Integration Guide SAP Predictive Maintenance and Service, on-premise edition Document Version: 1.0 – 2018-07-13

Integration Guide for SAP Predictive Maintenance and Service, on-premise edition FP06



PUBLIC

Typographic Conventions

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

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Document History

Version	Date	Change
1.0	2017-12-18	Initial version
1.1	2018-07-13	Current version

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1 About

Purpose

This integration guide is the starting point for the technical implementation of SAP Predictive Maintenance and Service (PdMS), on-premise edition. This document describes the integration of SAP Predictive Maintenance and Service, on-premise edition with SAP Enterprise Asset Management (EAM).

2 Integration of SAP Predictive Maintenance and Service, on-premise edition with SAP Enterprise Asset Management (EAM)

This section describes the concept of how the SAP Predictive Maintenance and Service, on-premise edition is integrated with SAP Enterprise Asset Management (SAP EAM). You can find cross-scenario implementation information as well as scenario-specific information in this guide.

1 Note

The central starting point for SAP Predictive Maintenance and Service, on-premise edition is the installation guide, which you can find on the SAP Help Portal page of SAP Predictive Maintenance and Service, on-premise edition at

https://help.sap.com/viewer/p/SAP_Predictive_Maintenance_and_Service.

This integration guide consists of the following SAP Predictive Maintenance and Service, on-premise edition sections:

- Link SAP EAM object to the model of SAP Predictive Maintenance and Service, on-premise edition
- Display model information of SAP Predictive Maintenance and Service, on-premise edition in EAM side panel
- Equipment creation and synchronization for EAM objects
- Transfer EAM work orders associated with equipment to SAP Predictive Maintenance and Service, onpremise edition
- Synchronization of notification between EAM and SAP Predictive Maintenance and Service, on-premise edition

The integration details that is presented here serves as an example of how you can integrate SAP EAM with SAP Predictive Maintenance and Service, on-premise edition. The scenarios are only intended as examples and do not necessarily run the way they are described here in your customer-specific system landscape. Ensure that you check your requirements and systems to determine how this 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 integration guide primarily discusses the overall technical implementation of SAP Predictive Maintenance and Service, on-premise edition and its associated components. However, additional software dependencies might exist without being mentioned explicitly in this document.

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2.1 Prerequisites

2.1.1 Prerequisites for Integration between SAP Predictive Maintenance and Service, on-premise edition and SAP EAM

Component	Description
SAP ERP Central Component	ERP EHP 6 and aboveNot applicable for S/4 HANA releases
Roles in SAP Predictive Maintenance and Service, on- premise edition	 The following predefined role templates are available: AssetCoreAdmin AssetCoreExpert AssetCoreReader

2.1.2 Important SAP Notes

You must read the following SAP Notes as it contains the most recent information as well as any necessary corrections.

Make sure that you have the up-to-date version of each SAP Note, which you can find on the SAP Service Marketplace at https://support.sap.com/en/my-support/knowledge-base.html

SAP Note Number	Component	Title
2382303	CA-AIN-PM	AIN-EAM Integration Overview
2327152	CA-AIN-PM	Linking of EAM objects to AIN Models
2366582, 2417919	CA-AIN-PM	Display of AIN model information in EAM side panel
2405095	CA-AIN-PM	Common objects for AIN-EAM Release 2.0
2413805	CA-AIN-PM	AIN Equipment Creation and Synchronization for EAM Objects
2422598	CA-AIN-PM	Document Creation and Synchronization

SAP Note Number	Component	Title
2405074	CA-AIN-PM	AIN Announcement Processing in EAM
2382489	CA-AIN-PM	AIN Authentication Client Certificates
2526795	CA-AIN-PM	Preparatory note for AIN-EAM Integration Release 3.0
2487706	CA-AIN-PM	AIN Authentication-OAuth 2.0
2488386	CA-AIN-PM	Common objects for AIN-EAM Release 3.0
2487705	CA-AIN-PM	Replicate Work orders from EAM to AIN
2485457	CA-AIN-PM	AIN Equipment Creation and Synchronization for EAM Objects- Background Mode
2552580	CA-AIN-PM	Common objects for AIN-EAM Release 4.0 - Batch 1
2552577	CA-AIN-PM	Document Creation and Synchronization - Version 2
2568695	CA-AIN-PM	Common objects for AIN-EAM Release 4.0 - Batch 2
2553257	CA-AIN-PM	AIN Equipment Creation and Synchronization for EAM Objects - Version 2
2568696	CA-AIN-PM	Replicate Notifications from EAM to AIN
2578680	CA-AIN-PM	Common objects for AIN-EAM Integration Notes 2600287 & 2601111
2601111	CA-AIN-PM	Document Creation and Synchronization - Same Document Type for Model and Equipment Documents
2600287	CA-AIN-PM	AIN Equipment Creation and Synchronization for EAM objects- Propose Equipment Functionality
2621471	CA-AIN-PM	Pulling AIN Notifications
2592547	CA-AIN-PM	Delivery Class changes - AIN-EAM Integration tables

2.2 Authentication Between SAP ERP and SAP Predictive Maintenance and Service, on-premise edition

You can use the basic authentication for communicating between SAP ERP systems and SAP Predictive Maintenance and Service, on-premise edition.

This setup involves two major steps:

8

1. Uploading Root CA of the PDMS Server Certificate in the ERP system

2. Maintaining PDMS System Information in ERP

2.2.1 Authorizations in SAP ERP

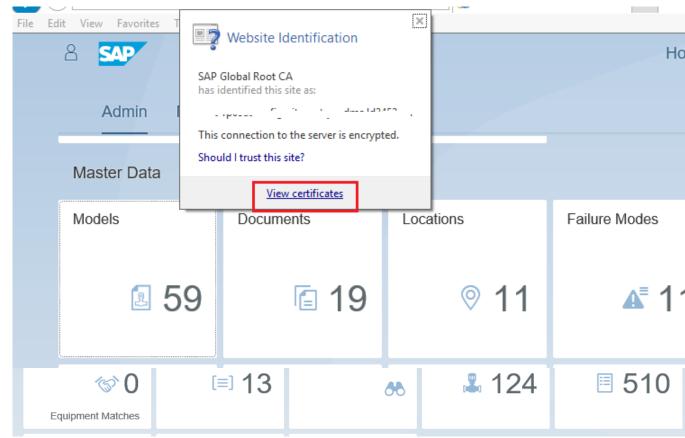
You must have authorization for the following transactions to perform the following activities on SAP ERP.

- STRUST (To upload a certificate)
- SM59 (To create a RFC destination)

2.2.2 Upload Root CA of the PDMS Server Certificate in ERP system

To upload the root CA of the server certificate of SAP Predictive Maintenance and Service, on-premise edition in the ERP system, follow these steps:

1. Import the root CA of the server certificate of SAP Predictive Maintenance and Service, on-premise edition



from the browser by launching any of the applications of SAP Predictive Maintenance and Service, onpremise edition.

 Click View Certificate -> Navigate to the Certificate Path tab -> Choose the Root certificate -> Again click View Certificate -> Navigate to the Details tab-> Click Copy to File to Export.

- The Certificate can be downloaded in Base-64 encoded X.509 format.
- 2. The root CA certificate of SAP Predictive Maintenance and Service, on-premise edition can be uploaded into ERP system via transaction code STRUST.
 - 1. Choose the PSE (SSL client) which will be used for SSL handshake between ERP and PDMS.
 - 2. Import the above downloaded root certificate into the selected PSE.

	SSL client SSL Client (Standar
SNC SAPCryptolib	Own Certificate
SSL server Standard SSL client SSL Client (Anonymo)	Subject Contraction of the second sec
SSL client SSL Client (Anonymo SSL client SSL Client (Standar	
🗙 WS Security Standard	Certificate List
X WS Security Other System Encry	Subject
X WS Security WS Security Keys SMIME Standard	
SSF Collaboration Integration	
SSF E-Learning	
🗗 SSF Logon Ticket	
	Veri, PSE A Password
	Certificate
	Subject Subject
	Subject (Alt.)
	Issuer
	10 to a statute
	Serial Number (Hex.)
	Serial Number (Hex.) 25 Serial Number (Dec.) 440
	Serial Number (Hex.) P Serial Number (Dec.) 4 Valid From 23.02.2016 05:54:10 to 23.02.2018 05:54:10
	Serial Number (Dec.) 4 Valid From 23.02.2016 05:54:10 to 23.02.2018 05:54:10
	Serial Number (Dec.) 4 Valid From 23.02.2016 05:54:10 to 23.02.2018 05:54:10

- 3. Add the imported certificate to the list.
- 4. Save the PSE changes.

2.2.3 Maintaining PDMS System Information in SAP ERP

To maintain the system information of SAP Predictive Maintenance and Service, on-premise edition:

- 1. Create a new RFC destination via transaction code SM59 using the following details:
 - Name: AIN_CONNECTION
 - Connection type: G (HTTP Connection to External Server)
 - Target host: System URL of SAP Predictive Maintenance and Service, on-premise edition Note:
 - Provide the port number of the SAP Predictive Maintenance and Service, on-premise system as the *Service No.* in RFC destination.
 - Path prefix should be left as empty.

nnection Test 😚	
RFC Destination	AIN_CONNECTION
Connection Type	G HTTP Connection to External Serv Description
escription	
Description 1	PDMS On-Premise Connection
Description 2	
Description 3	
Administration	Technical Settings Logon & Security Special Options
Target System Setti	ngs
Target Host	las05pdms.pal.sap.corp Service No. 5127
Path Prefix	البنجسیا
HTTP Proxy Options	
Global Configurat	tion
Proxy Host	
Drawy Convice	
Proxy Service	
Proxy User	
-	is initial
Proxy User	is initial

2. Under Logon Procedure, choose Basic Authentication and provide PdMS credentials.

onnection Test	6 3 /				
RFC Destination	AIN_	CONNECTION			
Connection Type	G HTTP	Connection to External Se	rv	Description	
escription					
Description 1	PDMS On-	Premise Connection			
Description 2					
Description 3					
Administration	Technic	al Settings / Logon & Sec	urity	Special Options	
Logon Procedure					
Logon with Use				1	
O Do Not Use a					
Basic Authen					
User	pdms_user		_		
PW Status	changed				
Password	*******	****	******	*****	
Logon with Tick	et				
• Do Not Send	Logon Ticke	t			
○Send Logon	Ticket Witho	ut Target System Referenc	e		
O Send Asserti	on Ticket for	Dedicated Target System			
System ID	C	lient			
Security Options					
Status of Secur	e Protocol				
SSL		O Inactive O Active		_	
SSL Certificate		DFAULT SSL Client (Stan	dard)	Cert. List	

Then, under **Security** Options, set SSL to Active and choose the relevant SSL certificate from the certificate list.

3. General/Global Configuration Settings:

The following general settings must be defined in SAP ERP system for basic authentication between SAP ERP system and SAP Predictive Maintenance and Service, on-premise edition system:

Transaction code: SM30

Table/View Name: AIN_V_GEN_CONFIG

Config Name	Value/Description
AIN_RFC_NAME	AIN_CONNECTION (RFC name as configured for the SAP PDMS destination system).
AIN_PATH_PREFIX	∕int
AIN_ERP_SYSTEM_NAME	ERP system name as defined in the PDMS Applications Setting, Systems section. Used to define the External ID for of PDMS object.

2.3 Assumptions and Implementation Considerations

2.3.1 Authorization in SAP EAM

The code delivered by SAP does not check any authorizations. It is the sole responsibility of the customer or partner to have their own authorizations assigned to the program.

Note

You will find information on specific prerequisites and roles in the relevant sections.

2.4 Link SAP EAM Object to Model of SAP Predictive Maintenance and Service, on-premise edition

2.4.1 Master Data Prerequisites

You must create classes and characteristics to be able to display details for the models of SAP Predictive Maintenance and Service, on-premise edition linked to SAP EAM objects.

Note

If classification is already being used, then the ability to have multiple classes per EAM object must be allowed. For more information, refer to IMG node Cross-Application Components --> Classification System \rightarrow Classes --> Maintain Object Types and Class Types. The checkbox Multiple classification must be checked.

2.4.1.1 Characteristics and Classes

- Create a characteristic group for SAP_AIN and assign them to classes
- Define a class for both class types 002 Equipment and 003 Functional Location.

Note

See SAP Note 2327152

2.4.2 Link EAM Objects to Models of SAP Predictive Maintenance and Service, on-premise edition

1. Execute program AIN_MODEL_MAPPER. This can be done from the transaction AIN_MAPPER or alternatively via SE38/SA38.

The program allows mapping of either equipment or functional locations.

- 2. If choosing equipment (or functional locations) then the list of objects to be mapped should be limited using the selection options of:
- Equipment Number / (Functional location)
- Maintenance plant
- Valid from Date
- 3. The checkbox *Skip AIN Linked Objects* means that the program will exclude any object that already has a mapping to an SAP Predictive Maintenance and Service, on-premise edition model.

- 4. The checkbox *Match based on Construction Type* means that the program will also select potential matches based on the construction type material.
- By default, the *Construction material type* is **HERS** but other material types, for example, a customer-specific type can be used.

The program attempts to determine potential SAP Predictive Maintenance and Service, on-premise edition model matches for the EAM objects in SAP Predictive Maintenance and Service, on-premise edition and then allows the user to select the best match and to create the link between the EAM object and the SAP Predictive Maintenance and Service, on-premise edition model (by adding classification details to the EAM object).

2.4.2.1 Matching Logic

This program will utilize the following two matching methods:

- Match on construction type
- Match on EAM object manufacturer and model number

2.4.2.1.1 Match on Construction Type

If the checkbox *Match based on Construction Type* is selected, then the program will attempt to find a matching model in SAP Predictive Maintenance and Service, on-premise edition based on the manufacturer part number and the vendor name from the construction material.

2.4.2.1.2 Match on EAM Object Manufacturer and Model No.

In this matching process, the manufacturer and model number from the EAM object is used. If there are no model details, then no attempt to match will occur. However, if the model is provided but the manufacturer is not, then an attempt to find a matching SAP Predictive Maintenance and Service, on-premise edition model will occur.

2.4.2.2 Edit or Delete a Link Between EAM Object and SAP Predictive Maintenance and Service, on-premise edition Model

The link can only be deleted by using the mapping program, since the classification information is used only to show the user to which SAP Predictive Maintenance and Service, on-premise edition object the object is mapped.

Alternatively, if the mapping needs to be changed, the program can be run again, a different match chosen and a new link created. This will remove the existing match and classification details.

1 Note

If the link is deleted, it will also remove the link to the relevant document management system record for the model.

2.5 Display SAP Predictive Maintenance and Service, onpremise edition Model Information in SAP EAM Side Panel

The side panel can be used to display additional context-sensitive information for existing transactions in a separate screen area without modifying the corresponding transaction.

The delivered side panel will display information for linked SAP Predictive Maintenance and Service, on-premise edition models.

Please refer to the below note for the implementation of this functionality.

- o SAP Note 2382489
- SAP Note 2417919

Note: NetWeaver business client (NWBC) is required to view the side panel.

See also:

- o http://scn.sap.com/community/erp/blog/2013/02/25/side-panel-for-sap-business-suite
- http://scn.sap.com/community/netweaver-business-client/blog/2013/11/21/nwbc-side-panel-democombining-a-sap-gui-transaction-with-an-html5-based-fpm-chart-guibb

2.5.1 Authorization in SAP Predictive Maintenance and Service, on-premise edition

The authentication user (RFC user) should have model read access in SAP Predictive Maintenance and Service, on-premise edition so that the user can access the model search API from EAM.

2.5.2 Authorization in SAP EAM

The SAP EAM user should have the role *AIN_MODEL_DETAILS* (or equivalent) to view the side panel content from the NetWeaver business client (NWBC).

2.5.3 View SAP Predictive Maintenance and Service, onpremise edition Model Information in SAP EAM Side Panel

The SAP Predictive Maintenance and Service, on-premise edition model side panel can be displayed in the following objects using the following:

Function	Transaction ID
Change equipment	IE02
Display equipment	IE03
Change functional location	IL02
Display functional location	IL03
Change Service notification	IW52
Display Service notification	IW53
Change PM notification	IW22
Display PM notification	IW23
Change work order	IW32
Display work order	IW33

Note

For visual enterprise (.vds) files the *Visual Enterprise Viewer* needs to be installed. The *Visual Enterprise Viewer* is available from the SAP Store.

2.6 Equipment Creation and Synchronization for EAM Objects

The SAP EAM Equipment or Functional location that needs to be synchronized to SAP Predictive Maintenance and Service, on-premise edition can be performed using this application.

2.6.1 Setup and Configurations

2.6.1.1 Global Configuration Settings

The following SAP Predictive Maintenance and Service, on-premise edition integration general settings must be defined for the equipment creation or synchronization functions.

Execute transaction **SM30** and *Table/View Name* **AIN_V_GEN_CONFIG**

Setting	Value or Description
AIN_FLP_URL	AIN Fiori Launchpad URL
AIN_ERP_SYSTEM_NAME	ERP system name as defined in the AIN Applications Setting, Systems section. Used to define the External ID for an AIN equipment record.
AIN_LEAN_EQUIPMENT	Value – "X" or "Blank"
	If set ("X") then the user has the option of creating lean equipment records in AIN (Equipment records with no model). If not set (Blank) then user will not get this option.
AIN_SYNC_HIERARCHY	Value – "X" or "blank"
	Defines whether the AIN Equipment Component Hierarchy is to be synchronized with EAM.
AIN_HIERARCHY_MASTER	Value – "EAM" or "AIN"
	Defines whether the EAM or AIN is the master system for the synchronization of the component hierarchy.
AIN_EQUI_SOURCEBPROLE	Defines the source business partner role of the equipment
	Possible values are:
	1 - For my operations
	2 - For Service
	3 - For Customer
	From plant maintenance integration perspective, it's always treated as "For my operations".
AIN_EQUI_LIFECYCLE	Defines whether the AIN equipment is actual or planned.
	Possible Values are
	1 - Planned
	2 - Actual
	From plant maintenance integration perspective, it's always treated as Actual equipment.

2.6.1.2 Mapping Configuration

The mapping configuration defines the mapping between the SAP Predictive Maintenance and Service, onpremise edition equipment records and SAP EAM technical objects (Equipment and Functional Locations) for the SAP Predictive Maintenance and Service, on-premise edition Equipment header information and the SAP Predictive Maintenance and Service, on-premise edition Equipment attributes (for both Model and Equipment templates).

To execute this, use view cluster **AIN_VC_TMPL_MAP** via transaction code **AIN_EQUI_CONFIG**.

2.6.1.2.1 Equipment Header Mapping

The equipment header mapping can be done using the maintenance view "AIN_V_EQ_HDR_MAP."

Transaction code: SM30

Table/View Name: AIN_V_EQ_HDR_MAP

You use this for:

- Mapping of the SAP Predictive Maintenance and Service, on-premise edition Equipment object header fields to EAM object fields.
- Separate mapping for EAM equipment and EAM functional location object.

Master system for the mapping fields can be defined. This determines the flow of the value during synchronization.

- Overwrite AIN => Yes. EAM acts as Master and the value flow is from EAM to SAP Predictive Maintenance and Service, on-premise edition.
- Overwrite EAM => Yes. SAP Predictive Maintenance and Service, on-premise edition acts as Master and the value flow is from SAP Predictive Maintenance and Service, on-premise edition to EAM.

The Equipment Header mapping is a mandatory configuration to create SAP Predictive Maintenance and Service, on-premise edition Equipment and below is the default Mapping configuration considering EAM as master. This can be changed by the operator accordingly.

Object Type	AIN Field Name	EAM Structure Name	EAM Field Name	Overwrite EAM	Overwrite AIN
Equipment	BUILDDATE	BAPI_ITOB	ACQDATE	No	Yes
Equipment	DESCRIPTION- SHORT	BAPI_ITOB	DESCRIPT	No	Yes
Equipment	INTERNALID	BAPI_ITOB_PARMS	EQUIPMENT	No	Yes
Equipment	SERIALNUMBER	BAPI_ITOB	MANSERNO	No	Yes
Functional Location	BUILDDATE	BAPI_ITOB	ACQDATE	No	Yes

Object Type	AIN Field Name	EAM Structure Name	EAM Field Name	Overwrite EAM	Overwrite AIN
Functional Location	DESCRIPTION- SHORT	BAPI_ITOB	DESCRIPT	No	Yes
Functional Location	INTERNALID	BAPI_ITOB_PARMS	FUNCLOC_INT	No	Yes
Functional Location	SERIALNUMBER	BAPI_ITOB	MANSERNO	No	Yes

The Equipment create public API from SAP Predictive Maintenance and Service, on-premise edition is used to create an SAP Predictive Maintenance and Service, on-premise edition equipment from EAM and the payload fields of the API should be mapped with the corresponding EAM BAPI structure fields.

The mapping is to the fields of the structures are as follows:

- BAPI_ITOB_PARMS, BAPI_ITOB and BAPI_ITOB_EQ_ONLY for Equipment
- BAPI_ITOB_PARMS, BAPI_ITOB and BAPI_ITOB_FL_ONLY for Functional Locations. For more details of the fields supported please see the details of these structures.
- The BAPI's BAPI_EQUI_GETDETAIL and BAPI_FUNCLOC_GETDETAIL are used to fetch the EAM object information and the above-mentioned structures are part of these BAPI's.

Note:

Serial number is mandatory for creation of equipment in SAP Predictive Maintenance and Service, onpremise edition from EAM objects. Mapping to the SAP Predictive Maintenance and Service, on-premise edition *Serial No*. field is required and entry in the *EAM object* field is mandatory.

2.6.1.2.2 Model Templates

This section is used for mapping of SAP Predictive Maintenance and Service, on-premise edition model templates to:

- EAM Equipment Characteristics
- EAM Functional Location characteristics
- Providing a default SAP Predictive Maintenance and Service, on-premise edition equipment template for an SAP Predictive Maintenance and Service, on-premise edition model template.

The SAP Predictive Maintenance and Service, on-premise edition model templates can be imported using the program **AIN_TEMPLATES_PULL** (using transaction **SE38**). Alternatively, you can manually enter the entries for the template.

Equipment Characteristics Mapping

You use this for mapping of model template attributes to EAM equipment characteristics. Once the template is imported, you can define the mapping for the SAP Predictive Maintenance and Service, on-premise edition attribute to the relevant EAM class and characteristic.

For more details on the considerations and limitations on the mapping of SAP Predictive Maintenance and Service, on-premise edition attributes to EAM characteristics, see the SAP Predictive Maintenance and Service, on-premise edition Attributes and EAM Characteristics Mapping section.

Dialog Structure	Template ID	B52D6A5C50054632B56C7ED	D5111ED31	Templa	e Name TRUCK - DIESEL			
• 🗎 Equipment Header Mapping								
🔹 🦲 Model Templates	Factoria Characteristic	- Useraia -						
Equipment Characteristics Mapping	Equipment Characteristics	s mapping						
• 📄 Functional Location Characteristics Map	AIN Attribute Group	Attribute Name	Attr Type	Val Type	Attribute Description	Class Type	Class	Characteristic Name
• 📄 Default Equipment Templates	TRUCK_INFORMATION	ENGINE_POWER_MAXIMUM	Numeric	▼Normal	Engine_Power_Maximum	002	AIN_TRUCK_DIESEL	AIN_MOD_ENGINE_POWER_MA
🕈 📄 Equipment Templates	TRUCK_INFORMATION	RELEASE_DATE	Date	▼Normal	Release_Date	002	AIN_TRUCK_DIESEL	AIN_MOD_RELEASEDATE
 Equipment Characteristics Mapping 	TRUCK_INFORMATION	TRUCK_TYPE	Enum	▼ Normal	 Truck_Type 	002	AIN_TRUCK_DIESEL	AIN_MOD_TRUCK_TYPE
• 🗎 Functional Location Characteristics Map	TRUCK_INFORMATION	TRUCK_USE	Enum	▼ Normal	▼ Truck_Use	002	AIN_TRUCK_DIESEL	AIN_MOD_TRUCK_USE
	TRUCK_INFORMATION	VEHICLE_HEIGHT	Numeric	▼ Normal	 Vehicle_Height 	002	AIN_TRUCK_DIESEL	AIN_MOD_VEHICLE_HEIGHT
	TRUCK_INFORMATION	VEHICLE_MARINE_SUIT.	Boolean	▼ Normal	 Vehicle_Marine_Suitable 	002	AIN_TRUCK_DIESEL	AIN_MOD_VEHICLE_MARINE_
	TRUCK_INFORMATION	VEHICLE_URL	String	▼ Normal	▼ Vehicle_URL			
	TRUCK_INFORMATION	VEHICLE_USE_DESCRIP	String	▼Normal	 Vehicle_Use_Description 	002	AIN_TRUCK_DIESEL	AIN_MOD_VEHICLE_USE_DES

The mapping of a characteristic will cause the value in EAM to be overwritten from the model in SAP Predictive Maintenance and Service, on-premise edition.

Functional Location Characteristics Mapping

You use this for mapping model template attributes to EAM functional location characteristics. Once the template is imported, the user can define the mapping for the SAP Predictive Maintenance and Service, on-premise edition attribute to the relevant EAM classification and characteristics.

Dialog Structure	Template ID E	52D6A5C50054632B56C7EDD5111E	D31	Template Na	me	TRUCK - DIESEL			
• 📄 Equipment Header Mapping									
Model Templates	Successful to a first officer	de Alfre Hereiter							
Equipment Characteristics Mapping	Functional Location Chara	cteristics mapping							
 Eunctional Location Characteristics Mapping 	AIN Attribute Group	Attribute Name	Attr Type	Val Type	Attrib	ute Description	Class Type	Class	Characteristic Name
• 📄 Default Equipment Templates	TRUCK_INFORMATION	ENGINE_POWER_MAXIMUM	Numeric	▼ Normal	▼ Engine	e_Power_Maximum	003	AIN_TRUCK_DIESEL	AIN_MOD_ENGINE_POWER_MP
Equipment Templates	TRUCK_INFORMATION	RELEASE_DATE	Date	▼ Normal	▼ Release	e_Date	003	AIN_TRUCK_DIESEL	AIN_MOD_RELEASEDATE
• 📃 Equipment Characteristics Mapping	TRUCK_INFORMATION	TRUCK_TYPE	Enum	▼Normal	 Truck 	Туре	003	AIN_TRUCK_DIESEL	AIN MOD_TRUCK_TYPE
 Eunctional Location Characteristics Mapping 	TRUCK_INFORMATION	TRUCK_USE	Enum	▼ Normal	▼ Truck	Use	003	AIN_TRUCK_DIESEL	AIN_MOD_TRUCK_USE
	TRUCK_INFORMATION	VEHICLE_HEIGHT	Numeric	▼ Normal	▼ Vehicl	e_Height	003	AIN_TRUCK_DIESEL	AIN_MOD_VEHICLE_HEIGHT
	TRUCK_INFORMATION	VEHICLE_MARINE_SUITAB	Boolean	▼Normal	▼Vehicl	e_Marine_Suitable	003	AIN_TRUCK_DIESEL	AIN_MOD_VEHICLE_MARINE
	TRUCK_INFORMATION	VEHICLE_URL	String	▼ Normal	▼ Vehicl	e_URL			
	TRUCK INFORMATION	VEHICLE USE DESCRIPTI	String	▼ Normal	▼ Vehicl	e Use Description	003	N_TRUCK_DIESEL	AIN MOD VEHICLE USE DE

The mapping of a characteristic will cause the value in EAM to be overwritten from the model in SAP Predictive Maintenance and Service, on-premise edition.

Default Equipment Template

This configuration allows the user to define a default SAP Predictive Maintenance and Service, on-premise edition equipment template for an SAP Predictive Maintenance and Service, on-premise edition model template. If no default equipment template is mapped, then, the user will need to select the relevant Equipment Template in SAP Predictive Maintenance and Service, on-premise edition for the copied Equipment records.

The value help for the Equipment Template will display all SAP Predictive Maintenance and Service, on-premise edition Equipment Templates, for which there has been a successful import.

Dialog Structure	Model Template ID	B52D6A5C500546	32B56C7EDD5111ED31	Template Na	me	TRUCK - DIESEL
• 📃 Equipment Header Mapping						
Model Templates		1.				
 Equipment Characteristics Mapping 	Default Equipment Te	mplates				
 European Functional Location Characteristics Mapping 	Equipment Template	ID	Template Name			
• 🛅 Default Equipment Templates	255A7EB0136147C8E	75A96C61FD62A08	DCK_EQUIPMENT_DETAILS		*	
🔻 📄 Equipment Templates					•	
• 📄 Equipment Characteristics Mapping						
 Eunctional Location Characteristics Mapping 	_					

2.6.1.2.3 Equipment Templates

You use this for mapping of SAP Predictive Maintenance and Service, on-premise edition equipment templates to:

- EAM Equipment Characteristics
- EAM Functional Location characteristics

The SAP Predictive Maintenance and Service, on-premise edition equipment templates can be imported using the program "AIN_TEMPLATES_PULL" (using transaction SE38). Alternatively, the entries for the template can be manually entered.

Equipment Characteristics Mapping

You use this for mapping SAP Predictive Maintenance and Service, on-premise edition equipment template attributes to EAM equipment characteristics. Once the template is imported, the User can define the mapping for the SAP Predictive Maintenance and Service, on-premise edition attribute to the relevant EAM class and characteristic.

Dialog Structure	Template ID 2	55A7EB0136147C8B75A96C61	FD62A08			Template Name	UCK EQUIP	MENT DETAILS			
• 🛅 Equipment Header Mapping								-			
 Model Templates 	Environment Characteristics	Manadan									
 Equipment Characteristics Mapping 	Equipment Characteristics	маррид									
 Eunctional Location Characteristics Mapping 	AIN Attribute Group	Attribute Name	Attr Type	Val Type		Attribute Description	Class Ty	Class	Characteristic Name	Owrite E	. Owrite All
• 📄 Default Equipment Templates	GENERAL_INFO	VEHICLE_CONDITION_AS.	Enum	▼ Normal	•	Vehicle_Condition_Assessment	002	AIN_TRUCK_EQU_D	AIN_EQU_VEH_COND_ASSESS	Yes 🔹	• No
 Equipment Templates 	GENERAL_INFO	VEHICLE_DESIGNATION	String	▼ Normal	•	Vehicle_Designation	002	AIN_TRUCK_EQU_D	AIN_EQU_VEH_DESIGNATION	No 🔻	• Yes
Equipment Characteristics Mapping	GENERAL_INFO	VEHICLE_VALUATION	String	▼ Normal	•	Vehicle_Valuation	002	AIN_TRUCK_EQU_D	AIN_EQU_VEH_VALUATION	No 🔻	Yes
 Enctional Location Characteristics Mapping 	HISTORY	VEHICLE_UTILISATION	Numeric	▼ Normal	•	Vehicle Utilisation (historic)	002	AIN_TRUCK_EQU_D	AIN_EQU_VEH_UTILISATION	No 🔻	Yes
	HISTORY	VEHICLE_UTILISATION	String	▼ Normal	•	Vehicle_Utilisation_Comment	002	AIN_TRUCK_EQU_D	AIN_EQU_VEH_UTIL_COMMENT	No 🔻	Yes
	TRUCK OPERATIONAL IN	F. ADDITIONAL DESCRIPTI.	String	▼ Normal	•	Additional Description				No 🔹	No
	TRUCK OPERATIONAL IN	F. DESCRIPTION	String	▼ Normal	•	Description				No 🔻	• No
	TRUCK OPERATIONAL IN	F. EXPECTED RETIREMENT .	Date	▼ Normal	₹F	Expected retirement date	002	AIN_TRUCK_EQU_D	AIN_EQU_EXP_RETIREMENT_D.	No 🔻	Yes
		F. NORMAL PAYLOAD	Numeric	▼ Maximum		Normal payload				No 🔻	No

The user can define whether the SAP Predictive Maintenance and Service, on-premise edition or the EAM system is the master. If the SAP Predictive Maintenance and Service, on-premise edition system is to be the master, then the setting "Owrite EAM" should be used or if the EAM system is to be the master, then the "Owrite AIN" should be used. This can be defined at each attribute independently. This means for some attribute values, the SAP Predictive Maintenance and Service, on be the master and for others the EAM system can be the master.

Functional Location Characteristics Mapping

You use this for mapping SAP Predictive Maintenance and Service, on-premise edition Equipment template attributes to EAM functional location characteristics. Once the template is imported, the user can define the mapping for the SAP Predictive Maintenance and Service, on-premise edition attribute to the relevant EAM classification and characteristics.

ialog Structure	Template ID 23	5A7EB0136147C8B75A96	C61FD62A0	8	Template Name TRU	Template Name TRUCK EQUIPMENT DETAILS				
📄 Equipment Header Mapping				_		-				
E Model Templates	Functional Location Charac	toristics Manning								
🔹 🚞 Equipment Characteristics Mapping		tensitics mapping								
• 🗎 Functional Location Characteristics Mapping	AIN Attribute Group	Attribute Name	Attr Type	Val Type	Attribute Description	Class Type	Class	Characteristic Name	Owrite E	. Owrite All
• 📄 Default Equipment Templates	HISTORY	VEHICLE_UTILISATION	Numeric '	Normal	 Vehicle Utilisation (historic) 	002	AIN_TRUCK_EQU	AIN_EQU_VEH_COND_A.	No	• Yes
📙 Equipment Templates	HISTORY	VEHICLE_UTILISATIO.	String '	• Normal	Vehicle_Utilisation_Comment	002	AIN_TRUCK_EQU	AIN_EQU_VEH_DESIGN.	Yes	• No
 Equipment Characteristics Mapping 	TRUCK OPERATIONAL IN	ADDITIONAL DESCRIP.	String '	• Normal	 Additional Description 	002	AIN_TRUCK_EQU	AIN_EQU_VEH_VALUAT.	No	• Yes
 Eunctional Location Characteristics Mapping 	TRUCK OPERATIONAL IN	DESCRIPTION	String '	• Normal	 Description 	002	AIN_TRUCK_EQU	AIN_EQU_VEH_UTILIS.	No	• Yes
	TRUCK OPERATIONAL IN	EXPECTED RETIREMEN.	Date '	• Normal	 Expected retirement date 	002	AIN_TRUCK_EQU	AIN_EQU_VEH_UTIL_C.	No	• Yes
	TRUCK OPERATIONAL IN	NORMAL PAYLOAD	Numeric '	• Maximum	 Normal payload 				No	• No
	TRUCK OPERATIONAL IN	NORMAL PAYLOAD	Numeric '	▼ Minimum	 Normal payload 				No	• No
	TRUCK OPERATIONAL IN	OPERATING RANGE	Numeric '	• Normal	 Operating Range (Hours) 	002	AIN TRUCK EQU	AIN_EQU_EXP_RETIRE.	Yes	▼ No

The user can define whether the SAP Predictive Maintenance and Service, on-premise edition or the EAM system is the master. If the SAP Predictive Maintenance and Service, on-premise edition system is to be the master, then the setting "Owrite EAM" should be used or if the EAM system is to be the master, then the "Owrite AIN" should be used. This can be defined at each attribute independently (i.e. For some attribute values, the SAP Predictive Maintenance and be the master and for others the EAM system can be the master).

2.6.1.3 Managing Differences Between the Two Systems

It is required to understand the differences between the mapping of SAP Predictive Maintenance and Service, onpremise edition attributes to EAM Characteristics. The below table explains how these differences are handled.

SAP Predictive Maintenance and Service, on-premise edition Attribute Type	Supported (Yes/No)	Comment
Boolean	Yes	Must be mapped to "characteristic with data type "Character format" with values "True" and "False"
Date	Yes	Supported.
Enum	Yes	With SAP Predictive Maintenance and Service, on- premise edition Enum attributes, the values in the SAP Predictive Maintenance and Service, on-premise edition

SAP Predictive Maintenance and Service, on-premise edition Attribute Type	Supported (Yes/No)	Comment						
		attribute must also be in the EAM characteristic with the same characteristic value.						
		Multiple values are supported if the EAM characteristic is also defined as allowing multiple values.						
Numeric	Yes	For numeric attributes the ISO code is used in matching UOM at time of copying values between SAP Predictive Maintenance and Service, on-premise edition/EAM. For the SAP Predictive Maintenance and Service, on- premise edition numeric values that store multiple values such as: Min/Max or Min/Max/Normal "x at y"						
		Attribute Group Attribute Name Attr Type Val Type						
		TRUCK OPERATIONORMAL PAYLOAD Numeric 🔹 Maximum 💌						
		TRUCK OPERATIONORMAL PAYLOAD Numeric 🔹 Minimum 💌						
		TRUCK OPERATIO OPERATING RANG Numeric 🔹 Normal 🔹						
		The mapping in EAM is to multiple characteristics (One per "value" to be stored. Example, Min/Max would require two characteristics). The "value type" field in the mapping is used to identify the specific SAP Predictive Maintenance and Service, on-premise edition value as shown below.						

ECC Characteristic Type	Supported (Yes/No)	Comment
Currency	Yes	Must be mapped to an SAP Predictive Maintenance and Service, on-premise edition string attribute type (will be stored without the currency). The ISO currency code is used in matching currency at time of copying values between SAP Predictive Maintenance and Service, on-premise edition /EAM.
Character	Yes	In SAP Predictive Maintenance and Service, on- premise edition string is 256 characters, in ECC Characteristics have a maximum of 30 characters.

ECC Characteristic Type	Supported (Yes/No)	Comment
		Hence the first 30 characters only will be supported in ECC.
Date	Yes	Supported
Time	No	Not supported as no equivalent SAP Predictive Maintenance and Service, on-premise edition attribute type.
Numeric	Yes	For numeric attributes the ISO code is used in matching UoM at time of copying values between SAP Predictive Maintenance and Service, on-premise edition/EAM.
Custom	No	Custom data types for characteristics are not supported.

Note

ISO Codes should be maintained for the UoMs and currency codes in ERP system. Values are case sensitive.

2.6.2 Master Data Prerequisites

In addition to the creation of the necessary program elements, there are some prerequisite classes and characteristics that must be created. These are used to store details of the linked SAP Predictive Maintenance and Service, on-premise edition model against the EAM objects. The following class and characteristics must be defined:

2.6.2.1 Characteristics

Characteristic	Description	Valid from	Data Type	Number of characters	Value Assignment	Case Sensitive
SAP_AIN_01	AIN: Model	01.04.2016	Character format	30	Single Value	Yes
SAP_AIN_02	AIN: Manufacturer	01.04.2016	Character format	30	Single Value	Yes

Characteristic	Description	Valid from	Data Type	Number of characters	Value Assignment	Case Sensitive
SAP_AIN_03	AIN: Equipment	01.04.2016	Character format	30	Single Value	Yes

Note

We recommend that a characteristic group of "SAP_AIN" be created and allocated to the characteristics to assist with management of the SAP Predictive Maintenance and Service, on-premise edition characteristics.

2.6.2.2 Classes

For both class types **002 Equipment** and **003 Functional Location** a class must be defined as shown below.

Class name	Description	Valid from	Same Classification
ZSAP_AIN	SAP AIN class for linking EAM to AIN	01.04.2016	Do not check

For the class the flowing characteristics must be assigned:

Characteristic	Description
SAP_AIN_01	PDMS: Model
SAP_AIN_02	PDMS: Manufacturer
SAP_AIN_03	PDMS: Equipment

Note

We recommend that a class group of "SAP_AIN" be created and allocated to the classes to assist with management of the SAP Predictive Maintenance and Service, on-premise edition classes.

2.6.3 Import of SAP Predictive Maintenance and Service, onpremise edition Model or Equipment Templates

Execute program **AIN_TEMPLATES_PULL** sing the transaction **SE38** or **SA38**. The program can be used to import the model and equipment templates from SAP Predictive Maintenance and Service, on-premise edition to the EAM. The selection screen is shown below.

AIN Model/Equipm	ent Template Import	
æ		
Selection Criteria		
Selection Chiteria		
Template Name		

The complete template attribute information gets imported from SAP Predictive Maintenance and Service, onpremise edition and the mapping entries for Equipment and Functional location gets created. You can map the SAP Predictive Maintenance and Service, on-premise edition attribute and the EAM Characteristics for EAM Equipment and Functional Location individually using the configuration transaction **AIN_EQUI_CONFIG**. The mapping will be done during the creation and synchronization of SAP Predictive Maintenance and Service, onpremise edition Equipment.

In execution, the program uses the SAP Predictive Maintenance and Service, on-premise edition API's to import the template information. As a result, the following import log screen will be presented to the user.

AIN Model/Equipment Template Import								
9 5 6 4 7 7 6	🖄 🗞 🗑 🚹 🎟 🖽 🖷							
Femplate Name	Template ID	Template Type	Status	Message				
DF_EQUIP_TEMPLATE	C11BD365B2454C5588F082A99D567	Equipment Template	00	Template Imported				
FRUCK - DIESEL	B52D6A5C50054632B56C7EDD5111	Model Template	040	Template is already imported				

2.6.4 Equipment Creation and Synchronization

Execute the program **AIN_EQUIPMENT_MAPPER** using transaction **AIN_EQUI_SYNC**. Alternatively, you can use transaction **SE38** or **SA38**.

You use this program to create and synchronize the SAP Predictive Maintenance and Service, on-premise edition Equipment based on EAM Equipment or Functional Location. The selection screen is shown below.

AIN Equipment Creation/Synchronization
election Criteria
●Equipment
O Functional Location
Equipment
Maintenance Plant to 📑
Valid from date to 📑
Batch Mode for Synchronization

The program is designed to be run online and you can select either Equipment or Functional location. Both technical objects are always created as "Equipment" in SAP Predictive Maintenance and Service, on-premise edition. The following screen is displayed once the selection screen is executed.

ATN Fau	unment Cresti	ion/Synchronizat	ion						
IN LYL	ipment creati	on/ Synchionizat	1011						
(COR) (CM									
914		▝▕▓▕▓▕▓▕▓							
🚺 🕅 Li	nk Model 🛗 Propose	Equipment 🖾 Link Equip	oment	De-Link Equipme	nt Create Equipment	Create Equipment wit	hout Model 🚱 Sync Data	Ra View Log	
Obi, Type	Tech. Obi.	Description	AIN I	Integration Status	Manufacturer	Model Name	AIN Equipment ID	Activity Log	Message
EQUI	QKD-4711	QKD-4711	040	Linked to AIN Mode	AIN Manufacturer	qkd-4711			
EQUI	QKD-BJ-01	QKD-BJ-01 Created via b.	00	Linked to AIN Equip	SAP Manufacturing	QKD-Compressor	QKD-BJ-01		
EQUI	OKD-BJ-02	QKD-BJ-02 via Batch Job	00	Linked to AIN Equip	AIN Manufacturer	qkd-4711	QKD-BJ-02		
EQUI	QKD-BLADE-4750-1	QKD-Wind-GEN-Equipme		No link to AIN					
EQUI	QKD-BLADE-4750-2	QKD-Wind-GEN-Equipme		No link to AIN					
EQUI	OKD-BLADE-4750-3	QKD-Wind-GEN-Equipme		No link to AIN					
EQUI	QKD-BLADE-4750-4	QKD-Wind-GEN-Equipme	000	Linked to AIN Mode	AIN Manufacturer	qkd-4711			
EQUI	OKD-CHAR	QKD-CHAR description !!	00	Linked to AIN Equip			QKD-CHAR		
EQUI	OKD-CHEM-0001	QKD-CHEM-0001		No link to AIN					
EQUI	OKD-CHEM-0002	QKD-CHEM-0001	00	No link to AIN					
EQUI	OKD-CLASSIF	QKD-CLASSIF	00	Linked to AIN Equip	AIN Manufacturer	DK22	QKD-CLASSIF		
EQUI	QKD-CPK-123	QKD-CPK-123	00	No link to AIN					
EQUI	OKD-CPK-4711	QKD-CPK-4711		No link to AIN					
EQUI	QKD-CS-4711	QKD-CS-4711 Compressor	100	No link to AIN					
EQUI	QKD-CS-4712	QKD-CS-4712 Engine E4	040	Linked to AIN Mode	AIN SERVICE PROVIDER	E4 Engine			
EQUI	QKD-CS-4713	QKD-CS-4713	00	Linked to AIN Equip	AIN Manufacturer	qkd-4711	QKD-CS-4713		
EQUI	OKD-CS-KAESER	Kaeser Compressor	040	Linked to AIN Mode	AIN Manufacturer	M500 - 2			
EQUI	OKD-CS-KAESER-2	QKD-CS-KAESER-2	040	Linked to AIN Mode	AIN Manufacturer	M500 - 2			
EQUI	QKD-CS-STR	QKD-CS-STR description !	00	Linked to AIN Equip	AIN Manufacturer	qkd-4711	QKD-CS-STR		
EQUI	QKD-GEN-4713	QKD-Wind-GEN-Equipme		No link to AIN					
EQUI	OKD-GEN-4750	QKD-Wind-GEN-Equipme		No link to AIN					
EQUI	QKD-LEAN	tet	00	No link to AIN					
EQUI	QKD-LEAN-2	lokjhg		No link to AIN					
EQUI	OKD-LEVEL-1	Top Level-1	00	Linked to AIN Equip			QKD-LEVEL-1		
EQUI	OKD-LEVEL-2	Top Level-2	00	Linked to AIN Equip			QKD-LEVEL-2		
EQUI	QKD-LEVEL-3	Top Level-3	00	Linked to AIN Equip			QKD-LEVEL-3		
EQUI	QKD-LEVEL-4	Top Level-4	00	Linked to AIN Equip			QKD-LEVEL-4		
EQUI	OKD-MC-220-01	QKD-MC-220-01	00	No link to AIN					
EQUI	OKD-PARTNET-TE	QKD-PARTNET-TEST	00	No link to AIN					
COULT	OKD DT 01	Dente of Tools	1000	Allo Ballino ATAL					

Below are options or buttons available in the Equipment Creation and Synchronization program.

Link Model

The *Link Model* button can be used to link the selected EAM technical object (Equipment or Functional location) to an SAP Predictive Maintenance and Service, on-premise edition Model.

Propose Equipment:

Propose Equipment does a search in SAP Predictive Maintenance and Service, on-premise edition to find out relevant/matching Equipment based on the selected search field and the results are proposed as "AIN Equipment ID".

Currently, search can be performed based on one of the below fields of SAP Predictive Maintenance and Service, on-premise edition.

- Internal ID
- Serial Number

The search functionality looks for a 100% match based on the mapping configuration. The mapping between the fields of EAM and SAP Predictive Maintenance and Service, on-premise edition will be picked from the Equipment Header Mapping configuration.

Link Equipment

The *Link Equipment* button can be used to link the selected EAM technical object to an existing SAP Predictive Maintenance and Service, on-premise edition Equipment.

The following activities takes place during the linking process:

- SAP Predictive Maintenance and Service, on-premise edition Equipment ID will be updated in the classification of the EAM technical object.
- EAM technical object ID will be set as External ID of the SAP Predictive Maintenance and Service, on-premise edition Equipment.
- SAP Predictive Maintenance and Service, on-premise edition model attributes will be copied to EAM technical object characteristics based on the Model template mapping configuration.
- EAM technical object characteristics will be copied to/from the SAP Predictive Maintenance and Service, onpremise edition Equipment attributes based on the Equipment template mapping configuration.

Delink Equipment

The *Delink Equipment* button can be used to remove the link between the EAM technical object with an already transferred or linked SAP Predictive Maintenance and Service, on-premise edition Equipment.

The following activities will happen during the delinking process:

- SAP Predictive Maintenance and Service, on-premise edition Equipment ID will be removed from the classification of the EAM technical object.
- External ID of the SAP Predictive Maintenance and Service, on-premise edition Equipment holding EAM technical object will be removed.

Create Equipment

The *Create Equipment* button can be used to create the equivalent SAP Predictive Maintenance and Service, onpremise edition Equipment from the selected EAM technical objects. This will use the Equipment header mapping and Template mapping configurations to identify the source for the data during creation process.

The following activities takes place during the creation process:

- SAP Predictive Maintenance and Service, on-premise edition Equipment is created based on the EAM technical object considering all the configurations.
- EAM technical object ID is set as External ID of the SAP Predictive Maintenance and Service, on-premise edition Equipment.
- SAP Predictive Maintenance and Service, on-premise edition model attributes are copied to EAM technical object characteristics based on the model template mapping configuration.
- EAM technical object characteristics are copied to the SAP Predictive Maintenance and Service, on-premise edition equipment attributes based on the equipment template mapping configuration.
- Lean Equipment (equipment without link to model) creation is supported. The SAP Predictive Maintenance and Service, on-premise edition Equipment is set to *Published*. The logging is enabled for the Equipment create action.

Synchronize Data

The *Sync data* button can be used to synchronize the data between the two systems for already linked / created Equipment based on the various mapping configurations. This button will also synchronize the Equipment hierarchy between the two systems, if the global configuration allows this.

The following activities takes place during the synchronization process:

- Equipment header information will be updated from SAP Predictive Maintenance and Service, on-premise edition to EAM or EAM to SAP Predictive Maintenance and Service, on-premise edition based on the header mapping configurations.
- SAP Predictive Maintenance and Service, on-premise edition model attribute changes will be updated to EAM technical object characteristics based on the Model template mapping configuration.
- Equipment specific characteristics/attributes will be updated from SAP Predictive Maintenance and Service, on-premise edition to EAM or EAM to SAP Predictive Maintenance and Service, on-premise edition based on the Equipment template mapping configuration.
- Equipment Hierarchy gets synchronized from SAP Predictive Maintenance and Service, on-premise edition to EAM or EAM to SAP Predictive Maintenance and Service, on-premise edition based on the global configuration setting.

The SAP Predictive Maintenance and Service, on-premise edition Equipment should be in *Published* state to run the synchronization process. The data between the two systems are compared and the update will happen only if change identified. A new revision of SAP Predictive Maintenance and Service, on-premise edition Equipment created to update changes from EAM. The logging is enabled for the Equipment synchronization action.

View Log

The *View Log* button can be used to view the log of the Equipment creation and synchronization action. The SLG1 log is fetched for the selected EAM technical object **AIN_INT** and sub-object: **EQUI**

2.7 Replicate Work Orders from SAP EAM to SA Predictive Maintenance and Service, on-premise edition system

2.7.1 Value Mapping Configuration:

The SAP ERP on-premise system comes with more customizable/configurable data whereas the SAP Predictive Maintenance and Service, on-premise edition system comes with the predefined value set. Hence a value mapping is required between SAP ERP and SAP Predictive Maintenance and Service, on-premise edition system values. The following are customizable fields which requires value mapping:

- Order Type
- Priority
- Status

Predefined value set in the SAP Predictive Maintenance and Service, on-premise edition system for the above fields:

SAP ERP Customizable Field Name	Field Description	SAP Predictive Maintenance and Service, on-premise edition Value	Description
ORDERTYPE	Order Type	1	Breakdown
		2	Inspections
		3	Installation
		4	Planned
		5	Disposal
		6	Operations
PRIORITY	Priority	5	Low
		10	Medium
		15	High
		20	Very High
		25	Emergency

STATUS	Status	NEW	New
		PBD	Published
		СРТ	Completed
		CSD	Closed

The value mapping can be done using the maintenance view AIN_V_VALUE_MAP.

The object type should be selected as Work order and the field name can be one of the field listed above.

The SAP EAM values are customer specific and it can be mapped to one of the above listed SAP Predictive Maintenance and Service, on-premise edition value.

Transaction code: SM30

Table/View Name: AIN_V_VALUE_MAP

An example for the value mapping configuration table is shown below for reference.

Display View "Maintenance View: AIN Value Mapper": Overview

🦻 🖪 🖪

Objkt.Type		Field Name	EAM Value	AIN Value	
Workorder	•	ORDERTYPE	PM01	1	-
Workorder	-	ORDERTYPE	PM02	2	*
Workorder	•	ORDERTYPE	PM03	3	#
Workorder	-	ORDERTYPE	SM01	4	
Workorder	-	PRIORITY	1	20	
Workorder	•	PRIORITY	2	15	
Workorder	•	PRIORITY	3	10	
Workorder	-	PRIORITY	4	5	
Workorder	•	PRIORITY	6	22	
Workorder	•	STATUS	CLSD	CSD	
Workorder	•	STATUS	CRTD	NEW	
Workorder	•	STATUS	REL	PBD	
Workorder	•	STATUS	SETC	CSD	
Workorder	-	STATUS	TECO	СРТ	

2.7.2 Replicate Work orders

The program to push the work orders from SAP ERP to SAP Predictive Maintenance and Service, on-premise edition can be executed using the transaction AIN_ORDER_POST (or using SE38, program AIN_WORKORDER_POST).

The work orders having reference to equipment as reference object will be pushed to SAP Predictive Maintenance and Service, on-premise edition based on the selection filter. Also, the reference object equipment should have an equivalent SAP Predictive Maintenance and Service, on-premise edition equipment so that the work orders can be assigned accordingly.

ction Criteria				
quipment				
Equipment		to		
Maintenance Plant		to		
Valid from Date		to		
Vork Order				
Order Type	PM01			
Status Inclusive			_	
Basic Start Date		to		
Basic Finish Date		to		
Language	EN			

1. In your SAP EAM system, use the transaction AIN_ORDER_POST to open the Selection Criteria for Workorder Push to AIN

The selection criteria have got two filter sections:

- o Equipment
- o Work Order
- 2. Select/Provide the appropriate inputs and execute the report to push the work orders into SAP Predictive Maintenance and Service, on-premise edition.

The following log will display the relevant posting status of the work orders.

Workorder Push to AIN									
9 🗈 🖶 🖆 🧧 🖓 I 🚱 I 🖄 I 🖽 🖽 📆									
Obj. Type Technical Object	Work Order	Status							
EQUI 10042782	4004889	□□■ Posted sucessfully to AIN							

The Equipment objects are fetched based on the selection options and then the associated work orders of the Equipment are fetched based on the work order filter.

The SAP Predictive Maintenance and Service, on-premise edition API's are used to post and update work orders in SAP Predictive Maintenance and Service, on-premise edition. The work order information like work order number, description, long text, priority, status, order type, start and finish date, time consumed are pushed from SAP EAM to SAP Predictive Maintenance and Service, on-premise edition.

Execution of the Program in Background

The program can be scheduled as a batch job and it is recommended to run in background.

2.8 Replicate Notifications from SAP EAM to SAP Predictive Maintenance and Service, on-premise System

2.8.1 Value Mapping Configuration:

The SAP ERP on-premise system comes with more customizable/configurable data whereas the SAP Predictive Maintenance and Service, on-premise edition system comes with the predefined value set. Hence a value mapping is required between SAP ERP and SAP Predictive Maintenance and Service, on-premise edition system values. The following are customizable fields which requires value mapping:

- Notification Type
- Priority
- Status

Predefined value set in the SAP Predictive Maintenance and Service, on-premise edition system for the above fields:

SAP ERP Customizable Field Name	Field Description	SAP Predictive Maintenance and Service, on-premise edition Value	Description			
NOTITYPE	Notification Type	M1	Maintenance			
		M2	Breakdown			
PRIORITY	Priority	5	Low			
		10	Medium			
		15	High			
		20	Very High			
		25	Emergency			
STATUS	Status	NEW	New			

	PBD	Published
	CPT	Completed

The value mapping can be done using the maintenance view AIN_V_VALUE_MAP.

The object type should be selected as Notification and the field name can be one of the field listed above.

The SAP EAM values are customer specific and it can be mapped to one of the above listed SAP Predictive Maintenance and Service, on-premise edition value.

Transaction code: SM30

Table/View Name: AIN_V_VALUE_MAP

An example for the value mapping configuration table is shown below for reference.

Change Vie	w "Maintenal	nce View: Al	N Value Mapper": 0	Overview
6 New Entries		R R		
Maintenance View	w: AIN Value Mappe	r		
Objkt.Type	Field Name	EAM Value	AIN Value	
Notification	 NOTITYPE 	M1	M1	^
Notification	 NOTITYPE 	M2	M2	-
Notification	 PRIORITY 	1	20	
Notification	 PRIORITY 	2	15	
Notification	 PRIORITY 	3	10	
Notification	 PRIORITY 	4	5	
Notification	 STATUS 	NOCO	СРТ	
Notification	 STATUS 	OSNO	NEW	

2.8.2 Replicate Notifications from SAP ERP to SAP Predictive Maintenance and Service, On-premise edition

The program to push the notifications from SAP ERP to SAP Predictive Maintenance and Service, on-premise edition can be executed using the transaction AIN_NOTI_POST (or using SE38, program AIN_NOTIFICATION_POST).

The notifications having reference to equipment as reference object will be pushed to SAP Predictive Maintenance and Service, on-premise edition based on the selection filter. Also, the reference object equipment should have an equivalent SAP Predictive Maintenance and Service, on-premise edition equipment so that the notifications can be assigned accordingly.

1. In your SAP EAM system, use the transaction AIN_NOTI_POST to open the Selection Criteria for Notification Push to AIN

Notification Push to AIN	
Q	
Selection Criteria	
Equipment	
Equipment	to 📑
Maintenance Plant	to 📄 📑
Valid from Date	to 📄
Notification	
Notification Type M1	
Status Inclusive	
Basic Start Date	to 🖻
Basic End Date	to 📄
Language EN	

The selection criteria have got two filter sections:

- o Equipment
- Notification
- 2. Select/Provide the appropriate inputs and execute the report to push the notifications into SAP Predictive Maintenance and Service, on-premise edition.

The following log will display the relevant posting status of the notifications.

Notification Push t	to AIN
9 B B 2 7 7	🕼 🟝 🖪 👿 🚹 🎟 🖽 📆
Obj. Type Technical Object	Notification Status
EQUI 10043290	10001542 OCE Posted sucessfully to AIN

The Equipment objects are fetched based on the selection options and then the associated notifications of the Equipment are fetched based on the notification filter.

The SAP Predictive Maintenance and Service, on-premise edition API's are used to post and update notifications in SAP Predictive Maintenance and Service, on-premise edition. The notification information like notification number, description, long text, priority, status, notification type, start and finish date, malfunction start and end date are pushed from SAP EAM to SAP Predictive Maintenance and Service, on-premise edition.

Execution of the Program in Background

The program can be scheduled as a batch job and it is recommended to run in background.

2.8.3 Replicate Notifications from SAP Predictive Maintenance and Service, On-premise edition to SAP ERP

The program to pull the notifications from SAP Predictive Maintenance and Service, on-premise edition to SAP ERP can be executed using the transaction AIN_NOTI_PULL (or using SE38, program AIN_NOTIFICATION_PULL).

The equipment specific notifications will be pulled from SAP Predictive Maintenance and Service, on-premise edition based on the creation date. In addition, the reference object equipment should have an equivalent SAP Predictive Maintenance and Service, on-premise edition equipment so that the notifications can be created in ERP accordingly.

1. In your SAP EAM system, use the transaction **AIN_NOTI_PULL** to open the **Selection Criteria** for **Notification Pull to AIN**

	0	~ «	8 000	鲁什林	10020	* *	<mark>60</mark> 🌣	
	IN: Pull Noti	fications						
obfication Filtering	Ð							
	Notification Filtering	1						
Creation Date 20.06.2018 D to	Creation Date		20.06.2018	to				

The selection criteria has got one filter section:

o Creation Date

1. Select/Provide the appropriate inputs and execute the report to pull the notifications from SAP Predictive Maintenance and Service, on-premise edition to SAP ERP.

The following log will display the notifications and its details.

IN: Pull No	tificat	ions						
	10000	and a second second	Contraction of the second second					
Short Text				Type Notification Type Descript		a second part of the part of the		e Synchronization Result
Selenium	NEW	New	M2	Breakdown	25	Emergency	08.05.2018	
test2	NEW	New	M2	Breakdown	20	Very High	08.05.2018	COM Notification 10002510 was successfully created in EAM
test1	NEW	New	M2	Breakdown	25	Emergency	08.05.2018	CO Priority 25 is not maintained in EAM
Test_NOTIF	NEW	New	M2	Breakdown	25	Emergency	08.05.2018	
Test_1805_bug f	fx NEW	New	M2	Breakdown	5	Low	08.05.2018	
test5	NEW	New	M2	Breakdown	5	Low	08.05.2018	CCD Notification 10002511 was successfully created in EAM
test3	NEW	New	M1	Mantenance Request	15	High	08.05.2018	CCE Notification 10002512 was successfully created in EAM
est4	NEW	New	MI	Maintenance Request	10	Medum	08.05.2018	CCD Notification 10002513 was successfully created in EAM
thejk	NEW	New	M2	Breakdown	25	Emergency	08.05.2018	

The associated notifications of the Equipment are fetched based on the Creation Date.

Create Notifications

The *Create Notifications* button can be used to create the equivalent SAP EAM notification from the selected SAP PDMS Notification. This will use the value mapping configurations to identify the source for the data during the creation process.

The following activities takes place during the creation process:

- SAP EAM notification is created based on the SAP Predictive Maintenance and Service, on-premise edition notification considering all the configurations.
- EAM Notification ID is set as external ID of the SAP Predictive Maintenance and Service, on-premise edition notification.

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