VERTEX®

Closing the Testing Gap for Taxes

How robust automation can transform indirect tax testing in SAP

ASUG

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Introduction

SAP is a leading enterprise resource planning (ERP) solution for organizations around the globe, providing the operational backbone to many business processes, including procurement, accounts payable, sales and billing.

These transactions trigger complex indirect tax (sales tax, VAT) calculation, accounting and reporting requirements. Many companies turn to Vertex solutions integrated with SAP to meet these obligations.

Extensive system testing is required to ensure that legal compliance is maintained for a company's purchasing and sales transactions in each taxing jurisdiction. This testing should occur during a new SAP or Vertex implementation, system upgrade or on a daily/weekly regression basis.

However, traditional SAP testing scope typically does not cover the wide variation of tax scenarios needed. This is due to data, resource and time constraints as traditional testing is a very manual process. While a tax department may want to see 3,000 tax scenarios validated, the SAP testing team may realistically only get to 50 test cases.

The result is a significant testing gap for taxes.

Complexities of Testing Indirect Taxes in SAP

The testing of indirect taxes derives its exponential path to complexity from a number of factors.

1. The number of data drivers that affect indirect tax outcomes.

The applicability of tax may vary based on what you are buying or selling, the seller or the buyer, the use of the product/service, the location when the product or service is delivered. These drivers are harnessed from the data coded on the SAP purchase or sales order, so testing is required to ensure that the data drivers in SAP are enabling the correct tax result in Vertex.

2. The taxing jurisdictions that apply rates and rules.

In some countries, the rules are applied at the country level, but in North America, the tax rules and rates are applied at the state, country/province and/or city level. In some extreme cases the minutest detail, such as the side of the street the buyer is located on, or the % of sugar in the juice can affect the taxability. Multiply this by the different products/services a company buys and sells and you have exponential tax scenarios to validate.

3. The legislative changes are constant.

Taxing jurisdictions around the world change their rate and rule content by an average (insert # changes Vertex delivers) per month. Thankfully, tax providers like Vertex are able to deliver these changes in its monthly content updates, but it does require some testing to ensure they are correctly applied and users are prepared for the changes.

4. Tax outcomes follow the business events

Taxability outcomes may vary depending on the nature of the purchase or sale transaction. For example, in the US, the purchase of goods for resale are taxed differently than goods purchased for own use. In Europe, the chain-flow of business events in an intercompany buy-sell arrangement may require tax determinations on each leg of the transaction stream. Testing each of these types of documents is required to ensure correct tax outcomes are applied.

5. Tax testing touches multiple system components

As advanced tax solutions get more integrated and automated, the testing of these solutions requires an end-to-end view of all the components. Validating these highly integrated applications is no longer just about checking a tax rate calculation.

It also requires validation of SAP master data, Tax Code determination logic, pre-calculation data cleansing, configuration and content in Vertex, post-calculation adjustments and messaging, accounting for taxes, reporting outputs, audit support and returns preparation.

Many transactions need to be processed across multiple documents. For example, a Purchasing test case may require the creation of Purchase Order, Release, Goods Receipt and Invoice. Add to this, the growing adoption of upstream procurement and A/P interfaces, and you easily have 10+ points of validation to confirm you are getting the right answer for the right reason and can support it under an audit in 3 years' time.

Let's do the math on a simple example of purchasing scenarios in the US:

Types of Products/Service purchased	75
Number of States registered	20
Test Documents needed for:	4
1. PO, Goods receipt, Invoice (3)	
2. FI invoice (1)	
Number of test documents needed	6,000

The resulting number of tax scenarios, reiterative document creation and validation steps could easily overwhelm any tax department and SAP testing team.

Limitations of Traditional Testing in SAP

Testing procure-to-pay and order-to-cash scenarios in SAP poses numerous challenges for testing teams, further exacerbating the tax testing gap.

1. Many testing environments have limited master data and it can be difficult to find the test data needed to process a transaction.

2. Many SAP documents require further data validation steps that a typical tax user would struggle to navigate. For example, a customer, sales org, plant and material must be compatible in order for a sales order to be successfully created. Inventory is required on-hand before a delivery can be posted.

3. Processing test cases in SAP requires multiple, linked documents that need to be repeated for failed test cases. Test users need to be skilled in document creation and how prerequisite checks need to be met. This is not typically a skill that Tax users hold, thereby increasing their dependence on SAP teams to complete their testing in SAP.

4. Analysis of test results requires the Tax team to wade into the SAP document flow and manually review the results. It may not be readily apparent why a test case may have failed, thus requiring the Tax team to seek support in investigating logs, debug results, or check data inputs.

5. Documenting test documents and results is an arduous process of capturing data, document numbers and results in shared spreadsheets. It is common for test documentation to be a limited after-thought, thereby posing risk to project governance.

6. Testing typically requires repeated cycles across different SAP environments, all of which may have varying master data sets, further increasing the testing effort needed to meet IT and tax standards.

7. It's a common fact for all companies, that effort spent on testing is limited — both in hours and timeline. Traditional testing methods require so much cross-functional effort and repeated steps, that there is typically no possibility that all the testing that is needed is successfully completed.

These are the reasons why the testing gap manifests itself across most companies around the world. Mitigating risk from the gap typically comes down to focusing only on a representative test sample of 50 – 100 test cases. Given that a single test case could take one FTE hour to complete, a typical range of tax testing hours in an SAP environment, could easily be 300 – 500 hours of effort, once multiple test cycles, multiple users, troubleshooting, re-testing and documentation are factored in....and that's the time spent on a small sub-set of desired tax scenarios.

Risks Arising from the Testing Gap

Quite simply, failure to test all the appropriate tax scenarios on a timely and regular basis can lead to material tax calculation and reporting errors in Production.

Correcting tax issues in Production leaves a much deeper footprint as it can require cancellation and rebills, accounting adjustments, customer and vendor communications, amendments to returns and audit management. The strain placed on tax, finance, procurement, accounts payable, customer service and billing teams can be significant as the roll-on effect of tax errors are amplified.

Inability to get ahead of system updates and changes in tax rates and rules, not only poses a tax liability, it poses a risk to the business as a whole.
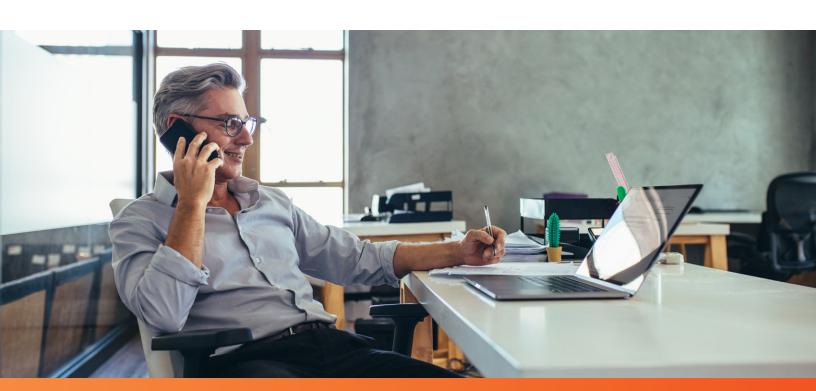
The testing gap is real.

Test Automation as the Answer

As companies are looking at solving the testing gap, it is even more critical for companies upgrading to S4 HANA, applying ongoing service packs, applying monthly rate updates or simply wanting to maintain assurances that tax results remain correct over time.

Automation is the key to managing and closing the testing gap. There are a number of test automation offerings available including test management software, SAP script loads and testing utilities within the Tax application. With varying effectiveness, they may address specific components of the testing cycle.

Test automation should replace manual efforts in finding and validating test data, executing the test cases and provide analytical results. Test automation should reside within SAP itself, so that the source data and processes can be accessed and used in the testing cycle. It should also enable the triggering of all components of the tax process, including pre-processing, tax calculation, post-calculation, accounting, and reporting.

The goal would be the ability to test all the tax variables using actual SAP data and transactions, while keeping human intervention to a minimum. The ongoing scalability of the solution should facilitate large-scale, on-demand regression testing, so any system changes can be easily tested and evaluated for risk. It would be a win-win-win-win-win+ for Tax teams and all the supporting teams in SAP who are impacted by tax testing.

Introducing Vertex TestSuite

With over 1,000 companies running SAP among its customer base, Vertex has been at the forefront of managing tax testing for some of the largest and most complex companies in the world.

The Vertex team developed Vertex TestSuite to automate the SAP tax testing cycle from test script through to documentation.

Vertex TestSuite is installed in your SAP ECC or S4 HANA environment and is purpose-built to mine your SAP data to build and validate your test scripts, execute your test cases with actual SAP documents created in BAPI and BDC modes, analyze the tax results and produce a full set of documented test cases. Vertex TestSuite delivers comprehensive logging to support your results analysis and enables easy re-execution runs for effortless regression testing.

Use Vertex TestSuite to test:

SAP document creation including Purchase Order, MM/FI invoicing, Sales Order, Billings

Accelerator programs, including Tax Code default, Data Mapping, Accelerator Reports

PLUS tools, including VENDORecon, Diagnostax and Drop Shipment

Vertex O-series calculation and reporting

Closing the Gap with Vertex TestSuite

Vertex TestSuite enables high-volume testing using your SAP data and processes, empowering the tax team to process thousands of test cases in a self-service mode.

Reduced dependence on impacted teams, including IT, Master data, Procurement, Accounts Payable, Finance, Sales, and Billing resources, ensures full test coverage without delays, approval requirements and untenable cost.

With Vertex TestSuite embedded in your SAP environment, the tax function can stay ahead of pending legislative changes, model impacts of business expansion and mitigate risk of tax errors before changes are moved to Production.

Vertex is leading the charge to enable organizations of all sizes, geographies and industries to gain the greatest tax outcomes with optimized business processes.

For more information, go to www.vertexinc.com/solutions/products/plus-tools

About Vertex
Vertex, Inc. is a leading global provider of indirect tax software and solutions. The company's mission is to deliver the most trusted tax technology enabling global businesses to transact, comply and grow with confidence. Vertex provides cloud-based and on-premise solutions that can be tailored to specific industries for major lines of indirect tax, including sales and consumer use, value added and payroll. Headquartered in North America, and with offices in South America and Europe, Vertex employs over 1,200 professionals and serves companies across the globe.
www.vertexinc.com/partners/sap

About ASUG
ASUG is the world's largest SAP user group originally founded by a group of visionary SAP customers in 1991. Its mission is to help people and organizations get the most value from their investment in SAP technology. ASUG currently serves thousands of businesses via companywide memberships, connecting more than 130,000 professionals with networking and educational resources to help them master new challenges. ASUG helps SAP customers make more possible through in-person and virtual events, on-demand digital resources, and ongoing advocacy for its membership.

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