



Application Operations Guide SAP™ Supply Chain Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)

Target Audience

- Technical consultants
- System administrators
- Solution consultants
- Business process owner
- Support specialist

PUBLIC

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Typographic Conventions

Example	Description
<Example>	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, "Enter your <User Name>".
▶ Example → Example ◀	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
http://www.sap.com	Textual cross-references to an internet address
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	<ul style="list-style-type: none"> Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. Cross-references to other documentation or published works
Example	<ul style="list-style-type: none"> Output on the screen following a user action, for example, messages Source code or syntax quoted directly from a program File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
EXAMPLE	Keys on the keyboard

Document History

**CAUTION**

Before you start the implementation, make sure you have the latest version of this document.

You can find the latest version at the following location: <http://service.sap.com/instguides>.

The following table provides an overview of the most important document changes.

Version	Date	Description
1.1	2011-12-07	The sections for SAP Forecasting and Replenishment (SAP F&R) have been updated.
1.2	2013-01-04	Text has been formally revised.

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1 Getting Started



CAUTION

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

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

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 carry them out. It also refers to documentation required for these tasks. You must use this guide in connection with other guides such as the Master Guide, Technical Infrastructure Guide, and SAP Library.

Target Groups

- Technical consultants
- System administrators
- Solution consultants
- Business process owner
- Support specialist

1.1 Global Definitions

SAP Application:

An SAP application is an SAP software solution that serves a specific business area like ERP, CRM, PLM, SRM, SCM. It represents a market view on groups of related business scenarios. The delivery of an application contains SAP components that are essential for implementing all application-related business scenarios, processes and functions. The implementation knowledge is allocated together with an application. For example, the SAP application SAP SCM 7.0 consists of several components such as SAP SCM Basis 7.0, SAP SCM 7.0 Server, and others.

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 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.

Component:

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

1.2 Important SAP Notes



CAUTION

Check regularly for updates for the Application Operations Guide.

Important SAP Notes

SAP Note Number	Title	Comment
100740	Setting up a PCanywhere connection in the SAP frontend	This note describes how to set up a PCanywhere connection in the SAP frontend.
592085	Installing the HTTP Connect service	This note describes how to install the HTTP Connect service.
605795	Windows Terminal Server connection in remote support	This note describes how to set up Windows Terminal Server connection in remote support.
617547	RZ20: Sending alerts as mail and SMS	Describes how to use transaction RZ20 to send alerts from the CCMS monitoring architecture as an e-mail, SMS, or other message types to one or several recipients.
1116050	Runtime Error when updating shipment date from SAP Event Management	This note describes how to deal with runtime errors when updating shipment date from SAP Event Management.
1118147	Report for deregistering invalid observers in IBINOBS	This note describes how to solve the following problem: there is a large volume of entries is caused by invalid IBINOBS entries; observers which are not used any more.
1228423	APO Planning Run and CIF Activities in parallel	This note describes how to solve the following problem: planning runs of one or several SAP SCM APO applications are scheduled in parallel to data transfer from SAP ERP to SAP SCM via the Core Interface (CIF). Planning runs or CIF updates report (locking) errors, or planning results or CIF updates are inconsistent or incomplete. These

SAP Note Number	Title	Comment
		errors can be caused by lock collisions because CIF and a planning run might change the same data (in most cases the same order) concurrently.
<u>1317865</u>	Downport: SAP SNC Monitor Templates	This note is relevant if you use the Computing Center Management System (CCMS). The note contains instructions how to add new SAP SNC monitor templates to the SAP SNC system if they are not available.
<u>1330450</u>	Installation of SCM Optimizer Version 7.01	This note describes the implementation of SCM Optimizer 7.01 for SCM APO 7.01.

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2 Technical System Landscape

2.1 Scenario/Component Matrix

For more information regarding the components necessary for business scenarios and processes, see the SAPSCMMaster Guide on the SAP Service Marketplace at ► <http://service.sap.com/instguides> → *SAP Business Suite Applications* → *SAP SCM* → *SAP SCM Server* → *Using SAP enhancement package 2 for SAP SCM Server 7.0* ◀.

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
Application and industry-specific components, such as SAP Financials and SAP Retail	Master Guide	► http://service.sap.com/instguides ◀
Technology components such as SAP NetWeaver	Master Guide	► http://service.sap.com/instguides ◀
Sizing	Quick Sizer Tool	► http://service.sap.com/sizing ◀
Technical configuration	Technical Infrastructure Guide — SAP NetWeaver 7.0	► http://service.sap.com/installNW70 ◀
Scalability	Technical Infrastructure Guide — SAP NetWeaver 7.0	► http://service.sap.com/installNW70 ◀
High availability	Technical Infrastructure Guide — SAP NetWeaver 7.0	► http://service.sap.com/installNW70 ◀
Security	Security Guide	► http://service.sap.com/securityguide ◀

2.3 Enterprise Services Information

For information about Enterprise Services operations, see the *SAP Enterprise SOA* [page 93] section of this guide.

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3 Monitoring of SAP Supply Chain Management (SAP SCM)

Within the management of SAP Technology, monitoring is an essential task. This section is therefore devoted strictly to this subject.

For more information about the underlying technology, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver Library* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* ◀.

3.1 Alert Monitoring with CCMS

Proactive automatic 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 SCM as quickly as possible.

3.1.1 CCMS Monitoring Installation and Setup

SAP SCM Server 7.0 including enhancement package 2 is technically based on SAP NetWeaver 7.0 including enhancement package 3, and thus reuses monitoring tools from SAP NetWeaver, such as the Computing Center Management System (CCMS). Therefore, we recommend that you set up the Monitoring Infrastructure as described in the Monitoring Setup Guide for SAP NetWeaver 7.0 located on SAP Service Marketplace at ► <http://service.sap.com/instguides> → *SAP NetWeaver* → *SAP NetWeaver 7.0 (Including Enhancement Package 3)* → *Operations* → *Monitoring* ◀.

The monitoring setup described in the Monitoring Setup Guide is the foundation for the following sections and contains all the information relevant to monitoring the SAP NetWeaver components used in SAP SCM. Proficient knowledge of system monitoring and basic knowledge of SAP NetWeaver is required to compose the user-defined SCM monitors recommended within this guide.

To enable the auto-alert mechanism of CCMS, see SAP Note 617547.

For more information about monitoring, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* ◀.

3.1.2 Component-Specific Monitoring

You can use CCMS to monitor SAP SCM Server and the following components:

- SAP SCM Basis
- SAP APO
- SAP liveCache
- SAP SCM Optimizer
- SAP Event Management
- SAP SNC
- SAP EWM
- SAP F&R
- Internet Graphics Service (IGS)

For this purpose, SAP SCM provides the following monitor sets, which can be accessed on the *SAP Easy Access* screen, by choosing ► *Tools* → *CCMS* → *Control/Monitoring* → *CCMS Monitor Sets* ◀ (transaction RZ20):

- SAP SCM Basis Monitor Templates
Comprises the *CIF Master Data Queue Monitor*
- SAP SCM Monitor Templates
Comprises the monitors for APO, EWM, Event Management, F&R, SCM Optimizer, SNC, and SAP liveCache



NOTE

If you use a central monitoring system (CEN) to monitor the above-mentioned components, make sure that this system works with SAP enhancement package 3 for SAP NetWeaver 7.0. Only then can you use all monitorable data (for example monitoring templates) provided with SAP SCM.

For more information about monitoring, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* ◀.

SAP SCM Basis (Part of SCM Server)

SAP SCM Basis allows monitoring of SAP Core Interface (CIF) and qRFC related values such as the status of CIF Compare Reconcile (delta report), CIF postprocessing entries, or an overview of blocked qRFCs. You can start the monitor in the *SAP Easy Access* screen, by choosing ► *Tools* → *CCMS* → *Control/Monitoring* → *CCMS Monitor Sets* → *SAP SCM Basis Monitor Templates* → *CIF Master Data Queue Monitor* ◀.

If you want to create your own SCM Basis monitor, you can use the following Monitoring Tree Elements (MTE):

- CIF Monitoring
- SCMB CIF Outbound Queues

3.1 Alert Monitoring with CCMS

- APO CIF Outbound Queues (which can be found under ► *Transactional RFC and Queued RFC* → *Outbound Queues (MTE)* ◀

For more information about setting up your monitoring, see the relevant documentation in the SAP Service Marketplace at <http://service.sap.com/monitoring>.

SAP APO (Part of SCM Server)

SAP SCM allows you to monitor CIF and qRFC related values, such as the status of CIF Compare Reconcile (delta report), CIF postprocessing entries, the consumption of planned independent requirements, or an overview of blocked qRFCs, but also SNP related values for master data and time series.

You can start the monitor in the *SAP Easy Access* screen by choosing ► *Advanced Planning and Optimization* → *APO Administration* → *Integration* → *Monitor* → *CCMS Monitor Sets* → *SAP SCM Monitor Templates* → *APO Monitor* ◀.

For more information about setting up this monitor, see SAP Library for SAP Supply Chain Management, on SAP Help Portal at <http://help.sap.com/scm702>, under ► *SAP Supply Chain Management (SAP SCM)* → *SAP Advanced Planning and Optimization (SAP APO)* → *Integration via Core Interface (CIF)* → *Technical Integration* → *Core Interface (CIF)* → *Administration* → *Monitoring* → *SAP APO Monitoring with CCMS* ◀.

If you want to monitor CIF using the SAP Solution Manager, see the Best Practice document *System Monitoring for mySAP SCM with SAP Solution Manager and CCMS* (<http://service.sap.com/~sapidb/011000358700002213412003E>).

SAP liveCache Technology

You can use the SAP liveCache Alert Monitor to identify memory problems in good time, to check the security of your SAP liveCache, and to monitor performance.

You can choose from the following displays for each SAP liveCache node in the monitoring tree:

- *Properties* (displays the SAP liveCache properties, the SAP liveCache status, and error messages)
- *Space Management* (memory in the data area, log area, and main memory)
- *Performance* (cache hit rates, free database sessions for user tasks, the status of the write-protection for the OMS monitor, and information about the optimizer statistics)
- *Backup/Recovery* (information about backups and recoveries)
- *Health* (information about bad indexes and database structure checks)
- *liveCache Applications* (information about the APO system)
- *External Analysis Tools* (information from the Database Analyzer)

You can use the following start options for the Alert Monitor:

- On the *SAP Easy Access* screen, call the SAP liveCache Assistant (transaction LC10) and choose ► *liveCache* → *Alert Monitor* → *MaxDB Monitoring* → *liveCache* ◀.
- On the *SAP Easy Access* screen, call the CCMS Monitor (transaction RZ20) and choose ► *SAP CCMS Monitors for Optional Components* → *MaxDB Monitoring* → *liveCache* ◀.

For more information about the nodes in the SAP liveCache Monitor, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *Database Administration in CCMS: SAP liveCache Technology* → *CCMS Monitoring* ◀.

Additionally, see the Best Practice document *System Monitoring for mySAP SCM (3.0-4.1) with SAP Solution Manager and CCMS* (<http://service.sap.com/~sapidb/011000358700002213412003E>).

To use the CCMS Monitoring of SAP liveCache, you need to activate the Alert Monitoring in the SAP liveCache Assistant (transaction LC10). For more information, SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *Database Administration in CCMS: SAP liveCache Technology* → *CCMS Monitoring* → *liveCache Alert Monitor* ◀.

Additionally, you need to schedule report /SAPAPO/OM_LCAALERTS in regular intervals (see section *SAP APO (Part of SCM Server)* [page 71] of this document). This report provides the information for the CCMS node *liveCache Applications*.

You can start the monitor on the *SAP Easy Access* screen by choosing ► *Advanced Planning and Optimization* → *APO Administration* → *Integration* → *Monitor* → *CCMS Monitor Sets* → *SAP SCM Monitor Templates* → *liveCache Monitor* ◀.

You can also use the DBA functions of the CCMS to administer your MySQL MaxDB database system. See *SAP liveCache Technology* [page 50] of this document for details.

SAP SCM Optimizer

You can start the monitor on the *SAP Easy Access* screen by choosing ► *Advanced Planning and Optimization* → *APO Administration* → *Integration* → *Monitor* → *CCMS Monitor Sets (transaction RZ20)* → *SAP SCM Monitor Templates* → *SAP Optimizer* ◀.

SAP Event Management (Part of SCM Server)

For more information about the monitoring of SAP Event Management, see *Application Operations Guide for SAP Event Management 7.0 Including SAP Enhancement Package 2* in SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP Event Management* → *Using SAP Enhancement Package 2 for SAP Event Management 7.0* ◀.

SAP Supply Network Collaboration (Part of SCM Server)

For more information about the monitoring of SAP Supply Network Collaboration, see *Application Operations Guide for SAP Supply Network Collaboration 7.0 Including SAP Enhancement Package 2* in SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

SAP Extended Warehouse Management (Part of SCM Server)

For more information about the monitoring of Extended Warehouse Management, see *Application Operations Guide for Extended Warehouse Management 7.01* in SAP Service Marketplace at <http://>

service.sap.com/instguides, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP EWM* → *Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

SAP Forecasting and Replenishment (Part of SCM Server)

Depending on the business process you are using in the scenario Forecasting and Replenishment, you can exchange data using XI or RFC.

When using XI, you should monitor the message types `ProductActivityBulkNotification` (TimeSeries = POS, Inventory), `ProductDemandInfluencingEventBulkNotification` (DIF), and `ReplenishmentOrderProposalBulkNotification` (Order Proposals).

For more information about monitoring XI in CCMS, see SAP Service Marketplace at ► <http://service.sap.com/instguides> → *SAP NetWeaver* → *SAP NetWeaver 7.0* → *Operations* → *Process Integration* → *Troubleshooting Guide- SAP XI 3.0/SAP NW 7.0* ◀.

When using RFC, you can use the RFC Monitor in CCMS. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* ◀.

SAP F&R Replenishment Workbench for Stores (RWBS) is running on J2EE and has no separate CCMS monitor entries. Instead, you can use the SAP J2EE monitor templates of CCMS.

Enhancement package 2 for SAP SCM 7.0 allows monitoring of the dispatcher for the efficient control of the FRP modules via CCMS. Here you can distinguish between planning objects and dispatcher processes. Planning objects are locations which are processed by FRP processor. Dispatcher processes is the framework which allows to process the locations according to the system customizing. How to create reaction methods and how to subscribe to those objects can be found in the online help to CCMS monitor.

For all other exceptional situations, the Exception Monitor can be used, where all critical data is integrated in the SCM Alert Monitor. You can call the SCM Alert Monitor using transaction `/FRE/EXC`.

For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *JAVA Technology* → *Administration Manual* → *Supportability and Performance Management* → *Monitoring* → *Displaying J2EE Engine Monitoring Data in the CCMS* ◀.

Internet Graphics Service

The Internet Graphics Service (IGS) is part of SAP NetWeaver, and it is used on SAP SCM screens to support the display of graphics. Since SAP SCM also uses the IGS, you should also monitor this component. CCMS gives you an overview of the current IGS configuration, the port watchers available, and their associated interpreters. It also displays various performance values for the relevant IGS components.

To monitor IGS in CCMS, you must activate CCMS Monitoring. You can do so by starting the GRAPHICS_IGS_ADMIN report in transaction SE38. Then enter **IGS RFC-Destination** and choose **F8**. Then select the menu *Environment* and choose *Switch on CCMS*.

You can find the monitor tree for IGS in the CCMS (transaction RZ20) as the *Internet Graphics Server* in the monitor set *SAP CCMS Monitors for Optional Components*.

For more information about the values displayed in CCMS, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *UI Technologies in ABAP* → *SAP Graphics* → *Internet Graphics Service* → *Administering the Internet Graphics Service (IGS)* ◀.

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

SAP SCM is technically based on SAP NetWeaver 7.0 (including enhancement package 3). For information about technical problem analysis (such as for database, operating system, or workload analysis), see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP Netweaver* ◀.

This SAP SCM Application Operations Guide only covers the differences and additional information specific to SAP SCM.

3.2.1 SAP SCM Basis (Part of SCM Server)

Since SAP SCM Basis is not a standalone component, log objects and subobjects in the SCM Basis are used by one or more application components that are based on the SAP SCM Basis. Therefore, these log objects and subobjects are described in the relevant section of this application component.



EXAMPLE

Log object /SAPAPO/PE is part of SCM Basis, but used by SAP SPP and thus described under SAP Service Parts Management.

3.2.2 SAP APO Analysis Tools (Part of SCM Server)

For information about internal and external monitoring, problem, and performance analysis tools, see the following Best Practices document:

Internal and External Consistency for SAP APO (3.x) / mySAP SCM (4.x) (<http://service.sap.com/~sapidb/011000358700002214842003E>)

For performance monitoring in SCM 7.x, see the documentation on the APO Performance Monitor on SAP Help Portal at <http://help.sap.com/SCM702>, under ► *SAP Supply Chain Management (SAP SCM)* → *SAP Advanced Planning and Optimization (SAP APO)* → *SAP APO Administration* → *APO Performance Monitor* ◀.

Depending on the business processes you are using in APO, you can find additional information in the following Best Practices documents:

- *Manage Demand Planning in SCM/APO* (<http://service.sap.com/~sapidb/011000358700000955412003E>)
- *Manage Supply Network Planning in SCM / APO* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage Global ATP in SAP APO (3.x) / mySAP SCM (4.x)* (<http://service.sap.com/~sapidb/011000358700007382482002E>)
- *Manage the Transportation Management Solution in SAP APO (3.x) / mySAP SCM (4.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

Trace and Log Files

Trace and log files are essential for analyzing problems.

For general information about traces, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* → *Trace Functions* ◀.

For general information about application logs, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP Netweaver* → *SAP NetWeaver by Key Capability* → *Solution Life Cycle Management by Key Capability* → *Application Log – (BC-SRV-BAL)* ◀.

Log objects and subobjects to be used for SAP APO in SLG1

Log Object	Log Subobject	Object/Subobject Text
AHT	N/A	Action Handler and Production Tracking
N/A	ACTION_HANDLER_CORE	Core Action Handler
APO	N/A	Advanced Planning and Optimization
N/A	ATP	APO Global ATP
N/A	CHK	Consistency Check for CTM Master Data
N/A	CTM	Capable-to-Match
N/A	DOWN_UPLOAD	Download and Upload liveCache Data
N/A	DP-RT0	Runtime Object
N/A	EDQA	Event-Driven Quantity Assignment (EDQA)
N/A	LCCHECK	RPM Matrices Test with liveCache Check
N/A	MD	Master Data

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Log Object	Log Subobject	Object/Subobject Text
N/A	MVM	Model/Version Management
N/A	ND	Network Design
N/A	PPDS	Production Planning and Detailed Scheduling
N/A	PPM	Production Process Model
N/A	PP_DTS	Production Planning and Detailed Scheduling
N/A	RECOVERY	Recovery
N/A	SCO	Sales Scheduling Agreement
N/A	SDPP	Consistency Check for Planning Books
N/A	SRC	Source of Supply Determination
N/A	SWITCH	liveCache Change/Upgrade
N/A	TPVS	Transportation Planning and Vehicle Scheduling
N/A	UPGRADE	Errors that occurred during the upgrade
N/A	VERSIONMERGE	SNP Version Merge
APO_BAPI	N/A	CommunicationAPO— External Systems
N/A	ATP_APS	ATP Service Object
N/A	CLP_APS	APS Collaborative Planning
N/A	DEL_REP	Deletion Report for Transaction Data
N/A	FC_APS	PlannedIndReqmtsAPS
N/A	KFIG_SEND_REP	Transfer Report for Key Figure Values
N/A	LOC_APS	APS Location
N/A	LPH_APS	Location Product Hierarchy APS
N/A	LPSP_APS	APS Location Product Substitution Procedure
N/A	LSP_APS	APS Location Determination Procedure
N/A	MDAT_SEND_REP	Transfer Report for Master Data
N/A	MO_APS	APS Manufacturing Order
N/A	OR_APS	APS Order Request
N/A	PB_APS	APS Planning Block
N/A	PDS_APS	Production Data Structure APS
N/A	PH_APS	Product Hierarchy APS
N/A	PLOC_APS	APS Partner Location
N/A	PL_EVENT	Planning Event
N/A	PO_APS	APS Procurement Order

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Log Object	Log Subobject	Object/Subobject Text
N/A	PPDS_APS	PP/DS Planning Services
N/A	PPMSP_APS	APS PPM Substitution Procedure
N/A	PPM_APS	APS Production Process Model
N/A	PPRD_APS	APS Partner Product
N/A	PRD_APS	Product APS
N/A	PRM_APS	APS Promotion
N/A	PSP_APS	APS Production Substitution Schema
N/A	QT_APS	APS Quota Arrangement
N/A	REQ_APS	APS Request for Quotation
N/A	RES_APS	APS Resources
N/A	RULE_APS	APS Substitution Rule
N/A	SEND_REP	Transfer Report for Transaction Data
N/A	SO_APS	APS Sales Order
N/A	ST_APS	APS Stock
N/A	TRL_APS	APS Transportation Lane
N/A	VS_APS	Vehicule Scheduling Services APS
APO_FCS	N/A	Log for APODP Applications
N/A	ADD_BOM	Add Bill of Materials Information
N/A	BCSP	Consumption in the Background
N/A	DPC	Demand Planning Characteristic Value Combination
N/A	DPF	Demand Plan Selection
N/A	DPP	Demand Plan
N/A	DPS	Demand Planning Scenario
N/A	DPT	Demand Planning Scenario Template
N/A	DPV	Demand Plan Version
N/A	DVOP	Demand View of Promotion
N/A	EXT_RELEASE	Extended Release to Supply Network Planning
N/A	FCS	Planning
N/A	GFC	Generate Forecasting
N/A	MD_CHECK	Subobject for Master Data Checker
N/A	PAREA_LOAD	Load Data from InfoCube into Planning Area
N/A	PA_CHANGE	Change Planning Area
N/A	PSTRU	Planning Object Structure
N/A	RELEASE	Release to Supply Network Planning

Log Object	Log Subobject	Object/Subobject Text
N/A	RELEASE_CUBE_TO_OLTP	Direct Release from InfoProvider of ERP System
N/A	RELEASE_CUBE_TO_SNP	Direct Release from InfoProvider to SNP
N/A	RE0	Forecasting Reorganisation
N/A	SDP94	Interactive Planning
N/A	SEASON	Seasonal Planning
N/A	S0	Selection Organization
N/A	TS	Time Series Management
N/A	TS_BATCH	DP Mass Processing
N/A	TS_PROP	Calculate Proportional Factors
N/A	VERSION_COPY	Copy Planning Version
N/A	XLS_UPLOAD	Excel Upload in Interactive Planning
N/A	EVTY_DEL	Deletion of Event Types with Dependencies
N/A	FCS_OPT	Classification and Forecast Optimization
N/A	MASS_EVDEL	Mass Deletion of Events
N/A	MASS_EVENT	Mass Creation of Events
N/A	OUTLIER_DETECT	Detection of Outliers
APO_SNP	N/A	APO: Supply Network Planning
N/A	AGG	SNP Aggregation
N/A	CAP	Capacity Leveling
N/A	DEP	SNP Deployment
N/A	DIS	SNP Disaggregation
N/A	DISR	SNP Disaggregation After Resource Consumption
N/A	DPLOPT	Deployment Optimization
N/A	FRWK	SNP Characteristic Framework
N/A	HEU	SNP Heuristic
N/A	LLC	SNP Low-Level Code Determination
N/A	OPT	SNP Optimization
N/A	RELEASE	Release to Demand Planning
N/A	RLCDEL	Delete Transaction Data
N/A	SFT	SNP Safety Stock Planning
N/A	SHLF	SNP Propagation of Shelf Life Dates
N/A	SLM	Single-Level Supply and Demand Planning
N/A	SPL	Prioritization of Deployment Stock Transfers

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Log Object	Log Subobject	Object/Subobject Text
N/A	TLB	TLB: Transport Load Builder
APO_MD	N/A	APO: Master Data
N/A	LO	Location
N/A	STD_HIER_CREATE	Report: Create Standard Hierarchy
N/A	VM	Version Management
APOPCM	N/A	Production Campaign in APO
N/A	APOPCMDPS	Production Campaign in DPS
CIFSCM	N/A	Application Log Object for Core Interface
N/A	DL	Delivery (Inbound)
N/A	SH	Transport (Inbound)
N/A	SHIPMENT	Transports
INC	N/A	Product and Location Substitution
MMP	N/A	Model Mix Planning and Sequencing
N/A	MMP_RUN	Model Mix Planning Run
N/A	SEQ_API	External Interface/Production Connection
N/A	SEQ_EXPERT_CHANGES	Expert Functions for Sequencing
N/A	SEQ_INTERACTIVE	Interactive Sequencing
MSP	N/A	Maintenance and Service Planning
N/A	DMND	Maintenance Demand
MSP_CIF	N/A	Maintenance and Service Planning — CIF
MSP_MTL	N/A	Maintenance and Service Planning — Maintenance Task List
RCC	N/A	Remote Control and Communication
RESOURCE	N/A	Resources
RPM	N/A	Rapid Planning Matrix
N/A	FATAL_ERRORS	Fatal Errors
N/A	REORG	Reorganize Data Vectors
N/A	RPM_RUN	Messages During RPM Run
N/A	TIMELINES	Create RPM Time Series in Background
RPM_LCC	N/A	Test of RPM liveCache Routines
N/A	HEADER	General Data for a Test Run
N/A	MESSAGES	Individual Messages of a Test Run
RPM_LCC_TESTTOOL	N/A	RPM Test Tool
/SAPAPO/CMDS	N/A	Collaborative Management of Delivery Schedules (CMDS)
N/A	CHECK	Consistency Check

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Log Object	Log Subobject	Object/Subobject Text
/SAPAPO/CONFR_CFGREL	N/A	Consistency of Configuration Relevance in Product Master
N/A	CFGREL	Configuration-Relevant Product
N/A	CLCH_RM	Remove Characteristic from CDP-Relevant Class
N/A	MAT_CONS	Product Master Consistency
/SAPAPO/CONFR_PCHECK	N/A	Material Variants Check
/SAPAPO/MC01	N/A	Planning with CDP
N/A	BLOCK	Block Planning
N/A	CFGSYS	Setting Up Configuration Relevance
N/A	MASTER	Master Data
N/A	MAT	Product Master
N/A	TRANS	Transactional Data
/SAPAPO/MC013X40	N/A	CDP IBASE Conversion
/SAPAPO/RT0	N/A	Production Data Engine
N/A	DELETE	Delete Production Data Structure
N/A	DP_GEN	Generate or Update Production Data Structures
N/A	EXPLODE_PPDS	Explosion for PP/DS
N/A	EXPLODE_SNP	Explosion for CTM/DP/SNP
N/A	PPDS_GEN	Generate PP/DS Production Data Structure
N/A	PPE_GEN	Generation of Production Data Structures from iPPE Data
/SCMB/MD	N/A	SCM Basis Master Data
N/A	SCU	Supply Chain Unit

For more information about trace and log files, see also the Best Practices documents mentioned in this section.

3.2.3 SAP liveCache Technology Analysis Tools

To monitor and administer your SAP liveCache, you have several options or tools, which should be used in the following order of preference:

Monitor	Detailed Description	Prerequisites
LC-Assistant (LC10)	You can use the SAP liveCache Assistant to monitor multiple SAP liveCaches on one or more servers.	N/A
Database Manager GUI (DBMGUI)	A graphical client tool used for remote administration of MaxDB and SAP liveCache systems.	After installing DBMGUI software on the front end, you can start DBMGUI. You can

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Monitor	Detailed Description	Prerequisites
	The Database Manager consists of a server and a client part. The server part (DBM server) is responsible for functionality. The client part is represented by DBMGUI, DBMCLI and WebDBM.	administer several SAP liveCaches with one DBMGUI session. Make sure that you select the correct SAP liveCache server when you issue a command. Before you can administer an SAP liveCache, you need to register it.
Database Manager Client (DBMCLI)	An SAP liveCache command line database client administration tool that can be executed from within SAP SCM using transaction SM49. The Database Manager consists of a server and a client part. The server part (DBM server) is responsible for functionality. The client part is represented by DBMGUI, DBMCLI and WebDBM.	N/A
WebDBM	A Web-based Database Management Tool. The Database Manager consists of a server and a client part. The server part (DBM server) is responsible for functionality. The client part is represented by DBMGUI, DBMCLI and WebDBM.	N/A

For more information about the database tools DBMGUI and DBMCLI, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *SAP MaxDB* → *Tools* ↩.

To download the latest version of these database tools, go to <http://www.mysql.com/downloads>. Alternatively, to download from SAP Service Marketplace, see SAP Note [386714](#). Additionally, you can use the following transactions to test and monitor SAP liveCache:

Monitoring Object	Monitor Transaction/ Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Display current LCA versions	/SAPAPO/OM04 or /SAPAPO/OM13 (see below)	As required or after SPs and upgrades	Check that correct versions are installed	Check which LCA build is installed on your SAP liveCache server	System monitoring team
Test program for SAP liveCache and LCA routines	/SAPAPO/OM03	As required or after SPs and upgrades	Correctly configured SAP liveCache and LCA routines should have output such as <code>liveCache test at LCA finished without errors</code>	Performs a simple check for LCA routines and SAP liveCache: useful to check the correct installation of SAP liveCache and/or LCA routines	System monitoring team and/or Basis Support

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Monitoring Object	Monitor Transaction/ Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Analyze SAP liveCache and LCA build	/SAPAPO/OM13	Daily / regularly		Shows LCA build, checks important SAP liveCache and LCA build, checks network speed/status (see below), shows SAP liveCache log files	System monitoring team
Display meaning of LCA routine return code	/SAPAPO/OM10	As required	Use to help analyze LCA routine messages or errors	Shows the meaning of return codes issues by LCA routines	Basis Support
SAP liveCache data viewer	/SAPAPO/OM16, <i>Display Plan Version</i> then choose <i>Calculate</i> in the output list	As required	Can be used to see the approximate size of planning versions in SAP liveCache	Shows the size of data by planning version (in KB)	Basis and Application Support
Check consistency of data between APO and SAP liveCache	/SAPAPO/OM17	Daily / weekly / as required	Check for inconsistencies and correct as necessary	For more information, see the Best Practice <i>Internal and External Consistency for SAP APO 3.x / mySAP SCM 4.x/5.0</i> (http://service.sap.com/~sapidb/011000358700002214842003E)	System monitoring team (Basis and Application Support)
Display SAP liveCache OMS and LCA routines performance analysis information	▶ LC10 → <i>liveCache Monitoring</i> → <i>Performance</i> ◀	As required	N/A	Use transactions to help analyze SAP liveCache and LCA routine activity; show details of current activity; LCA routine runtime analysis statistics; Class container information; OMS data, size, age and versions; active transactions	Basis Support
SAP liveCache and liveCache Applications test cockpit	/SAPAPO/OM14	Daily / weekly / after upgrade or SP	N/A	The test cockpit contains many reports that are available for testing SAP liveCache and LCA routines. It can be used for	Basis Support

Monitoring Object	Monitor Transaction/ Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
				performance comparisons/tests.	
Evaluate performance and verify SAP liveCache and LCA routines	SE38 – /SAPAPO/OM_ PERFORMANCE <execute> [Default 5 sec]	Weekly / after upgrade or SP	Check to see if performance of SAP liveCache and LCA routines differs greatly from previous runs	Tests SAP liveCache and LCA routines based on benchmark data. Results can be used to roughly compare performance and ensure SAP liveCache / LCA routines are working well	Performance monitoring team
Database Analyzer	You can call the Database Analyzer in several different ways: <ul style="list-style-type: none"> From the operating system level using command dbanalyzer In the Database Manager CLI In the CCMS (for SAP systems) 	Weekly / after upgrade or SP	Check to see if performance of SAP liveCache and LCA routines differs greatly from previous runs	The Database Analyzer program is a tool for analyzing the performance of database instances. For more information, see SAP Help Portal at http://help.sap.com → SAP NetWeaver → SAP NetWeaver 2004s → SAP NetWeaver 7.0 Library → English → SAP NetWeaver Library → SAP NetWeaver by Key Capability → Databases → SAP liveCache Technology → Database Administration in CCMS: SAP liveCache Technology → CCMS Monitoring → External Analysis Tools ↗	Performance monitoring team
Workload	ST03N Workload Analysis Tool, see below	Weekly / after upgrade or SP	Check to see if performance of SAP liveCache and LCA routines differs greatly from previous runs	N/A	Performance monitoring team

Monitoring and Testing LCA and SAP liveCache Transactions

LCA traces grow very large, very quickly. Therefore, never run LCA traces unattended and always ensure that they are switched off immediately afterwards, otherwise disk-full situations might occur in a very short space of time.

Despite this, several transactions can be used (often in combination) to help assess what is occurring in SAP liveCache and the running LCA routines.

To monitor transactions currently running in SCM and SAP liveCache, you may need to use several transactions or tools:

- Transaction SM50 or SM66 (for all application servers):
Choose *Process overview*, look for **DB procedure**; match the PID here to the APPL PID seen in the LC10 *Active or Runnable Tasks* screens to see which SCM work process is connected and working in SAP liveCache.
- Transaction LC10:
Choose **► Console → Active Tasks or Runnable Tasks ◀** – shows currently active tasks in SAP liveCache, or runnable tasks that are waiting for either SAP liveCache processing time or a response from SCM/ABAP programs. See SAP Note [454653](#) for the meaning of each status in these screens.

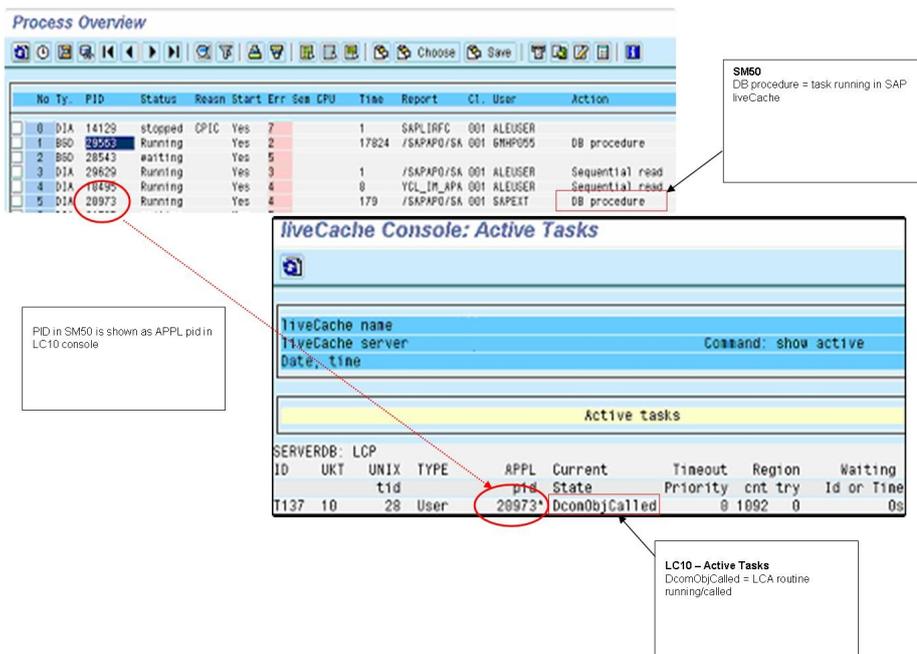


Figure 1:

Other standard basis tools can also be used for monitoring SAP liveCache and LCA routines:

- Transaction SE30:
ABAP runtime analysis.



NOTE

This may not distinguish between APO database and SAP liveCache accesses

- Transaction ST05:
SQL Trace (may become extremely large – do not leave traces running unattended), see SAP Note [483854](#).

Network Monitoring Between SAP liveCache and Application Server

If the SAP SCM system and the SAP liveCache are on physically separate servers, you should regularly (daily) check the network performance between the two servers using the NIPING tool. Poor network performance can lead to slow response times. These slow response times may suggest poor SAP liveCache performance, but in fact are due to the network. To check this, read SAP Note [458221](#) and consider using the NIPING functionality in transaction /SAPAPO/OM13 on the *Network* tab page.

Workload Analysis Tool: Transaction ST03N

To help you determine the SAP liveCache elements of total response times with an SAP SCM system, use transaction ST03N.

More information about this tool is available with the **F1** help function and in the latest versions of the help documentation.

ST03N offers three views: *Service Engineer*, *Administrator*, and *Expert*. For history information about response times by days (for comparison purposes), you must be in Expert mode and have all necessary authorizations.

If you view the workload on a server, you can see the response times broken down by type (such as dialog, batch, or RFC), and under the column *DB Proc Time* you can see the SAP liveCache percentage or portion of total response times.

Transaction ST03N is especially useful for analyzing whether you have a bottleneck or SAP liveCache performance issue on your system. It can also be used to see how changes of LCA build and SAP liveCache parameters have affected your system.

Other features are available, such as transaction profiles, but the SAP liveCache processing time is separated out to help you monitor and analyze your system in more detail.

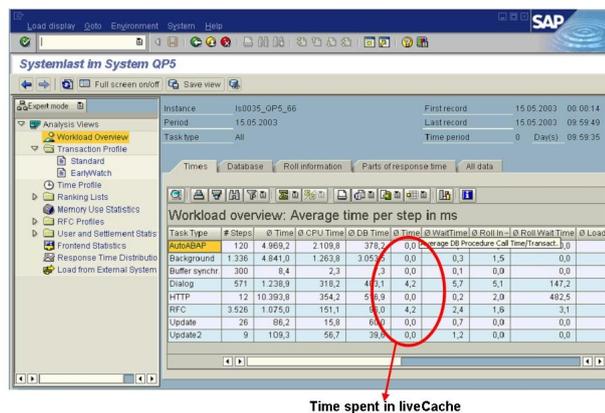


Figure 2:

Trace and Log Files

Trace and log files are essential for analyzing problems.

Every SAP liveCache system message is stored in a log file called `kn1diag`. You should check this file within the SCM System using transaction LC10 (call transaction LC10 then choose **liveCache: Monitoring**

| *Problem Analysis* → *Messages* → *Kernel* (↩). The `kn1diag` file is limited in size (SAP liveCache parameter `kerneldiagsize`, default 800 KB). Once this size limit has been reached, the messages in that file are overwritten in a round robin. One exception to this are messages relating to starting the database in the operational state ADMIN.

**NOTE**

The `kn1diag` file is saved to `kn1diag.old` during an SAP liveCache restart. For error analysis, save the `kn1diag` files before they are overwritten on subsequent restarts of SAP liveCache. Depending on the installation, you can find the `kn1diag` file at operating system level in the directory `/sapdb/data/wrk/<liveCacheName>`.

Another important log file is `kn1diag.err`. All SAP liveCache errors are recorded in this file. You can view this file using transaction LC10 (or at operating system level in the same directory as the `kn1diag` file). This file is useful for SAP liveCache error analysis. After every restart of your SCM System, check the initialization log of SAP liveCache. You can do so in transaction LC10 (call transaction LC10 then choose ► *liveCache* → *Monitoring and then Problem Analysis* → *Logs* → *Operating* → *Current* (↩). Again, depending on your installation, you can find it at operating system level in the directory `/sapdb/<liveCacheName>/db` as file `lcinit.log`.

For serious error analysis, you may need to use a kernel or LCA trace. Only use these traces in coordination with SAP Active Global Support since they can heavily influence system performance. For more information about switching on a kernel trace, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *SAP MaxDB* → *Database Administration* → *Troubleshooting* → *Traces* (↩).

To turn on/off LCA traces, use transaction `/SAPAPO/OM02`. To view LCA trace files, use transaction `/SAPAPO/OM01`.

**NOTE**

Ensure that your file system has enough disk space available to store all log files. For more information, see the SAP liveCache Technology Installation Guide on the SAP Service Marketplace at ► <http://service.sap.com/instguides> → *SAP NetWeaver* → *SAP NetWeaver 7.0 (including Enhancement Package 3)* → *Installation* → *Installation – Standalone Engines* → *Installation SAP liveCache Technology* (↩) and SAP Note [429215](#).

Important Log and Trace Files

Content	File	Path
<ul style="list-style-type: none"> ■ Database start and stop ■ Specifications about the physical memory areas ■ User processes ■ System error messages 	kn1diag	/sapdb/data/wrk/<liveCacheName>

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

Content	File	Path
Same messages as in kn1diag created before SAP liveCache restart	kn1diag.old	/sapdb/data/wrk/<liveCacheName>
All error messages and warnings of the SAP liveCache kernel since the installation of the SAP liveCache	kn1diag.err	/sapdb/data/wrk/<liveCacheName>
Starting, stopping, and initialization of the SAP liveCache	lcinit.log	/sapdb/data/wrk/ <liveCacheName>/db
All reactions of the database kernel to database statements	kn1trace	/sapdb/data/wrk/ <liveCacheName>/db

For more information about trace and log files, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *SAP MaxDB* → *Database Administration* → *Troubleshooting* → *Log Files* ↩.

3.2.4 SAP SCM Optimizer Analysis Tools

Once SAP SCM optimizers have been correctly installed and configured, they require little or no administration and maintenance. This section lists the most important transactions for optimizers with information about what they are used for.

Monitoring Object	Monitor Transaction/Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
User list for optimizers	rcc_session	As required	N/A	Displays a user list for optimizers	Basis Support
Versions of optimizers	rcc_version	As required	N/A	Displays optimizer versions	System monitoring team
Running optimizer processes	rcc_session	As required	N/A	Display optimizer processes	Basis Support
RFC destinations for optimizers	SM59 / rcc_cust	During installation or after configuration changes	Test connection status to ensure all is OK	Defining and checking optimizer RFC destinations – can also be used to check if optimizer server is online	System monitoring team and Basis Support
Spool file of optimizer run	SM37	As required	Messages in spool file	Check also for application errors after the optimizer run using rccf_log (see section Trace and Log Files).	Application Support /Job scheduling team
Detailed performance	/SAPAPO/ PERFMON	As required	N/A	Display runtime details	Application Support

Monitoring Object	Monitor Transaction/Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
information of optimizer runs					

Depending on the business processes you are using, we recommend that you also look at the following documents:

- *Manage Supply Network Planning & CTM in SAP APO (3.x) and SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x, 5.0)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage the Transportation Management Solution in SAP APO (3.x) / SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

Trace and Log Files

Trace and log files are essential for analyzing problems.

Important Log and Trace Files

Monitoring Object	Monitor Transaction/Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Optimizer logs and trace files	rcc_log To display the trace files, choose ► <i>Extras</i> → <i>Display Log File</i> ◀	Check frequently – daily, weekly	Check for Errors	Display and analyze optimizer logs and trace files. These files are on the server in the directory log of the SAP gateway on which the optimizers are installed (either your own server or application, SAP liveCache or database server): Directory (Windows version): \usr\sap\<SID>\G<GWNr>\log or \usr\sap\<SID>\DVEBMGS<GWNr>\log <SID> = SystemID for example, APO <GWNr> = SystemNr (=GatewayNr) for example, 00 For more information, see SAP Note 391808.	Basis Support
Changing the detail level of trace files	/SAPAPO/OPT10	Only in coordination with SAP	As directed by SAP Support	As directed by SAP Support	Basis Support
Spool file of optimizer run	SM37	As required	Messages in spool file	Check also for application errors after the optimizer run using rccf_log (see above).	Application Support /Job scheduling team

Monitoring Object	Monitor Transaction/ Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Displaying log files (as an alternative to rccf_log)	/SAPAPO/ PERFMON	Check frequently – daily, weekly	Check for Errors	Display and analyze optimizer logs	Basis Support

Depending on the business processes you are using, we recommend that you look at the following documents on SAP Service Marketplace at <http://service.sap.com>:

- *Manage Supply Network Planning & CTM in SAP APO (3.x) and SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x, 5.0)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage the Transportation Management Solution in SAP APO (3.x) / SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

Distributed Statistical Records (DSR)

For each optimization run one DSR, containing technical data (for example runtime and memory consumption), can be written to the file system. For more information, see SAP note [1088212](#).

3.2.5 SAP Event Management Analysis Tools (Part of SCM Server)

For information, see *Application Operations Guide SAP Event Management 7.0 Including SAP Enhancement Package 2* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP Event Management* → *Using SAP Enhancement Package 2 for SAP Event Management 7.0* ◀.

3.2.6 SAP SNC Analysis Tools (Part of SCM Server)

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

3.2.7 SAP Extended Warehouse Management Analysis Tools (Part of SCM Server)

For information, see *Application Operations Guide SAP™ Extended Warehouse Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//>

[instguides](#), under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP EWM* → *Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

3.2.8 SAP Forecasting and Replenishment Analysis Tools (Part of SCM Server)

SAP Forecasting and Replenishment (SAP F&R) provides mainly batch-operated processes and offers exception monitoring for all background processes. Business exceptions as well as technical exceptions from SAP F&R (including the Forecasting & Replenishment Processor (FRP)) that occur during the process are logged and can be reviewed within an exception workbench (transaction /FRE/EXC).

Monitor	Detailed Description	Prerequisites
/FRE/ECP	Exception Workbench	See SAP Library

For more information about exception monitoring in SAP F&R, see SAP Library for SAP Supply Chain Management on SAP Help Portal at <http://help.sap.com/scm702>, under ► *SAP Supply Chain Management (SAP SCM)* → *SAP Forecasting and Replenishment* → *Exception Management* ◀.

In addition to the above, there is an option to use the CCMS Monitor integration. At the moment, it is possible to display alerts for the dispatcher process and the run of FRP-Dispatcher for the planning of locations.

For the monitoring object *locations*, the system creates alerts in case the processing of a single location is aborted (yellow alert) or the complete dispatcher processing is aborted (red alert).

For the monitoring of the *Dispatcher processes*, in each case the current state of every process is reported. Possible alerts for these objects are *started* (green) *stopped* (gray) or *aborted* (red).

Use transaction RZ20 and choose ► *SAP F&R node* → *F&R status messages* ◀.

SAP F&R Replenishment Workbench for Stores (RWBS) requires no dedicated monitoring transactions as it is a front-end component.

Trace and Log Files

Trace and log files are essential for analyzing problems.

In SAP F&R, all business exceptions as well as technical exceptions that occur during the process are logged and can be reviewed within an exception workbench (transaction /FRE/EXC, see above). No specific configuration settings are required to switch on logging except the dispatcher processes. The dispatcher trace level allows you to define the level of detail of the exceptions issued by the dispatcher:

- Tracing of the dispatcher process

The dispatcher can be traced in three levels:

- A gray LED-icon indicates that tracing is deactivated
- A yellow LED-icon indicates that serious errors are traced
- A green LED-icon indicates that standard tracing is switched on

3.2 Detailed Monitoring and Tools for Problem and Performance Analysis

- A system-settings-icon indicates that detailed tracing is switched on
- Tracing of the controller process
 - A gray LED-icon indicates that tracing is deactivated
 - A green LED-icon indicates that standard tracing is switched on
- Tracing of the event handler process
 - A gray LED-icon indicates that tracing is deactivated
 - A green LED-icon indicates that standard tracing is switched on

SAP F&R Replenishment Workbench for Stores (RWBS) has no dedicated trace and log files.

Information about generic trace and log files of the J2EE engine can be found in the SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver Library* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* ◀.

3.2.9 SAP Service Parts Management

When you deploy the Service Parts Management scenario, you can check the application logs using the following transactions:

Monitor	Detailed Description	Prerequisites
/SAPAPO/PE_LOG_DISP	Log display	N/A
SLG1	Application log display	N/A

Trace and Log Files

Trace and log files are essential for analyzing problems.

For more information about traces, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *Monitoring and Administration Tools for Application Server ABAP* → *Trace Functions* ◀.

For general information about application logs, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Solution Life Cycle Management by Key Capability* → *Application Log – (BC-SRV-BAL)* ◀.

The application log can be accessed using the above mentioned transactions.

Log objects and subobjects to be used for SPP in /SAPAPO/PE_LOG_DISP (or SLG1)

Log Object	Log Subobject	Object/Subobject Text
/SAPAPO/PE	N/A	Planning Service Manager
N/A	PE_RUNTIME	Planning Service Manager *)
N/A	<SPP-related_subobjects>	Subobjects with name or text starting with / containing SPP
SCM_SPL_REP	N/A	Supply Chain Management: Service Parts Logistics Reporting
N/A	SCR_BASIS	Supply Chain Analytical Tools
N/A	SCR_BO_EQ	Error Queue for Business Objects
N/A	SRVF	Service Fill

Log Object	Log Subobject	Object/Subobject Text
N/A	SRVLOSS	UI for Service Loss Analysis

*) PE_RUNTIME is used for logging the most important errors during the execution of a Planning Service Manager (PSM) run.

3.2.10 Scenario-Specific Problem Analysis Tools

3.2.10.1 Project Manufacturing

Since the scenario for project manufacturing is limited to enabling the transfer of SAP ERP networks and planned maintenance orders and does not provide any specific transactions or functions except the display order feature within transaction /SAPAPO/RRP2, monitoring and analysis for the scenario is covered by the standard monitoring and analytical features for SAP APO and SAP liveCache technology as described above.

Interface Monitors

Interface monitors are essential for analyzing problems with interfaces such as RFC, IDoc, and HTTP. Project manufacturing uses the standard CIF for data transfer between SAP ERP and SAP APO. Refer to the analysis tools for CIF as described in section *SAP SCM Basis (Part of SCM Server)* [page 22].

Data Archiving Monitors

Data archiving is not relevant for project manufacturing, as neither the project order nor the plant maintenance order is archived in SAP APO. These orders always have their original counterpart created and maintained in SAP ERP. As soon as the corresponding network or PM order reaches a certain status in SAP ERP, the order in SAP APO is physically deleted.

For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [page 70] section in this guide.

3.2.10.2 Forecasting & Replenishment (F&R)

Interface Monitors

Interface monitors are essential for analyzing problems with interfaces such as RFC, IDoc, and HTTP

Monitor	Detailed Description	Prerequisites
Transaction / FRE/CON	The interface workbench in SCM provides a possibility to check records that were processed with errors. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/scm702 ► <i>SAP Supply Chain Management (SAP SCM) → SAP Forecasting and Replenishment → Interfaces → Interface Processing → Interface Workbench</i> ◀.	None

To monitor the connection between the SCM system and SAP NetWeaver BI (BW system), see the configuration guide for Forecasting and Replenishment on the SAP Service Marketplace at ► <http://>

service.sap.com/ibc → *Industry Solutions* → *SAP for Retail* → *Multilevel Replenishment / Forecasting & Replenishment* ↩.

Data Archiving Monitors

No archiving monitors are applicable because SAP Forecasting and Replenishment only deletes records. For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [page 70] section in this guide.

3.2.10.3 Make to Order for OEM

There are no specific analysis tools for Make to Order for OEM. You can use the analysis tools of SAP APO, SAP liveCache technology, and SAP SCM optimizer as described above.

Data Archiving Monitors

Data archiving is not necessary for Make to Order for OEM. For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [page 70] section in this guide.

3.2.10.4 Multiple Output Planning

There are no specific analysis tools for Multiple Output Planning. You can use the analysis tools of SAP APO (especially PP/DS and CIF) and SAP liveCache technology as described above.

Data Archiving Monitors

Data archiving is not necessary for Multiple Output Planning. For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [page 70] section in this guide.

3.2.10.5 Maintenance and Service Planning

There are no specific analysis tools for Maintenance and Service Planning. You can use the analysis tools of SAP APO and SAP liveCache technology as described above.

Data Archiving Monitors

Data archiving is not necessary for Maintenance and Service Planning. For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [page 70] section in this guide.

3.2.10.6 Component Maintenance Based on Customer Request

Part of the ERP ECC solution. Details mentioned in the ERP ECC Solution Operation Guide.

3.2.10.7 Component Maintenance Based on MRP

Part of the ERP ECC solution. Details mentioned in the ERP ECC Solution Operation Guide.

3.2.10.8 Component Maintenance Based on Direct Requirement

Part of the ERP ECC solution. Details mentioned in the ERP ECC Solution Operation Guide.

3.2.10.9 Dealer Sales and Service (Vehicle Service)

There are no specific analysis tools for Dealer Sales and Service. You can use the analysis tools of SAP APO and SAP liveCache technology as described above.

Data Archiving Monitors

Data archiving is not necessary for Dealer Sales and Service. For periodic tasks required to contain data growth (for example, reorganization of temporary data), refer to the *Periodic Tasks* [[page 70](#)] section in this guide.

3.2.10.10 Engineer-to-Order – Project Manufacturing

There are no specific analysis tools for Engineer-to-Order – Project Manufacturing. You can use the analysis tools of SAP APO and SAP liveCache technology as described above.

3.2.10.11 Make-to-Order Manufacturing

There are no specific analysis tools for Make-to-Order Manufacturing. You can use the analysis tools of SAP APO and SAP liveCache technology as described above.

3.2.10.12 Service Parts Planning

There are no specific analysis tools for Service Parts Planning. You can use the analysis tools of SAP APO, SAP SNC and SAP liveCache technology as described above.

3.2.10.13 Service Parts Execution

There are no specific analysis tools for Service Parts Execution. You can use the analysis tools of SAP APO, SAP SNC and SAP liveCache technology as described above.

3.3 Data Consistency

If related or identical data is stored in multiple places, inconsistencies may exist (for example, after restoring a single component). The following table describes how consistency can be verified and how inconsistencies may be repaired:

Component/data store	Check tool/method	Detailed Description	Prerequisites
SAP SCM/SAP APO / OLTP system	N/A	See Best Practice document <i>Internal and External Consistency for SAP APO (3.x) / mySAP SCM (4.x/5.0)</i> (http://service.sap.com/~sapidb/011000358700002214842003E)	N/A
SAP liveCache /SAP DB	N/A	See Best Practice document <i>Internal and External Consistency for SAP APO (3.x) / mySAP SCM (4.x/5.0)</i> (http://service.sap.com/~sapidb/011000358700002214842003E)	N/A

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that are printed on both sides.**

4 Management of SAP SCM

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.

For more information about the underlying technology, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* ◀.

4.1 Starting and Stopping

We recommend that you **start** the components in the following order; to **stop**, proceed in reverse order:

Start and Stop Sequences and Tools

Software Component	Start and Stop Sequences and Tools		Detailed Description
	Sequence	Tool	
SCM Server	1	STARTSAP/STOPSAP (Unix) SAPMMC (Windows)	N/A
SAP liveCache	2	LC10	See below
J2EE Engine	3	Depending on the system landscape	Necessary when using the SAP F&R Replenishment Workbench for Stores (RWBS). See below
SAP ERP	4	STARTSAP/STOPSAP (Unix) SAPMMC (Windows)	N/A
SAP NetWeaver Business Intelligence (BI)	5	STARTSAP/STOPSAP (Unix) SAPMMC (Windows)	N/A
SAP NetWeaver Process Integration (PI)	6	STARTSAP/STOPSAP (Unix) SAPMMC (Windows)	N/A
CIF (Plug-In)	7	Start: Reports RSTRFCQ3 and RSTRFCI3 Stop: Reports RSTRFCQ1 and RSTRFCI1	See below
SAP SCM Optimizer	8	Establish network connection to SCM system	No explicit start/stop, but only network connection to SCM system necessary using transaction SM59. For more information, see the Installation Guide of the SAP SCM optimizer.

4.1 Starting and Stopping

Software Component	Start and Stop Sequences and Tools		Detailed Description
	Sequence	Tool	
Internet Graphics Server (IGS)	8	You can start/stop the Windows IGS by using services. On your Windows desktop, choose ► <i>Start</i> → <i>Settings</i> → <i>Control Panel</i> → <i>Services</i> ◀ (or ► <i>Administrative Tools</i> → <i>Services</i> ◀). Scroll down and choose ► <i>SAP IGS</i> → <i>Start/Stop Service</i> ◀.	N/A
F&R Dispatcher	8	ACTIVATE/DEACTIVATE START/STOP via transaction /FRE/ FRP_DISP_ACT	The dispatcher has to be activated first. Then the dispatcher has to be started. If the dispatcher is started it can be stopped again. If the dispatcher is stopped, you can also deactivate it again.

For the list of components required for each scenario, see SAP Service Marketplace at <http://service.sap.com/scl>.

Even though SAP Net Weaver PI and SAP SCM optimizer can be started independently from all other components, we recommend that you start/stop the components in a certain sequence.

For more information about STARTSAP/STOPSAP and SAPMMC, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* ◀.

Starting and Stopping SAP liveCache

SAP liveCache should be started and stopped using transaction LC10.

Alternatives: Call the RSLVCSTART and RSLVCSTOP reports from within SAP, or by using SAPEVT at OS level; call the START_LIVECACHE and STOP_LIVECACHE function modules from within SAP, or by using STARTRFC at OS level.

For more information about starting and stopping SAP liveCache, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *Database Administration in CCMS: SAP MaxDB* → *Database Administration in CCMS: SAP liveCache Technology* → *liveCache Assistant* → *liveCache: Monitoring* → *Operating* ◀.

You can also start SAP liveCache with DBMCLI or DBMGUI, but this may cause a short dump, so start it with LC10 if possible. For more information, see SAP Note [326073](#).

Starting and Stopping CIF

To **start** the CIF queues of your SAP SCM system, use the following reports in SCM and all connected SAP Systems (ERP or R/3).

For outbound queues, use report RSTRFCQ3. Enter the following values:

- Parameter QNAME: **CF***
- Parameter DEST: **<Name of logical system>**

4.2 Software Configuration

- Parameter FORCE: no entry required
- Parameter NO_ACT: no entry required

For inbound queues, use report RSTRFCI3. Enter the following values:

- Parameter QNAME: **CF***
- Parameter FORCE: no entry required
- Parameter MAXLUW: no entry required
- Parameter NO_ACT: no entry required

To determine whether you are using inbound or outbound queues, execute transaction CFC1 in the connected SAP systems (ERP or R/3) and transaction /SAPAPO/C2 in the SCM system.

If you are using outbound queues, you only need to start the outbound queues. If you are using inbound queues, you have to start inbound **and** outbound queues.

To **stop** the queues, use the following reports in the SAP SCM system and all connected SAP systems (ERP or R/3) according to the queue type you are using:

For outbound queues, use report RSTRFCQ1. Enter the following values:

- Parameter QNAME: **CF***
- Parameter DEST: <Name of Logical System of receiving system>
- Parameter FORCE: no entry required

For inbound queues, use report RSTRFCI1. For parameter QNAME, enter **CF***. No entry is required for parameter FORCE.

To determine whether you are using inbound or outbound queues, execute transaction CFC1 in the connected SAP systems (ERP or R/3) and transaction /SAPAPO/C2 in the SCM system.

If you are using outbound queues, you only need to stop the outbound queues. If you are using inbound queues, you have to stop inbound **and** outbound queues.

For more information, see SAP Note [505304](#).

Starting and Stopping J2EE Engine

When using the SAP F&R Replenishment Workbench for Stores (RWBS) you have to start/stop the J2EE Engine.

Depending on your operating system and how you installed the J2EE Engine in your system landscape different procedures apply.

For more information about starting and stopping the J2EE Engine, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *Java Technology* → *Administration Manual* → *J2EE Engine* → *Starting and Stopping the J2EE Engine* ⚡.

4.2 Software Configuration

This section explains which components or scenarios used by this application can be configured, and which tools are available for adjusting them.

4.2 Software Configuration

Component Configuration Tools

Component	Configuration Tool(s)	Detailed Description
SCM Server not CIF-specific	ABAP TAs:	N/A
	SM59	Create RFC destination
	BD54	Maintain logical systems
	SMQR/SMQS	qRFC queue registration
	SMQ1/SMQ2	qRFC queue monitors
	SBGRFCMON	bgRFC queue monitor
	SBGRFCCONF	bgRFC configuration
SCM Server Core Interface (CIF)	ABAP TAs:	N/A
	/SAPAPO/C1	Business system group (BSG)
	/SAPAPO/C2	Assignment of BSG to logical system and specification of the release, queue type, and error handling method of the connected SAP system
	/SAPAPO/C3	CIF application log
	/SAPAPO/C4	Special user settings during CIF transfer
	/SAPAPO/C91	Activation/deactivation of bgRFC in CIF
ERP (CIF-specific)	ABAP TAs:	N/A
	NDV2	Specification of connected system type and release
	CFC1	Logical system – queue type assignment
	CFC2	Special user settings during CIF transfer
	CFC3	Filter size/select size adjustment
	CFG1	CIF application log
SCM Basis	not relevant	No technical configuration data (see other applications using SCM Basis, and the SCM Optimizer)
SCM Optimizer	ABAP TA SM59	No technical configuration data (all technical details are stored in standard ABAP Customizing, for example transactions SM59: RFC connectivity information)
	ABAP TA RCC_CUST (or RCC* respectively)	RCC_CUST: Defining and checking optimizer RFC destinations – can also be used to check if optimizer server is online) RCC_SESSION Active Session RCC_LOG Log Display RCC_PARAM Settings for Experts /SAPAPO/OPT10 Optimizer internal settings

CIF-Specific Configuration Tools in ERP

Component	Configuration Tool(s)	Detailed Description
ERP (CIF-specific)	ABAP TAs:	N/A
	NDV2	Specification of connected system type and release
	CFC1	Logical system — queue type assignment
	CFC2	Special user settings during CIF transfer

Component	Configuration Tool(s)	Detailed Description
	CFC3	Filter size/select size adjustment
	CFG1	CIF application log

4.3 Administration Tools

SAP SCM mainly uses standard administration tools based in SAP NetWeaver. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* ◄.

For managing other software components, see below and the solution operation guides listed in *Related Information* [page 103].

4.3.1 SAP APO (Part of SCM Server)

For more information about internal and external consistency for SAP APO and SAP SCM, see the following Best Practice document: *Internal and external consistency for SAP APO 3.x and mySAP SCM 4.x / 5.0* (<http://service.sap.com/~sapidb/011000358700002214842003E>).

For more information about performance monitoring in SCM 7.0 (including EHP2), see SAP Library for SAP Advanced Planning and Optimization on SAP Help Portal at <http://help.sap.com/scm702>, under ► *SAP Supply Chain Management (SAP SCM)* → *SAP Advanced Planning and Optimization (SAP APO)* → *SAP APO Administration* → *APO Performance Monitor* ◄.

Depending on the business processes you are using in SAP APO, you can find more information in the following Best Practice documents:

- *Manage Demand Planning in SAP APO (3.x) / SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700000955412003E>)
- *Manage Supply Network Planning & CTM in SAP APO (3.x) and SAP SCM (4.x / 5.x)* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x, 5.0)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage Global ATP in SAP APO (3.x) / SAP SCM (4.x / 5.0 / 5.1)* (<http://service.sap.com/~sapidb/011000358700007382482002E>)
- *Manage the Transportation Management Solution (TP/VS) in SAP APO (3.x) / SAP SCM (4.x/5.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

4.3.2 SAP liveCache Technology

General Information

For up-to-date information about important SAP liveCache parameters, see SAP Note [719652](#). This note is updated frequently.

Changes in the hardware configuration of your SAP liveCache machine, such as additional RAM or CPUs, or changes in application data volumes or configuration may require different parameter settings. Check the above note regularly for updated parameter settings. If you experience performance issues, check your SAP liveCache settings against the latest recommendations in this note.

Some important parameters for SAP liveCache are the following:

- **MAXCPU**

The number of CPUs that can be used by SAP liveCache. For information about load balancing of SAP liveCache, see SAP Note [695721](#).

- **CACHE_SIZE**

The size of the data cache memory area used by SAP liveCache. The initial value for this parameter is defined during the sizing of your system. It may, however, require some tuning for normal operation, or in other situations, such as increasing the amount of RAM or data volume on your SAP liveCache server.

- **OMS_HEAP_LIMIT**

The maximum usable heap memory of SAP liveCache and LCA routines (private memory)

**NOTE**

Changes to SAP liveCache parameters do not take effect until the SAP liveCache has been stopped and restarted, so schedule downtime for SAP liveCache if you want to adjust any parameters.

SAP liveCache Memory Areas

This section describes the main SAP liveCache memory areas. These areas are: LC management, heap memory, and net memory usage.

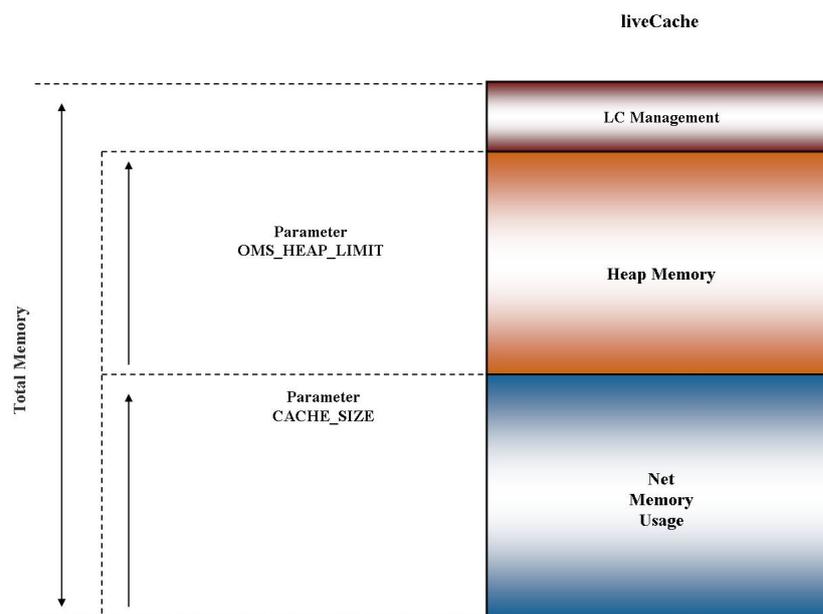


Figure 3:

- **LC management** is needed for administrative purposes, such as starting, stopping, and backup of SAP liveCache.
- **Heap memory** refers to the memory allocation of the LCA routines in SAP liveCache (private liveCache memory regions).
 - Kernel parameter
OMS_HEAP_LIMIT
- **Net memory usage** of objects is where the actual data is stored in SAP liveCache.
 - Kernel parameter
CACHE_SIZE

Parameter OMS_HEAP_LIMIT

SAP Note [337445](#) describes how to perform the calculation and to adjust the parameter OMS_HEAP_LIMIT.

Monitoring Heap Memory Usage

LC heap memory allocation can be monitored using the internal SAP liveCache table OMS_HEAP_STATISTICS.

To read this data, we recommend using transaction LC10 or a database tool such as DBMCLI or DBMGUI.

To monitor heap memory usage in the SAP liveCache Assistant, call transaction LC10 and choose **► liveCache: Monitoring → Current Status → Memory Areas → Heap Usage ◀**.

In this section, you can find the total heap area currently in use by SAP liveCache and LCA routines in the row *Maximum Heap Usage*. You can also use the *sum* button to calculate the accumulated heap values. Here the row *Size* is the memory that was allocated from the operating system. It reflects the *Maximum* segment size that was needed by LCA routines since start of SAP liveCache.

Note that the sum of *Size* and the value of *Maximum Heap Usage* always differ slightly. In row *Currently used* the current usage of memory by LCA routines and copied OMS objects is displayed. If the value of *Size* comes close to the value of `OMS_HEAP_LIMIT`, errors in LCA routines may occur due to insufficient memory.

When using DBMCLI, you can display heap memory by entering the command `show storage`.

For more information about using DBMCLI for displaying database information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *SAP MaxDB* → *Tools* → *Database Manager CLI* → *Command Reference for Working with the Database Manager CLI* → *Controlling Databases* ◀.

Heap memory is graphically represented below and consists of the following main building blocks:

- **Total heap** (kilobytes) – total heap area currently in use by SAP liveCache and LCA routines
- **Reserved heap** (kilobytes) – “high water” mark, maximum amount of heap used since SAP liveCache start
- **Emergency heap** (kilobytes) – reserved memory

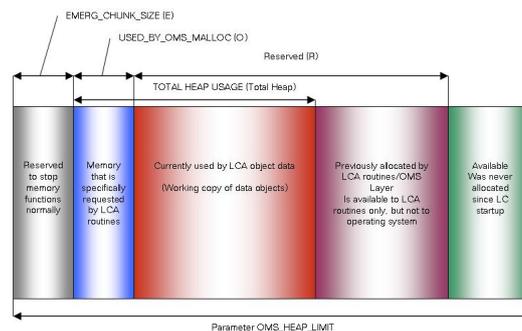


Figure 4:

Garbage Collectors and Data Cache Filling Levels

When you monitor the data cache usage or filling level, you see the value in the *data cache usage percentage* column increase, then some time later decrease, considerably. This is because of the history data (`OMS_HISTORY`) that is used for consistent views within SAP liveCache. This history data is only required for open transactions or transactional simulations within SAP liveCache. When it is no longer required, the data is automatically deleted. The garbage collectors are responsible for deleting this obsolete history data.

For more information about garbage collectors, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *SAP MaxDB* → *Tools* → *Database Manager CLI* ◀.

For an example of data cache usage call transaction `LC10`, then choose ► *liveCache: Monitoring* → *Current Status* → *Memory Areas* → *Caches* ◀.

Cache Accesses				
	Accesses	Successful	Unsuccessful	Hit Rate
Entire Data Cache	67.142.399	66.347.998	794.401	98,82%
History/Undo	2.271.992	2.271.992	0	100,00%
OMS Data	43.889.246	43.137.918	751.328	98,29%
SQL Data	20.981.161	20.938.088	43.073	99,79%
Catalog Cache	6.659.262	5.022.678	1.636.591	75,42%
Sequence Cache	5.079	5.078	1	99,98%

Figure 5:

For information about the operating system parameterization of SAP liveCache, see SAP Note [487972](#).

Monitoring SAP liveCache Memory Areas and Data Volumes

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Memory of SAP liveCache server (Windows only)	LC10, then ► <i>liveCache Monitoring</i> → <i>Problem Analysis</i> → <i>Messages</i> → <i>Core</i> → <i>Current</i> ⚡, then search for string <i>Total physical memory</i>	N/A	Add RAM to server, check <i>data cache/cache size</i> and <i>oms heap limit</i> parameters	To process LCA routines, SAP liveCache uses heap memory. You need to limit this heap memory using SAP liveCache parameter <i>OMS_HEAP_LIMIT</i> . Check that the sum of <i>OMS_HEAP_LIMIT</i> and <i>data_cache_size</i> is no larger than the main memory of machine.	System monitoring team
Current data cache size	LC10, then ► <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Memory Areas</i> → <i>Data Cache</i> ⚡	At least daily	Check that there is enough memory allocated for data cache.	Size of data cache – actual size in MB/KB See also – DataCache filling levels and active parameters	System monitoring team
Data cache filling levels	LC10, then ► <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Memory Areas</i> → <i>Data Cache</i> ⚡	At least daily	If filling level consistently above 80%, check % of OMS history v OMS data. Consider resizing <i>Cache_Size</i> .	Amount of total DataCache used by real data – see line <i>OMS_DATA size</i>	System monitoring team

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Data cache hit rate	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Memory Areas</i> → <i>Data Cache</i> ⬅	At least daily	Check that there is enough memory allocated for data cache.	This value should be $\geq 98.8\%$. If it is not, your SAP liveCache may be too small or incorrectly configured. After restarting SAP liveCache, you need at least 50 000 SAP liveCache data requests before a meaningful value is shown.	System monitoring team
Active SAP liveCache parameters OMS_HEAP_LIMIT	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Parameters</i> → <i>Currently</i> ⬅	As required	Adjust as necessary.	Show currently active parameters. Parameter OMS_HEAP_LIMIT For parameter settings and calculation, see SAP Notes 337445 and 719652 .	Basis Support
Heap memory usage	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Memory Areas</i> → <i>Heap Usage</i> ⬅	Often (especially when data volumes or system changes occur)	Sufficient memory must be available for heap areas, data cache, and the operating system of the SAP liveCache server – and correctly distributed between them.	The list header shows the value for the reserved memory marked with <i>Maximum Heap Usage</i> . This value shows the (private) memory dynamically requested by SAP liveCache, usually for use by LCA routines. It is not returned to the OS until SAP liveCache is stopped. So this value specifies the	System monitoring team

4.3 Administration Tools

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
				amount of RAM that is locked into the SAP liveCache/LCA routines process – it is reusable only by SAP liveCache, but it is not necessarily currently in use by SAP liveCache; it is the “high water” mark of heap usage.	
Status, size, and number of the data area Check filling level of SAP liveCache data area	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Current Status</i> → <i>Memory Areas</i> → <i>Data Area</i> ⚡	Daily	If filling level is higher than 80%, consider adding a new data volume to avoid bottlenecks. The filling level may reduce itself automatically if the garbage collector deletes history data.	Check status and that there is enough data area configured. Check filling level of SAP liveCache data area carefully to prevent SAP liveCache problems (not only performance issues; some history data could also be deleted, leading to errors with transactions).	System monitoring team
Adding a data volume	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Administration</i> → <i>Configuration</i> → <i>Volumes</i> → <i>Data Area</i> ⚡	As necessary	Add data volume if filling level of data area is $\geq 80\%$	Add data volume as required.	Basis Support
Check filling level of SAP liveCache log area	LC10, then ▶ <i>liveCache: Monitoring</i> → <i>Current Status</i>	Daily	If filling level is higher than 50%, consider activating	Check filling level of SAP liveCache log area carefully to prevent SAP	System monitoring team

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
	→ <i>Memory Areas</i> → <i>Log Area</i> ↩		automatic log backups.	liveCache problems.	
Activating automatic log backup	See SAP Help Portal at ▶ http://help.sap.com → <i>SAP NetWeaver</i> → <i>SAP NetWeaver 7.0 (including Enhancement Package 2)</i> → <i>SAP NetWeaver 7.0 Library</i> → <i>English</i> → <i>SAP NetWeaver Library</i> → <i>SAP NetWeaver by Key Capability</i> → <i>Databases</i> → <i>MaxDB</i> → <i>Basic Information</i> → <i>Concepts of the Database System</i> → <i>Administration</i> → <i>Backing Up and Restoring</i> → <i>Backing Up Log Entries</i> → <i>Activating and Deactivating Automatic Log Backup</i> ↩.	If necessary	Activate automatic log backup if filling level of log area is $\geq 50\%$	Activate automatic log backup if required.	Basis Support
SAP liveCache action log	/SAPAPO/OM11	Daily	Traffic lights: <ul style="list-style-type: none"> ■ <i>Red</i> = errors or failures ■ <i>Yellow</i> = warnings ■ <i>Green</i> = success Investigate errors and warnings.	The reported actions are: <ul style="list-style-type: none"> ■ Initializations (Calls of program / SAPAPO/DELETE_LC_ANCHORS) ■ Deletion of old (obsolete) transactional simulations ■ Consistency checks and 	System monitoring team

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
				corrections with / SAPAPO/ OM17 <ul style="list-style-type: none"> ■ Creation, change, and deletion of planning versions ■ Errors raised by transaction /SAPAPO/ OM13 ■ Errors raised by program / SAPAPO/ OM_REORG_DAILY (see <i>SAP APO (Part of SCM Server)</i> [page 71]) ■ Activation and deletion of ATP time series ■ Changes in SAP liveCache Customizing 	

You can automate SAP liveCache database management in the CCMS. The central DBA Planning Calendar is one of the tools that you can use to automate actions. This calendar enables you to manage data and log backups as well as update optimizer statistics and check the database structure in integrated SAP environments from a central location.

For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *Database Administration in CCMS: SAP MaxDB* → *DBA Cockpit: SAP MaxDB* → *Jobs* → *DBA Planning Calendar* ◀.

4.3.3 SAP SCM Optimizer

General Information

Transport of configuration settings

All configuration settings of the SCM Optimizer are stored on the application server. So normal ABAP transports or customizing can be used for the transport of configuration settings.

Customer modifications

The different optimizers cannot be changed by the customer. If customer-specific changes have been approved by SAP, these are incorporated into the standard optimizer engines. Therefore, no special version management is required. For changes outside the SCM Optimizer (ABAP), the workbench can be used.

Conflicts between customer-specific changes (ABAP) and SAP updates can be solved using the workbench.

Monitoring SAP SCM Optimizer

Monitoring Object	Monitor Transaction / Tool	Monitor Frequency	Indicator or Error	Monitoring Activity or Error Handling Procedure	Responsibility
Optimizer server settings	rcc_cust	During installation, or for configuration changes to optimizer servers	N/A	Maintain master data for optimization servers.	Basis Support
RFC destinations for optimizers	SM59 / rcc_cust	During installation or after configuration changes	Test connection status to ensure all is OK	Defining and checking optimizer RFC destinations – can also be used to check if optimizer server is online	System monitoring team and Basis Support

See also *SAP SCM Optimizer Analysis Tools* [page 35].

4.3.4 SAP Event Management (Part of SCM Server)

For information, see *Application Operations Guide SAP Event Management 7.0 Including SAP Enhancement Package 2* on SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP Event Management* → *Using SAP Enhancement Package 2 for SAP Event Management 7.0* ◀.

4.3.5 SAP Supply Network Collaboration (Part of SCM Server)

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.3.6 SAP Extended Warehouse Management (Part of SCM Server)

For information, see *Application Operations Guide SAP™ Extended Warehouse Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP EWM* → *Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

4.3.7 SAP Forecasting and Replenishment (Part of SCM Server)

You activate and start the FRP dispatcher with the `/FRE/FRP_DISP_ACT` transaction.

4.4 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 SCM consists of two parts, as follows:

- 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).

Based on the type of application data contained in a component, we have introduced a categorization scheme for system components that can be used to analyze the backup requirements of any system component and to easily determine an appropriate backup method for this component.

The following table lists the categories in general, the table after this one lists the components used by SAP SCM.

4.4 Backup and Restore

Categories of System Components	Category Properties	Suggested Methods for Backup and Restore	Examples
I	Only software, no configuration or application data	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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: <ul style="list-style-type: none"> ■ 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: <ul style="list-style-type: none"> ■ 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 DBMS	Data: <ul style="list-style-type: none"> ■ 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: <ul style="list-style-type: none"> ■ Application-specific file system backup ■ Backup of software, configuration, log files 	Webserver
VII	Original application data, standalone system, data managed by a	Data: <ul style="list-style-type: none"> ■ Database and log backup ■ Backup of software, configuration, log files 	N/A

4.4 Backup and Restore

Categories of System Components	Category Properties	Suggested Methods for Backup and Restore	Examples
	DBMS, not based on SAP WebAS		
VIII	Original application data, standalone system, based on SAP WebAS	Data: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Application-specific file system backup, data consistency with other systems must be considered Backup of software, configuration, log files 	N/A
X	Original application data, data exchange with other systems, data managed by a DBMS, not based on SAP WebAS	Data: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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

The following table lists the components used by SAP SCM and how to backup them:

Component	Data to Be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
SAP SCM Server (Category XI)	Original application data (where data is exchanged with other systems; based on Web AS), application log data Software, configuration data, log data	Data: <ul style="list-style-type: none"> 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, 	Application data: SAP recommendation: daily; redo log files periodically (for example, hourly) Log/configuration files on file system level: once a week full backup, daily incremental backup Software: SAP recommendation: after installation and	N/A

4.4 Backup and Restore

Component	Data to Be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
		configuration, log files	before and after each software change such as patches and upgrades	
SAP SCM Basis (Category XI)	Original application data (where data is exchanged with other systems; based on Web AS), application log data Software, configuration data, log data	Data: <ul style="list-style-type: none"> ■ 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 	Application data: SAP recommendation: daily; redo log files periodically (for example, hourly) Log/configuration files on file system level: once a week full backup, daily incremental backup Software: SAP recommendation: after installation and before and after each software change such as patches and upgrades	N/A
SCMB PLUS (Category II)	(no persistent application data) Software, configuration data	Data: - See SAP SCM Basis	Software Configuration: Together with SAP SCM Basis	N/A
SAP liveCache (Category X)	Original application data (where data is exchanged with other systems; managed by a DBMS, not based on Web AS), application log data Software, configuration data, log data	Data: <ul style="list-style-type: none"> ■ - MaxDB database and log backup, data consistency with other systems must be considered - ■ Backup of software, configuration, log files 	Application data: SAP recommendation: daily; redo log files periodically (for example, hourly) Log/configuration files on file system level: once a week full backup, daily incremental backup Software: SAP recommendation: after installation and before and after each software change such as patches and upgrades	N/A
SAP SCM Optimizer (Category II)	(no persistent application data) Software, configuration data	Data:- Software, configuration:	Software, configuration: On a regular basis, at least after	N/A

4.4 Backup and Restore

Component	Data to Be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
		<ul style="list-style-type: none"> ■ File system backup either full or incremental; registry backup on Windows platforms or <ul style="list-style-type: none"> ■ No backup, new installation and configuration in case of a recovery 	installation and software upgrades/ configuration changes	
SAP Internet Graphics Service (IGS) (Category II)	-- (no persistent application data) Software, configuration data	Data: - Software, configuration: <ul style="list-style-type: none"> ■ File system backup either full or incremental 	Software, configuration: On a regular basis, at least after installation and software upgrades / configuration changes	N/A
FRP (Category IV/ VI)	Mainly replicated application data, backup recommended, data not managed by a DBMS	Data: <ul style="list-style-type: none"> ■ Database and log backup ■ Backup of software, configuration, log files 	Application data: SAP recommendation: daily Log/configuration files on file system level: once a week full backup, daily incremental backup Software: SAP recommendation: after installation and before and after each software change such as patches and upgrades	N/A
SAP F&R RWBS (Category II)	-- (no persistent application data)	Data: - Software, configuration: - -	After a crash, only reinstall the software and restart application	N/A
SAP EWM (Category XI)	Original application data, data exchange with other systems, data not managed by a DBMS	Data: <ul style="list-style-type: none"> ■ Database and log backup, application log backup (such as job logs in file system), data 	Application data: SAP recommendation: daily; redo log files periodically (for example, hourly)	N/A

4.4 Backup and Restore

Component	Data to Be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
		<p>consistency with other systems must be considered</p> <ul style="list-style-type: none"> ■ Backup of software, configuration, log files 	<p>Log/configuration files on file system level: once a week full backup, daily incremental backup</p> <p>Software: SAP recommendation: after installation and before and after each software change such as patches and upgrades</p>	
SAP SNC (Category XI)	Original application data, data exchange with other systems, based on SAP WebAS Software, configuration, data, log data	<p>Data:</p> <ul style="list-style-type: none"> ■ 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 	<p>Application data: SAP recommendation: daily; redo log files periodically (for example, hourly)</p> <p>Log/configuration files on file system level: once a week full backup, daily incremental backup</p> <p>Software: SAP recommendation: after installation and before and after each software change such as patches and upgrades</p>	N/A
SAP ERP (Category XI)	Original application data, data exchange with other systems, based on SAP Web AS Software, configuration data, log data	<p>Data:</p> <ul style="list-style-type: none"> ■ 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 	<p>Application data: SAP recommendation: daily; redo log files periodically (for example hourly)</p> <p>Log/configuration files on file system level: once a week full backup, daily incremental backup</p> <p>Software: SAP recommendation: after installation and before and after each software change like patches and upgrades</p>	N/A

4.4 Backup and Restore

Component	Data to Be Backed Up	Backup Method / Tool	Recommended Backup Frequency	Backup Sequence (if required)
SAP Event Management (Category XI)	Original application data, data exchange with other systems, based on SAP Web AS Software, configuration data, log data	Database and log backup; file system backup (full and/or incremental)	Application data: SAP recommendation: daily; redo log files periodically (for example, hourly) Log/configuration files on file system level: once a week full backup, daily incremental backup Software: SAP recommendation: after installation and before and after each software change like patches and upgrades	N/A
SAP NetWeaver (Usage Type PI)	See SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/nw703 , under ► <i>SAP NetWeaver</i> → <i>Administrator's Guide</i> → <i>Technical Operations for SAP NetWeaver</i> → <i>Administration of SAP NetWeaver Systems</i> → <i>PI (Process Integration)</i> → <i>Management</i> → <i>Backup/Restore and Recovery</i> ◀.			
SAP NetWeaver (Usage Type BI)	See SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/nw703 , under ► <i>SAP NetWeaver</i> → <i>Administrator's Guide</i> → <i>Technical Operations for SAP NetWeaver</i> → <i>Administration of SAP NetWeaver Systems</i> → <i>BI (Business Intelligence)</i> → <i>Backup and Recovery (AS ABAP)</i> ◀.			
SAP cFolders	See SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/nw703 , under ► <i>SAP NetWeaver</i> → <i>SAP NetWeaver by Key Capability</i> → <i>Application Platform by Key Capability</i> → <i>ABAP Technology</i> → <i>Administration of Application Server ABAP</i> ◀.			
SAP Event Management	See the Application Operations Guide for SAP Event Management on SAP Service Marketplace at http://service.sap.com/instguides under ► <i>SAP Business Suite Applications</i> → <i>SAP SCM</i> → <i>SAP Event Management</i> → <i>Using SAP Enhancement Package 2 for SAP Event Management 7.0</i> ◀.			

**NOTE**

The backup of database and Web AS takes care of application data, configuration settings and log data. For more information, see Best Practice document **Backup and Restore for mySAP Business Suite** on SAP Service Marketplace at ► <http://service.sap.com/bp-roadmap> → *Operations Implementation* ◀.

Frequency of the Backup**SAP SNC**

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com/>

[instguides](#), under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

SAP ERP

SAP ERP recommends that you back up your individual components in the SAP ERP 6.0 landscape regularly to ensure that you can restore and recover them if there is a system failure. For more information about backup and recovery for SAP ERP 6.0, see SAP Service Marketplace at ► <http://service.sap.com/instguides> → *SAP Business Suite Applications* → *SAP ERP* → *SAP ERP 6.0* → *Operations* ◀ and also *SAP enhancement packages for SAP ERP 6.0*.

SAP Event Management

For information, see *Application Operations Guide SAP Event Management 7.0 Including SAP Enhancement Package 2* on SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP Event Management* → *Using SAP Enhancement Package 2 for SAP Event Management 7.0* ◀.

Backup Procedures

SAP SCM is based on SAP NetWeaver (Web Application Server ABAP) technology. All backup procedures for ABAP-based components also work for SAP SCM. For more information about backup and recovery, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* ◀.

Online Backup

The data contained in the database can be backed up online; however, it is not possible to do the same for the runtime infrastructure. An online backup refers to the system landscape and not the databases that contain the business-critical application, or the infrastructure components.



NOTE

If you perform a backup while the server is running, open files may not be backed up.

Backup and Recovery of SAP NetWeaver Components

For more information about backup and restore for the **usage type Application Server for ABAP**, **usage type Process Integration (PI)**, and the **usage type Business Intelligence (BI)**, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* → *Administration of SAP NetWeaver Systems* ◀.

Backup and Recovery for SAP SCM Basis and SCMB PLUS

A backup and recovery for SAP SCM Basis and SCMB PLUS has to be done together the applications using SAP SCM Basis (SAP SCM Server, SAP SNC, SAP EWM).

Backup and Recovery for SAP SCM Server, SAP liveCache technology, and SAP SCM Optimizer

For specific information about backup/restoration and recovery of the components on the SAP SCM Server (SAP Advanced Planning and Optimization, SAP Event Management, SAP Supply Network Collaboration, and Forecasting and Replenishment) as well as the SAP SCM Optimizer, see the Best Practice document *Backup and Restore for mySAP* on SAP Service Marketplace at ► <http://service.sap.com/bp-roadmap> → *Operations Implementation* → *Backup and Restore for mySAP Business Suite* ◄ and the Best Practice *Backup, Recovery and High Availability for SAP APO (3.x) / mySAP SCM (4.x)*.

For information about backup and recovery of SAP liveCache, see the *Checklist for Recovery of SAP liveCache*.

The SAP SCM Optimizer does not contain any persistent application data. Therefore, no backup is required. Perform a new installation in case of a restore.

Backup and Recovery for SAP Internet Graphics Server (IGS):

The SAP IGS does not contain any persistent application data. Therefore, you only need to back up the IGS itself and the configuration files.

Depending on where the IGS is installed, you have the following options for backup and recovery:

1. Installation on Web AS

If you have installed the IGS on the Web AS, you have two options for backup and recovery, as follows:

1. Make a backup of all files of the IGS installation using operating system tools. You can recover the IGS by using your backup.
2. Make a backup of all files in the `conf` directory of the IGS installation. For a recovery, reinstall the IGS and copy all files from the `conf` directory back to the `conf` directory.

2. Standalone Installation on Microsoft Windows Server

If you have installed the IGS on a standalone Microsoft Windows server, you have two options for backup and recovery, as follows:

1. Make a backup of all files of the IGS installation. For a recovery, restore the IGS files and restart the IGS service in Microsoft Windows using command `igswdserv -i` in the `bin` directory of the installation directory.
2. Make a backup of all files in the `conf` directory of the IGS installation. For a recovery, reinstall the IGS and copy all files from the `conf` directory back to the `conf` directory.

Backup and Recovery for SAP Supply Network Collaboration (SAP SNC)

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◄.

Backup and Recovery for Extended Warehouse Management (EWM)

For information, see *Application Operations Guide SAP™ Extended Warehouse Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications → SAP SCM → SAP EWM → Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

Backup and Recovery for Forecasting & Replenishment Processor (FRP)

The FRP contains persistent application data. Most of the data (99%) is replicated data from the SCM server. When re-initializing a store environment, the only data that is lost is the day weights, in other words, the information that depicts the distribution of sales over a week for all location products, and the history of out-of-stock information, which is used for the correction of historical consumption data in case of assumed lost consumptions. The first usually is regained quickly after some weeks of operational run. The impact on business is that for a short period of time the weekly demand forecasts are not correctly distributed over the days. Losing the history of out-of-stock information can lead to lower forecast values in case the correction of lost consumption is activated and there is a significant amount of out-of-stock situations in the past. With a highly adaptive forecast method, this effect disappears after some time of operational run.

Depending on the operation options (central, local, hybrid) a different backup strategy might be useful, also depending on the overall company's situation and strategy. The different options and the impact on backup strategies are described in the F&R configuration guide in section *Maintain F&R Processor Administration Settings*.

Depending on the chosen strategy, you have the following options for backup and recovery:

- You can back up all files in the directory of FRP using operating system tools. For a recovery, restore the files in the same directory.
- If you do not have a backup of the FRP files, you can reinstall the FRP in the same directory or in another one. Here you can also import Support Packages. For more information, see SAP Notes [1487613](#) and [1487615](#).

For more information about administration of the FRP, see SAP Library for SAP Supply Chain management on SAP Help Portal at <http://help.sap.com/scm702>, under ► *SAP Supply Chain Management (SAP SCM) → SAP Forecasting and Replenishment (SAP F&R) → F&R Processor → Administration* ◀.

Backup and Recovery for SAP F&R Replenishment Workbench for Stores (RWBS)

SAP F&R Replenishment Workbench for Stores (RWBS) is a front-end component and does not contain any persistent application data. Therefore, after a crash, it is sufficient to reinstall the software for a recovery and to restart the application. No resynchronization is necessary.

Backup and Recovery: Information about Scenarios using SAP SCM

For the backup of scenarios, you have to back up the components involved in the respective scenario. For information about the components involved in scenarios using SAP SCM, see the Scenario Component List on the SAP Service Marketplace at ► <http://service.sap.com/sc1> → *Start Application*

→ *SAP Scenarios and Realization Alternatives* . Select a scenario (for example within an *Industry Solution*), mark and *Add* the required scenario(s) to the *Selected Scenarios/Processes/Variants* area. Then mark the scenario and choose *Show Realization Alternatives*. For each alternative the required components are listed.

4.5 Application Copy

Homogeneous System Copy

If you are using SAP APO (including SAP liveCache), you can find information about a **homogeneous** system copy (that is, without changing your operating system or database platform) in the *SAP System Landscape Copy for SAP NetWeaver and mySAP Solutions* document at  <http://service.sap.com/scm> → *Technology* → *SAP System Landscape Copy for SAP NetWeaver and mySAP Solutions*  and SAP Notes [210564](#) and [129352](#).

For a **homogeneous** system copy of all other components (SAP Event Management; SAP Supply Network Collaboration, SAP SCM Optimizer; SAP Forecasting and Replenishment), the standard procedures of SAP NetWeaver apply.

For Forecasting and Replenishment it is also necessary to consider the content of SAP Note [1033225](#) for the component FRP.

Beyond this, we recommend that you have implemented SAP Note [908369](#) for Time Series Document Management (TSDM) and SAP Note [906762](#) for Order Document Management (ODM), to have full client copy functionality for those components.

For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under  *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* .

You should be aware that the *Multiple Output Planning* scenario uses characteristics-dependent planning (CDP). The master data for characteristic propagation is maintained in the production process model (PPM). After every client copy, system copy, or an upgrade, the characteristic propagation of the PPMs has to be generated again. For more information, see SAP Note [494839](#).

Heterogeneous System Copy

Heterogeneous system copies for SAP SCM are currently supported on request and on a project basis. For more information, see SAP Note [543715](#). More details and forms are available under <http://service.sap.com/osdbmigration>.



NOTE

A client copy from one system into another system with a different operating system or database is not an alternative to a complete heterogeneous migration. For example, client copies do not ensure that all repository changes are taken over into the new system. Therefore, if you want to change your SAP SCM database or application server platform, a heterogeneous system copy is the only procedure that ensures full data replication into the new system.

For more information about a heterogeneous system copy of SAP liveCache, see SAP Note [632357](#).

For Forecasting and Replenishment it is also necessary to consider the content of SAP Note [1033225](#) for the component FRP.

**NOTE**

After a system copy, the connections between the systems as well as the system identifiers in the business configuration of the SAP NetWeaver PI system must be corrected to reflect the copies instead of the original systems.

4.6 Periodic Tasks

4.6.1 Scheduled Periodic Tasks

This section describes all automatable tasks required to run periodically 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 *Scenario/Component Matrix* [[page 15](#)] section 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.

In addition to the standard jobs mentioned in the *Technical Operations Manual for SAP NetWeaver* (in SAP Library under SAP NetWeaver), you must schedule SCM-specific jobs in your SCM system and, where specified, in all the connected SAP systems.

All jobs, unless otherwise specified, should be run at times of minimal system activity, so as not to affect performance or otherwise disrupt your daily operations.

4.6.1.1 SAP SCM Basis (Part of SCM Server)

Since SAP SCM Basis is not a standalone component, periodic tasks for objects in SAP SCM Basis are normally initiated by application components that use SAP SCM Basis and are also documented with these components. For example, the `/SCMB/ALEN_ALERT_DELETE` report for the deletion of current alerts is located in SCM Basis but used by SAP SNC. Therefore, you find the relevant information in *Application Operation Guide SAPTM Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com/instguides>, under **▶ SAP Business Suite Applications → SAP SCM → SAP SNC → Using SAP enhancement package 2 for SAP SNC 7.0 ◀**.

4.6.1.2 SAP APO (Part of SCM Server)

Standard/Housekeeping Jobs

Program Name / Task	ERP / SCM	Recommended Frequency	Detailed Description	Responsibility
Report BRCONNECT	SCM	Daily	Calculates BW-relevant optimizer statistics (for Oracle); see SAP Notes 129252 and 421795 .	Basis Job Scheduling
Report /SAPAPO/ CRES_CAPACITY_LENG THEN	SCM	Weekly / Monthly	Extends time streams of resources in SAP liveCache.	Application Support /Job Scheduling Team
Jobs for reorganization	SCM	N/A	You can select various jobs for reorganization from the <i>SAP Easy Access</i> menu under ► <i>SAP Supply Chain Management</i> → <i>Advanced Planning and Optimization</i> → <i>APO Administration</i> → <i>Reorganization</i> ◀ For more information about the particular jobs, see the Best Practice documents mentioned below.	

For more information about relevant jobs for SAP APO, see the Best Practice document *Internal and external consistency for SAP APO 3.x and mySAP SCM 4.x / 5.0* (<http://service.sap.com/~sapidb/011000358700002214842003E>)

Depending on the business processes you are using in SAP APO, you can find more information in the following Best Practice documents:

- *Manage Demand Planning in SAP APO (3.x) / SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700000955412003E>)
- *Manage Supply Network Planning & CTM in SAP APO (3.x) and SAP SCM (4.x / 5.x)* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x, 5.0)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage Global ATP in SAP APO (3.x) / SAP SCM (4.x / 5.0 / 5.1)* (<http://service.sap.com/~sapidb/011000358700007382482002E>)
- *Manage the Transportation Management Solution (TP/VS) in SAP APO (3.x) / SAP SCM (4.x/5.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

4.6.1.3 SAP liveCache Technology

Standard/Housekeeping Jobs

Program Name / Task	R/3/SCM	Recommended Frequency	Detailed Description	Responsibility
Report /SAPAPO/ CRES_CAPACITY_ LENGTHEN	SCM	Weekly / Monthly	Extends time streams of resources in SAP liveCache.	Application Support /Job scheduling team

4.6 Periodic Tasks

Program Name / Task	R/3/SCM	Recommended Frequency	Detailed Description	Responsibility
Report RSLVCBACKUP Transaction DB13C (Central DBA Planning calendar)	SCM	Daily	Starts a backup of SAP liveCache. See SAP Note 455154 for the report RSLVCBACKUP and SAP Library for SAP NetWeaver on SAP Help Portal at http://help.sap.com/nw703 , under ► <i>SAP NetWeaver</i> → <i>SAP NetWeaver by Key Capability</i> → <i>Database Administration</i> → <i>Database Administration for SAP MaxDB</i> → <i>Database Administration in CCMS: SAP MaxDB</i> → <i>DBA Cockpit: SAP MaxDB</i> → <i>Jobs</i> → <i>DBA Planning Calendar</i> ⚡.	Basis Job Scheduling
Report /SAPAPO/ OM_REORG_DAILY Transaction / SAPAPO/OM25	SCM	Daily	Deletes old transactional simulation data, and old Optimizer logs. For more information, see SAP Notes 139558 and 679118 . To check whether this job is scheduled, use transaction /SAPAPO/OM13 ► <i>Checks</i> ⚡ tab.	Basis Job Scheduling
Report /SAPAPO/ OM_DELETE_OLD_ SIMSESS	SCM	Every 30 minutes	Reorganizes LCA data from old sim sessions in SAP liveCache; helps free up memory To check whether this job is scheduled, use transaction /SAPAPO/OM13 ► <i>Checks</i> ⚡ tab.	Basis Job Scheduling
Report /SAPAPO/ OM_LCAALERTS	SCM	Daily	Provides Information for CCMS monitoring of SAP liveCache, see also SAP Note 683554 . To check whether this job is scheduled, use transaction /SAPAPO/OM13 ► <i>Checks</i> ⚡ tab page.	Basis Job Scheduling
Report /SAPAPO/ OM_LC_ LOGGING_LOG_DE L Transaction / SAPAPO/OM12	SCM	Monthly or as required	Use to delete the SAP liveCache action log (see /SAPAPO/OM11 in section 4.1.2) up to a specific date.	Basis Job Scheduling

4.6.1.4 SAP SCM Optimizer

Standard/Housekeeping Jobs

Program Name / Task	ERP / SCM	Recommended Frequency	Detailed Description
Report /SAPAPO/ OM_REORG_DAILY Transaction /SAPAPO/OM25	SCM	Daily	Deletes old LCA, transactional simulation data, and old optimizer logs. See SAP Notes 139558 and 679118 .

4.6.1.5 SAP Event Management (Part of SCM Server)

For information, see *Application Operations Guide SAP Event Management 7.0 Including SAP Enhancement Package 2* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP Event Management* → *Using SAP Enhancement Package 2 for SAP Event Management 7.0* ◀.

4.6.1.6 SAP Supply Network Collaboration (Part of SCM Server)

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.6.1.7 SAP Extended Warehouse Management (Part of SCM Server)

For information, see *Application Operations Guide SAP™ Extended Warehouse Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP EWM* → *Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

4.6.1.8 Project Manufacturing

Standard/Housekeeping Jobs

Program Name / Task	Recommended Frequency	Detailed Description
Report /SAPAPO/DM_PEGKEY_REORG Transaction /SAPAPO/DM_PEGCHECK	Monthly	Consistency check and reorganization of pegging areas and account assignment objects

4.6.1.9 Supplier Managed Inventory

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications → SAP SCM → SAP SNC → Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.6.1.10 Release Processing

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications → SAP SCM → SAP SNC → Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.6.1.11 Forecasting and Replenishment

Standard/Housekeeping Jobs

Program name / Task	Recommended frequency	Detailed description
Transaction /FRE/DIFAR Report /FRE/DB_DIF_ DELETE	Depending on the data volume caused by Demand Influencing Factors (DIF) occurrences, the report should run weekly, monthly, or quarterly. The number of DIF occurrences depends on the use of DIFs in a customer project.	This program is used to delete obsolete DIF occurrence data. A DIF occurrence is obsolete if at least one of the following conditions is satisfied: <ul style="list-style-type: none"> ■ The occurrence is not active. ■ The validity period ends before the relevant historical time horizon. ■ The DIF definition no longer exists. ■ The DIF assignment no longer exists. You can delete DIF occurrences that are not obsolete (as defined above) via a DIF user interface (for example, the DIF Workbench). When a DIF Occurrence is deleted, all related objects (texts, assignments, memos) are also deleted. This report should also run after deletion of a DIF to remove all corresponding master data. A DIF can be deleted in Customizing for Forecasting and Replenishment.
Report /FRE/DB_DIF_ DELTA_DELETE	Weekly – Monthly	Deletes obsolete DIF delta records. A DIF delta record is obsolete in the sense of this report, if there is no active occurrence for the DIF assigned to a particular location. Deleting obsolete DIF delta records can reduce the run time of FRP sequence 3 (demand forecast calculation) for the respective location. For more information, see SAP Note 1651436 .
Report /FRE/DB_MSG_ REORGANIZATION	Daily	Deletes exceptions where expiry date has passed.

4.6 Periodic Tasks

Program name / Task	Recommended frequency	Detailed description
		If BI extraction of exceptions is active, the last extraction date is checked and only those exceptions with expiry date older than the last extraction date are deleted.
Transaction /SCMB/ODM_DELETE Report /SCMB/ODM_DATA_DELETE	Weekly	Deletes order documents with document type FROP with header status ≥ 90 (that is completed, rejected or deleted) and for <i>Time One</i> with <i>Date Type for Date One</i> PLANTP and <i>Date Two</i> one month in the past
Transaction /FRE/TS_AGG_DAY_WEEK Report /FRE/FU_TS_AGGREG_DAY_WEEK	Weekly	Aggregates daily time series into weekly time series according to the time series profile horizon
Transaction /FRE/TS_DELETE Report /FRE/FU_TS_DELETE	Monthly	Deletes time series data that fall outside of the defined time horizon according to the time series profile horizon. Report /FRE/FU_TS_AGGREG_DAY_WEEK should be run before.
Transaction /SAPAPO/REO_MATLOCTD Report /SAPAPO/DM_REORG_PROD_LOC_TD	Weekly – Monthly	Reorganization of time-dependent data for a location product
Transaction /FRE/REO_LANETD Report /FRE/DB_REORG_LANE_TD	Monthly	The report deletes obsolete time-dependent data for transportation lanes for products
Transaction /FRE/REO_MATLOC Report /FRE/DB_MATLOC_DELETE	Monthly	The report removes location products that are no longer in use in F&R. The report works on location products that are flagged for deletion; the report deletes the location products and dependent data from the database, that is all data where the location product occurs. The report does not archive the data before deletion.
Report /FRE/CPFR_DETERMINE_LOCPRD	Daily	This report is used to generate a table with a list of locations that are directly supplied by a vendor for a given product. The information in this table is used by the FRP process to determine if a tactical forecast is required for a given product/location and the horizon of this tactical forecast.
Transaction /FRE/REO_TRPROD2TD Report /FRE/DB_REORG_TRPROD2_TD	Weekly – Monthly	Reorganization of time-dependent data for external procurement relationships for subranges
Transaction /FRE/ANA_CLEANUP Report /FRE/DB_ANA_CLEANUP	Weekly – Monthly	This report is used to physically delete analytical data collected during the replenishment run. The objective is to reduce the size of the tables when data has been successfully transmitted to the Business Warehouse. Information such as Minimum Stock Variance and Weekly Figures may increase extremely quickly and may grow faster than the other analytical information. The different analytical data that is deleted in this report:

Program name / Task	Recommended frequency	Detailed description
		<ul style="list-style-type: none"> ■ For Stock Exceptions, entries in table /FRE/ANA_STCKEXC ■ For Minimum Stock Variances, entries in table /FRE/ANA_VAR ■ For Order Proposal Statistics, entries in table /FRE/ANA_OP_STAT ■ For Weekly Figures, entries in table /FRE/ANA_WEEKLY <p>SAP suggests that you clean the analytics tables regularly to improve transfer time to the Business Warehouse, unless you need to keep these entries for your own reports.</p> <p>Prerequisite: Before any data is deleted, it must be transmitted to the Business Warehouse. Daily extraction of the analytical data should be scheduled by the Business Warehouse for all types of analytical information, including stock exceptions (stockout, possible stockout, overstock, understock, deadstock exceptions), Minimum Stock Variances, Order proposal statistics, weekly figures and any other analytical data that does not require specific tables, such as manually changed order proposals and replenishment exceptions.</p> <p>The selected data to be clean-up is checked to ensure it has been extracted to BW, and a warning message is issued if the data has not been extracted yet.</p> <p>The user can also decide to clean-up the selected data even if this has not been extracted to BW.</p>
Report /FRE/RWBS_MATKL_UPDATE	Daily	This report updates the Replenishment Workbench for Stores (RWBS) table of merchandise categories for each store or distribution center to which an RWBS user (replenishment specialist or manager) is already assigned. You can schedule this report in a background job or run it directly when changes are made to merchandise categories or lanes, or when articles are assigned or removed from a store or vendor.
Transaction /FRE/REO_CONTRACTS Report /FRE/DB_CONTRACT_REORG	Daily - Weekly	This reports deletes obsolete contracts. You can determine for which source locations contracts will be deleted. The recommended frequency depends on the contract data volume.

SAP Forecasting & Replenishment uses the normal Web AS functionality of load balancing with server groups, but is extended in configuration for parallel processing. For the F&R scenario it is possible to distribute the workload of the forecasting and replenishment background jobs across server groups on location level to optimize parallel execution dynamically and data access time. For more details, see the configuration guide for F&R, especially the section on configuration of FRP.

You can find the configuration guide for Forecasting and Replenishment on the SAP Service Marketplace under ► <http://service.sap.com/ibc> → *Industry Solutions* → *SAP for Retail* → *Multilevel Replenishment / Forecasting & Replenishment* ◀.

SAP F&R Replenishment Workbench for Stores (RWBS) does not require any periodic tasks.

4.6.1.12 Responsive Replenishment

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.6.1.13 Make to Order for OEM

Standard/Housekeeping Jobs

Program Name / Task	Recommended Frequency	Detailed Description
Transaction RPM_DATEVECTORS_REORG Report RPM_DATEVECTORS_REORG	Monthly	Deletes obsolete date vectors (pointers between requirements and resources) in SAP liveCache.
Report /SAPAPO/CULL_DELETE_RTO	Monthly	Deletes obsolete PDS data in SAP liveCache.

4.6.1.14 Multiple Output Planning

There are no scenario-specific jobs. You can use the standard jobs for SAP APO and SAP liveCache technology as described above.

4.6.1.15 Maintenance and Service Planning

There are no scenario-specific jobs. You can use the standard jobs for SAP APO and SAP liveCache technology as described above.

4.6.2 Required Manual Periodic Tasks

This section describes all manual tasks required to run periodically to keep the application running smoothly over time. A manual task needs a person to execute it, 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. 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.

4.6.2.1 SAP SCM Basis (Part of SCM Server)

As SAP SCM Basis is not a standalone component, required manual tasks for objects in SAP SCM Basis are normally initiated by application components that use the SAP SCM Basis and are also documented with these components. For example, report /SCMB/ALERT_HIST_DEL for the deletion of

the alert history is located in the SCM Basis but used by SAP SNC. Therefore, you find the relevant information in the relevant section for periodic tasks in SAP SNC.

4.6.2.2 SAP APO (Part of SCM Server)

For more information about required manual tasks for SAP APO and SAP SCM, see the following Best Practice document: *Internal and external consistency for SAP APO 3.x and mySAP SCM 4.x / 5.0* (<http://service.sap.com/~sapidb/011000358700002214842003E>).

Depending on the business processes you are using in SAP APO, you can find more information in the following Best Practice documents:

- *Manage Demand Planning in SAP APO (3.x) / SAP SCM (4.x, 5.x)* (<http://service.sap.com/~sapidb/011000358700000955412003E>)
- *Manage Supply Network Planning & CTM in SAP APO (3.x) and SAP SCM (4.x / 5.x)* (<http://service.sap.com/~sapidb/011000358700004718192003E>)
- *Manage Production Planning in SAP APO (3.x) / mySAP SCM (4.x, 5.0)* (<http://service.sap.com/~sapidb/011000358700008416512001E>)
- *Manage Global ATP in SAP APO (3.x) / SAP SCM (4.x / 5.0 / 5.1)* (<http://service.sap.com/~sapidb/011000358700007382482002E>)
- *Manage the Transportation Management Solution (TP/VS) in SAP APO (3.x) / SAP SCM (4.x/5.x)* (<http://service.sap.com/~sapidb/011000358700007382622002E>)

The following table lists the business processes above and their location in the Solution Manager Content:

Process	Path in Solution Manager Content
<i>Demand Planning and Forecasting</i>	▶ SAP SCM → Scenarios → Demand and Supply Planning Processes in SCM → Business Processes → Demand Planning and Forecasting ◀
<i>Multilevel Demand & Supply Match</i>	▶ SAP SCM → Scenarios → Demand and Supply Planning Processes in SCM → Business Processes → Multilevel Demand & Supply Match ◀
<i>Backorder Processing</i>	▶ Sales → Business Processes → Backorder Processing ◀

4.6.2.3 SAP liveCache Technology

For information about required manual periodical tasks in SAP liveCache, see section 3.2.2, *SAP liveCache Technology Analysis Tools* [page 28], and the Best Practice document *Internal and External Consistency for SAP APO 3.x / mySAP SCM 4.x/5.0* (<http://service.sap.com/~sapidb/011000358700002214842003E>).

4.6.2.4 SAP SCM Optimizer

For information about required manual periodical tasks in SAP SCM Optimizer, see section *SAP SCM Optimizer Analysis Tools* [page 35].

For information about required manual periodical tasks in SAP liveCache, see section *SAP liveCache Technology Analysis Tools* [page 28].

4.6.2.5 SAP Supply Network Collaboration (Part of SCM Server)

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

4.6.2.6 SAP Extended Warehouse Management (Part of SCM Server)

For information, see *Application Operations Guide SAP™ Extended Warehouse Management Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com/instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP EWM* → *Using SAP Enhancement Package 2 for SAP EWM 7.0* ◀.

4.6.2.7 SAP Forecasting and Replenishment (Part of SCM Server)

There are no required manual periodical tasks for Forecasting and Replenishment. See the scheduled periodical tasks described in section 4.6.1.11, *Forecasting and Replenishment* [page 74].

4.6.2.8 Project Manufacturing

There are no scenario-specific manual periodical tasks for Project Manufacturing. Perform the tasks for SAP APO and SAP liveCache technology as described above.

4.6.2.9 Make to Order for OEM

There are no specific required manual periodical tasks for Make to Order for OEM. Perform the tasks for SAP APO, SAP liveCache technology, and SAP SCM Optimizer above.

4.6.2.10 Multiple Output Planning

There are no specific required manual periodical tasks for Multiple Output Planning. Perform the tasks for SAP APO, and SAP liveCache technology above.

4.6.2.11 Maintenance and Service Planning

There are no specific required manual periodical tasks for Maintenance and Service Planning. Perform the tasks for SAP APO and SAP liveCache technology above.

4.6.2.12 Service Parts Planning

There are no specific required manual periodical tasks for Service Parts Planning. Perform the tasks for SAP APO and SAP liveCache technology above.

When using the TPOP forecast with Service Parts Planning (SPP), make sure that after an upgrade from SCM 5.1 to SCM 7.0, the report /SAPAPO/PPR_UPD has been executed exactly once. This report determines the planning profiles containing an SCM 5.1 forecast profile in which you have chosen the TPOP forecast as type for the forecast run. In these planning profiles, the report replaces regular forecast services by the appropriate TPOP forecast services. In detail, the report makes the following replacements in the affected planning profiles:

- SPP_FCS_SERVICE is replaced by SPP_FCS_SERVICE_TPOP
- SPP_FCS_SERVICE_MSE is replaced by SPP_FCS_SERVICE_MSE_TPOP
- SPP_FCST_RELEASE is replaced by SPP_FCST_RELEASE_TPOP
- SPP_RECALC_HISTFCST is replaced by SPP_RECALC_HISTFCST_TPOP

Enter all planning profiles in the report and choose *Execute*.

4.7 Load Balancing

SAP SCM uses the standard functionality of NetWeaver for logon and load balancing. For more information about network load balancing, see SAP Service Marketplace at <http://service.sap.com/ha> and SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver → Administrator's Guide → Technical Operations for SAP NetWeaver* ◄.

4.8 User Management

SAP SCM uses the standard functionality of NetWeaver for user management, such as creating users with transaction SU01 and creating and using roles with transaction PFCG. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver → Administrator's Guide → SAP NetWeaver Security Guide → User Administration and Authentication* ◄.

For more information about user management in SAP SCM, see the SAP SCM Security Guide on the SAP Service Marketplace at ► <http://service.sap.com/securityguide> → *SAP Supply Chain Management → SAP Supply Chain Management 7.0 EHP 2 Security Guide* ◄.

For an overview of the information necessary for operating SAP NetWeaver Identity Management, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Security* → *Identity Management* ◀.

4.9 Printing

SAP SCM uses the standard functionality of NetWeaver for printing. For more information about printing, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *SAP Printing Guide (BC-CCM-PRN)* ◀.

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5 High Availability

For high availability options of SAP APO, SAP liveCache technology, and SAP SCM Optimizer, you can find information in the Best Practice document *Backup, Recovery and High Availability for SAP APO (3.x) / mySAP SCM (4.x)* (<http://service.sap.com/~sapidb/011000358700007382632002E>).

For high availability of all other components of SCM, see the information on SAP Service Marketplace at <http://service.sap.com/ha>, or see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* ↩.

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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.

The following topics are covered:

- **Transport and Change Management**
Enables and secures the distribution of software changes from the development environment to the quality assurance and production environment.
- **Development Request and Development Release Management**
Enables customer-specific maintenance procedures and open integration with third-party products.
- **Template Management**
Enables and secures the rollout of global templates, including localizations.
- **Quality Management and Test Management**
Reduces the time, cost, and risk associated with software changes.
- **Support Packages and SAP Notes Implementation**
Provides standardized software distribution and maintenance procedures.
- **Release and Upgrade Management**
Reduces the time, cost, and risk associated with upgrades.

6.1 Transport and Change Management

All components of SAP SCM are client-enabled. For transport and change management issues, the procedures of SAP NetWeaver apply. For more information, see the SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *ABAP Technology* → *Administration of Application Server ABAP* → *Change and Transport System* ◀.

The transport of Java components can be obtained from the following link: Java Transport (http://help.sap.com/saphelp_nw2004s/helpdata/en/54/347a2a840246b1bbd8fc9154be6658/frameset.htm).

Multiclient capabilities

Regarding the multiclient capabilities of SAP SCM, the following applies:

- SAP SCM 7.0 is multiclient compliant per design.
- For SAP APO some restrictions apply:

SAP APO Application	Multiclient Compliant	Comment
PP/DS	Yes	N/A
TP/VS	Yes	SAP BW related restrictions only for Carrier Selection; uses ATP product allocation, because in this case, ATP product allocation uses Demand Planning automatically
ATP	Yes, with restrictions and workarounds	SAP BW related restrictions for ATP product allocation when using Demand Planning
ATP	Yes	N/A
CTM	Yes	N/A
SNP	Yes, with restrictions and workarounds	SAP BW related restrictions for technical data based on planning object structures
DP	Yes, with restrictions and workarounds	SAP BW related restrictions.

- SAP liveCache: For productive systems we recommend that you run exactly one SAP liveCache on a separate server (for reasons of performance, stability, and availability).

The supply of several SCM systems from a common SAP liveCache (with shared data) is not supported. Thus, from a logical point of view, each system has to have its own SAP liveCache.

SCM Optimizer

The ABAP parts of the optimizers can be transported via standard ABAP transport and change management. The optimizer-engines themselves need to be copied manually (file system tree *apoopt*). The supply of several SCM systems from a common optimization server is possible. It is recommended to have distinct sets of optimizer-executables in such cases. Additionally, take extra care with load balancing to avoid overcommitting of CPU and memory resources.

6.2 Development Requests and Development Release Management

The standard procedures of SAP NetWeaver apply. For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver → Administrator's Guide → Technical Operations for SAP NetWeaver* ◄.

For more information about customer-specific development, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver → SAP NetWeaver by Key Capability → Application Platform by Key Capability → ABAP Technology → Administration of Application Server ABAP → Change and Transport System → Change and Transport System - Overview → Changing the SAP Standard (BC)* ◄.

For more information about integration with third party products, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver → Administrator's Guide → Technical Operations for SAP NetWeaver → Technical Operations Manual for SAP NetWeaver* SAP → *Administration of IT Scenarios → Enabling Business-to-Business Processes* ◀.

6.3 Template Management

You can deploy Customizing settings by using Business Configuration Sets (BC sets).

For more information about BC sets, see BC Set Documentation.

6.4 Quality and Test Management

You can use the SAP NetWeaver Development Infrastructure to learn about the various possibilities to test your software changes.

6.5 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. The technology for applying support packages and patches does not change.

You can find detailed information about the availability of SP stacks for SAP SCM 2007 on SAP Service Marketplace at <http://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.

Use the Maintenance Optimizer (transaction **DSWP**) of the SAP Solution Manager to select, download, and install the needed usages, or software components and required support packages. For more information, see the following:

- SAP Solution Manager documentation on SAP Help Portal at ► <http://help.sap.com> → *SAP Solution Manager → Maintenance Management → Maintenance Optimizer* ◀
- SAP Service Marketplace at <http://service.sap.com/solman-mopz>
- The documentation for transaction **SAINT** (SAP Add-On Installation Tool)

For more information about the implementation of support packages as well as possible side effects, see ► <http://service.sap.com/patches> → *SAP Support Packages in Detail* ◀

For more information about the tools necessary for implementing patches, see the SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703> ► *SAP NetWeaver → SAP NetWeaver by Key Capability → Application Platform by Key Capability → ABAP Technology → Administration of Application Server ABAP* ◀.

6.6 Release and Upgrade Management

For information about an upgrade to SCM 7.0 Enhancement Package 2, see the Upgrade Master Guide for SAP SCM.

After SAP SCM 7.0, 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 allows reducing 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 about the release and upgrade management of SAP NetWeaver 7.0 (including Enhancement Package 3), Usage Type PI, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► SAP NetWeaver → Administrator's Guide → Technical Operations Manual for SAP NetWeaver → Administration of SAP NetWeaver Systems → PI (Process Integration) → Software Logistics → Release and Upgrade Management ◀.

For all other components, see the application operation guides listed in section 9.3, *Related Information* [page 103].

Component Release

Software Component	Tools for Displaying the Current Version
Project Manufacturing	
SCM Server	Menu ► System → Status ◀
SAP liveCache	Transaction /SAPAPO/OM13
SAP ERP or SAP R/3	Menu ► System → Status ◀
CIF (PlugIn)	Menu ► System → Status ◀
SAP SCM Optimizer	Transaction rcc_version
Supplier-Managed Inventory	
SCM Server	Menu ► System → Status ◀
SAP ERP or SAP R/3	Menu ► System → Status ◀
XI	See below
CIF (PlugIn)	Menu ► System → Status ◀
Internet Graphics Service (IGS)	See below
Release Processing	
SCM Server	Menu ► System → Status ◀
SAP ERP or SAP R/3	Menu ► System → Status ◀
XI	See below
Forecasting & Replenishment	

Software Component	Tools for Displaying the Current Version
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP BI 7.03 Server (Part of SAP NetWeaver)	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP F&R Replenishment Workbench for Stores (RWBS)	See below
XI	See below
Responsive Replenishment	
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
XI	See below
CIF (PlugIn)	Menu ► <i>System</i> → <i>Status</i> ⚡
Make-to-Order for OEM	
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP liveCache	Transaction /SAPAPO/OM13
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
CIF (PlugIn)	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP SCM Optimizer	Transaction rcc_version
Multiple Output Planning	
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP liveCache	Transaction /SAPAPO/OM13
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
CIF (PlugIn)	Menu ► <i>System</i> → <i>Status</i> ⚡
Maintenance and Service Planning	
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP liveCache	Transaction /SAPAPO/OM13
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
CIF (PlugIn)	Menu ► <i>System</i> → <i>Status</i> ⚡
Scenarios using Event Management	
SCM Server	Menu ► <i>System</i> → <i>Status</i> ⚡
SAP ERP or SAP R/3	Menu ► <i>System</i> → <i>Status</i> ⚡
CIF (PlugIn)	Menu ► <i>System</i> → <i>Status</i> ⚡

Displaying the Support Package Version of IGS

You can display the Support Package version of the IGS in the following two ways:

- Using the Web Interface

<http://<hostname>:<port>>

<hostname> = The name of the machine where the IGS is installed, for example P12345

<port> = The port of the http listener. You can find this in the IGS configuration file.

- Using CCMS (see section 3.1.2.2, *CCMS Monitoring Installation and Setup* [page 17])

For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Application Platform*

by *Key Capability* → *ABAP Technology* → *UI Technologies in ABAP* → *Frontend Services (BC-FES)* → *SAP Graphics (BC-FES-GRA)* → *Internet Graphics Service* → *Administering the IGS* ↩.

Displaying the Support Package Version of XI Content

1. To check the version of the SAP SCM system, choose ► *System* → *Status* → *SAP System Data* ↩.
2. Choose *Component Information*.
3. To check the Support Package of the SCM content in the SAP NetWeaver PI system, on the *SAP Easy Access* screen of your SAP NetWeaver PI system, choose ► *Integration Builder* → *Integration Repository* ↩.
4. Choose ► *SAP SCM* → *SAP SCM 7.0 including Enhancement Package 2* ↩.
5. Open the context menu for SAP SCM and choose *Display Support Package*.

If the *Display Support Package* option is not available in the context menu, no Support Packages have been installed. In this case, the system has Support Package level 000.

For more information about version management in the Exchange Infrastructure of SAP NetWeaver, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Process Integration by Key Capability* → *SAP NetWeaver Exchange Infrastructure* → *Design and Configuration Time* → *Software Logistics for XI Objects* → *Version Management* ↩.

Displaying the Support Package Version of SAP F&R Replenishment Workbench for Stores (RWBS)

You can display the Support Package version of the SAP F&R Replenishment Workbench for Stores (RWBS) (formerly called *F&R Store User Interface*) in the following two ways:

- Using the system information on the Web page of the J2EE server
Click *System Information* to display the version information for SAP F&R Replenishment Workbench for Stores (RWBS)
- Using the Visual Administrator or the Config tool of the J2EE Engine
For more information, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* → *Administration of SAP NetWeaver Systems* → *AS Java (Application Server for Java)* → *Management* → *Tools* ↩.

SAP Release and Upgrade Plans

For information about SAP's release and upgrade plans, see SAP Service Marketplace at ► <http://service.sap.com/releasestrategy> → *SAP Business Suite* → *SAP Supply Chain Management* ↩.

For information about the maintenance strategy and further services for SAP SCM, see <http://service.sap.com/maintenance>.

You can access the upgrade guide at ► <http://service.sap.com/instguides> → *SAP Business Suite Applications* → *SAP SCM* ↩.

7 Troubleshooting

For information about troubleshooting SAP NetWeaver, see the *Technical Operations Manual for SAP NetWeaver* on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *Administrator's Guide* → *Technical Operations for SAP NetWeaver* → *Administration of SAP NetWeaver Systems* ◀.

7.1 SAP Supply Network Collaboration

For information, see *Application Operation Guide SAP™ Supply Network Collaboration Operations Guide Release 7.0 (Including SAP Enhancement Package 2)* on SAP Service Marketplace at <http://service.sap.com//instguides>, under ► *SAP Business Suite Applications* → *SAP SCM* → *SAP SNC* → *Using SAP enhancement package 2 for SAP SNC 7.0* ◀.

7.2 SAP Forecasting and Replenishment

7.2.1 Monitoring of F&R Inbound Interface

Description

If data from an SAP system (ERP or R/3) has been stored successfully in the interface table in F&R, this data is posted to F&R master data and transaction data using report /FRE/BIF_INB01 (transaction /FRE/BIF). This report reads the interface table and posts the data to the relevant master and transaction data tables in F&R.

In report /FRE/BIF_INB01, you can choose which data is to be posted and whether the data is to be processed in parallel.

Exceptions that occur during the posting of data to F&R are logged in the Interface Workbench (transaction /FRE/CON) and the Exception Workbench (Transaction /FRE/EXC).

Possible Problem

Not enough DIA work processes are available or a process has been aborted.

Possible Approach

All processes should create exceptions or error messages in the workbenches. If such errors or exceptions occur, there is a recovery strategy for reposting failed data. The erroneous data can be re-released and reprocessed. When the errors are fixed, go to the Interface Workbench (transaction /FRE/CON) and set the status of the items to *Not Processed*. Reprocess the erroneous items using report /FRE/BIF_INB01 (transaction /FRE/BIF).

7.2.2 Monitoring of F&R Outbound Interface

Description

Released order proposals are transferred to SAP ERP, when purchase orders are created for these order proposals.

You can transfer released order proposals to ERP using report `/FRE/BIF_INB01` (transaction `/FRE/BIF`) by selecting the *Outbound Message Types* group box.

Firstly, the order proposals are transferred sequentially to an interface table. Then, the order proposals are posted in SAP ERP via parallel RFC processing.

Order proposals that have not yet been released, can be released and transferred using report `/FRE/FU_OPM_MASS_REL` (transaction `/FRE/OPM_MASSREL`). The order proposals are transferred to SAP ERP as described for report `/FRE/BIF_INB01`.

If exceptions occur during processing, they are written to the Exception Workbench or the Interface Workbench.

Possible Problem

Not enough DIA work processes are available or a process has been aborted.

Possible Approach

All processes should create exceptions or error messages in the workbenches. The incorrect items can be reprocessed. Go to the Interface Workbench and set the status of the items to *Not Processed*. Then reprocess the incorrect items using report `/FRE/BIF_INB01` (transaction `/FRE/BIF`).

7.2.3 Monitoring of FRP Run

Description

The Forecast and Replenishment Processor (FRP) run should be carried out every day for all relevant locations. You do this using the FRP Dispatcher or report `/FRE/FRP_MID_BASIC`.

If you use the FRP Dispatcher you can monitor the execution of the single tasks via report `/FRE/UI_FRP_SHOW_LOC_STATUS`.

If you use the report `/FRE/FRP_MID_BASIC` you can monitor the execution of the single sequences via report `/FRE/UI_FRP_SHOW_SEQSTATUS`.

The exception workbench shows errors, warnings and information that are issued during the FRP run (transaction `/FRE/EXC`).

Additionally, the dispatcher can also be monitored via CCMS. You can start the CCMS monitor on the *SAP Easy Access* screen, by choosing ► *CCMS Monitoring* (transaction `RZ20`) → *SAP F&R* → *F&R Status Messages* ◀. Here you can distinguish between planning objects and dispatcher processes. Planning objects are locations that are processed by the FRP processor. Dispatcher processes represent the framework that allows you to process the locations according to the Customizing. For information

about how to create reaction methods and how to subscribe to these objects, see the online help for the CCMS monitor.

Possible Problem

Not enough DIA work processes are available, a process has been aborted, or there is not enough disk space.

Possible Approach

All processes should create error messages in the Exception Workbench. If you execute the `/FRE/UI_FRP_SHOW_LOC_STATUS` or the `/FRE/UI_FRP_SHOW_SEQSTATUS` report, not all tasks or sequences have the status OK.

If one or several steps fail, they can be reprocessed. In case of using the FRP dispatcher, use either the report `/FRE/UI_FRP_PROC_LOC_BY_DISP` (all steps will be reprocessed) or the report `/FRE/UI_FRP_PROC_LOC_AFTER_ERR` (starts with the erroneous step). When using `/FRE/FRP_MID_BASIC`, use the appropriate restart option (details are explained in the input help).

First, solve the respective resource problems (disk, available processes). After that, you can reprocess the steps that have not been processed.

7.3 SAP Enterprise SOA

In the following section, you can find troubleshooting information for different topics in the area of service-oriented architecture (SOA).

7.3.1 Authorization

If it seems that there is a possible authorization problem, first proceed as follows:

- Check that the service is available.
If the service is not available, see *Service Availability*.
- Check whether the user itself does not exist, is locked, or is linked to a role that is not allowed to perform the service.
If your answer is *yes*, troubleshoot the problem by yourself.

If both questions above are answered with *no*, add the following information to your message to SAP:

- Security/user rights (NW authentication/authorization)
- Service run authorization (role assignment of service user)

Frequent Problem: HTTP Exception / Problem Exception / Dump Message:

Web service is not running for this user!*

- Web service is not running for this user! Technical permissions are missing for the following:
 - For ESA for execution of Web services

- For application in back-end system

The problem occurs while sending the request.

Example: Unauthorized – Authorization problems (role)

The Web service cannot run. Logon to *remote server* is not possible. Problem is detected from network.

Problem Code/Message

ICF-LE-http-c:005-I:-T:1-C:3-U:5-P:5-L:6 HTTP/1.1 401 Unauthorized

What happened?

Calling URL http://usciqueh.wdf.sap.corp:50077/sap/bc/srt/xip/sap/ECC_EmpAddrEmpQR broken because of incorrect logon.

What did you do?

Logon was performed in system QEH for client 005, user test and language EN.

What could you do?

Check client, user and password for typos.

If you do not have access rights, contact your system administrator.

Further comments

HTTP/1.1 401 Unauthorized, content-type: text/html; charset=utf-8 content-length: 2242, sap-system: QEH

www-authenticate: Basic realm="SAP Web Application Server [QEH]"

sap-client: 005, server: SAP Web Application Server (1.0;700)

7.3.2 Interface

Interface problems are communication problems between components, objects, and functions via calls or parameters. Examples: missing parameter, missing/incorrect method function offered/any kind of mismatch in calls between caller and callee. All problems about public API fall into this category.

They show up as problem messages from the consumer WSDL runtime. In most cases, the source lies in problems in the consumer application (Java, .Net, ...) and is located between the provider and consumer site.

Frequent Problem: Problem message from consumer WSDL runtime

Message: No generation of client proxy possible.

- For example, no support for long path in MS .Net (SAP Note [993024](#))

Message: Dynamic generation of structures or classes not possible

- For example, workaround (SAP Note [993024](#))

Example: Problems in consumer application (Java, .Net, ...)

No support for long path in MS .Net (see SAP Note [993024](#)). Problem is detected from consumer site/client site. The problem message is posted from the consumer WSDL runtime.

Problem Code/Message

```
at com.sap.engine.core.thread.impl3.SingleThread.run (SingleThread.java:170)
```

Caused by: com.sap.engine.interfaces.webservices.server.deploy.

WSDeploymentException: Webservices common deployment exception!

The reason is: Problem occurred generating ws client proxy files. Package problem.

Dynamic generation of structures or classes not possible.

What happened?

java.rmi.RemoteException: Cannot deploy application. So the fully qualified name for the proxy class is 260 characters, which has caused the IOException during deployment.

What did you do?

Tried to call a Web service with a long definition name.

What could you do?

For example, see workaround (SAP Note [993024](#)).

7.3.3 Checking / Conversion

Checking / conversion problems are located at the provider site. It might be helpful to use trace tools (see *Troubleshooting Notes* [[page 97](#)]).

Example: Request valid, but data missing or incorrect

The request is valid, but data for business logic or content is missing or incorrect. The problem is detected from the provider site, for example message 2801000 2006.

The following problem text was processed in the system QEK: *Exception condition NOT_FOUND raised.*

Problem Code/Message

Problem when processing your request

HTTP/1.1 500 Internal Server Problem / Log file / Dump in Backend

What happened?

The URL <http://usciqek.wdf.sap.corp:50090/sap/bc/srt/xip/sap/ECCEmpTimSheetChgRC> was not called due to a problem.

What could you do?

Use the trace tool to detect the source of the problem.

Example: Dump in Backend/Network exceptions

The implementation of the services or the implementation in used application components produces a dump in the back-end based on the data entered. For some test data, it works, for other data it does not work due to missing Customizing or code bugs. The problem is detected from provider site. For example, message 0004157629 2006, 3716561 2006. The following problem text was processed in the system QEK: *Exception condition NOT_FOUND raised.*

Problem Code/Message

Problem when processing your request

HTTP/1.1 500 Internal Server Problem / Log file / Dump in Backend

What happened?

The URL <http://usciquek.wdf.sap.corp:50090/sap/bc/srt/xip/sap/ECCEmpTimSheetChgRC> was not called due to a problem.

What could you do?

Use the trace tool to detect source of the problem.

7.3.4 Problems with Web Service Infrastructure Tools

If you face problems with one of the Web service infrastructure tools, select the corresponding component from the following table:

Problem Source	SAP Application Area	Description
*	CA-SOA-DS	SAP Discovery System for enterprise SOA
*	CA-SOA-WP	ES Workplace
*	CA-SOA-WS	General Web Service Problems
Backend	CA-DMS	Document Management System
Backend	SV-SMG-SDD	Service Data Download
Backend	XX-SER-TCC	Technical Core Competence
Duet	XA-OSP	Office Suite Program
J2EE	BC-JAS	Java Application Server
J2EE	BC-JAS-WEB	Web Container, HTTP, JavaMAIL, JSP
RFC	BC-MID-RFC	RFC
Web Service Design-Time	BC-DWB-PRX	Proxy Generation
Web Service Design-Time	BC-DWB-WS-ABA	Web Service Tools – ABAP
Web Service Design-Time	BC-DWB-WS-JAV	Web Service Tools – Java
Web Service Runtime	BC-ESI-WS-ABA	Web Service and SOAP – ABA
Web Service Runtime	BC-ESI-WS-JAV	Web Service and SOAP – JAV
Web Service Runtime	BC-MID-ICF	Internet Communication Framework
XI Design-Time	BC-XI-IBD	Integration Builder – Design
XI Runtime	BC-XI	Exchange Infrastructure

Problem Source	SAP Application Area	Description
XI	BC-CCM-SLD	System Landscape Directory/Component
XI	BC-XI-CON-AFW	J2EE Adapter Framework
XI	BC-XI-CON-AFW-TAD	Technical Adapter (JMS, JDBC, RFC, SOAP, File)
XI	BC-XI-IBC	Integration Builder – Configuration

For problems with SDN, use the generic email address sdn@sap.com and report the problems via email.

7.3.5 Troubleshooting Notes

If you are interested in further information, the most important SAP Notes for troubleshooting enterprise SOA are listed below.

Note Number	Short Text
900076	Procedure in the RFC problem case
69455	Service tools for Applications ST-A/PI (ST14, RTCCT00L, ST12)
963774	Duet – Requirements for troubleshooting
764417	Information for troubleshooting of the SAP J2EE Engine 6.40
825797	Tracing for the Web Container in SAP J2EE Engine 6.40
878860	RFC Tracing for ABAP-to-external communication
878962	RFC Tracing for ABAP-to-external communication
847395	Problem message: SOAP processing fault, problem id = 112
1006665	Checklist for creating web service problem message
1012681	Generating Traces for SOAP Runtime (ABAP)
1009109	Analyze web service problems with ICF recorder
724804	Using the ICF recorder for troubleshooting
806546	XI Troubleshooting Guide
821268	XI 3.0 / PI 7.0 AF: Overview of available FAQ notes
854536	XI 3.0 / PI 7.0 AF: Information Required by SAP Support
912414	Activate client logging of Integration Builder tools
953120	XI 3.0 / PI 7.0 JDBC Adapter: JDBC Driver Tracing
1009527	Problem Analysis Exchange Infrastructure Profile

Other related SAP Notes for troubleshooting:

Note Number	Short Text
13719	Preliminary transports to customers (note for customers)
16018	More information required on reported message
47682	Activating the CPIC trace
85750	Syntax problem in SAPLSTUW after Hot Package 18
91488	SAP Support Services – Central preparatory note

Note Number	Short Text
127642	RSCOLL00: Tuning COLLECTOR_FOR_PERFORMANCEMONITOR
133017	Namespace conflicts w. upgrade to Release 4.x
133735	SAPLSTUW: IMPORT_ALIGNMENT_MISMATCH during import of STAPAR
142005	Termination of RSSTAT90 after upgrade
164203	Problems with SAPHTTP
176277	Generating RFC trace information
187939	SAP Service tools Update (RTCCTOOL)
207223	Activating the SAP EarlyWatch Alert
216952	Service Data Control Center (SDCC) – FAQ
413708	RFC library that is current at this time
500235	Network Diagnosis with NIPING
507994	Creating plug-in trace files for troubleshooting
517484	Inactive services in the Internet Communication Framework
532918	RFC trace generation scenarios
661600	SAP Easy DMS: Creating an “extended trace”
710146	How to change J2EE Engine JVM Settings
710154	How to create a thread dump for the J2EE Engine 6.40
724719	How to enable HTTP tracing in the SAP J2EE Engine 6.40
724804	Applying the ICF-Recorders for troubleshooting
730870	FAQ XI 3.0 RFC Adapter
742395	Analyzing High CPU usage by the J2EE Engine
746917	FAQ Content Player – SAP Learning Solution
751872	Problem analysis with HTTP or external debugging
761921	Creating an XI adapter framework trace file
763561	Service Data Control Center (SDCCN) – FAQ
769478	Remote connection with XI systems
774854	FAQ XI 3.0 BC Adapter
777565	Output of runtime information from tp (Trace)
781680	SDCC/SDCCN – Problems with function modules
784471	Determining installed Adapter Framework Version
804713	Download information from ST-A/PI missing in BW scenarios
813993	FAQ: Message status in the adapter framework
816022	FAQ: XI 3.0 J2EE Adapter Engine / Messaging System
819893	Exchange profile cannot be imported
821267	FAQ: XI 3.0 / PI 7.0 File Adapter
821268	XI 3.0 / PI 7.0 AF: Overview of available FAQ notes
824236	XI File & JDBC Adapter: Retrieving diagnostic channel configuration
830039	FAQ: Deployment of the XI adapter framework
831162	FAQ: XI 3.0 / PI 7.0 JDBC Adapter
845540	Template for reporting Messages in BC - JAS*

Note Number	Short Text
854536	XI 3.0 / PI 7.0 AF: Information Required by SAP Support
856346	J2EE JMS Adapter: Frequently Asked Questions (FAQ)
856597	FAQ: XI 3.0 SOAP Adapter
856599	FAQ: XI 3.0 Mail Adapter
869095	Maintaining the ICF recorder settings
870270	FAQ note for initiating Support related to ISpeak Adapters
889529	First analysis for messages in BC-JAS-SF
937159	XI Adapter Engine is stuck
938980	Logon to Integration Builder fails
944792	Runtime analysis by start of external RFC-servers
990000	BW-BPS: Performance monitoring and analysis
1000528	FAQ: XI 3.0 / PI 7.0 Adapter and Channel Monitoring
1004255	How to create a full HPROF heap dump of J2EE Engine 6.40/7.0
1006665	Checklist creation for a web service problem message
1009109	Analyzing of web service problems with the ICF-Recorder
1012681	Trace generation for SOAP Runtime (ABAP)

7.3.6 SAP Application Areas Troubleshooting

If you face a problem while troubleshooting Web service problems, select one of the following components for problem reporting:

Area	Problem Area	SAP Application Area
Backend	Document Management System	CA-DMS
Backend	Service Data Download	SV-SMG-SDD
Backend	Technical Core Competence	XX-SER-TCC
Duet	Office Suite Program	XA-OSP
J2EE	Java Application Server	BC-JAS
J2EE	Web Container, HTTP, JavaMAIL, JSP	BC-JAS-WEB
RFC	RFC	BC-MID-RFC
Web Service	Web Service and SOAP – ABAP	BC-ESI-WS-ABA
Web Service	Web Service and SOAP – Java	BC-ESI-WS-JAV
Web Service	Internet Communication Framework	BC-MID-ICF
XI	System Landscape Directory / Component	BC-CCM-SLD
XI	Exchange Infrastructure	BC-XI
XI	J2EE Adapter Framework	BC-XI-CON-AFW
XI	Technical Adapter (JMS, JDBC, RFC, SOAP, File)	BC-XI-CON-AFW-TAD
XI	Integration Builder – Configuration	BC-XI-IBC
XI	Integration Builder – Design	BC-XI-IBD

For Enterprise SOA documentation, see ES Workplace at <https://www.sdn.sap.com/irj/sdn/explore-es>.

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 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.

The following topics are covered:

- Remote Support
- Component hierarchy relevant for this application

SAP liveCache Assistant (transaction LC10) is an administration and support tool that is available in the Web browser as well as in the SAP GUI. A read-only support role is available for using *SAP liveCache Assistant*. For information about how to set up the role, see SAP Note [452745](#).

For more information about *SAP liveCache Assistant*, see SAP Library for SAP NetWeaver on SAP Help Portal at <http://help.sap.com/nw703>, under ► *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Database Administration* → *Database Administration for SAP MaxDB* → *Database Administration in CCMS: SAP MaxDB* → *Database Administration in CCMS: SAP liveCache Technology* → *liveCache Assistant* ◀.

8.1 Remote Support Setup

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

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

For the SAP SCM Optimizer the standard ERP support connection is normally sufficient. In very rare cases, the support requires direct access to the optimization server via Windows Terminal Server /Telnet (depending on the used operating system).

8.2 Problem Message Handover

For information about processing of internal support messages and forwarding them to SAP, see SAP Help Portal at ► <http://help.sap.com> → *SAP Solution Manager* → *SAP Solution Manager 7.0* → *English* → *Service Desk* ◀.

For sending problem messages/tickets to SAP, choose the appropriate component (or subcomponent) name from the SAP component hierarchy:

Component	Component Name
SCM	Supply Chain Management
+ SCM-CA	SCM Cross Applications
+ SCM-APO	Advanced Planning and Optimization
+ SCM-APO-OPT	SCM Optimizer
+ SCM-BAS	SCM Basis
+ SCM-EWM	Extended Warehouse Management
+ SCM-TM	Transportation Management
+ SCM-ECT	Execution
+ SCM-EM	Event Management
+ SCM-FRE	Forecasting and Replenishment
+ SCM-ICH	Supply Network Collaboration
+ SCM-FC	Fulfillment Coordination

The SCM Focus Group offers technical consulting services such as Administration, Monitoring, and Backup and Recovery concepts for your SCM system.

You can find a detailed list of the services, as well as all contact persons, in the SCM Focus Group fact sheet on SAP Service Marketplace under ► <http://service.sap.com/scm> → *SAP SCM Technology* → *Technical Consulting (in the Related Topics box)* → *SCM Technology Focus Group* ◀.

For an overview of all services provided by SAP SCM, see SAP Service Marketplace at <http://service.sap.com/safeguarding>.

A Appendix

A.1 Appendix

A.1.1 Related Guides

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

A.1.2 Related Information

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

Content	Quick Link on SAP Service Marketplace <a href="http://service.sap.com/<quick link>">http://service.sap.com/<quick link>
Master Guide, Installation Guide and Upgrade Guide	/instguides
Related SAP Notes	/notes
Released Platforms	/platforms
Network Security	/securityguide /network
Technical Infrastructure	/installNW70
SAP Solution Manager	/solutionmanager

The following table contains links to the documentation referenced in this Application Operations Guide.

Guide	Path
Technical Operations Manual for SAP NetWeaver	▶ http://help.sap.com/nw703 → SAP NetWeaver → Administrator's Guide → Technical Operations for SAP NetWeaver ◀
Technical Operations Manual for mySAP Technology	▶ http://help.sap.com/nw2004 → SAP NetWeaver → SAP NetWeaver Components / mySAP Technology Components → Technical Operations Manual for mySAP Technology ◀
Application Operations Guide for SAP ERP	▶ http://service.sap.com/instguides → SAP Business Suite Applications → SAP ERP → SAP ERP 6.0 → Operations ◀

A.1.3 External Messages

The following table contains a list of the external messages, including the system, processing, and the application components involved. For more information about the semantics and the queues involved, see the following sections:

- *Semantics of External Messages* [page 111]
- *Queues of External Messages* [page 114]

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/SCWM/INB_DELIVERY_REPLACE	ERP	EWM	Function module	N/A
/SCWM/INB_DLV_SAVEREPLICA	ERP	EWM	Function module	N/A
/SCWM/INB_PO	ERP	EWM	Function module	N/A
/SCWM/OBDLV_CHNG_QUAN_MUL	ERP	EWM	Function module	N/A
/SCWM/OUTB_DLV_CHANGE	ERP	EWM	Function module	N/A
/SCWM/OUTB_DLV_SAVEREPLICA	ERP	EWM	Function module	N/A
/SPE/INB_DELIVERY_CONFIRM_DEC	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/INB_DELIVERY_REPLACE	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/INB_DELIVERY_SAVEREPLICA	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/INB_DELIVERY_RESPONSE	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/INB_DELIVERY_SPLIT	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/INB_EGR_CREATE_PROD /SPE/INB_EGR_CREATE_POSA	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/OUTB_DELIVERY_SAVEREPLICA	EWM	ERP	Function module	N/A
BAPI_OUTB_DELIVERY_CONFIRM_DEC	EWM	ERP	Function module	N/A
BAPI_OUTB_DELIVERY_REJECT	EWM	ERP	Function module	N/A
BAPI_OUTB_DELIVERY_SPLIT_DEC	EWM	ERP	Function module	N/A
/SCWM/OUTB_DLV_SAVEREPLICA	EWM	ERP	Function module	N/A
CIFMAT, CFP1, CFM2/3	ERP	EWM	Function module	N/A
BAPI_BATCH_SAVE_REPLICA	EWM	ERP	Function module	N/A
/SCWM/QFU_BY_EXTERNAL	ERP	EWM	Function module	SMQ1 (EWM) / SMQ2 (ERP)
QIE RFC_CONF_CANCEL_EXT_INSP	ERP	QIE/ EWM	Function module	ERP: SWEQADM, SWETYPV, SWELS, SMQ1 EWM: SMQ2
QIE RFC_CONF_CHANGE_EXT_INSP	ERP	QIE/ EWM	Function module	ERP: SWEQADM, SWETYPV, SWELS, SMQ1 EWM: SMQ2
QIE RFC_CONF_EXT_INSP	ERP	QIE/ EWM	Function module	ERP: SWEQADM, SWETYPV, SWELS, SMQ1 EWM: SMQ2
QIE RFC_NOTIFY_RES_EXT_INSP	ERP	QIE/ EWM	Function module	SMQ1 (EWM) / SMQ2 (ERP)

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
QIE_RFC_STATUS_INFO_EXT_INSP	ERP	QIE/ EWM	Function module	ERP: SWEQADM, SWETYPV, SWELS, SMQ1 EWM: SMQ2
/SPE/INSP_MAINTAIN_MULTIPLE	EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
QPLEXT_RFC_INSP_LOT_CREATE	QIE/ EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
QPLEXT_RFC_INSP_LOT_CHANGE	QIE/ EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
QPLEXT_RFC_INSP_LOT_CANCEL	QIE/ EWM	ERP	Function module	SMQ1 (EWM) / SMQ2 (ERP)
/SPE/GOODSMVT_CREATE	EWM	ERP	Function module	SMQ2 (ERP)
/SPE/PO_CREATE	EWM	ERP	Function module	N/A
/SCWM/IDOC_OUTPUT_GOODSMVT_CR	EWM	ERP	IDOC	N/A
/SCWM/OALE_PACKSPEC_REPLICATE	APO/ EWM	APO/ EWM	Function module	SMQ1
/SCWM/API_PACKSPEC_REPLICATE	APO/ EWM	APO/ EWM	Function module	N/A
/SCWM/OALE_ELEMGROUP_REPLICATE	APO/ EWM	APO/ EWM	Function module	SMQ1
/SCWM/API_ELEMGROUP_REPLICATE	APO/ EWM	APO/ EWM	Function module	N/A
/SCWM/OALE_WORKSTEP_REPLICATE	APO/ EWM	APO/ EWM	Function module	SMQ1
/SCWM/API_WORKSTEP_REPLICATE	APO/ EWM	APO/ EWM	Function module	N/A
/SCWM/OALE_CONDITION_REPLICATE	APO/ EWM	APO/ EWM	Function module	SMQ1
/SCWM/API_CONDITION_REPLICATE	APO/ EWM	APO/ EWM	Function module	N/A
/SCWM/GTS_CBLOCK_RELEASE	GTS	EWM	Function module	SM58 and report /SCWM/ GTS_CBREL_MON
/SCWM/WMSUID01	non-SAP	EWM	IDOC	N/A
/SCWM/WMTCID01	non-SAP	EWM	IDOC	N/A
/SCWM/WMBIID01	non-SAP	EWM	IDOC	N/A
/SCWM/WMRRID01	EWM	non-SAP	IDOC	N/A
TMSHP1	EWM	non-SAP	IDOC	N/A
TMFRD2	EWM	non-SAP	IDOC	N/A
/SCWM/WMCAID01	non-SAP	EWM	IDOC	N/A

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/SCWM/WMPHID01	non-SAP	EWM	IDOC	N/A
/SCWM/WMTOID01	non-SAP	EWM	IDOC	N/A
/SCWM/MFS_SEND	EWM	non-SAP	Function module	▶ Warehouse Management Monitor Node MFS → Telegram buffer → Outgoing Telegram ◀
SHPMNT05	EWM	ERP	IDOC	N/A
TPSSHT01	EWM	ERP	IDOC	N/A
SHP01NT05	ERP	EWM	IDOC	N/A
/SCWM/MFS_RECEIVE2	non-SAP	EWM	Function module	▶ Warehouse Management Monitor Node MFS → Telegram buffer → Incoming Telegram ◀
/SCWM/R_PS_DATA_LOAD	non-SAP	APO/ EWM	File	N/A
/SCWM/BAPI_PI_DOCUMENT_COUNT	non-SAP	EWM	BAPI	N/A
/SCWM/BAPI_PI_DOCUMENT_POST	non-SAP	EWM	BAPI	N/A
/SCWM/BAPI_PI_DOCUMENT_DELETE	non-SAP	EWM	BAPI	N/A
/SCWM/R_PI_STOCK_DWNLD	non-SAP	EWM	file	N/A
/SCWM/R_PI_FILEUPLD	non-SAP	EWM	file	N/A
/SCWM/BAPI_PI_DOCUMENT_CREATE	non-SAP	EWM	BAPI	N/A
/SCWM/R_INITIALSTOCKUPLOAD	non-SAP	EWM	file	N/A
/SCWM/R_INITIALSTOCKUPLOAD	non-SAP	EWM	file	N/A
/SCWM/TLAGPS_UPLOAD	non-SAP	EWM	file	N/A
ME_APO_FORWARD_PO_TO_APO	EWM	ERP	function module	N/A
0WM_DLVI	BI	EWM	BI Data Source	N/A
0WM_EWL	BI	EWM	BI Data Source	N/A
0WM_EXCCODE	BI	EWM	BI Data Source	N/A
0WM_MS_RESULT	BI	EWM	BI Data Source	N/A
0WM_PL_DLVI	BI	EWM	BI Data Source	N/A
0WM_VAS	BI	EWM	BI Data Source	N/A
0WM_WO	BI	EWM	BI Data Source	N/A
0WM_WT	BI	EWM	BI Data Source	N/A

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
0WM_WT_WO	BI	EWM	BI Data Source	N/A
0WM_BIN	BI	EWM	BI Data Source	N/A
0WM_LGNUM_ATTR	BI	EWM	BI Data Source	N/A
0WM_LGNUM_TEXT	BI	EWM	BI Data Source	N/A
0WM_MS_TEXT	BI	EWM	BI Data Source	N/A
/1BEA/CRMB_DL_O_RFCCOLLRUN	EWM	CRM	function module	N/A
/1BEA/CRMB_BD_O_RFCCOLLCANCEL	EWM	CRM	function module	N/A
/1BEA/CRMB_BD_O_RFCPRINT	EWM	CRM	function module	N/A
/SAPSLI/GTS_CSD_PRINTREQUEST	EWM	CRM	function module	N/A
/SPE/AAC_DETERMINATION	EWM	ERP	function module	Report /SCWM/ RACC_IMP_ERP_UI
BAPI_TIMEAVAILSCHEDULE_BUILD	ERP HR	EWM	function module	N/A
BAPI_WAGECOMPEXT_GETLIST	ERP HR	EWM	function module	N/A
BAPI_WAGECOMPEXT_CREATE	EWM	ERP HR	function module	N/A
BAPI_WAGECOMPEXT_DELETE	EWM	ERP HR	function module	N/A
/SPE/INB_CALL_TRX_VL60	EWM	ERP	function module	N/A
/SPE/WBS_ELEM_CONV_INT_EXT	ERP	EWM	function module	N/A
/SCWM/DLV_DELTA_SELECT	ERP	EWM	function module	N/A
BAPI_BATCH_GET_DETAIL	ERP	EWM	function module	N/A
BAPI_OBJCL_GETCLASSES	ERP	EWM	function module	N/A
/SPE/GET_T156	ERP	EWM	function module	N/A
/SPE/MBEW_GEN_ARRAY_READ	ERP	EWM	function module	N/A
L_MM_MATERIALS_READ_QUANTITY	ERP	EWM	function module	Report /SCWM/ERP_STOCKCHECK
CONVERSION_EXIT_CORPR_INPUT	ERP	EWM	function module	N/A
BAPI_MATERIAL_AVAILABILITY	ERP	EWM	function module	N/A
/SAPSLI/API_6800_TEWM_SYNCH	EWM	GTS	function module	N/A
/SCWM/GTS_SCRAPPING_RELEASE	GTS	EWM	function module	N/A
/SCWM/GTS_SHP_PROC_RELEASE	GTS	EWM	function module	N/A
/SAPSLI/API_6800_SYNCH_MASS	EWM	GTS	function module	N/A
/SAPSLI/API_LCLIC_EXTNO_GET	EWM	GTS	function module	N/A
/SAPSLI/API_SYNCH_PRECIP_SPI	GTS	EWM	function module	N/A
/SAPSLI/EWM_SAKE_ERROR	EWM	GTS	function module	N/A
/SAPSLI/API_6800_SCRP_SYNCH	EWM	GTS	function module	N/A
/SCWM/MATERIAL_RFC_READ	APO	EWM	function module	N/A
/SCWM/DATE_TO_PERIOD_CONVERT	APO	EWM	function module	N/A
/SCWM/FIRST_DAY_IN_PERIOD_GET	APO	EWM	function module	N/A
/SCWM/GET_ACCOUNT_OF_PERIODS	APO	EWM	function module	N/A

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/SCWM/LAST_DAY_IN_PERIOD_GET	APO	EWM	function module	N/A
/SCWM/T009B_READ_MULTI	APO	EWM	function module	N/A
/SCMB/MDL_KEYC_BY_VRSIOEX	APO	EWM	function module	N/A
/SCMB/MDL_LOC_GET	EWM	EWM	function module	N/A
/SCWM/LOCATION_RANGE_GETF4	APO	EWM	function module	N/A
/SAPAPO/PFCS_VALID_PERKZ_GET	APO	EWM	function module	N/A
/SAPAPO/PFCS_DEMAND_KYFSEM_GET	APO	EWM	function module	N/A
BAPI_APOATP_CHECK	EWM	APO	function module	N/A
/SCMB/MDL_LOCPROD_READ_MULTI	APO	EWM	function module	N/A
DespatchedDeliveryNotification_Out	EWM	non-SAP	XI	SXMB_MONI
/SCWM/BIF_YRD_VAPP_QR	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
VehicleAppointmentCreatedNotification_Out	EWM	non-SAP	XI	SXMB_MONI
VehicleAppointmentChangedNotification_Out	EWM	non-SAP	XI	SXMB_MONI
VehicleAppointmentCancelledNotification_Out	EWM	non-SAP	XI	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CHANGE_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CAIN_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CAOUT_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CHIN_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CHOUT_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_CONN_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_DISC_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_LOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_VAPP_ULOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_DAPP_QR	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_DAPP_CREATE_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/SCWM/BIF_YRD_DAPP_CANCEL_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_DAPP_LOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_DAPP_ULOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
DockAppointmentChangedNotification_Out	non-SAP	EWM	XI	SXMB_MONI
DockAppointmentCreatedNotification_Out	non-SAP	EWM	XI	SXMB_MONI
DockAppointmentCancelledNotification_Out	non-SAP	EWM	XI	SXMB_MONI
/SCWM/BIF_YRD_TAPP_BLOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_QR	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_CAIN_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_CAOUT_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
TransportationUnitAppointmentCreatedNotification_Out	non-SAP	EWM	XI	SXMB_MONI
TransportationUnitAppointmentCancelledNotification_Out	non-SAP	EWM	XI	SXMB_MONI
TransportationUnitAppointmentChangedNotification_Out	non-SAP	EWM	XI	SXMB_MONI
/SCWM/BIF_YRD_TAPP_CHANGE_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_CHIN_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_CHOUT_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_LOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_ULOCK_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
/SCWM/BIF_YRD_TAPP_UBLOC_RC	non-SAP	EWM	XI+WEBSservice	SXMB_MONI
TransportationUnitAppointmentLoadingAdvancedNotification_Out	non-SAP	EWM	XI	SXMB_MONI
/SCWM/RFID_ACTION	All	EWM	function module	N/A
/SCWM/RFID_AII_EWM	All	EWM	WEBSservice	N/A
/AIN/PUB_IDCONV_ENCODE	EWM	All	function module	N/A

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/AIN/PUB_IDCONV_ENCODE_NUMGEN	EWM	All	function module	N/A
/AIN/PUB_IDCONV_DECODE	EWM	All	function module	N/A
/AIN/PUB_IDCONV_FORMATS_GET	EWM	All	function module	N/A
/AIN/PUB_DEVCOM_SPOOL_PRINT	EWM	All	function module	N/A
/AIN/ID_ALT_FORMATS_GET	EWM	All	WEBSservice	N/A
/AIN/ID_ENCODE_NUMGEN	EWM	All	WEBSservice	N/A
/AIN/AutoIDLabel_PrintRC	EWM	All	WEBSservice	N/A
/SCWM/BIF_DLV_ID_QR ID	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_DLV_OD_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
DeliveryInformation_Out	EWM	non-SAP	XI	/SCWM/BIF_DLV_ID_QR ID
DeliveryInformation_Out	EWM	non-SAP	XI	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_WH_ID_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_WHAREA_ID_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SUBAREA_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_STAGAREA_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_BIN_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_WRKSTAT_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_DOOR_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_CHKCPNT_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBWSEAREA_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBSUBAREA_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBSTAGAREA_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBBIN_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBWRKSTAT_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_SBDOR_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID

Message	Sender System	Recipient System	Communication Type	Monitoring Transaction
/SCWM/BIF_SBCHECKPNT_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_HU_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
/SCWM/BIF_INV_QR	non-SAP	EWM	XI+WEBSservice	/SCWM/BIF_DLV_ID_QR ID
RFC_READ_TABLE (query table U_11008)	EWM	ERP	function module	Report /SCWM/R_PSA_REPLICATE (Transaction /SCWM/PSA_REPLICATE)
/SCWM/ERP_PSA_STOCK_QUERY	ERP	EWM	function module	N/A
/SCWM/OUTB_DLV_CANCELLATION	ERP	EWM	function module	N/A
IDENTITY_MODIFY	other	EWM	function module	Identity Center Monitoring
IDENTITY_RETRIEVE	other	EWM	function module	Identity Center Monitoring

A.1.3.1 Semantics of External Messages

Message	Semantics	Application Components	
		Sender	Recipient
/SCWM/INB_DELIVERY_REPLACE	Replacement request	LO-SPM-INB	SCM-EWM-IF-ERP
/SCWM/INB_DLV_SAVEREPLICA	Replicate inbound delivery	LO-SPM-INB	SCM-EWM-IF-ERP
/SCWM/INB_PO	Communicate Purchase Order changes	LO-SPM-INB	SCM-EWM-IF-ERP
/SCWM/OBDLV_CHNG_QUAN_MUL	Quantity change request for multiple delivery items	LO-SPM-OUTB	SCM-EWM-IF-ERP
/SCWM/OUTB_DLV_CHANGE	Change outbound deliveries	LO-SPM-OUTB	SCM-EWM-IF-ERP
/SCWM/OUTB_DLV_SAVEREPLICA	Replicate outbound delivery	LO-SPM-OUTB	SCM-EWM-IF-ERP
/SPE/INB_DELIVERY_CONFIRM_DEC	Confirms goods receipt for inbound deliveries	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/INB_DELIVERY_REPLACE	Report changes of inbound deliveries	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/INB_DELIVERY_SAVEREPLICA	Replicate inbound delivery	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/INB_DELIVERY_RESPONSE	Response to replacement request of ERP	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/INB_DELIVERY_SPLIT	Communicate delivery split	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/INB_EGR_CREATE_PROD /SPE/INB_EGR_CREATE_POSA	Request Goods Receipt Notifications	SCM-EWM-IF-ERP	LO-SPM-INB
/SPE/OUTB_DELIVERY_SAVEREPLICA	Replicate outbound delivery	SCM-EWM-IF-ERP	LO-SPM-OUTB

Message	Semantics	Application Components	
		Sender	Recipient
BAPI_OUTB_DELIVERY_CONFIRM_DEC	Confirms goods issue for outbound deliveries, stock posting changes and returns deliveries; sends IBGI message (invoice before goods issue)	SCM-EWM-IF-ERP	LO-SPM-OUTB
BAPI_OUTB_DELIVERY_REJECT	Response to quantity change request of ERP	SCM-EWM-IF-ERP	LO-SPM-OUTB
BAPI_OUTB_DELIVERY_SPLIT_DEC	Communicate delivery split	SCM-EWM-IF-ERP	LO-SPM-OUTB
/SCWM/OUTB_DLV_SAVEREPLICA	Replicate outbound delivery (without predecessor document) Only true for SCM 5.1 to SAP ERP 6.0 EhP3. No distribution otherwise.	LO-SPM-OUTB	SCM-EWM-IF-ERP
CIFMAT, CFP1, CFM2/3	Material Master Distribution (CIFMAT as ALE message type for CIF, CFP1 (periodic transfer of changes from ERP) or CFM2/3 (CIF initial transfer) or ERP Core Update with BTE for CIF)	SCM-APO-INT-MD	SCM-APO-INT-MD
BAPI_BATCH_SAVE_REPLICA	Creates new batch with valuation in ERP	SCM-EWM-MD-BA	N/A
/SCWM/QFU_BY_EXTERNAL	Triggers putaway for an inspected stock	LO-SPM-RET	SCM-EWM-QM-RP
QIE_RFC_CONF_CANCEL_EXT_INSP	Confirm cancellation of inspection	QM-IM	CA-QIE
QIE_RFC_CONF_CHANGE_EXT_INSP	Confirm change inspection	QM-IM	CA-QIE
QIE_RFC_CONF_EXT_INSP	Confirm creation of inspection lot	QM-IM	CA-QIE
QIE_RFC_NOTIFY_RES_EXT_INSP	Results of inspection lot	QM-IM	CA-QIE
QIE_RFC_STATUS_INFO_EXT_INSP	Notify status of inspection lot	QM-IM	CA-QIE
/SPE/INSP_MAINTAIN_MULTIPLE	Sends Inspection result of a return item to ERP for distribution to CRM	SCM-EWM-QM-RP	LO-SPM-RET
QPLEXT_RFC_INSP_LOT_CREATE	Create inspection lot in ERP	CA-QIE	QM-IM-IL
QPLEXT_RFC_INSP_LOT_CHANGE	Change inspection lot in ERP	CA-QIE	QM-IM-IL
QPLEXT_RFC_INSP_LOT_CANCEL	Cancel inspection lot in ERP	CA-QIE	QM-IM-IL
/SPE/GOODSMVT_CREATE	This message creates goods movement documents in ERP. Only valid for goods	SCM-EWM-IF-ERP	LO-SPM-STO

Message	Semantics	Application Components	
		Sender	Recipient
	movements without ERP delivery.		
/SPE/PO_CREATE	Create a STO in ERP	SCM-EWM-QM	LO-SPM-STO
/SCWM/IDOC_OUTPUT_GOODSMVT_CR	Goods Movement Create	SCM-EWM-IF-ERP	N/A
/SCWM/OALE_PACKSPEC_REPLICATE	Replicate packspec header	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/API_PACKSPEC_REPLICATE	Receiving replicated packspec header	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/OALE_ELEMGROUP_REPLICATE	Replicate packspec element group	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/API_ELEMGROUP_REPLICATE	Receiving replicated packspec element group	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/OALE_WORKSTEP_REPLICATE	Replicate packspec workstep	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/API_WORKSTEP_REPLICATE	Receiving replicated packspec workstep	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/OALE_CONDITION_REPLICATE	Replicate packspec condition record	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/API_CONDITION_REPLICATE	Receiving replicated packspec condition record	SCMB-BAS-PAK-PS	SCMB-BAS-PAK-PS
/SCWM/GTS_CBLOCK_RELEASE	Release customs-blocked stock. Creates a stock transfer document from customs-blocked stock to normal stock	SLL-LEG	SCM-EWM-IF-GTS
/SCWM/WMSUID01	Move Handling Unit	SCM-EWM-IF-WCU	N/A
/SCWM/WMTCID01	Confirm warehouse task	SCM-EWM-IF-WCU	N/A
/SCWM/WMBIID01	Block storage bins	SCM-EWM-IF-WCU	N/A
/SCWM/WMRRID01	Release wave	SCM-EWM-IF-WCU	N/A
TMSHP1	Send/Receive shipment to/from an external planning system	SCM-EWM-TM	SCM-EWM-TM
TMFRD2	Send/Receive a freight document to/from an external planning system	SCM-EWM-TM	SCM-EWM-TM
SHPMNT06	Send/Receive Shipment to/from ERP	SCM-EWM-IF-ERP	LE-TRA_IN
TPSHT01	Send deletion of shipment to ERP	SCM-EWM-IF-ERP	LE-TRA_IN
/SCWM/WMCAID01	Cancellation / Cancellation Request of WO	SCM-EWM-IF-WCU	N/A
/SCWM/WMPHID01	Create and distribute Pick-Hus	SCM-EWM-IF-WCU	N/A
/SCWM/WMTOID01	Create warehouse task	SCM-EWM-IF-WCU	N/A

Message	Semantics	Application Components	
		Sender	Recipient
/SCWM/MFS_SEND	Send Telegram to PLC	SCM-EWM-MFS	N/A
/SCWM/MFS_RECEIVE2	Receive Telegram from PLC	SCM-EWM-MFS	N/A

A.1.3.2 Queues of External Messages

Message	Queue Name
/SCWM/INB_DELIVERY_REPLACE	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SCWM/INB_DLV_SAVEREPLICA	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SCWM/INB_PO	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SCWM/OBDLV_CHNG_QUAN_MUL	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SCWM/OUTB_DLV_CHANGE	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SCWM/OUTB_DLV_SAVEREPLICA	DLVS<logicalsystemERP><ClientERP> <Number_of_originaial_ERP_Delivery>. For example DLVSQ4LCLNT4000180010219
/SPE/INB_DELIVERY_CONFIRM_DEC	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SPE/INB_DELIVERY_REPLACE	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SPE/INB_DELIVERY_SAVEREPLICA	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SPE/INB_DELIVERY_RESPONSE	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SPE/INB_DELIVERY_SPLIT	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SPE/INB_EGR_CREATE_PROD /SPE/INB_EGR_CREATE_POSA	n/a
/SPE/OUTB_DELIVERY_SAVEREPLICA	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
BAPI_OUTB_DELIVERY_CONFIRM_DEC	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
BAPI_OUTB_DELIVERY_REJECT	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317

Message	Queue Name
BAPI_OUTB_DELIVERY_SPLIT_DEC	DLVS<logicalsystemEWM><ClientEWM>. For example DLVSA3PCLNT0010180010317
/SCWM/OUTB_DLV_SAVEREPLICA	DLVS<logicalsystemERP><ClientERP><Number_of_originial_ERP_Delivery>. For example DLVSQLCLNT4000180010219
CIFMAT, CFP1, CFM2/3	CFMAT<matnr>, CFLD<src.logsys><number><counter>
BAPI_BATCH_SAVE_REPLICA	WMCC<batchno><productno>
/SCWM/QFU_BY_EXTERNAL	DLVS<logical_system><delivery_number> For example DLVSQLCLNT4000084001775
QIE RFC_CONF_CANCEL_EXT_INSP	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QIE RFC_CONF_CHANGE_EXT_INSP	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QIE RFC_CONF_EXT_INSP	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QIE RFC_NOTIFY_RES_EXT_INSP	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QIE RFC_STATUS_INFO_EXT_INSP	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
/SPE/INSP_MAINTAIN_MULTIPLE	DLVS<logical_system><delivery_number> For example DLVSQLCLNT4000084001775
QPLEXT RFC_INSP_LOT_CREATE	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QPLEXT RFC_INSP_LOT_CHANGE	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
QPLEXT RFC_INSP_LOT_CANCEL	QI<logical system><inspection_document_number> For example QIQ1PCLNT401000000112127
/SPE/GOODSMVT_CREATE	EWMSGOODSMVT or <delivery_queue> (For example ROD-AFS)
/SPE/PO_CREATE	EWMD<username><warehousenumber> For example EWMSIHORSCH___SPU2
/SCWM/IDOC_OUTPUT_GOODSMVT_CR	N/A
/SCWM/OALE_PACKSPEC_REPLICATE	PSID<PSID>
/SCWM/API_PACKSPEC_REPLICATE	PSID<PSID>
/SCWM/OALE_ELEMGROUP_REPLICATE	PSEG<PSEG>
/SCWM/API_ELEMGROUP_REPLICATE	PSEG<PSEG>
/SCWM/OALE_WORKSTEP_REPLICATE	PSWS<PSWS>
/SCWM/API_WORKSTEP_REPLICATE	PSWS<PSWS>
/SCWM/OALE_CONDITION_REPLICATE	PSID<PSID>
/SCWM/API_CONDITION_REPLICATE	PSID<PSID>
/SCWM/GTS_CBLOCK_RELEASE	N/A
/SCWM/WMSUID01	N/A
/SCWM/WMTCID01	N/A
/SCWM/WMBIID01	N/A

Message	Queue Name
/SCWM/WMRRID01	N/A
TMSHP1	N/A
TMFRD2	N/A
/SCWM/WMCAID01	N/A
/SCWM/WMPHID01	N/A
/SCWM/WMTOID01	N/A
/SCWM/MFS_SEND	N/A
/SCWM/MFS_RECEIVE2	N/A
SHPMNT06	N/A
TPSSHT01	N/A

B Reference

B.1 The Main SAP Documentation Types

The following is an overview of the **most important** documentation types that you need in the various phases in the life cycle of SAP software.

Cross-Phase Documentation

SAPterm is SAP's terminology database. It contains SAP-specific vocabulary in over 30 languages, as well as many glossary entries in English and German.

- Target group:
 - Relevant for all target groups
- Current version:
 - On SAP Help Portal at ► <http://help.sap.com> → *Glossary* ◀
 - In the SAP system in transaction STERM

SAP Library is a collection of documentation for SAP software covering functions and processes.

- Target group:
 - Consultants
 - System administrators
 - Project teams for implementations or upgrades
- Current version:
 - On SAP Help Portal at <http://help.sap.com> (also available as documentation DVD)

The **security guide** describes the settings for a medium security level and offers suggestions for raising security levels. A collective security guide is available for SAP NetWeaver. This document contains general guidelines and suggestions. SAP applications have a security guide of their own.

- Target group:
 - System administrators
 - Technology consultants
 - Solution consultants
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/securityguide>

Implementation

The **master guide** is the starting point for implementing an SAP solution. It lists the required installable units for each business or IT scenario. It provides scenario-specific descriptions of preparation,

B.1 The Main SAP Documentation Types

execution, and follow-up of an implementation. It also provides references to other documents, such as installation guides, the technical infrastructure guide and SAP Notes.

- Target group:
 - Technology consultants
 - Project teams for implementations
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

The **installation guide** describes the technical implementation of an installable unit, taking into account the combinations of operating systems and databases. It does not describe any business-related configuration.

- Target group:
 - Technology consultants
 - Project teams for implementations
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

Configuration Documentation in SAP Solution Manager – SAP Solution Manager is a life-cycle platform. One of its main functions is the configuration of business scenarios, business processes, and implementable steps. It contains Customizing activities, transactions, and so on, as well as documentation.

- Target group:
 - Technology consultants
 - Solution consultants
 - Project teams for implementations
- Current version:
 - In SAP Solution Manager

The **Implementation Guide (IMG)** is a tool for configuring (Customizing) a single SAP system. The Customizing activities and their documentation are structured from a functional perspective. (In order to configure a whole system landscape from a process-oriented perspective, SAP Solution Manager, which refers to the relevant Customizing activities in the individual SAP systems, is used.)

- Target group:
 - Solution consultants
 - Project teams for implementations or upgrades
- Current version:
 - In the SAP menu of the SAP system under ► *Tools* → *Customizing* → *IMG* ◀

Production Operation

The **technical operations manual** is the starting point for operating a system that runs on SAP NetWeaver, and precedes the application operations guides of SAP Business Suite. The manual refers

B.1 The Main SAP Documentation Types

users to the tools and documentation that are needed to carry out various tasks, such as monitoring, backup/restore, master data maintenance, transports, and tests.

- Target group:
 - System administrators
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

The **application operations guide** is used for operating an SAP application once all tasks in the technical operations manual have been completed. It refers users to the tools and documentation that are needed to carry out the various operations-related tasks.

- Target group:
 - System administrators
 - Technology consultants
 - Solution consultants
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

Upgrade

The **upgrade master guide** is the starting point for upgrading the business scenarios and processes of an SAP solution. It provides scenario-specific descriptions of preparation, execution, and follow-up of an upgrade. It also refers to other documents, such as upgrade guides and SAP Notes.

- Target group:
 - Technology consultants
 - Project teams for upgrades
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

The **upgrade guide** describes the technical upgrade of an installable unit, taking into account the combinations of operating systems and databases. It does not describe any business-related configuration.

- Target group:
 - Technology consultants
 - Project teams for upgrades
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/instguides>

Release notes are documents that contain short descriptions of new features in a particular release or changes to existing features since the previous release. Release notes about ABAP developments are the technical prerequisite for generating delta and upgrade Customizing in the Implementation Guide (IMG).

- Target group:

B.1 The Main SAP Documentation Types

- Consultants
- Project teams for upgrades
- Current version:
 - On SAP Service Marketplace at <http://service.sap.com/releasenotes>
 - In the SAP menu of the SAP system under ► *Help* → *Release Notes* ◀ (only ABAP developments)

Documentation in the SAP Service Marketplace

You can find this document at the following address: <http://service.sap.com/instguides>

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