Enabling Business Communication Across an SAP Netweaver Landscape

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Introduction

This White Paper discusses the IT infrastructure challenges that enterprises with SAP Solution need to address in order to improve the efficiency of their business processes. It explores the integral role of documents within business processes and how SAP R/3 and NetWeaver produce documents to support interaction with other SAP as well as non-SAP systems. There will also be a review of the technologies that are provided to support the exchange of document-based information between SAP NetWeaver and other systems. Recommendations on solutions that meet the challenges of improved business communications will be provided.

NetWeaver is the technology stack with which SAP is delivering its Enterprise Services Architecture (ESA) vision of an open and flexible services-based application framework. With NetWeaver, SAP presents customers with a layered architecture that can be used to manage and execute their business processes, including SAP Enterprise Portal to facilitate the end user interface as well as SAP Exchange Infrastructure (XI), the component integration layer. While XI will enhance the interchange of data between SAP solutions as well as with other applications, Netweaver enterprises will continue to rely upon documents to support the exchange and delivery of information required to support end to end business processes.

SAP NetWeaver offers a toolset for composing and communicating business documents. However, these tools only provide part of the solution. Companies are still faced with the challenges of ensuring that information is communicated in a way that is easy to understand and that it doesn't get lost on its way to its intended destination. For certain industries, such as banking, telecoms and utilities, there are additional challenges that arise when managing the production of high volume output – usually destined for external customers and consumers. In order to understand where these gaps arise, it is worthwhile developing an improved understanding of the document management capabilities that are provided with SAP Netweaver.

Transforming NetWeaver Data into Business Information

The business information that Netweaver users need to share internally as well as with customer and suppliers is held in repositories. Tools are provided to allow selecting and structuring the information to be included in a document. Document content is defined in the template using field names from SAP database tables, for example customer address, customer number, or account information. At runtime, the information is retrieved from SAP internal repositories and added to the document as specified by the placeholders defined in the template. Once reports are created, they can then be printed or electronically distributed using whatever communication channels are available.

To assist in document design, SAP provides customers with SAPscript and Smart Forms. SAPscript was originally introduced with SAP R/3 version 3.0 and was intended to provide some scripting to help users improve the presentation quality of documents. While some companies continue to use SAPscript, an increasing number of users are now using SmartForms - a more recent design tool, initially introduced with R/3 4.6c. SmartForms comes with a graphical user interface which enables more intuitive document design.

Document template selection and retrieval of transaction data is performed by ABAP code. After transaction data has been merged with the relevant template, the resulting output documents are forwarded to the central Netweaver spooler as a print request. This request is initially buffered before spool control transfers it to an output device. Typically, Netweaver will utilize the management services provided by the underlying operating system to distribute documents.

Where there is a requirement to generate high volume output, such as monthly bills that need to be mailed to a utility's customers, there are additional issues that need to be considered. The production process can take a long time to complete. Additional post processing may be necessary - for example to ensure that multiple items being mailed to one customer are bundled into a single envelope. Output may need to be produced in a format that is compatible with an external print shop.

As can be seen, Netweaver offers much of the functionality required to support enterprise business communications. However, as companies analyse how they will migrate their technology landscape towards a service-oriented architecture, it becomes apparent that additional requirements need to be addressed.

Business Communication in a Services-based Architecture

In addition to document composition and output management, an open services-based architecture requires a business communication platform that offers advanced functionality including:

- Ability to specify and execute complex distribution rules
- Support for multi-channel communication via multiple formats
- Post-processing of business documents allowing sorting and bundling of documents
- End-to-end tracking of document-based communication from core business system to final destination
- Dynamic interaction between users and documents in support of business processes
- Bi-directional exchange of information enabling the automated processing of inbound documents as well as output distribution

The good news is that SAP recognizes these needs and provides interfaces to the NetWeaver architecture that interaction with complementary technologies. Below are just a few examples of the interfaces available:

- **BC-RDI**: A raw data interface for SAPScripr to pass unformatted data through the Netweaver spool for processing by external output management systems.
- **BC-XSF**: An XML interface for the printing of SAP Smart Forms.
- **CA-ALE:** ALE Converters for exchanging business information using SAP IDocs.
- **BC-XOM:** External Output Management for coupling external output management systems to the SAP spool system

Summary

Business communication and multi-channel output distribution has become increasingly complex for SAP enterprises. Companies continue to rely upon heterogeneous systems which can include the Netweaver stack. The document composition and output management tools shipped with business applications lack advanced communication infrastructure to support the creation, formatting and delivery of business documents. Enterprises also need to make sure that information can be tracked and managed from the point at which it is created by the original Netweaver application right the way through to its final output destination.

A business communication layer in the SAP NetWeaver landscape enables companies to optimize the process of creation, enrichment, formatting, and distribution of documents, as well as significantly improving the efficiency of their business processes by using the most appropriate format and distribution channel for every situation, for each different purpose.

Companies cannot afford to ignore the benefits that can be realized by optimizing Netweaver related and enterprise wide business communication.

Biography

Mark Nation is responsible for product marketing at StreamServe. Mark has gained over 20 years experience working with major enterprises around the world needing to address their output management and document distribution challenges. Prior to joining StreamServe, Mark has worked for Redwood Software and Macro 4 in a variety of technical and marketing roles.