Optimized Business Process Monitoring with “Run SAP for Retail”

Applies to:
Run SAP, Run SAP for Retail, Business Process & Interface Monitoring, POS DM, SAP ERP POS Inbound

Summary
An optimized operational concept is the key for lowering operating costs of a solution landscape, enable continuous improvement and innovation and minimize risk and impact of critical production events.

"Run SAP" is a proven methodology which guides the customer through the process of implementing an end-to-end operational concept. With "Run SAP for Retail", we have now added Retail-specific Best Practices for Solution Operations as accelerators to the "Run SAP" methodology.

Starting with typical Best Practice processes of Retail customers, we give for each process step specific and proven best practices recommendations how to monitor the business processes, how to handle some typical exceptions or errors, which jobs should be scheduled, etc.

This article is about the adoption of the Run SAP methodology in a SAP for Retail context. In order to demonstrate the steps necessary to apply the standard for Business Process and Interface Monitoring, the example of the POS Inbound process using POS Data Management is used.

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The motivation for Business Process Monitoring

Today retail companies are facing the following challenges:

- Cope with complex and heterogeneous system landscapes
- Manage processes across system borders
- Manage a large diversity of process models, applications and technologies
- Ensure appropriate performance when processing high data volume and meet allowed time windows

Due to these challenges the monitoring of all involved applications is very complex, requires various skills and is a task that binds a lot of resources.

My experience with customer installations and the operating in place is that people in charge of ensuring the availability and integrity of systems and processes are struggling to have a high visibility on the system and processes involved. A main problem is to understand and consequently prioritize the impact of errors and exceptions. The reason is mainly missing or incomplete process related information on the monitoring tasks to be executed.

In order to best serve the business, the goal must be to ensure a seamless execution of the core processes instead of a punctual monitoring. This is done via an end-to-end central monitoring along the core processes. Besides focusing on the most important monitoring tasks, an automation of the monitoring tasks allows to increase the operation efficiency and free resources for innovation and improvements. Also to understand an exception in its process context enables a system analyst to better detect the source of a problem and to prevent the error from happening in the future. This leads to a continuous improvement of the processing quality and to a further reduction of the operating efforts and cost.

In order to achieve this goal, people in charge of operating a landscape must therefore:

- Have the possibility to monitor critical exceptions at a central point in a standardized way
- Understand the impact of exceptions (putting alerts and warnings into a context) and hence prioritize monitoring and problem solving for the most important business processes
- Have the knowledge about contacts and escalation paths for the single exception detected

The enablers of these requirements are:

- A documentation of the main business processes containing monitoring relevant information
- A central monitoring infrastructure that allows:
  - To group exceptions, thresholds and status by business context
  - The automation of monitoring tasks
  - The generation of alerts and mails for critical exceptions
  - A fast access to more detailed exception analysis methods in order to be able to execute corrective measures or to address the right people for problem solving
  - The generation of support workflows for problems detected
- A good cooperation between operation and business experts

Without the knowledge of application experts, operation teams have often difficulty in improving this situation and to achieve the goals described. That is why the ideal time for the creation of an operational concept is prior to go-live as at that time usually the availability of the required skills and experiences is assured.

The following chapter contains a starting point and hints for the first enabler, which is the documentation of the core business processes from an operational point of view.
Introduction to Run SAP

Run SAP provides a proven methodology also described as „ASAP for Operations“. In a similar way as ASAP helps customers to implement SAP products by providing templates and guidelines, Run SAP guides the customer through the process of implementing an operational concept. It comprises support standards for key solution operations and a roadmap how to implement the standards in your organization. In order to ease the implementation of Run SAP, accelerators are provided in form of: Best Practice documents, Content, Services, Training and tools for End-to-End Solution Operations.

Using these accelerators, you can define your operational concept much quicker and more efficiently to directly address the challenges initially described. Whereas the Run SAP methodology provides generic templates and guidelines, you can use the Best Practice documents in the solution manager content as starting point and adjust them to your specific processes and organization. If the provided documents do not yet cover the processes you run in your environment, you can use the documents as an example on how the methodology is used and adapted in real life. In either way by using already defined content, you can considerably decrease the effort of adopting the standards.

For more details and a full explanation of Run SAP, please refer to [http://service.sap.com/runsap](http://service.sap.com/runsap)

One of the standards out of the Run SAP methodology is the Business Process and Interface Monitoring.

Business Process and Interface Monitoring

The Business Process & Interface Monitoring standard describes the path to achieve an end-to-end monitoring of your business process by taking the following steps:

- Identify your core processes and give a short description of the processes
- Describe critical aspects of the processes for the business
- Identify the process steps across the systems involved for each of the core processes and the monitoring requirements involved
- Identify the monitoring objects and Monitoring KPIs along the selected processes
- Describe the monitoring possibilities of the described monitoring objects, if applicable add hints on how to automate the monitoring task
- Describe problem indication error handling and escalation paths

By following these steps you build the basis for a proactive monitoring approach rather than a reactive one. The monitoring of business process KPIs allows you to detect and treat errors before they become critical. Regardless of what monitoring infrastructure you have or you will have in place, documenting the monitoring objects and KPIs for the process is mandatory to ensure a seamless execution of your core business processes.
Adoption of Run SAP “Business Process and Interface Monitoring” for the Retail Industry

In order to accelerate the adoption of this methodology for customers and partners in the Retail Industry, Best Practice documents have been provided for the retail processes “POS Inbound” and “Forecast and Replenishment” as a starting point. Further retail specific Best Practices will follow. The documents have been edited by consultants and developers based on the knowledge acquired in several years of project experience. The documents should provide a valuable entry point into the methodology and provide ready-to-run input for your own operational concept. As initially described, to collect process related information on monitoring activities is a time consuming task that requires various skills. Therefore the usage of the delivered content is already an important step into achieving an elaborated monitoring concept that forms the basis for future automation of monitoring activities.

The following explanations should give you an idea how the process steps are to be realized using the example of a POS Inbound process. The procedure could be applied to other processes accordingly to ease the roll-out to your other core processes.

Identification of core processes and process descriptions

First of all, core processes need to be identified. The POS Inbound process, which comprises the integration of Sales Data collected at the Point of Sale and its posting to subsequent applications, can be considered as one of the core Retail processes, as the mission of a retailing company is to provide goods to customers sourced from suppliers. The daily business of a retailer is to manage the assortment offered at competitive prices and to guarantee the availability of the items offered at the Point of sale in an efficient way. The success of this mission is controlled by integrating and analyzing the sales activities carried out in the stores.

Description of critical aspects in the process for business

Once the core processes are defined, a description should follow that details why the process is critical for the business. The explanation should be on a level high enough not to overload an operator. The objective is to give the operator a good feeling of the real impact of the process. Regarding the POS Inbound example, this explanation could look as follows:

The POS Inbound process is extremely critical in a Retail environment because the information of goods sold forms the basis for further decisions and subsequent processes like:

- Updating of stock levels and financial postings
- Replenishment
- Turnover and performance reporting
- Promotion and assortment reporting

E.g. based on the information of items sold, stock levels are updated in SAP for Retail and replenishment requirements are calculated. In order to avoid expensive surplus or out of stock situations at the store, it is obvious that the flow of the sales information from the POS System to ERP and to potentially a Forecast & Replenishment application has to be secured and closely monitored.

Identification of process steps across the systems involved

Then, the relevant process steps need to be specified. Relevant process steps in the POS Inbound process would be the collection of TLOG data (sales transaction information) and its flow to the subsequent application via the posting of the sales transactions to POS Data Management, their validation in POS DM and the sending of this data to SAP ERP, SAP BI or other target applications.
Monitoring objects and Monitoring KPIs along the process

For each critical process step, one or several monitoring objects are defined. Monitoring objects are considered to be every aspect along the process that needs to be looked at for proper monitoring. For our example, process monitoring objects would be the status of processing as shown in the POS DM Workbench or the Status of IDocs both sent from POS DM and received in SAP ERP, the status of a job involved or the status of delta queue processing in SAP BI.

The monitoring possibilities of the monitoring objects described

For each monitoring object one or several additional tools (for monitoring and analysis) need to be defined such as the transaction or program to be used in order to best see the status of processing. The information needs to be given how the status is visible or at what threshold an exception should be triggered. Also the frequency should be described in which the tool should be used. In our example a monitoring possibility would be the POS DM Workbench. This transaction needs to be looked at a frequency determined by the frequency of uploads to POS DM. In a landscape where real-time processing is used with POS DM, the frequency of monitoring is of course higher compared to a landscape where the POS data are uploaded once a day.

Describe problem indication, error handling, and escalation paths

In case of an alert, the person in charge of operating needs to know:

1. how to recognize a critical problem,
2. how to deal with the problem, or
3. who to address in case of problems the operator cannot fix on his own.

In our example, a problem indication might detail what error messages are possible in IDoc processing in general and which critical cases requiring immediate action. An error handling description include how each of these critical error messages could be treated, e.g. if an IDoc failed because certain critical articles are not listed, the steps might be described how to list an article. If the error cannot be solved because perhaps the article master data does not exist, a responsible contact should be defined. Depending on the criticality of the process, an escalation path should be defined if the error is not solved in the required response time exceeds a certain threshold.

Summary and next steps

This article contains the steps how to document monitoring of a business process using the support standard “Business Process & Interface Monitoring” out of the Run SAP methodology. In order to demonstrate the adoption of this standard, the example of a POS Inbound process is given. You can use the content collected by experienced consultants and developers delivered in form of best practices documents to improve the operational efficiency of the business critical processes described with a reduced effort. A higher transparency of the processes and a faster reaction on critical events reduces the risk and financial impact of errors and hence helps to raise the reliability of the processes involved.

The next step would consequently be to collect all necessary status and alert information at a central point using a monitoring infrastructure like SAP Solution Manager. This will be covered in a future blog.
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