

# FREEING BUSINESS PROCESSES FROM IT LANDSCAPE CONSTRAINTS

## SAP NetWeaver® PROCESS INTEGRATION FOR SMOOTH SCALING

To optimize partner collaboration and enable greater automation, monitoring, and control, you must integrate processes across software solutions, which also scale elegantly. The SAP NetWeaver® technology platform and the SAP NetWeaver Process Integration offering are among the best answers to this challenge.



Since the mid-1990s, organizations have been investing in ways to integrate business processes across their enterprises and extended value chains. These efforts have typically included large expenditures on the fast and easy approach offered by individual solutions for point-to-point data exchange. Although integrating disparate applications is more or less successful, these solutions often fail to provide a satisfactory return on investment in the long term. And as the number of point solutions grows, the evolving web of interfaces produces a complexity in the IT landscape that distracts end users and drives up operational costs. Worse, it jeopardizes the stability of the entire IT environment – at a time when your overtaxed IT managers have dwindling resources at their disposal and are being asked to take a more strategic role in enabling business innovation.

Even if you can live with complexity, point-to-point integration does not give you the power to integrate multiple disparate solutions seamlessly for increasing business-to-business collaboration. To operate processes independent of an IT landscape – and do so in a way that enables greater automation, monitoring, and control – savvy organizations are seeking an advanced approach to end-to-end process integration that will scale elegantly to accommodate expanding operational scope. The SAP NetWeaver® technology platform stands out as a broader communication infrastructure that solves integration issues within the enterprise and between enterprises at a sustainable cost while serving as the architectural foundation for future application services within the enterprise. The SAP NetWeaver Process Integration (SAP NetWeaver PI) offering, like

its predecessor the SAP NetWeaver Exchange Infrastructure (SAP NetWeaver XI) component, plays the lead role in end-to-end process integration. It helps you meet in one offering all your application-to-application and business-to-business integration challenges – and build for the future with an enterprise service-oriented architecture (enterprise SOA).

### Protecting Existing Application Investments

To contain costs as you integrate, your IT organization needs to evolve existing solutions into strategic environments that drive business change while obtaining value from previous investments. SAP NetWeaver PI is designed to protect technology investments by transparently integrating all existing components from both SAP and third-party vendors without disrupting your business. It runs on the SAP NetWeaver Application Server component and uses an array of adapters to connect multiple non-SAP business software with the process flow.

### Predefined Integration Content for SAP® Applications

SAP NetWeaver is the most cost-effective way to integrate processes for companies already running one or more SAP® applications. When your IT landscape includes SAP applications, you can take advantage of packaged content for integrating SAP software – for example, the SAP ERP Financials solution with external billing software. Predefined templates, methodologies, and standards are available for all kinds of SAP products, shortening time to integration by providing time-tested rules for data transformation and message routing between applications.

## Messaging Services and a Central Interface Repository

SAP NetWeaver PI offers a wealth of services essential in any heterogeneous and complex software landscape, including a runtime infrastructure for message exchange, configuration options for managing integration processes and message flows, and options for mapping message contents among sender and receiver applications. At the same time, it provides a common, central repository for interfaces; support for integration-centric business process management based on the industry-standard business process execution language for Web services (BPEL); and an integrated tool set that brings SAP expertise to organizations defining their own interfaces, mappings, and routing rules.

Value chain integration efforts have typically included large expenditures on the fast and easy approach offered by point solutions for enterprise application integration, business partner integration, or business process management.

To boost runtime performance even more, messages can be bundled together to minimize context switching in pipeline processing, and the adapter engine includes routing and mapping intelligence so that most messages don't have to move through the central hub, eliminating

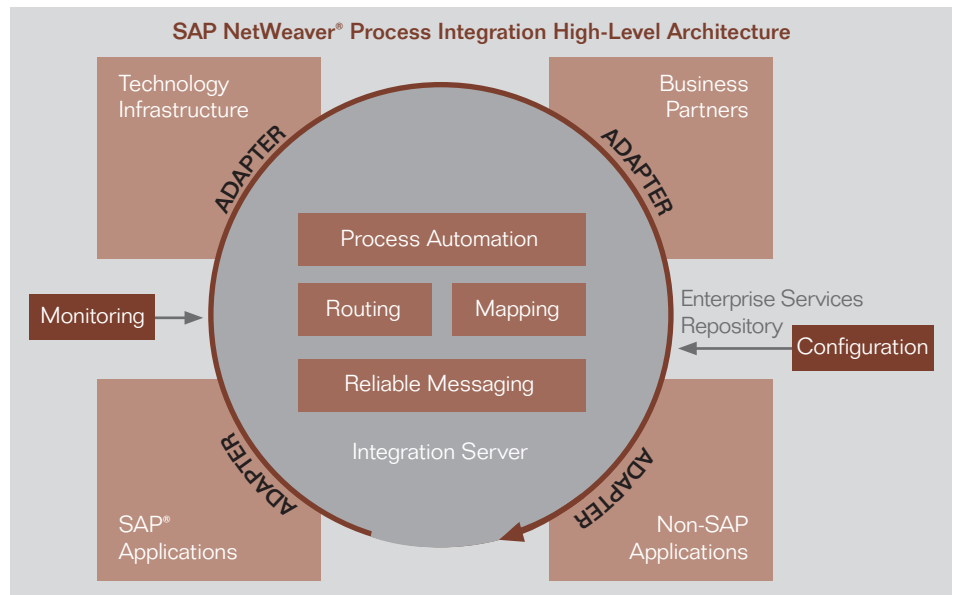


Figure 1: Integrating Applications and Partners in a Hub-and-Spoke Model

a reconfiguration step. SAP NetWeaver PI also supports the Web services reliable messaging (WS-RM) standard that protects communication among distributed applications in cases of software, system, or network failure.

**Business Activity Monitoring Features**  
SAP NetWeaver PI offers infrastructure for business activity monitoring (BAM), in particular to support event provisioning and event correlation. As a result, your applications can request global action to be taken anywhere along the process chain in response to local events; conversely, they can react to key global events within their local processes.

## Streamlining Business-to-Business Integration

Companies working in isolation clearly can no longer offer the best complete solutions to boost competitive advantage and address evolving customer requirements. Delivering faster innovation at lower costs today involves sharing investments, assets, and ideas across your network of business partners. Only through this kind of cooperation can you offer more robust solutions to your customers and pool knowledge with partners to gain insight into product design, service deployment, and process improvement.

Effective value chain collaboration means incorporating the existing applications of multiple business partners into your business processes. You may, for example, rely on electronic means

to convey orders, manage shipments and inventory, receive invoices, and report quality of parts to suppliers. Because such interenterprise transactions involve the transfer of legally binding documents potentially representing high monetary value, requirements for partner communication are different from those for purely internal communication.

**SAP NetWeaver solves integration issues at sustainable cost and becomes a foundation for future application services. The SAP NetWeaver Process Integration offering addresses all the major challenges of end-to-end process integration.**

Traditional information transfer to business partners has relied on cumbersome batch processes. The initiating application produces the documents to be conveyed, and a specialized communication solution receives the documents, transforms them into the partner's preferred format, and deposits them in the partner's mailbox on a value-added network. This process is both expensive, producing connectivity costs that are prohibitive for many smaller buyers and suppliers, and error prone, with at least as many points of failure as interfaces.

To address this dual challenge, SAP NetWeaver uses the hub-and-spoke infrastructure familiar from application

integration and illustrated in Figure 1. Specialized spoke adapters for partner communication can be tailored to the processes and connectivity requirements of each partner, while maintaining data and process security, reliability, and validity.

### **Enabling Enterprise SOA**

To speed development and integration of new applications and increase process flexibility, the enterprise service-oriented architecture (enterprise SOA) approach gives various application interfaces a common look and exposes them as Web services to application developers. Developers retrieve services representing required business semantics from a central storehouse and use them as building blocks for composite applications for end users.

In SAP NetWeaver PI, Enterprise Services Repository houses and catalogs the services delivered by SAP partners and those you have created, offering powerful visual modeling functionality that helps you document, structure, and govern all assets, from high-level process component models to service interfaces and their data types. The services bus provides secure access to services from composite applications at runtime, smoothly orchestrating the details of flow logic: routing, schema validation, and structure and value mapping,

### **Nothing Succeeds Like Success**

Only SAP helps organizations achieve a more flexible IT environment in this three-pronged approach, not only connecting disparate applications and businesses,

As the number of point solutions grows, the evolving tangle of interfaces produces a complexity that distracts end users and drives up operational costs, jeopardizing the stability of the entire IT environment.

but also leveraging enterprise SOA to deliver the means to integrate new applications and businesses as you grow and diversify. By implementing these strategies on a single platform, you benefit further by reducing the cost required for software, training, and operation.

Over 2,500 companies have licensed SAP NetWeaver PI to integrate non-SAP solutions, and over 1,500 of those solutions are currently productive. SAP provides over 50 content packages to enable rapid integration with all major SAP applications, and the SAP ecosystem includes over 250 partner solutions certified by SAP for use with SAP NetWeaver PI.

### **Find Out More**

To find out more about SAP end-to-end process integration, call your SAP representative or visit us on the Web at [www.sap.com/platform/netweaver/processintegration.epx](http://www.sap.com/platform/netweaver/processintegration.epx).

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## Summary

Companies who have been seeking to integrate business processes across their value chain have until now spent most of their time and money on point solutions for enterprise application integration or on business partner integration. But increasing the number of point solutions increases total cost of ownership (TCO), while IT landscape complexity escalates operational costs. Even if you can live with these unfortunate by-products, point-to-point integration does not help you meld multiple disparate applications to optimize partner collaboration. To do that in a way that enables greater automation, monitoring, and control, savvy organizations are demanding end-to-end process integration that scales elegantly across software solutions. The SAP NetWeaver® technology platform and the SAP NetWeaver Process Integration offering are among the best answers to this challenge.

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## Challenges

- Simplify IT complexity while protecting legacy investments
- Help IT become a strategic partner in business innovation
- Reduce operational costs while empowering employees
- Help make future application and business integration efforts easier

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## Supported Business Processes and Software Functions

- Business process integration – Build a platform that streamlines current applications and scales smoothly for future growth
- Supply chain optimization – Integrate partner business applications seamlessly with your own
- Enterprise service-oriented architecture – Package application functions for developers as reusable Web services stored in a common repository accessed via a standards-based service bus

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## Business Benefits

- **Reduced TCO** – You get the best value from existing infrastructure investments and save money by simplifying the tangle of application interfaces
- **Easy integration of new applications** – A set of repeatable enterprise services reduces development efforts and scales seamlessly upward
- **Efficient processing** – A single process handles large amounts of interenterprise transactions automatically and reliably.

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## For More Information

To find out more about SAP end-to-end process integration, call your SAP representative or visit us on the Web at [www.sap.com/platform/netweaver/processintegration.epx](http://www.sap.com/platform/netweaver/processintegration.epx).

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