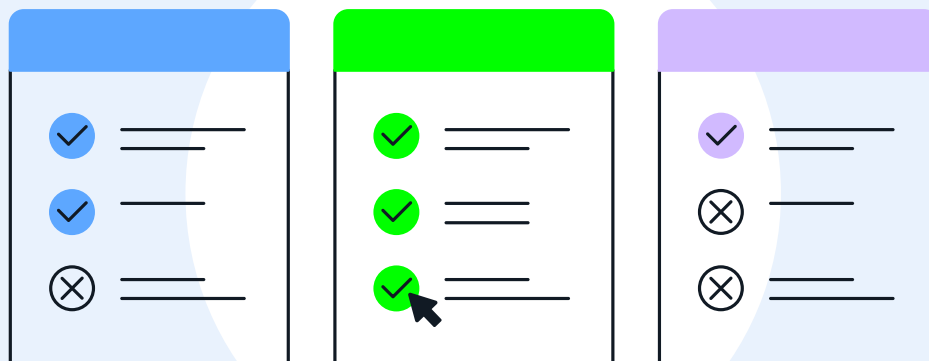




End-to-end Test Automation in SAP: A Tool Comparison

What to look for in an SAP test automation tool,
and the alternatives to SAP TAO

Introduction

Automated testing is a coveted form of testing, and integral to achieving quality assurance. For enterprises using SAP, automation enables you to mitigate risk, reduce costs and improve efficiency by increasing the speed and accuracy of SAP testing.

Quality assurance is not a one-time activity. **It's a continuous process.**

As Accenture explains in their 2018 DevOps for SAP report, *"automated tests help keep production incidents from happening and must therefore be effective, cover the right areas and have results that are easy to understand."*

But as SAP TAO is coming to an end, businesses are searching for alternative solutions to automate end-to-end tests in their SAP systems.

Businesses should consider adopting a solution that enhances their testing beyond SAP TAO's initial capabilities. This is especially true when testing a system like SAP where multiple stakeholders can be involved in an end-to-end test.

There are automation solutions that can help you to easily scale beyond a single department, migrate to S/4HANA faster, and easily automate across SAP and non-SAP applications.

While there is no one "right" solution to testing your platform, there are points you can take into consideration to make sure that you're choosing the best tool for your complex IT landscape.



Sifting through the noise: finding the right automation solution

With a swarm of solutions available, it can be difficult to find one that meets your needs. So what solutions exist for businesses that need to do more with less, and reduce the risk of their updates and releases?

As changes in SAP environments become more complex and frequent, end-to-end testing is becoming crucial to ensuring the continued functionality of business processes and functions from start to finish.

With that in mind, there are some key areas you should look for in your tool:



Robust automation of SAP GUI and Fiori - Does the tool enable you to automate on SAP GUI? Smart recorders can enable users to automate all steps in an SAP GUI at speed.



Reduces complexity - Can the solution support seamless end-to-end processes amidst a changing and complex environment? The easier it is to build your automation flows, the quicker you will be able to run your flows and identify errors. For large-scale ERP applications like SAP, this is absolutely essential.



Scalable - Will the automation solution enables teams to apply automation beyond a department or project? A solution with the same visual approach to test automation and RPA will make automation a scalable initiative organization-wide.



Collaborative - Can the tool be used by QA personnel and domain experts? With a visual language, users can build fast, stable, and reliable test automation without relying on expensive developer resources.



Supports migration to SAP S/4HANA - Does your tool support migration to S/4HANA? For enterprises operating on one or more SAP ERP modules, migration to S/4 HANA brings additional risk of disruption to core business processes.



Cross-application automation - Can you easily create end-to-end test cases across applications both in and outside of SAP, without having to program? An explosion of new technologies means that more non-SAP technologies have been integrated with SAP systems. This makes creating end-to-end tests more complicated when using SAP-owned tools because of the difference in programming languages. With a visual language, enterprises can run data-driven tests across a landscape of interfaces using the same intuitive approach.

Why third-party solutions are a suitable alternative

For end-to-end testing of business processes spanning across multiple technologies and systems, it requires the use of a third-party testing tool to build automation across non-SAP portions.

If you're reliant on building script to test beyond SAP, you're adding complexity to the process. This also makes your system more prone to risk that can lead to downtime.

Independent commercial solutions offer a wider range of possibilities for testing outside of SAP, and UI tests on SAP GUI, easily and intuitively, without having to learn other programming languages.

By removing the need for a programming language to script tests in SAP, you're also able to automate more test cases. You can build end-to-end tests extending beyond SAP, all with the same visual approach. This makes the test cases easier for SAP consultants to understand complex test cases and give feedback.



Comparing SAP TAO with Leapwork, Selenium and Tricentis Tosca

Usability and Adoption

	Leapwork	SAP TAO	Tricentis Tosca	Selenium
Made for business users and tech specialists	Yes	No	No	No
Required programming language	Not required	QTP's own VBScript/ABAP	C#	C#, Python, Java
User influence on roadmap	Yes, directly	No	No	Open-source
Comprehensive training materials	30+ free videos	Paid support	Paid support	Google
Speed of adoption	5 days	5 days/1 month 6-9 months with QTP	3-6 months	3-6 months
Support by automation specialists	Live chat	Paid consultants	Paid support	Paid consultants
Maintenance workload	Light	Medium	Medium	Heavy
Scalability	Easy	Medium	Medium	Difficult
Made for DevOps	Yes	Yes	Yes	No
Live data-driven automation	Visual	Programming	Programming	Programming

Applications supported

	Leapwork	SAP TAO	Tricentis Tosca	Selenium
Supports web using Selenium	Yes	No	No	Yes
Supports Windows applications	Yes	Yes	Yes	No
Supports mainframe	Yes	Yes	Yes	No
Cross-browser support	All browsers	Programming	Programming	Programming
Supports Fiori 2.0	Yes	Yes	Yes	No
Supports migration to SAP S/4HANA	Yes	No	Yes	No

Governance and Documentation

	Leapwork	SAP TAO	Tricentis Tosca	Selenium
Encrypted assets storage	Yes	Yes	Yes	No
Built-in version history and tamper-proof audit trails	Yes	Yes	No	No
Automatic video recording	Yes (SAP smart recorder)	Yes	No	No
Dashboards and exception reporting	Yes	Yes	Yes	No

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