



## Int4 Interface Testing Tool

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#### For whom int4 IFFT is designed?

Int4 IFFT is designed for companies that run their business on SAP systems with multiple core processes operating in 3<sup>rd</sup> party systems integrated with SAP.

- A high number of inbound and outbound interfaces integrated with SAP systems
- A complex logic handled by the interfaces
- Documents posted by interfaces are crucial for business operations (business continuity) and proper financial reporting in SAP
- Companies that often adjust their integration architecture to support business growth (acquisition of new companies, adding new EDI clients, business improvement projects, etc.)

#### What are typical scenarios for int4 IFFT use?

Int4 IFFT supports both build and test phases of typical SAP projects. It can be used in waterfall and agile approaches. Some examples include:



- New SAP implementations (ECC, S/4HANA and other ABAP-based products). During the development of application interfaces from/to external systems, creating a test cases database of interface messages saves time and lowers the cost of external resources. There is no need to involve external system resources to retrigger numerous examples to proceed with the development.

*Example: an EDI sales order interface is being developed; due to improper mapping in SAP PI, the developer asks the B2B provider's resource to send the same message 5 times*

- Rollouts. When projects incorporate new sites, changes are requested within the current integration landscape. New systems are integrated and, more importantly, some of the existing systems require changes in the current interfaces to support local requirements. Before exiting each of the testing phases, a company must perform a detailed regression testing to ensure that all new extensions are not negatively affecting the existing interfaces.
- Regular day-to-day maintenance of a live system. The int4 IFFT's automatic regression testing of application interfaces helps companies to be more confident that all CRs, defects and changes would not negatively impact the business operations. The CR process is faster and system owners are more flexible for business needs. IFFT enable users to make some changes that were not possible before because of extensive retesting effort.

### Does int4 IFFT have any SAP certificates?

Yes, Int4 IFFT has been successfully certified by SAP for integration with SAP S/4HANA on-premise edition 1511 via the SAP integration scenario ABAP Add-On Deployment for SAP S/4HANA (certification number 8681) and certified for integration with SAP NetWeaver 7.40 via the SAP integration scenario ABAP Add-On Deployment for SAP NetWeaver (certification number 8670)

### What is the testing scope?

Int4 IFFT covers interface testing across the whole SAP landscape: both SAP PO middleware and the backend systems.

For inbound interface test cases, testing starts when the message is received from a 3<sup>rd</sup> party application in the middleware platform. With the exception of inbound adapter modules, the interface flow phases include: routing rules determination, BPM, mappings, lookups etc.

In the backend system all the interface processing steps are verified until the final business document is posted to SAP database. The testing steps include: ALE interface configuration, functional system customizing, standard and customs programs and all user-exits and enhancements called by the interface logic.



For outbound interfaces, testing starts when a business document triggers the interface and continues until the final version of an XML message is ready to be sent out to the 3<sup>rd</sup> party receiver by middleware.

In addition, int4 IFTT allows for testing of the whole business processes that consist of many associated interface messages and manual actions. Manual actions can be replicated during the test execution by SAP eCATT recordings.

### What is the time effort for a test case creation?

The process of a test case creation is very efficient because the existing documents, previously created by the interfaces, may be reused. In a typical scenario, the tester pick up interface messages for documents created during the user acceptance test and bulk uploads them.

Additionally, assertions are defined per document groups (e.g. sales order, outbound delivery, financial posting etc.). There is no need to define them each time when a test case is created; moreover, based on int4 IFTT configuration, the assertions will be applied to test cases automatically.

### Who are the typical users and how could they benefit?

The typical users are:

- Members of Run and Support Teams – faster testing and introducing changes to live environments; increased system confidence & reliability
- Integration architects and developers – faster development process
- Functional experts – access to the interface layer without any technical knowledge; ability to retest integration processes themselves
- IT managers– additional confidence thanks to robust and compressive testing on a daily basis

### How the Return of Investment is calculated?

The ROI of int4 IFTT implementation depends on a company's specific conditions but there are some common benefits that can be used as a standard estimate basis:

1. Reduced time spent on defect resolution and retesting; trackable results of intermediary testing
2. Reduced downtime for Integration architects and Functional experts
3. Reduced downtime for developers, they don't need to have any process or functional knowledge to be able to retest the scenario themselves
4. No delays for requesting non-SAP resources to trigger data in their systems

5. Various business departments are now convinced to order interface changes for business improvements and known defects. It is common that business is reluctant to request any changes in complicated interfaces, even if it means additional costs of increased manual workload

Since int4 IFTT can be used during the project phase and later during the maintenance phase, we present both hypothetical evaluations:

#### Calculation of ROI during each phase of template implementation project

Estimation type	Conservative	Regular
Number of interfaces	100	100
Average number of defects during build & testing cycles	6	8
Time effort reduction for each of the defects (hours). (Summarized for developers, integrations architects, 3 <sup>rd</sup> party experts and SAP functional experts.)	2h	3h
Total reduction in hours	1200	2400
Total reduction in man-days	150	300

Both conservative and regular models show significant savings. This means that more time can be spent on improvements!

#### Calculation of ROI during the further rollouts and maintenance of production systems

During SAP production systems maintenance, int4 IFTT is most useful for:

- Periodical window for import transports to production environment.
- Production go-lives of rollouts and incorporating them into the main production environment.

It's worth mentioning, that without an automated tool, such as int4 IFTT, it is very time consuming to perform complex SAP interface tests on a weekly or monthly basis. With int4 IFTT the frequency is no longer an issue, as tests are fully automated: they can be even run daily.

Our estimations are based on the assumption that the interface regression testing requires the following resources: a 3<sup>rd</sup> party expert to trigger documents, a SAP technical expert and a SAP application expert to assert the results.



For the below estimation, we assumed that the interface regression testing is performed once per month for all interfaces, before the monthly deployment window.

Estimation type	Conservative	Regular
Number of interfaces (WRICEFS)	100	100
Average number of test cases per interface:	1	2
Time effort per interface (all team members combined)	1h	1h
Total number of hours per one full cycle regression testing	100	200
Total number of days per one full cycle regression testing	12,5	25
Total number of days spent on regression testing during a year (12 executions)	150	300

Int4 IFTT allows simultaneous testing of multiple test cases for each interface (not just one or two as in the above example). Since it is fully automatic, there is no reason to limit the scope of regression testing. The risk that important test cases may be removed from the scope (as seemingly not relevant) is significantly reduced. The quality of the testing process final results is improved, which is indeed a priceless value.

Both ROI evaluations show a significant time effort (cost) reduction (up to 95%) compared to the current interface testing process.

### What about the source code ownership?

There are two models of int4 IFTT licensing: a free trial period license and a full license. The free trial license doesn't allow customer to make any modifications to the source code. The full license allows such modifications but the original code's ownership remains with int4.

From a technical point of view, int4 IFTT is a regular ABAP add-on to SAP system and modifications of functionalities or extensions can be done by customer on their own, or with implementation partners, just like with any other custom code in the customer's system.

Int4 doesn't recommend own modifications and is always happy to help with implementations of new client-specific functionalities.



## What training is available?

There are two types of typical int4 IFTT users; therefore, two training programs are available:

### **An int4 IFTT business analyst workshop**

- Skills: configuring new interfaces & processes; defining assertion rules
- Audience: integration architects / RUN/support team members
- Duration: 12-24h

### **An int4 IFTT user workshop**

- Skills: creating new test cases; test cases execution
- Audience: IA / developers / functional consultants / RUN/support team members
- Duration: 4-6h

Int4 IFTT is delivered with an installation manual and a user guide.