SAP enhancement package 7 for SAP ERP 6.0

Typographic Conventions

Type Style	Description
Example	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
`EXAMPLE`	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE`	Keys on the keyboard, for example, `F2` or `ENTER`.

⚠ Caution

<Put your caution here>

Example

<Put your example here>

i Note

<Put your note here>

➡ Recommendation

<Put your recommendation here>

Syntax

```
<Put your syntax here>
```

Document History

⚠ Caution

Make sure you use the **current** version of the Application Operations Guide.

The current version of the Application Operations Guide is at service.sap.com/instguides on SAP Service Marketplace.

Version	Date	Change
1.0	2013-07-02	First version of the Application Operation Guide for EHP7 for SAP ERP 6.0

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1 Getting Started

⚠️ **Caution**

This guide does not replace the daily operations handbook that we recommend customers to create for their specific production operations.

1.1 About this Guide

Designing, implementing, and running your SAP applications at peak performance 24 hours a day has never been more vital for your business success than now.

This guide provides a starting point for managing your SAP applications and maintaining and running them optimally. It contains specific information for various tasks and lists the tools that you can use to implement them. This guide also provides references to the documentation required for these tasks, so you will sometimes also need other Guides such as the Master Guide, Technical Infrastructure Guide, and SAP Library.

ℹ️ **Note**

You can find the SAP ERP 6.0 SR3 Solution Operation Guide on SAP Service Marketplace at service.sap.com/instguides →SAP Business Suite Applications → SAP ERP → SAP ERP 6.0 →Operations → Solution Operation Guide SAP ERP 6.0

Target Groups

- Technical Consultants
- System Administrators
- Solution Consultants
- Business Process Owner
- Support Specialist

The application and release mySAP ERP 2005 was associated with product version SAP ERP 2005. SAP ERP 2005 has been renamed SAP ERP 6.0. This guide exclusively refers to the name SAP ERP 6.0, rather than the formerly used name mySAP ERP 2005.

The following table provides an overview of the most important changes in naming:

Release	Former Name	Product Version / Notation in Guide
SAP ERP 6.0	mySAP ERP 2005 / SAP ERP 2005	SAP ERP 6.0
EHP1 for SAP ERP 6.0	SAP enhancement package 1 for SAP ERP 6.0	SAP enhancement package 1 for SAP ERP 6.0
	SAP ERP Enhancement Package 2005.1	
EHP2 for SAP ERP 6.0	SAP enhancement package 2 for SAP ERP 6.0	SAP enhancement package 2 for SAP ERP 6.0
	SAP ERP Enhancement Package 2005.2	
EHP3 for SAP ERP 6.0		SAP Enhancement Package 3 for SAP ERP 6.0
EHP4 for SAP ERP 6.0		SAP Enhancement package 4 for SAP ERP 6.0
EHP4 for SAP ERP 6.0 / NW 7.01		SAP Enhancement package 4 for SAP ERP 6.0 / NW 7.01
EHP5 for SAP ERP 6.0 / NW 7.02		SAP Enhancement package 5 for SAP ERP 6.0 / NW 7.02
EHP6 for SAP ERP 6.0 / NW 7.31		SAP Enhancement package 6 for SAP ERP 6.0 / NW 7.31

1.2   Global Definitions

SAP Application

A SAP application is an SAP software solution that serves a specific business area like ERP, CRM, PLM, SRM, and SCM.

Business Scenario

From a microeconomic perspective, a business scenario is a cycle, which consists of several different interconnected logical processes in time. Typically, a business scenario includes several company departments and involves with other business partners. From a technical point of view, a business scenario needs at least one SAP application (SAP ERP, SAP SCM, or others) for each cycle and possibly other third-party systems. A business scenario is a unit which can be implemented separately and reflects the customer's prospective course of business.

Software Component

A component is the smallest individual unit considered within the Solution Development Lifecycle; components are separately produced, delivered, installed and maintained.

1.3   Important SAP Notes

⚠️ Caution

Check regularly for updates available for the Application Operations Guide.

Important SAP Notes

SAP Note Number	Title	Comment
998833	Release Restrictions SAP ERP 6.0 - Enhancement Packages	Describes limitations of SAP enhancement packages for SAP ERP 6.0
1066110	Composite SAP note: Available SAP Lib. DVDs & download packs	Describes how to install an SAP Library on your customer server.
1737650	EHP7 for SAP ERP 6.0 SP Stacks - Release & Information Note	Contains information and references to notes for applying Support Package (SP) Stacks of SAP Enhancement Package 7 for SAP ERP 6.0
1818596	Enhancement package 7 for SAP ERP 6.0: Required SWC	Contains installation information for SAP EHP7
1816819	Dual Stack support for Suite7i2013	Important information on dual-stack support
1359215	Technical prerequisites for using enterprise services	You are using or intend to use Enterprise Services provided with SAP Business Suite
1826531	Add-on compatibility of SAP NetWeaver 7.4 - ABAP	You plan to run 'SAP NetWeaver 7.4 - ABAP' as platform for 'SAP Business Suite i2013 (EhP7)' product versions together with ABAP Add-Ons on the same system. Which points do you need to consider?
1514967	SAP HANA: Central Note	SAP HANA Appliance Software SAP HANA Database

SAP Note Number	Title	Comment
1865866	SAP enhancement package 7 for SAP ERP 6.0 - HANA	SAP HANA Appliance Software and SAP HANA Database on EhP7
1847953	EHP7 for SAP ERP 6.0 - HANA Content Activation	SAP HANA Content activation - additional information
1732276	High availability limitations of HANA database	Describes current restrictions of failover scenarios in HANA database.
1784475	Solution Manager Content for SAP NetWeaver AS ABAP 7.4	Contains information about the documentation of the technical configuration of SAP NetWeaver Application Server ABAP 7.4.

2 Technical System Landscape

EHP7 for SAP ERP 6.0 consists of various technical components, each representing a particular function as described in the Master Guide for SAP enhancement package 7 for SAP ERP 6.0.

i Note

You can find the current version of the Master Guide for SAP enhancement package 7 for SAP ERP 6.0 on SAP Service Marketplace at service.sap.com/instguides → SAP Business Suite Applications → SAP ERP → SAP ERP 6.0 → SAP enhancement packages for SAP ERP 6.0 → SAP enhancement package 7 for SAP ERP 6.0 → Master Guide- SAP enhancement package 7 for SAP ERP 6.0.

Purpose of the Master Guide for SAP enhancement package 7 for SAP ERP 6.0

The master guide provides a central starting point for the technical implementation of the enhancement packages for SAP ERP. It outlines the basic idea of the enhancement package concept and provides an insight into the overall implementation procedure.

To ensure a smooth technical implementation, the master guide helps you to find further information and links to related documents that outline business processes, scenarios, and software units. Getting a clear picture of the implementation procedure will help you to plan and prepare all required steps of your project. Keep in mind that additional software dependencies, which are not mentioned explicitly in the present document, might exist. These dependencies are described in notes which are linked in the installation and configuration guides.

- For a general overview of the available SAP documentation, see The Main SAP Documentation site at

http://help.sap.com

2.1 Business Functions

To run an individually configured SAP system it is useful to know which Business Functions are active in the system. You can display all active Business Functions using the transaction SFW5.

- Each specific business function of EHP7 FOR SAP ERP 6.0 includes distinct software components.

⚠ Caution

For current information about the business functions and for further information, see SAP Note 1818596.

2.2 Related Documentation

The following table lists where you can find more information about the technical system landscape.

Error! Reference source not found.   SAP enhancement package 7 for SAP ERP 6.0

10   © 2012 SAP AG. All rights reserved.   **Technical System Landscape**

Topic	Guide/Tool	Quick Link on SAP Service Marketplace (service.sap.com)
Information about business and technical aspects of SAP ERP including news, services, events, demos, education, and workshops	Master Guide	erp
Comprehensive information about the installation and upgrade of SAP ERP	Master Guide	erp-inst
Tailored information to facilitate the preparation of the upgrade decisions and the execution of the upgrade project	Master Guide	erp-upgrade
Sizing	Quick Sizer Tool	sizing
Detailed information about the technical system landscape of EHP7 for SAP ERP 6.0	Master Guide	instguides → SAP Business Suite Applications → SAP ERP → SAP ERP 6.0 → SAP enhancement packages for SAP ERP 6.0 → SAP enhancement package 7 for SAP ERP 6.0
Information about the application and integration platform SAP NetWeaver	Master Guide	netweaver
Security	Security Map	security
SAP Master Data Governance	Operations Guide	instguides → SAP Business Suite Applications → SAP Master Data Governance → SAP Master Data Governance (ERP 6.0 EHP07)

3 Monitoring of EHP7 for SAP ERP 6.0

Within the management of SAP Technology, monitoring is an essential task. A section has therefore been devoted solely to this subject.

Generally, all ERP applications use the NetWeaver technology for all monitoring tasks. Only specialties are described in detail in this guide.

You can find more information about the underlying technology in the "SAP NetWeaver Administrator's Guide – Technical Operations Manual" in the SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operations for SAP NetWeaver.

3.1 Alert Monitoring with CCMS

Proactive, automated monitoring is the basis for ensuring reliable operations for your SAP system environment. SAP provides you with the infrastructure and recommendations needed to set up your alert monitoring to recognize critical situations for SAP Product Lifecycle Management as quickly as possible.

SAP enhancement package 7 for SAP ERP 6.0is based on SAP NetWeaver technology, so you can use standard SAP NetWeaver monitoring tools. This includes the Computing Center Management System (CCMS). With the monitoring architecture of the CCMS, SAP provides an infrastructure with which you can monitor your IT landscape centrally. The monitoring architecture is delivered with every SAP NetWeaver Application Server. The architecture runs on every SAP NetWeaver Application Server and can be extended to include additional SAP and non-SAP components. The concept of the monitoring architecture is to make all required information available in a central monitoring system, such as alerts or log files.

In the Alert Monitor, you can find a number of monitor sets delivered by SAP. These contain the most important monitors that allow you to easily monitor your IT landscape. The SAP CCMS Monitor Templates monitor set contains the most important monitors for your daily monitoring tasks. For SAP ERP, a set of templates with the name "SAP ERP Monitor Templates" is available. You can either use the monitors from this set directly or as templates for your own monitors.

> ⅰ Note
>
> For more information about the CCMS, see SAP Help Portal at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information →Technical Operations for SAP NetWeaver → Administration of Application Server ABAP

3.1.1 Monitoring Installation and Setup

In order to enable the auto-alert mechanism of CCMS, see SAP Note 617547.

3.1.2 Detailed Monitoring and Tools for Problem and Performance Analysis

The technology of SAP Product Lifecycle Management is based on SAP NetWeaver 7.0. For more information about technical problem analysis (such as with a database, the operating system, or workload analysis), see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide.

3.1.3 Component-Specific Monitoring for SAP Product Lifecycle Management (PLM)

There are no additional CCMS monitor templates specific for SAP Product Lifecycle Management. However, we recommend that you monitor the RFC connections between an SAP PLM system in a demilitarized zone (DMZ) and within a firewall (see section Technical System Landscape). You can use the SAP CCMS monitor templates in the SAP CCMS Monitor Sets transaction (transaction code RZ20) and SAP NetWeaver tools for monitoring RFC connections. For more information about monitoring RFC connections, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → Administration of SAP NetWeaver Systems → SAP NetWeaver Gateway Foundation Technical Operations Guide

The SAP Product Lifecycle Management user interface is an ABAP Web Dynpro application. For more information about monitoring ABAP Web Dynpro applications, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → Administration of SAP NetWeaver Systems → AS ABAP (Application Server ABAP) → Administration → Web Dynpro ABAP Administration.

If you use TREX in your system landscape, you can also use monitoring tools specific for TREX. For more information, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → Administration of SAP NetWeaver Systems → AS ABAP (Application Server ABAP) → Administration of Standalone Engines → Search and Classification (TREX) → Monitoring.

Business Context Viewer (BCV) is an analytic application that does not produce actively used data. For this reason, there is no need for CCMS monitoring or alerts.

3.1.4 Component Specific Monitoring for SAP FS-CM

There are no additional CCMS monitor templates specific for SAP FS-CM.

However, we recommend that you monitor the RFC connections between SAP FS-CM and SAP FS-PM. A description how to maintain RFC connections is available in the SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → Administration of SAP NetWeaver Systems → SAP NetWeaver Gateway Foundation Technical Operations Guide

Trace and Log Files

Logging and tracing for ABAP components is done using transaction SLG1. An Application Log comprises a log header and a set of messages. The log header contains general data (type, created by/on, etc.). Each log in the database also has the attributes Object and Sub object. These attributes describe the application which wrote the log, and classify this application. This guide outlines new categories and sub-categories for logs that have been established with EHP7 for SAP ERP 6.0 only.

3.1.5   Log objects for IS-Oil and IS-PRA

IS-Oil and IS-PRA provide the following log objects, accessible in transaction SLG1:

Component	OBJECT	SUBOBJECT	SUBOBJTXT
IS-Oil	OI0_CROSS	CONS	Logs from consistency reports/tools
IS-Oil	OI0_CROSS	XPRA	Various XPRA logs if necessary (optional use)
IS-Oil	OIG_MASSPROCESS	1	IS-OIL TD: Shipment mass processing with ROIGTRSL
IS-Oil	OIJ	NOM1	Nomination
IS-Oil	OIJ	TICKET	Ticket
IS-Oil	OIR_PROCESS_CONTROL	CMP1	Complaint processing
IS-Oil	OIR_PROCESS_CONTROL	FM01	Fuels meter readings
IS-Oil	OIR_PROCESS_CONTROL	FM02	Fuels meter readings: Clear
IS-Oil	OIR_PROCESS_CONTROL	FPR1	Fuels Pricing
IS-Oil	OIR_PROCESS_CONTROL	FPR2	Fuels Price check results
IS-Oil	OIR_PROCESS_CONTROL	FS01	Fuels dip readings
IS-Oil	OIR_PROCESS_CONTROL	FS02	Fuels dip readings: Clear
IS-Oil	OIR_PROCESS_CONTROL	FS03	Fuels stocks
IS-Oil	OIR_PROCESS_CONTROL	IS01	SSP Invoicing
IS-Oil	OIR_PROCESS_CONTROL	MM01	Material movements based on meter readings
IS-Oil	OIR_PROCESS_CONTROL	MM02	Material movements based on dip readings
IS-Oil	OIR_PROCESS_CONTROL	PC01	Payment card transaction upload
IS-Oil	OIR_PROCESS_CONTROL	PC02	Clearing house settlement/transmission
IS-Oil	OIR_PROCESS_CONTROL	PC03	PC Reconciliation upload
IS-Oil	OIR_PROCESS_CONTROL	PC04	PC Reconciliation run
IS-Oil	OIR_PROCESS_CONTROL	PRN1	SSR Print Processing
IS-Oil	OIR_PROCESS_CONTROL	PRNL	Location based collective output
IS-PRA	OIU	CA	Contract Allocation

IS-PRA	OIU	PC	Product Control
IS-PRA	OIU	PR	Production volume allocation
IS-PRA	OIU	REP_MMS_2014	Reporting - MMS-2014
IS-PRA	OIU	REP_REG	Regulatory Reporting
IS-PRA	OIU	VL	Valuation
IS-PRA	OIU	XX	Default heading
IS-PRA	OIUX3	STEP_LOG	Reporting Step Log
IS-OIL	OI_PROPT	MARKET_COST	
IS-OIL	OI_PROPT	OWN_PRICE	
IS-OIL	OI_PROPT	SALES_VOLUME	

3.1.6   Log objects for Global Trade Management

Global Trade Management (EA-GLTRADE) provides the application log "Trading Contract Synchronization". To access this application log in transaction SLG1, enter object WB2_SYNC. No sub object is defined for it.

Component	OBJECT	SUBOBJECT	TXT
LO-GT-TC	WB2_SYNC		Trading Contract Synchronization

The 'External Identification' field contains the name of the queue for which the log was created. Once the errors are fixed, you can restart the queues in transaction SMQ1 (qRFC Monitor).

Reversely, you can also select the erroneous queues in transaction SMQ1 and then display the logs for those queues using transaction SLG1. To display the queues enter the queue name in the field "External Identification" and choose object WB2_SYNC.

We recommend that you do not to use any time restrictions. You can select the erroneous queues in transaction SMQ1 by using the following generic search parameters for the queue names:

Completely generic:	WB2_TC_*
Generic for purchase side:	WB2_TC_M*
Generic for sales side:	WB2_TC_V*

Single document on purchase side: WB2_TC_M_xxx, -> xxx is used for the document number (leading zeroes have to be considered)

Single Document on sales side: WB2_TC_V_xxx, → xxx is used for the document number (leading zeroes have to be considered)

Creation of Chargeback Requests by Using Post Processing Framework

In Compensation Management (component LO-GT-CHB) you can create chargeback requests by using the Post Processing Framework. Depending on your Customizing settings in Compensation Management (Logistics General ->Global Trade Management->Compensation Management->Condition Contract->Define and Configure Actions), chargeback requests are automatically created in a synchronous or asynchronous way when the document is saved, or manually by calling up report RSPPFPROCESS. The processing status is tracked in the log of the Post Processing Framework. To select actions with processing errors, go to transaction WCB_SPPFP, set the processing time to initial and select action status 2. After execution, the system displays all actions with processing errors. The processing log helps you to analyze the cause of the error.

To select actions that have not been processed yet, select actions status 0. Adding the creation date as an additional search parameter allows you to find successful actions that have not been processed for a long period of time.

Component	Object	Sub object	Text
LO-GT-TC	WBGT		Global Trade

Log Object: WBGT

Program name: WB2_BATCH_CLASS_TC_SYNC

External ID: WB2_BTC_xxx_yyy (xxx = trading contract number including leading zeroes, yyy = time stamp)

There could be qRFC entries that you can find in transaction SMQ1. These entries have the following queue name: WB2_BTC_xxx (xxx = trading contract number including leading zeroes)

3.1.7   Log objects for SAP FS-CM ABAP

Object: ICL_LOT2GL - Post Reserves to Financial Accounting

This log is used in the report ICL_CF_LOT2GL.

This report is accessible from the easy access menu → Insurance → Claims Management → Claim → Routine Interface Processes → Post reserves to Financial Accounting.

Log is saved.

Object: ICL_RES2LOT - Reserve Lot

This log is used in the report ICL_CF_CASE_RESERVE2LOT.

This report is accessible from the easy access menu → Insurance → Claims Management → Claim → Routine Interface Processes → Transfer claim reserves to Lot.

Log is saved.

Object: ICL_RTM - Claims Processing - Runtime Analyses

This log is used when Enterprise Search/BRF/BRFplus performance trace is turned on using the checkpoint group ICL_PERFORMANCE_DISPLAY in direct input mode or batch mode.

Error! Reference source not found.   SAP enhancement package 7 for SAP ERP 6.0

16   © 2012 SAP AG. All rights reserved.   **Monitoring of EHP7 for SAP ERP 6.0**

Log is saved.

Object: ISCMCLAIM – Claims

Sub Object: OUTBOUND - Outbound Interface

Sub Object: POLICYSNAPSHOT - Policy Snapshot

Sub Object: RBPOM - Role-Based Performer (Automatic Assignment via HR - Organization Management)

Sub Object: RI - Reinsurance interface

Object : ICL_VCST - Activation of Versioned Customizing per Switch Framework

3.1.8 Log objects for SAP ERP Financial Accounting and Operations

Logging and tracing for ABAP components is done using transaction SLG1. An Application Log comprises a log header and a set of messages. The log header contains general data (type, created by/on, etc.). Each log in the database also has the attributes Object and Sub-object. These attributes describe the application which wrote the log, and classify this application. The SAP ERP Financial Accounting and Operations uses the following log object and sub-object:

Log object: FI_LOC_CN (UI Update for China)

Sub-object: BJPRINT (Background Printing)

3.1.9 Log objects for SAP Product Lifecycle Management (PLM)

3.1.9.1 Trace and Log Files

Trace files and log files are essential for analyzing problems. SAP Product Lifecycle Management uses SAP NetWeaver tools for tracing and logging. There are no SAP PLM specific trace and log files. For more information about tracing and logging with SAP NetWeaver tools, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver by Key Capability → Solution Lifecycle Management by Key Capability → System Management → Tools for Monitoring the System → Trace Functions.

3.1.9.2 Workload Monitors

SAP Product Lifecycle Management uses the standard NetWeaver workload monitor. For more information, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP

Library → English → SAP NetWeaver Library → Technical Operation Manual → Administration of SAP NetWeaver
Systems → AS ABAP (Application Server ABAP) → Monitoring → Tools → Workload Monitor.

3.1.9.3   Interface Monitors

Interface monitors are essential for analyzing problems with interfaces such as RFC, IDoc, and HTTP. If you create
RFC connections for running your SAP PLM system landscape, use standard SAP NetWeaver tools for monitoring
these RFC connections. For more information, see SAP Help Portal at http://help.sap.com → SAP NetWeaver →
SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → Technical
Operation Manual → Administration of SAP NetWeaver Systems → AS ABAP (Application Server ABAP) →
Administration → Connectivity → RFC Administration.

3.2   Data Growth and Data Archiving Monitors

SAP enhancement package 7 for SAP ERP 6.0uses the standard tools for archiving and monitoring data archiving
available in SAP NetWeaver, and does not require an application-specific tool. For more information, see the
following sources:

help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → SAP NetWeaver 7.0 Library → English → SAP
NetWeaver Library → SAP NetWeaver by Key Capability → Solution Life Cycle Management by Key Capability →
Data Archiving (CA-ARC)

help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → SAP NetWeaver 7.0 Library → English → SAP
NetWeaver Library → SAP NetWeaver by Key Capability → Solution Life Cycle Management by Key Capability →
Solution Monitoring → Monitoring in the CCMS → Data Archiving Monitor

3.2.1   Archiving for SAP FS-CM

FS-CM data can be archived using the archiving engine (AR_ENGINE).

Following scenarios can be archived.

1) ICLCLAIM: Claim

2) ICLECCEVT: Claim Bundle

3) ICLINDRES: Reserve Lot

4) ICLSC: Benefits Catalog

Fastest growing FS-CM object is ICLCLAIM.

3.2.2 Archiving for SAP ERP Financial Accounting and Operations

The following archiving procedures are required:

- Archiving Financial Accounting Verification Documents with FI_VERDOC

- Performing Archiving Object-Specific Customizing of FI_VERDOC

- Defining Write Variant for FI_VERDOC

- Dependencies of FI_VERDOC

- Displaying Financial Accounting Verification Document Archived with FI VERDOC

For more information about the individual archiving procedures, see SAP Library for SAP ERP Financial Accounting and Operations at help.sap.com/erp-addons.

3.2.3 Archiving for SAP Product Lifecycle Management (PLM)

3.2.3.1 Data Growth and Data Archiving Monitors

The following tables are the fastest growing tables in SAP Product Lifecycle Management:

Fastest Growing Tables in SAP Product Lifecycle Management

Technical Name of Table	Description
/PLMB/AUTH_OBSID	The table contains assignments of business objects (for example, materials) to access control contexts.
/PLMB/AUTH_UGSID	The table contains assignments of users and user groups to contexts.
/PLMB/AUTH_SIDRP	This is an SAP ECC table. Monitor this table closely, too, if you use Product Lifecycle Management.

These tables are only filled if you use access control management.

Use the archiving object /PLMB/SID to archive this data.

For periodic tasks required to contain data growth (that is, to reorganize temporary data), see the Periodic Tasks section in this guide.

3.2.4 Archiving for SAP ICM

Business Transaction Exit numbers: CACS1900, CACS1901, CACS2900, CACS2901.

Function modules providing the sample implementations:-

CACS00_SAMPLE_ITF_1900

CACS00_SAMPLE_ITF_1901

CACS00_SAMPLE_ITF_2900

CACS00_SAMPLE_ITF_2901

Place of Archive Files:

Content repository defined for Archiving in transaction AOBJ .Default provided by SAP: A7

3.2.4.1 Data Consistency

When you work in a system landscape with one SAP Product Lifecycle Management system installed in a demilitarized zone (DMZ) and another SAP Product Lifecycle Management system serving as back-end system, you need to make sure that users in both systems are synchronized. This means that users working with the SAP Product Lifecycle Management system in the DMZ need identical users in the SAP Product Lifecycle Management back-end system. Use central user management to make sure the users are synchronized. For more information about user administration, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ Application Help → SAP Library → English → SAP NetWeaver Library → Technical Operation Manual → General Administration Tasks → Security and User Administration → User Administration and Identity Management → User Administration and Identity Management in ABAP Systems.

4 Management of SAP enhancement package 7 for SAP ERP 6.0

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation.

You can find more information about the underlying technology in the Technical Operations Manual in the SAP Library under SAP NetWeaver.

4.1 Starting and Stopping

When you start SAP NetWeaver, you start the system database, the application servers, and the respective processes of which the system consists.

You can find general information on starting and stopping of SAP NetWeaver based systems at
http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver Library Administrator's Guide → Technical Operations Manual for SAP NetWeaver → General Administration Tasks → Starting and Stopping SAP NetWeaver ABAP and Java

4.1.1 Starting and Stopping for SAP Product Lifecycle Management

When you start your SAP Product Lifecycle Management system, make sure you follow the order below:

Start and Stop Sequences and Tools

Software Component	Start and Stop Sequences and Tools		
	Start Sequence1	Tool	Detailed Description
SAP ERP	1	STARTSAP/ STOPSAP (Unix) Microsoft Management Console (Windows)	For more information, see the SAP NetWeaver Technical Operations Manual → General Administration Tasks → Starting and Stopping SAP NetWeaver ABAP and Java.

SAP Product Lifecycle Management Add-On	2	STARTSAP/ STOPSAP (Unix) Microsoft Management Console (Windows)	For more information, see the SAP NetWeaver Technical Operations Manual → General Administration Tasks → Starting and Stopping SAP NetWeaver ABAP and Java.

1The stop sequence is in reverse order to the start sequence.

If you work with a system landscape with SAP Product Lifecycle Management running in a DMZ and as a back-end system, make sure you stop the SAP Product Lifecycle Management system in the DMZ first before stopping the back-end system. When you start the systems, start the back-end system first before you start the SAP Product Lifecycle Management system in the DMZ.

4.2 Software Configuration

This chapter explains which components or scenarios used by this application are configurable and which tools are available for adjusting.

Component Configuration Tools

Component	Configuration Tool(s)	Description
SAP ERP	Implementation Guide (IMG)	The IMG is the standard SAP tool for ABAP-based system used for Component Customizing.
SAP ERP	SAP Solution Manager	SAP Solution Manager is the standard SAP tool for process- and scenario-based configuration.
SAP Product Lifecycle Management	Implementation Guide (IMG)	The IMG is the standard SAP tool for ABAP-based system used for Component Customizing.
SAP Product Lifecycle Management	SAP Solution Manager	SAP Solution Manager is the standard SAP tool for process- and scenario-based configuration.
Environment, Health and Safety	Implementation Guide (IMG)	The IMG is the standard SAP tool for ABAP-based system used for Component Customizing.
Environment, Health and Safety	SAP Solution Manager	SAP Solution Manager is the standard SAP tool for process- and scenario-based configuration.

4.3 Backup and Restore

You need to back up your system landscape regularly to ensure that you can restore and recover it in case of failure.

The backup and restore strategy for SAP enhancement package 7 for SAP ERP 6.0consists of two parts:

- Backup and restore coverage for each component (see table below)
- Cross-system data dependencies and handling

The backup and restore strategy for your system landscape should not only consider SAP systems but should also be embedded in overall business requirements and incorporate your company's entire process flow. In addition, the backup and restore strategy must cover disaster recovery processes, such as the loss of a data center through fire. It is most important in this context that you ensure that backup devices are not lost together with normal data storage (separation of storage locations).

Category of System Component	Category Properties	Suggested Methods for Backup and Restore	Example
I	Only software, no configuration or application data	- No backup, new installation in case of a recovery or - Initial software backup after installation and upgrade - Backup of log files	BDOC modeler
II	Only software and configuration information, no application data	- Backup after changes have been applied or - No backup, new installation and configuration in case of a recovery - Backup of log files	- SAP Gateway Comm. Station - SAP Business Connector - SAP IPC (2.0C)
III	Only replicated application data, replication time is sufficiently small for a recovery	Data: - No data backup needed - Backup of software, configuration, log files	- SAP IMS/Search Engine - SAP IPC (2.0B) - Webserver - SAP ITS
IV	Only replicated application data, backup recommended because replication time is too long, data not managed by a DBMS	Data: - Application specific file system backup or - Multiple instances - Backup of software, configuration, log files	- SAP IMS/Search Engine - Webserver
V	Only replicated application data, backup recommended because replication time is too long, data managed by a	Data: - Database and log backup or - Multiple instances - Backup of software, configuration, log files	- SAP IPC (2.0B) - Catalog Server

Category of System Component	Category Properties	Suggested Methods for Backup and Restore	Example
	DBMS		
VI	Original application data, standalone system, data not managed by a DBMS	Data: • Application specific file system backup • Backup of software, configuration, log files	Webserver
VII	Original application data, standalone system, data managed by a DBMS, not based on SAP WebAS	Data: • Database and log backup • Backup of software, configuration, log files	—
VIII	Original application data, standalone system, based on SAP WebAS	Data: • Database and log backup, application log backup (such as job logs in file system) • Backup of software, configuration, log files	Standalone SAP R/3
IX	Original application data, data exchange with other systems, data not managed by a DBMS	Data: • Application specific file system backup, data consistency with other systems must be considered • Backup of software, configuration, log files	—
X	Original application data, data exchange with other systems, data managed by a DBMS, not based on SAP WebAS	Data: • Database and log backup, data consistency with other systems must be considered • Backup of software, configuration, log files	• SAP liveCache • SAP Mobile Workbench
XI	Original application data, data exchange with other systems, based on SAP WebAS	Data: • Database and log backup, application log backup (such as job logs in file system), data consistency with other systems must be considered • Backup of software, configuration, log files	• SAP R/3 • SAP CRM • SAP APO • SAP BW

You can find general information on backup and restore of SAP NetWeaver based systems at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operations for SAP NetWeaver

4.3.1 Backup and Restore for SAP FS-CM

FS-CM is based on AS ABAP and uses BI, PI. Use the standard SAP NetWeaver tools to backup and restore.

In addition, FS-CM application data can be archived and restored using the archiving engine (Transaction: AR_ENGINE).

Refer to section 3.2.1 on FS-CM archiving scenarios.

4.4 Periodic Tasks

4.4.1 Scheduled Periodic Tasks

This chapter describes all automatable tasks required to run periodically in order to keep the application running smoothly over time. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping in the chapter Scenario / Component Matrix above. Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

For each component that requires periodical tasks to be scheduled list all relevant tasks (typically background jobs) per component in a component table below or refer to documentation where these tasks are already well documented.

Additionally for each business scenario that requires specific periodical tasks list and describe them within the Scenario specific tasks table below.

4.4.2 Periodic Tasks for SAP Product Lifecycle Management

SAP Product Lifecycle Management uses the standard tools and procedures based on SAP NetWeaver ABAP technology. For more information about periodic tasks, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operation Guide.

Scenario-Specific scheduled Periodic Tasks

Required for scenario(s)	Program Name/Task	Task scheduling tool	Recommended Frequency	Detailed Description

PLM Authorization Checks	/PLMB/R_UPDATE_RT_FROM_CP	Transaction SM36	5 minutes - once per day	This report transforms changes to access control contexts or user groups to data base tables that are used by the PLM authorization check. It must be scheduled as a regularly running batch job. Its frequency determines how fast changes to user groups and access control contexts take effect for PLM authorization checks.
PLM Authorization Checks	SBAL_DELETE	Transaction SM36	Weekly	This report deletes old log entries. It should be scheduled regularly to ensure that log entries from report /PLMB/R_AUTH_UPDATE_RT_FROM_CP are deleted when they have reached their expiry date.
PLM Authorization Administration	/PLMB/R_DEL_CTXT_BO_ASSNGNMT	Transaction SM36	Once a day or depending on archiving runs	This report checks for assignments of contexts to objects that have been archived and deleted recently. The report removes those assignments.

4.4.3   Manual Tasks for SAP Product Lifecycle Management

This chapter describes all manual tasks required to run periodically in order to keep the application running smoothly over time. A manual task needs a person to execute, in contrast to the scheduled tasks listed above, which can be automated using a task scheduler program. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping in the chapter Scenario/Component Matrix above. Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Scenario-specific manual tasks

Required for scenario(s)	Task	Tool(s) supporting	Recommended Frequency	Detailed Description

		this task		
Check for duplicate user groups	/PLMB/R_DUPLICATE_USRGRPS	Transaction SM6	On demand	This report can be used to check for duplicate user groups.

4.5   Load Balancing

SAP enhancement package 7 for SAP ERP 6.0uses the standard functionality of SAP NetWeaver for logon and load balancing. For more information on load balancing, see SAP Service Marketplace at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operation Guide → General Administration Tasks → High Availability → Network High Availability → Web Server Networks and DMZs

4.6   User Management

EHP7 for SAP ERP 6.0 uses the standard functionality of SAP NetWeaver for user management, such as creating users with transaction SU01 and creating and using roles with transaction PFCG. For more information on user management, see SAP Service Marketplace at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operation Guide → General Administration Tasks → Security and User Management

4.6.1   User Management for SAP Product Lifecycle Management

User management for the PLM uses the mechanisms provided by the SAP NetWeaver Application Server ABAP, for example, tools, user types, and password policies. For an overview of how these mechanisms apply for the PLM, see sections User Management and User Administration and Authentication in the Product Lifecycle Management Security Guide on SAP Service Marketplace at http://service.sap.com/securityguide.

For more information about user management in the Portal, see SAP Help Portal at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver by Key Capability → Portal → Portal Administration Guide → User Administration.

Product Lifecycle Management is integrated with SAP NetWeaver Identity Management. For an overview of the information necessary for operating SAP NetWeaver Identity Management, see the Identity Center - Operations Guide available on SAP Help Portal at http://help.sap.com/nw74 → SAP NetWeaver Identity Management 7.1.

5   High Availability

EHP7 for SAP ERP 6.0 follows the general high availability concept for all SAP NetWeaver based systems. For more information on high availability, see SAP Service Marketplace at help.sap.com →SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operation Guide → General Administration Tasks → High Availability

If you plan to implement High Availability EHP7 for SAP ERP 6.0 application, please get in contact with your hardware partner to set up the High Availability scenario.

5.1.1   High Availability for SAP Product Lifecycle Management

SAP Product Lifecycle Management is part of SAP ERP, which means that all high availability measures for SAP ERP also apply for SAP PLM. In particular, you can protect SAP Product Lifecycle Management from downtimes using redundancy approaches such as installations on at least two different runtime environments or physical machines. A load balancing or dispatching mechanism ensures that in case of a downtime of one runtime or physical machine the remaining ones can handle all requests.

When a machine running SAP ERP crashes, users who are logged on to the SAP Product Lifecycle Management Web user interface get error messages that the connection to SAP ERP has been lost.

If you plan to implement High Availability in your EHP7 for SAP ERP 6.0 application, please get in contact with your hardware partner to set up the High Availability scenario.

Please check also note 1732276 for current High availability limitations of HANA database.

For more information, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → General Administration Tasks →High Availability → SAP NetWeaver AS ABAP → High Availability or SAP NetWeaver AS JAVA → High Availability.

6 Software Change Management

Software Change Management standardizes and automates software distribution, maintenance, and testing procedures for complex software landscapes and multiple software development platforms. These functions support your project teams, development teams, and application support teams.

The goal of Software Change Management is to establish consistent, solution-wide change management that allows for specific maintenance procedures, global rollouts (including localizations), and open integration with third-party products.

This section provides additional information about the most important software components.

6.1 Transport and Change Management

For transport and change management issues, the procedures of SAP NetWeaver apply for EHP7 for SAP ERP 6.0. For more information, see the Technical Operations Manual for SAP NetWeaver on SAP Help Portal at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver Library Administrator's Guide → Technical Operations Manual for SAP NetWeaver → Administration of SAP NetWeaver Systems → AS ABAP (Application Server ABAP) → Software Logistics → Transport and Change Management

6.1.1 Transport and change management for SAP Product Lifecycle Management

SAP Product Lifecycle Management uses the transport and change management in SAP NetWeaver. This means that changes to configuration and programs are recorded and transported with the transport and change management. For more information about transport and change management in SAP NetWeaver systems, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4→ System Administration and Maintenance Information → Technical Operation Guide → Administration of SAP NetWeaver Systems → AS ABAP (Application Server for ABAP) → Software Logistics → Transport and Change Management.

You can use SAP Product Lifecycle Management with more than one client.

If you use an SAP Product Lifecycle Management system in a demilitarized zone (DMZ) and another SAP Product Lifecycle Management system as back-end system, note the following restrictions:

* Make sure that the DMZ system runs with exactly one SAP Product Lifecycle Management back-end system.
* Make sure that the DMZ system and the back-end system have the same support packages.

6.2 Development Requests and Development Release Management

The standard procedures of SAP NetWeaver apply. See the Technical Operations Manual for SAP NetWeaver on SAP Help Portal at help.sap.com com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver Library Administrator's Guide → Technical Operations Manual for SAP NetWeaver

6.3 Support Packages and Patch Implementation

We recommend that you implement Support Package Stacks (SP-Stacks), which are sets of Support Packages and patches for the respective product version that must be used in the given combination.

You can find detailed information about the availability of SP-Stacks for EHP7 for SAP ERP 6.0 on the SAP Service Marketplace at service.sap.com/sp-stacks. Please read the corresponding Release and Information Notes (RIN) before you apply any Support Packages or Patches of the selected SP Stack.

For more information about the implementation of support packages as well as possible side effects, see service.sap.com/patches -> SAP Support Packages in detail.

For more information about the tools necessary for implementing patches, see the Technical Operations Manual for SAP NetWeaver on SAP Help Portal at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver Library Administrator's Guide → Technical Operations Manual for SAP NetWeaver → General Administration Tasks → Software Logistics (Overview)

6.3.1 Support packages for SAP Product Lifecycle Management

You can use SAP Solution Manager Maintenance Optimizer for applying Support Packages and Patches. Available Support Packages are listed in the Software Distribution Center (SWDC). If you enter through the SAP Developer Network (SDN), the system takes you automatically to the SWDC for the download. Of course, you can also search for the business packages directly in the SWDC. To do this, open the page http://service.sap.com/swdc. There you can find the business packages directly in the solution in question at Download → SAP Support Packages and Patches → Entry by Application Group.

In the Support Pack Stack Product Lifecycle Management uses NetWeaver 7.40.

You can use the SAP Note assistant to implement SAP Notes in all Product Lifecycle Management components.

6.4 Release and Upgrade Management

Following SAP ERP 6.0 SAP delivers new functions through enhancement packages. With SAP enhancement packages, you can install and activate new functions driven by your business needs without performing a system upgrade. The enhancement package installation requires two different tools – SAP Solution Manager Maintenance Optimizer and the Enhancement Package Installation tool.

As before, corrections are available in Support Packages. SAP provides Support Packages on a regular basis during the defined maintenance period. In parallel, SAP provides equivalent Support Packages for enhancement packages. You must install parts of the enhancement packages in combination with the latest available Support Packages. This approach reduces installation, modification adjustment, and testing effort. Using this strategy, SAP enhancement packages can be installed as a normal maintenance activity together with Support Packages.

For more information system landscape and installation, see the Master Guide for EHP7 for SAP ERP 6.0 on SAP Service Marketplace at

service.sap.com/instguides → SAP Business Suite Applications → SAP ERP → SAP ERP 6.0 → SAP enhancement packages for SAP ERP 6.0 → SAP enhancement package 6 for SAP ERP 6.0

7 Troubleshooting

7.1 Problem Analysis Guide (PAG)

Please note that not for all components part of EHP7 for SAP ERP 6.0, detailed troubleshooting information is available. For all WebAS based applications we advise you to have a look at the Problem Analysis Guide (PAG) that can be found at help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → SAP NetWeaver Library → Administrator's Guide → Technical Operations Manual for SAP NetWeaver -> General Administration Tasks → Troubleshooting for SAP Web Application Server

The PAG contains a list of problem analysis scenarios which describe all activities and their sequence in order to analyze a problem which might occur with SAP NetWeaver TM (NW).

The description of each activity contains:

- A list of the necessary tools or programs as well as the steps in the tools, if necessary
- A description of the problem-specific content semantics (e.g. log or trace messages)

    Problem analysis scenarios (PAS) can cover cases of either error analysis or performance analysis.

    In addition, there can be both component and scenario-oriented PAS:

- Component-oriented PAS

    Error and performance analysis within single NW components (e.g. XI) or sub-components
    (e.g. XI-AF)

- Scenario-oriented PAS

    Error and performance analysis within NW scenarios (e.g. broadcasting)

7.1.1 Troubleshooting for SAP Product Lifecycle Management

If errors occur during the operation of the PLM Web UI applications, we recommend that you create a CSS ticket under the corresponding application component (they all start with PLM-WUI*).

For more information about how to operate SAP NetWeaver Enterprise Search, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 7.4 → Application Help → SAP Library → English → SAP NetWeaver Library → Function-Oriented View → Search → SAP NetWeaver Enterprise Search.

8 Support Desk Management

Support Desk Management enables you to set up an efficient internal support desk for your support organization that seamlessly integrates your end users, internal support employees, partners, and SAP Active Global Support specialists with an efficient problem resolution procedure.

For support desk management, you need the methodology, management procedures, and tools infrastructure to run your internal support organization efficiently.

8.1 Remote Support Setup

SAP support needs to be able to work remotely for highest efficiency and availability. Therefore all required support tools must be remotely accessible for SAP support. For SAP SNC, the standard SAP procedures for setting up remote support setup apply.

For information about Remote Support Setup, see SAP Service Marketplace at service.sap.com/access-support.

All support tools are accessible by SAP Gui or web browser using a support role. This role does not allow performing any changes to the component.

For ABAP based components e.g. the role SAP_RCA_SAT_DISP is shipped via the ABAP add-on component ST-PI.

8.2 Problem Message Handover

For information about processing of internal support messages and forwarding them to SAP, see SAP Help Portal at help.sap.com-> SAP Solution Manager -> SAP Solution Manager 7.0 -> English -> Service Desk. To send problem messages to SAP, use the referent ERP application component in the SAP application component hierarchy.

9 Environment, Health and Safety (EHS) Application Operations Guide

9.1 Important SAP Notes

SAP Note Number	Title	Comment
1870650	EH&S Application Operations Guides	Information on the EH&S Application Operations Guide.
122400	EH&S installation: Composite SAP Note	Installation of EH&S, implement corrections to EH&S, or plan an upgrade to a higher R/3 Release with EH&S installed.
1394553	EH&S WWI server installation instructions	Comprehensive description of how to set up an EH&S WWI generation server.

9.2 Technical System Landscape
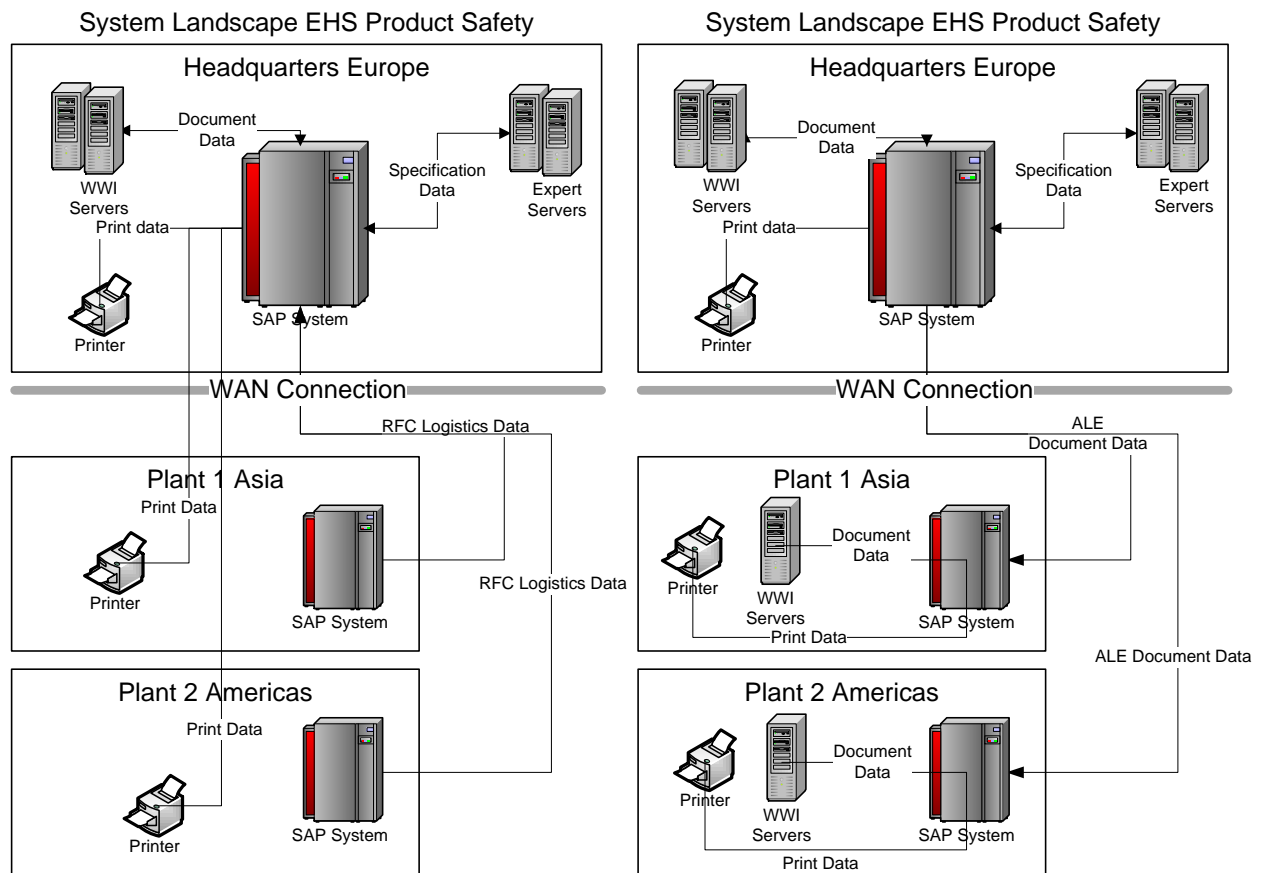
You can install *Environment, Health and Safety (EHS) Product Safety* centrally or distributed.

For the central installation, the data is stored centrally on the EHS instance. WWI generation servers (WWI servers) and EH&S Expert servers are connected to the central instance of EHS. All processes that run in EHS are executed in the EHS system. But they can also be triggered from the logistics systems.

For the distributed installation, EHS is installed in a master system and in the distributed logistics systems of the plants. Data is maintained in the master system of EHS and then distributed to the logistics system through ALE. Logistics-dependant processes are executed in the logistics systems of the plants. In the distributed installation, WWI servers must also be installed in the plants.

9.2.1 Scenario/Component Matrix

Environment Health and Safety (EHS) runs on SAP NetWeaver AS ABAP.

Additional components for EHS are:

- EH&S Windows Wordprocessor Integration (EH&S WWI)
- EH&S Expert

EH&S WWI and EH&S Expert are registering RFC servers that read and write EHS specification data via Remote Function Call (RFC) from the SAP system.

9.2.2 Related Documentation

The following table lists where you can find more information about the technical system landscape.

Topic	Guide/Tool	Quick Link on SAP Service Marketplace (service.sap.com)
Application- and Industry-specific Components such as SAP Financials and SAP Retail	Master Guide	instguides
Technology Components such as SAP Web Application Server	Master Guide	instguides
Sizing	Sizing Guide	sizing
Technical Configuration	Master Guide	instguides
Scalability	Master Guide	instguides
High Availability	Master Guide	instguides
High Availability (EH&S WWI and EH&S Expert)	Note	SAP Note 1061242
Security	Security Map Application Security Guide	security instguides

9.3 Monitoring Environment, Health and Safety (EHS)

Within the management of SAP Technology, monitoring is an essential task. A section has therefore been devoted solely to this subject.

You can find more information about the underlying technology in the *SAP NetWeaver Administrator's Guide – Technical Operations Manual* in the *SAP Library* under *SAP NetWeaver Library*.

9.3.1 Alert Monitoring

Proactive, automated monitoring is the basis for ensuring reliable operations for your SAP system environment. SAP provides you with the infrastructure and recommendations needed to set up your alert monitoring to recognize critical situations for EHS as quickly as possible.

9.3.1.1 Monitoring Installation and Setup

In order to enable the auto-alert mechanism of CCMS, see SAP Note 617547.

9.3.1.2   Component Specific Monitoring

To monitor the availability of EH&S Windows Wordprocessor Integration servers (EH&S WWI servers) and EH&S Expert servers with CCMS, see SAP Note 1061242.

You can monitor the report shipping under *Edit Report Shipping Orders* (transaction `CVD1`). Under *WWI Monitor* (transaction `CG5Z`), you can monitor the report generation and the report shipping.

You can monitor the status of print requests that are generated in the SAP component *Global Label Management* in the *Labeling Workbench* (transaction `CBGLWB`).

9.3.2   Detailed Monitoring and Tools for Problem and Performance Analysis

9.3.2.1   Trace and Log Files

Use trace files and log files to analyze problems.

Important log and trace files for Report Shipping (EHS-SAF-RSH)

Component	Content	File / log object	Path
EHS-SAF-RSH	Logging EHS Report Shipping	Log object `CVDS`	SAP Application Log (transaction `SLG1`)

Important log and trace files for Report Generation (EHS-BD-RDF)

Component	Content	File/ log object	Path
EHS-BD-RDF	Logging EHS Report Generation	Log object `EHRE`	SAP Application Log (transaction `SLG1`)

To log the report generation, set the environment parameter `REPORT_GENERATION_PROTOCOL` to `X` in the Customizing of *Basic Data and Tools* under *Specify Environment Parameters*.

Important log and trace files for Global Label Management (EHS-SAF-GLM)

Component	Content	File/ log object	Path
EHS-SAF-GLM	Logging EHS Global Label Management	Log object `EHGL`	SAP Application Log (transaction `SLG1`)
EHS-SAF-GLM	Logging print requests that are processed in EHS Global Label Management	Log object `EHPR`	SAP Application Log (transaction `SLG1`)

Important log and trace files for EH&S Expert (EHS-BD-TLS-EXP)

Component	Content	File/ log object	Path
EHS-BD-TLS-EXP	RFC log	Rfc*.log	Configured EH&S Expert log directory
	RFC trace	Rfc*.trc	EH&S Expert installation directory
	EXP log	Exp*.log	Configured EH&S Expert log directory
	Windows Event Log	-	Windows Control Panel - Event Viewer
	Dev_trc	dev_rfc.trc	EH&S Expert installation directory
	Application Log	object EHAD	SAP Application Log (transaction SLG1)

For more information on EH&S Expert logs and traces and how to enable them, see SAP Note 1364100

Important Log and Trace files for EHS WWI (EHS-BD-RDF-WWI)

Component	Content	File/ log object	Path
EHS-BD-RDF-WWI	(1) Logging EHS Report Generation	object EHAD	SAP Application Log (transaction SLG1)
	(2) WWI err file Trace of one generation	*.err	EH&S WWI root directory
	(3) Windows Event Log	-	Windows Control Panel - Event Viewer
	(4) WWI file log	*.log	Windows temp directory
	(5) RFC errors from RFC library	dev_rfc.trc	EH&S WWI installation directory
	(6) RFC trace	Rfc*.trc	EH&S WWI installation directory

1. To log the report generation, set the environment parameter REPORT_GENERATION_PROTOCOL to X in the Customizing of *Basic Data and Tools* under *Specify Environment Parameters*

   Saving the complete log will affect generation performance, therefore this function is switched off by default.

2. To save temporary EH&S WWI files including the err file, set **dont_delete** to **1** under **[spool]** in WWI.INI.

   Temporary EH&S WWI files are used for error analysis by SAP Support.

   The amount of disk space that is consumed by the temporary EH&S WWI files can raise very fast. Therefore, set **dont_delete** to **0** to switch off this setting.
   For further information, see SAP Note 959195

3. You can also check the recent generation logs in the *Windows Event Log* for each EH&S WWI service.

4. To enable the EH&S WWI file log, set **LogToFile** to **1** under **[Global]** in WWI.INI.

   The EH&S WWI file log is mainly used for long-term error analysis and to analyze crashes of EH&S WWI.

Caution: The logs can consume a lot of disc space. So, the log to file will slow down the WWI server.

For further information, see SAP Note 778684

5. `dev_rfc.trc` is enabled through Remote Function Call (RFC) by default.

   `dev_rfc.trc` logs RFC connection errors.

6. To enable the RFC traces, set **RFC_TRACE** to **1** in the SAPRFC.INI file of the RFC destination.

   The RFC library logs the complete binary RFC traffic to the file.

   Note that the generated log files consume a lot of disc space. Therefore, set **RFC_TRACE** to **1** in the SAPRFC.INI file when not required.

The EH&S WWI logs depend on the trace level that has been configured for EH&S WWI. The EH&S WWI trace level is configured as parameter **-T** in the WWI service. Trace level ranges from **0** (only fatal errors) to **5** (debug trace) Trace level **3** is set as default.

9.3.2.2   Workload Monitors

Component	Monitor	Description	Prerequisites
EH&S Windows Wordprocessor Integration (for EHS Product Safety)	*WWI Monitor* (transaction `CG5Z`)	Shows the queue of the report generation and report shipping orders in EH&S WWI.	You have configured the WWI generation in the Customizing of *Basic Data and Tools* under *Specify Generation Servers*.
EH&S Windows Wordprocessor Integration (for print requests in EHS Global Label Management)	*Labeling Workbench* (transaction `CBGLWB`)	You can filter the print request queue by their states.	You have configured the processing of print request in EHS Global Label Management.

Use the following filters in the *Labeling Workbench* to show the print requests in the respective status:

- Print requests bodies to be processes: status AA (Print request body exists)
- Print requests to be created: status ZS (Print request created, not yet processed)
- Print requests to be printed: status ZD (Print request ready for printing)

9.3.2.3   Other Important Problem Analysis and Monitoring Too

Component	Monitor	Description	Prerequisites
EH&S Windows Wordprocessor Integration and	EH&S WWI and EH&S Expert Server	Here, you can check the configuration and the Windows event log of	EH&S Management Servers are set up (see the Customizing of *Basic Data and Tools* under *Set Up EH&S Management*

Component	Monitor	Description	Prerequisites
EH&S Expert	Administration (transaction `CGSADM`)	EH&S WWI servers and EH&S Expert servers, furthermore you can switch on logging and download log files.	*Server*)
EH&S Windows Wordprocessor Integration (for EHS Product Safety)	Job selection (transaction `SM37`)	Shows job logs	Use filter the following filters: • Job Name: `WWI*` • User Name:`*` • and after event: `*`
EH&S Windows Wordprocessor Integration (for print requests in EHS Global Label Management)	Job selection (transaction `SM37`)	Shows job logs	Use the following filters: • Job Name: `EHSGLM_PRQ*` • User Name:`*` • and after event: `*`

Monitoring EH&S Windows Wordprocessor Integration and EH&S Expert Services

EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert Services must be monitored by a watchdog, so they are restarted in case of a fatal error.

We recommend to use EH&S Management Server (in the Customizing of *Basic Data and Tools* under *Set Up EH&S Management Server*).

If you are not using EH&S Management Server, configure EhsStart.exe as watchdog:

• For EH&S Expert Server: *in the Customizing of Basic Data and Tools* under *Set Up EH&S Expert Server As a Windows Service.*

• For EH&S WWI: in the Customizing of *Basic Data and Tools* under *Set Up EhsStart As a Windows Service*.

Monitoring EH&S WWI and EH&S Expert File System

Monitor the file system of the EH&S WWI servers and the EH&S Expert servers to make sure they do not run out of free disk space.

Archive or delete no longer needed log files regularly. For more information, see *Trace Files and Log Files*.

9.3.2.4   Interface Monitors

You use interface monitors to analyze problems with interfaces such as Remote Function Call (RFC), IDoc, and HTTP.

Interface	Description	Technology Used
REPMAS	Reports are distributed from the EHS system to logistics systems.	IDoc
SUBMAS	Specification data is distributed from the EHS system to logistics systems.	IDoc
PHRMAS	Phrase data is distributed from the EHS system to logistics systems.	IDoc
DANGEROUSGOOD	Dangerous goods data is distributed from the EHS system to logistics systems.	IDoc
WWI*	There are several RFC functions (WWI*) which call the WWI server.	RFC
START_EXPERT_SYSTEM	Calls the Expert rules engine.	RFC
RMS_SOLVE_RXM	Calls the Expert matrix solver.	RFC
OccupationalIncidentERPCreateRequestConfirmation_In	When an occupational incident occurs in a company, the persons involved (or contacted) must record the most important information about it as part of incident processing.	SOA WebService
DisposalNoteERPRequestConfirmation_In DisposalNoteERPRequestConfirmation_Out DisposalNoteURIERPByIDQueryResponse_Out WasteManagementPartnerERPRequestConfirmation_Out	Waste disposal notes	SOA WebService
HazardousMaterialAdministrationHazardousMaterialIn HazardousMaterialAdministrationHazardousMaterialOut	Collects information about hazardous materials. This information must be available in the company's logistic systems to ensure compliance with all regulations pertaining to hazardous materials.	SOA WebService
International Uniform View of Chemical Substance	Used to replicate or to request international uniform view of chemical substance for IUCLID database.	SOA WebService

Interface	Description	Technology Used
`Replication In International Uniform View of Chemical Substance Replication Requesting Out`		

For more information, see the Enterprise Services Wiki under http://wiki.sdn.sap.com/wiki/display/ESpackages. There, search for EH&S.

9.3.2.5   Data Growth and Data Archiving Monitors

Most critical regarding database growth are EHS reports. The reports can consume a lot of disc space. The documents are saved in the Document Management System (DMS). If you do not use an external DMS system, data base table `DRAO` grows fast and consumes considerable space.

To reduce the consumed database space, see SAP Note 586293.

To use data archiving see SAP Note 915854 and SAP Note 1093408.

To reduce database space consumed by specification data run report `RC1PHDEL` regularly. Specification data is not deleted by default but marked for deletion. Run report `RC1PHDEL` to delete the data on the database physically.

> ⚠ Caution
>
>   Consider the applicable data retention policies.

You can define periodic tasks required to contain data growth (that is, to reorganize temporary data). For more information, see *Periodic Tasks*.

9.3.3   Data Consistency

If you store related or identical data in different locations, this can cause data inconsistencies, for example, after restoring a single component (such as EH&S Windows Wordprocessor Integration or EH&S Expert). The following table describes how you can verify data consistency and how you can repair data inconsistencies.

Component / Data Store	Check Tool / Method	Description	Prerequisites
Expert Cache	Initialize cache in	See *EH&S Expert Cache*	You use the EH&S Expert cache.

Component / Data Store	Check Tool / Method	Description	Prerequisites
	transaction `CGSADM`	*Initialization* under help.sap.com	
WWI Print Request Cache	Delete cache	Delete the DMS folder on the WWI server. EH&S WWI will refill this cache.	You have configured the Customizing activity *Configure WWI Document Management System*.

9.4 Management of Environment, Health and Safety

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation.

You can find more information about the underlying technology in the *Technical Operations Manual* in the SAP Library under *SAP NetWeaver*.

9.4.1 Starting and Stopping

Start and Stop Sequences and Tools

Software Component	Sequence	Tool	Description
SAP ERP 6.0			
EH&S Windows Wordprocessor Integration (EH&S WWI)		Windows Services	Start the watchdog service that is used for EH&S WWI (`EhsStart` or `EhsManagementServer`).
EH&S Expert		Windows Services	Start the watchdog service that is used for EH&S Expert(`EhsStart` or `EhsManagementServer`).

9.4.2 Software Configuration

This chapter explains the configurable components or scenarios that are used by *Environment, Health and Safety (EHS)* and the tools that are used to configure the settings.

Component Configuration Tools

Component	Configuration Tool(s)	Description
EH&S Windows	Transaction `CGSADM`	Offers the most commonly used

Component	Configuration Tool(s)	Description
Wordprocessor Integration (EH&S WWI) and EH&S Expert		administration and configuration options that are necessary for EH&S WWI and EH&S Expert.
EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert	`SvcAdmin.Exe`	Tool to change the Windows service settings.
EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert	File `Saprfc.ini`	Used to configure the RFC destinations.
EH&S Windows Wordprocessor Integration (EH&S WWI)	File `WWI.INI`	Used to configure EH&S WWI.
EH&S Windows Wordprocessor Integration (EH&S WWI)	`ConPro.Exe`	EH&S WWI configuration program that guides the installation steps you have to proceed manually and that checks the consistency of the configuration.
EH&S Expert	`ExpAdmin.Exe`	Used to configure the EH&S Expert rule sets and the general EH&S Expert settings.

9.4.3   Administration Tools

Software Component	Transaction/Tool	Description	Prerequisites
EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert	EH&S WWI and EH&S Expert Server Administration (transaction `CGSADM`)	Offers the most commonly used administration and configuration options that are necessary to implement EH&S WWI and EH&S Expert.	
EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert	`SvcAdmin.Exe`	Used to change the Windows service settings.	
EH&S Windows	File `WWI.INI`	Used to configure EH&S WWI, including	

Software Component	Transaction/Tool	Description	Prerequisites
Wordprocessor Integration (EH&S WWI)		the log files.	
EH&S Expert	`ExpAdmin.Exe`	Used to configure the EH&S Expert rule sets and the EH&S Expert settings including the trace levels.	

9.4.4 Backup and Restore

You must back up your system landscape regularly to ensure that you can restore and recover it in case of failure.

The backup and restore strategy for *Environment, Health and Safety (EHS)* consists of two parts:

- Backup and restore coverage for each component (see table below)
- Cross-system data dependencies and handling

The backup and restore strategy for your system landscape should not only consider SAP systems but should also be embedded in overall business requirements and incorporate your company's entire process flow. In addition, the backup and restore strategy must cover disaster recovery processes, such as the loss of a data center through fire. It is most important in this context that you ensure that backup devices are not lost together with normal data storage (separation of storage locations).

Category of System Component	Category Properties	Suggested Methods for Backup and Restore	Example
I	Only software, no configuration or application data	- No backup, new installation in case of a recovery or - Initial software backup after installation and upgrade - Backup of log files	BDOC modeler
II	Only software and configuration information, no application data	- Backup after changes have been applied or - No backup, new installation and configuration in case of a recovery - Backup of log files	- SAP Gateway Comm. Station - SAP Business Connector - SAP IPC (2.0C)
III	Only replicated application data, replication time is sufficiently small for a recovery	Data: - No data backup needed - Backup of software, configuration, log files	- SAP IMS/Search Engine - SAP IPC (2.0B) - Webserver - SAP ITS
IV	Only replicated application data, backup	Data: Application specific file system backup	SAP IMS/Search

Category of System Component	Category Properties	Suggested Methods for Backup and Restore	Example
	recommended because replication time is too long, data not managed by a DBMS	or • Multiple instances • Backup of software, configuration, log files	Engine • Webserver
V	Only replicated application data, backup recommended because replication time is too long, data managed by a DBMS	Data: • Database and log backup or • Multiple instances • Backup of software, configuration, log files	• SAP IPC (2.0B) • Catalog Server
VI	Original application data, standalone system, data not managed by a DBMS	Data: • Application specific file system backup • Backup of software, configuration, log files	Webserver
VII	Original application data, standalone system, data managed by a DBMS, not based on SAP WebAS	Data: • Database and log backup • Backup of software, configuration, log files	—
VIII	Original application data, standalone system, based on SAP WebAS	Data: • Database and log backup, application log backup (such as job logs in file system) • Backup of software, configuration, log files	Standalone SAP R/3
IX	Original application data, data exchange with other systems, data not managed by a DBMS	Data: • Application specific file system backup, data consistency with other systems must be considered • Backup of software, configuration, log files	—
X	Original application data, data exchange with other systems, data managed by a DBMS, not based on SAP WebAS	Data: • Database and log backup, data consistency with other systems must be considered • Backup of software, configuration, log files	• SAP liveCache • SAP Mobile Workbench
XI	Original application data, data exchange with other systems, based on SAP	Data: • Database and log backup, application log backup (such as job logs in file	• SAP R/3 • SAP CRM • SAP APO

Category of System Component	Category Properties	Suggested Methods for Backup and Restore	Example
	WebAS	system), data consistency with other systems must be considered • Backup of software, configuration, log files	• SAP BW

The following table lists the components used by EHS and the suggested methods for backup and restore (see *Category of System Component*):

Component	Category of System Component
SAP ERP 6.0	XI
EH&S Windows Wordprocessor Integration (EH&S WWI)	III
EH&S Expert	III

9.4.5   Periodic Task

9.4.5.1   Scheduled Periodic Tasks

This chapter describes all automatable tasks required to run periodically in order to keep the application running smoothly over time. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping under *Scenario / Component Matrix* . Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Scheduled Periodic Tasks for EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert

Program Name/Task	Task Scheduling Tool	Recommended Frequency	Description
Windows Update	Windows Update	1 / month	Install the Microsoft security updates on the EH&S WWI servers and EH&S Expert servers

9.4.5.2   Required Manual Periodic Tasks for Environment, Health and Safety

This chapter describes all manual tasks required to run periodically in order to keep the application running smoothly over time. A manual task need an a person to for each execute in opposite to the scheduled tasks listed above which can be automated using a task scheduler program. Such tasks may be required on component level and are therefore relevant in each scenario that uses the component. You can find the mapping under *Scenario / Component Matrix*. Other tasks may be relevant for certain business scenarios only. It is important that you monitor the successful execution of these tasks on a regular basis.

Manual Tasks for EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert

Task	Tool(s) Supporting this Task	Recommended Frequency	Description
Clean up logs and traces		1 / week	For EH&S Expert and EH&S WWI clean up the log and trace files as well as temporary EH&S WWI files. See *Trace and Log Files*.Error! Reference source not found.

9.4.6   Load Balancing

You can determine load balancing from *Environment Health and Safety (EHS)* to EH&S Expert servers and EH&S WWI servers through Remote Function Call (RFC).

For more information see SAP Note 1061242.

Logging On and Load Balancing Setup/Tools

Scenario(s)	Description	Tools to be Used
EH&S Expert	Connect several EH&S Expert services to one RFC destination. RFC applies the load balancing automatically.	RFC
EH&S WWI	If you use several WWI servers on several RFC destinations, the load balancing is determined by the WWI dispatcher background job.	Customizing
EH&S WWI for EHS Global Label Management	If you connect several WWI services to one RFC destination, RFC applies the load balancing automatically.	RFC
EH&S WWI for print request processing in EHS Global Label Management	If you connect several WWI services to each RFC destination, RFC applies the load balancing automatically. The load is distributed through several decentralized WWI servers.	RFC Customizing

9.4.7 Management of Outdated Technical Data

For EH&S Expert and EH&S Windows Wordprocessor Integration (EH&S WWI) you must clean up the log and trace files as well as temporary EH&S WWI files. For more information, see *Trace and Log Files*.

9.5 High Availability of Environment, Health and Safety

Environment, Health and Safety (EHS) follows the general high availability concept for all SAP NetWeaver based systems. For more information on high availability, see SAP Service Marketplace at help.sap.com →*SAP NetWeaver → SAP NetWeaver 7.4 → System Administration and Maintenance Information → Technical Operation Guide → General Administration Tasks → High Availability.*

Components With Single Point of Failure

Component	Description	HA Setup Description
EH&S Windows Wordprocessor Integration (EH&S WWI)	Creation and printing of reports	See SAP Note 1061242
EH&S Expert	Calculation of secondary specification data	See SAP Note 1061242

Each of the above components can be a single point of failure in this scenario. In order to achieve high availability (HA) for the complete scenario, it is required that all components with single point of failures are setup with HA.

For further information, see SAP Note 1061242.

9.6 Software Change Management

Software Change Management standardizes and automates software distribution, maintenance, and testing procedures for complex software landscapes and multiple software development platforms. These functions support your project teams, development teams, and application support teams.

The goal of Software Change Management is to establish consistent, solution-wide change management that allows for specific maintenance procedures, global rollouts (including localizations), and open integration with third-party products.

This section provides additional information about the most important software components.

9.6.1 Transport and Change Management

You must transfer the configuration files for EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert between systems manually.

Component Change Management Tools

Component	Solution Manager Maintenance Optimizer Integration	Transport Management Tool
EHS	Yes	Transport organizer (transaction `SE01`)
EH&S WWI	No	N/A
EH&S Expert	No	N/A

9.6.2 Development Requests and Development Release Management

For EHS use the Transport organizer (transaction `SE01`).

9.6.3 Support Packages and Patch Implementation

We recommend that you implement Support Package Stacks (SP-Stacks), which are sets of Support Packages and patches for the respective product version that must be used in the given combination.

You can find detailed information about the availability of SP-Stacks for SAP ERP 6.0 on the SAP Service Marketplace at service.sap.com/sp-stacks. Read the corresponding Release and Information Notes (RIN) before you apply any Support Packages or Patches of the selected SP Stack.

For *Environment, Health and Safety (EHS)* the SAP NetWeaver AS ABAP tools apply.

You can download the patches for EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert from the SAP Service Market Place. For more information, see SAP Note 568302.

9.7 Troubleshooting

For more information on troubleshooting EH&S Expert, see SAP Note 1364100.

For more information on troubleshooting EH&S Windows Wordprocessor Integration (EH&S WWI), see SAP Note 1058521.

9.8 Support Desk Management

Support Desk Management enables you to set up an efficient internal support desk for your support organization that seamlessly integrates your end users, internal support employees, partners, and SAP Active Global Support specialists with an efficient problem resolution procedure.

For support desk management, you need the methodology, management procedures, and tools infrastructure to run your internal support organization efficiently.

9.8.1 Remote Support Setup

See SAP Note 35010 for setting up remote connections.

To analyze EH&S Windows Wordprocessor Integration (EH&S WWI) and EH&S Expert issues you must set up a remote connection to the underlying Windows servers, for example, by Windows Terminal Services (WTS).

9.8.2 Problem Message Handover

Use the respective sub-components of *Environment, Health and Safety (EHS)*.

10 Appendix

10.1 Related Guides

You can find more information about installation and configuration in the Master Guide.

10.2 Related Information

The following table contains links to information relating to the Application Operations Guide.

Content	Quick Link to the SAP Service Marketplace
Master Guide, Installation Guide and Upgrade Guide	instguides ibc
Related SAP Notes	notes
Released Platforms	platforms
Network Security	securityguide network
Technical Infrastructure	ti
SAP Solution Manager	solutionmanager