A Broadcom Company
technologies

White Paper

Mass Data Processing for SAP Industry Solutions

Introduction

Business processes where large volumes of data are processed, such as a payment run or dunning run, are performed by mass data processing activities in SAP Contract Accounts Receivable.

This white paper begins with an explanation of all the SAP industry solutions and components that perform mass data processing. Then, using the SAP Solution for Industries as an example of mass data processing in SAP, the document describes how the process normally works and outlines some of the challenges of this approach. The paper then goes on to explain how Automic Workload Automation automates the process and describes the benefits this provides.

SAP Solutions Performing Mass Data Processing

SAP Solution for Industries

SAP Solution for Industries includes two modules: Industry Solution for Utilities (IS-U), Contract Accounts Receivable and Payable (FI-CA). This solution is a business-process-oriented sales and information system for all kinds of utility supplies and services. Used for managing standard customers, special customers, and service customers, the solution includes such functionality as settlements, invoicing, creating partial bills, meter reading, order creation, and order placement.

SAP Solution for Insurance

SAP Solution for Insurance includes the modules Collections/Disbursements (FSCD) and FI-CA and provides the advanced claims, policy and billing management capabilities that insurers need to improve efficiency, profitability, and customer loyalty. This solution enables insurers to implement business processes, to optimize reinsurance processes, and to gain sophisticated functionality for statutory reporting.

SAP Solution for Public Sector

SAP Solution for Public Sector includes the modules Contract Accounting (PSCD) and FI-CA= and it enables governments to optimize limited resources in public administration while delivering responsive front-office services. This solution supports business processes across a wide range of government functions, from accounting and procurement to case management and social services.

SAP Solution for Telecoms

SAP Solution for Telecoms includes the modules Revenue Management and Contract Accounting (RMCA) and FI-CA. This solution supports end-to-end enterprise business processes for wire line, wireless, cable, broadband, satellite and multi-service operators.

SAP Solution for Media

SAP Solution for Media includes the module FI-CA. This solution meets the unique demands of publishers, broadcasters, advertising agencies, news services, and entertainment businesses. The solution provides tailored solutions to keep up with rapid changes driven by the Internet, online publishing, digital broadcasting, and globalization.

How Processing Mass Data Works in SAP

Mass data processing in SAP is always performed according to a standard procedure. To begin with, processing is always triggered manually by an online transaction in the SAP system, with the necessary parameters (such as general selections, reconciliation key, and account category) being manually selected by an online user. Due to the large amount of data that needs to be processed, the online user can also set parameters to split the job into multiple child jobs. The child jobs are created at runtime and run in parallel, and asynchronously, in the SAP system.

Functionality provided within the XBP interface creates a distinct parent-child relationship (see Figure 1), as well as functionality for intercepting jobs to prevent an immediate start. This functionality ensures that the root job ends only after all the child jobs have ended.

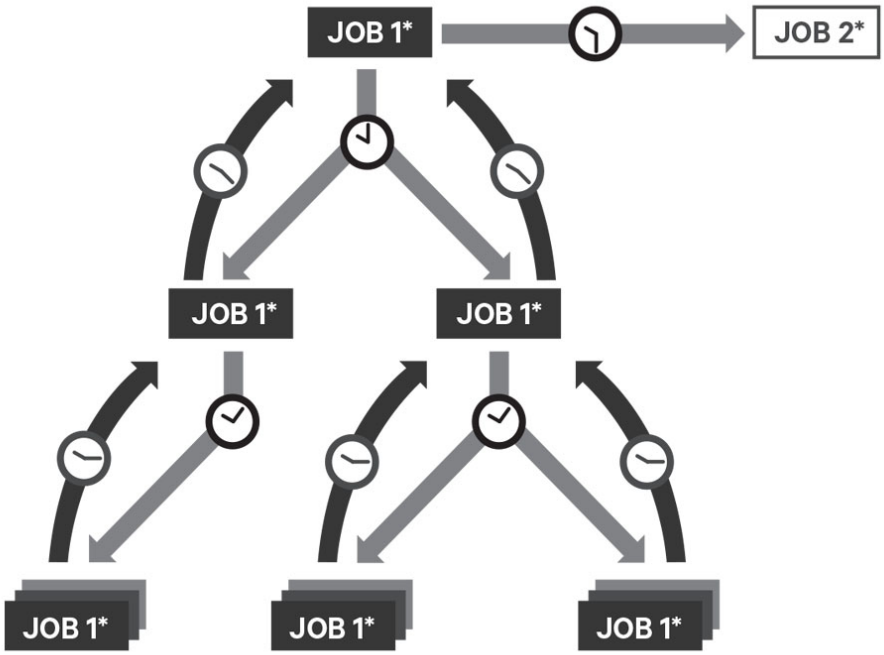

Figure 1: Parent-child relationships provide the basis for interdependencies in parallel mass processing.

Disadvantages of the Standard SAP Procedure

The standard SAP method provides only one approach for mass data processing, involving manual scheduling and monitoring. This approach results in some major disadvantages:

- Online transactions cannot be scheduled as recurrent jobs.
- Variable parameters must be adjusted manually prior to each processing run.
- The requirement for manual interventions and for manual parameter modifications creates numerous sources of possible failures.
- There is no monitoring available either for the overall processing or for runtimes, only for technical activities, such as performance metering.
- Errors do not result in alarms.
- There is no way to define interdependencies with processes in other systems (such as in SAP BW or in other applications).
- Scheduling and monitoring functionality is limited.
- There are limited control options for child jobs.
- Restrictions on running processes in parallel causes jobs to take much longer than they otherwise would.
- The application log must be analyzed manually to determine whether processing has completed successfully.

How Automic® Workload Automation Improves Mass Data Processing

Once you create sample sets of parameters in SAP for each type of mass processing (such as invoicing or dunning), Automic Workload Automation will use them as a reference for any newly created mass runs, retaining all static values, such as the number of child jobs to be created.

In activating the mass run in SAP, Automic Workload Automation starts by having one of its job objects call an ABAP program in SAP. The job object then copies the sample set of parameters into a runtime parameter set, using identification and date as key words. After automatically evaluating the runtime parameters (such as a booking date or a meter reading period), and modifying them as needed to optimize processing, Automic Workload Automation passes them to a variant. The solution then splits up the total processing volume into child jobs and starts the mass run, using the newly defined parameters and running the child jobs in parallel. A group object monitors all of the child jobs and analyzes each child job's application log after it finishes, looking for logical errors.

The results of these analyses can trigger various follow-on activities in Automic Workload Automation:

- Distributing the results by email to the appropriate person, such as to the responsible accounting clerk.
- Starting a follow-on activity, such as another mass run.
- Notifying the responsible individual in the event of an error and, where appropriate, blocking further processing.

By automating mass processing of SAP data with Automic Workload Automation, you gain:

- Automated scheduling, monitoring, and analysis of mass data runs.
- Continuing availability of all information in the online system.
- Fewer errors, because you have eliminated manual work.
- Optimized resource planning, because processes are now automated.
- Faster job completion because of optimized parallel processing (see Figure 2 on the following page).
- Cost and time savings for key users in the accounting departments, because they no longer have to manually process invoicing and dunning.
- Automatic notification in case of errors.
- Integration of mass processing with enterprise business processes, and definition of interdependencies with other systems and applications (such as UNIX, IBM z/OS, Microsoft Windows, or SAP BW).

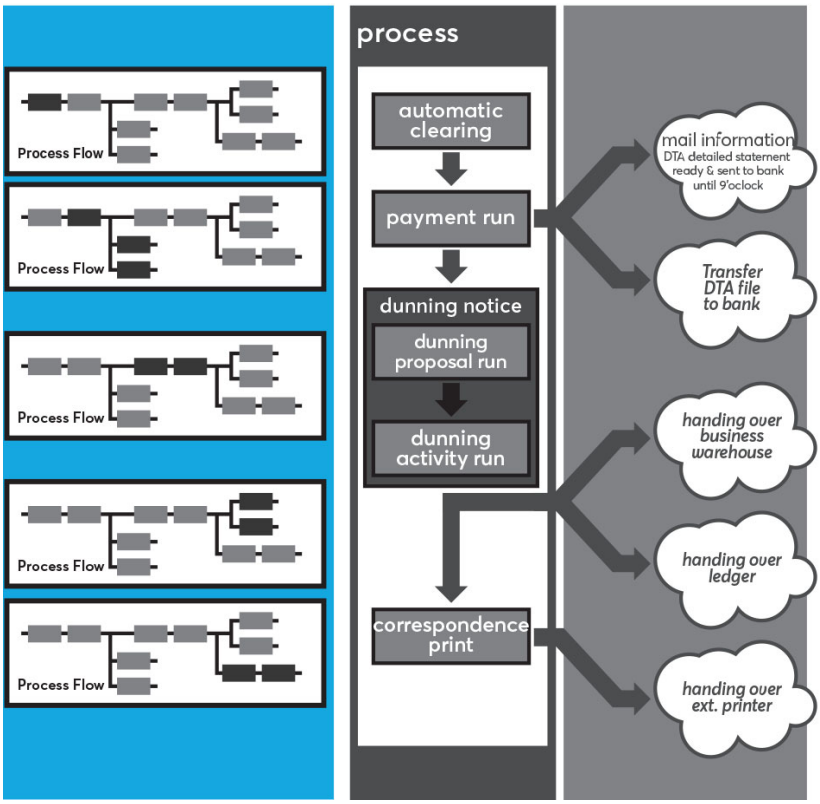

Figure 2: Get faster job completion with Automic Workload Automation parallel processing.

Conclusion

Companies with a large number of customers need to be able to accurately and efficiently perform mass data processing in various SAP industry solutions. While these solutions do provide the basic functionality for such processing operations, they don't allow for comprehensive automation.

Automic Workload Automation provides end-to-end automation for mass data processing, resulting in lower costs, faster job completion and increased reliability.

For more information, please visit ca.com/automation.