

# **SAP Customer Activity Repository 1.0**

## **Support Pack 04**

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# Documentation on the SAP Service Marketplace

You can find this document at the following address: [service.sap.com/instguides](https://service.sap.com/instguides)

# Typographic Conventions

Table 1

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
<b>Example</b>	Emphasized words or expressions
<b>Example</b>	Words or characters that you enter in the system exactly as they appear in the documentation
<a href="http://www.sap.com">www.sap.com</a>	Textual cross-references to an internet address
<a href="#">/example</a>	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
<a href="#">123456</a>	Hyperlink to an SAP Note, for example, SAP Note <a href="#">123456</a>
<i>Example</i>	<ul style="list-style-type: none"> <li>Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options.</li> <li>Cross-references to other documentation or published works</li> </ul>
Example	<ul style="list-style-type: none"> <li>Output on the screen following a user action, for example, messages</li> <li>Source code or syntax quoted directly from a program</li> <li>File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools</li> </ul>
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
<span>EXAMPLE</span>	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 on SAP Service Marketplace [service.sap.com/instguides](http://service.sap.com/instguides).

The following table provides an overview on the most important document changes:

Table 2

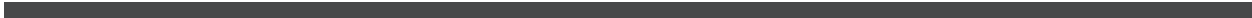
Version	Date	Description
1.02	2014-05-13	Updates with regards to co-deployment with SAP ERP.
1.01	2014-03-14	Important updates to the <i>Overall Implementation Sequence</i> section.
1.0	2013-09-20	Initial version.



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# 1 Getting Started

## 1.1 About this Document

This Master Guide is the central starting point for the technical implementation of SAP Customer Activity Repository. You can find cross-scenario implementation information as well as scenario-specific information in this guide.

Use the Master Guide to get an overview of SAP Customer Activity Repository, its software units, and its scenarios from a technical perspective. The Master Guide is a planning tool that helps you to design your SAP Customer Activity Repository system landscape. It refers you to the required detailed documentation, mainly:

- Installation guides for single software units
- SAP Notes
- Configuration information
- SAP Library documentation

### Note

You can find the most current information about the technical implementation of SAP Customer Activity Repository and the latest installation guide on SAP Service Marketplace at [service.sap.com/instguides](https://service.sap.com/instguides).

We recommend that you use the documents available here. The guides are regularly updated.

## Constraints

- The business scenarios that are presented here serve as examples of how you can use SAP software in your company. The business scenarios are only intended as models and do not necessarily run the way they are described here in your customer-specific system landscape. Ensure to check your requirements and systems to determine whether these scenarios can be used productively at your site. Furthermore, we recommend that you test these scenarios thoroughly in your test systems to ensure they are complete and free of errors before going live.
- This Master Guide primarily discusses the overall technical implementation of SAP Customer Activity Repository, rather than its subordinate components. This means that additional software dependencies might exist without being mentioned explicitly in this document. You can find more information on component-specific software dependencies in the corresponding installation guides.

## 1.2 Related Information

### Planning Information

For more information on planning topics not covered in this guide, see the following content on SAP Service Marketplace:

Table 3

Content	Location on SAP Service Marketplace
Latest versions of installation and upgrade guides	<a href="http://service.sap.com/instguides">service.sap.com/instguides</a>
General information about SAP Customer Activity Repository	<a href="http://help.sap.com/car">help.sap.com/car</a>
SAP Business Maps – information about applications/solutions and business scenarios	<a href="http://service.sap.com/businessmaps">service.sap.com/businessmaps</a>
Sizing, calculation of hardware requirements – such as CPU, disk and memory resource – with the Quick Sizer tool	<a href="http://service.sap.com/quicksizer">service.sap.com/quicksizer</a>
Released platforms and technology-related topics, such as maintenance strategies and language support	<a href="http://service.sap.com/platforms">service.sap.com/platforms</a> To access the Platform Availability Matrix directly, enter <a href="http://service.sap.com/pam">service.sap.com/pam</a>
Network security	<a href="http://service.sap.com/securityguide">service.sap.com/securityguide</a>
High Availability	<a href="http://service.sap.com/ha">service.sap.com/ha</a>
Performance	<a href="http://service.sap.com/performance">service.sap.com/performance</a>
Information about Support Package Stacks, latest software versions and patch level requirements	<a href="http://service.sap.com/sp-stacks">service.sap.com/sp-stacks</a>
Information about Unicode technology	<a href="http://service.sap.com/unicode@sap">service.sap.com/unicode@sap</a>

### Further Useful Links

The following table lists further useful links on SAP Service Marketplace:

Table 4

Content	Location on SAP Service Marketplace
Information about creating error messages	<a href="http://service.sap.com/message">service.sap.com/message</a>
SAP Notes search	<a href="http://service.sap.com/notes">service.sap.com/notes</a>
SAP Software Distribution Center (software download and ordering of software)	<a href="http://service.sap.com/swds">service.sap.com/swds</a>
SAP Online Knowledge Products (OKPs) – role-specific Learning Maps	<a href="http://service.sap.com/rkt">service.sap.com/rkt</a>

## 1.3 Important SAP Notes

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at [service.sap.com/notes](http://service.sap.com/notes).

Table 5

SAP Note Number	Title	Description
<a href="#">1843898</a>	Release strategy for the ABAP add-on RTLCAR	SAP Customer Activity Repository 1.0 release and upgrade information
<a href="#">1921071</a> with related notes	Collection Note: RTLDDF 1.0 SP02 with UDF on SAP HANA	Overview of support package SP02 of Demand Data Foundation (DDF) 1.0 with Unified Demand Forecast (UDF) on the SAP HANA database; referenced related notes providing details of the changes made for this support package as well as implementation instructions and prerequisites.
<a href="#">1605140</a>	SAP HANA 1.0: Central Note - SAP LT Replication Server	Collective note for all the relevant SAP Notes for LT Replication Server for SAP HANA
<a href="#">1778607</a>	SAP HANA Live for SAP Business Suite	What to consider when implementing SAP HANA Live for SAP Business Suite.
<a href="#">1791342</a>	Time Zone Support in SAP HANA	How to handle time zone functions <code>UTCTOLOCAL</code> and <code>LOCALTOUTC</code> .
<a href="#">1799313</a>	Create Tables for SAP HANA Live	How to create a set of tables relevant for SAP HANA Live in the SAP HANA database using the SAP LT Replication Server.
<a href="#">1782065</a>	Tables for SAP HANA Analytics for SAP Business Suite	Contains a list of general tables required for SAP HANA Live for SAP Business Suite.
<a href="#">1781992</a>	Tables for SAP HANA Analytics for ERP 1.0	Contains a list of tables required for SAP HANA Live for ERP.
<a href="#">1938004</a>	Create CRM tables in SAP Customer Activity Repository	Note describing the creation of SAP CRM tables required to activate SAP HANA Content for SAP Customer Activity Repository.
<a href="#">1909488</a>	Create "dummy" CRM tables in SAP Customer Activity Repository	Note describing the creation of SAP CRM "dummy" tables required to activate SAP HANA Content for SAP Customer Activity Repository.
<a href="#">1897024</a>	Replicate ERP tables for SAP Customer Activity Repository	Note describing the replication of SAP ERP tables from a source SAP ERP system.
<a href="#">1897025</a>	Replicate CRM tables for SAP Customer Activity Repository	Note describing the optional replication of SAP CRM tables from a source SAP CRM system.
<a href="#">1933265</a>	Deactivate the BW BAdI implementations for master data access BAdIs	Note describing the correction required to deactivate one of the active implementations of BAdIs that read master data.
<a href="#">337623</a>	Customizing after installation or upgrade	Note describing the process of copying the standard SAP-delivered Customizing settings.

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## 2 SAP Customer Activity Repository Overview

### 2.1 Introduction to SAP Customer Activity Repository

#### Customer-Centric, Unified Platform

Your customers are the driving force of your business. Your customers are an ever-evolving group who buy products in stores, research products online prior to making purchases, order products and product parts through catalogs, wait for promotions, splurge on gifts during holidays, make returns and exchanges when they are unhappy with their purchases, and sometimes even walk out of your stores when the product they came to buy is not available.

SAP Customer Activity Repository consolidates data related to customer transactional activities in one, unified platform as follows:

- Transactions your customers carry out in your brick-and-mortar stores are transferred to the repository, typically using trickle feed processing.
- Sales documents, created in your source SAP ERP system as a result of orders your customers place on the Web, through a call center or from a catalog, are either regularly replicated to the repository or accessed directly from the SAP ERP tables. The direct access to SAP ERP tables is only possible when SAP ERP and SAP Customer Activity Repository are installed on the same SAP HANA database.

SAP Customer Activity Repository classifies all these transaction by the order channel in which they were carried out.

Collecting loyalty information at the point-of-sale as well as the replication of customer information from a source CRM system to the repository allows you to drill down to the individual customer level when analyzing the transactional data.

#### Inventory Visibility

SAP Customer Activity Repository gives you insight to your current inventory position. Inventory information is available to the repository from a source SAP ERP system either through replication or through direct access to SAP ERP tables. The repository combines SAP ERP inventory information with the unprocessed POS sales information (that is, POS sales figures which have not yet been sent to SAP ERP). Combining the current SAP ERP inventory information with unprocessed POS sales figures allows you to gain a clearer picture of your current inventory.

#### Predictive

Another key advantage of using SAP Customer Activity Repository is that it contains the Demand Data Foundation component, which allows you to predict future customer demand. Taking advantage of the predictive capabilities of the repository, you can prepare your inventory and pricing strategies to meet the expected customer demand and expected financial results.

#### Analytics

All data contained in the repository is exposed to consuming applications through SAP HANA views included in SAP HANA Live for SAP ERP and SAP HANA Content for SAP Customer Activity Repository. The repository leverages all the flexibility and the convenience of SAP HANA views to simplify access to your customer's transactional data. This

allows you to react faster, predict faster and make inventory and pricing decisions in your retail business faster than ever before.

## SAP POS Data Management 1.0 and SAP Customer Activity Repository 1.0

SAP POS Data Management (SAP POS DM) 1.0 and SAP Customer Activity Repository 1.0 are two **separate** applications that allow you to receive and process POS transaction data from connected stores. You do not need to have SAP POS DM 1.0 installed to use SAP Customer Activity Repository 1.0, in fact, you **cannot** install both SAP POS DM 1.0 and SAP Customer Activity Repository 1.0 on the same SAP HANA database.

Both applications, SAP Customer Activity Repository 1.0 and SAP POS DM 1.0, rely on the POS Inbound Processing Engine (PIPE) to collect transaction data from connected stores, process the data, and send it to follow-on applications. PIPE is made available in both applications through the inclusion of the Point of Sale Data Management software component (RTLPOSDM). However, the SAP Customer Activity Repository and the SAP POS DM applications, contain different versions of this component:

Table 6

Application	Software Component Version	Functionality
SAP POS DM 1.0	RTLPOSDM 100	<ul style="list-style-type: none"><li>• Basic PIPE functionality</li><li>• Master data obtained from SAP NetWeaver BW</li></ul>
SAP Customer Activity Repository 1.0	RTLPOSDM 200	<ul style="list-style-type: none"><li>• Basic PIPE functionality</li><li>• Master data obtained from a source SAP ERP system, and, optionally, a source SAP CRM system</li><li>• Additional SAP Customer Activity Repository functionality:<ul style="list-style-type: none"><li>◦ SAP Workforce Management Integration</li><li>◦ Customizing and tasks for order channel assignment</li><li>◦ Additional fields in the / POSDW / TLOGF table, BADIs, and tasks for customer identification</li><li>◦ Predefined worklist to determine unprocessed sales</li></ul></li></ul>

The SAP Customer Activity Repository 1.0 application offers significant advantages over SAP POS DM 1.0, including the availability of multichannel data in the same platform, predictive capabilities, inventory visibility and multichannel sales analytic content.

## 2.2 Software Units of SAP Customer Activity Repository

### 2.2.1 Software Component Matrix

This section provides an overview of which business scenario uses which software unit.

#### **i** Note

This Master Guide provides just one way to implement each business scenario. For other ways to implement business scenarios, see the documentation accompanying the Customer Activity Repository business scenario in SAP Solution Manager.

Table 7

Business Scenario	SAP HANA Enterprise Edition	SAP NetWeaver 7.40	SAP ERP	SAP CRM	SAP HANA Live for SAP ERP	SAP Customer Activity Repository
Customer Activity Repository	X	X	X	(X)	X	X
X = mandatory; (X) = optional						

### 2.2.2 System Landscape

The following diagram displays a potential SAP Customer Activity Repository system landscape.

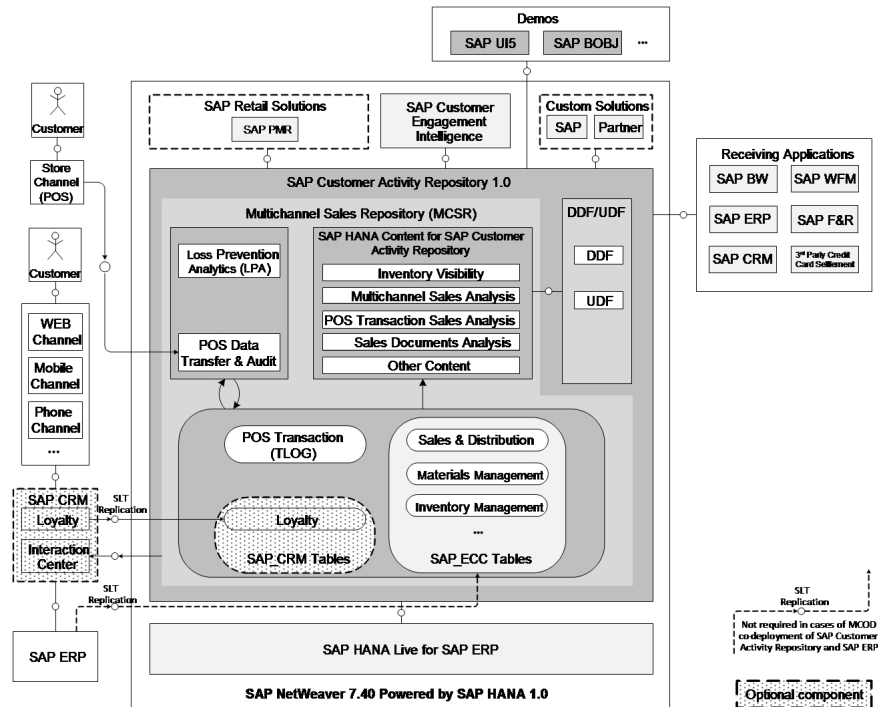


Figure 1: SAP Customer Activity Repository System Landscape

## 2.2.3 Overall Implementation Sequence

The following steps describe the overall installation sequence for SAP Customer Activity Repository:


### Process

1. Verify that you have installed all of the prerequisites for installing SAP Customer Activity Repository. The following table presents the prerequisites for installing SAP Customer Activity Repository 1.0 and provides links to the respective installation documentation:

Table 8

Prerequisite	Mandatory/Optional	Installation Information
SAP HANA Appliance Software SPS 06, or higher  <b>Note</b> The Unified Demand Forecast (UDF) algorithms are implemented and shipped as an Application Function Library (AFL) in the SAP HANA database. As such, SAP HANA AFL 1.0 is required.  For more information, see <i>Administrator's Guide, Demand Data Foundation (DDF) 1.0 on SAP HANA</i> .	Mandatory	<a href="#">SAP HANA Server Installation Guide</a> or <a href="#">SAP HANA Server Installation Guide (Unified Installer)</a>



Prerequisite	Mandatory/Optional	Installation Information
SAP HANA database clients	Optional	<i>SAP HANA Database - Client Installation and Update Guide</i>
SAP HANA Studio	Mandatory	<i>SAP HANA Database - Studio Installation and Update Guide</i>
SAP LT (Landscape Transformation) Replication Server for SAP HANA 2.0	Mandatory	<i>Installation Guide, Trigger-Based Data Replication Using SAP Landscape Transformation Replication Server</i>
One of the following versions of SAP Solution Manager: <ul style="list-style-type: none"> <li>• SAP Solution Manager 7.0 EHP1, SP23 or higher</li> <li>• SAP Solution Manager 7.1, SP01 or higher</li> </ul>	Mandatory	<i>Master Guide, SAP NetWeaver 7.4</i>
SAP NetWeaver 7.40	Mandatory	<i>Installation Guide, SAP Systems Based on the Application Server &lt;Your Server&gt; of SAP NetWeaver on &lt;Your Operating System&gt;: SAP HANA Database</i>
SAP Enhancement Package 5 for SAP ERP 6.0	Mandatory	<i>Installation Guide, SAP ERP 6.0 Including SAP Enhancement Package 5 - Technical Usage "Central Applications" &lt;Your Server&gt; on &lt;Your Operating System&gt;</i>
SAP Enhancement Package 2 for SAP CRM 7.0 or SAP Enhancement Package 2 for SAP CRM 7.0, Version for SAP HANA or higher	Optional	<i>Installation Guide, SAP Customer Relationship Management 7.0 Including Enhancement Package 2 Java and ABAP</i>  <i>Administrator's Guide, SAP Enhancement Package 2 for SAP CRM 7.0, Version for SAP HANA</i>
SAP HANA Live for SAP ERP SP02 or higher <div>  <b>Caution</b>  SAP Customer Activity Repository does not require that you execute all of the installation steps exactly as they are described in the <i>Administrator's Guide, SAP HANA Live for SAP Business Suite</i>. </div>	Mandatory	<i>Administrator's Guide, SAP HANA Live for SAP Business Suite</i>

Prerequisite	Mandatory/Optional	Installation Information
You must read the <i>Install SAP HANA Live for SAP ERP</i> procedure in <i>Installation Guide, SAP Customer Activity Repository</i> prior to installing SAP HANA Live for SAP ERP.		

2. Perform the pre-installation, installation, and post-installation steps described in *Installation Guide, SAP Customer Activity Repository*.

## 3 Business Scenarios of SAP Customer Activity Repository

### 3.1 Customer Activity Repository

#### Description

You use this scenario to collect transactional data that was previously spread over multiple independent applications into one common foundation. This scenario includes the business process that allows you to receive transactions from the point-of-sale (POS) terminals in your stores, cleanse and audit this data, and store it in SAP Customer Activity Repository.

You use the other business processes included in this scenario to obtain transactional data that can originate from a number of possible sources (for example, SAP CRM) and is stored in SAP ERP in the form of sales documents. Once this data is available in SAP Customer Activity Repository, these business processes allow you to harmonize the transactional data originating from several order channels and to perform a wide spectrum of analytical operations on this data. The analyses you perform can improve decision-making in your retail business. For example:

- Do some articles sell better in a particular channel? Based on this information, should my assortment per order channel be updated?
- What is the profitability of the different order channels in my retail business?
- What products does a particular customer buy in the store or on the web?

#### Note

The customer for a given point-of-sale (POS) transaction can only be identified if the customer uses a loyalty card at the time of purchase.

- What is my current inventory (including unprocessed POS transactions)?
- What are the forecasted sales for a given product/location combination?
- Do I have any product on-shelf availability issues in my stores?

The following processes are supported:

- **Performing POS Data Transfer and Audit**

You can use this business process to manage point-of-sale (POS) transactions. During this process, cash register sales data from individual stores is transmitted (typically using trickle feed) to SAP Customer Activity Repository. Administrators monitor and troubleshoot the inbound queues.

Once the transactional data is received, you can process, cleanse and audit the data. Auditors ensure the consistency of the sales transaction data.

You can also use outbound tasks of SAP Customer Activity Repository to send the processed transactional data to follow-on applications. Alternatively, you can simply store transactional data in the repository. Any consuming applications can access the stored data in near real-time through SAP HANA views provided in SAP HANA Content for SAP Customer Activity Repository.

- **Performing POS Sales Analysis**

You can use this business process to analyze POS sales data stored in SAP Customer Activity Repository in near real-time.

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POS transactions are transferred to the repository using the *Performing POS Data Transfer and Audit* business process. Trickle feed posting of transactions from connected stores combined with the speed of the underlying SAP HANA database allow you to quickly analyze POS sales data.

Different roles in your retail organization need to analyze POS data at different levels. Some need to analyze data at the transaction line item level, and others need to quickly roll up POS transactional data to various aggregation levels. All these analysis scenarios are supported by this business process.

- **Performing Inventory Visibility Analysis**

You can use this business process to obtain an accurate, near real-time visibility of inventory during store operations, sales and other business processes. Current inventory takes into consideration SAP ERP unrestricted stock amounts and POS transactions stored in SAP Customer Activity Repository that have not yet been posted to SAP ERP (unprocessed sales.) Combining these figures provides a more accurate view on the current inventory levels in your retail business.

Implementing this business process to obtain a near real-time snapshot of your inventory levels provides the following benefits:

- Transparency on critical stock levels
- Overview of critical inventory characteristics and KPIs such as valuated stock, unprocessed sales quantities, stock valuations, and safety stock levels
- Answers to critical questions, such as “Does this store have inventory in stock for a given article?”
- When combined with sales, service or other store operation business processes, a high degree of customer satisfaction can be achieved

- **Performing Sales (Billing) Document Analysis**

You can use this business process to analyze the sales data that is generated in a source SAP ERP and is made available in near real-time in SAP Customer Activity Repository.

As sales take place in various systems, they are processed by SAP ERP, where corresponding sales documents are created. Certain types of sales documents, such as billing documents, are made available in SAP Customer Activity Repository in near real-time.

Different roles in your retail organization need to analyze billing document data at different levels of detail. Some need to analyze data at the billing document line item level, and others need to quickly roll up billing document data to various aggregation levels. All these analysis scenarios are supported by this business process.

- **Performing Multichannel Sales Analysis**

You can use this business process to analyze multichannel sales data available in SAP Customer Activity Repository.

POS transactions created in your brick-and-mortar stores, also referred to as the store order channel, are transferred to the repository using the *Performing POS Data Transfer and Audit* business process.

Sales that take place through other order channels in your business, are processed by SAP ERP, where corresponding sales documents are created. Certain types of sales documents, such as billing documents, are made available in SAP Customer Activity Repository in near real-time.

SAP Customer Activity Repository consolidates sales data from these order channels, allowing you to have a holistic view of sales data in near real-time. Capturing sales data from different order channels in one single platform provides:

- Near real-time access and visibility into customer sales data across channels.
  - Different roles in your retail organization need to analyze multichannel sales data at different levels. Some need to analyze data at the line item level, and others need to quickly roll up sales data to various aggregation levels. All these analysis scenarios are supported by this business process.
- Near real-time flash reports within split seconds

- Ability to compare current sales with sales from last year as well as forecasted sales
- Data required by follow-on business scenarios, for example, new segmentation and call center scenarios as well as integration with SAP Customer Engagement Intelligence

- **Creating Demand Forecast**

You can use this business process to create a demand forecast with Unified Demand Forecast (UDF). The UDF demand forecast can serve as the basis for various cross-industry planning and automation use cases. UDF also provides insights into shopper behavior, enabling retailers to perform predictive analytics.

Demand modeling is the process of finding the values for the parameters of a defined statistical model to explain the historical demand. The parameters typically describe the effects of demand influencing factors (DIFs). The parameter values can then be used to predict the effects of similar DIF occurrences in the future, a process referred to as demand forecasting.

The demand forecast is a demand predicted for a particular product, in a particular location, for a given scenario (for example, promotion, sales channel), for a specific time period in the future. Any aggregation of demand forecasts across products, locations, scenarios, or time is also a demand forecast.

- **Monitoring On-Shelf Availability**

You can use this business process to perform monitoring or analysis:

- Perform monitoring to retrieve a regularly updated list of product locations that are likely out-of-shelf at a specific point in time in one or more stores. You can use this information to trigger follow-on actions, such as replenishment from the backroom, correction of inventory information, and tidying of the shelf to allow for an unobstructed view of the product.
- Perform an analysis to determine which product locations had on-shelf availability issues at what times in the past. This makes you aware of the on-shelf availability situation and allows you to define appropriate follow-up activities to improve the situations where necessary.

By detecting product locations that are likely out-of-shelf using a statistical algorithm based on POS transaction data in SAP Customer Activity Repository, you can determine possible out-of-shelf situations even if you have no separate system inventory for the shelf or the figures are not correct due to spoilage, theft or misplacement.

For more information on SAP On-Shelf Availability, see [help.sap.com/osa](https://help.sap.com/osa).

## Configuration

Depending on the business processes you are using, you may not need to configure or use certain functionality included in SAP Customer Activity Repository.

Table 9

Functionality		DDF/UDF	Retail Multichannel Foundation	POS Data Transfer and Audit	On-Shelf Availability	Analytics and Multichannel Enablement
SAP Customizing Path		► SAP Customer Activity Repository ► Demand Data Foundation ►	► SAP Customer Activity Repository ► Retail Multichannel Foundation ►	► SAP Customer Activity Repository ► POS Data Management ►	► SAP Customer Activity Repository ► On-Shelf Availability ►	► SAP Customer Activity Repository ► Multichannel Enablement for Sales Documents ►
Business Scenario	Business Process					
Customer Activity Repository	Performing POS Data Transfer and Audit			X		
	Performing POS Transaction Data Migration			X		
	Performing POS Sales Analysis		X	X		
	Performing Inventory Visibility Analysis			X		
	Performing Sales (Billing) Document Analysis		X	X		X
	Performing Multichannel Sales Analysis		X	X		X
	Creating Demand Forecast	X	X	X		X
	Monitoring On-Shelf Availability			X	X	
X = configuration mandatory; " " = configuration optional						

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For more information on configuring the business processes listed above, see the documentation accompanying the Customer Activity Repository business scenario in SAP Solution Manager.

For more information in installation prerequisites and installation instructions, see the *SAP Customer Activity Repository 1.0 Installation Guide*.

## Further Information

The following documents provide more information about the Customer Activity Repository scenario:

Table 10

Content	Location
Scenario Description	See documentation in SAP Solution Manager.
Configuration Documentation	See documentation in SAP Solution Manager.



## 4 Solution-Wide Topics

### 4.1 SAP Solution Manager

SAP recommends using the SAP Solution Manager platform to efficiently support the implementation of your solution. Using SAP Solution Manager significantly accelerates the implementation process and helps you to achieve your business goals. At the same time, SAP can deliver support services based on the business scenarios designed and documented in SAP Solution Manager. Implementation content for your solution may further accelerate the implementation process. For information about availability of content specifically tailored to your solution, see SAP Service Marketplace at [service.sap.com/solutionmanager](http://service.sap.com/solutionmanager).

### 4.2 Service-Oriented Architecture (SOA)

SAP's delivery on SOA (service-oriented architecture) differs from the pure architectural concept of SOA in the delivery of ready-to-use enterprise services. Enterprise services are SAP-defined Web services which provide end-to-end business processes or individual business process steps that can be used to compose business scenarios while ensuring business integrity and ease of reuse. SAP designs and implements enterprise service interfaces to ensure semantic harmonization and business relevance. This section deals with the service-enablement of SAP Customer Activity Repository.

#### Service Enablement

The service enablement of SAP Customer Activity Repository consists of one or more of the following SAP components:

- **SAP Customer Activity Repository**  
Enterprise services are a part of the software components of the SAP Customer Activity Repository application. Enterprise services are the technical interfaces to the functionality available in the business application.
- **SAP NetWeaver PI 7.0 or higher**  
SAP NetWeaver Process Integration (SAP NetWeaver PI) is an open integration and application platform that provides tools enabling you to set up a service-oriented architecture for business applications. You can use the platform for providing, discovering, and consuming services, integrating applications using the integration server, and managing business processes. Process integration is required in a runtime environment to consume enterprise services in a mediated scenario.

We recommend that you use the highest version of SAP NetWeaver Process Integration (PI). For more information, see SAP Note [1515223](https://support.sap.com/en/notes/1515223) and SAP Note [1388258](https://support.sap.com/en/notes/1388258).

#### **i** Note

Starting with SAP NetWeaver Process Integration (PI) 7.3, SAP provides a new installation option: Advanced Adapter Engine Extended (AEX). Since AEX is based on AS Java alone, it is easier to install, maintain, and it needs less memory and data storage. AEX is a cost-saving option compared to a full installation of SAP NetWeaver PI. For more information about the AEX, enter the phrase Advanced Adapter Engine Extended in

the documentation of SAP NetWeaver Process Integration under [help.sap.com/nw73](http://help.sap.com/nw73) and see SAP Note [1573180](#).

### **i** Note

Asynchronous services that are enabled for Web Services Reliable Messaging (WS-RM) can be called in a point-to-point communication scenario. Otherwise asynchronous services can only be consumed in a mediated scenario.

- Enterprise Services Repository

The Enterprise Services Repository (ES Repository) is the central repository that contains the definition of all enterprise services and models. The ES Repository is shipped with SAP NetWeaver PI and with SAP NetWeaver Composition Environment (CE) starting with SAP NetWeaver PI 7.1 and with SAP NetWeaver CE 7.1. The Enterprise Services Repository is a design time environment that enables you to create and enhance enterprise service definitions.

### **i** Note

In a SAP NetWeaver 7.0x landscape you use the Integration Repository to create and enhance enterprise service definitions.

- Services Registry

The Services Registry is shipped with SAP NetWeaver PI and SAP NetWeaver CE starting with SAP NetWeaver PI 7.1 and SAP NetWeaver CE 7.1. The Service Registry is only required for the publication of enterprise service end-points (Web services) that have been configured and activated in the SAP Customer Activity Repository.

- SAP NetWeaver CE 7.1 or higher

The SAP NetWeaver Composition Environment (SAP NetWeaver CE) provides a robust environment for the design and implementation of composite applications.

The design time environment of SAP NetWeaver CE can be used for the model-driven design and development of composite applications based on enterprise services. SAP NetWeaver CE offers the tools and the environment necessary for running composite applications quickly and efficiently in a runtime environment.

## Installation of the SOA

The installation of service interfaces, and therefore the service enablement of SAP Customer Activity Repository, consists of one or more of the following phases:

- Identification of software components and required business functions

You use the technical data section of the enterprise service documentation to identify the following data for each enterprise service:

- the software component version with which the service was shipped (use transaction `SOAMANAGER` in your SAP Customer Activity Repository system)
- the business function(s) required to be activated

- Import of ESR Content (also known as XI Content) (optional)

## Related Documentation

For more information about the service-oriented architecture (SOA), see the following information sources:

- SCN Community in the SAP Network at [scn.sap.com/community/soa](http://scn.sap.com/community/soa) (registration required)
- SAP Note [838402](#): Problems with non-Unicode system landscapes

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- SAP Customer Activity Repository application help under ► [help.sap.com/car](https://help.sap.com/car) ► *Application Help* ► *Enterprise Services* ►



[www.sap.com](http://www.sap.com)