WHITE PAPER

GAIN CONTROL OF DOCUMENTS FOR INCREASED CONTROL OF SAP® BUSINESS PROCESSES

DECEMBER 2008

© Copyright 2008 Levi, Ray & Shoup, Inc. All rights reserved. LRS, the LRS diamond logo, and VPSX are registered trademarks of Levi, Ray & Shoup, Inc. SAP, SAP NetWeaver, mySAP and all SAP logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries. Redwood is a registered trademark of Redwood Software. All other product names are trade and service marks of their respective companies.

Table of Contents

EXECUTIVE SUMMARY 4

INTRODUCTION 4

BUTTERFLIES AND BUSINESS PROCESS MANAGEMENT 5

ENTERPRISE OUTPUT MANAGEMENT: A CRITICAL FIRST STEP 5

TAKING AUTOMATION TO THE NEXT LEVEL 6

INTEGRATION EXAMPLE: SAP, SAP CENTRAL PROCESS SCHEDULING, AND VPSX SOLUTIONS IN ACTION 8

CONCLUSION 9

EXECUTIVE SUMMARY

As organizations develop and implement strategic SAP® solution-based systems, they often overlook the important role of documents in key business workflows. Responding to customer needs, SAP software solution partners Levi, Ray & Shoup, Inc. (LRS) and Redwood Software Inc. have developed integrated solutions to provide improved BPM integration and system scalability.

LRS has demonstrated that its VPSX V1.R1.0 solution can be deployed successfully on the SAP NetWeaver® Application Server J2EE engine 7.0. This deployment has been tested and certified by the SAP Integration and Certification Center as Powered by SAP NetWeaver. The SAP NetWeaver technology platform powers the mySAP™ Business Suite family of applications, SAP composite applications, and solutions from partners such as VPSX 1.R1.0 from LRS. SAP NetWeaver unifies integration technologies into a single platform and is pre-integrated with business applications, enabling change and reducing the need for custom integration. Together, these solutions enhance control of document-intensive processes and aid in corporate governance and compliance efforts.

INTRODUCTION

Regardless of size, industry, or application focus, most planning and implementation teams focused on SAP solutions have two things in common. The first is a desire to improve business processes by streamlining the corresponding information systems. The second is a recognition that these new applications will shape — and be shaped by — existing workflows.

Most new systems are developed in the context of existing work processes, employees, customers, suppliers, and regulations. In the push to ensure a successful development and deployment effort, a team overseeing SAP implementation must never lose sight of a few basic facts:

- The ultimate goal is not just to launch a new application, but to provide long-term cost savings, increase efficiency, and make the organization more competitive.
- Any new SAP application should both improve individual work processes and integrate with other systems (often, but not always, SAP solution-based).
- Automating and managing digital workflows is fairly straightforward. However, controlling mechanical and human ones is much more challenging.

This third point is directly applicable to the many document-driven processes found in most organizations. It explains why, after decades of trying, no organization has achieved the goal of the fabled “paperless office.”

While online applications, EDI, and other electronic systems have enabled companies to significantly reduce the amount of unnecessary paperwork, some important documents remain in paper form. For example, the barcode tracking label on a tractor axle as it rolls down the assembly line. The government-mandated hazardous materials form that enables a chemical company to comply with safety regulations. The system-generated quote letter aimed at enticing a customer to switch insurance carriers. And countless others.

Analysts estimate that 30 percent of all business process interruptions involve document related failures. Each printed document is produced on an electromechanical device – a printer – that is subject to hardware, network, and software problems. Without a way to identify, resolve, and/or prevent such document errors, all subsequent steps in the workflow are at risk.

Butterflies & Business Process Management

In recent years, much has been written about the chaos-theory concept of "The Butterfly Effect." This is the idea that even a small change in a system can affect other variables which result in large-scale alterations of events. (For example, the tiny breeze of a butterfly's wings can cause subsequent changes that eventually affect the path of a tornado.)

In the context of an SAP solution-based environment, a missing barcode label need not result in the electronic equivalent of a Kansas twister. However, significant time and resources may be spent identifying and rectifying the error, re-submitting the job, and assessing the impact on later work processes. For example, worker confusion about a mislabeled component can slow production of a finished product, causing delays in shipping, invoicing, etc. Over time, such inefficiencies add up to dramatic increases in TCO.

The solution to this problem comes from the field of business process management — specifically, the business activity monitoring component. To optimize business operations in an SAP solution-based environment, a system must be able to:

- Monitor the state of the system and critical business events
- Communicate real-time status with administrators and process scheduling software
- Initiate automated or manual error-recovery processes and/or shift workloads to react to critical system events
- Produce a historical log of system events to aid in process improvement and regulatory compliance efforts

What does this have to do with documents? In fact, quite a lot. Because documents often initiate and confirm business processes, guaranteed document delivery is a critical — and often overlooked — element in an organization's success.

Enterprise Output Management: A Critical First Step

The first step in transforming documents from "necessary evils" into strategic business assets is to establish a single point of control for managing output. An enterprise output management (EOM) solution provides assured delivery of documents to printers, email recipients, electronic archives, and other destinations.

In addition, EOM software can inform network administrators and help desk staff of document delivery problems before they threaten critical business processes. For example, if a barcode label printer malfunctions on a loading dock, the EOM solution can notify the local administrator via email and re-route the document to an alternate

printer. This enables the shipping department to continue working without adversely affecting subsequent work processes.

Such solutions are not new in the world of enterprise computing. Since 1982, Levi, Ray & Shoup, Inc. (LRS) has been providing EOM software solutions to thousands of the world's largest organizations. Not surprisingly, many of these customers have deployed SAP enterprise applications to help them streamline their supply chain, HR, financial, and other systems.

Recognizing the importance of assured document delivery, SAP developers created a standardized interface to allow bidirectional communication between business applications and external output management systems. The BC-XOM interface enables LRS' robust VPSX® output management solution to send real-time printing status messages directly to the SAP user interface. In addition to providing assured document delivery, the VPSX solution removes CPU-intensive print processes from application servers. The result: dramatically improved system performance.

VPSX output management software improves the efficiency of SAP solution-based environments much like a modern traffic signal improves vehicle flow through a busy intersection. Both are able to monitor and constantly adapt to changing conditions in ways that less sophisticated systems could not. Both improve the efficiency of the systems they regulate. And each of them helps to prevent frustrating delays and costly mistakes.

TAKING AUTOMATION TO THE NEXT LEVEL

Expanding on the traffic metaphor; anyone who has endured a long red-light wait with no traffic in sight understands the benefits of a modern, dynamically controlled traffic signal. But what if each intelligent signal could also communicate and interact with other signals in the general area as well as nearby highway access ramps? Such a system would greatly benefit drivers and pedestrians alike.

Just as coordinated traffic control systems give unprecedented control to city planners, automated process scheduling solutions enhance an IT organization's ability to efficiently manage advanced SAP solution-based environments. When used in conjunction with VPSX output management software, such solutions provide reliable execution of document-driven business processes that span multiple applications and systems.

Together, SAP and Redwood Software have developed SAP Central Process Scheduling, an integrated job scheduling and process automation solution that is licensed and supported by SAP. LRS has integrated VPSX output management software with SAP Central Process Scheduling. In addition, the SAP Solution Manager application management solution monitors and collects real-time data about an organization's system landscape. This data is shared with SAP Central Process Scheduling, which can automatically respond to a series of predefined system "events." The benefits include faster error recovery, reduced administrative overhead, and improved service levels.

LRS' VPSX output server solution further extends the reach of these offerings from SAP and Redwood into the realm of printers, email systems, and other output destinations. Leveraging the bi-directional printing feedback capabilities of VPSX software, the combined solution creates an environment in which:

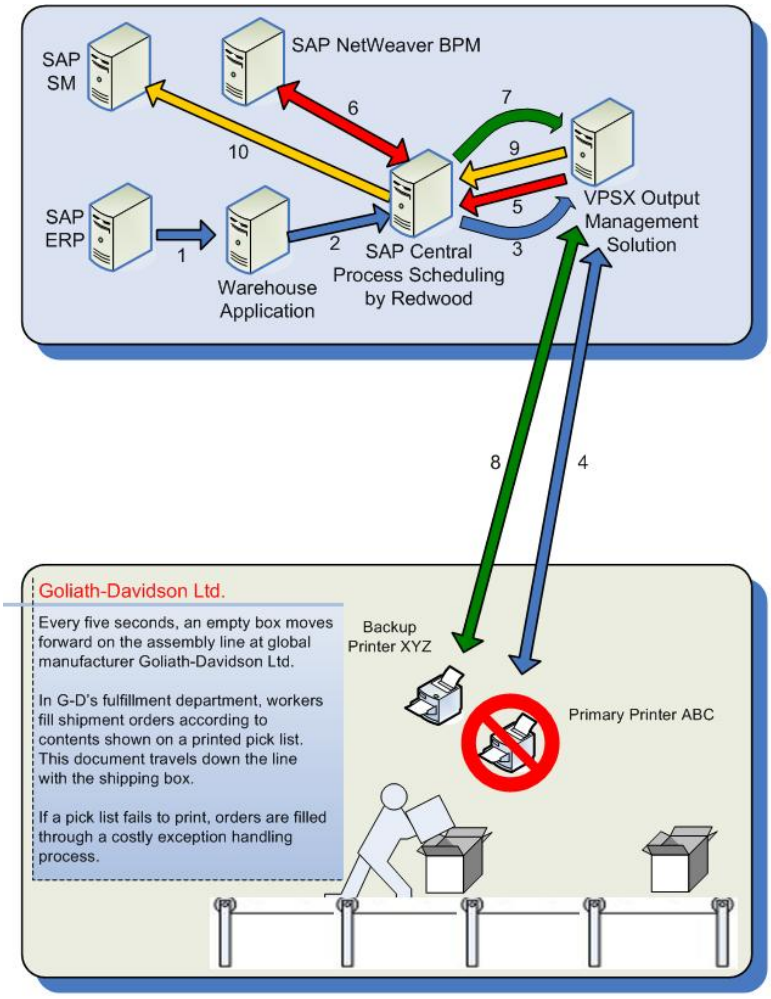
- VPSX software reports printing errors and other events to SAP Central Process Scheduling using a standard process-ID
- SAP Central Process Scheduling can re-synchronize the business process queue to minimize the impact of errors, allocate the best alternate VPSX resource, and notify SAP Solution Manager
- SAP Solution Manager is fully aware of all printing errors, completed jobs, paper usage, and other reporting parameters, which aids in regulatory compliance

In addition, the solution enables companies to monitor and manage both SAP and non-SAP applications from a robust central point of control. The SAP Central Process Scheduling and VPSX solutions have the ability to interact with platforms and applications outside the SAP ecosystem. With the information provided from SAP Solution Manager, along with SAP Central Process Scheduling and the VPSX software, customers gain a complete end-to-end view of document output flow.

INTEGRATION EXAMPLE: SAP, SAP CENTRAL PROCESS SCHEDULING, AND VPSX SOLUTIONS IN ACTION

While the SAP, Redwood, and LRS solutions provide valuable standalone functionality, their individual merits are multiplied when used together. The synergy between these components can best be illustrated through an example. Goliath-Davidson Ltd. (G-D) is a high-volume manufacturer of precision widgets used in various industries around the world. Like many manufacturers, G-D's automated assembly and shipping environment is heavily reliant on SAP applications.

As shown in the diagram below, each order created by the company's ERP application generates a printed pick list that employees use to fulfill customer orders. Other documents may include barcode labels, shipping manifests, and various printed materials. If any of these documents fail to appear, workers will not know which items to include in each customer shipment. The company has implemented both automated and manual processes to deal with such contingencies.



Document Processes and Rules-Based Error Recovery

1. Order initiated by ERP system, which triggers warehouse application
2. Warehouse application triggers SAP Central Process Scheduling for job scheduling & tracking
3. SAP Central Process Scheduling assigns a unique process identifier '123' and submits print job to VPSX output mgmt. solution via SAP BC-XOM certified interface
4. VPSX intelligent printer connection senses hardware error at printer ABC; places job in held document queue
5. VPSX notifies SAP Central Process Scheduling that output for job '123' failed due to hardware error
6. SAP Central Process Scheduling checks SAP NetWeaver BPM for business rules to apply if errors occur while printing and applies these rules to assign an alternate printer XYZ
7. SAP Central Process Scheduling notifies VPSX through API that printer ABC should be replaced by XYZ
8. Document is printed successfully on backup printer XYZ within seconds of initial error on device ABC
9. VPSX notifies SAP Central Process Scheduling that output for job '123' printed successfully on device XYZ, noting time of print
10. SAP Central Process Scheduling logs job status to SAP Solution Manager module for future audit and compliance purposes

As complex electromechanical devices, printers are prone to a variety of failures — paper jams, missing/low toner and other supplies, loose connectors, etc. Intelligent output management solutions like VPSX software instantly sense such conditions and trigger appropriate action. Such solutions serve as both the vanguard of business process continuity and the “eyes and ears” for SAP NetWeaver Business Process Management (SAP NetWeaver BPM), SAP Solution Manager, and the like.

The scenario above is more than just a theoretical example; it is actually a simplified depiction of an actual SAP customer environment at a multinational pharmaceutical company. For this customer, processing delays not only wasted time and money on internal processes but also exposed the company to costly service level penalties.

The ability to precisely track both successful and failed business processes is a critical element in an organization’s compliance efforts. Whether in the highly regulated pharmaceutical and financial industries or in other vertical sectors, the integration of document delivery, job scheduling, and core SAP solutions is an important aspect of sound corporate governance.

CONCLUSION

In order to succeed, organizations must be able to anticipate changing environmental conditions and react according to best business practices. A comprehensive enterprise output management solution can help in optimizing document-driven processes.

Individually, the SAP Solution Manager, SAP Central Process Scheduling, and VPSX solutions provide unprecedented control over the resources within their purview. Together, they automate and facilitate end-to-end management of critical workflows. Like a finely tuned traffic control system, these integrated solutions keep information — and business processes — moving at full speed.

To learn more about how improved document management can help your bottom line, contact the SAP experts at LRS: sapalliance@lrs.com.