Master Guide

SAP® Master Data Management 2.00

Support Package 05

Document Version 1.50 - November 04, 2004

Material Number 50064960

THE BEST-RUN BUSINESSES RUN SAP

Typographic Conventions

Type Style	Represents
Example Text	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.
	Cross-references to other documentation
Example text	Emphasized words or phrases in body text, titles of graphics and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Contents

1 Getting Started

This Master Guide was developed to provide a central starting point for the technical implementation of **SAP Master Data Management (SAP MDM).** It contains an overview of all activities for the installation of SAP Master Data Management.

SAP MDM consists of the following business scenarios:

❑ Content Consolidation

❑ Master Data Harmonization

❑ Central Master Data Management

The Master Guide provides the information about which components and which guides are required during the technical implementation process.

- In the Getting Started [page 5] section, you get valuable information about using this document and related information (documentation and SAP Notes) crucial to the installation.

- In the SAP Master Data Management Technical implementation [page 9] section, you will find:

    – An overview of each business scenario including its technical components (mandatory and optional components).

    – Examples of how the different components interact, and what protocols and interfaces are used (technical infrastructure examples). Depending on the actual business processes that have to be implemented and other aspects (such as security or performance), the real infrastructure might be different.

    – Information about the component's software releases.

    – Information about the overall installation sequence and subsequent steps.

    – References to related installation and configuration guides.

    – Information about mutual dependencies that affect two or more components within the business scenario.

- In the Software Components Overview [page 27] section, you get a short description of every software component that is part of Master Data Management.

- Depending on the specific business scenario and the number of processes to be implemented, many different installation and configuration guides are required during the business scenario implementation process. In the References [page 33] section, you can find an overview of all required documentation referenced in this Master Guide.

> As of SAP MDM 2.00 SP05 SAP Master Data Management is aligned with SAP NetWeaver ´04, that is you can also use it within your SAP NetWeaver ´04 landscape. To enable this alignment, SAP Exchange Infrastructure 3.0 and SAP Enterprise Portal 6.0 is required.

> For the most current information about the technical implementation of SAP MDM and the latest installation and configuration guides, see the SAP Service Marketplace at `service.sap.com/instguides.`
> We strongly recommend that you use the documents that are available on these pages. These guides are updated on a regular basis.

1.1 Related Information

The following list contains links to important information for planning the technical implementation of SAP MDM.

List of Related Information

Content	Location in SAP Service Marketplace
Installation and Upgrade Documentation	`service.sap.com\instguides`
Configuration Documentation	`service.sap.com\ibc`
Information on released platforms	`service.sap.com\platforms`
Information on planning the system infrastructure and network security	• `service.sap.com\ti` for technical infrastructure information and SAP Network Integration Guide • `service.sap.com\securityguide` for SAP Security Guide
Information on hardware sizing, calculation of hardware requirements and the quick sizer tool	`service.sap.com\sizing`
Information and documentation on high availability issues for a multitude of areas, for example, SAP systems, databases, tools and network.	`service.sap.com\ha`

1.2 Important SAP Notes

Read the installation SAP Notes before beginning the installation. These contain the most recent information regarding the installation, as well as corrections to the installation documentation.
Make sure that you have the most recent version of each SAP Note. They are located on the SAP Service Marketplace under the Internet address `service.sap.com/notes` or in SAPNet - R/3 Frontend.

List of Related SAP Notes

SAP Note Number	Title	Description
619104	MDM 2.00: Additions to Master Guide	Latest information on SAP MDM 2.00.
620309	Master Data Management 2.00 Add-On	Information on installing SAP Master Data Management 2.00 Add-On using transaction SAINT

1.3 History of Changes

The Master Guide is updated on a regular basis in SAP Service Marketplace at the Internet address `service.sap.com/instguides`.

> ⚠️
>
> Make sure you have the latest version of the Master Guide by checking SAP Service Marketplace right before the installation.

The following table provides an overview on the most important changes that were made within the latest versions.

Master Guide Version	Important Changes
1.00 (August 27, 2003)	First version.
1.05 (September 15, 2003)	Detailed software component requirements for SAP Solution Manager added Frontend: Service Pack requirements changed for Microsoft Internet Explorer
1.10 (October 31, 2003)	Order information for SAP Solution Manager added.
1.15 (December 10, 2003)	Component *Integration Services* added to Software Component Matrix.
1.20 (January 12, 2004)	Minor changes.
1.25 (January 21, 2004)	Details about XI content added.
1.30 (February 20, 2004)	WP-PI version changed.
1.35 (February 25, 2004)	Information added about system landscape.
1.40 (May 14, 2004)	Information about SAP NetWeaver ´04 added.
1.45 (August 03, 2004)	SRM Server as client component deleted.
1.50 (November 04, 2004)	Reference on Support Package release and information note inserted.

2 SAP Master Data Management Technical implementation

2.1 Business Scenario Overview

SAP MDM Content Consolidation

Heterogeneous IT environments consisting of systems from a multitude of vendors are commonplace. The result is that common master data - needed to establish cross-system business processes and a uniform approach to analytical applications - is often stored in a number of different locations, systems, and in incompatible formats.

In consolidating master data objects from different systems, identical or similar objects need to be identified, possibly cleansed, and existing duplicates (that is, redundant master data records within one client system) can be determined. *SAP MDM* allows you to search and track master data, with *SAP MDM Content Consolidation* being applicable to the following master data objects:

- *Business Partner*

- *Product*

- *Technical assets*

- *Document links*

Information about identical master data records can be transferred to a business information warehouse for unified, company-wide analytics.

SAP MDM Master Data Harmonization

Often it is not only necessary to consolidate master data records as described in the *SAP MDM - Content Consolidation* scenario, but also to obtain permanently harmonized master data records. In addition to the *SAP MDM - Content Consolidation* scenario, *SAP MDM – Master Data Harmonization* enables consistent maintenance and distribution of master data records – focusing on global attributes. This applies to the following master data objects: *Business Partner*, *Product*, *Product Structure*, *Technical Asset*, *Document Links*, and *Change Master*. Global attributes cover master data information that is relevant across the entire company and IT environment. It ensures that all client systems are supplied with the same master data after distribution, and that business processes can be processed seamlessly. In the client systems, the distributed master data records can then be enriched with locally relevant attributes.

SAP MDM Central Master Data Management

Maintaining a subset of master data attributes is sometimes insufficient. Therefore *SAP MDM* also supports the central maintenance of a complete object definition, including dependencies to other objects, on the master data server. This applies to *Product master data*. Maintenance in local systems now happens only rarely or not at all. Active status management updates each of the individual distribution steps, so that the distribution process can be handled and traced in a controlled and transparent manner.

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>
> For more information, see the Business Scenario Descriptions available on the SAP Service Marketplace at the following Internet address:
> `service.sap.com/ibc`.

2.2 Software Component Matrix

This section provides an overview of all available business scenarios and corresponding components and their **minimum** releases and **minimum** Support Package (SP) levels.

> For detailed Support Package and patch level information, see the corresponding SAP Note which is provided for each SAP MDM Support Package. You can find an overview of these notes in **SAP Note 682623** *MDM Support Packages: Release and information notes.*

You have **two installation options** which mainly differ in the component versions of SAP Enterprise Portal and SAP Exchange Infrastructure:

- Installation Option 1: SAP Enterprise Portal 5.0, SAP Exchange Infrastructure 2.0

- Installation Option 2: SAP Enterprise Portal 6.0, SAP Exchange Infrastructure 3.0

  Installation option 2 is compliant with SAP NetWeaver ´04.

Installation Option 1

Scenarios:

CC = Content Consolidation

MDH = Master Data Harmonization

CMDM = Central Master Data Management

Software Component	Minimum Release / Minimum Support Package (SP) Level	SAP MDM Business Scenarios (X = mandatory / (X) = optional)		
		CC	**MDH**	**CMDM**
1: SAP Enterprise Portal				
LDAP Server (Portal LDAP, Corporate LDAP)	For information on the supported directory servers, see the Platform Availability Matrix on the SAP Service Marketplace at the Internet address `service.sap.com /pam50`	X	X	X
SAP Enterprise Portal Platform on SAP J2EE Engine single node (stand-alone version)	5.0, SP 05, Patch 1, Hotfix 6 6.20, SP11	X	X	X
SAP Java Connector (SAP JCO)	2.0.5	X	X	X
Business Package for Portal Users	50.5	X	X	X

Business Package for SAP CRM 4.0	50.2	X	X	X
Business Package for SAP MDM 2.00	50.1	X	X	X
SAP Enterprise Portal Knowledge Management Platform				
• Content Management (CM)	5.0, SP 05, Patch 2, Hotfix 5	(X)	X	X
• Retrieval and Classification (TREX)	6.0, SP 0, Patch 1	(X)	X	X
2: SAP User Management Engine				
SAP User Management Engine (SAP UME)	3.0, SP 07	X	X	X
3: Master Data Server				
SAP Master Data Management Add-On (including ABAP-part of SAP Content Integrator 2.0)	2.0 (MDM 200)	X	X	X
SAP Basic Java Libs (running on SAP WAS 6.20 J2EE Engine)	6.20, SP07	X	X	X
SAP Business Information Warehouse (SAP BW) (Unicode system) Use the latest Kernel Patch when you install SAP BW.	3.1 Content SP 08, SAP_ABA SP 28, SAP_BASIS SP 28	X	X	X
Basis Plug-In	2003.1, SP 03 (PI_BASIS 2003_1_620)	X	X	X
SAP XI Add-On	2.0, SP03 (APPINT 200_620)	X	X	X
Integrated Product and Process Engineering	2.0, SP 02 (EA-IPPE 200) Do not use a higher version than EA-IPPE 200.	X	X	X
SAP Internet Transaction Server (SAP ITS)	6.20, SP 03	X	X	X
Enterprise Portal Plug-In	6.0, SP00 (WP-PI 600_620)	X	X	X
SAP Content Integrator (SAP CI) on SAP J2EE Engine cluster including the following components: • SAP Java Connector (SAP JCO) • SAP User Management Plug-In • SAP XI Java Proxy Framework	2.0 6.20, SP 13 2.0.8 3.0, SP 07 2.0, SP02	X	X	X

2.2 Software Component Matrix

4: SAP Exchange Infrastructure				
SAP Exchange Infrastructure (SAP XI), plus process integration content (XI Content MDM 2.00[1])	2.0, SP03	X	X	X
MDM ID Mapping Framework servlet		X	X	X
Integration Services	2.0, SP02, Patch Level 3	X	X	X
SAP Internet Transaction Server	6.20, SP 03	(X)	(X)	(X)
Enterprise Portal Plug-In	6.0, SP00 (WP-PI 600_620)	X	X	X
5: SAP Solution Manager				
SAP Solution Manager on SAP CRM server	3.1, SP 04 (ST 310) including: • SAP_BASIS 6.20, SP 28 • SAP_ABA 6.20, SP28 • BBPCRM 310, SP 04 • ST-ICO 100	(X) [2]	(X) [2]	(X) [2]
SAP Internet Transaction Server	6.20, SP 03	(X)	(X)	(X)
Enterprise Portal Plug-In	6.0, SP00 (WP-PI 600_620)	X	X	X
6: Analytics				
SAP Business Information Warehouse (SAP BW) plus BI Content add-on [3]	3.1 Content BI_CONT 3.2	X	(X)	(X)
SAP Business Information Warehouse (SAP BW) plus BI Content add-on [3]	3.1 Content BI_CONT 3.3	(X)	(X)	(X)

[1] = For details about the XI Content, see section *2.5.1 SAP MDM Installation*.

[2] = Highly recommended to support Customizing ID Mapping and Customizing distribution. The SAP Solution Manager is not part of the SAP MDM 2.0 shipment. To order the Solution Manager, see **SAP Note 628901**.

[3] = BI Content 3.2 add-on provides the extraction of master data key mapping information. In addition BI Content 3.3 add-on provides the extraction of central master data attributes and descriptions. SAP BW 3.1 Content and the BI Content 3.2/3.3 add-ons are not part of the SAP MDM 2.0 shipment.

Installation Option 2

Scenarios:

CC = Content Consolidation

MDH = Master Data Harmonization

CMDM = Central Master Data Management

Software Component	Minimum Release / Minimum Support Package (SP) Level	SAP MDM Business Scenarios (X = mandatory / (X) = optional)		
		CC	MDH	CMDM
1: SAP Enterprise Portal				
LDAP Server (Portal LDAP, Corporate LDAP)	For information on the supported directory servers, see the Platform Availability Matrix on the SAP Service Marketplace at the Internet address `service.sap.com /pam50`	X	X	X
SAP Enterprise Portal Platform	6.0 SP04	X	X	X
Business Package for SAP CRM 4.0	60.2 + latest patch	X	X	X
Business Package for SAP MDM 2.00	60.1	X	X	X
SAP Enterprise Portal Knowledge Management Platform • Content Management (CM) • Retrieval and Classification (TREX)	 6.0 SP 04 6.1	(X)	X	X
2: SAP User Management Engine				
SAP User Management Engine (SAP UME)	3.0, SP 07	X	X	X
3: Master Data Server				
SAP Master Data Management Add-On (including ABAP-part of SAP Content Integrator 2.0)	2.0 (MDM 200), SP05	X	X	X
SAP Basic Java Libs (running on SAP WAS 6.20 J2EE Engine)	6.20, SP10	X	X	X

2.2 Software Component Matrix

SAP Business Information Warehouse (SAP BW) (Unicode system) Use the latest Kernel Patch (at least 1283) when you install SAP BW.	3.1 Content SP 12, SAP_ABA SP 36, SAP_BASIS SP 36	X	X	X
Basis Plug-In	2003.1, SP 06 (PI_BASIS 2003_1_620)	X	X	X
SAP XI Add-On	2.0, SP03 (SP04 recommended) (APPINT 200_620)	X	X	X
Integrated Product and Process Engineering	2.0, SP 02 (EA-IPPE 200) Do not use a higher version than EA-IPPE 200.	X	X	X
SAP Internet Transaction Server (SAP ITS)	6.20, SP 08	X	X	X
Enterprise Portal Plug-In	6.0, SP00 (WP-PI 600_620)	X	X	X
SAP Content Integrator (SAP CI) on SAP J2EE Engine cluster including the following components: • SAP Java Connector (SAP JCO) • SAP User Management Plug-In • SAP XI Java Proxy Framework	2.0, SP05 6.20, SP 13 2.0.8 3.0, SP 07 2.0, SP02	X	X	X
4: SAP Exchange Infrastructure				
SAP Exchange Infrastructure (SAP XI), plus process integration content (XI Content MDM 2.00[1])	3.0, SP02	X	X	X
Integration Services	3.0	X	X	X
5: SAP Solution Manager				
SAP Solution Manager on SAP CRM server including: • SAP_BASIS 6.20, SP 34 • SAP_ABA 6.20, SP34 • BBPCRM 310, SP 04 • ST-ICO 100	3.1, SP 07 (ST 310)	(X)[2]	(X)[2]	(X)[2]
SAP Internet Transaction Server	6.20, SP 08	(X)	(X)	(X)

Enterprise Portal Plug-In	6.0, SP00 (WP-PI 600_620)	X	X	X
6: Analytics				
SAP Business Information Warehouse (SAP BW) plus BI Content add-on [3]	3.1 Content BI_CONT 3.2	X	(X)	(X)
SAP Business Information Warehouse (SAP BW) plus BI Content add-on [3]	3.1 Content BI_CONT 3.3	(X)	(X)	(X)

[1] = For details about the XI Content, see section *2.5.1 SAP MDM Installation*.

[2] = Highly recommended to support Customizing ID Mapping and Customizing distribution. The SAP Solution Manager is not part of the SAP MDM 2.0 shipment. To order the Solution Manager, see **SAP Note 628901**.

[3] = BI Content 3.2 add-on provides the extraction of master data key mapping information. In addition BI Content 3.3 add-on provides the extraction of central master data attributes and descriptions. SAP BW 3.1 Content and the BI Content 3.2/3.3 add-ons are not part of the SAP MDM 2.0 shipment.

Master Data Clients (MDC)

The SAP systems that you want to connect with SAP MDM must fulfill the software requirements listed below.

The fulfillment of the software requirements is a technical prerequisite for connecting the described client systems. It does not imply that the full functional scope regarding the attributes of the individual master data objects is covered.

SAP System	Support Package Level	Add-Ons	
		Installation option 1	**Installation option 2**
SAP R/3			
SAP R/3 Releases 4.0B – 4.6B can be integrated on a project basis			
SAP R/3 4.6C	---	R/3 Plug-In PI 2003_1_46C, SP 03	R/3 Plug-In PI 2003_1_46C, SP 07
SAP R/3 Enterprise 4.70	For distribution of Business Partner (BP) master data: SAP_ABA 6.20, SP 23	Basis Plug-In PI_Basis 2003_1_ 620, SP 03 SAP R/3 Plug-In PI 2003_1_470, SP 03 For distribution of BP master data: SAP XI Add-On 2.0, SP 03 (APPINT200_620)	Basis Plug-In PI_Basis 2003_1_ 620, SP 06 SAP R/3 Plug-In PI 2003_1_470, SP 07 For distribution of BP master data: SAP XI Add-On 2.0, SP 03 (SP04 recommended) (APPINT200_620)

2.2 Software Component Matrix

SAP Customer Relationship Managment			
SAP CRM 3.1	BBPCRM SP 05 or higher For distribution of Business Partner master data: SAP_ABA 620, SP 23	For distribution of BP master data: SAP XI Add-On 2.0, SP 03 (APPINT200_620) Basis Plug-In PI_Basis 2003_1_ 620, SP 03	For distribution of BP master data: SAP XI Add-On 2.0, SP 03 (SP04 recommended) (APPINT200_620) Basis Plug-In PI_Basis 2003_1_ 620, SP 06
SAP CRM 4.0	BBPCRM SP 02 or higher For distribution of Business Partner and Product master data: SAP_ABA 620, SP 24	For distribution of BP and Product master data: SAP XI Add-On 2.0, SP 03 (APPINT200_620) Basis Plug-In PI_Basis 2003_1_ 620, SP 03	For distribution of BP and Product master data: SAP XI Add-On 2.0, SP 03 (SP04 recommended) (APPINT200_620) Basis Plug-In PI_Basis 2003_1_ 620, SP 06

Non-SAP systems

You can integrate non-SAP systems on a project basis only.

Front End Requirements

Supported Front Ends for Portal Clients that are used for MDM 2.00

	Operating System	**Internet Browser**
Portal Administrator	• Windows NT 4.0 SP6a • Windows 2000	• Internet Explorer 5.5 Service Pack 2 • Internet Explorer 6.0.x Service Pack 1
	• Windows XP	• Internet Explorer 6.0.x Service Pack 1
Portal User	• Windows 95 • Windows 98 (restricted)[1] • Windows ME • Windows NT 4.0 SP6a • Windows 2000 • Windows XP	• Internet Explorer 5.5 Service Pack 2
	• Windows NT 4.0 SP6a • Windows 2000 • Windows XP	• Internet Explorer 6.0.x Service Pack 1

[1] Certain design elements are not displayed correctly, but the portal functionality is not impaired.

For the **Workflow Modeler,** the following versions are supported:

• Internet Explorer 5.5 Service Pack 2

• Internet Explorer 6.0.x Service Pack 1

It is generally recommended to have the latest Service Pack installed on your operating system.

> SAP MDM 2.00 does not support Netscape® browsers.

To use some applications that are included in the worksets for the *Master Data Administrator* or *Master Data Manager* roles, you must install the SAP GUI for Windows 6.20 (including BW plug-in). This applies to the following applications:

• *Workflow Builder*

• *Process chain*

• *Up- and download of business partner data*

Java Runtime Environment

Users with the roles Master Data Administrator or Master Data Manager require the Java Runtime Environment with at least version 1.3.1 to use SAP XI and the Workflow Modeler.

2.3 Related Software CDs / Download Locations

The following table provides an overview of which CDs are required to install specific software components. In some cases you must download the software or Support Packages / patches from SAP Service Marketplace.

Note that the CD *MDM 2.0 Installation* includes the following Support Packages:

- SAP_BASIS 01-25
- SAP_ABA 01-25
- SAP_BW 01-02
- PI_BASIS (Releases 2002_1_620, 2002_2_620, 2003_1_620)
- EA-IPPE 01-02
- WP-PI 01-03

If some components require a higher Support Package level, download the addtional Support Packages from the SAP Service Marketplace.

Software Component	Required Software CDs
LDAP Server	CD *Novell eDirectory*
SAP Enterprise Portal	CD *Portal/CM*, CD *RDBMS*, CD *SAP J2EE Engine Single Node* Installation option 1*: SAP Service Marketplace: `service.sap.com/epinstall` → *EP 5.0 SP<nn> Roadmap* Installation option 2*: SAP Service Marketplace: `service.sap.com/patches` → *SAP NetWeaver → SAP NetWeaver ´04*
SAP Java Connector (SAP JCO)	SAP Service Marketplace: `service.sap.com/connectors` → *SAP Java Connector → Tools & Services*
Business Packages	`www.iviewstudio.com` → *Content Catalog*
SAP Business Information Warehouse	*Kernel* CD, *Export* CD, *Presentation* CDs, *RDBMS* CDs (Language CD) SAP Service Marketplace: `service.sap.com/patches` → *SAP BW → SAP BW 3.1 Content → Support Packages*
Content Management	CD *Portal/CM* Installation option 1*: SAP Service Marketplace: `service.sap.com/epinstall` → *EP 5.0 SP<nn> Roadmap* Installation option 2*: SAP Service Marketplace: `service.sap.com/patches` → *SAP NetWeaver → SAP NetWeaver ´04*
TREX	CD *TREX* Installation option 1*: SAP Service Marketplace: `service.sap.com/patches` → *SAP Enterprise Portal → SAP Enterprise Portal 6.0 → Binary Patches → TREX 6.0*

	Installation option 2*: SAP Service Marketplace: `service.sap.com/patches` → *SAP NetWeaver* → *SAP NetWeaver ´04*
SAP User Management Engine	CD *SAP SRM – UME 3.0 SP4/SR1* SAP Service Marketplace `service.sap.com/patches` → *SAP SRM (WITH EBP)* → *SAP SRM 2.0 (WITH EBP 3.5)* → *Binary Patches* → *User Management Engine 3.0* → *OS independent*
SAP Master Data Management Add-On	CD *MDM 2.0 Installation* SAP Service Marketplace `service.sap.com/patches` → *SAP MDM* → *SAP MDM 2.0*
SAP Basic Java Libs	SAP Service Marketplace: `service.sap.com/patches` → *SAP Web Application Server* → *SAP Web Application Server 6.20* → *Binary Patches* → *SAP Basic Java Libs*
Basis Plug-In	SAP Service Marketplace: `service.sap.com/installations` → *SAP R/3 Plug-In* → *PI_Basis* SAP Service Marketplace: `service.sap.com/patches` → *SAP R/3 Plug-In* → *PI_Basis*
SAP XI Add-On	CD *Exchange Infrastructure 2.0 SR1* SAP Service Marketplace: `service.sap.com/patches` → *SAP Exchange Infrastructure* → *SAP Exchange Infrastructure 2.0* → *Support Packages*
Integrated Product and Process Engineering	CD *MDM 2.0 Installation* SAP Service Marketplace: `service.sap.com/patches`
SAP Internet Transaction Server	*Server Components CD 1*
Enterprise Portal Plug-In	SAP Service Marketplace: `service.sap.com/installations` → *Enterprise Portal Plug-In* → *WP-PI* `service.sap.com/patches` → *Enterprise Portal Plug-In* → *WP-PI*
SAP Content Integrator	CD *MDM Content Integrator 2.0* SAP Service Marketplace: `service.sap.com/patches` → *SAP MDM* → *SAP MDM 2.0*
SAP Exchange Infrastructure	CD *Exchange Infrastructure* Installation Option 1*: SAP Service Marketplace: `service.sap.com/patches` → *SAP Exchange Infrastructure* → *SAP Exchange Infrastructure 2.0* Installation option 2*: SAP Service Marketplace: `service.sap.com/patches` → *SAP NetWeaver* → *SAP NetWeaver ´04*

2.3 Related Software CDs / Download Locations

Process Integration Content	CD *MDM 2.0 Installation* SAP Service Marketplace `service.sap.com/patches` → *SAP MDM* → *SAP MDM 2.0*
SAP Solution Manager	CD *SAP R/3 Add-On SAP Solution Manager* SAP Service Marketplace `service.sap.com/patches` → *SAP Solution Manager*
MDM ID Mapping Framework servlet	Installation option 1 only: Attached to **SAP Note 651321**.

* = For information about the installation options, see section 2.2 Software Component Matrix [page 10].

2.4 Technical System Landscape

The following graphics shows the systems involved in SAP Master Data Management:
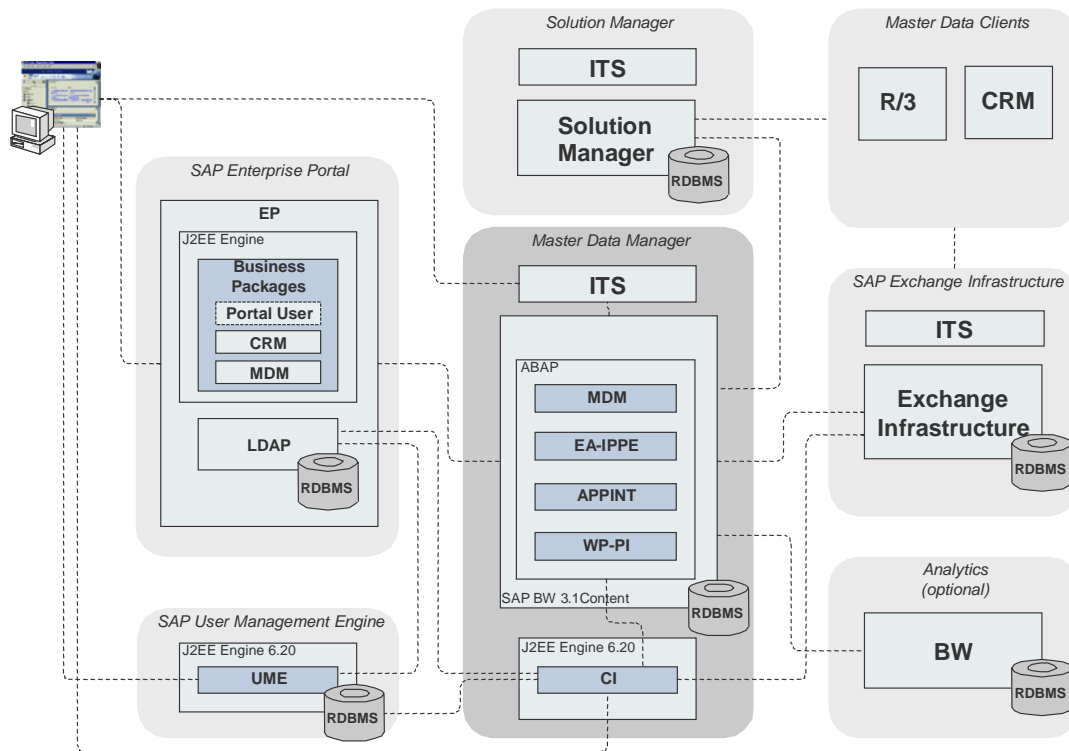
For the sake of simplicity and clearness the graphic contains icons for whole SAP systems, not for single hosts. Remember that every SAP system may consist of several hosts with different tasks.

To provide high availability and load balancing to the Master Data Server, follow the documentation High Availability for mySAP.com Solutions. This documentation is available on the the SAP Service Marketplace under the Internet address `service.sap.com/ha`.

Redundant network infrastructure should be used to ensure availability of the service. This includes all active and passive network devices. Some load balancing mechanisms, such as Windows Load Balancing Server (WLBS), have no single point of failure (SPOF) by design. Other mechanisms avoid SPOF by redundancy.

The next graphic shows an **exemplary** technical infrastructure of SAP MDM. It depicts how you can distribute the SAP MDM components on different hosts. For performance reasons you should implement SAP MDM on at least three hosts.

> To improve performance in your production landscape, we strongly recommend that you install SAP MDM and SAP CI on one host. By this, you minimize the number of remote calls.

2.4 Technical System Landscape

Keep in mind that there may be dependencies for the different SAP MDM components regarding databases and operating systems. Therefore, plan carefully on which platforms you are going to install the components. For detailed information on platform dependencies, see on SAP Service Marketplace under the Internet address `service.sap.com/platforms`.
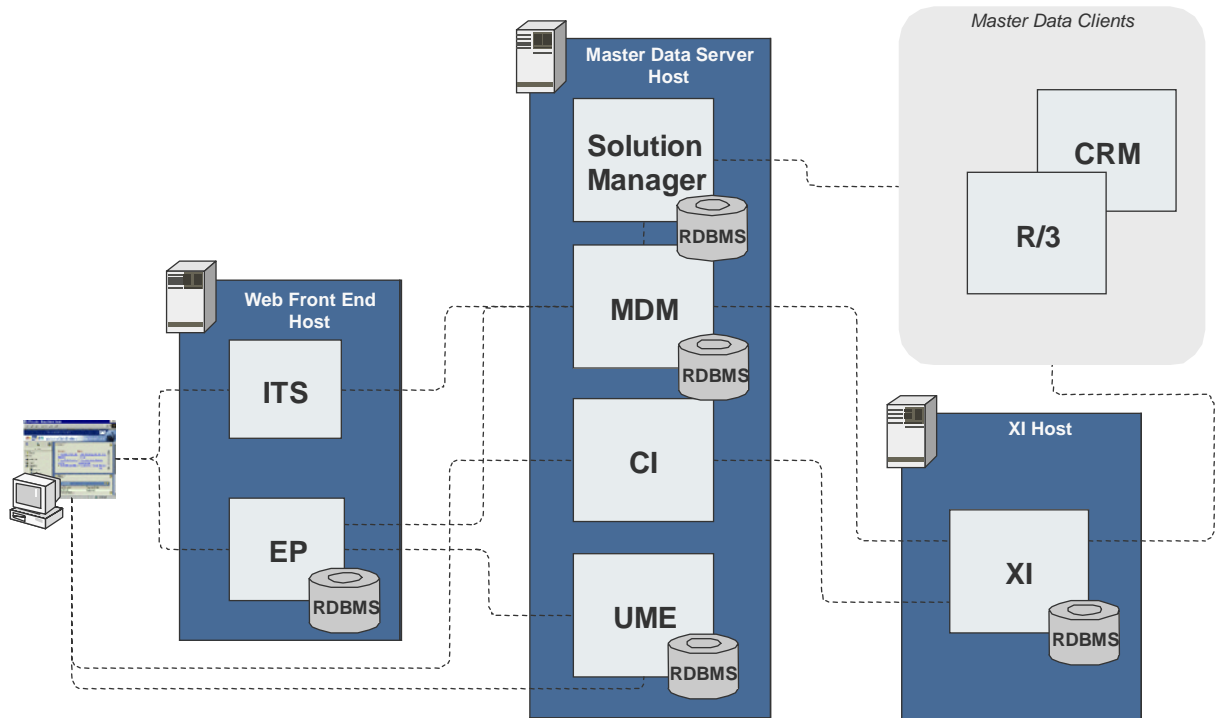
2.5 SAP MDM Technical implementation Sequence

This section lists the sequence of steps (installation, technical configuration, application configuration) required to implement the business scenarios of SAP MDM.

2.5.1 SAP MDM Installation

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Do not install the Master Data Server on an already existing SAP BW system.

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If the following components already exist in your system landscape you can use them for SAP Data Management provided they fulfill the software requirements:
- SAP Solution Manager
- SAP Exchange Infrastructure

You can install the below mentioned systems in parallel. However, within the systems you must follow the given installation sequence.

For information about the required minimum component releases and Support Package levels, see the Software Component Matrix [on page 10].

For information on the required documentation, see section Documentation [on page 33].

No	Action [Corresponding Documentation]	Remarks and Subsequent Steps [Corresponding Documentation]
SAP Enterprise Portal		
1	Install the SAP Enterprise Portal including the portal platform (on SAP J2EE Engine single node (stand-alone version), LDAP corporate and portal directory server(s), Content Management and TREX Guides: Installation option 1: *Enterprise Portal 5.0 SP5 Installation Guide* (documentation set) Installation option 2: *Master Guide SAP NetWeaver ´04*, section *SAP Enterprise Portal*	
2	Install the SAP Java Connector. Guide: The installation documentation is included in the software package that is available for download from SAP Service Marketplace at the Internet address `service.sap.com/connectors`.	After you have installed the SAP Java Connector, update the RFC library (`librfc32.dll`) as described in **SAP Note 633762.**

2.5 SAP MDM Technical implementation Sequence

3	Import the required Business Packages. Make sure they correspond with your SAP Enterprise Portal version. • Business Package for Portal Users (only required for installation option 1) • Business Package for SAP CRM 4.0 • Business Package for SAP MDM 2.0 Guide: *How to use a Business Package*	Download the Business Packages from `www.iviewstudio.com`.
SAP User Management Engine		
4	Install SAP User Management Engine including SAP J2EE Engine cluster node. Guide: *Installation Guide - SAP User Management Engine 3.0* **SAP Note 630637** *Installation UME 3.0 for MDM 2.0 Scenarios* Note that this SAP Note is absolutely required for the installation of SAP UME in the context of SAP MDM. It lists several additional steps that you must perform during installation.	
Master Data Server		
5	Install a **Unicode** SAP BW system and apply the required Support Packages. Guide: *Component Installation Guide – SAP Business Information Warehouse 3.1C*	Use the latest Kernel Patch when you install SAP BW. Upgrade the Basis plug-in to at least PI_BASIS 2003_1_620 SP 02.
6	Install the SAP Basic Java Libs. **SAP Note 544979:** *Importing Java Support Packages with SDM*	
7	Install the following components on SAP BW and apply the required Support Packages: • Integrated Process and Product Engineering (see **SAP Note 601756**) • Enterprise Portal Plug-In (see **SAP Note 655941**) • SAP XI Add-On (see **SAP Note 439915**)	
8	Install the SAP Internet Transaction Server. Guide: *SAP@Web Installation Guide.*	
9	Install the SAP MDM 2.00 Add-On Guide: **SAP Note 620309**	
10	Install SAP Content Integrator including SAP J2EE Engine (cluster node), SAP UME plug-in, SAP Java Connector and SAP XI Java Proxy Framework. Guide: *Installation Guide - SAP Content Integrator 2.0.*	After you have installed the SAP Java Connector, update the RFC library (`librfc32.dll`) as described in **SAP Note 633762.**

SAP Exchange Infrastructure		
11	Install the SAP Exchange Infrastructure including the Integration Services. Guides: Installation option 1: *Master Guide – SAP Exchange Infrastructure 2.0* Installation option 2: *Master Guide SAP NetWeaver ´04,* section *SAP Exchange Infrastructure*	Installation option 1: For SAP Exchange Infrastructure 2.0 you must install the Enterprise Portal Plug-In (see **SAP Note 655941**).
12	Installation option 1 only: Install the MDM ID Mapping Framework servlet on the SAP J2EE Engine of the Exchange Infrastructure. Guide: **SAP Note 651321**	

13	Copy the process integration content (XI Content) from CD to the file system of the Integration Repository host and import it into the Integration Repository. You must import the content for the following components:
	• MDM 2.00
	• Application Basis 620 (SAP_ABA 6.20)
	• PI_BASIS 2003_1_620
	• Content Integrator 2.0
	
	You must also import the necessary XI content for your Master Data Clients. The different MDCs require XI Content for the following software components:
	
	• *SAP R/3 4.6C:*
	   o SAP_APPL 4.6C
	   o PI 2004_1_46C or, if you have installed PI 2003_1_46C, than import the XI content for PI 2003_1_470
	
	• *SAP R/3 Enterprise 4.70:*
	   o SAP_APPL 4.70
	   o PI 2004_1_470 or PI 2003_1_470 (depending on your PI version)
	   o PI_Basis 2003_1_ 620
	
	• *SAP CRM 4.0:*
	   o SAP_BBPCRM 4.0
	   o SAP_ABA 6.20
	   o PI_BASIS 2003_1_ 620
	
	• *SAP CRM 3.1:*
	   o SAP_ABA 6.20
	   o PI_BASIS 2003_1_ 620
	
	The Support Package level of the Master Data Client XI content must be the same as the Support Package level of the Master Data Client itself.	

	Guide: Online documentation in SAP XI or in SAP Help Portal at `help.sap.com`.	
14	Optional for installation option 1: Install the SAP Internet Transaction Server on SAP XI (Integration Server). Guide: *SAP@Web Installation Guide*	
SAP Solution Manager		
15	Install the SAP Solution Manager. Guide: *Installation Guide – SAP Solution Manager 3.1*	Install the Enterprise Portal Plug-In (see **SAP Note 655941**).
16	Optional: Install the SAP Internet Transaction Server on the SAP Solution Manager Guide: *SAP@Web Installation Guide*	

2.5.2 SAP MDM Upgrade

As this is the first release of SAP MDM, no upgrade is available.

2.5.3 SAP MDM Configuration

For information about the configuration of SAP MDM, see the corresponding configuration guide:

- *Configuration Guide – SAP MDM Content Consolidation*

- *Configuration Guide – SAP MDM Master Data Harmonization and Central Master Data Management (SAP MDM 2.00)*

3 Software Components Overview

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

3.1 SAP Components

3.1.1 Application Components

SAP Enterprise Portal

The SAP Enterprise Portal consists of the following components:

- SAP Enterprise Portal Platform

- Knowledge Management Platform

- SAP Unification Server (only available for users with a unification license; not required for SAP MDM)

SAP Enterprise Portal Platform

The portal platform provides an environment for developing and administering portal content (roles and iViews) and for performing user administration. It also provides a set of services for running iViews and assembling them on portal pages which are rendered in SAP Enterprise Portal in a Web browser.

Knowledge Management

The Knowledge Management platform includes **Content Management** (CM) and **Retrieval and Classification (TREX)**. The Knowledge Management offers a range of iViews providing services for managing unstructured information across multiple repositories, for automatically classifying documents, and searching across heterogeneous repositories.

CM provides functions and services to manage content. It offers users a central point of entry to access and manipulate content that is stored in distributed, heterogeneous repositories. CM functions enable basic operations around documents like navigation, editing, property assignment, versioning, and access control. CM services provide features such as subscriptions, approval workflow and XML or time-dependent publishing.

TREX is a search and classification engine capable of processing free-text search queries, carrying out automatic classification, searching for similar documents and extracting key information from documents. Its capabilities enable employees to quickly find information in any Content Management repository like Lotus Notes, mail, file system, web or CM repository.

Business Packages

Business packages are predefined portal applications targeted to a set of related roles. Because business packages already include most of the content those roles need, they greatly speed up the implementation process. Business packages consist of worksets that form a unit from the content perspective. Customers can change and extend business packages by creating new iViews and worksets, changing SAP's iViews and worksets, adding

access to additional reports or documents, and adding Drag&Relate relationships. They can also modify the business packages by enhancing them with the building blocks offered as part of SAP's content offering, including role templates or SAP BW Business Content.

SAP User Management Engine

Using the SAP User Management Engine (UME) for SAP and SAP applications, you can work on several systems of the your landscape at once with just a single logon.

Logon to Single Sign-On is performed immediately after logging on at the start of the day or rebooting.

You need only one user name and one password to access several systems. There is no compromise, however, in the area of data security.

Within SAP MDM, the SAP UME provides the Content Integrator component with the required user information.

SAP Master Data Management Add-On

SAP Master Data Management Add-on is a central unit within SAP MDM to manage the master data objects and required services, such as maintenance, authorization, status management, Workflow, and cross-object search. Additionally it incorporates central features for controlled load and distribution of master data within a heterogeneous IT landscape.

SAP Business Information Warehouse

SAP Business Information Warehouse (SAP BW) is a robust and scalable data warehouse. The reporting tools within SAP BW offer a quick and easy way to gain access to the information you need. SAP BW warehouse management tools let you integrate and store data from sources throughout the organization and beyond – sources that contribute to strategic analysis and decision-making.

SAP BW largely consists of three functional areas:

- Front end
- Report definition and Web publishing
- Data analysis in BEx Analyzer and a Web browser plus integration of analytical applications into mySAP Enterprise Portals
- Organization of reports
- Administrator's workbench
- Data management
- Monitoring
- Scheduling
- Data extraction
- SAP BW extractors in SAP components
- Openness to external systems
- Integration of extraction, transformation, and loading (ETL) tools

SAP Solution Manager

The SAP Solution Manager is SAP's new service and support platform that helps you to implement and operate your SAP solution efficiently. Together with the SAP Service Marketplace, the SAP Solution Manager represents SAP's strategic service infrastructure that guides our customers through all stages of their SAP solution life cycle.

Today, the SAP Solution Manager consists of:

- Central documentation of system landscapes and core business processes

- Implementation tools, key functional implementation aspects such as blueprinting, configuration and testing
  (formerly known as AcceleratedSAP or ValueSAP)
  Access to SAP Support services and Best Practices

- Periodic service level reporting and real-time monitoring of system components and business processes

- Advanced message handling for fast problem analysis and resolution including the SAP Note Assistant and a direct connection to the SAP Support Back Office.

Within SAP Master Data Management, the SAP Solution Manager is used for Customizing synchronization within a heterogeneous IT landscape.

3.1.2 Industry-specific Components

SAP MDM uses no industry-specific components.

3.1.3 Technology Components

SAP J2EE Engine

SAP J2EE Engine is a complete implementation of the Java™ 2 Enterprise Edition standard. It is J2EE 1.2 certified and therefore has all capabilities that the specification defines to run applications which are written for this standard.

The standard was developed to define an environment where enterprise applications written in Java can run easier and to provide the infrastructure that such applications need. Beneath others, it includes the following services:

- Java Server Pages

- Java Servlets

- Enterprise Java Beans

- Java™ Message Service

- Java Mail™

SAP J2EE Engine Cluster

SAP J2EE Engine cluster is a set of independent nodes that are addressed and managed as a single system. The cluster consists of two types of nodes: dispatchers and servers. The administrator of the system determines the number of dispatchers and servers in a cluster.

Each dispatcher node is connected to all server nodes in the cluster and each server node maintains connections to all other cluster nodes. Clustering enables dynamic load balancing by distributing client requests among the server nodes in the cluster, thereby providing higher scalability and improved system performance.

SAP J2EE Engine 6.20 Stand-Alone Version

SAP J2EE Engine 6.20 can be configured as a stand-alone version in which a single server node assumes the role of a server and a dispatcher. This configuration is appropriate when processing a small number of client requests. It encapsulates all function in terms of services that SAP J2EE Engine 6.20 cluster provides, but does not deliver a higher level of scalability and reliability, because no cluster exists.

SAP Web Application Server

Definition

SAP Business Information Warehouse, which is the basis for the SAP MDM add-on, is built upon the SAP Web Application Server.

SAP Web Application Server (SAP Web AS) provides the technological foundation for all other SAP components. In a sense, SAP Web Application Server is the "operating system" of mySAP Business Suite. Until SAP R/3 4.6D, SAP Web Application Server was named SAP Basis.

In the past, SAP Basis was used and shipped exclusively as an integral part of SAP R/3. This was also reflected by the fact that SAP Basis and SAP R/3 had identical release names and shared Support Packages.

With the introduction of mySAP Business Suite, SAP now offers multiple components that build on SAP Web Application Server. As a result, there is no tight naming relation between SAP Web Application Server and SAP R/3 any more.

Use

SAP Web Application Server provides a platform for quickly developing and deploying dynamic and collaborative Web applications or other thin-client applications (WAP, PDA, and so on) and includes all proven SAP programming models and technologies. With SAP Web Application Server, SAP natively supports open Internet standards, including such protocols as HTTP, HTTPS, and SMTP, as well as Internet document standards like HTML and XML.

Open integration capabilities provide access to existing SAP and non-SAP applications. All integration facilities supported by SAP are available with SAP Web Application Server. The Java Connector or the DCOM Connector give ABAP applications access to Java or .NET components and vice versa. In addition, the Internet Communication Framework (ICF) of SAP Web AS enables ABAP-written programs to process and distribute HTTP requests directly. As a consequence, SAP Web Application Server can serve both as an HTTP server and client. It serves as an HTTP server for bringing applications to the user via a Web browser either directly or via a standard Web server. It serves as an HTTP client to access other Web applications for collecting information and data. To complete Web connectivity, SAP Web AS provides full support for sending and receiving e-mails via SMTP.

SAP Content Integrator

SAP Content Integrator correlates and integrates master data with the aim of creating and maintaining data consistency in multiple back-end system landscapes. SAP Content Integrator identifies identical master data from one or more back-end systems using

customizable matching strategies and stores the result as key mapping information. SAP Content Integrator can create key mappings between the following master data objects:

- Business partners

- Products

- Categories of a source and target schema (category hierarchy)

SAP Exchange Infrastructure

Based on a native Web infrastructure that leverages open standards, SAP Exchange Infrastructure (SAP XI) makes it possible to manage the broad diversity of highly heterogeneous components from a multitude of vendors and running in various technology environments. The integration capabilities capture shared business semantics and act as a mediator between the services and their technical realizations. It includes technical functions, such as Web service discovery, queuing, mapping, and routing. It also establishes an infrastructure for business process management and high-performance execution within and across organizational boundaries.

Exchange-based process integration removes the problems of direct connections by extracting shared collaboration knowledge. These shared business semantics ease the integration of both external and internal components. Instead of directly coding point-to-point interfaces for each new component, the exchange infrastructure allows instant plug-in of new components once per component. This provides the future flexibility needed in today's fast-changing business world, and it reduces integration costs compared to the direct connection approach.

SAP Internet Transaction Server

The SAP Internet Transaction Server (SAP ITS) combines existing Internet technology with SAP technology and provides reliable access to SAP functions from the Internet or intranets.

SAP ITS is a SAP technology component. It is a gateway between one or more Web servers and one or more SAP application servers. Typically, the Web server is an HTTP server, but other protocols such as FTP or Gopher may also be supported.

SAP ITS mainly generates HTML pages and enables end users to interact with different SAP systems using a Web browser. SAP ITS also acts as the server component for the SAP GUI for HTML and various application scenarios, such as SAP Employee Self-Services or SAP CRM.

The following graphic shows how SAP ITS extends the three-tier client/server architecture of the SAP system for Internet use:
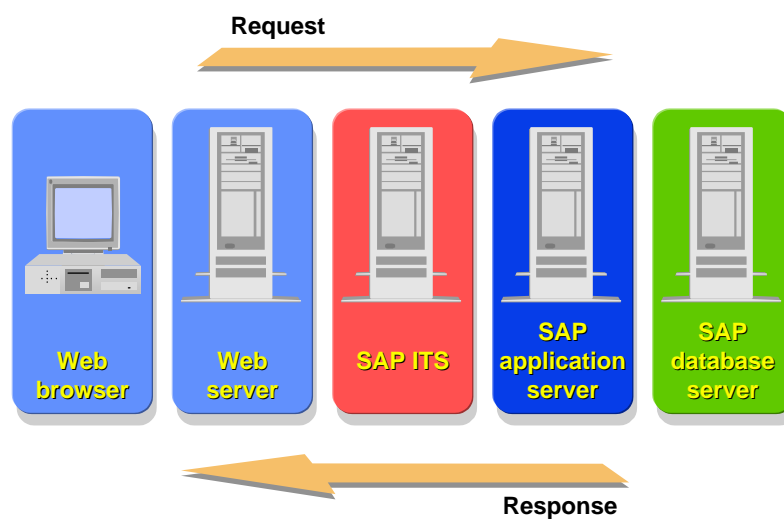
Request

Response

The SAP ITS manages all requests and responses between a Web browser client and an SAP system server.

3.2 Non-SAP Components

SAP MDM uses no third-party components.

4 References

4.1 SAP Notes

The following table lists all SAP Notes mentioned in this documentation.

SAP Note Number	Title
619104	*MDM 2.00: Additions to Master Guide*
620309	*Master Data Management 2.00 Add-On*
651321	*MDM 2.0: Delivery of MDM Web Application for XI*
633762	*Sporadic RFC crashes in a multithread application*
630637	*Installation UME 3.0 for MDM 2.0 Scenarios*
544979	*Importing Java Support Packages with SDM*
601756	*Installation of EA-IPPE 200*
655941	*WP-PI 6.00: SAP Enterprise Portal Plug-In*
439915	*Exchange Infrastructure Integration Server 2.00*
628901	*You want to order the SAP Solution Manager 3.1*

4.2 Documentation

List of technical implementation and configuration documentation for SAP MDM and its business scenarios.

Title	Where to find
SAP Enterprise Portal Installation Guide (SAP EP 5.0) (Documentation set that contains installation guides for Portal, Content Management and TREX)	SAP Service Marketplace at `service.sap.com/epinstall`
Master Guide SAP NetWeaver ´04, section *SAP Enterprise Portal*	SAP Service Marketplace at `service.sap.com/instguidesNW04` → Installation
Installation Guide – SAP User Management Engine 3.0	SAP Service Marketplace at `service.sap.com/instguides` → *SAP MDM*
How to use a Business Package	SAP Service Marketplace at `service.sap.com/epinstall` → *How-To Guides* → *Current How-To Guides*
Component Installation Guide – SAP Business Information Warehouse 3.1C	SAP Service Marketplace at `service.sap.com/instguides` → *mySAP Business Intelligence* → *Using SAP BW 3.1*
SAP@Web Installation Guide	Server Components CD
Installation Guide – SAP Content Integrator 2.0	SAP Service Marketplace at `service.sap.com/instguides` → *SAP MDM*
Master Guide – SAP Exchange Infrastructure 2.0	SAP Service Marketplace at `service.sap.com/instguides` → *SAP Exchange Infrastructure* → *Release 2.0*
Master Guide – SAP NetWeaver ´04, section *SAP Exchange Infrastructure 3.0*	SAP Service Marketplace at `service.sap.com/instguidesNW04` → *Installation*
Installation Guide – SAP Solution Manager 3.1	SAP Service Marketplace at `service.sap.com/solutionmanager` → *Installation Guides*
Configuration Guide – SAP MDM Content Consolidation	SAP Service Marketplace at `service.sap.com/instguides` → *SAP MDM*
Configuration Guide – SAP MDM Master Data Harmonization and Central Master Data Management	SAP Service Marketplace at `service.sap.com/instguides` → *SAP MDM*