VERTEX®

Vertex® PLUS Tools for SAP
TestSuite

Business need

When implementing or upgrading SAP, testing the Procure-to-Pay (P2P) or Order-to-Cash (O2C) processes can be very manual and time-consuming. Developing test scripts, finding, and validating data, executing and analyzing the test cases can easily require hundreds of resource hours.

To add to the complexity of SAP P2P and O2C testing, the implementation of Vertex for transaction taxes (Sales, Use, VAT, GST) requires an extended set of test cases to cover the different taxing variables. Many tax departments need to test different jurisdiction rules, various products and services, customers, vendors, and a wide range of special rules and exemptions.

All these testing variables need to be incorporated into the PO and AP process in MM/FI and the Sales Order to Billing process in SD. The multiple layers of complexity in SAP - Vertex testing requires dedicated resources who can navigate the data in an SAP test environment

For example, testing the Transaction Taxes may require the following number of tests:

Testing Scope	Number of Test cases
PO through to LIV	50
FI Invoice	50
Sales Order to Billing	50
Total	150

The typical breakdown in hours spent on testing for these 150 test cases may be:

Task	FTE Hours
Preparing test scripts	80
Validating/creating test data	40
Test execution in SAP	80
Analyzing results	80
Updating test documentation	40
Total	320

This effort may then need to be repeated across multiple testing cycles, through future upgrades, and in perpetuity after go-live as Vertex or SAP updates are applied. Given the labor-intensive approach for traditional testing and limited resources, this can often result in a reduced testing scope. This means a higher risk that system errors will not be caught until you encounter the issue in Production.

TestSuite was developed for SAP customers to automate the testing process and dramatically decrease the manual effort on SAP transaction testing. You can use TestSuite for initial deployments of Vertex, upgrades of Vertex, and ongoing regression testing.
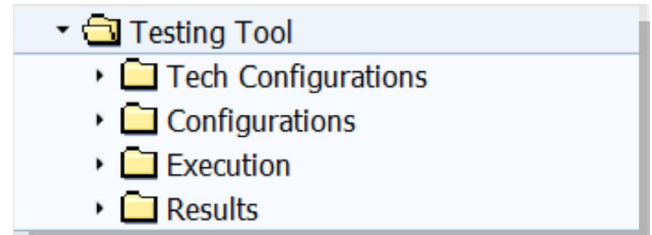
Solution summary

TestSuite is a program that is installed in SAP and automates the end-to-end test functions for SAP SD, MM and FI transactions:

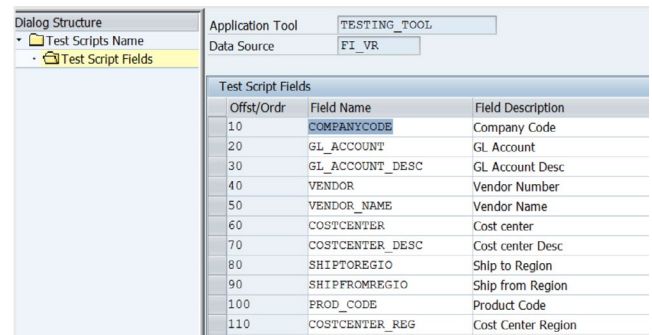| Function	What does TestSuite do?
Scripts	Creates complete test scripts with actual SAP data using minimal test criteria and by mining your previously posted SAP transactions.
Validate	Validates the SAP data combinations in each test case.
Execution	Executes the test cycle in SAP: • Purchase Order -> Release -> Goods Receipt- > LIV invoice> Accounting • FI invoice • Sales Order > Delivery > Billing
Analysis	Compares actual results with expected for data points, such as: • Taxability • Tax rate • Tax Code • Jurisdiction Code Other criteria may be configurable during deployment.
Logging	Captures step-by-step actions and messages as test documents are being created in SAP. Easy access to Accelerator Data Mapping log files.
Reporting	Comprehensive reports capturing the SAP transaction documents and results.

How does TestSuite work?

The TestSuite program resides in SAP with screens that look and feel like a standard SAP program. Once you have installed TestSuite:

1. **You access TestSuite through a custom SAP transaction code (T-Code)**

2. **Configure your Test Script templates with your desired data points**

3. **Populate your Test Script Templates with your data points and expected results. You only need to populate _minimum_ data for each test. For example, you may want to test:**

   a. Office Supplies in Colorado

   b. Hardware used in Maryland in an Admin cost center

   c. Professional Services in California

   You don't need to specify the actual SAP data in the script– just your data points, such as a GL Account that contains the description of "Office Supplies"
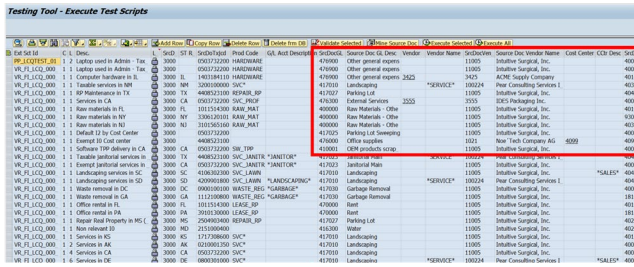

4. **Load your Test Scripts into TestSuite and your Test criteria will be checked and VALIDATED.**

5. **TestSuite will then MINE your SAP system for valid data combinations that meet your test criteria.**

This includes all the SAP data needed to create documents, such as vendor, plant, GL account, cost object, material group and more!

TestSuite will even mine your historical transaction data to find valid scenarios to re-test.[1] This is an effective way to test based on real-life examples.

[1] Requires Accelerator or SPOT Reports.

6. **Click on EXECUTE to automatically create the test documents in SAP in different modes that simulate:**

   a. Manually entered documents (e.g. ME21N, MIGO, MIRO, FB60)

   b. BAPI documents (PO, LIV and FI)

   c. IDOCS (FI only)

   d. Collective Billing (e.g. Billing Due List)

The testing tool will automatically create:

Type	Documents created
Purchase Order	Purchase Order PO Release Goods Receipt Logistics Invoice Accounting Document
Financial Accounting	FI Invoice
Sales Order	Sales Order Delivery Billing Billing Due list

7. **TestSuite results clearly show PASSED vs FAILED tests, along with highlighted failure points. For example, if your actual vs expected taxability do not match.**

8. **And comprehensive LOGGING that traces through the document creation steps and system messages**

Solution delivery – configuring the fit

TestSuite is object-oriented program delivered via SAP transport files. All objects are within our custom namespace.

As part of the solution delivery, Vertex will configure the TestSuite Program according to your company's document creation rules.

Benefits of the solution

- Completely streamlines the entire testing process for transaction taxes and core SAP MM, FI and SD testing.
- Significantly reduces the cost of testing during deployments, upgrades, and ongoing regression testing.
- Enables you to process hundreds or even thousands of test cases with very little manual effort
- Reduces your system deployment timelines.
- Easy to repeat, modify and re-execute test cases.
- Predict and manage your system and data risk up-front.
- Allows you to test real-life scenarios from previously posted documents.
- Empowers you to test a high number of data combinations to fully validate your system setups.

Comparing TestSuite to the Standard Testing approach

Testing Step	Standard Approach	TestSuite
Define test script criteria	Manual input on a spreadsheet	Manual input on a spreadsheet
Define expected results of taxability, tax rate and tax code	Manual input on a spreadsheet	Manual input on a spreadsheet
Find data in SAP to meet test criteria	Manual lookups in SAP tables or master data	✅ Automated
Validate or "pre-test" the SAP data	Manual testing in SAP	✅ Automated
Update test scripts with validated data	Manual updates to spreadsheet	✅ Automated
Execute MM tests in SAP	Manually create PO, release, goods receipt and invoice	✅ Automated
Execute FI tests in SAP	Manually create FI invoice	✅ Automated
Execute SD tests in SAP	Manually create sales order, delivery, billing	✅ Automated
Capture data passing from SAP to tax system	Get a developer to set breakpoints and debug through each transaction	✅ Automated[2]
Capture test results in Vertex Accelerator log	Manually find logs for each individual test document.	✅ Automated[3]
Compare actual to expected results	Manual comparisons	✅ Automated
Fix failed tests	Varied action, depending on the cause of failure	Varied action, depending on the cause of failure
Re-test again	Manual re-testing in SAP	✅ Automated
Capture test documents and results	Manual input on a spreadsheet	✅ Automated

[2] Captured in Accelerator Data Mapping logs
[3] Available only with Accelerator

Vertex Accelerator

To learn more about the Accelerator please click here

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