

Bring Innovations to Complex Landscapes, Quickly and Easily

How to Implement Enhancement Packages to Fulfill Your Company's Application and/or Technical Needs

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Implementing new business processes or introducing new technologies in a complex IT landscape can be challenging, especially when that landscape consists of multiple systems and versions of SAP software. In these heterogeneous environments, there may be interdependencies among the software that could cause issues when upgrading, and there are typically various options available to deploy new functionality.

To overcome these challenges and seamlessly add new innovations to a complex system landscape, SAP offers enhancement packages for SAP Business Suite and SAP NetWeaver. As previous columns have discussed, enhancement packages provide collections of new or improved business functions that you can deploy modularly and on your own timetable; you can tailor your upgrade strategy based on the functionality you need.¹ All core SAP Business Suite 7 applications, like SAP ERP and SAP Supplier Relationship Management (SAP SRM), are now enabled for continuous innovation through enhancement packages. Similarly, enhancement packages for SAP NetWeaver allow you to update your technology platform while keeping your core software stable.

In this article, you will learn how to implement SAP's latest SAP Business Suite innovations with enhancement packages and apply the newest SAP NetWeaver technology to your infrastructure.

¹ For more information, see "Innovation Without Disruption: A Deep Dive into SAP's Enhancement Package Strategy for SAP ERP" in the January-March 2009 issue of *SAPinsider* (sapinsider.wispubs.com), and "New Tools and Time Savers for Developers: The Latest from SAP NetWeaver Enhancement Packages" in the October-December 2009 issue.

First, I will provide an overview of the lifecycle management process for planning and implementing enhancement packages. Then, I will review different implementation scenarios for SAP Business Suite and SAP NetWeaver.

How to Install an Enhancement Package: An End-to-End Lifecycle Management Process

A company often uses different SAP business applications, such as SAP ERP and SAP SRM, to run its business processes; these technical systems form a system landscape. As a result, software update processes no longer refer to single systems, but instead to complete landscapes.

To efficiently manage an SAP system landscape, technical systems that work together and depend on each other are grouped into product systems. The maintenance project for an enhancement package installation is done on the product system level.

Before we look at specific scenarios, let's review the main steps of the end-to-end lifecycle management process for implementing SAP enhancement packages (see **Figure 1**). Note that to install enhancement packages for the latest release of SAP Business Suite or for SAP NetWeaver 7.0, you must have SAP Solution Manager 7.0 enhancement package 1, support package 23 or higher, in place before any implementation activity can begin.

1. Define the System Landscape

To enable a product system maintenance process, you (the administrator) must first:

- Register your systems in the System Landscape Directory (SLD)² and transfer the system data to SAP Solution Manager.
- As an optional step, run SAP Landscape Verification 1.0 for SAP Solution Manager. This tool, which is an add-on to SAP Solution Manager, checks the system data in the SAP Solution Manager System Landscape (transaction SMSY) for inconsistencies and, if needed, provides concrete instructions in the form of messages and hints to update the system data.
- Update the system data using transaction SMSY.
- Assign a landscape pattern, such as “Hub,” to technical systems to model the individual landscape setup used.

2. Run the Maintenance Optimizer

When the system and landscape data in transaction SMSY are maintained correctly, you can start a new maintenance transaction using the

² For a brief description of the System Landscape Directory and other key terms used in this article, see the online version of this article at sapinsider.wispubs.com.

Maintenance Optimizer (MOPZ), a tool within SAP Solution Manager that guides users through these steps:

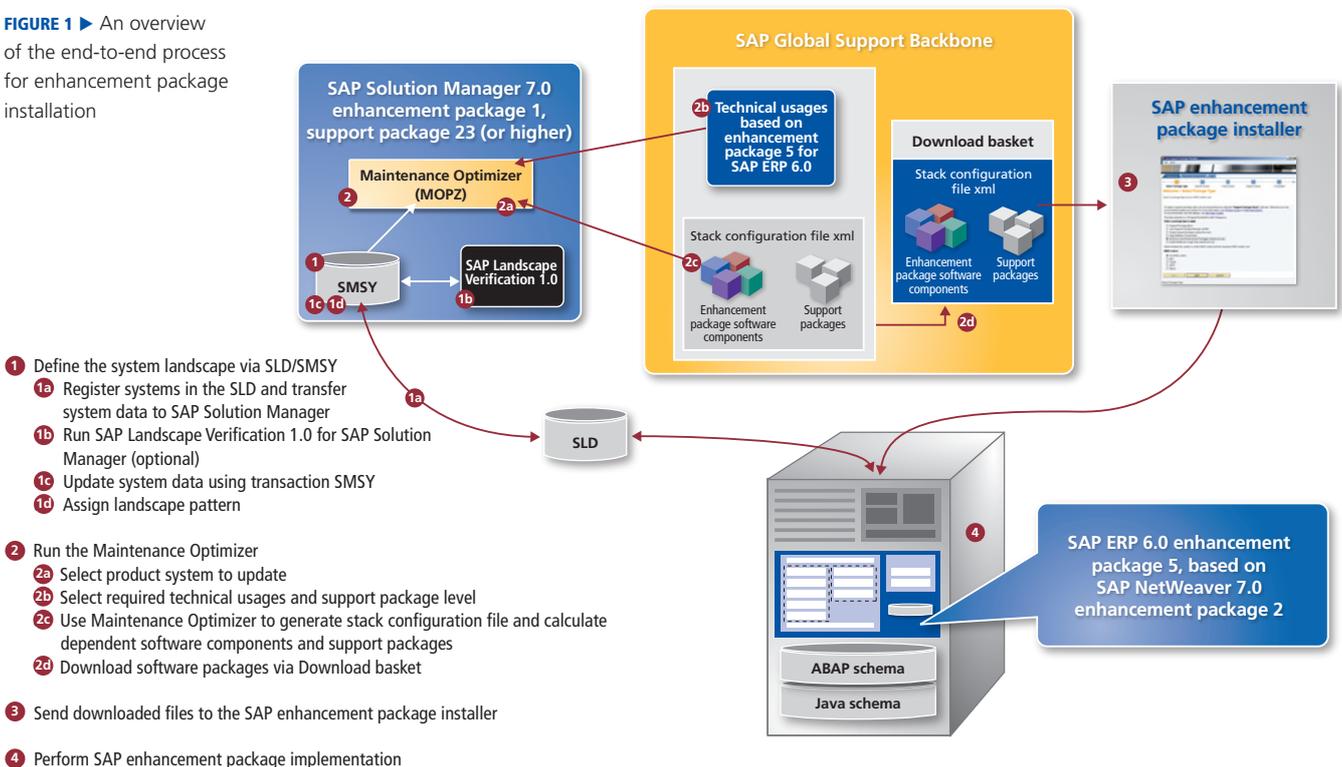
- Select the product system you want to update.
- Select the required technical usages and support package level of the desired target state.
- Use the Maintenance Optimizer to generate a stack configuration file and calculate the dependent software components and support packages.
- Place the files in the SAP Service Marketplace download basket and download them using the SAP Download Manager.

3. Send Downloaded Files to the SAP Enhancement Package Installer

Provide all downloaded files, together with the stack XML configuration file calculated by the Maintenance Optimizer, to the SAP enhancement package installer. To make the files available to the SAP enhancement package installer, make sure that the download directory path refers to the download location of the files. You can download the SAP enhancement package

SAP’s enhancement package strategy — enabling a business to take advantage of new capabilities while keeping its core software stable — was introduced with SAP ERP 6.0 and has been proven with several enhancement packages since 2006.

FIGURE 1 ► An overview of the end-to-end process for enhancement package installation



The “landscape-aware” concept involves the ability to assign a landscape pattern like “Hub” or “Sidecar” that the Maintenance Optimizer can recognize to calculate a potential system impact and minimize disruptions.

installer from the SAP Software Distribution Center on the SAP Service Marketplace. Follow this path from <http://service.sap.com/swdc>: *Support Packages and Patches* → *Entry by Application Group* → *Additional Components* → *Upgrade Tools* → *SAP EHP INSTALLER*.

4. Perform the Implementation

Finally, perform the enhancement package implementation by starting the SAP enhancement package installer. After you download the tool from the SAP Service Marketplace, unpack and execute the installer via SAPCAR. Then, start the SAP enhancement package installer front end and run through the guided procedure.

The installer updates the system with the enhancement package files and support packages with minimal downtime. After you complete the enhancement package implementation, be sure to set the status of the MOPZ maintenance transaction to “complete.”

Now that you have an understanding of how to implement an enhancement package, let’s consider two scenarios.

Landscape-Aware Enhancement Package Implementation Scenarios

The motivation to adopt new innovation within your system landscape through enhancement packages can be application-driven or

technology-driven. SAP now offers ways to take either approach, depending on your strategy.

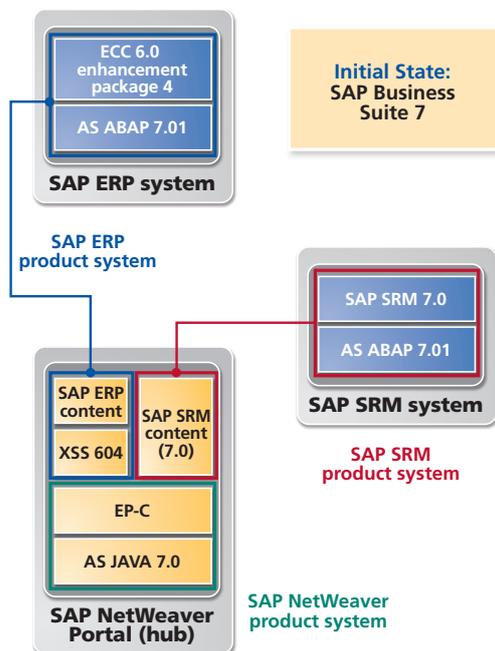
Note!

Progressing from an SAP NetWeaver release to an enhancement package for SAP NetWeaver is optional; however, adopting a business function in an enhancement package for SAP Business Suite might require a specific SAP enhancement package for SAP NetWeaver.

You can deploy more than one SAP application on a technical system — for example, SAP NetWeaver Portal with SAP ERP and SAP SRM components. Thus, the technical system can be used in more than one product system, and you have to assign the landscape pattern “Hub” to such a system. This could lead to interdependencies of the technical systems during system maintenance and enhancement package implementation.

To minimize disruptions, the Maintenance Optimizer can now interpret the landscape pattern “Hub” and automatically calculate the minimum impact on the involved systems — thus the Maintenance Optimizer is “aware” of the landscape. During the maintenance of a product system, all technical systems serving as a hub are updated only if required.

FIGURE 2 ▼ The initial state of our sample SAP Business Suite system landscape configuration, with SAP ERP, SAP SRM, and SAP NetWeaver Portal 7.0



The Landscape’s Initial State

Figure 2 shows the initial state of a system landscape based on SAP Business Suite 7 with SAP NetWeaver Portal as a hub; three product systems are in place:

- The SAP ERP product system (outlined in blue) consisting of an SAP ERP enhancement package 4 ABAP back end and SAP ERP enhancement package 4 Java applications on SAP NetWeaver Portal
- The SAP SRM product system (outlined in red) consisting of an SAP SRM 7.0 ABAP back end and SAP SRM 7.0 Java applications on SAP NetWeaver Portal
- The SAP NetWeaver product system (outlined in green) consisting of SAP NetWeaver Portal 7.0

Application-Driven Update Scenario

Consider that your company wants to implement business functionality that will be available in an

upcoming enhancement package for SAP Business Suite 7 applications. In our example, there are two possible application-driven implementations:

1. Enhancement package 5 for the SAP ERP product system (see **Figure 3**)
2. Enhancement package 1 for the SAP SRM product system (see **Figure 4**)

If you want to apply both of these enhancement packages to your system landscape, you have to create two independent maintenance transactions in the Maintenance Optimizer (refer back to the “Run the Maintenance Optimizer” step in the previous section). One transaction is for the SAP ERP product system

FIGURE 3 ▶ When implementing enhancement package 5 for the SAP ERP system, the other systems remain unchanged

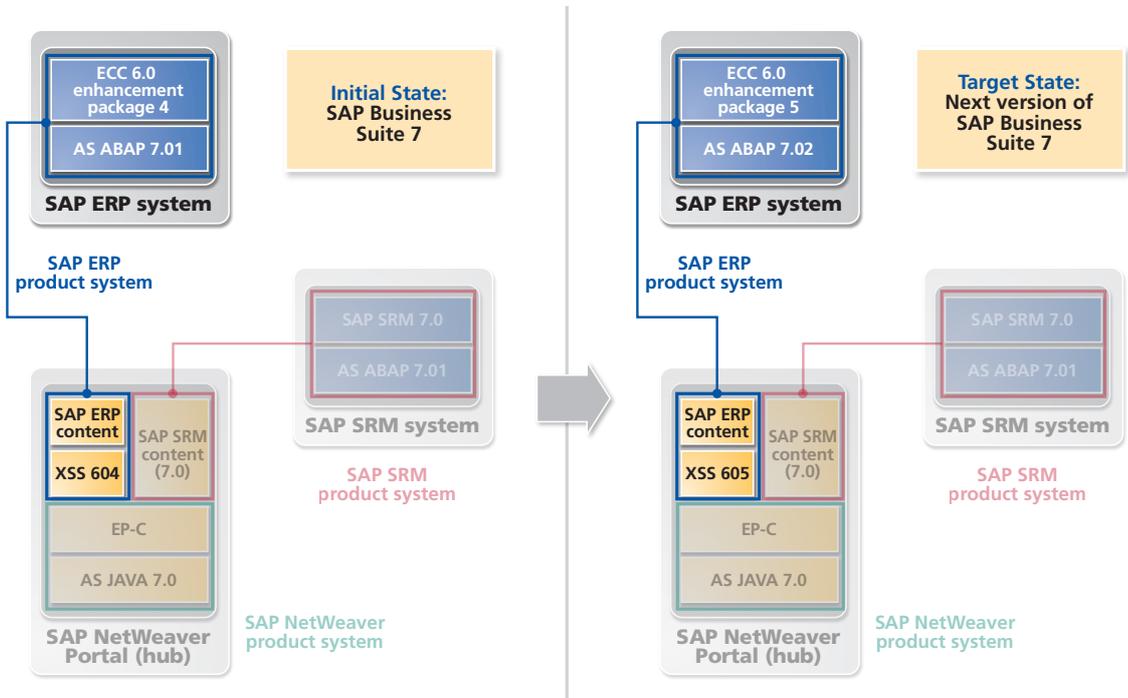
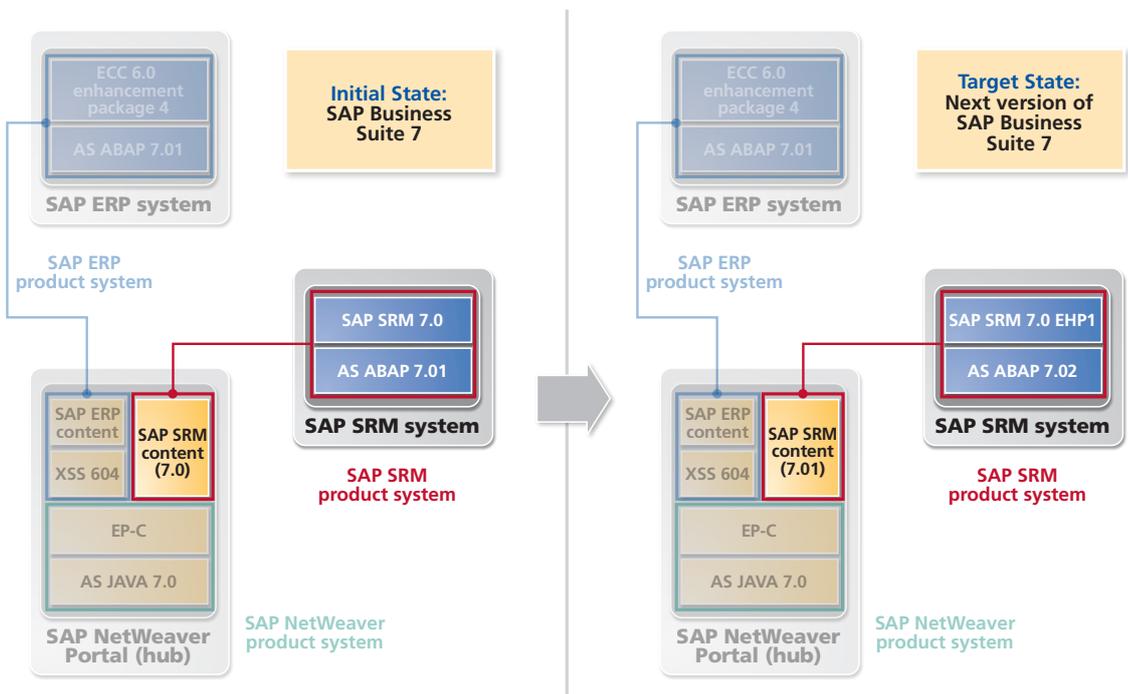


FIGURE 4 ▶ When implementing enhancement package 1 for the SAP SRM system, the other systems remain unchanged



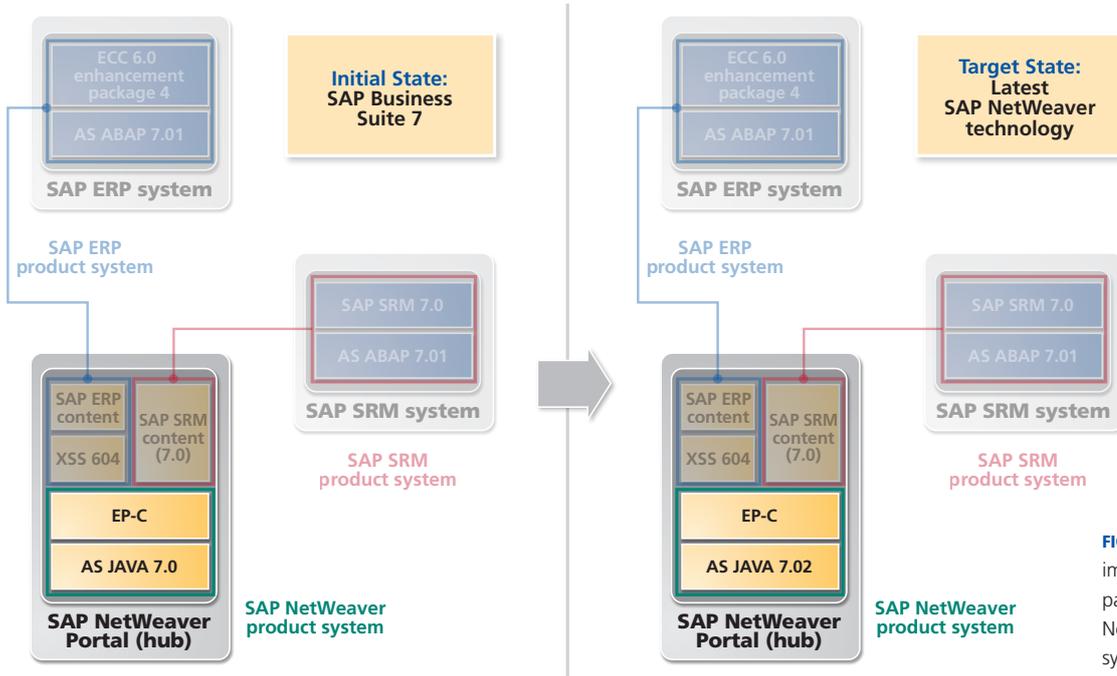


FIGURE 5 ◀ When implementing enhancement package 2 for the SAP NetWeaver system, the other systems remain unchanged

Note!

In these scenarios, the system landscape is already defined because the product systems are in place. Therefore, start with the “Run the Maintenance Optimizer” step and move forward.

with enhancement package 5 for SAP ERP 6.0 as the target, and the second transaction is for the SAP SRM product system with enhancement package 1 for SAP SRM 7.0 as the target.

For this application-driven update, no new SAP NetWeaver functionality in the SAP NetWeaver Portal hub is required, and the SAP NetWeaver Portal system remains on SAP NetWeaver 7.0. Also, if you want to apply only one of these enhancement packages (for example, only enhancement package 5 for SAP ERP 6.0), the other application ABAP back-end system (here, the SAP SRM 7.0 ABAP back end) remains unchanged with respect to the product version.

Technology-Driven Update Scenario

Now consider that your company wants to implement new SAP NetWeaver Portal functionality available with a new enhancement package version for SAP NetWeaver 7.0. In our example,

you can update SAP NetWeaver Portal by implementing either:

1. Enhancement package 1 for SAP NetWeaver 7.0 for the SAP NetWeaver product system, *or*
2. Enhancement package 2 for SAP NetWeaver 7.0 for the SAP NetWeaver product system (see **Figure 5**)

Again, you would start by creating a maintenance transaction in the Maintenance Optimizer. For either implementation, you don't need to update the SAP Business Suite application components on SAP NetWeaver Portal, and you don't need to upgrade the connected SAP Business Suite ABAP back-end systems. The SAP ERP product system and the SAP SRM product system remain unchanged with respect to the product version.

Summary

Landscape-aware, end-to-end lifecycle management processes and tool improvements help simplify and speed up SAP Business Suite implementations. Whether your organization is considering an application-driven update scenario or a technology-driven one, you now have the flexibility — and technical know-how — to add the functionality you need without revamping your entire landscape. For more information, visit www.sdn.sap.com/irj/sdn/alm. ■

Additional Resource...

- “Centralize and Simplify SAP Solution Maintenance Across Your System Landscape with the Maintenance Optimizer — An Administrator's Guide” by Martin Rink and Stefan Raffel (*SAP Professional Journal*, Volume 10, Issue 1, www.SAPpro.com)