SAP enhancement packages for SAP ERP
Technology Facts

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Agenda:

1. SAP Enhancement Package Concept
   - The Challenge
   - Improved Software Lifecycle
   - Maintenance

2. Architecture and Technology
   - Switch Framework
   - EHP Installer
   - Technical Facts

3. Implementation Procedure
   - Innovation Management
   - Installation procedure
   - Recommendations

4. Customer Experiences and Summary
   - Project Statistics
   - Key Take Aways
   - Roadmap
   - Services
Enhancement Packages = Innovation + Stability

Enhancement Packages reduce conflict between stability and innovation

**INNOVATION**
- Fast and easy introduction of business innovation at any time when needed

**STABILITY**
- Stable and robust business processes for maximum efficiency and low TCO
- Routine deployment of support packages to sustain compliance

**ENHANCEMENT PACKAGES = INNOVATION + STABILITY**
- Enable IT to continuously provide new functionality: Installation of enhancement packages as part of routine maintenance
- Selective, non-disruptive activation of innovation at any time - driven by business needs
1. Always install parts of SAP enhancement packages combined with Support Pack Stack as a maintenance activity with minor additional effort and facilitated by the new EHP Installer tool.

2. Select and activate the functionality needed by your business using the Switch Framework. Functionality your business does not need will remain dormant.
### At-A-Glance: SAP Enhancement Package 4

**SAP ERP – Cross Industry Enhancements**

#### Financials
- **Treasury & Risk Management**
  - Exposure & Hedge Mgmt for Commodities and FX
  - Correspondence monitor with automatic matching
  - IFRS 7 Reporting
- **Master Data Governance**: Central Maintenance for Chart of Accounts
- **Financial Supply Chain Management**
  - New enterprise services and new web UIs
  - Collections Management: Support of several backends and collections from subsidiaries
  - Financial accounting and New General Ledger
  - Information Life Cycle Management for Tax Auditing
  - Simplified Reporting and Power Lists

#### Sales and Service
- **End-to-end support for supplier and customer returns**
- Sales order entry via CRM
- Incentive and commission management

#### HCM
- **Talent Management**:
  - New capabilities for E-Recruiting
  - Performance Management: UI, Functionality and Integration
  - Enhanced Compensation Management
  - Integrated Talent Management Processes (incl. Nakisa)
  - Enriched learning solution
- **Outsourced manufacturing scenario**: Work order integration
- **Product Life Cycle Management** – new functions, UI and integration to iPPE
- **Manufacturing Execution** (Configurable dashboard and more)
  - Flexible and adaptive manufacturing processes with order-split functionality
  - Cross systems tracking of all batch related objects
- **Integration to SAP LPO**
- **Extended Warehouse Management integration** with Kanban and repetitive manufacturing

#### Corporate Services
- **Enterprise Asset Management**
  - New standard solution for Recycling Administration (REA)
- **Project Management** – Handling large projects
- **Real Estate Management**
- **New capabilities for Travel Management**
- **Quality Management** – Q-Notifications
- **Cross SAP ERP**: Coverage of all common business cases with PDF-Based Forms

#### Procurement and Logistics Execution
- **New Scenario for Service Procurement**
- **Sourcing Capabilities**
- **Enhanced MM-Fi Integration**
- **Supplier Managed Inventory (SMI) and Vendor Managed Inventory (VMI)**

**Highlights**
Growth Of Productive SAP Enhancement Package Customers

3000+ new productive EHP customers within the last 12 months

General availability of EHP 3

General availability of EHP 4

3978 productive EHP customers
Quick Facts

Preamble: SAP enhancement packages are shipped as a delta shipment to SAP ERP 6.0

1. Selective Installation:
   - Each enhancement package contains new versions of existing software components
   - You only update software components, which are related to the functionality you want to use.
   - After installation:
     • No UI or process change until a Business Function is activated (ABAP)
     • One common regression test for both, SP and enhancement package

2. Selective Activation
   - New functionality must be explicitly switched on to become active in the system (EHP4: ~300 Business Functions).
   - If activated:
     • Changes are predictable, only well described changes in the activated areas.
     • Testing is simplified with templates, provided for every Business Function
New 7-2 Maintenance Strategy
More Planning and Investment Security for SAP Customers

7-2 maintenance strategy for SAP Business Suite 7 core applications*:
7 years of mainstream maintenance, 2 years of extended maintenance
- Long-term planning security and higher return on investment – nine year maintenance horizon
- Additional time to deploy and benefit from innovation delivered via enhancement packages
- Less additional cost for extended maintenance

* Core applications of SAP Business Suite 7: SAP CRM 7.0, SAP SRM 7.0, SAP SCM 7.0, SAP PLM 7.0; plus SAP ERP 6.0 (EHP4) and SAP NetWeaver 7.0. Industry-specific add-on applications and SAP enhancement packages based on these core application releases will offer mainstream and extended maintenance in line with these releases.
** Enhancement Packages: Illustrative only; does not reflect exact shipment times and frequency.
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   - Project Statistics
   - Key Take Aways
   - Roadmap
   - Services
Motivation:
Evolution of SAP Architecture

SAP R/3 up to 4.6C
Industry Solutions

SAP R/3 Enterprise
Enterprise Extension Set

SAP Web Application Server 6.20

SAP ECC Core (5.0)
Enterprise Extensions

mySAP ERP 2004
Self-Services
Internet Sales
Composite Applications
Strategic Enterprise Management
and more ...
Industry Solutions

SAP R/3 Enterprise Core (4.70)

SAP ECC Core (6.0)
Enterprise Extensions

SAP ERP 6.0
Supplier Relationship Management
Self-Services
Internet Sales
Composite Applications
Strategic Enterprise Management
and more ...

SAP ECC Core (5.0)
Enterprise Extensions

SAP ECC Core (6.0)
Enterprise Extensions

SAP NetWeaver 2004

SAP NetWeaver 2004

PEOPLE INTEGRATION
Multi Channel Access
Portal Collaboration

INFORMATION INTEGRATION
Bus. Intelligence Knowledge Mgmt
Master Data Mgmt

PROCESS INTEGRATION
Integration Broker Business Process Mgmt

APPLICATION SERVER (6.40)
J2EE ABAP
DB and OS Abstraction

SAP NetWeaver 7.0

SAP NetWeaver 7.0

PEOPLE INTEGRATION
Multi Channel Access
Portal Collaboration

INFORMATION INTEGRATION
Bus. Intelligence Knowledge Mgmt
Master Data Mgmt

PROCESS INTEGRATION
Integration Broker Business Process Mgmt

APPLICATION SERVER (7.00)
J2EE ABAP ITS
DB and OS Abstraction

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**Selective, component-wise installation:** With SAP EHPs you can selectively update software components. Matching combinations of software components, as well as PI/EP/BI-content and Java software components are grouped by **Technical Usages.** As the number of software components are limited, e.g. a separated installation of logistics and financials (both are located in the core software component SAP/EA_APPL) is not possible.

Strict separation of technical installation and the implementation of the new functionality: **Explicit activation** separately for each **Business Function** (with EHP4: ~300 Business Functions). However only Backend functionality (ABAP) is switchable.
New Installation Tool: SAP Enhancement Package Installer

QUICK FACTS

EHP Installer:
Standard tool to implement SAP enhancement packages

Technology: System Switch Procedure

Available for:
- all 64-bit platforms
- SAP enhancement package 4 for SAP ERP 6.0
- SAP enhancement package 1 for SAP NetWeaver 7.0 and 7.1

RELIABLE & INTUITIVE

- Mature, stable and optimized system switch procedure
- Improved user experience due to intuitive guided procedure

MINIMIZED DOWNTIME

- Risk mitigation due to isolated shadow system
- Optimized Downtime
Equivalent Support Packages (see also SAP note 1064635)

- Are time-synchronized SPs for different versions of one software component (SWC)
- Contain identical corrections for capabilities that both versions have in common
- Differ only with respect to corrections for new capabilities (which are only provided by the higher SWC version)
- Support Package Stacks for SAP ERP include Support Packages for SAP NetWeaver.

<table>
<thead>
<tr>
<th>Enhancement Package (EHP)</th>
<th>EHP SP Stack</th>
<th>Based on ERP SP Stack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancement Package 4 for SAP ERP 6.0</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Enhancement Package 3 for SAP ERP 6.0</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>15</td>
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Selective, component-wise installation: With SAP EHPs you can selectively update software components. Matching combinations of software components, as well as PI/EP/BI-content and Java software components are grouped by **Technical Usages**. As the number of software components are limited, e.g. a separated installation of logistics and financials (both are located in the core software component SAP/EA_APPL) is not possible.

Strict separation of technical installation and the implementation of the new functionality: **Explicit activation** separately for each **Business Function** (with EHP4: ~300 Business Functions). However only Backend functionality (ABAP) is switchable.
With the **Switch Framework** it is possible to control the activation of SAP ERP objects.

Activating a Business Function triggers switches.

The switch controls whether the switch-controlled code is executed or not at runtime.

The Switch Framework is a proven concept (already used to retrofit Industry Solutions in ERP 6.0).

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**Fundament:** The **Enhancement Framework** is the solution of SAP NetWeaver 7.0 to allow adaptations of development objects without touching them.

All enhancements offered by Enhancement Framework can be switched by the Switch Framework.

All reports, includes, classes, function modules, and Web Dynpro ABAP UIs can be changed and enhanced using the Enhancement Framework.

The new BAdI is also integrated in the Enhancement Framework.
A switch controls the visibility of other repository objects.
Things You Should Know Before Installing SAP Enhancement Packages

**EHP Facts**

- **Only one EHP Level per system**
  One application system can only consist of one EHP level (e.g. EHP3 or EHP4). Hence installed EHP components have to be updated with every future EHP implementation.

- **Industry Solutions**
  Customers who have activated an industry business function set have to include the corresponding EHP industry software component during installation.

- **EHP Installation and functional activation is non-reversible**

**Technical Delivery**

- **EHPs are “cumulative”**
  When installing the latest EHP you will automatically get all functionality delivered with previous Enhancement Packs.

- **Delta Shipment**
  The EHP installation delivers only changed objects to your system. Whereby EHP 3 is a delta shipment to ERP 6.0 and EHP 4 is a delta shipment to EHP 3.

**Project Perspective**

- **Modification Adjustment**
  After installing Enhancement Packages modifications must be adjusted – even if no business function has been activated.

- **Regression Test required**
  The installation of an SAP Enhancement Package requires a full regression test – even if no business function has been activated.

- **Effort Estimation**
  Most customers say that the installation effort is a bit higher with EHP’s (without activating business functions) compared to pure Support Package updates.

**Enhancement Packages for SAP NetWeaver**

SAP Enhancement Package 4 for SAP ERP 6.0 is available for SAP NetWeaver 7.0 and 7.01. Select the right product version!
SAP EHP 1 for SAP NetWeaver: New ERP System Landscape Options

Two EHP4 product versions available

With the current enhancement package different installation options and system landscape alternatives are available for Java based system instances:

1. EHP 4 for SAP ERP 6.0

In case you already have an existing NW EP or BI 7.0, you can use the latest EHP4 functionality by choosing the “EHP 4 for SAP ERP 6.0” product version. In this case, only ABAP based systems will be updated to NW 7.01 (=EHP1 for NW) while the Java instances will stay on NW 7.00.

2. EHP 4 for SAP ERP 6.0/ NW 7.01

The “EHP 4 for SAP ERP 6.0/ NW 7.01” product version should be primarily used in new installations and leverages NW EHP 1 (ABAP and Java).

EHP 4 components for SAP ECC Server 6.0 always require SAP EHP 1 for SAP NetWeaver 7.0.
Selectable Landscape Options

Two NetWeaver landscape options available for EHP4 customers

Product Version 1: EHP 4 for SAP ERP 6.0

Product Version 2: EHP 4 for SAP ERP 6.0 / NW 7.01

By choosing product version EHP 4 for SAP ERP 6.0 all new functionality will run on existing SAP NetWeaver 7.0 systems (without NW EHP1).

By choosing product version EHP 4 for SAP ERP 6.0 / NW 7.01 all NetWeaver based system will be also updated with NW EHP1.

Always based on EHP 1 for NW (independent of chosen product version)

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1  SAP Enhancement Package Concept
   The Challenge • Improved Software Lifecycle • Maintenance

2  Architecture and Technology
   Switch Framework • EHP Installer • Technical Facts

3  Implementation Procedure
   Innovation Management • Installation procedure • Recommendations

4  Customer Experiences and Summary
   Project Statistics • Key Take Aways • Roadmap • Services
Implementation Procedure of SAP Enhancement Packages

Discover & Evaluate:
- EHP Info Center
- Solution Browser Tool

Preparation & Blueprint
- Maintenance Optimizer
- Implementation Content

Realization (Install, Activate, & Test):
- Enhancement Package Installer
- Switch Framework
- Configuration + Customizing Predefined test content

Application Lifecycle Management (ALM)

- Requirements
- Design
- Build & Test
- Deploy
- Optimize
- Operate
- Go-Live and Support

Enhancement Package Lifecycle
Enhancement Package Lifecycle:
How ALM and ASAP relate to each other

Application Lifecycle Management phases:

- Requirements
- Design
- Build & Test
- Deploy

Discover New EHP Functionality
- SAP Service Marketplace
- SAP Solution Composer

Business and Technical Aspects
- Business Blueprint
- Implementation Content
- Maintenance Optimizer

Installation and Configuration
- Installation Tools
- Technical Configuration
- Business Configuration
- Test Management

Deployment
- Go-Live and Support
- Transport Management

Plan
- Discovery
- Evaluation
- Preparation
- Blueprint

Build
- Realization
- Prep. for Cutover
- Go-Live & Support

Corresponding ASAP phases:
Phase 1:
Select Required Business Functions

Requirements
- Design
- Build & Test
- Deploy

Identification: Enhancement Package Info Center

- Single point of access to all information related to EHP’s:
  - Presentations, documentation and release notes
  - Test catalogue and learning maps
- Documentation at deep level of granularity
- Great ability to analyze new software functionality
- Easily identify needed Business Function(s)

Further Services and Tools

- Accelerated Innovation Enablement (AIE)
  - Five days of SAP enablement helping to evaluate the innovation capabilities of the latest SAP EHP
- Solution Browser

Result:
High-Level Business Requirements and Selection of Business Functions

http://service.sap.com/erp-ehp
How To Use The EHP Information Center

The Concept
- Purpose of the SAP ERP enhancement package strategy
- Concept and methodology of enhancement packages
- What you need to know before
- How to implement them
- What to test at what point in time

Functional Overview
- Which enhancements are included in each enhancement package?
- Which areas of the solution were touched by new developments?

Level 1 => ‘Short overview presentation’:
Get an idea of each business function (short description and target group)

Level 2 => ‘Detailed overview presentation’:
Understand each business function with features included, benefits, target users and their and technical name. (~ 1 slide per business function)

Level 3 => ‘Detailed presentation’:
Understand each feature of a business function (~ 1 slide per feature)

Level 4 => ‘Online information’:
Assess each business function, using all related information. This is presented in a table-like list with links to documentation, test cases, release notes, detail presentations, etc.

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The SAP enhancement package information center contains documentation for each EHP business function.

Technical Usages and Business Packages that are required to use the business function.

Additional business functions that must be activated as well.

Prerequisites that must be satisfied before the activation.

Features that become available when the business function is activated.

### Business Function Documentation

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Documentation</th>
<th>Presentation</th>
<th>Release Notes</th>
<th>Dependencies</th>
<th>Test Catalog</th>
<th>Enhancement Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Solution 02 (HCM_LS0_CE 2)</td>
<td><img src="Image" alt="Icon" /></td>
<td><img src="Image" alt="Icon" /></td>
<td><img src="Image" alt="Icon" /></td>
<td><img src="Image" alt="Icon" /></td>
<td><img src="Image" alt="Icon" /></td>
<td>4</td>
</tr>
</tbody>
</table>

**Description:**
1. Portal role for training administrators
2. Learning management for team
3. Concurrent & global employment support
4. Rapid content publishing
5. BI data source for course appraisals
6. Offline course distribution.

The above features are available with both SAP Learning Solution (LSO) & Enterprise Learning (EL) (SAP EL = SAP LSO 600 + Enhancement Pack 2 + Virtual Learning Room feature).
SAP Accelerated Innovation Enablement
5 days free* access to SAP Solution Architects

Benefit from direct engagement with SAP’s experts:
SAP provides up to five remote person days per calendar year assistance and enablement per customer helping to evaluate the innovation capabilities of the latest SAP Enhancement Package.

Value Proposition
Accelerated Innovation Enablement provides access to SAP Solution Architects to evaluate the innovation capabilities of the latest SAP Enhancement Package and how it may be deployed for your business process requirements.

Technical Prerequisites
- SAP’s Accelerated Innovation Enablement service is delivered remotely by SAP Solution Architects and is only available to SAP Enterprise Support customers
- SAP Solution Manager Enterprise Edition
- Documentation of core business processes within SAP Solution Manager Enterprise Edition and information about the special focus on your specific functional requirements
- SAP requires the commitment of the time and expertise of Customer’s functional and/or process lead

Further Information
http://service.sap.com/enterprisesupport -> Scope description -> SAP Accelerated Innovation Enablement

In A Nutshell
Entitlement
- Customer is entitled to receive up to five calendar days remote advice per year.
Outcome
- The results of the check will be documented in English by SAP expert.
Duration
- 5 calendar days (= 5x8hrs)
Addressed Solution
- SAP Business Suite 7 core applications (ERP 6.0, CRM 7.0, SCM 7.0, PLM 7.0)

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How to evaluate a Business Function in your system landscape

For evaluation purposes („Does the Business Function add value?“) you should not use the development system until you are sure about later realization.

Recommendation: Use a sandbox system
Keep in mind: Activation of a business function cannot be revoked.

You can only transport the complete BF system switch settings across the system landscape.
Prepare Technical Installation

- Check Prerequisites
  - What are the prerequisites to check before installing?

- Choose Installation Approach
  - Selective or Broad

- Map Business Functions and Technical Usage
  - Which are ‘technical usages’ are relevant?

Define Business Aspects

- Create Business Blueprint for Innovation
- Execute implementation project with ASAP methodology

Result: Business Blueprint and Technical Preparation Activities
Prerequisites For SAP ERP 6.0 EhP4 Installation

1. Up-to-date SAP Solution Manager
   - EHP1 for SAP Solution Manager 7.0

2. Latest installation or upgrade tools
   - For systems on ERP 6.0 use Enhancement Package Installer (SAPehpi)
   - For systems from SAP R/3 4.0B to SAP ECC 5.0 use upgrade tools (SAPup) & bind in EHP

3. Compatibility of Add-ons
   - Ask your add-on provider whether your add-ons are compatible with the SAP enhancement package for SAP ERP 6.0, for Add-ons delivered by SAP check SAP note 1226284

4. Support Packages
   - In general there is no minimal Support Pack Level required in the source system where the SAP enhancement package will be installed – refer to the guides and relevant notes for more details.
**Attention:** Do not install new Support Packages before an EHP installation unless you are sure that the equivalent EHP Support Packages have already been released.

During an EHP installation, the target Support Packages that are equivalent to the current Support Package levels must be included in the installation queue. If the equivalent target Support Packages are not yet released, you must postpone the EHP installation until the release date.

### Example

<table>
<thead>
<tr>
<th>Software Component</th>
<th>SAP ERP 6.0 Support Package</th>
<th>Equivalent EHP4 Support Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>700</td>
<td>701</td>
</tr>
<tr>
<td>Support Package</td>
<td>SP 19</td>
<td>SP 05</td>
</tr>
<tr>
<td>Release Date</td>
<td>CW 25 (June)</td>
<td>CW 41 (October)</td>
</tr>
</tbody>
</table>

In this example, the EHP4 installation would have to be postponed for more than three months if SAP_BASIS 700 SP 19 was installed directly after its release in June.

**Summary:** In general, SAP recommends to implement the latest Support Packages, but if you are planning an EHP installation, careful scheduling is necessary.
Mapping Process
Relationship between Technical Usages, Business Functions and Software Components - Example

**Business Function**
- A “Business Function” is the activatable unit within the SAP ECC Server

**Business Function 1**
Real Estate Management
Technical Name: RE_GEN_CI_1

**Business Function 2**
New General Ledger Accounting
Technical Name: FIN_GL_CI_1

**Business Function 3**
Lean Manufacturing
Technical Name: LOG_PP_LMAN

**Technical Usage**
- A “Technical Usage” groups software components which must be installed together.

**Media**
ABAP Product Instance: Media

**Central Applications**
ABAP Product Instance: Central Application

**Financials**
ABAP Product Instance: Leasing/Contract A/R & A/P

**HCM Self Services**
ABAP Product Instance: Human Capital Management
JAVA Product Instance: SAP XSS (Self Services)

**Main Instances & Software Components**

**SAP ECC Server**
- EA-HR 604
- SAP_HR 604
- ERECRUIT 600
- EA_GLTRADE 600
- ......

**SAP NetWeaver 701**
- Central Application

Mapping via OSS Note 165438
Relation between Technical Usages, Business Functions and SWCVs: SAP Note 1165438

SAP Note 1165438 - Enhancement package 4 for SAP ERP: Required SWC contains the following attachments:

- EhP4_BF_TU_Mapping.pdf
  - Business functions
  - Technical usage
  - Product instances
  - Business packages (content)

- EhP4_TU_BF_Mapping.pdf
  - Technical usages
  - Business functions
  - Product instances
  - Business Packages

- EHP4_BF_SWCV_Mapping.pdf
  - ABAP-based product instances
  - ABAP-based EHP4 software component versions
  - Java-based product instances
  - Java-based EHP4 software component versions
Installation Procedure At A Glance

‘Broad’ Installation

1+2. Choose relevant Technical Usage(s) with potential business value for your company.

Queue of installable packages + stack xml

Selective Installation

1. Choose business functions, e.g.: ‘Retail Buying’

2. Map business function(s) to Technical Usage(s)

Now defined: technical usage(s)

3. Select technical usage(s) using Solution Manager Maintenance Optimizer. Automated calculation and download of required installation files

4. Install installation packages using **EHP Installer**

5. Modification Adjustment

6. Regression Test

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Two Alternative Installation Approaches
(For SAP ECC Server)

**Selective Installation**

- Customer's IT Strategy for EHP installations:
  - Change (install) only what is needed for activating a business function that the business decided to use.
  - Use synergy effects with your maintenance cycles to avoid a separate regression test.

- **Proceeding**: Install exactly those technical usages that are needed to activate the business functions that are in scope for your project.

- **Advantages**: Minimize risk for this implementation project
  - Less potential adjustment efforts as less software components are touched

**‘Broad’ Installation**

- Customer's IT Strategy for EHP installations:
  - Proactively add relevant scope of new functions to be in best shape to activate further business functions as soon as these are requested by the business.
  - Use synergy effects with your maintenance cycles to avoid a separate regression test.

- Proceeding for SAP ECC: Flat installation approach
  - **Look at the technical usages offered** and exclude the ones that you do not use on this system.
  - For the remaining technical usages, check if the enhancements inside potentially add value for you
  - If yes, install these technical usages.

- **Advantages**: Minimize initial effort for analyzing new functions
  - In best shape for new implementations.
### Broad Approach: Choose Technical Usage(s)

1. **Select the required Core Functionality:**
   - **Technical Usage(s):** Central Applications, Human Capital Management

2. **Plus optionally select the extended functionality:**
   - **Technical Usage(s):** E-Recruiting on ECC Server, HCM - Learning Solution, Global Trade, Financial Supply Chain Mgmt, ESA ECC-SE, PLM Core, Financial Services

3. **Plus optionally select one industry related Technical Usage(s):**
   - **Technical Usage(s):** Discrete Ind. & Mill Products, Oil&Gas, Hospital, Public Sector Accounting, Catch Weight Management, Insurance, Media, Utilities/Waste&Recycl./Telco, Oil&Gas with Utilities, Retail, Defense, Defense Forces & Public Sec., Financials - Contr. Acc. & Leasing

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**Proceeding using the ‘broad installation approach’:**

1. Exclude all technical usages that reflect topics that you do not use in your system.
2. For the remaining technical usages, briefly verify if these include interesting capabilities for your end-users. To find out which Business Functions are part of a Technical Usage read Note [1165438](#) – there you will find the respective mapping.
3. Check if any add-on’s are installed and if these are released for the respective EHP.
4. For those technical usages that fulfill this prerequisite, install them along with SP stack.
5. For customers with an activate industry business function set: The corresponding industry component must be included into the EHP installation.
To get a quick start and overview of the EHP technology and installation essentials read the **Must Know Guide**
Phase 3: Build And Test

Software Installation And Activation

- Installation of enhancement package with EHP-installer
- Activation of Business Functions using the Switch Framework

Regression and Acceptance Testing

- SAP delivers EHP test case templates
- SAP Solution Manager enables risk based testing (BPCA)

Further Services

- Expert Guided Implementation
  - Update to Solution Manager EHP1 including basic configuration

Result:
Getting the solution ready and tested
Overview About Main Steps Of EHP Installation Procedure

1. Prepare SAP Solution Manager system

2. Calculate software packages and generate configuration file with Maintenance Optimizer

3. Install the software packages on every system that is part of your ERP solution

Package Configuration File („Stack XML“)

If SLD and SMSY are configured correctly, Maintenance Optimizer will calculate the packages for every system that is part of the ERP solution.

Sample system landscape:
- SAP ERP 6.0
  - ECC Server
  - ABAP
  - Java
- SAP NetWeaver Enterprise Portal
  - EP
- SAP NetWeaver Business Intell.
  - BI
  - ABAP
- SAP NetWeaver Process Integration
  - ABAP + JAVA

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1. Solution Manager Preparation

- Make sure you have an Up-to-date Solution Manager System (Patches), more information: Note 1083576 (EHP3) or Note 1165438 (EHP4)

- In general: review the set up of your Solution Manager System and System landscape (Transaction SMSY), note 1022072 gives for further information (e.g. Product version of your system has to be = ERP 6.0 NOT ECC 6.0)

- Get familiar with the Maintenance Optimizer

- XML file is generated and stored in /EPS/in of Solution Manager System (configuration required!)

Further help:
Implement Note 1233954 (No XML in EPS Inbox), Note 1134872 (FAQ for Stack Delta Files in EPS), Note 1122966 (Maintenance Optimizer for EHP), Note 1090202 (MOPZ: adjust stack delta XML), Note 1165587 (MOPZ: EHP stack selection)

2. Get familiar with EHP Installer


- Download your EHP Installer tool provided on SAP Service Marketplace: http://service.sap.com Go to → Support Packages and Patches → Additional Components → Upgrade Tools → SAP EHP INSTALLER
Expert Guided Implementation

Description
- Customer is trained in SAP Solution Manager configuration step by step by SAP Expert remotely.
- Customer executes configuration of explained steps.
- Customer has direct remote access to SAP Expert during execution of configuration steps.
- The delivery covers 5 days. At the end of delivery the standard configuration will be finished.

When to choose offering?
- Customer wants to set up or update SAP Solution Manager with standard configuration.
- Customer has the technical skills, but lacks SAP Solution Manager specific configuration knowledge.
- Willingness to execute implementation in defined time frame

How to order?
- SAP offers delivery at fixed time slots
- Available delivery slots are published on the SAP Service Marketplace (Alias: SolutionManager -> Services -> Expert Guided Impl.)
- Customers plan projects and self-register based on project timeline:
  - Alias: SolutionManager -> Services -> Expert Guided Implementation
  - Direct Link: http://service.sap.com/~form/sapnet?_SHORTKEY=01100035870000717440&_SCENARIO=01100035870000000202&

Empowering via Web sessions
- Explanation of implementation steps through SAP Expert ("Remote training")
- Typically 1-2 hours in each morning

Execution by customer/partner team
- On own project system
- On demand supported by back office, SAP expert over phone or remote
- Typically each afternoon for the setup steps of the day

Enterprise Support customers can join Expert Guided Implementation without additional charge in 2009

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Guided Download Procedure: Maintenance Optimizer

- Technical usage: predefined, installable subsets of an SAP enhancement package for SAP ERP

- SAP Note 1165438 (EHP4) maps identified business functions to a technical usage

- You enter the technical usage in the Maintenance Optimizer and it automatically calculates the relevant download files

- Prerequisites:
  - Solution Manager 7.0 EHP1 or higher,
  - Accuracy of system data
  - Data maintenance with Solution Manager System Landscape (SMSY)

* This is an example of installed software components in SAP ECC. For Java components and BI-, PI- and Portal content, a different installation procedure would be used.
The SAP Solution Manager Maintenance Optimizer will perform the following steps automatically …

<table>
<thead>
<tr>
<th>Select SAP ERP 6.0 EHP4 Support Package Stack</th>
<th>Determine equiv. SPs for SAP ERP 6.0 components</th>
<th>Determine equiv. SPs for SAP NetWeaver 7.0 EHP1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EHP4 SP Stack Selection</strong></td>
<td><strong>ERP 6.0 SP Equivalence</strong></td>
<td><strong>NetWeaver SP Equiv.</strong></td>
</tr>
<tr>
<td>You must select an EHP4 SP Stack to calculate Support Packages for an ERP 6.0 EHP4 system</td>
<td>Each ERP 6.0 EHP4 SP Stack contains the definition of an equivalent ERP 6.0 SP Stack (check SAP Note 1297231)</td>
<td>Each ERP 6.0 EHP4 SP Stack contains the definition of an equivalent NetWeaver SP Stack</td>
</tr>
<tr>
<td><strong>EHP4 SP Stack Content</strong></td>
<td><strong>ERP 6.0 SP Stack Content</strong></td>
<td><strong>NetWeaver SP Stack Content</strong></td>
</tr>
<tr>
<td>ERP 6.0 EHP4 SP Stacks contain Support Packages for every available EHP4 software component version</td>
<td>ERP 6.0 SP Stacks contain Support Packages for every ERP 6.0 software component version</td>
<td>NetWeaver SP Stacks contain Kernel patches and Support Packages for the software components: SAP BASIS, SAP ABA, SAP BW, and PI_BASIS</td>
</tr>
<tr>
<td><strong>Other software components</strong></td>
<td><strong>Other software components</strong></td>
<td><strong>Other software components</strong></td>
</tr>
<tr>
<td>ERP 6.0 EHP4 SP Stacks do not contain Support Packages for ERP software component version 600 and NetWeaver software components</td>
<td>ERP 6.0 SP Stacks do not contain Support Packages for EHP4 software component versions and NetWeaver software components</td>
<td>NetWeaver SP Stacks do not contain Support Packages for ERP application software components</td>
</tr>
</tbody>
</table>
SAP EHP Installer – Timing Diagram

Installation Preparation Steps

1. Identify System Stacks
2. Extract & Import Tools
3. Configuration of Installation Tool
4. Check System

Preprocessing

5. Lock TMS
6. Create Shadow Inst. & Repository
7. Mod. Adjustment
8. Activate & Distribute
10. Import EHP & SP Stacks

Downtime

6. Shadow build - up

Post-Processing

7. Prepare Downtime Backup
8. Deploy (AS Java)

Finalization

9. Post Activities
10. Verify & Test System
11. Start Production Operation

Uptime

Majority of User Interactions (~1 day)

Initial Uptime

Overall installation runtime (median: 46 hours)
Consider **additional temporary system resources**:
(free space on file systems, DB & log archives)
- SAPehpi installation directory: ~ 25GB
- EHP4 & SPS Download directory: ~ 10GB depending on # of packages
- Free space in /usr/sap/trans : ~ 4GB
- Shadow system ~ 60-80 GB
- Archive Logs

**Start early enough with the EHP Installer process!**
- Until end of preprocessing phase SAPehpi can run during system uptime, i.e. start at beginning of the week
- Consider executing the preprocessing phase during low DB utilization times (i.e. a weekend earlier)
- After uptime preprocessing you can stop SAPehpi and continue later with the downtime phases at beginning of maintenance window
- Consider time for postprocessing
  - Manual clean-up steps and load generation
  - Adjustment transports and Backup
  - Testing & validation
During and after EHP or Support Package installation your development system may not be able to support your production line with emergency corrections and/or phased development go-lives unless you add temporarily a copy of the development system.

Based on your risk profile you should consider appropriate measures.

Ensure dual maintenance.
### SAP Enhancement Package Installation Tool Matrix

<table>
<thead>
<tr>
<th>Case</th>
<th>Enhancement Package Level</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation of ... on existing SAP ERP 6.0 system landscape</td>
<td>Enhancement Package 3 for SAP ERP 6.0</td>
<td>ABAP: SAINT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Java: JSPM</td>
</tr>
<tr>
<td></td>
<td>Enhancement Package 4 for SAP ERP 6.0</td>
<td>ABAP: SAPehpi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Java: SAPehpi*</td>
</tr>
<tr>
<td>Upgrade to SAP ERP 6.0 and inclusion of ...</td>
<td>Enhancement Package 3 or 4 for SAP ERP 6.0</td>
<td>ABAP: SAPup</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Java: SAPJup</td>
</tr>
</tbody>
</table>

* If technology update is not intended, you have to use JSPM.
# Installation of Additional Technical Usages

If you want to activate a business function that does not belong to the technical usages that have been installed initially, you must install the missing technical usage later. There are two different options to install additional technical usages:

<table>
<thead>
<tr>
<th>EHP Installer</th>
<th>Transaction SAINT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory for the initial EHP4 installation</strong></td>
<td><strong>Prerequisites:</strong></td>
</tr>
<tr>
<td><strong>Advantages:</strong></td>
<td>The EHP4 Technical Usage “Central Applications” must be already installed</td>
</tr>
<tr>
<td></td>
<td><strong>Disadvantages:</strong></td>
</tr>
<tr>
<td></td>
<td>Longer downtime compared with EHP Installer</td>
</tr>
<tr>
<td></td>
<td>Limited possibilities to reset installation</td>
</tr>
<tr>
<td></td>
<td><strong>Advantage:</strong></td>
</tr>
<tr>
<td></td>
<td>Shorter total runtime for small installation queues (few packages and/or small packages)</td>
</tr>
<tr>
<td><strong>Disadvantage:</strong></td>
<td><strong>Advantage:</strong></td>
</tr>
<tr>
<td>Total runtime is longer compared with SAINT</td>
<td><strong>Advantage:</strong></td>
</tr>
</tbody>
</table>

Both installation options require modification adjustment and regression tests for the affected software components!
Key Take Aways

EhP 4 requires SAP Solution Manager EHP1

- Maintenance Optimizer must be set up and running (check Note 1122966)
- Maintenance Optimizer analyzes the ERP’s software components and calculates a list of packages

Enhancement Package 4 is installed with a new tool

- SAINT is not supported anymore (see Note 1256600).
- EHP installer tool reads the list of packages from Solution Manager
- The SAPehpi tool reduces the downtime compared with SAINT

Always combine the installation of Enhancement Packages with the installation of the latest Support Package Stack

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Activities before the Activation ...

- View the list of business functions now selectable
- Access documentation, release notes, test catalogue and possible dependencies from here
- Install the relevant documentation, refer to SAP note 1066110

Benefits

- Transparency of all system and UI changes that will take place
- Stability for all other parts of the solution

Activities after the Activation ...

- Activate the chosen business function
- Configure the chosen business function

Benefits

- New coding becomes active only where activated
- Faster implementation because only activated parts are configured
Switch Framework: Transaction SFW5
Transport of Switch Settings

Transaction: SFW5

Activate Business Functions Manually

Sandbox

DEV
transport

QAS
transport

PRD

Generate transport with switch settings
Import transport with switch settings
Import transport with switch settings
Test & Go Live

Activities

- Acceptance test for selected business functions
- Use standard test case templates
- Train end-users
- Go live, transport switch activities to production system

Benefits

- Faster test preparation due to test case templates
- Smaller test scope because changes are documented for each business function
- Smaller training effort due to limited and documented effect on user interfaces

You can access the TCT’s before Installing an EHP..

- All test cases are available as documents in the enhancement package information center (http://service.sap.com/erp-ehp)
- Documents (texts) can be downloaded

..or after installing an EHP

- Test cases are shipped with the enhancement package and are part of the installation (SAP ECC)
- Access the test case from the switch transaction (SFW5)
- From there, you will (by drilldown) enter the test workbench
- Test cases can be transported to SAP Solution Manager via workbench request.
Phase 4: Deploy

Go-Live and Support

- Update of production system: EHP Installer is specialized to minimize downtime
- Release of the EHP System for Production Operation
- Support after Go-Live
- Project Closure

Services

- SAP delivers Continuous Quality Checks
- Transport Management synchronizes deployment to production

Result: Innovation is available for business
Overview of Factors affecting EHP Installer Tool Runtime & Downtime

- System Configuration
- Hardware / Hard Disk Config
- Database Utilization & Configuration
- Number of modifications
- Number of selected technical usages & SP’s
- Productive applications/ Add-Ons or industry solutions
- Number of clients
- System Configuration
- Hardware / Hard Disc Config
- Database Utilization & Configuration
- Number of modifications
- Number of selected technical usages & SP’s
- Productive applications/ Add-Ons or industry solutions
- Number of clients

Key Take Aways

- As each system is highly individual regarding it’s configuration and application data.
- A forecast of runtime and downtime is only possible when analyzing results of an EHP installation test run with representative set of data!
Current Statistics
- SAP Enhancement Package Installer

EHP Installer Statistics for SAP Enhancement Package 4 for SAP ERP 6.0

Median Runtime: 46h
Median Downtime: 7,8h

*This statistic is based on the current evaluation forms referring to test and productive systems where an EHP 4 implementation was performed.
Recommendations on implementation procedure of SAP enhancement packages

**Discovery**

Use Sandbox System to explore new functions, Business Functions are not reversible.

**Installation tactics**

Always combine installation of enhancement package with the installation of the latest Support Package Stack (ABAP). However there are exceptions: Pay attention especially in mixed environments: ABAP/JAVA, e.g. LSO. Minimized downtime with new tool: EHP Installer.

**Preparation**

Read the documentation: The principles and methods to install SAP enhancement packages differ significantly from a traditional release upgrade. Make sure your SAP Solution Manager 7.0 is at the latest patch level (SAP Note 1122966).
Agenda:

1. SAP Enhancement Package Concept
   - The Challenge
   - Improved Software Lifecycle
   - Maintenance

2. Architecture and Technology
   - Switch Framework
   - EHP Installer
   - Technical Facts

3. Implementation Procedure
   - Innovation Management
   - Installation procedure
   - Recommendations

4. Customer Experiences and Summary
   - Project Statistics
   - Key Take Aways
   - Roadmap
   - Services
Benefits of SAP Enhancement Packages
Customer Proof Points

**Innovate - Just in Time**
- Stability and Access to Innovation – activate new functionality on demand.

**Cost reduction**
- Lower effort to install functional enhancements, ideally silent as part of system maintenance
- Easier testing with standard test case templates

‘Within an extremely short timeframe, we managed to implement functional enhancements around Real Estate Management. We went live after only a few weeks.’

Martin Kling, Head of Group Financials, TreuHandStelle GmbH

‘We were delighted that no side effects occurred at all outside the activated new functional capability. The EHP concept allowed us to fulfill requirements years before we will start our next release upgrade. The end-user reactions were very positive and no critical issues occurred.’

Stephan Polster, Project Manager, ThyssenKrupp Steel

‘The implementation of SAP enhancement package 2 for SAP ERP 6.0 was much easier than upgrading a full release. We installed all the software components that we could get in order to be open to implement further innovations at minimized cost at any time.’

Thomas Muhler, Technology Consultant, cormeta ag

‘We implemented enhancement package 2 in order to use the new capabilities for Bank Relationship Management. No critical issues occurred. The implementation was very easy.’

Joerg Engel, System Engineer, Wuerth-Group
# Technical Upgrade Project vs. Enhancement Package Installation

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Upgrades¹</th>
<th>SAP Enhancement Packages²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Duration</td>
<td>Ø 21 weeks</td>
<td>Ø 7 weeks</td>
</tr>
<tr>
<td>Duration of Project Phases in weeks</td>
<td>- 67%</td>
<td>- 50 to 75%</td>
</tr>
<tr>
<td>Preparation: 3 w</td>
<td></td>
<td>Preparation: 1 w</td>
</tr>
<tr>
<td>Blueprint: 3 w</td>
<td></td>
<td>Blueprint: 1 w</td>
</tr>
<tr>
<td>Realization: 8 w</td>
<td></td>
<td>Realization: 2 w</td>
</tr>
<tr>
<td>Prep for cutover: 3 w</td>
<td></td>
<td>Prep for cutover: 1,5 w</td>
</tr>
<tr>
<td>Prod. Cutover &amp; support: 2 w</td>
<td></td>
<td>Prod. Cutover &amp; support: 1 w</td>
</tr>
</tbody>
</table>

Based on current statistics of EHP 2 and EHP 3, enhancement package installations are much faster than upgrade projects.

¹ Based on 140 upgrades from SAP R/3 4.6C to SAP ERP 6.0. Source: Upgrade Experience Database
² Based on 51 enhancement package installations to SAP EHP 2 and 3. Source: Enhancement Package Experience Database
In a nutshell: You CAN deliver Innovation without disruption

1. **Installation With Regular Maintenance**
   - Install EHP combined with Support Package as a maintenance activity - with only minor additional effort.

2. **Minimize your downtime using the new EHP Installer**
   - Plan for some additional technical preparation and execution time.

3. **SAP Enhancement Packages accelerate the adoption of innovation**
   - Select and activate the functionality needed by your business using the Switch Framework.

4. **Use SAP Solution Manager – Maintenance Optimizer**
   - Make sure you update to EHP1 for SAP Solution Manager 7.0 BEFORE starting the implementation.
We follow our roadmaps and keep promises

- SAP Business Suite 7 generally available since May 2009
- EHP concept is proven by high number of 3978 live customers
Service offering:
Enhancement package planning for SAP ERP 6.0

Overview....
- Intensive 2 days onsite workshop
- We plan your EHP installation project & strategy
- Learn from experienced SAP Consultants
- Feel well prepared to start your Implementation project!

Your Benefit:

Project Milestone Plan
- We define a customer specific implementation approach & EHP strategy
- We create an enhancement package project roadmap based SAP’s best practices & proved methodology

Knowledge Transfer
- Getting behind the new technology
- Understand the concept of switchable Business Functions & Technical Usages
- Learn how to use “EHP Installer” Tool

Landscape Dependencies
- Identify technical dependencies of your system landscape
- Outlines critical issues for a smooth Implementation project

Order & Contact Details...
Direct contact: martina.kaplan@sap.com
Service Market Place Link: /UFG
Questions?

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