

Integration Validation – Implementing New Applications Without Risk

When implementing and running solution landscapes that drive mission-critical business processes, the integration of solutions can be complex and challenging. The implementation work is typically distributed across many teams and in most cases many stakeholders, including custom-built and third-party software.

Integration validation helps you introduce solutions into your production environment smoothly while maintaining ongoing operations with minimal disruption. The service offering from SAP combines tried-and-tested processes and tools, such as the SAP® Solution Manager application management solution, with a clear governance model and holistic, one-issue tracking methodology (“single source of the truth”).

MISSION CONTROL CENTER – THE ONE-TEAM APPROACH

The organizational framework for each integration validation project is provided by the mission control center, which is formed from the Customer Center of Expertise (COE) location. It unites customer experts, partners, and SAP staff as one team in one room and works in principle like a NASA control room. Every mission-critical application and technology component is represented, as well as every implementation and operation services provider.

Integration validation activities focus on:

- The completeness of the solution
- Technical performance
- Data and interface consistency
- 24-hour schedule
- Root cause analysis
- Change request and release management
- Business process monitoring

As the foundation for successfully deploying solutions, SAP has defined:

- Solution standards that are related to process security, data consistency, monitoring, and exception management
- Product standards that deal with transactional consistency, root cause analysis, and extensibility
- Operation standards that address incident and change-request tracking, high availability, and system performance and capacity

Integration validation helps ensure that these standards are implemented, enforced, and validated systematically for all SAP and non-SAP components of the solution.

SCOPING REQUIRED ACTIVITIES

To define the scope of the mandatory work streams (data consistency and performance), the experts in the mission control center first determine the critical core business processes, including all relevant interfaces and the underlying landscape. This results in end-to-end documentation of the solution. Similarly, information regarding the volume of the processed data for the critical business processes and the peak volume is required. In addition, the key performance indicators (KPIs) for system performance are of central importance here.

A further key prerequisite for helping to ensure successful integration validation is that the tools for root cause analysis have been implemented. Upcoming issues must be recorded and tracked in an issue tracking system. In the same way, a change-request tracking tool must be used that records all changes to solution components, interfaces, systems, and the infrastructure itself.

STEP-BY-STEP PROCEDURE

To adhere to the core SAP product, solution, and operation standards, integration validation focuses on the following key steps:

- **End-to-end integration of business processes is validated.**

For each mission-critical business process scenario, an end-to-end trace is created that lists all modules, components, and interfaces used as well as all data updates and inserts. Based on this trace, a detailed analysis with regards to data consistency, transactional correctness, and performance is then performed and potential issues are identified.

- **End-to-end business process monitoring and exception management procedures are validated.**

While the points above are being executed, 100% transparency of business process completion and exception management is validated. Most exceptions are enforced and simulated.

- **Process integrity is addressed.**

Special focus is given to process integrity by analyzing data inconsistencies as well as data entry by end users:

- Every error message is displayed to the end user. If this is not possible, exceptions are monitored and the corresponding workflows for error correction are implemented.
- A transaction is always posted in the database completely or not at all.
- Data consistency within a component and across components of the solution landscape does not depend on the end user. Consistency is maintained by the software solution and not by end users.

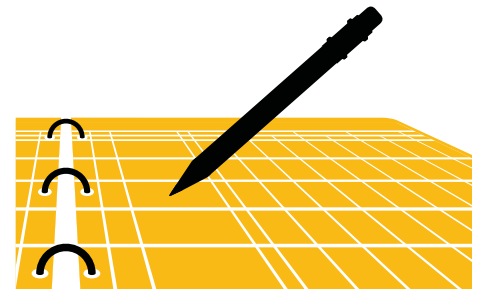
- **Performance and scalability is validated.**

The relevant business process scenarios (dialog and batch) are executed and traced – the latter if the measured performance does not meet the requirements. Based on the trace, a root cause analysis is performed to identify inefficient coding, inefficient database calls, unnecessary data transfer, system bottlenecks, and so on. The performance diagnostic tools are used while the load test is running. Performance bottlenecks are identified and any measures necessary to optimize technical performance are taken.

TRIED-AND-TESTED SUCCESS

Integration validation is powered by SAP's application lifecycle management concept. As attested by a variety of customer projects, integration validation services help ensure that core business processes are running correctly from a technical perspective and meet the requirements set for performance and data consistency.

As a systematic approach to securing implementation projects, the integration validation methodology is applied to identify and quantify technical issues hindering the software supporting core business processes before the software goes live.



EVENTS

SAP® MaxAttention™ Councils and SAP Active Global Support CIO Events

Next year we will continue the successful work in the SAP® MaxAttention services community to reduce total cost of ownership and increase the availability of SAP solutions.

We will conduct two major SAP MaxAttention events in 2012. The SAP MaxAttention Council will take place in March 2012 in Miami, Florida, where you will have the chance to actively co-innovate in workshop sessions on our two major focus topics:

- Modern custom-built solutions leveraging new technologies – for example, SAP HANA™ appliance software and mobility
- Orchestrated accelerated innovation

All results from the SAP MaxAttention Council will then be presented at the SAP MaxAttention Summit in September or October 2012.

More detailed information on our upcoming events in 2012 will be sent to you individually.

If you have any questions regarding SAP MaxAttention events, please contact maxattention@sap.com.