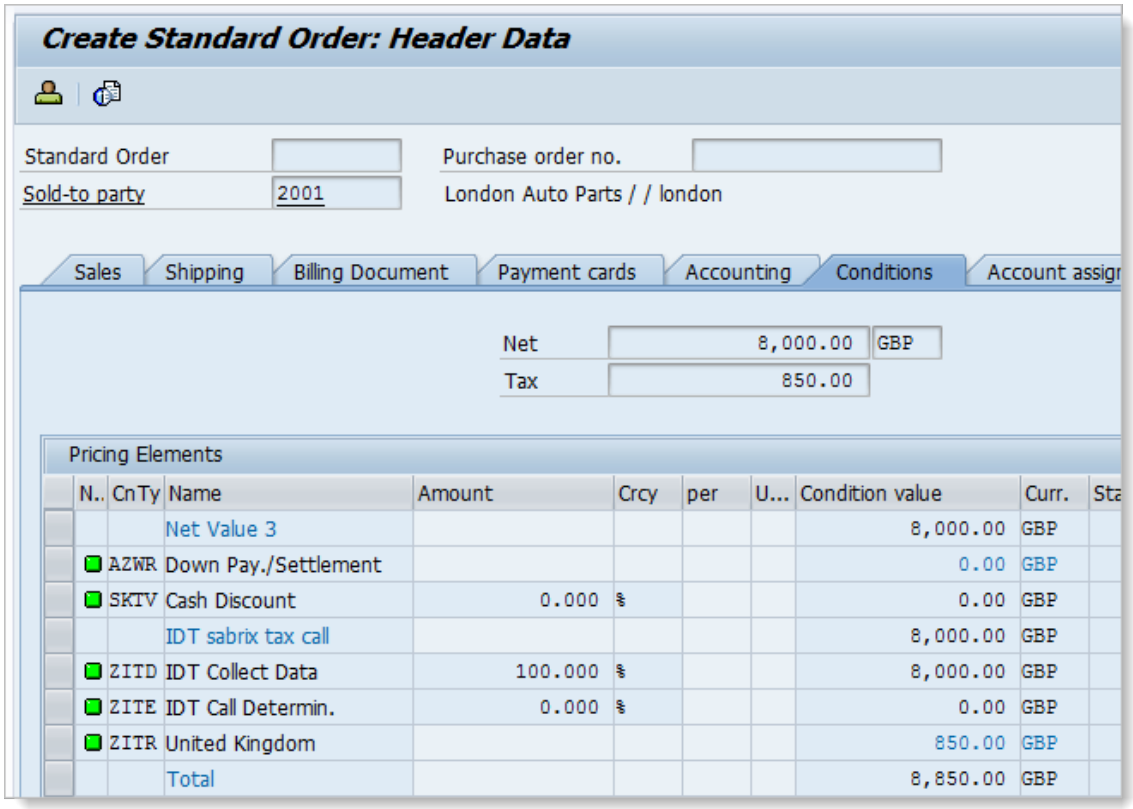


2. Enter the Sold-to Party, Material and Quantity.



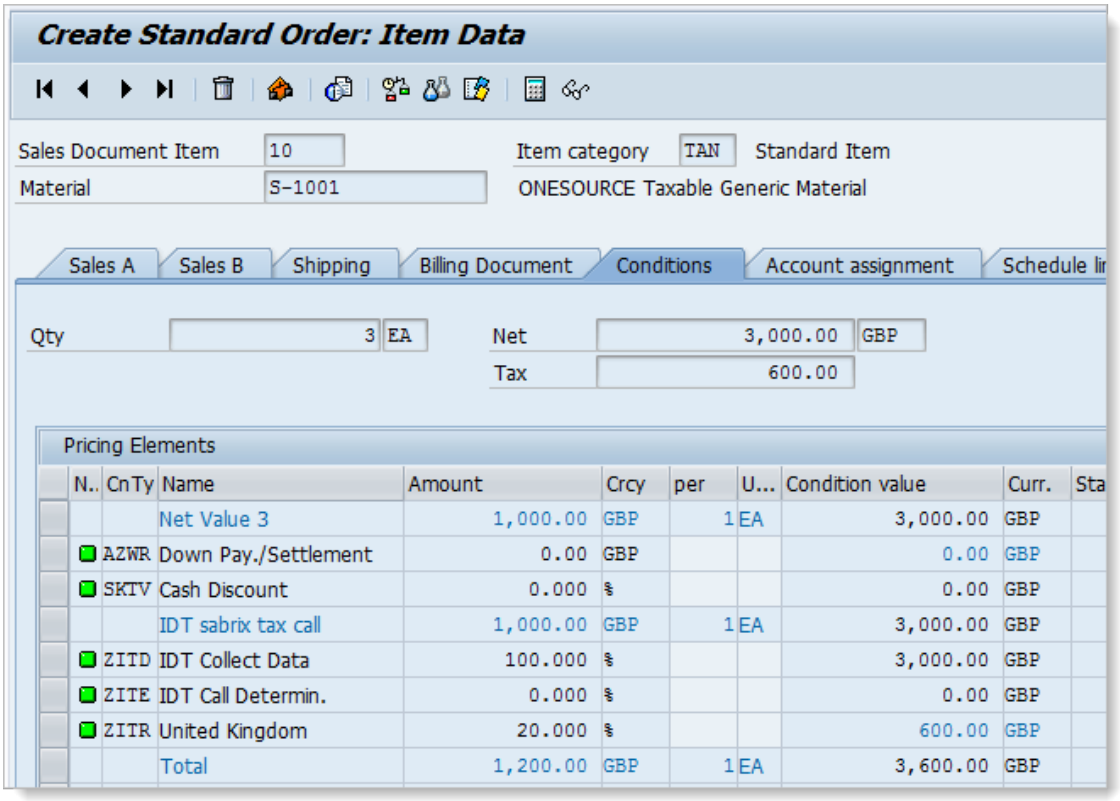
3. Select **Goto → Header → Conditions**

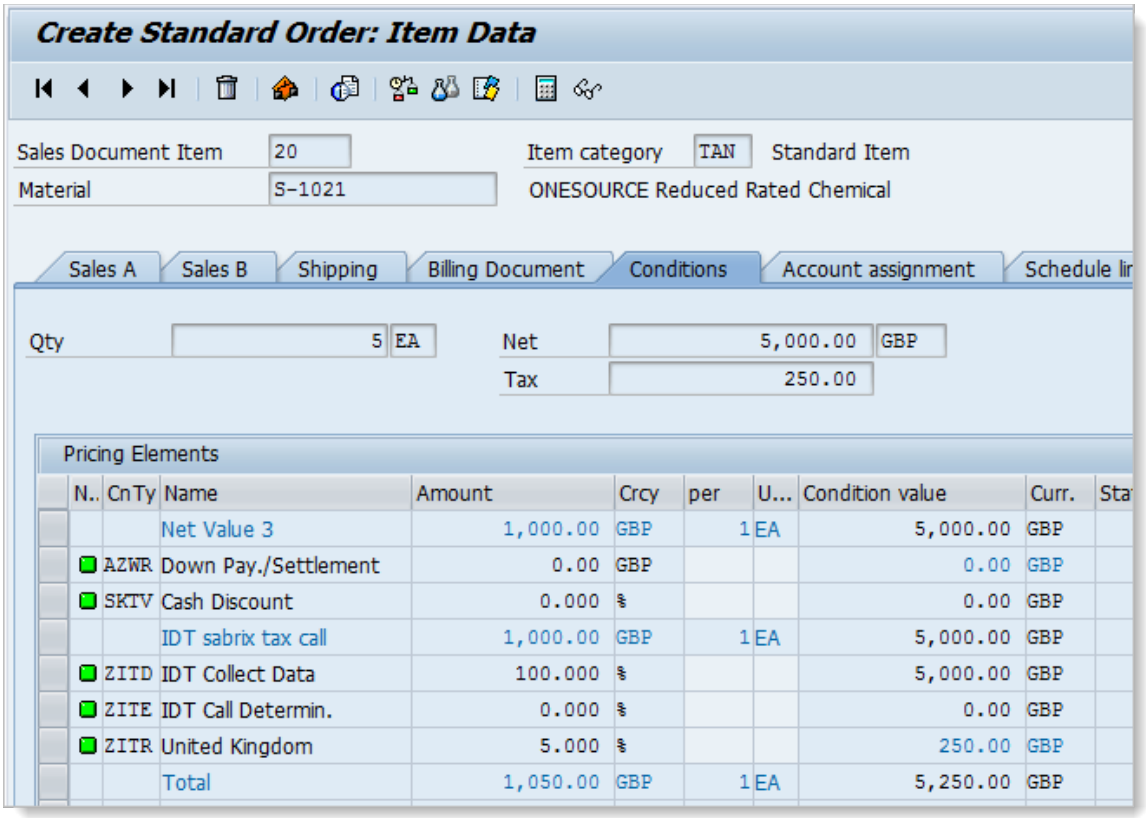
   Now a tax call is made to Determination and taxes are returned. You can view the taxes calculated by the system at header and item level.



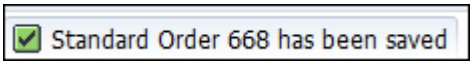
4. Select **Goto → Item → Conditions**

   You will see tax details and the difference between Standard and Reduced Rated products.





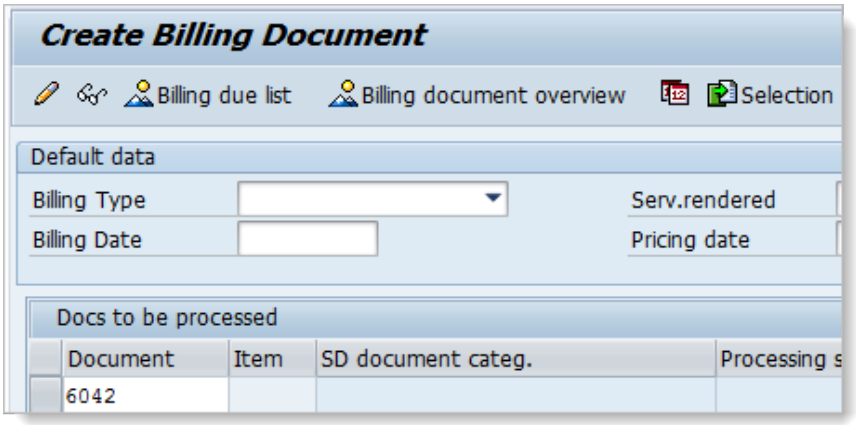
5. Click **Save** to create a Sales Order.



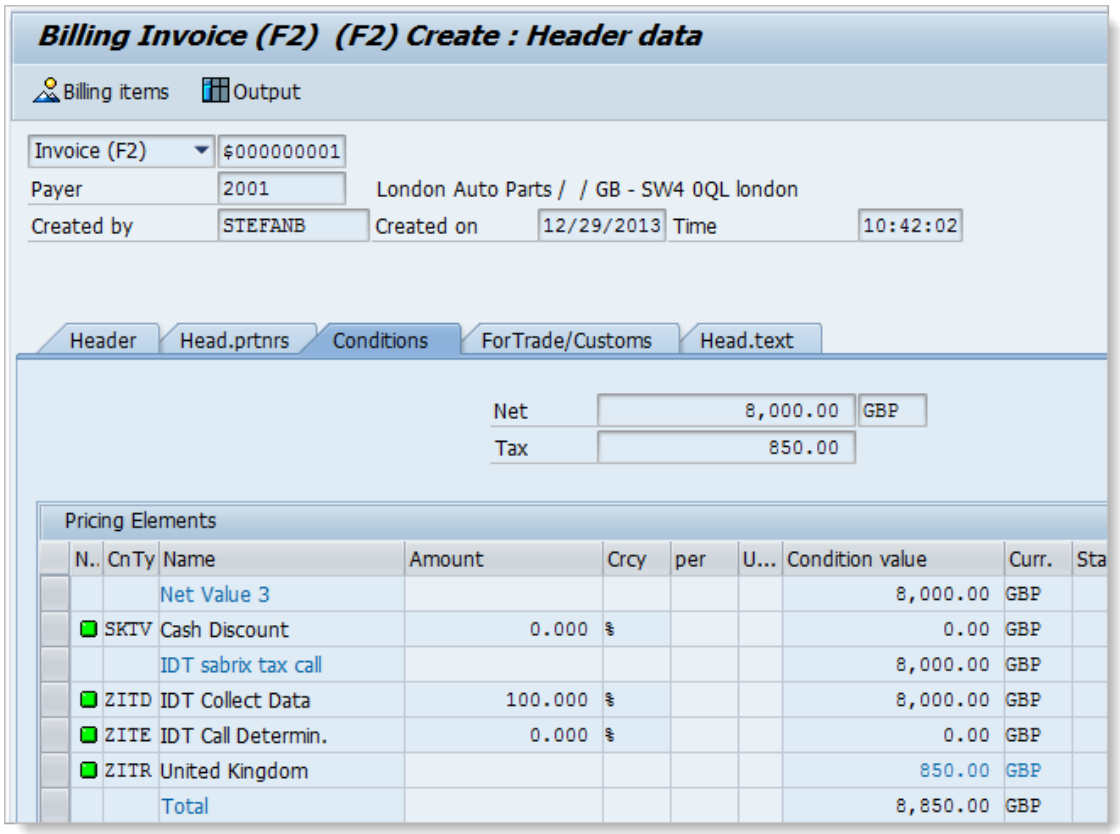
On the header conditions the percentage rate does not show as this is summarized data. The percentage rate will however, show at the line item level as shown above on the 20% standard rate and the 5% reduced rate lines.

Processing a Billing Document

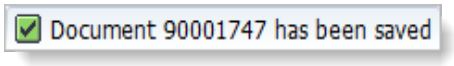
1. Transaction Code: **VF01**.The last created order number is displayed by default. **ENTER**.



2. **Goto → Header → Pricing Conditions Header**
   Now a tax call is made to Determination and taxes are returned. You can view the taxes calculated by the system at header and item level.

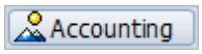


3. Click **Save** to create a Billing Document.



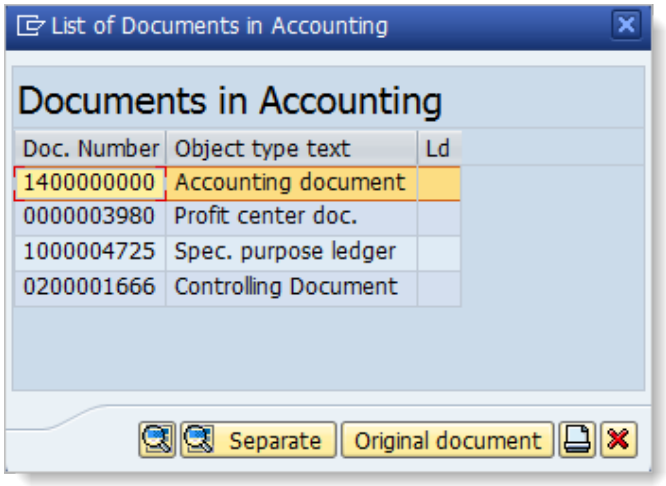
DISPLAYING ACCOUNTING DOCUMENT

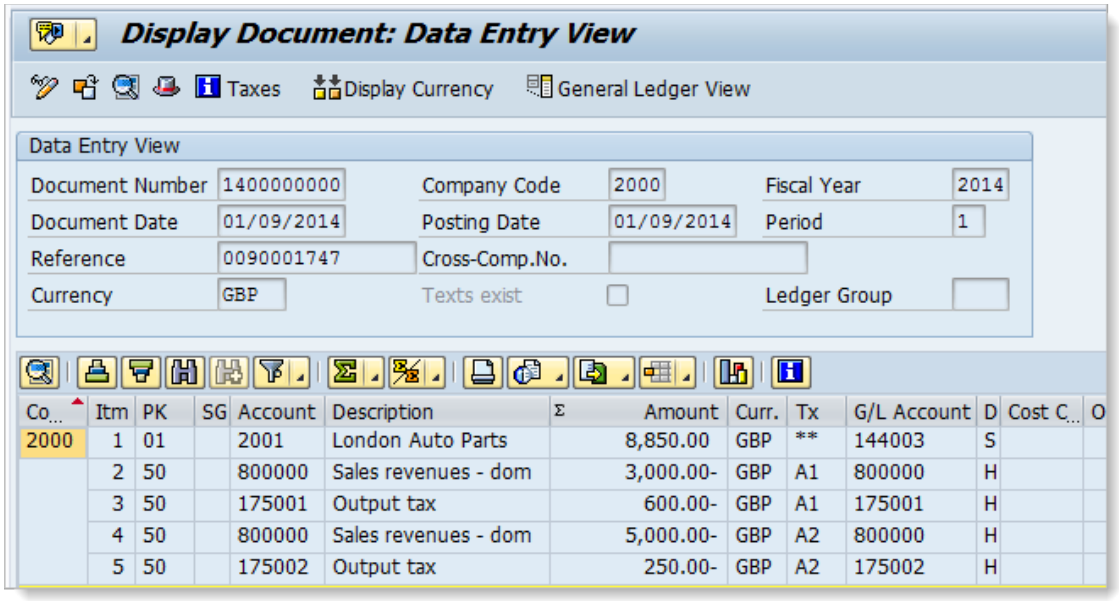
1. Transaction **VF02**. Enter document number if not already present.

2. Click on 

to get to the accounting documents pop up.

3. Select the **Accounting Document** and double click it.





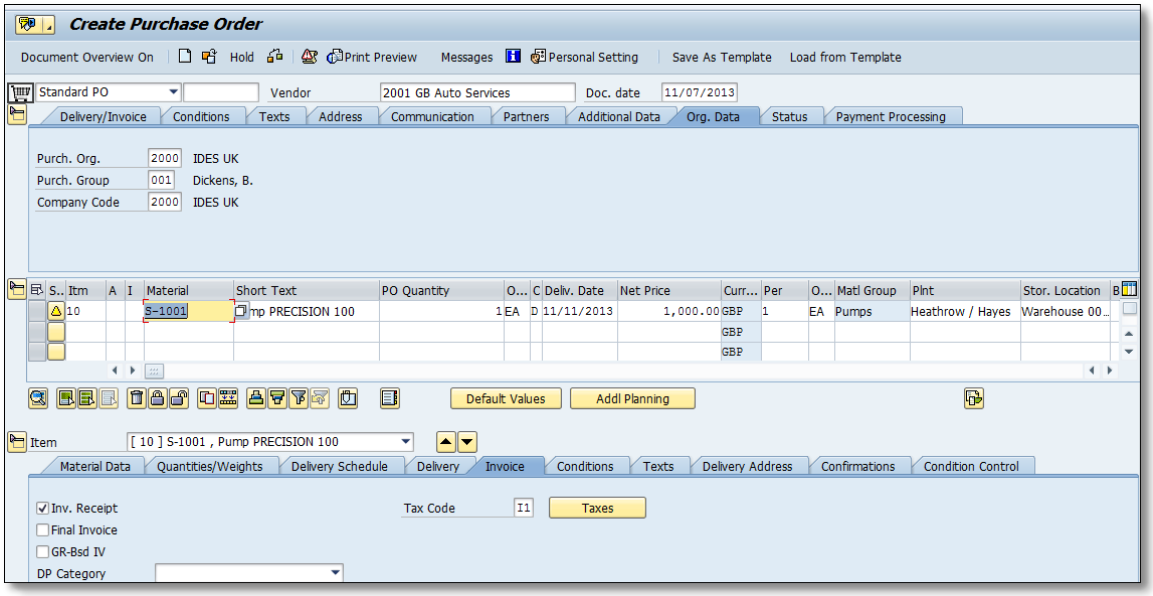
Co...	Itm	PK	SG	Account	Description	Σ	Amount	Curr.	Tx	G/L Account	D	Cost C...	O
2000	1	01		2001	London Auto Parts		8,850.00	GBP	**	144003	S		
	2	50		800000	Sales revenues - dom		3,000.00-	GBP	A1	800000	H		
	3	50		175001	Output tax		600.00-	GBP	A1	175001	H		
	4	50		800000	Sales revenues - dom		5,000.00-	GBP	A2	800000	H		
	5	50		175002	Output tax		250.00-	GBP	A2	175002	H		

SAMPLE PURCHASE TO PAY SCENARIOS

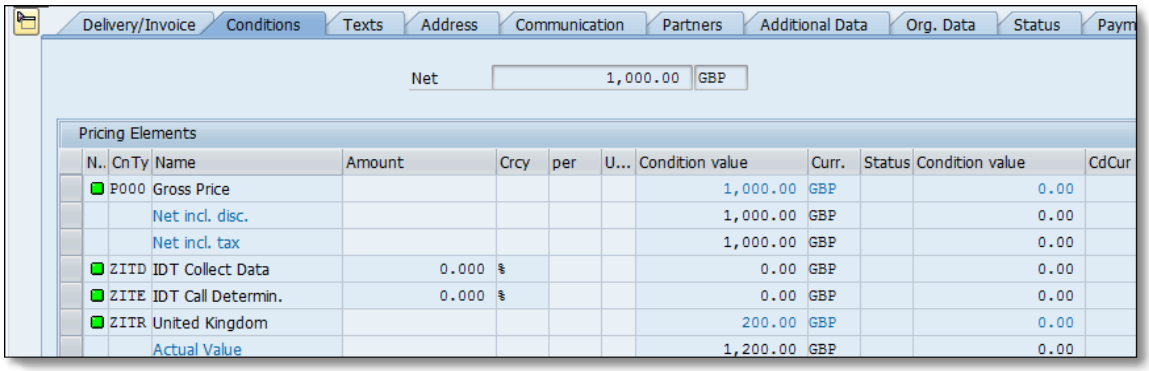
This section provides a simple example of the complete Purchase-to-Pay process once the ONESOURCE Indirect Tax Suite has been integrated with SAP.

PROCESSING A PURCHASE ORDER

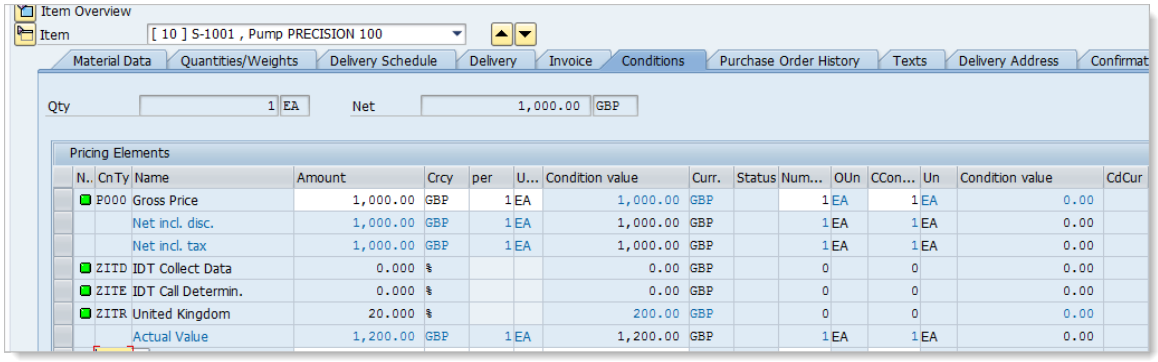
1. Transaction Code: **ME21N**
   Enter relevant purchase data; make sure you have a driver tax code of I1.



2. Go to **Conditions** tab on the header details. At this time a tax call to Determination will be made.



3. Tax details for each line can be viewed on the line **Conditions** tab.



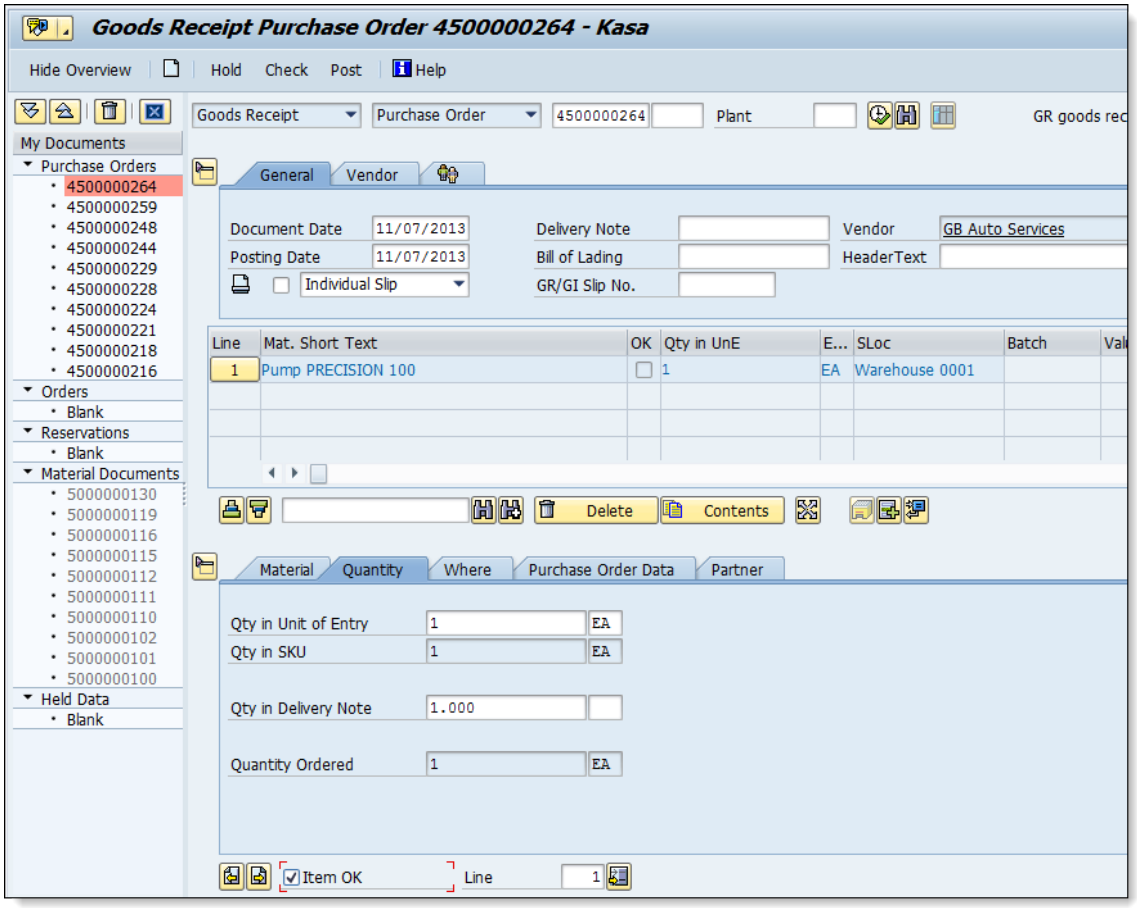
N..	CnTy	Name	Amount	Crcy	per	U...	Condition value	Curr.	Status	Num...	OUn	CCon...	Un	Condition value	CdCur
	P000	Gross Price	1,000.00	GBP	1	EA	1,000.00	GBP		1	EA	1	EA	0.00	
		Net incl. disc.	1,000.00	GBP	1	EA	1,000.00	GBP		1	EA	1	EA	0.00	
		Net incl. tax	1,000.00	GBP	1	EA	1,000.00	GBP		1	EA	1	EA	0.00	
	ZITD	IDT Collect Data	0.000	%			0.00	GBP		0		0		0.00	
	ZITE	IDT Call Determin.	0.000	%			0.00	GBP		0		0		0.00	
	ZITR	United Kingdom	20.000	%			200.00	GBP		0		0		0.00	
		Actual Value	1,200.00	GBP	1	EA	1,200.00	GBP		1	EA	1	EA	0.00	

4. **Save** the Purchase Order.

PROCESSING A MIGO RECEIVING DOCUMENT

This step is provided for illustration purposes only, no tax call will be made on the MIGO process.

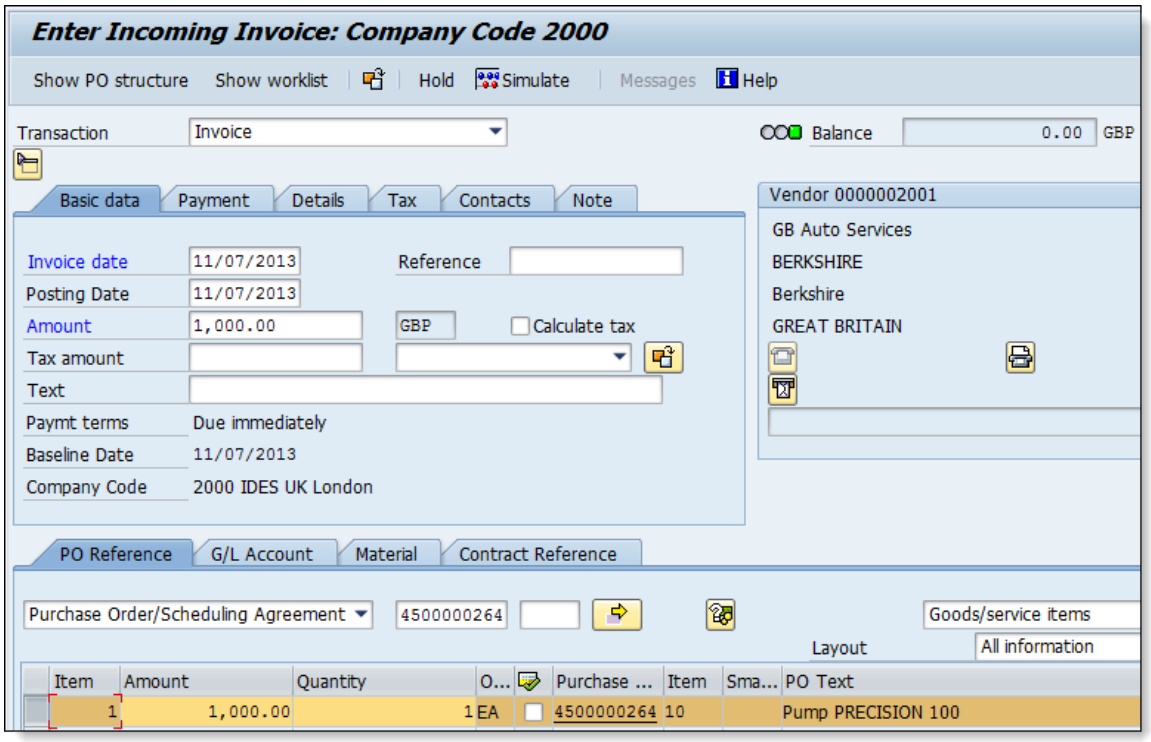
1. Transaction Code: **MIGO**
   Enter the Purchase Order and **ENTER**.



2. Check **Item OK,** enter the amount, unit of measure, delivery note, bill of lading, warehouse location, etc. and **Save** the Goods Receipt document.

PROCESSING A LIV DOCUMENT

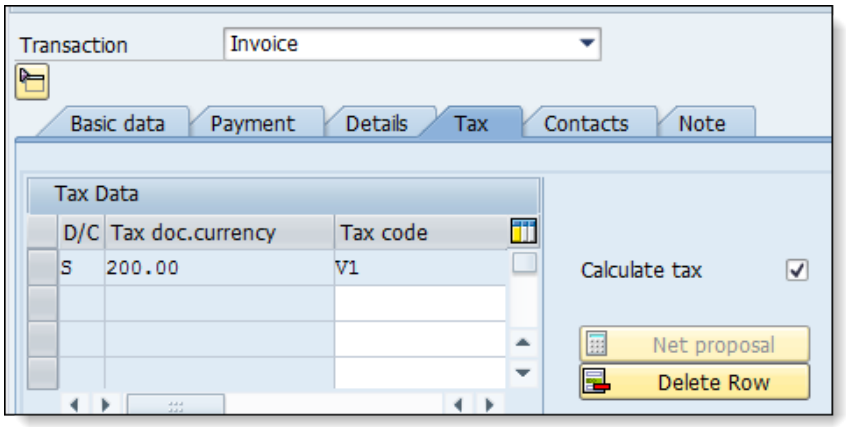
1. Transaction Code: **MIRO**
   Enter the Invoice Date, Invoice number, Amounts, Purchase Order number and **ENTER**.

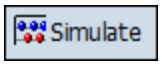


2. Check the

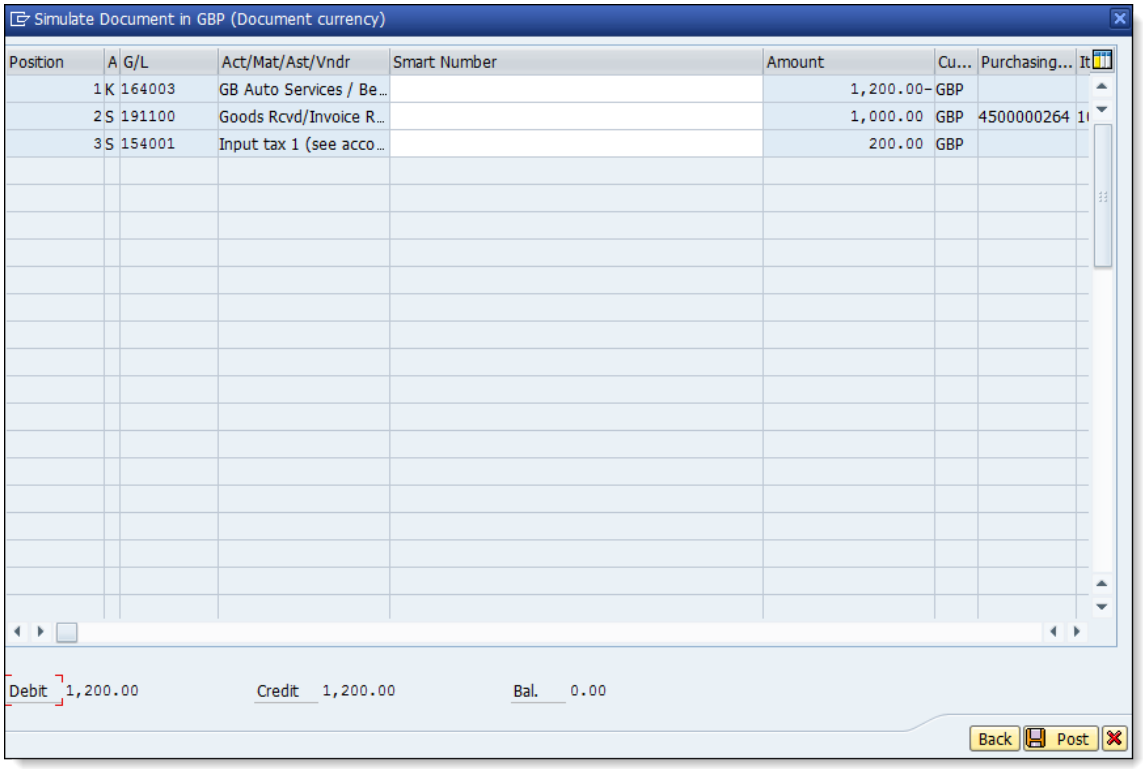
to calculate taxes by Determination and balance the amounts to zero.

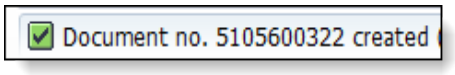
3. Optionally go to **Tax** tab to see that tax and tax code are returned by Determination.



4. Simulate 

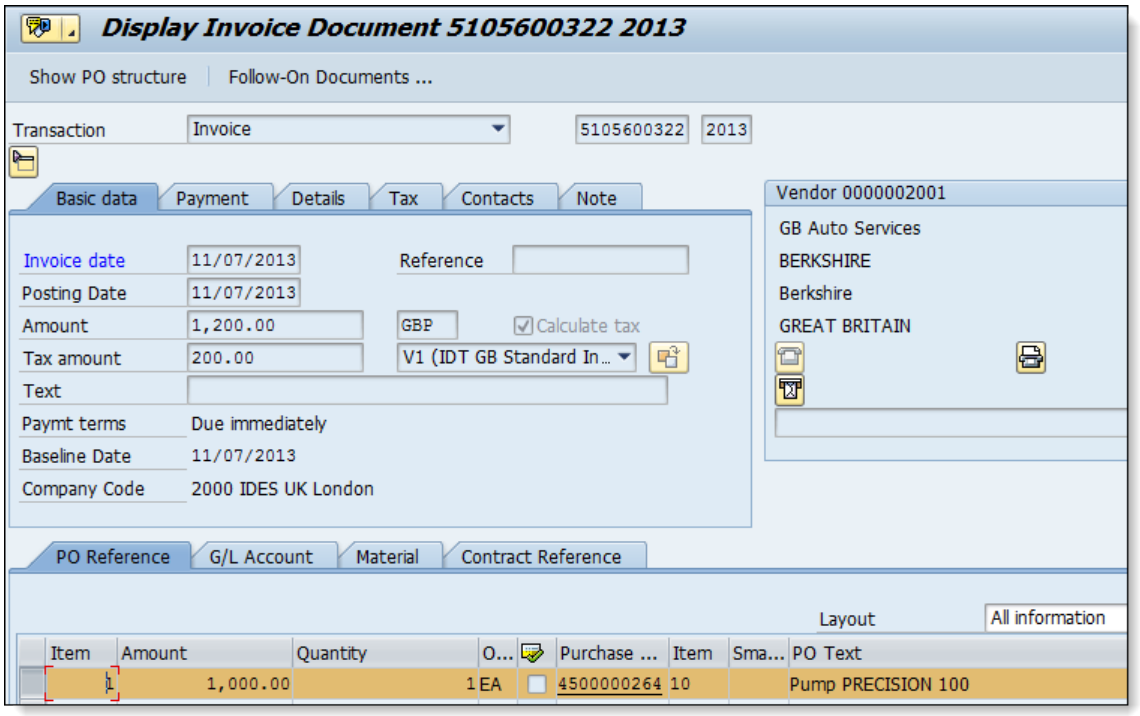
and **Post** the document which creates the Logistic Invoice Document.



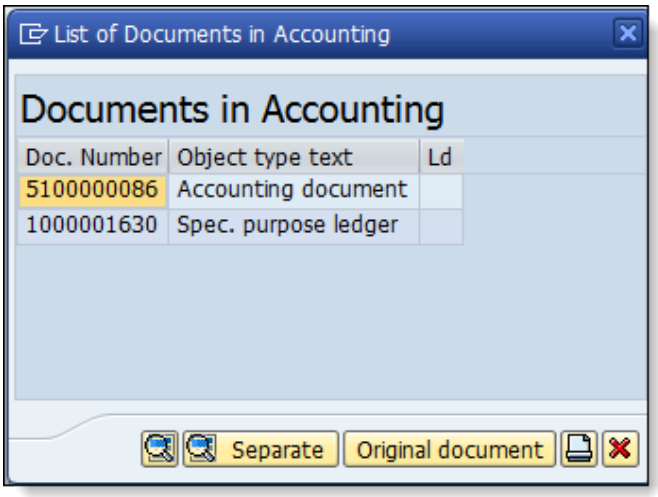


DISPLAYING A LIV DOCUMENT

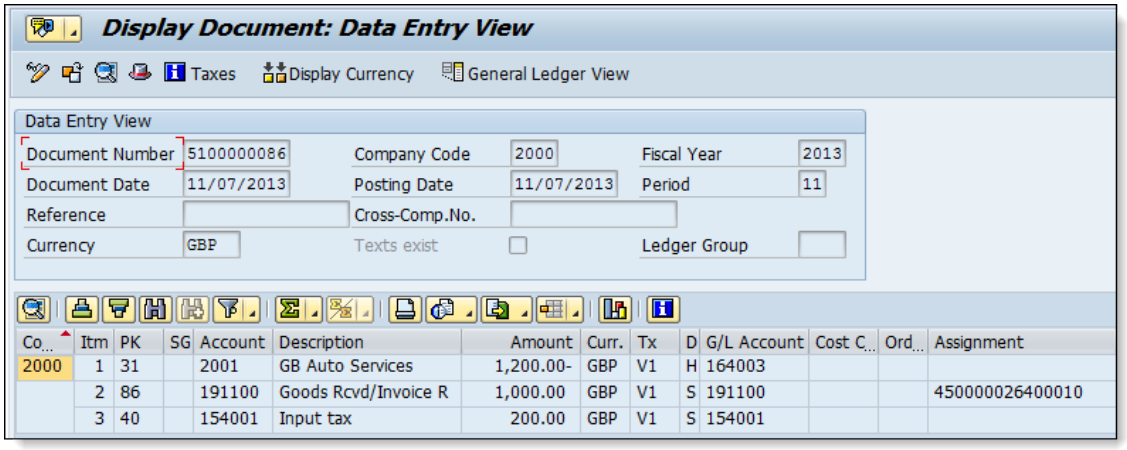
1. Transaction Code: **MIR4**. This comes back with the latest LIV document created.



2. Click on Follow-On Documents ... and double click on the **Accounting Document**.



3. The G/L document is displayed.



SAMPLE NON- PO VENDOR INVOICE

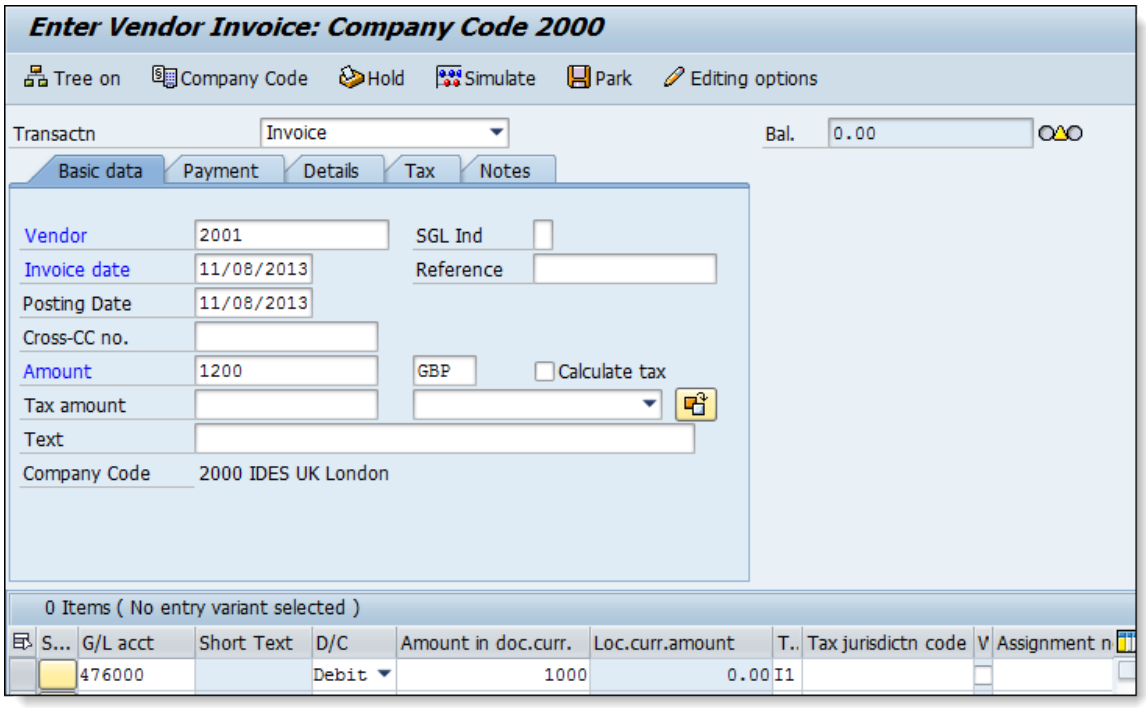
We recommend that calculate taxes on net amount should be used as your standard option. The FB00 editing option can be set either way however we currently do not support the gross calculation method.

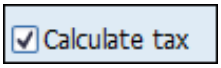
Special Note: SAP Enjoy transactions can sometimes depending on the screen steps taken, calculate tax and currencies with weird or unexpected results. Some of this could be standard SAP behavior as we have seen OSS notes from SAP stating that the Enjoy transactions sometimes have this behavior. If this occurs, we recommendation you switch to complex view and fix the transaction when this occurs.

PROCESSING A NON-PO VENDOR INVOICE

1. Transaction Code: **FB60**

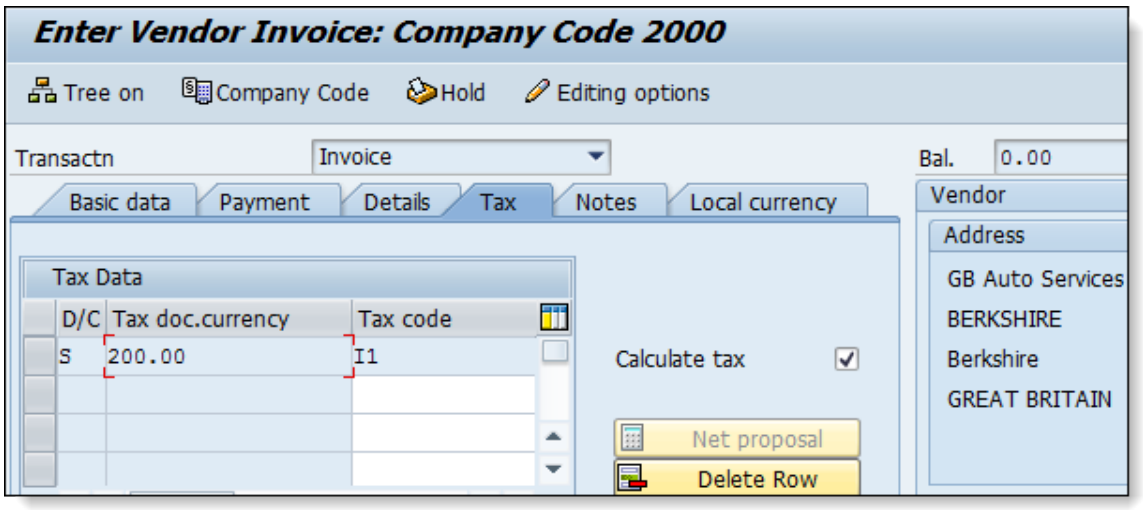
   Enter required information including the driver tax code used.



2. Check the 

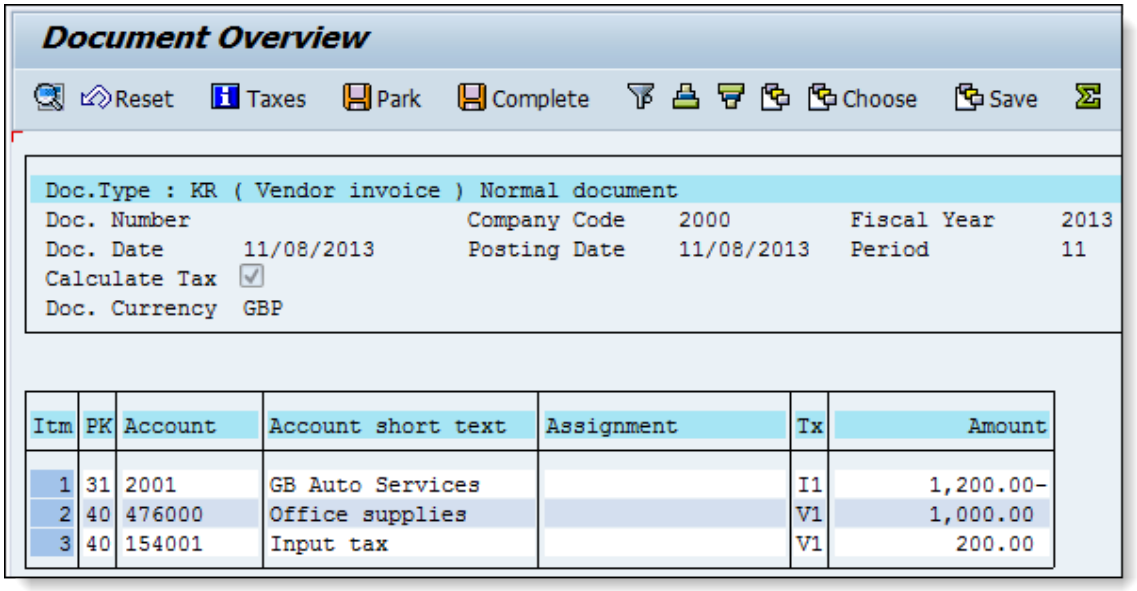
button.

3. Optionally go to **Tax** tab to verify the tax.

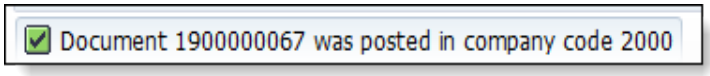


4. Go back to **Basic data** tab and click on

.

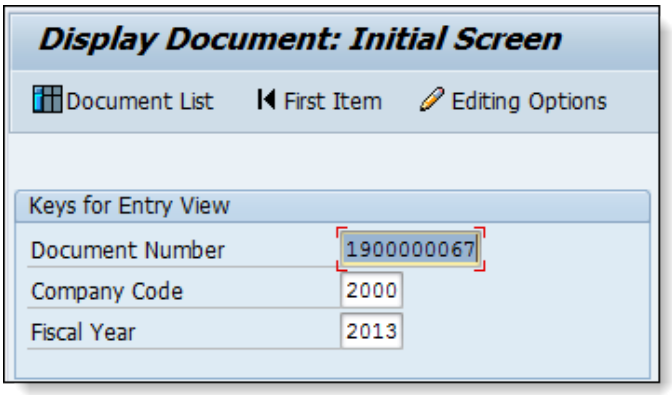


5. **Save** the document.

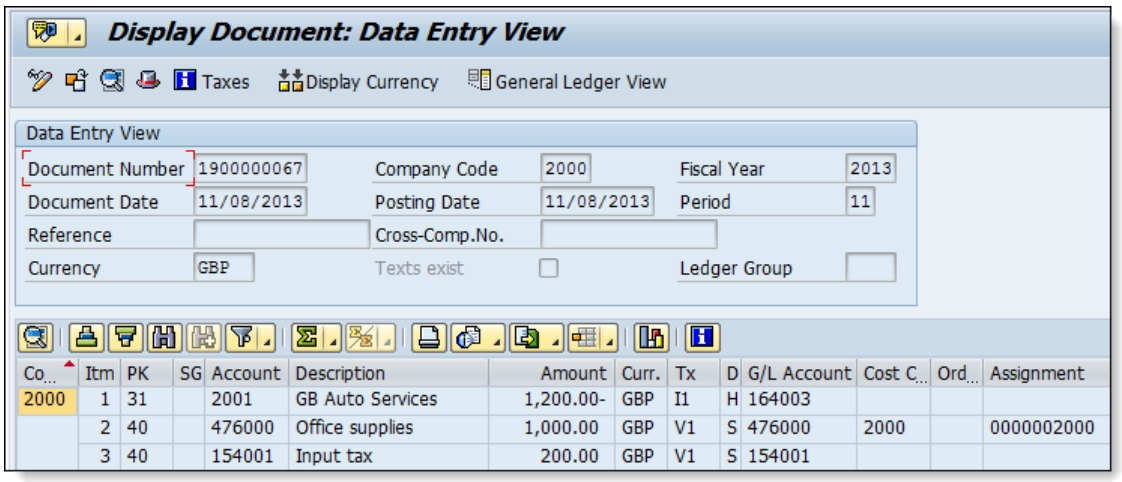


DISPLAY A VENDOR INVOICE

1. Transaction Code: **FB03**



2. **ENTER**.



STANDARD SAP VAT REPORT

RUNNING THE REPORT

One of the major benefits of using standard SAP tax codes is that you can run SAP provided reports. Such as the *Advanced Return for Tax on Sales/Purchases*, transaction code **F.12**. We will use a custom layout that has the tax rate added to the report. See the *Report Configurations* topic for configuration instructions.

For illustration purposes a tax rate change was simulated on November 1, 2013 (11/01/2013) from the prior 20% tax rate to a new 22% rate.

Transactions prior to 11/1/2013 show the 20% rate, where document after the rate change show the new 22% rate. This is reflected in the document detail section and tax total section. **Output tax details:**

Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013

Selections

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 23:18:05 Date 01/10/2014
London Ledger 0L RFUMSV00/STEFANB Page 1

Output tax: Line items

CoCd	M	Year	Pstng Date	DocumentNo	Reference	Tx	Trs	Rate	Tax base amount	Output Tax Pay.	Gross amount	Output tax
2000	8	2013	08/01/2013	1400000135	0090001192	A1	MWS	20.000	1,000.00-	200.00-	1,200.00-	200.00-
2000	11	2013	11/01/2013	1800000052		A1	MWS	22.000	1,000.00-	220.00-	1,220.00-	220.00-
2000	11	2013	11/12/2013	1400000186	0090001393	A1	MWS	22.000	1,000.00-	220.00-	1,220.00-	220.00-
* 2000						A1			3,000.00-	640.00-	3,640.00-	640.00-
2000	8	2013	08/01/2013	1400000135	0090001192	A2	MWS	5.000	1,000.00-	50.00-	1,050.00-	50.00-
* 2000						A2			1,000.00-	50.00-	1,050.00-	50.00-
**2000									4,000.00-	690.00-	4,690.00-	690.00-

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 23:18:05 Date 01/10/2014
London Ledger 0L RFUMSV00/STEFANB Page 2

Output tax: Total

CoCd	Trs	Tx	Description	Rate	Tax base amount	Output Tax Pay.	Output tax	Not to be pd ov.
2000	MWS	A1	IDT GB Standard Output TAX	20.000	1,000.00-	200.00-	200.00-	
2000	MWS	A1	IDT GB Standard Output TAX	22.000	2,000.00-	440.00-	440.00-	
2000	MWS	A2	IDT GB Reduced Rate OutputTax	5.000	1,000.00-	50.00-	50.00-	
* 2000	MWS				4,000.00-	690.00-	690.00-	
**2000					4,000.00-	690.00-	690.00-	

Input tax details:

Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013

Selections

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 23:18:05 Date 01/10/2014
London Ledger 0L RFUMSV00/STEFANB Page 3

Input tax: Line items

CoCd	M	Year	Pstng Date	DocumentNo	Reference	Tx	Trs	Rate	Tax base amount	Deduct.Input Tax	Gross amount	Input tax
2000	7	2013	07/23/2013	1900000135		V1	VST	20.000	1,000.00	200.00	1,200.00	200.00
2000	11	2013	11/01/2013	1900000187		V1	VST	22.000	1,000.00	220.00	1,220.00	220.00
* 2000						V1			2,000.00	420.00	2,420.00	420.00
**2000									2,000.00	420.00	2,420.00	420.00

IDES UK Tax on sls/purch. adv. ret.: Posting date 07/01/2013 to 11/30/2013 Time 23:18:05 Date 01/10/2014
London Ledger 0L RFUMSV00/STEFANB Page 4

Input tax: Total

CoCd	Trs	Tx	Description	Rate	Tax base amount	Deduct.Input Tax	Input tax	Non-deductible
2000	VST	V1	IDT GB Standard Input Tax	20.000	1,000.00	200.00	200.00	
2000	VST	V1	IDT GB Standard Input Tax	22.000	1,000.00	220.00	220.00	
* 2000	VST				2,000.00	420.00	420.00	
**2000					2,000.00	420.00	420.00	

This report can be extracted in multiple formats and used with the Thomson Reuters ONESOURCE Indirect Tax Compliance solution for returns processing.

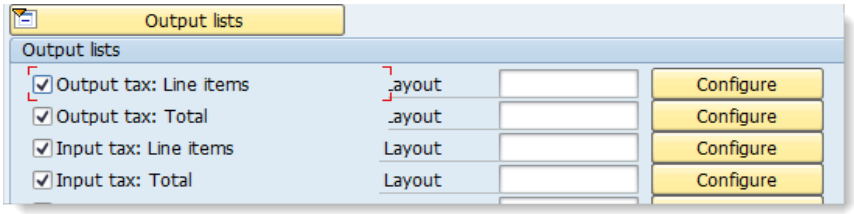
REPORT CONFIGURATIONS

When using ONESOURCE Indirect Tax Integration for SAP you will no longer maintain the tax rates on SAP tax codes, but rather use the tax rate returned by Determination. To assist in VAT Reporting, and if desired for extracting your tax data for returns preparations, it is recommended to add the tax rate to the layout display of your VAT reports. We will add the tax rate to both **Output tax: Line items** and **Input tax: Line items** layouts. The process is the exact same, so we use the output side in this example.

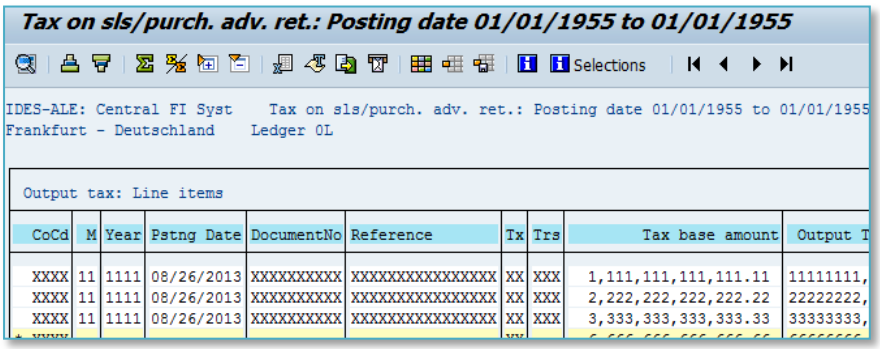
In this sample we will show how this can be done using report RFUMSV00.

1. Transaction Code: **F.12**.

2. Open the **Output list** option on the report selection screen.

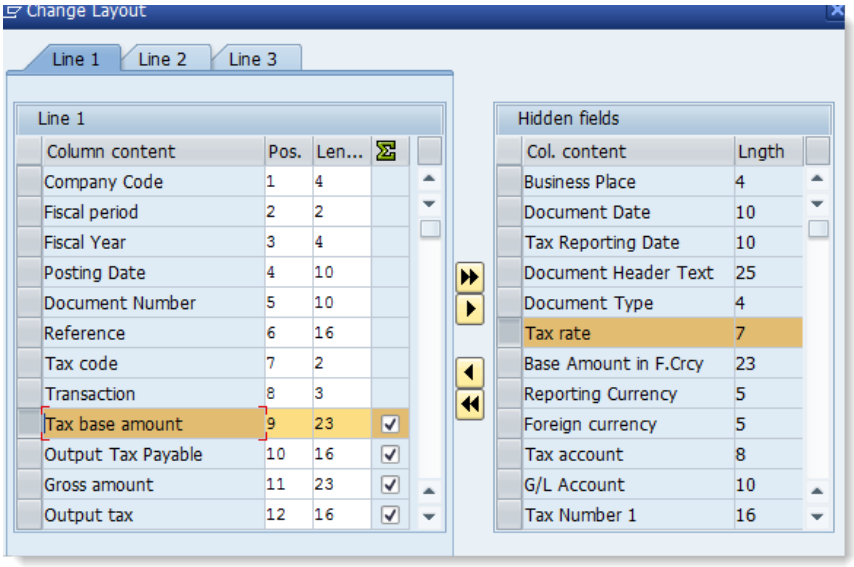


3. Click on **Configure** for the *Output tax: Line items*. You will see the configuration screen.

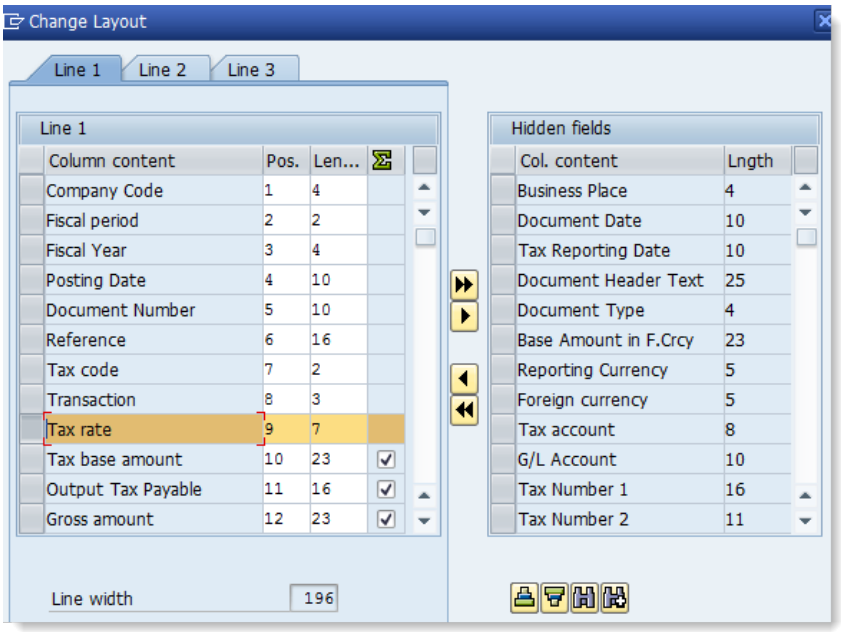


4. On the overview screen click on the **Change layout.** icon or use Ctrl+F8:

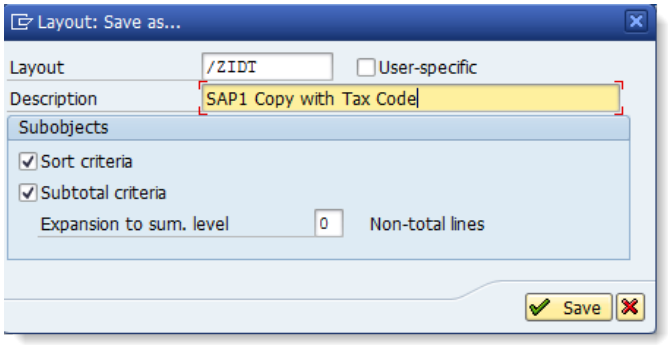
5. We want to add *Tax Rate* field between Transaction (account key) and Tax base amount. To do so highlight in the left side panel **Tax base amount** and on the right-side **Tax rate**.



6. **Click** the *left arrow* in the screen to add the tax rate. You will have to move the tax rate to the left side and then change the position number to move it to the correct column on the report.



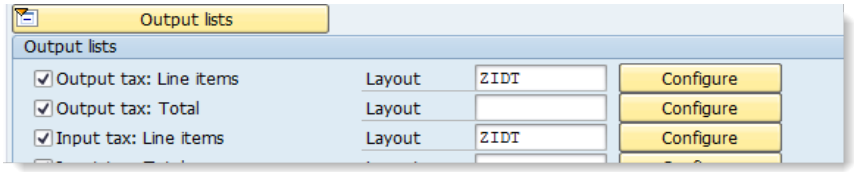
7. Click **Copy**, then go to menu **Settings** → **Layout** → **Saving** (Ctrl+F10):



8. Name your layout and give it a description, make sure the **User-specific** flag is NOT checked as that would not show your layout variant to others.

9. **Save**

10. Repeat the exact same steps for the “Input tax: Line items”. Once done assign the new layouts to the Output list options.

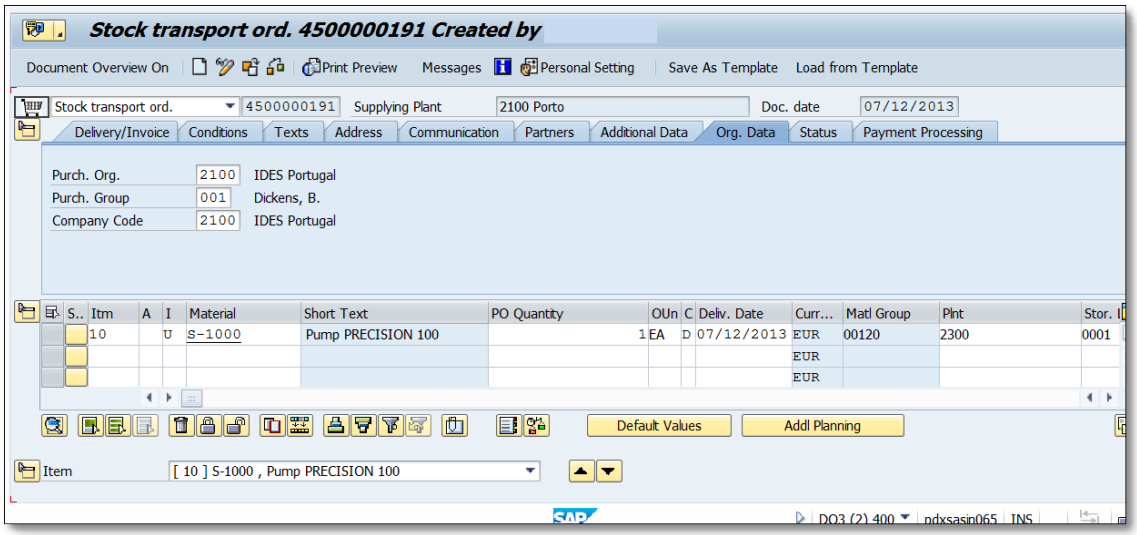


11. Test your reportlayout.

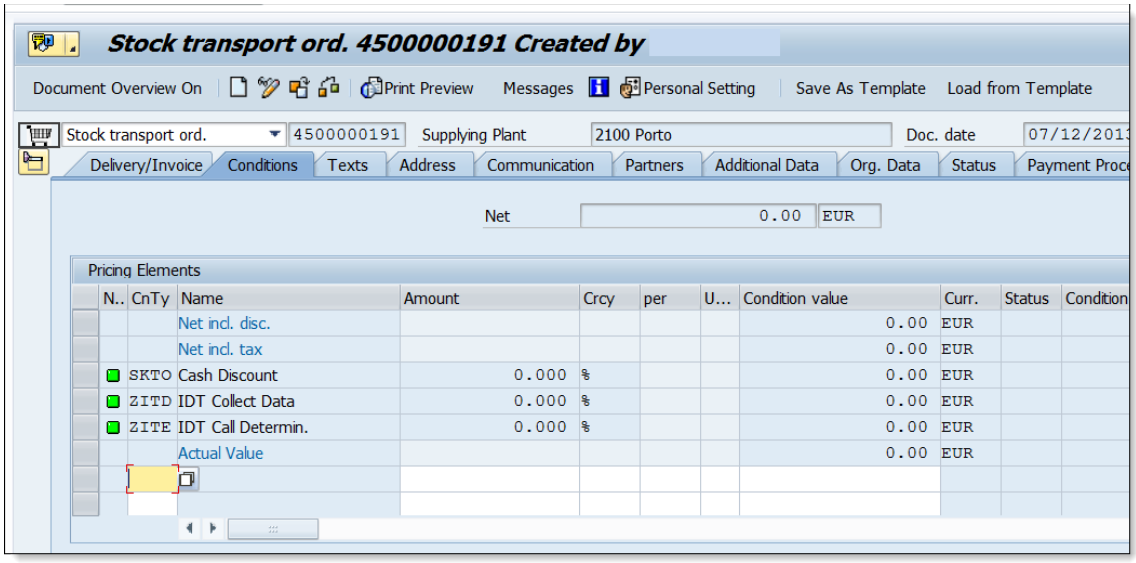
PROCESSING A PLANTS ABROADSTOCK TRANSPORT ORDER

For example we create a STO between a Portugal plant 2100 and Spain plant 2300 that both belong to company code 2100 and are part of Plants Abroad scenario.

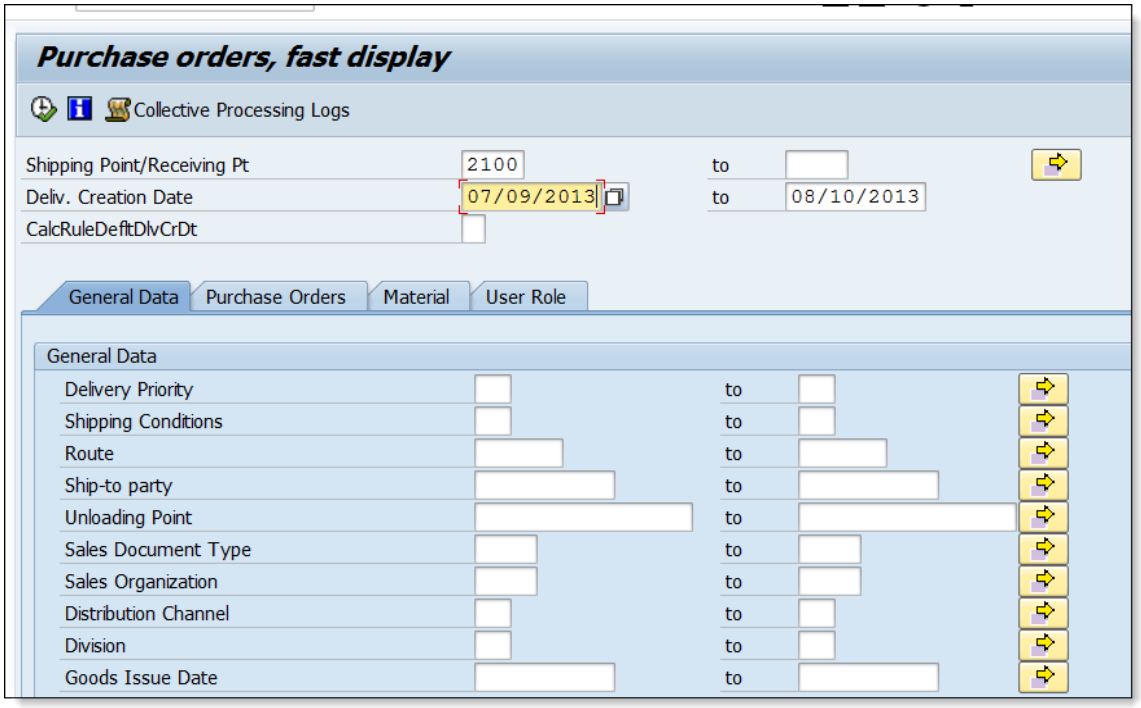
Transaction code: **ME21N**



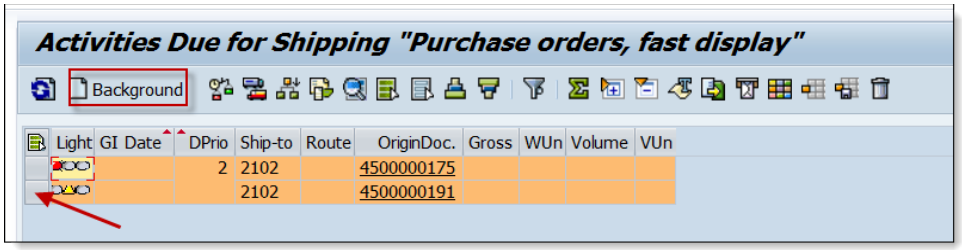
In the STO there is no call to Determination hence the conditions tab at this point will look like the sample below. This is standard SAP expected behavior at this point in the transaction as the tax determination happens at posting of the billing document. You may however see a partial log on the log report that has some of the request data but no subsequent call to Determination or response data. A complete XML log will come at time of billing document posting to accounting.



Transaction Code: **VL10B**

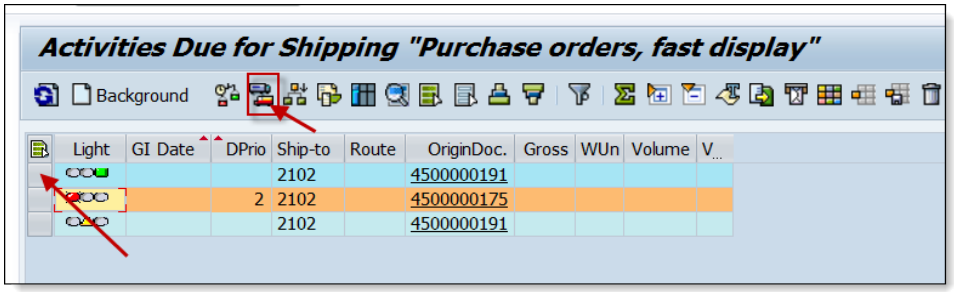


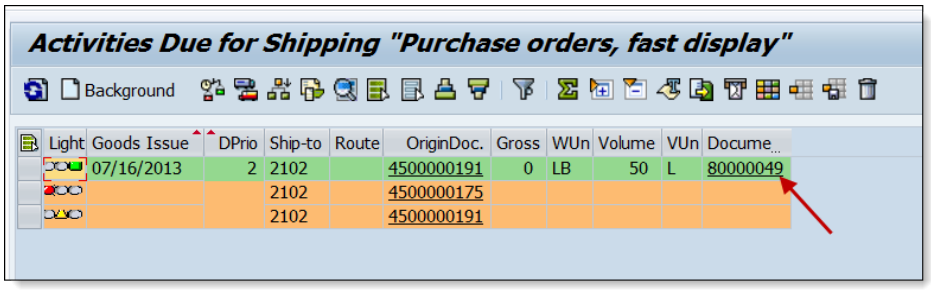
Remove **CalcRuleDeftDlvCrDt** field to blank, enter **shipping point**, and **EXECUTE.**



Select line for the STO document number and **EXECUTE** in Background.

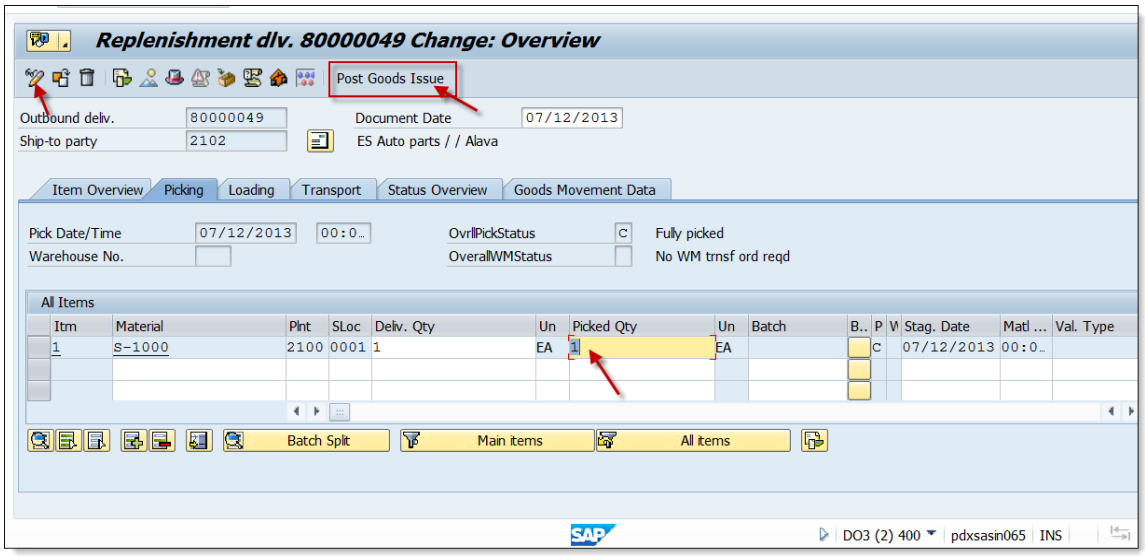
Select the new line and hit the show/hide delivery button.



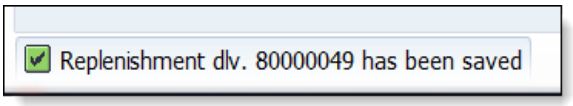


Double click on the document number to get to the delivery and complete the picking and foreign trade data.

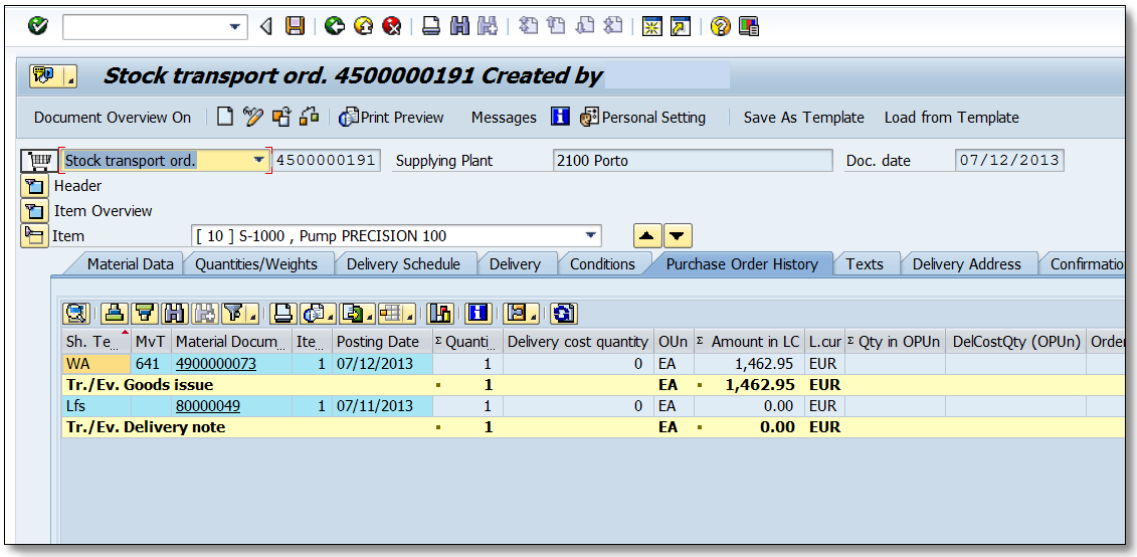
Transaction code: **VL02N**



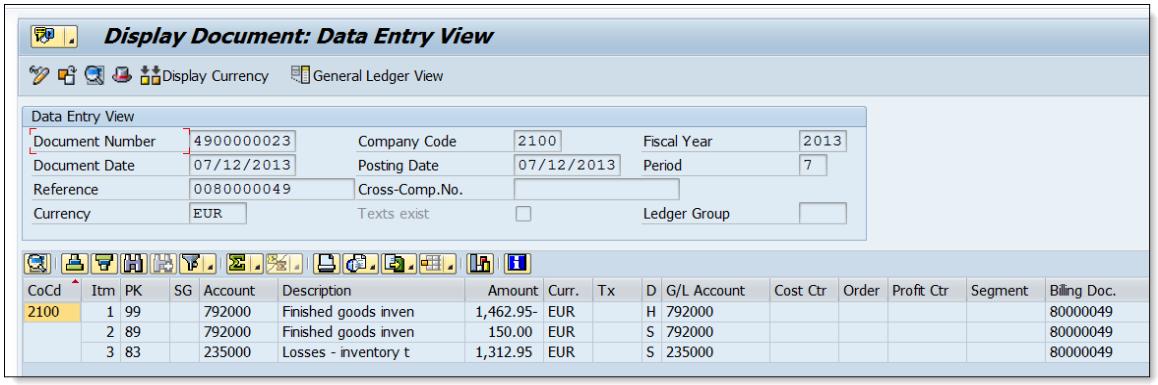
Here we enter the pick quantity in change mode and then hit **Post Goods Issue**.



View of the STO purchasing history at this point using transaction code **ME22N.**

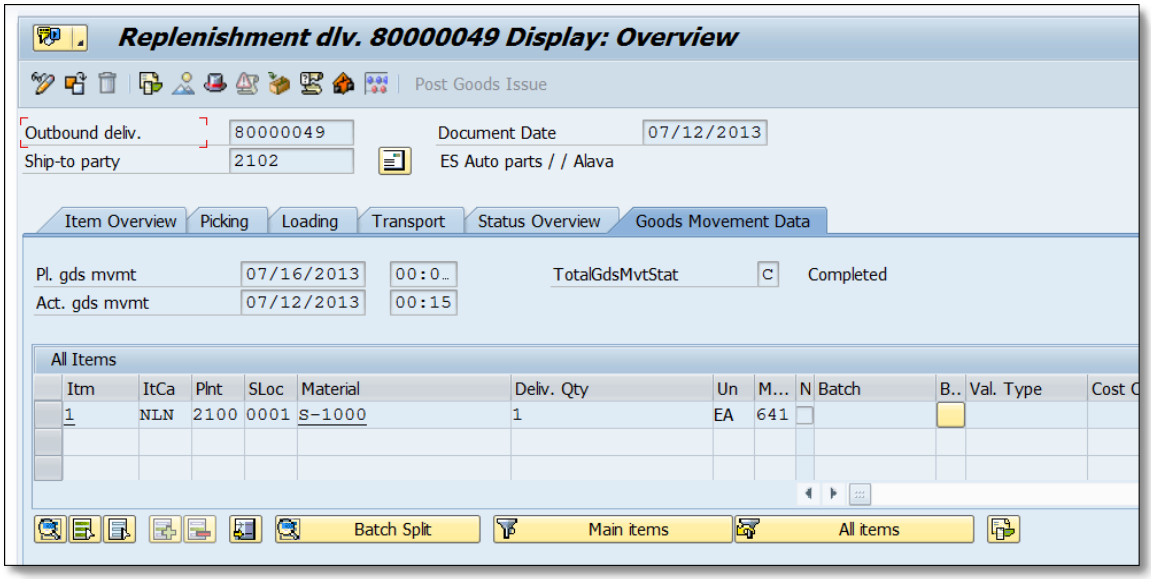


Accounting document from the goods issue transaction.

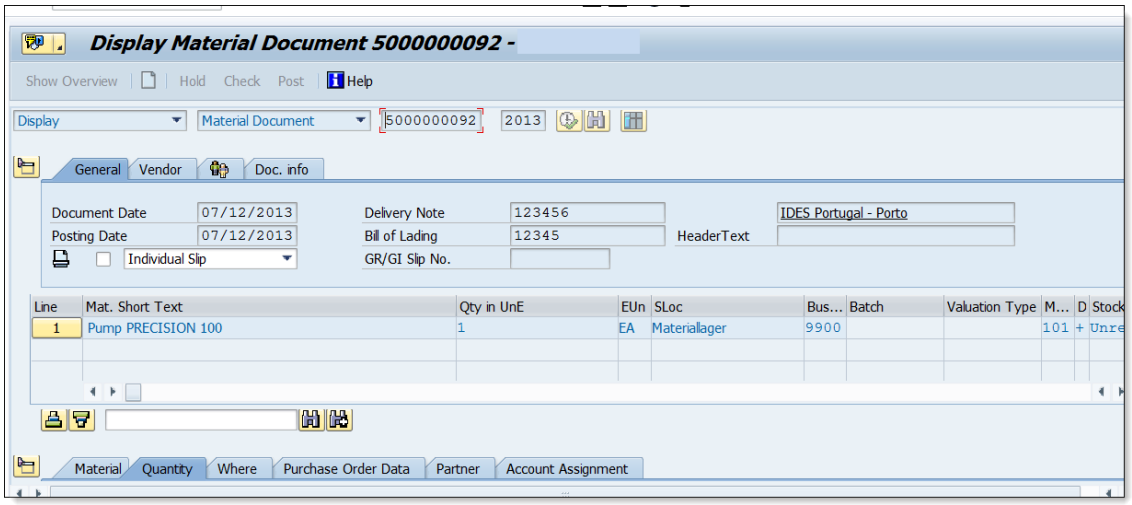


(Note that this one had a large variance between standard values in the material master. This should normally not be the case unless your accounting views on the two plants are using different standard costs.)

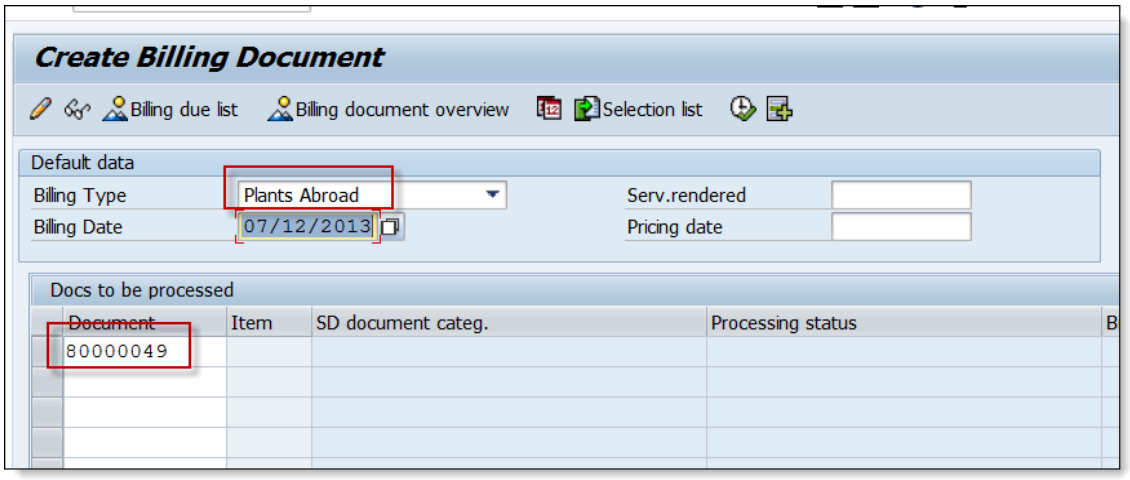
Display view of the delivery document.



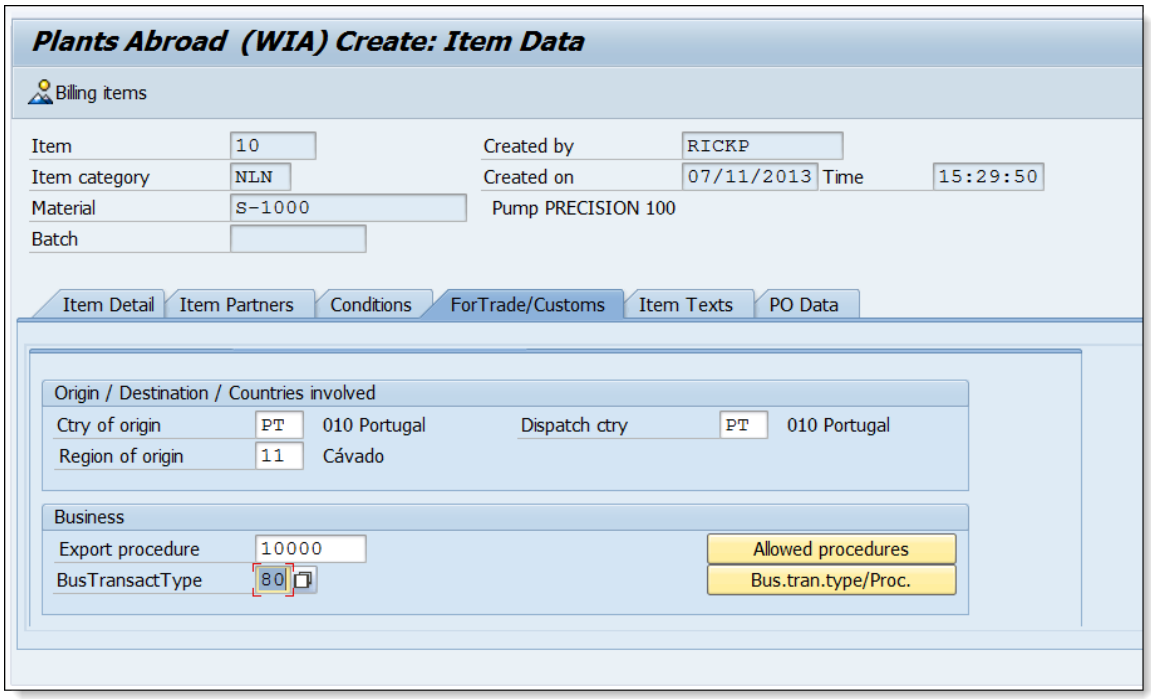
MIGO receiving by the receiving plant.



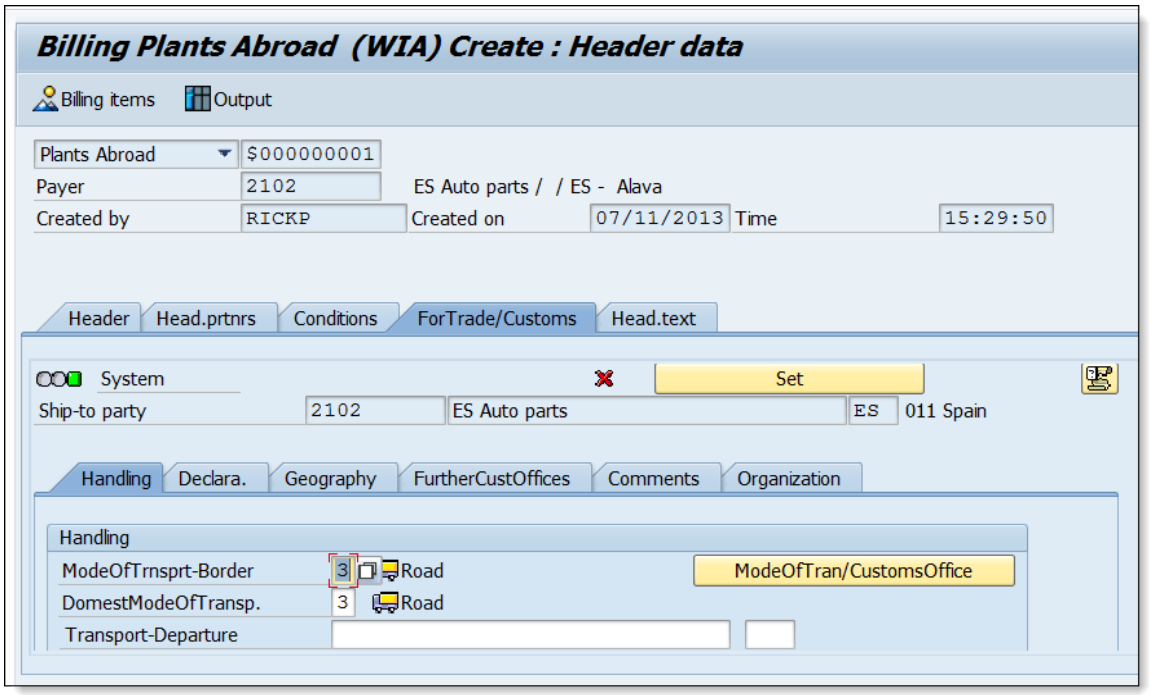
VF01 transaction to post the WIA billing document.



Select plants abroad billing type from drop down and enter the document number of the delivery. **Execute**.

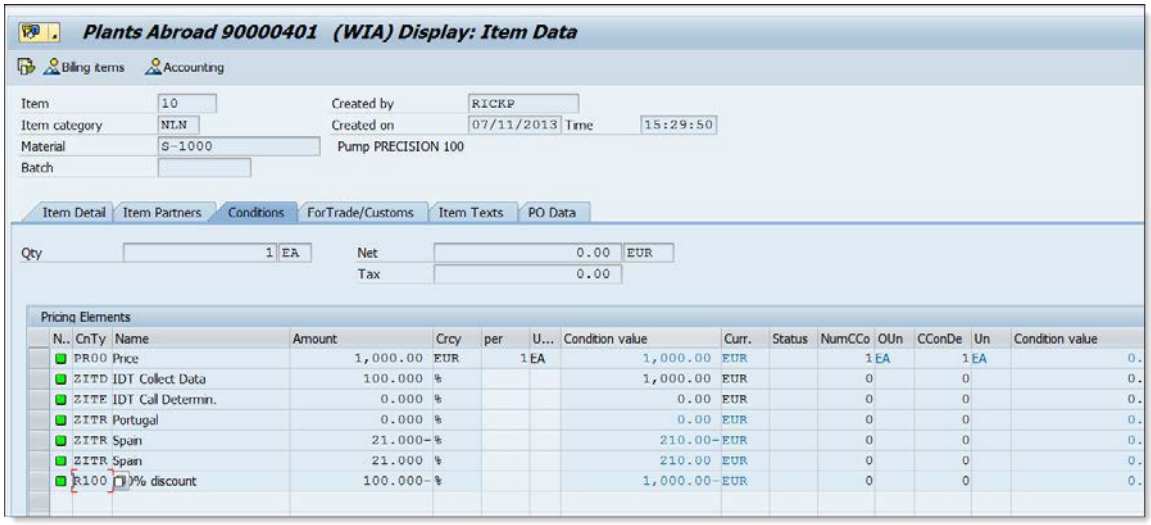


Before saving the document verify that the foreign trade data is complete on the billing and that the Export procedure, BusTransactType, etc. is filled in and complete.



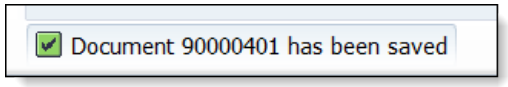
Also verify the foreign trade data at the header record is correct, entering handling information.

Once a tax call has been made from the header conditions tab, tax details can be viewed on the item conditions tab of the billing document:

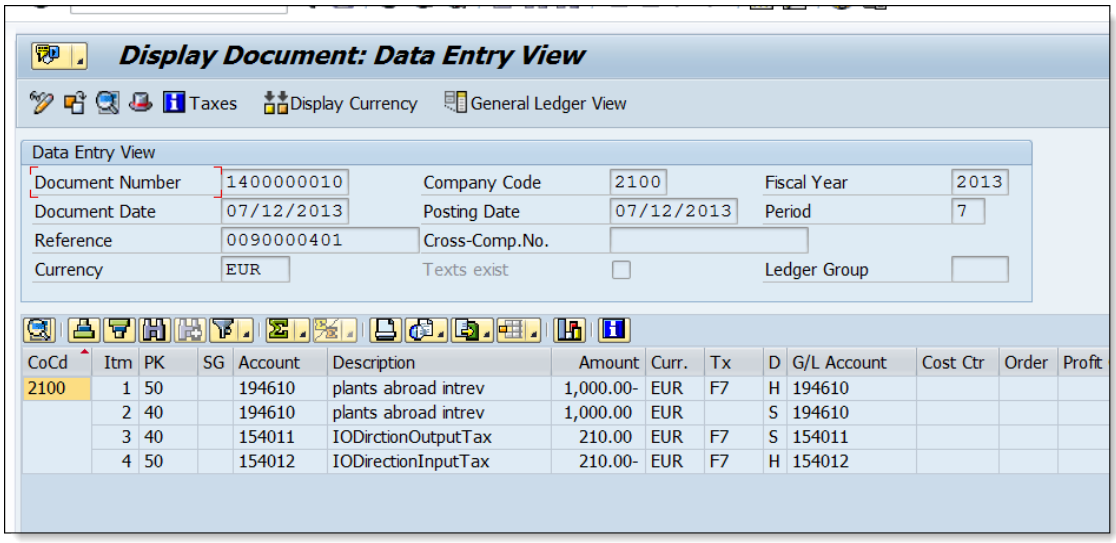


Note the conditions show both the seller calculation and the buyer calculation of tax on the order.

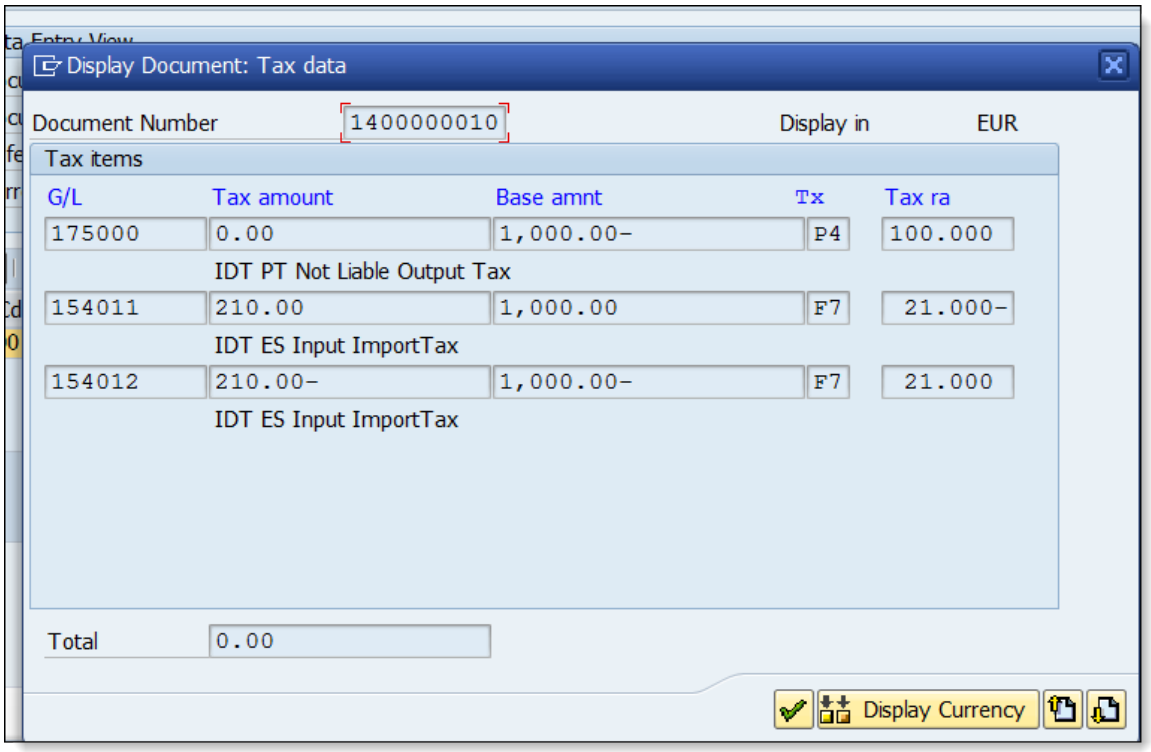
Next save the document.



Accounting document from the WIA billing.



Accounting document from the billing shows the correct posting. Note that the seller role tax calculation was zero rated tax so there will be no line for it on the accounting document even though it displays in the taxes tab. The entry will however be included in the BSET table in SAP for use in VAT reporting.



The **Taxes** button on the document shows the import tax at zero rated taxes for the sending plant and the import tax output and input directions on the receiving plant.

Calculation XML log is displayed below. Note that this log will have two invoice blocks in the XML because of the nature of this document type having two calls to Determination. In the first invoice block you will see the call as the seller for Portugal plant with tax block of the Not Liable Import tax returned. In the second invoice block you will see two Acquisition tax blocks (input and output) that represent the buyer call to Determination for the Spain plant side.

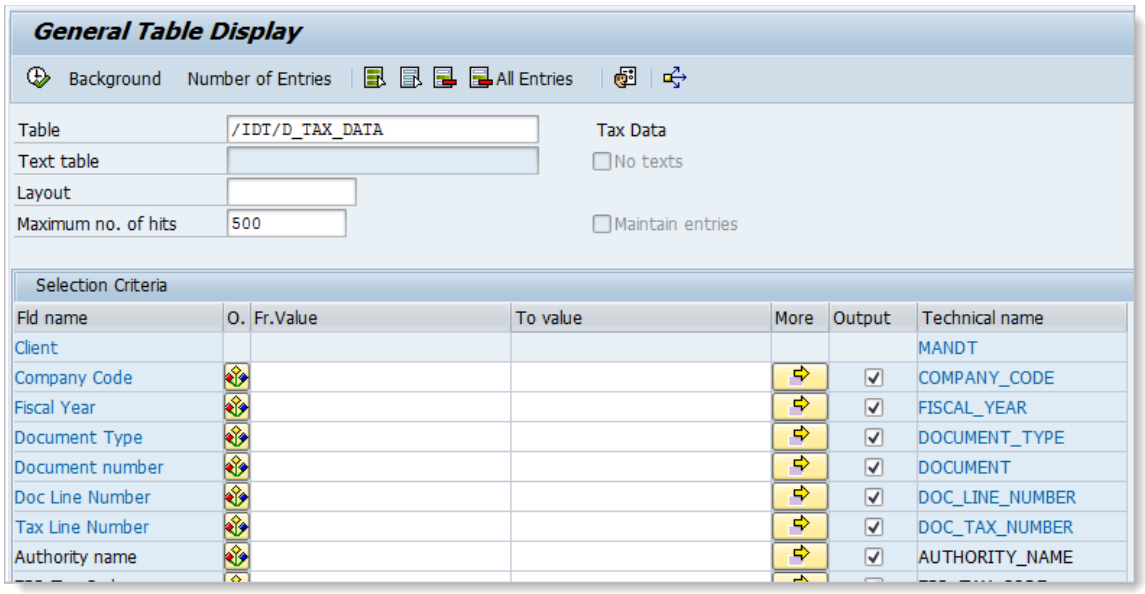

```
  <?xml version="1.0" encoding="utf-8" ?>
- <LOG>
  - <taxCalculationRequest xmlns="http://www.sabrix.com/services/taxcalculationservice/2011-0
    - <INDATA version="G">
        <COMPANY_ROLE>S</COMPANY_ROLE>
        <EXTERNAL_COMPANY_ID>2100</EXTERNAL_COMPANY_ID>
        <HOST_SYSTEM>DO3</HOST_SYSTEM>
        <CALLING_SYSTEM_NUMBER>400</CALLING_SYSTEM_NUMBER>
      + <INVOICE>
      + <INVOICE>
      </INDATA>
    </taxCalculationRequest>
  - <taxCalculationResponse>
    - <OUTDATA version="G">
      - <REQUEST_STATUS>
          <IS_SUCCESS>X</IS_SUCCESS>
          <IS_PARTIAL_SUCCESS>X</IS_PARTIAL_SUCCESS>
        </REQUEST_STATUS>
        <COMPANY_ROLE>S</COMPANY_ROLE>
        <EXTERNAL_COMPANY_ID>2100</EXTERNAL_COMPANY_ID>
```


two invoice blocks for the seller call and the buyer call

REVIEWING TAX DETAILS IN TABLE /IDT/D_TAX_DATA

Table /IDT/D_TAX_DATA stores information returned from Determination in SAP for subsequent use in Invoice Printing, Reporting, or other downstream functions. This section outlines how one can view data stored in this table.

Transaction Code **SE16N**. Enter table name /IDT/D_TAX_DATA. Then **ENTER**.

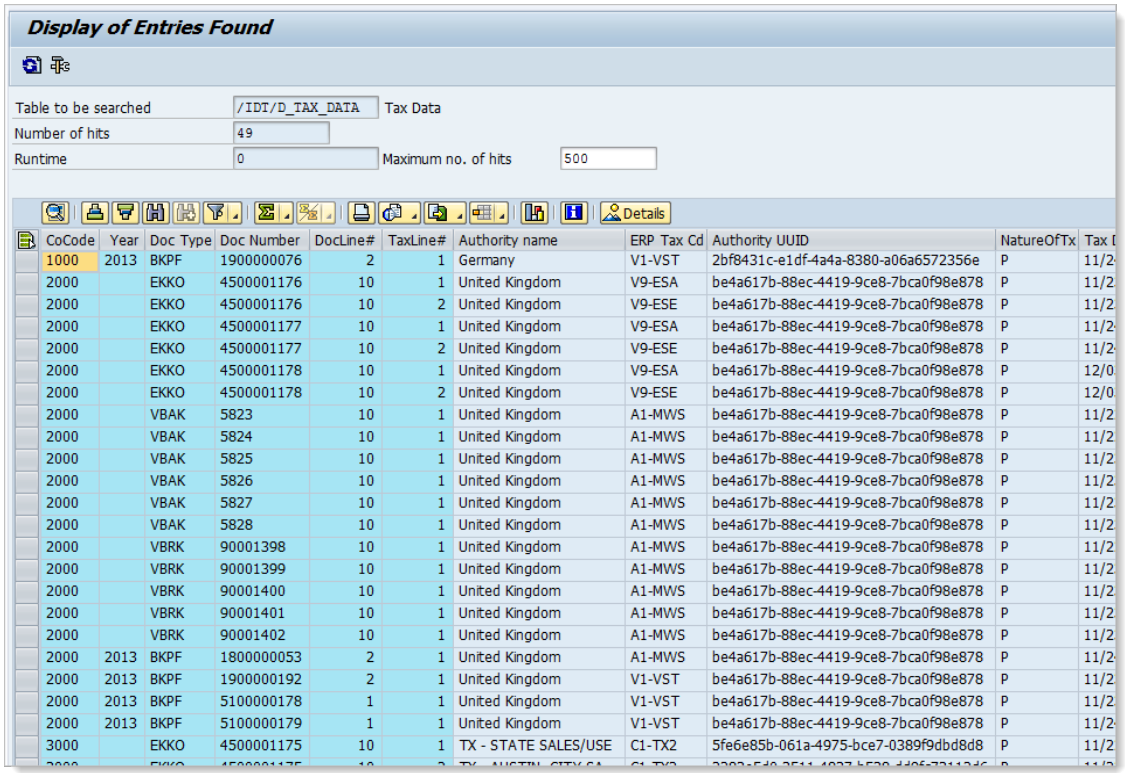


The keys to this table are as follows:

Field Name	Description
Client	The client where the table lookup is completed (not changeable).
Company Code	The Company Code for which the transaction was completed.
Fiscal Year	The fiscal year when a document was posted. This is only applicable to LIV and FI documents (document type BKPF).
Document Type	Used to separate out different records posted to tax data table: VBAK – Sales type of documents (Order, Quote, Debit Memo Request, etc.) VBRK – Billing type of documents (Sales Invoice,

Field Name	Description
Document Type	Invoice Cancelations, Debit Memo, etc.) EKKO – Purchase type of documents (Purchase Order.) BKPF – LIV and FI type of documents.
Document Number	The number assigned by SAP during the save of the document.
Doc Item Number	The item number in the SAP document.
Tax Line Number	Sequential number for each tax authority on that item's price or tax procedure.

If desired, use above table to narrow down the list of search results to be displayed in the table lookup. Once done, EXECUTE the report:



Display of Entries Found

Table to be searched: /IDT/D_TAX_DATA Tax Data
Number of hits: 49
Runtime: 0 Maximum no. of hits: 500

CoCode	Year	Doc Type	Doc Number	DocLine#	TaxLine#	Authority name	ERP Tax Cd	Authority UUID	NatureOfTx	Tax D
1000	2013	BKPF	1900000076	2	1	Germany	V1-VST	2bf8431c-e1df-4a4a-8380-a06a6572356e	P	11/2
2000		EKKO	4500001176	10	1	United Kingdom	V9-ESA	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		EKKO	4500001176	10	2	United Kingdom	V9-ESE	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		EKKO	4500001177	10	1	United Kingdom	V9-ESA	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		EKKO	4500001177	10	2	United Kingdom	V9-ESE	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		EKKO	4500001178	10	1	United Kingdom	V9-ESA	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	12/0
2000		EKKO	4500001178	10	2	United Kingdom	V9-ESE	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	12/0
2000		VBAK	5823	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBAK	5824	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBAK	5825	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBAK	5826	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBAK	5827	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBAK	5828	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBRK	90001398	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBRK	90001399	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBRK	90001400	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBRK	90001401	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000		VBRK	90001402	10	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000	2013	BKPF	1800000053	2	1	United Kingdom	A1-MWS	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000	2013	BKPF	1900000192	2	1	United Kingdom	V1-VST	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000	2013	BKPF	5100000178	1	1	United Kingdom	V1-VST	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
2000	2013	BKPF	5100000179	1	1	United Kingdom	V1-VST	be4a617b-88ec-4419-9ce8-7bca0f98e878	P	11/2
3000		EKKO	4500001175	10	1	TX - STATE SALES/USE	C1-TX2	5fe6e85b-061a-4975-bce7-0389f9dbd8d8	P	11/2

APPENDIX 1: OTHER FEATURES

LOG FORMATTING

This section explains how to format an SAP SOAP log quickly for easy analysis and sharing.

PREREQUISITE

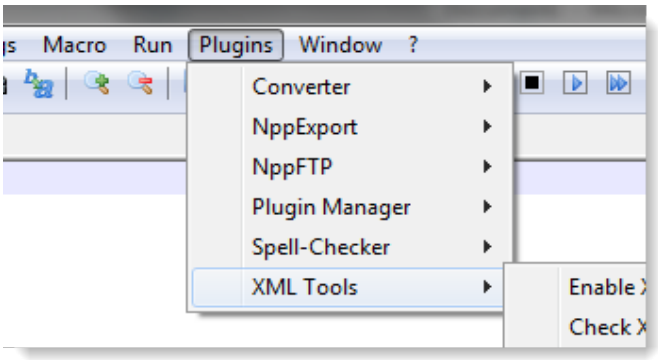
You must have Notepad++ installed. Go to http://notepad-plus-plus.org/download/ to download and install the free tool.

XML TOOLS PLUG-IN FOR NOTEPAD++ INSTALL

Once Notepad++ is installed we need to install XML Tools. Download the latest version from the link provided. Here we use xmltools_2.3.2_r908_unicode_beta4.

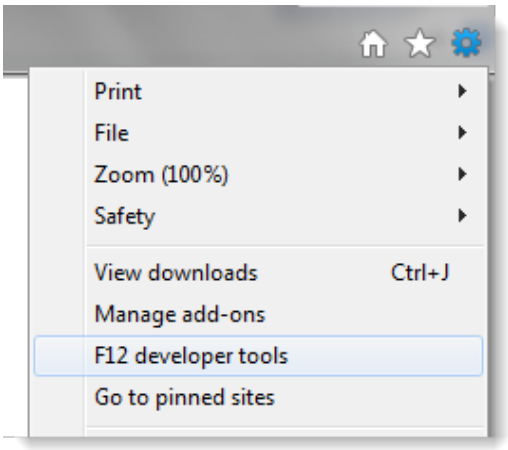
Once downloaded, unzip the XML Tools plug-in. Then copy the **XMLTools.dll** file into the Notepad++ **plugins** directory (usually at C:\Program Files (x86)\Notepad++\plugins). Copy all the **dll** files in the *ext_libs* directory of the zip file into the root directory of Notepad++ (usually C:\Program Files (x86)\Notepad++).

Once done start Notepad++ (close it and restart it if it was open during the plugin install). Now you should see under the **Plugins** menu a new sub-menu for **XML Tools:**

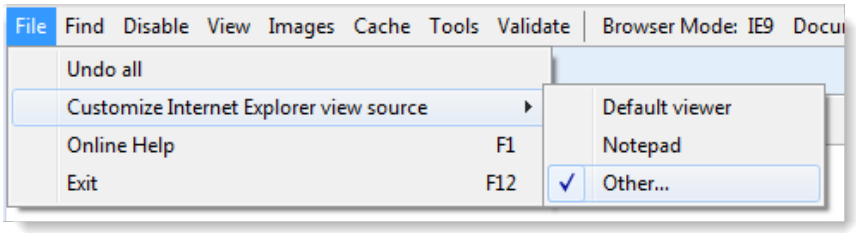


MAKING NOTEPAD++ YOUR DEFAULT TEXT EDITOR

The SAP Log file browser pop-up uses IE as the browser default, so we must change the text editor default in IE. Open IE, then got to **Tools** (Alt-X) and select **F12 Developer Tools** (F12).



You will now see a new window on the bottom of the browser screen. Use menu **File** → **Customizing…** → **Other**.

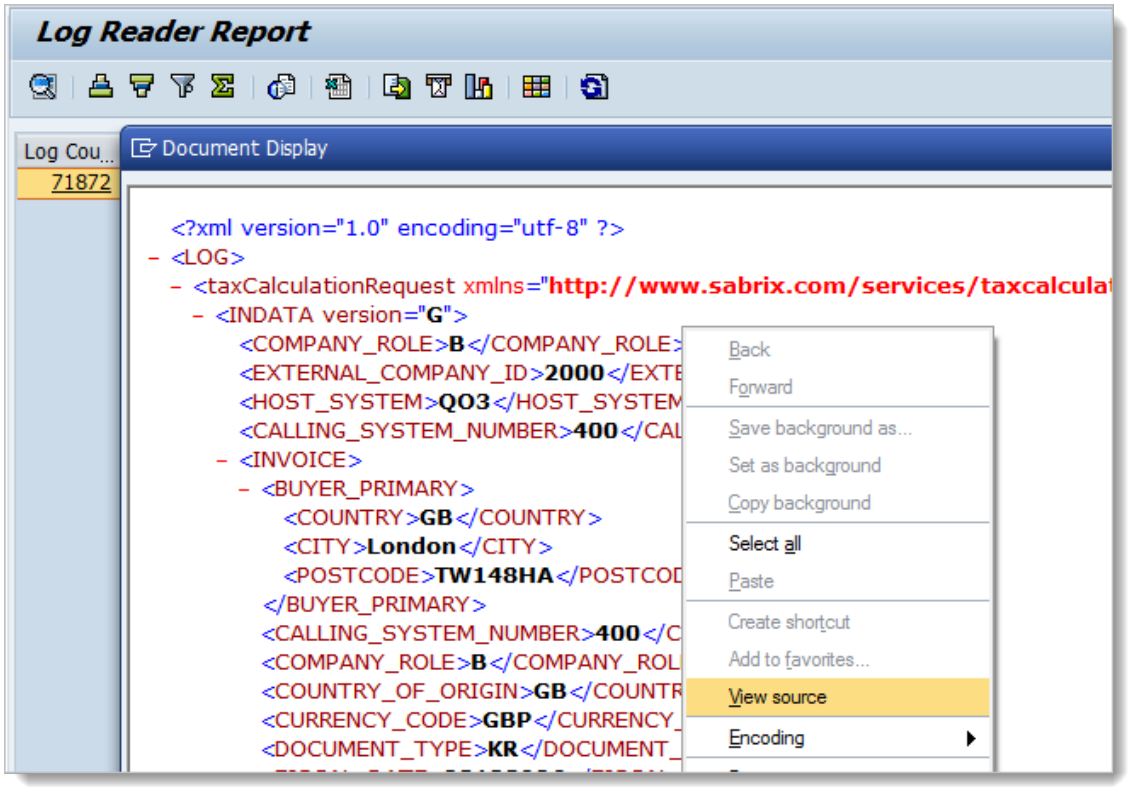


In the pop-up browse to Notepad++ (usually at C:\Program Files (x86)\Notepad++) and select the **notepad++.exe** file. Close the Developer option in IE via **F12**. Close IE.

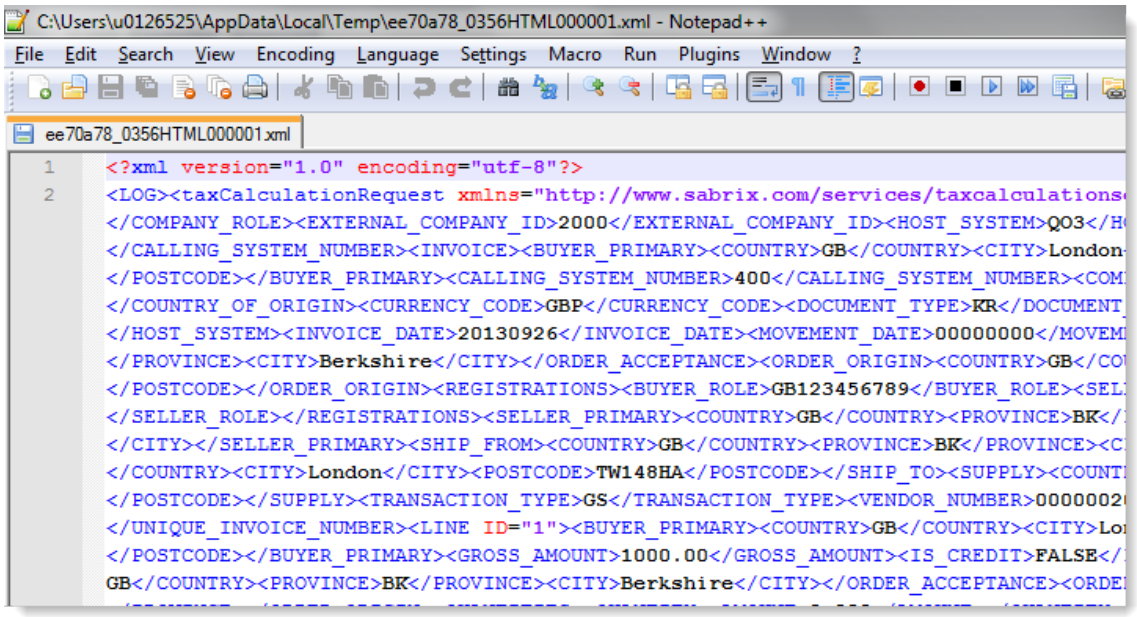
You are now set up!

READING A SAP LOG FILE WITH THE NEW SETUP

Go to an SAP log and select it to get the pop-up with the SOAP request/response details:

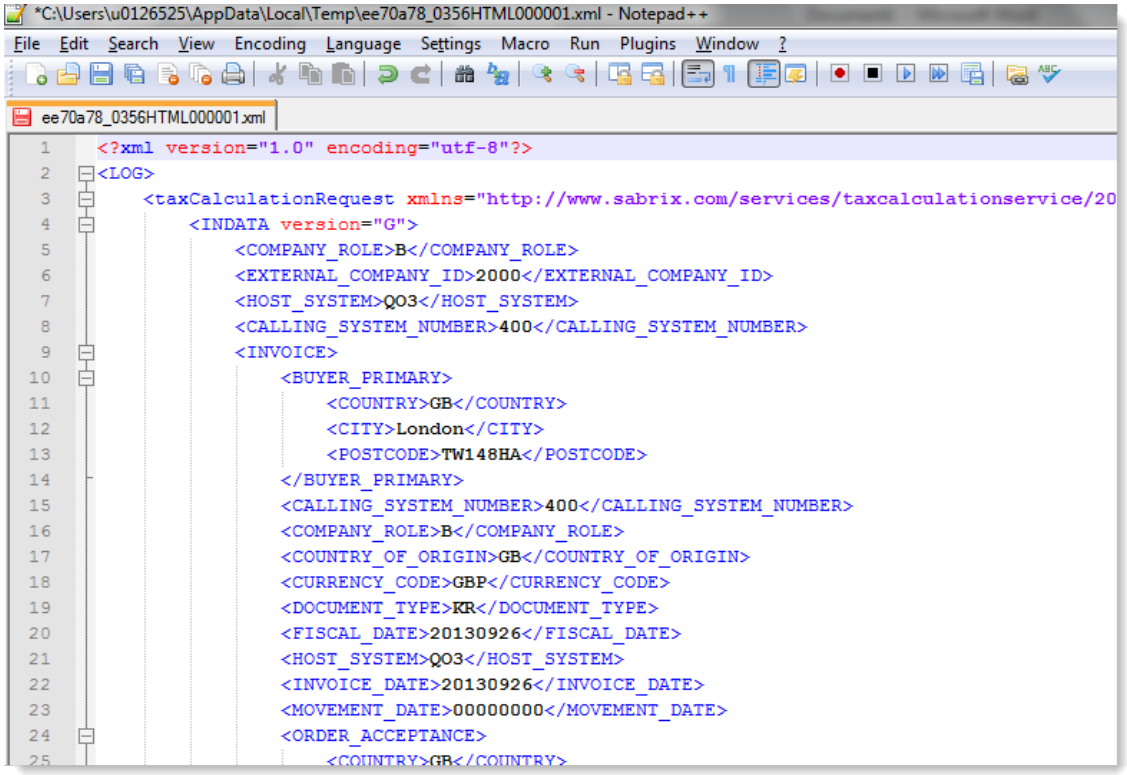


Right click in the log and select **View Source**. Notepad++ will now automatically open and show the log details:



But this is difficult to read in the format shown….

So, let's solve this in one quick step! Use **Ctrl+Alt+Shift+B** (or menu **Plugins → XML Tools → Pretty Print (XML only – with line breaks)**).

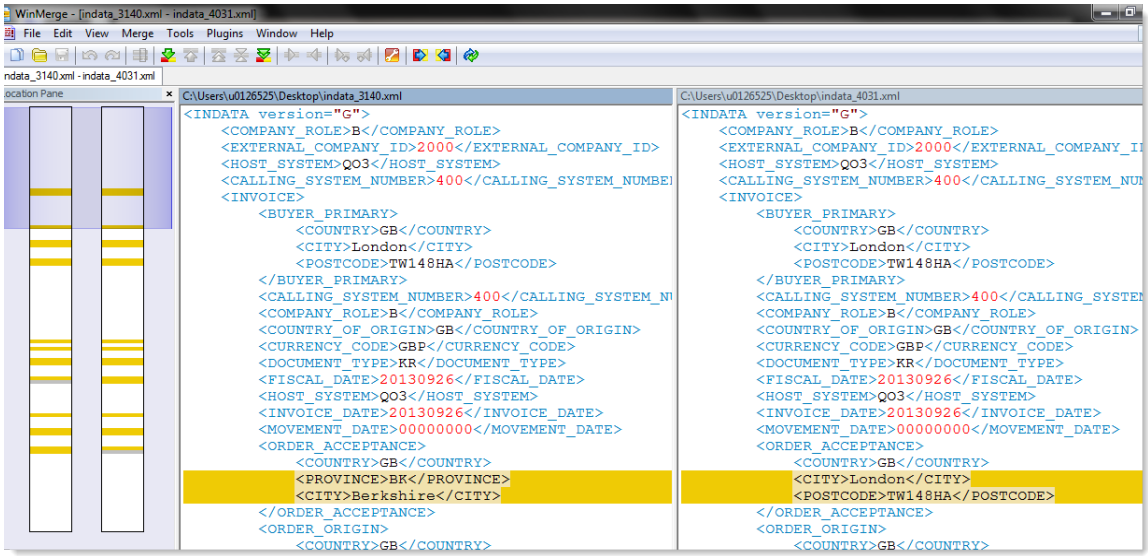


Voila!! You can now analyze, copy sections out, or even copy the <INDATA> to </INDATA> section and run it through the Determination XML Invoice servlet, soapUI, or the SAP SOAP Manager.

COMPARING LOG FILES

Once you have your log file formatted it's easy to compare two files to each other. You can for example quickly copy the <INDATA> to </INDATA> section of two logs into separate files and then compare them.

You can use WinMerge (free at http://winmerge.org/downloads) to compare the formatted files.



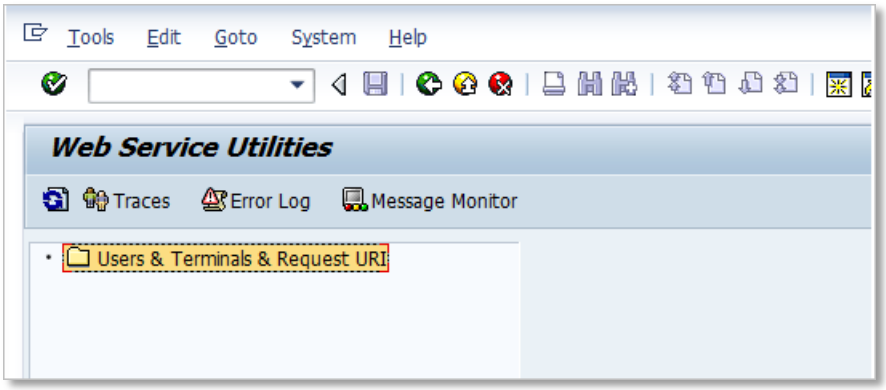
USING SOAMANAGER TO ACCESS ADDITIONAL ERROR MESSAGES NOT DISPLAYED IN THE LOG

Often the Global Next error messages you see on the screen and in the log, are not very detailed. They imply that an error occurred but give no details on which error occurred and why it occurred. Generally, a much better error messages exists and it can be obtained.

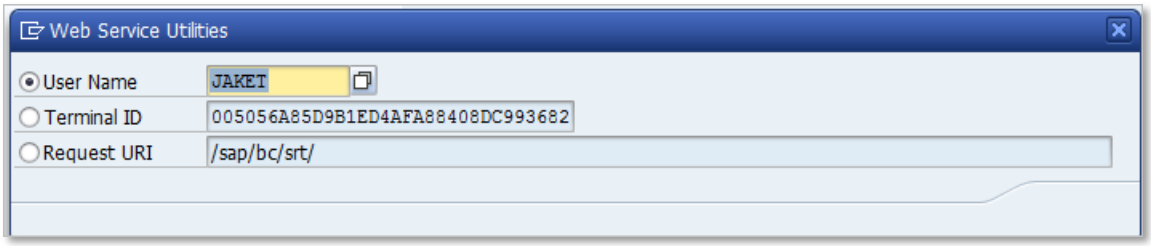
The simplest way is to use transaction SOAMANAGER in SAP. This transaction has a "payload trace" functionality. It is hard to show this with screens images because different versions of SAP have very different screen flows for transaction SOAMANAGER. But in all cases a persistence user, who has the correct authority, should be able to get it to work.

The next simplest way is to use transaction SRT_UTIL to get the payload trace data. This transaction also changes with different versions of SAP but not as much as SOAMANAGER.

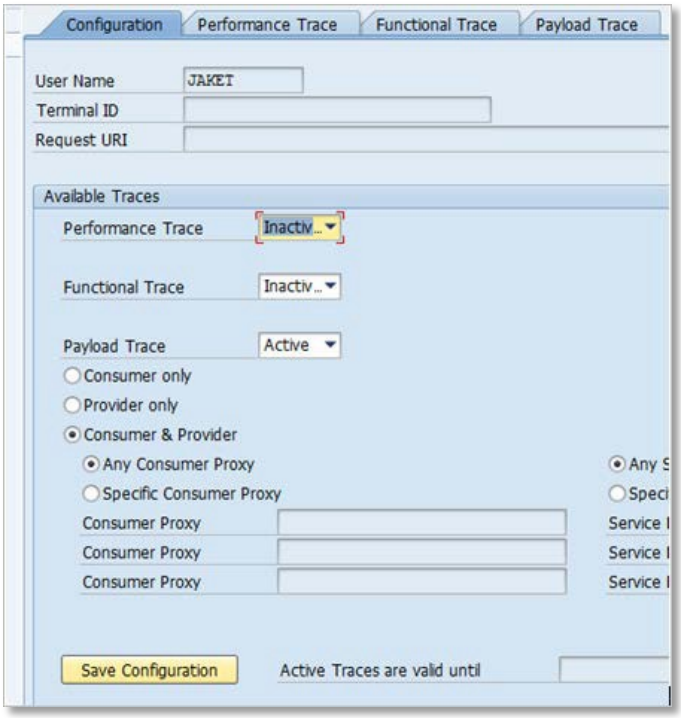
Step 1) Create a trace:



Right click on “Users & Terminals & Request URI” and select “Add User, Terminal, or select URI”. Generally, it is best to go with a user.

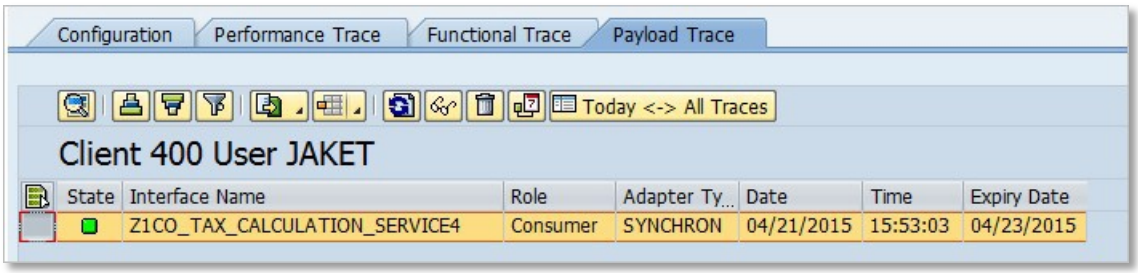


Set payload trace to “Active”:

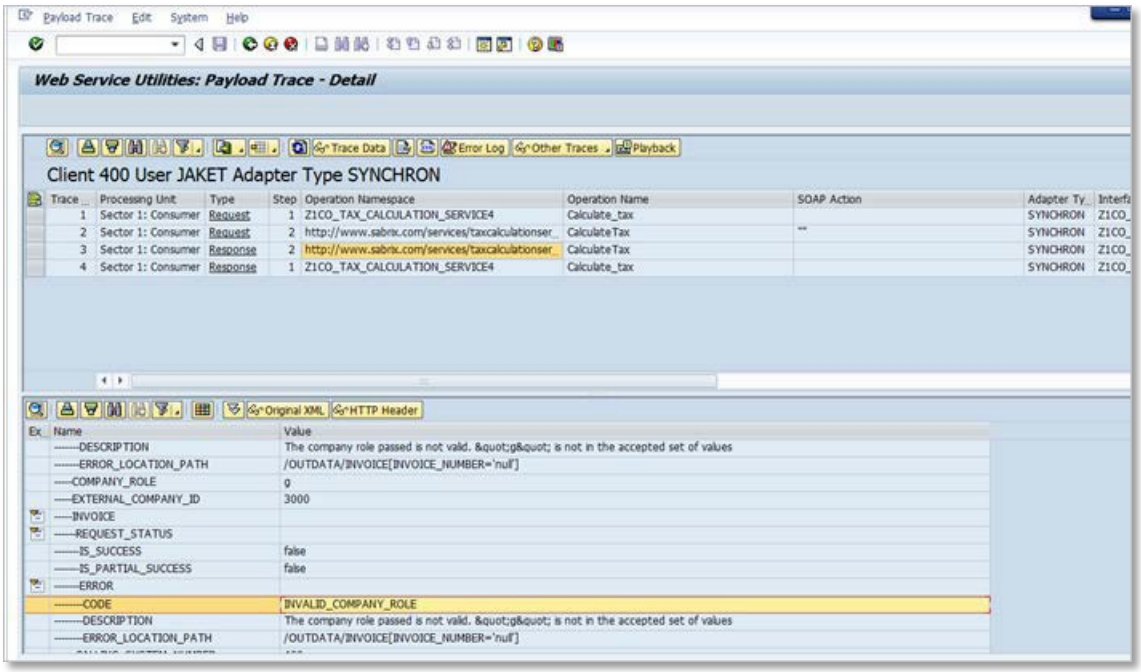


And press “Save Configuration”. Then run your error producing transaction and select the “Payload Trace” tab.

Here you should be able to see the payload trace with the detailed error messages.

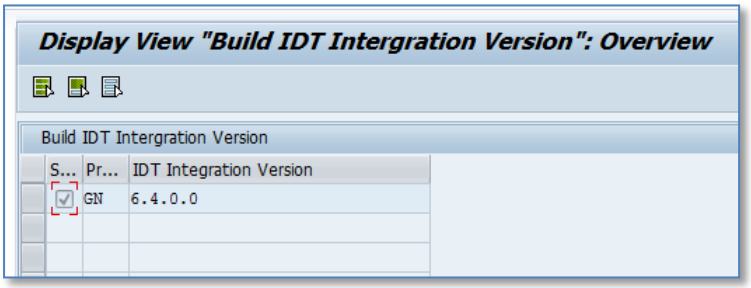


Click on the glasses, then you should look for the error, it is usually best seen in one of the responses:



In this case the error was due to an “invalid company role”.

TRACKING OF INTEGRATION RELEASE VERSION

To track or determine which release version of the Integration software you are using we have added a special table /IDT/D_VERSION which will be populated with the version of the software as part of the install process of the transport requests to the system. You can view this table using SE16 transaction and see the various versions that have been added to your installation. This transaction is also available in the standard basic setup menu.

Transaction code**: /IDT/Version**