



ENOVIA SmarTeam

SmarTeam Express Configuration Guide V5R20

© Dassault Systèmes, 1997, 2010. All rights reserved.

CATIA, ENOVIA, SMARTEAM and the 3DS logo are registered trademarks of Dassault Systèmes or its subsidiaries in the US and/or other countries.

PROPRIETARY RIGHTS NOTICE: This documentation is the property of Dassault Systèmes. This documentation shall be treated as confidential information and may only be used by employees or contractors of the Customer in accordance with the terms of the End-User License Agreement accepted by Customer.

Any use of the Licensed Program contained in this media or accompanying it, is subject to the terms of the End User License Agreement accepted by Customer. The Licensed Program is protected by international copyright laws and international treaties. Unauthorized use, reproduction and/or distribution of any of the Licensed Program, or any part thereof, may result in severe civil and/or criminal penalties, and will be prosecuted to the maximum extent possible under the law. Company names and product names mentioned herein are the property of their respective owners and certain portions of the Licensed Program contain elements subject to copyright owned by these entities. See the Documentation CD provided with the Licensed Program for details and/or additional terms and conditions relating to these entities.

Part Number: FDN-I5-200210

Contents

Chapter 1: Introduction	1
Overview	1
Internet Site	1
Chapter 2: Database Creation	2
Data Model Designer (DMD)	2
Chapter 3: After Database Creation	6
Check List for the Express Server Environment	6
Configuration According to Selected Mechanism	6
SDE without SNE	7
Profile Cards	7
SNE without SDE	7
Copying NLS for the New Database	8
Configuring the SmarTeam Server-Client Environment	8
Creating a Shared Folder	8
Icons and Scripts	8
Configuring Quick Report Definitions	9
Script Hooking	10
Configuration for Web	10
Menu Editor	11
Configuring Menus upon Upgrading the Express Database	11
User Maintenance	11
Disable Classes from SmarTeam Searches	11
Disable Set Admin Authorization	11
Default Values	12
Admin Settings Configuration	12
Accept or Reject Process	12
Export/Import XML	13
Configuration Settings	14
Export/Import XML	14
Attaching an Existing Database to SmarTeam	14
For Client Environment	15
Configuring Quick Report Definitions	15
For Demo Environment	15
PLMDB Installation	15
PLMDB Configuration Files	15
Configuring SmarTeam – Web Editor Profile Cards	16

Chapter 4: Customizing Standard Reports	17
Configuring Standard Reports	17
Adding User Defined Tools	17
Adding Menus	18
Adding Authorizations	20
Configuring the Admin Settings File	20
Replacing the Logo Image File	21
User Settings	21
Chapter 5: SmarTeam Express Configurations	22
Check List for Express Configurations	22
Copy Tool	22
Reuse Item Structure: Class and Attribute Mapping	23
Item Structure: Class and Attribute Mapping	25
Create Standard Item: Class and Attribute Mapping	26
New Item Structure: Class and Attribute Mapping	27
BOM from CAD Design: Class and Attribute Mapping	29
Configuration Views	30
Create Items/BOM from Document Tree (Design-to-Configure)	30
Upload Documents	30
Workflow Processes	32
User Permissions for a Workflow Process	32
Update Permission for the Process Profile Card	32
Attach/Detach Objects from/to the Workflow Process	32
Document Release	33
Document Release Flowchart	33
Document Release Flowchart Node Description	33
Engineering Change Request (ECR)	34
ECR Flowchart	35
ECR Flowchart Node Description	35
Engineering Change Order (ECO)	36
ECO Flowchart	36
ECO Flowchart Node Description	36
Item Release	38
Item Release Flowchart	38
Item Release Flowchart Node Description	38
Manufacturing Change Order	39
MCO Flowchart	39
MCO Flowchart Node Description	39
Replace Temporary Item	40
Replace Temporary Item Flowchart	40
Replace Temporary Item Flowchart Node Description	40
Standard Item Approval	41
Standard Item Flowchart	41
Standard Item Nodes Definition	41
Users and Authorizations	42

Menu Definitions	43
Application Tool Setup	43
Documents Revision Branching	43
Item State in SmarTeam Engineering Express	44
Definition	44
Item State Transitions	45
Lifecycle Rules Setup	45
Express Scripts	46
Hooks	46
PLMDatabase.bs	46
PLMCadBomExport.ebs	47
PLMDB_ObjectInitialization.ebs	48
PLMDB_OnBeforeUpdateProject.ebs	49
PLMDB_Standard.ebs	49
PLMDB_UpdateDirtyFlag.bs	49
ProjectManagement.ebs	50
User Defined Tools	50
PLMDatabase.bs	50
PLMDB_CadBomExport.ebs	51
PLMDB_DesignCopy.bs	52
PLMDB_LocateInCATIA.bs	52
PLMDB_Standard.ebs	52
ProjectManagement.ebs	52
Form Designer	53
PLMDatabase.bs	53
PLMDB_ObjectInitialization.ebs	53
Workflow Scripts	54
Document Release	54
Engineering Change Order (ECO)	54
Engineering Change Request	54
Item Release	55
Manufacturer Change Order (MCO)	55
Replace Temporary Item	55
Scripts Implementation	56
Sequence Patterns used for CAD	56
Chapter 6: Admin Settings	57
Understanding the Admin Settings	58
Admin Settings List	59
General Settings	59
Duplicate Admin Settings	60
ECAD Import	61
Engineering Change Settings	61
Import Items/BOM to SmarTeam	61
Quick Create	63
Replace Temporary Items in BOM	63
Set Flow Process Status	64
Smart XML Settings	66

Upload Documents	70
Purge Specification Links	71
Quick Report Admin Settings	71
Licenses Used in SmarTeam Engineering Express	74
Chapter 7: PGM for SmarTeam Express	75
Classes	75
Authorization Groups	76
Menus	76
Scripts	76
Chapter 8: Adding the Express Engineering (SNE) Behavior to an Existing SmarTeam Database	77
Solution Description	77
Implementing the "Add SNE" Process in the Database	77
Add SNE While Deleting Items - Type 1	78
Prerequisites	78
Admin Console	78
Run DMD	78
Add SNE with No Items Mechanism - Type 2	79
Run DMD	79
Mapping the SNE Data Model to the Database	79
Post DMD Run	80
Limitations	81
Chapter 9: Upgrade Old SDE Procedure	82
Upgrade Procedure	82
Preparation	82
Upgrading to R19	82
Post Installation	82
General	82
SDE CATIA	83
SDE SolidWorks	83
Chapter 10: Upgrading an Express Database to R20	85
User Maintenance	85

Chapter 1: Introduction

Overview

This document describes how to create and configure a SmarTeam Express database.

It contains the following chapters:

- **Chapter 1, Introduction:** This chapter.
- **[Chapter 2, Database Creation](#):** describes how to create a database for SmarTeam Express using the SmarTeam Data Model Designer.
- **[Chapter 3, After Database Creation](#):** describes the changes to be made in order to configure SmarTeam to work with the SmarTeam Express database.
- **[Chapter 4, Customizing Standard Reports](#):** describes the Standard Reports functionality.
- **[Chapter 5, SmarTeam Express Configurations](#):** presents the definitions that result from applying SmarTeam Express behavior on a new database.
- **[Chapter 6, Admin Settings](#):** presents all the Admin Settings for SmarTeam Express.
- **[Chapter 7, PGM for SmarTeam Express](#):** lists the new classes and links added in the Data Model Designer for PGM implementation in SmarTeam Express.
- **[Chapter 8, Adding the Express Engineering \(SNE\) Behavior to an Existing SmarTeam Database](#):** describes in detail the procedures to be followed in order to add SNE behavior to an existing SmarTeam database.
- **[Chapter 9, Upgrade Old SDE Procedure](#):** describes the upgrade procedure for updating from R17 SDE to R19 .
- **[Chapter 10, Upgrading an Express Database to R20](#):** describes the upgrade procedure for updating from Express Database to R20.

Internet Site

You are highly recommended to frequently visit our website for the latest updates and plug-in products, including the latest Service Packs, Program Directory (Release Notes), Hotfixes and technical support at <http://www.3ds.com/support/>.

In addition, you will also be able to view any installation known issues.

Chapter 2: Database Creation

This chapter describes how to create a SmarTeam Database with Express behaviors using the SmarTeam Data Model Designer.

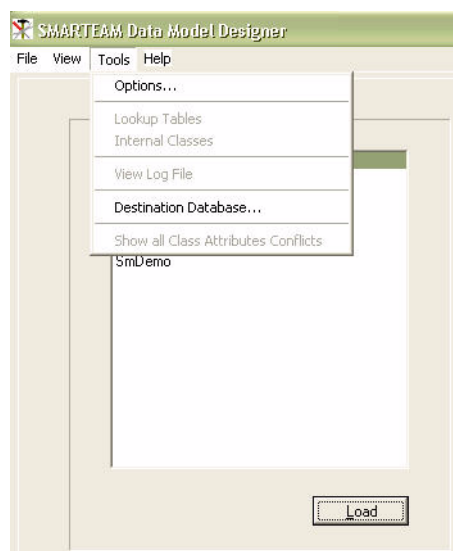
IMPORTANT! PLMDB is a demo database, and should not be used for production purposes. In order to create a new database for production, use the Data Model Designer as described in this chapter.

Data Model Designer (DMD)

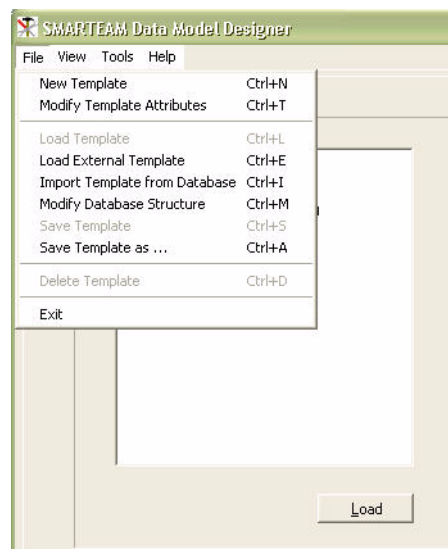
Run the DMD and perform the following procedure.

IMPORTANT! Selecting any SmarTeam Express Mechanism or Database Level Behavior (DLB) creates a database and all data required to work with the database, e.g. Profile Cards and the Data Definition modules. You can select any combination of mechanisms. There is some configuration that needs to be done after selecting the mechanisms.

- 1 Create a new (empty) SQL, Oracle or DB2 database.
- 2 Open the DMD Tools menu, select **Destination Database** and define your destination database.

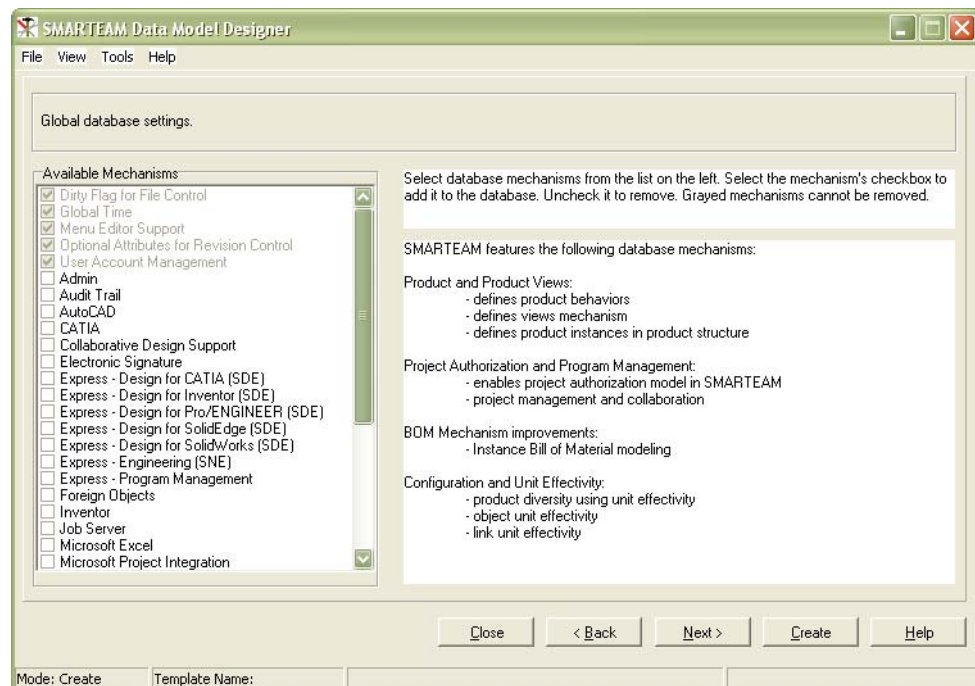


- 3 Click **File, New Template** and create a new database.



4 Select the behaviors that you need in the Available Mechanisms pane:

- Express - Design for CATIA (SDE)
- Express - Design for Inventor (SDE)
- Express - Design for SolidEdge (SDE)
- Express - Design for SolidWorks (SDE)
- Express - Design for Pro/ENGINEER (SDE)
- Express - Engineering (SNE)
- Express - Program Management



Notes:

- a** For simplicity, the terms SNE and SDE will be used in this document.
 - b** SDE is shown in the DMD for the following database types:
 - A new database
 - A database that was created as SDE
 - c** To use SmarTeam – Web Editor on this database, select the behavior: **SmartWeb30**.
- 5** Click **Next**, twice.
- 6** For each super-class, define Display Attributes (in the Display Order tab) according to the following table:

Note: Depending on the mechanism selected, some of these super-classes may not be available.

Super Class Name	Display Attribute Name
Users class	FIRST_NAME LAST_NAME LOGIN
Projects class	TDMX_ID TDM_DESCRIPTION
Documents class	TDMX_ID REVISION TDM_DESCRIPTION
Items	TDMX_ID REVISION TDM_DESCRIPTION
Products	TDM_ID TDM_DESCRIPTION TDM_PROD_VIEW_CNTXT
Contacts	TDMX_ID TDMX_COMPANY_NAME TDMX_ADDRESS TDMX_CITY TDMX_COUNTRY
Flow Process	TDM_NAME TDM_DESCRIPTION
Admin	TDM_DESCRIPTION
Manufacturer Items	TDMX_ID TDM_DESCRIPTION TDMX_PRIORITY TDMX_LAST_ORDERED_DATE

7 Click Create.

The PLM database is created with the relevant class structure and all related data (e.g., Menus, Profile Cards, Look-ups). The database is connected to the Server and is ready for configuration.

8 In the window that appears, define the Company Name, Database Name, and Regional Settings.**9 Click Close.****Notes:**

- As you obtain the Profile Card from the behaviors automatically, do not use the "Design a Profile Card Form" option in the last stage of the DMD. If you do, the automatic generation of the Profile Card will not occur.
- If you attempt to close the window by clicking Cancel after successfully running the DMD, an error message will be displayed. It has no impact on the successful DMD operation.
- Do not attempt to remove any of the classes created by the SmarTeam Express installation; this will NOT be possible as all classes are created by mechanisms (DLBs).
- Do not modify the definition of existing attributes (those that come with the behaviors selected).

Chapter 3: After Database Creation

This chapter provides all the information necessary for configuring SmarTeam for use with a new SmarTeam Express Database.

Check List for the Express Server Environment

The following procedures must be performed in order to configure the SmarTeam Express database:

- [Configuration According to Selected Mechanism](#)
- [Copying NLS for the New Database](#)
- [Configuring the SmarTeam Server-Client Environment](#)
- [Configuring Quick Report Definitions](#)
- [Script Hooking](#)
- [Menu Editor](#)
- [User Maintenance](#)
- [Default Values](#)
- [Admin Settings Configuration](#)
- [Configuration Settings](#)
- [Attaching an Existing Database to SmarTeam](#)
- [For Client Environment](#)
- [For Demo Environment](#)
- [Configuring SmarTeam – Web Editor Profile Cards](#)

Note: The definitions for Compare Tool should be defined manually in the database, but can be reviewed in the PLMDB database.

Configuration According to Selected Mechanism

Follow the relevant topics in the sections below, according to the mechanism(s) you selected in the DMD.

SDE without SNE

Profile Cards

If you selected the SDE mechanism without selecting the SNE mechanism, then:

Open the Form Designer and update the following profile cards.

- 1 As the SDE implementation does not include SmarTeam – Workflow, delete the label and attribute controls Design Configuration on the profile cards of the classes.

A screenshot of a form with two fields: 'Flow Process' and 'Flow Status'. 'Flow Process' is a text input field with a small icon to its right. 'Flow Status' is a dropdown menu with a blue arrow icon.

- 2 As the SDE implementation does not include SmarTeam – BOM, delete the label and attribute controls "In BOM" on the profile cards of the Documents Tree class.

A screenshot of the 'Documents Tree' profile card. It contains several fields: 'Quantity' (text input with value '1'), 'In Bom' (dropdown menu with value 'Yes' and a green arrow icon, highlighted with a red circle), 'Description' (text input), 'Created by' (text input with a user icon), 'Creation Date' (text input with value '11/22/2007 16:27'), 'Modified by' (text input with value 'Lead Des' and a user icon), and 'Last mod. date and time' (text input with value '02/24/2009 09:20').

Note: If SNE is added on an existing SDE configuration, you must add Smarteam – BOM attributes manually using the Form Designer.

- 3 As the Design configuration attribute, if you implement an SDE other than SDE SolidWorks, delete the label "Design configuration" on the profile cards of classes:
 - Part
 - Assembly
 - Standard

A screenshot of a form with two fields: 'Design Configuration' and 'Master Configuration'. Both are text input fields.

SNE without SDE

If you selected the SNE mechanism without selecting the SDE mechanism, then, on the SmarTeam server, perform the following:

- 1 Rename the XML file (for backup purposes) of the new database located under:

**<SmarTeam_Home>\ConfigurationSettings\Data\System\smarteam#
\$\$<DB ID>\smarteam.std.configurationmanagement.config**

Note: <DB ID> represents the DB ID that is generated after creating the database.

For example, the DB ID of the PLMDB in R20 is:
F6F8758D1028472A838D3C5A8DD0EB3B

- 2 If you have installed a SmarTeam Express Demo environment, the file can be found under:
 <SmarTeam_Home>\Express\SNE\Post Installation
- 3 Replace the mapping tool XML file mentioned in step 1, with the one you retrieved in step 2.

Copying NLS for the New Database

Perform the following procedure.

- 1 Backup the new Database NLS in the custom folder.
 Path: <SmarTeam_home>\NLS\<DB Language>\Custom\Databases\<DB ID>
 - 2 Delete all sub-folders from the Database NLS folder.
 - 3 Move the empty folder with DB ID to std.
 From: <SmarTeam_home>\NLS\<DB Language>\Custom\Databases
 To: <SmarTeam_home>\NLS\<DB Language>\Std\Databases
 - 4 Copy the sub-folders from PLMDB folder to the new Database NLS folder.
 From: <SmarTeam_home>\NLS\<DB Language>\Std\Databases\8C62BEEF01A8481BABCD79B4ECD4F0F4
 To: <SmarTeam_home>\NLS\<DB Language>\Std\Databases\<DB ID>
- Note:** <DB Language> is the selected language from the four languages supported in SmarTeam.

Configuring the SmarTeam Server-Client Environment

Creating a Shared Folder

- 1 Create a folder on the server for sharing data.
- 2 Define Share and Security permissions for this folder:
 - Read Permissions for Domain Users
 - Change Permissions for SmarTeam Admin User
- 3 Add sub-folders Scripts and Icons, resulting in the following directory structure:
 \\<Server Name>\<Shared Folder>\Script
 \\<Server Name>\<Shared Folder>\Icons

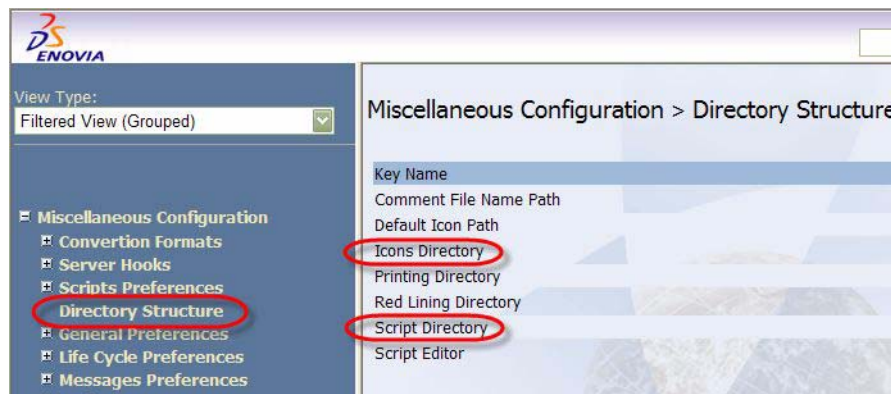
Icons and Scripts

The SmarTeam Express Server installation installs icons and scripts and the Client installation does not.

By default, the server configures directly to the <SmarTeam_home> folder.

Perform the following procedure:

- 1 Copy Scripts from the Installed Scripts to the Script folder under the shared folder.
The Installed Scripts are located in the **<SmarTeam_home>\Script** folder
For an upgrade scenario, you can copy scripts from the DVD - Scripts folder.
- 2 Copy Icons from the Installed Icons to the the Icons folder under the Shared folder.
The Installed Icons are located in the **<SmarTeam_home>\Icons** folder
- 3 Open the SmarTeam Configuration Editor and define the Script and Icon Folders keys on the Domain level as a UNC path:



- 4 In cases where this procedure cannot be performed as a post installation task, copy the <Icons> and <Script> folders from the SmarTeam server to each client domain machine.
- 5 Copy Scripts from the Installed Scripts to the **Script** folder under the shared folder.

Configuring Quick Report Definitions

The file **SmartQuickReportPublic.ini** contains the template definition of all public reports.

Perform the following procedure in order to use the public reports.

- 1 Move the definition file to the shared folder (see [Creating a Shared Folder](#)).
From: **<SmarTeam_home>\LocalConfig\SmartQuickReportPublic.ini**
To: **\\<Server Name>\<Shared Folder>\SmartQuickReportPublic.ini**
- 2 Update the Class IDs in the ini file as follows:
 - a Open the SmartQuickReportPublic.ini file and search for the text: **Classes_Id**.
 - b Replace the existing value 109 with the correct one from your new DB: Get the Class ID of super class Items using an SQL statement.
 - c Replace the value 92 with the correct one from your new DB: Get the class ID of super class Documents using an SQL statement.

Note: Example of SQL statement: `SELECT CLASS_ID FROM TDM_CLASS WHERE CLASS_NAME = 'Items'`

Note: Quick Report will only run if a printer has been defined.

Script Hooking

Configuration for Web

The Administrator should perform the following steps to ensure that the Express functionality will also work from the Web-based client:

- 1 Copy Script file:** Copy the script file **PLMDB_SmarteamWebHooks.wsc** from the SDK folder to the SmarTeam Web Server machine.
- 2 Register Script file:** Right-click on **PLMDB_SmarteamWebHooks.wsc** in the SmarTeam Web Server machine and select **Register**.
- 3 Define Server Hooks/Init Key:** Open the System Configuration Editor and define the System Configuration Key as follows:
 - a** Select **Miscellaneous Configuration, Server Hooks, Init**.
 - b** Click **Add Value**.
 - c** Enter the value **PLMDB_SmarteamWebHooks.WSC**.
 - d** Define the level for this setting (**Domain \ Site \ ...**). The recommended level is **System**.
- 4 Create ECR Folders on Web:**
 - a** Run the Flow Chart Designer from the Admin Console.
 - b** Open the Workflow Engineering Change Request (ECR)
 - c** Select the Start node.
 - d** Click F4 to open the Properties window.
 - e** Select the **On Receive** event in the Properties window.
 - f** Assign the function **PLMDB_CreateECRFoldersWeb** from the **PLMDatabase.bs** script file.
 - g** Select the workflow window (no node should be selected).
 - h** Click F4 to open the Properties window.
 - i** Select the **After Attach Object** event in the Properties window.
 - j** Assign the function **PLMDB_AfterAttachWeb** from the **PLMDatabase.bs** script file.

IMPORTANT! In many cases, hooks are already used by other scripts, either supplied by SmarTeam or written by the implementer. In these cases, please make sure to contact the implementer of the system in order to correctly merge scripts so that the new functions will be properly applied and used.

Menu Editor

Configuring Menus upon Upgrading the Express Database

When upgrading the Express database, in order to prevent two different menus appearing (the existing PLMDB menus and the new SmDemo menus), the SmarTeam Express database admin should perform the following steps before upgrading:

- 1 Open the Menu Editor in the previous version.
- 2 Create a new profile named Administrator.
- 3 Add all products to the new profile.
- 4 Copy the content of all products from the System profile to the new profile.
- 5 Delete all the contents from the System and User profiles.

Note: When upgrading from another Express database, or when creating a new Express database, open the Menu Editor and update the menu options to match the PLMDB_R19 options. This is not relevant for V5R20.

User Maintenance

Disable Classes from SmarTeam Searches

Classes on which the user can run scripts are visible in the Query by Attribute (QBA) and Query by Example (QBE), even though the user does not have View Object authorization on these classes.

To hide these classes:

- 1 Select **User Maintenance > Authorizations**.
- 2 Select the group whose authorizations you want to change.
- 3 Select the top level (Class Browser).
- 4 Switch to **User Defined Operations**.
- 5 Make a list of all the authorizations defined.
- 6 Clear all the authorizations or click the **Clear Authorization** button.
- 7 Click **Apply**.
- 8 For each removed authorization, select the super-class needed to run these tools one by one and add authorization.

Disable Set Admin Authorization

To disable the Set Admin Authorization from the Express groups, perform the operations described in [User Maintenance](#).

Default Values

When working in a Japanese-language operating system, newly created folders are not linked when a user tries to initiate an ECR process.

To ensure that newly created folders are linked properly:

- 1 Open the Default Values tool.
- 2 Switch to Attached Folders Class.
- 3 Redefine the default value for Autolink as TRUE.

Note: As this attribute is defined in the behavior, you must perform this action each time the DMD is used to modify the database.

Admin Settings Configuration

Accept or Reject Process

The mapping of the Lookup Value by the Response Name is fully defined in the Admin Settings without the need for mapping in the script file.

The function used in the script file is replaced with a new function.

There are two types of Subject used in the Admin Settings for this function:

- Global - The definitions will be applied to all processes
- Specific Workflow - The definitions will be applied to a specified process

Add the Admin Settings as presented in the following table:

Global

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Global_1 \ Global_2 \ ...	The definitions will be applied to all processes
First Value – Fourth Value	<FLOW RESPONSE NAME>;<Lookup Value>	e.g. SEND TO REVIEW;In Review

Specific Workflow

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	<Process_Name>_1 \ <Process_Name>_2 \ ...	The definitions will be applied to the specified processes
First Value – Fourth Value	<FLOW RESPONSE NAME>;<Lookup Value>	e.g. INITIATE;Started

Notes:

- a** If the same Flow Response Name is defined for all processes (Global_1) and a specific process and the Lookup Value is different, the system will use the Lookup Value of the specific process.
- b** For a complete list of settings that replaces the settings from R18 SP2 HF1, see the second sheet of the Excel file, or review [Chapter 6, Admin Settings](#).
- c** After "Global" or after <Process_Name> you must use a "_" sign in order for the function to work correctly.

Export/Import XML

The Export XML tool exports items and BOM to an XML file that will be imported to the ERP system.

The Import XML tool imports items from the ERP system to SmarTeam. If the item already exists it is updated, and if it does not exist, it is added.

The Admin Settings contain the definitions of the attributes to be exported to the XML file or imported from the XML file. All the settings for attributes are defined in the Long Value field.

Add the Admin Settings as presented in the table below:

Function	Section	Subject	Mandatory
Export	Smart XML_ITEM	IncludedItemAttributes	Yes
Export	Smart XML_BOM	IncludedHeaderAttributes	Yes
Export	Smart XML_BOM	IncludedLineAttributes	Yes
Import	Smart XML_ITEM	IncludedImportItemsAttributes	No

Notes:

- This functionality is available for SmarTeam – Editor Windows-based only. When running from SmarTeam – Editor Web-based, an error message appears.

Configuration Settings

Export/Import XML

Add Configuration Settings at the Domain/Site level:

Key Name	Description	Default Value for Demo (EN)
importXML-FolderPath	Path to the xml files to be imported with ERP data	C:\Program Files\SMARTTEAM\Express\SNE\ERP\Import
exportXML-FolderPath	Path to the xml files to export with data for ERP	C:\Program Files\SMARTTEAM\Express\SNE\ERP\Export

Note: A key will be added to the file configuration set **smarteam.std.express.config.xml**.

Attaching an Existing Database to SmarTeam

Note: This section is relevant only if you want to attach an existing database to SmarTeam other than PLMDB or the database you created with the DMD after the SmarTeam Express Installation process.

- 1 Copy the <newDB>.mdf file into your SmarTeam DB directory (<SmarTeam Home>\SmarTeam>\DB).
- 2 Create a new DB connection using the Database Connection Manager utility. When prompted, assign the <newDB>.mdf file as the Database file.
- 3 Configure the vault server to work with the new DB through the vault server setup utility.
- 4 If you have a new vault folder that you want to use with the new DB, place this folder under the Vault directory and make sure that you configure the Vault Server through the Vault Server Setup utility to work with this folder.
- 5 Configure the Workflow server (if it exists) to work with the new DB through the Workflow server setup utility.
- 6 If you have additional icons and scripts that you want to use with the new DB, copy them to the corresponding folder on the server.
- 7 From the NLS folder, copy the database XML files to the corresponding folder on the server:
 <SmarTeam_home>\NLS\en\Std\Databases\<DB ID>
 <SmarTeam_home>\NLS\en\Custom\Databases\<DB ID>

For Client Environment

Configuring Quick Report Definitions

Perform the following procedure.

- 1 Open the definition file.
Path: <SmarTeam_home>\LocalConfig\SmartQuickReport.ini
- 2 Change the **Public_Ini**:
From: <SmarTeam_home>\LocalConfig\SmartQuickReportPublic.ini
To: \\<Server Name>\<Shared Folder>\SmartQuickReportPublic.Ini

For Demo Environment

PLMDB Installation

The PLMDB installation is in the Demo Environment installation instead of the SmDemo installation.

PLMDB Configuration Files

All the required files for the configuration are located in the following directory:

<SmarTeam_home>\Engineering Express\Post Installation

File Name	M/O	Purpose
PLMDB_Domain_config.zip	M	For SDE scenarios (Design Copy, CAD Integrations)
PLMDB_System_config.zip	O	For backup purposes of the original file in case you need to restore it for Demo purposes later
PLMDB_user_config.zip	O	For a quick Start for users configuration, when running Demo scenarios.

M = Mandatory, O = Optional

- 1 Open the zip file:
<SmarTeam_home>\Engineering Express\SNE\Post Installation\
PLMDB_Domain_config.zip
- 2 Extract the following two files from the zip file:
smarteam.std.designCopy.config.xml
smarteam.std.legacyPreferences.config.xml
- 3 Verify if these files already exist on the domain level of the configuration settings:
 - If No, copy these files
 - If Yes, merge the keys with the existing files (installed during the installation process)

Configuring SmarTeam – Web Editor Profile Cards

To define profile cards for SmarTeam – Web Editor, the administrator should perform the following steps:

- 1** Install PLMDB_R20
- 2** Open the Web Form Designer for PLMDB_R20
- 3** Export all the profile cards to an XML file
- 4** Open the Web Form Designer of the user's database
- 5** Import all the profile cards from the XML file to the user's database

Chapter 4: Customizing Standard Reports

The Standard Reports functionality enables you to generate reports for a an Item/ECR Process and output them in formatted XML or as a Micosoft Excel file. All attributes that will be used in the Standard Reports are defined in Admin Settings.

Configuring Standard Reports

To configure the Standard Reports functionality on your database, execute the procedures in the following sections.

Adding User Defined Tools

To add User Defined Tools:

Note: For details about using the Script Maintenance functionality, refer to the SmarTeam – Editor Online Help.

- 1 Open Admin Console, Application Tools, Script Maintenance, User Defined tab and add the User Defined Tools from the table according the Class name written in the **Hook to** column:

Note: All Scripts are located in the Script named: PLMDB_Reports.bs

Hook to	UDT Name	Script Function Name
Items	Reports Drawing List	PLMDB_DrawingListReport
	Reports Item by State	PLMDB_ItemByStateReport
	Reports Item History	PLMDB_ItemHistoryReport
	Reports Item Related Information	PLMDB_ItemRelatedInfoReport
	Reports Multi Level BOM	PLMDB_MultiLevelBOMReport
	Reports Part List	PLMDB_PartListReport
	Reports Related ECRs in BOM	PLMDB_RelatedECRsInBOMReport
	Reports Standard Items in BOM	PLMDB_StandardItemsInBOMReport
	Reports Top Items	PLMDB_TopItemsReport
ECR Process	Reports ECR Information	PLMDB_ECRInformationReport

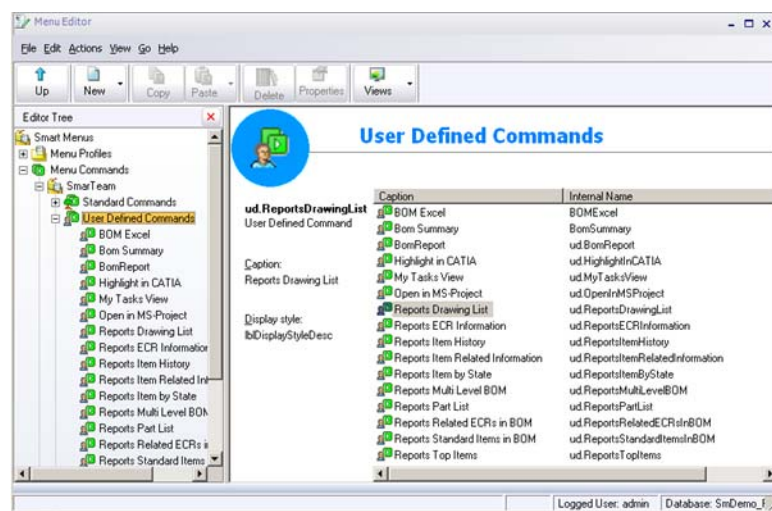
Adding Menus

After you add the User Defined Tools to the Script Maintenance, define a Menu item for each User Defined Tool in SmarTeam Menu Editor.

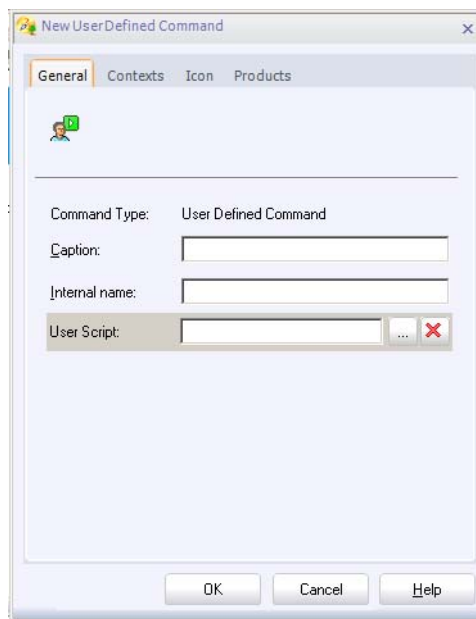
To add Menus:

Note: For details about using the Menu Editor functionality, refer to the SmarTeam – Editor Online Help.

- 1 From the Admin Console, select User Interface Management, Menu Editor.
- 2 From the Smart Menus tree:
 - Expand Menu Commands, SmarTeam, User Defined Commands



- Right-click and add new User Defined Tools command
- Click OK
- Repeat previous two steps until you finish adding all User Defined Tools commands



3 From the Menus node:

- Open Menu Profiles, System Profiles, <Profile Name>, SmarTeam, Pulldown Menus, SmarTeam Main Menu
- Create a new menu e.g., Standard Reports
- Right-click and add new Menu Item for new command
- Click OK
- Repeat previous two steps until you finish adding all Menu Items
- Save the Profile
- Copy the new Menu e.g., Standard Reports
- Paste as Tree to other Profiles

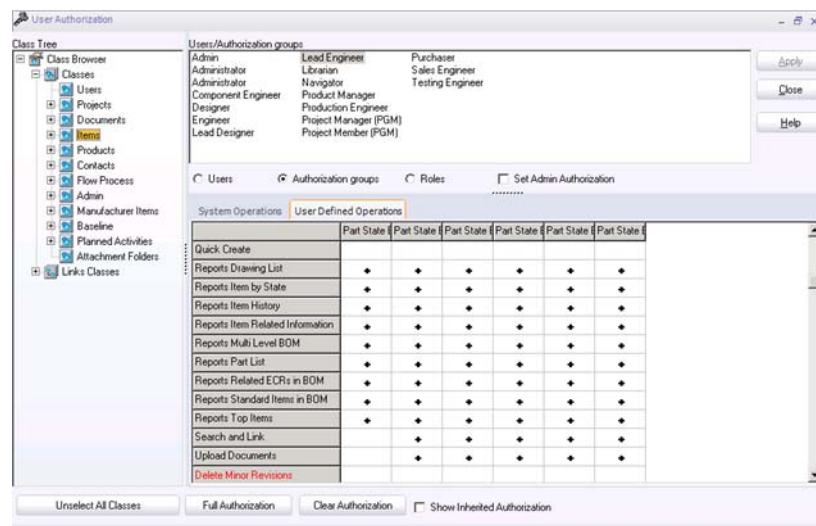


Adding Authorizations

To add group Authorizations:

Note: For details about adding Authorizations, refer to the SmarTeam – Editor Online Help.

- 1 From the Admin Console, User Maintenance, Security, Authorization.
- 2 In the User Authorization window:
 - Select the Class for which the Scripts were hooked
 - Select the Group to which you want to add the authorization
 - Select User Defined Operations tab
 - Add authorization to run the Standard Reports
 - Click **Apply**
 - Repeat for all Classes for which the Standard Reports were hooked

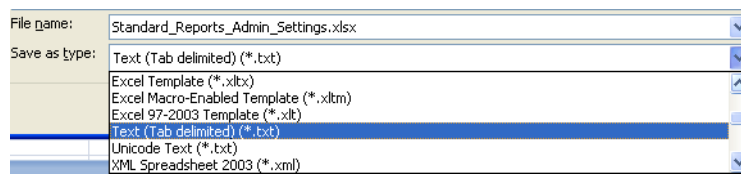


Configuring the Admin Settings File

Perform this procedure to configure the Admin Settings for Standard Reports.

To configure Admin Settings:

- 1 Import Admin Settings with SmarTeam Import Tool from the attached Excel file: **Standard_Reports_Admin_Settings.xls**
 - Open the **Standard_Reports_Admin_Settings.xls** in Microsoft® Excel
 - Change the Admin Settings values to conform to your customers' requirements
 - Delete headers (first row)
 - Save as: Text (Tab delimited)(*.txt)



- Open Import Tool
- Define Import:
 - Define a new import
 - Select **Admin Settings** class
 - Open Attribute definition
 - Define ID from Mask
 - Define other attributes from .txt file
 - Click **Run**, perform the import

2 Optional – Add Admin Folder for Standard Reports and link Admin Settings to Admin Folder.

Note: Sometimes there will be cases where the ENOVIA SmarTeam Express, CATIA Integration or Regulatory Certification Framework databases have their Admin behaviors already implemented and the Admin Settings need to be added to the database. For all non-ENOVIA SmarTeam Express users, add the Admin Settings via the Data Model Designer.

Replacing the Logo Image File

The Logo image file (**PLMDB_Report_Logo.bmp**) is copied from the SmarTeam Icons directory to the local directory of the user: **%UserProfile%\Local Settings\Application Data\SmarTeam\Reports**. You can replace the provided Logo file with your company Logo in the SmarTeam Icons directory.

User Settings

User settings are saved for each user when running a Standard report. This setting contains the user selection in the user interface.

User settings are created for each report that the user runs. This setting stores the selection of the user for the specific report. Only the SmarTeam Administrator can update/delete these settings.

These settings can be found by searching the report name in the section of the setting.

Chapter 5: SmarTeam Express Configurations

This chapter presents the definitions that result from applying SmarTeam Express behavior on a new database.

Check List for Express Configurations

The following definitions are created after applying SmarTeam Express behavior on a new database:

- [Copy Tool](#)
- [Configuration Views](#)
- [Create Items/BOM from Document Tree \(Design-to-Configure\)](#)
- [Upload Documents](#)
- [Workflow Processes](#)
- [Users and Authorizations](#)
- [Menu Definitions](#)
- [Application Tool Setup](#)
- [Documents Revision Branching](#)
- [Item State in SmarTeam Engineering Express](#)
- [Express Scripts](#)

Copy Tool

In SmarTeam, there are predefined mappings that support the SmarTeam Engineering Express scenarios. These are:

- [Reuse Item Structure: Class and Attribute Mapping](#)
- [Item Structure: Class and Attribute Mapping](#)
- [Create Standard Item: Class and Attribute Mapping](#)
- [New Item Structure: Class and Attribute Mapping](#)
- [BOM from CAD Design: Class and Attribute Mapping](#)

For details on the SmarTeam – Editor Copy Tool, see "Copy Tool" in SmarTeam – Editor Online Help.

Reuse Item Structure: Class and Attribute Mapping

Class		Attribute		Condition
Source	Target	Source	Target	
Item	Item	Description Item Type Top Item Classification Detailed Description Unit of Measure Service Item Long Lead Item Material Phantom Item	Description Item Type Top Item Classification Detailed Description Unit of Measure Service Item Long Lead Item Material Phantom Item ID (Sequence = Item)	Top Item = Yes
Items Tree	Items Tree	Find Number Operation Sequence Balloon Number Quantity Reference Designator Unit of Measure Find Number	Find Number Operation Sequence Balloon Number Quantity Reference Designator Unit of Measure Find Number Link Creation Source (Default Value = Reuse Item Structure)	
Item	Item	ID	ID	State <> Inactive State <> Temporary Top Item <> Yes
Items Tree	Items Tree	Quantity Balloon Number Link Creation Source Reference Designator Unit of Measure	Quantity Balloon Number Link Creation Source Reference Designator Unit of Measure Link Creation Source (Default Value = Reuse Item Structure)	
Software-Item	Software Item	ID	ID	State <> Inactive State <> Temporary

Class		Attribute		Condition
Items Tree	Items Tree	Balloon Number Operation Sequence Quantity Reference Designator Find Number Unit of Measure	Balloon Number Operation Sequence Quantity Reference Designator Find Number Unit of Measure (Link Creation Source = Reuse Item Structure)	
Standard Item	Standard Item	ID	ID	
Items Tree	Items Tree	Balloon Number Operation Sequence Quantity Reference Designator Find Number Unit of Measure	Balloon Number Operation Sequence Quantity Reference Designator Find Number Unit of Measure (Link Creation Source = Reuse Item Structure)	

Item Structure: Class and Attribute Mapping

Class		Attribute		Condition
Source	Target	Source	Target	
Item	Item	ID	ID	
Items Tree	Items Tree	Quantity Ballon Number Find Number Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure Effective from Effective until	Quantity Ballon Number Find Number Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure Effective from Effective until	
Software Item	Software Item	ID	ID	
Items Tree	Items Tree	Quantity Ballon Number Find Number Effective from Effective until Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure	Quantity Ballon Number Find Number Effective from Effective until Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure	
Standard Item	Standard Item	ID	ID	
Items Tree	Items Tree	Quantity Ballon Number Find Number Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure Effective from Effective until	Quantity Ballon Number Find Number Operational Sequence Reference Designator Unit Effective End Unit Effective Start Unit of Measure Effective from Effective until	

Create Standard Item: Class and Attribute Mapping

Class		Attribute		Condition
Source	Target	Source	Target	
Temporary Item	Standard Item	Description Material Unit of Measure Detailed description	Description Material Unit of Measure Detailed description Item Type (Sequence = Standard Item) ID (Default Value = Buy)	
Items Tree	Items Tree	Quantity	Quantity	

New Item Structure: Class and Attribute Mapping

Class		Attribute		Condition
Source	Target	Source	Target	
Item	Item	Classification Description Detailed description Item Type Long Lead Item Material Phantom Item Service Item Top Item Unit of Measure	Classification Description Detailed description Item Type Long Lead Item Material Phantom Item Service Item Top Item Unit of Measure ID (Sequence = Item)	
Items Tree	Items Tree	Ballon Number Find Number Operation Sequence Quantity Reference Designator Unit of Measure	Ballon Number Find Number Operation Sequence Quantity Reference Designator Unit of Measure	
Software Item	Software Item	Cost Description Detailed Description Classification Item Type	Cost Description Detailed Description Classification Item Type ID (Sequence = Software Item)	

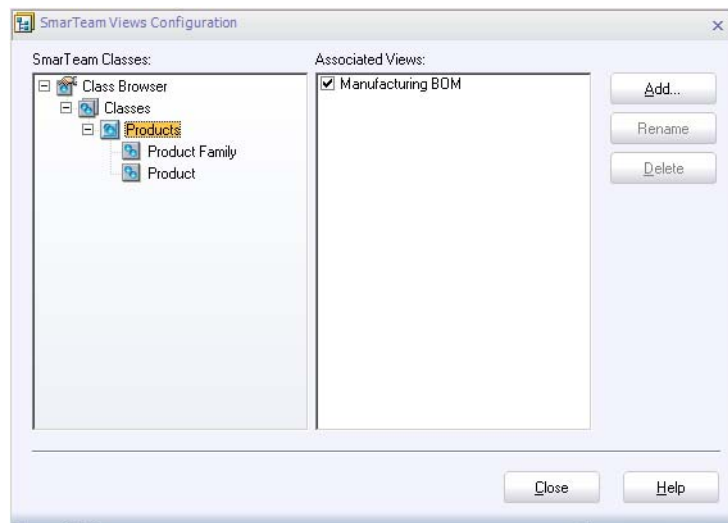
Class		Attribute		Condition
Source	Target	Source	Target	
Items Tree	Items Tree	Ballon Number Quantity Operation Sequence Reference Designator Find Number Unit of Measure	Ballon Number Quantity Operation Sequence Reference Designator Find Number Unit of Measure	
Standard Item	Standard Item	Description Classification Cost Item Type Service Item Unit of Measure	Description Classification Cost Item Type Service Item Unit of Measure ID (Sequence = Standard Item)	
Items Tree	Items Tree	Ballon Number Quantity Operation Sequence Find Number Reference Designator Unit of Measure	Ballon Number Quantity Operation Sequence Find Number Reference Designator Unit of Measure	

BOM from CAD Design: Class and Attribute Mapping

Class		Attribute		Condition
Source	Target	Source	Target	
Assembly	Item (Relational Link = Specification dependency link)	Item Number Effective From Effective Until Description	ID Effective From Effective Until Description	
Documents Tree	Items Tree	Reference Designator Quantity Effective From Effective Until Unit of Measure	Reference Designator Quantity Effective From Effective Until Unit of Measure Link Creation Source (Default Value = BOM from CAD Design)	
Part	Item (Relational Link = Specification dependency link)	Item Number	ID	
Documents Tree	Items Tree	Reference Designator Quantity Unit of Measure	Reference Designator Quantity Unit of Measure Link Creation Source (Default Value = BOM from CAD Design)	
Standard	Standard Item (Relational Link = Specification dependency link)	Item Number Description	ID Description	
Documents Tree	Items Tree	Reference Designator Effective From Effective Until Quantity Unit of Measure	Reference Designator Effective From Effective Until Quantity Unit of Measure Link Creation Source (Default Value = BOM from CAD Design)	

Configuration Views

There is one defined configuration view in the system Manufacturing BOM, but in SmarTeam Engineering Express, the Items Tree is also considered as an Engineering BOM view.



The Item Tree is the default configuration view and it is considered as an Engineering BOM View.

Configuration Views are taken into consideration when performing an Export BOM to XML and Locking BOM Structure operations.

For details on Configuration Views, see "SmarTeam Configuration Views Definition" in SmarTeam – Editor Online Help.

Create Items/BOM from Document Tree (Design-to-Configure)

Design-to-Configure is used in the Express Methodology in order to connect the Design back to the Engineering. For full details on Design-to-Configure, see "Design-to-Configure Automatic BOM Creation from CAD Integration" in SmarTeam – Editor Online Help.

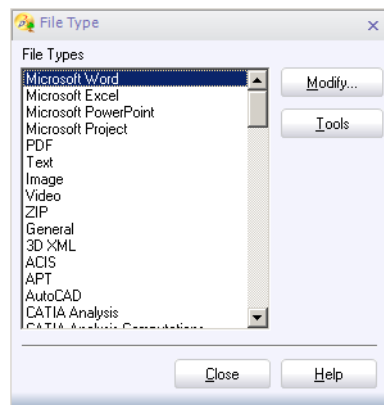
Upload Documents

When running Upload Documents, the file type of the document to be uploaded is automatically identified by its extension from the definitions made in the Applications Setup utility.

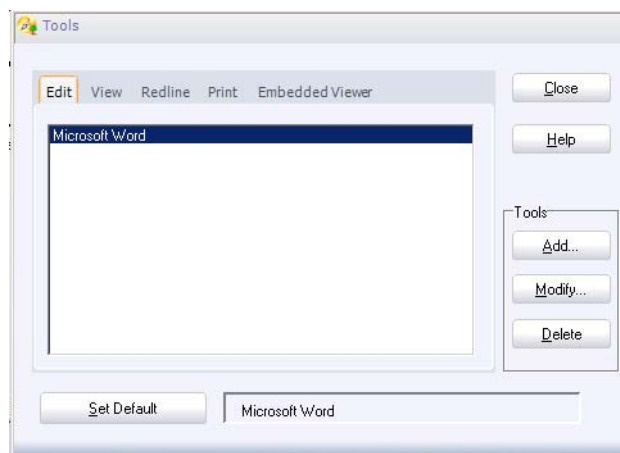
To define file type extensions

- 1 From the SmarTeam – Editor main menu, select **Admin > Applications Setup**.

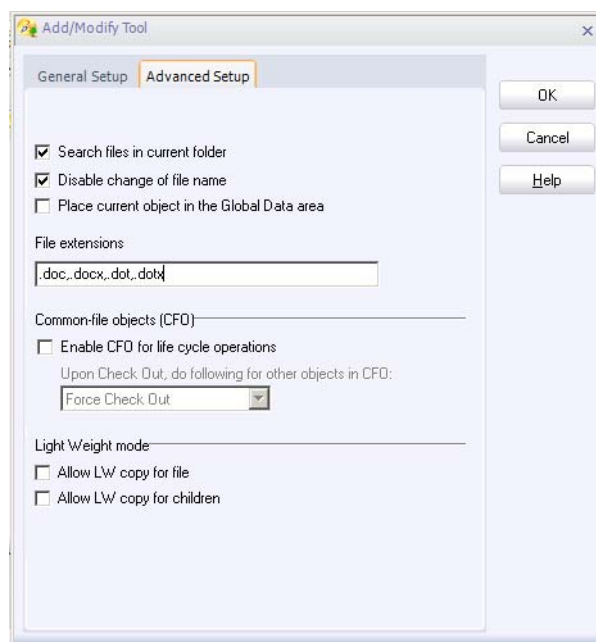
The File Type window appears:



- 2 Select the desired file type, and then select **Tools**.



- 3 From the **Edit** tab, in the right panel, select **Modify** and in the Add/Modify Tool window, switch to the **Advanced Setup** tab.



- 4 In the File Extensions field, enter the desired file extensions, delimited by commas. For example, you can define four different file types for Microsoft Word : .doc,.docx,.dot,.dotx

Workflow Processes

This section describes each Workflow process used in conjunction with SmarTeam Engineering Express, and presents flowcharts and node descriptions for each process.

Most of these processes are implemented by the Flowchart Designer. For details, see "Starting the Flowchart Designer" in SmarTeam – Editor Online Help.

User Permissions for a Workflow Process

Update Permission for the Process Profile Card

Only users who have appropriate permissions defined in User Maintenance can update profile cards. Within those users, only node users and administrators are authorized to update the profile card of the process before the process is completed.

This is implemented in the Before Attach object event of the workflow process.

Note: When the workflow process has ended, users cannot update the profile card of the process.

Attach/Detach Objects from/to the Workflow Process

Only the users of the current node or the administrator can attach items/documents to the flow process or detach objects from the flow process.

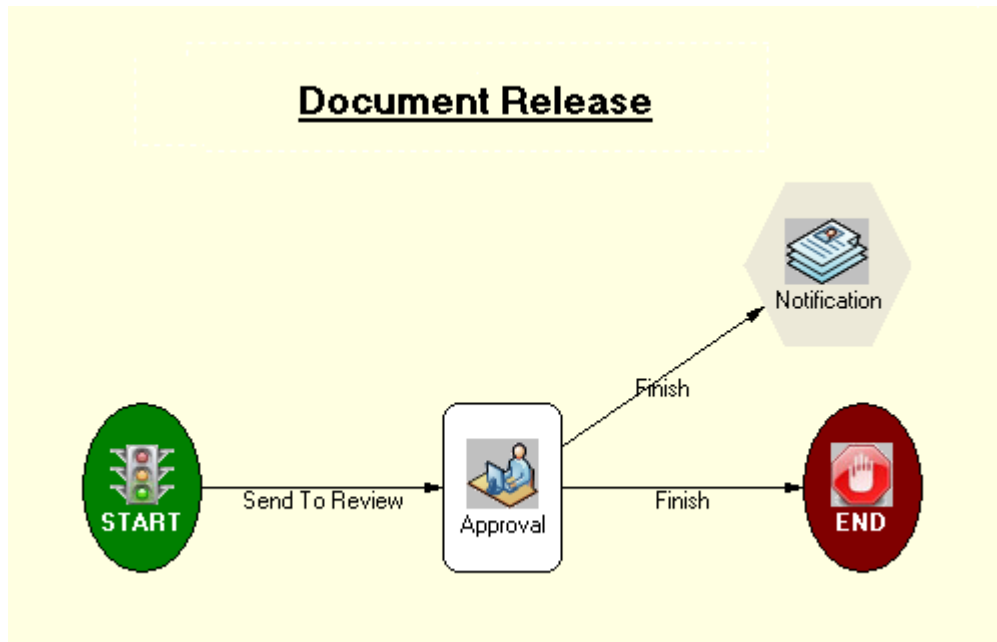
Note: When the workflow process has ended, users cannot attach/detach objects to the process.

Document Release

The Document Release process is used when a new document is created and needs to be approved, for example, New Design Part, New Specification Document.

At the end of this process, the document status is updated to Released.

Document Release Flowchart



Document Release Flowchart Node Description

Node	Assigned Group	Task
Start	Current user	Initiator for the release Prepares document for release
Approval	Lead Designer	Performs a Release lifecycle operation Approves the document
Notification	All reviewers	Notifies all users of the node

Engineering Change Request (ECR)

A process that is used by designers and engineers in order to request a change of an existing product/document due to:

- Customer needs
- Market needs
- Internal needs etc.

An ECR may lead to the creation of an ECO, put on hold or rejected according to the decision makers (the Change Control Board).

To perform a change on an object, the user needs to perform the following steps:

- 1 Select the object(s).
- 2 Initiate an ECR process.

The system automatically creates the ECR and runs then the script that is hooked for that class.

Along with the ECR, the system creates three related folders:

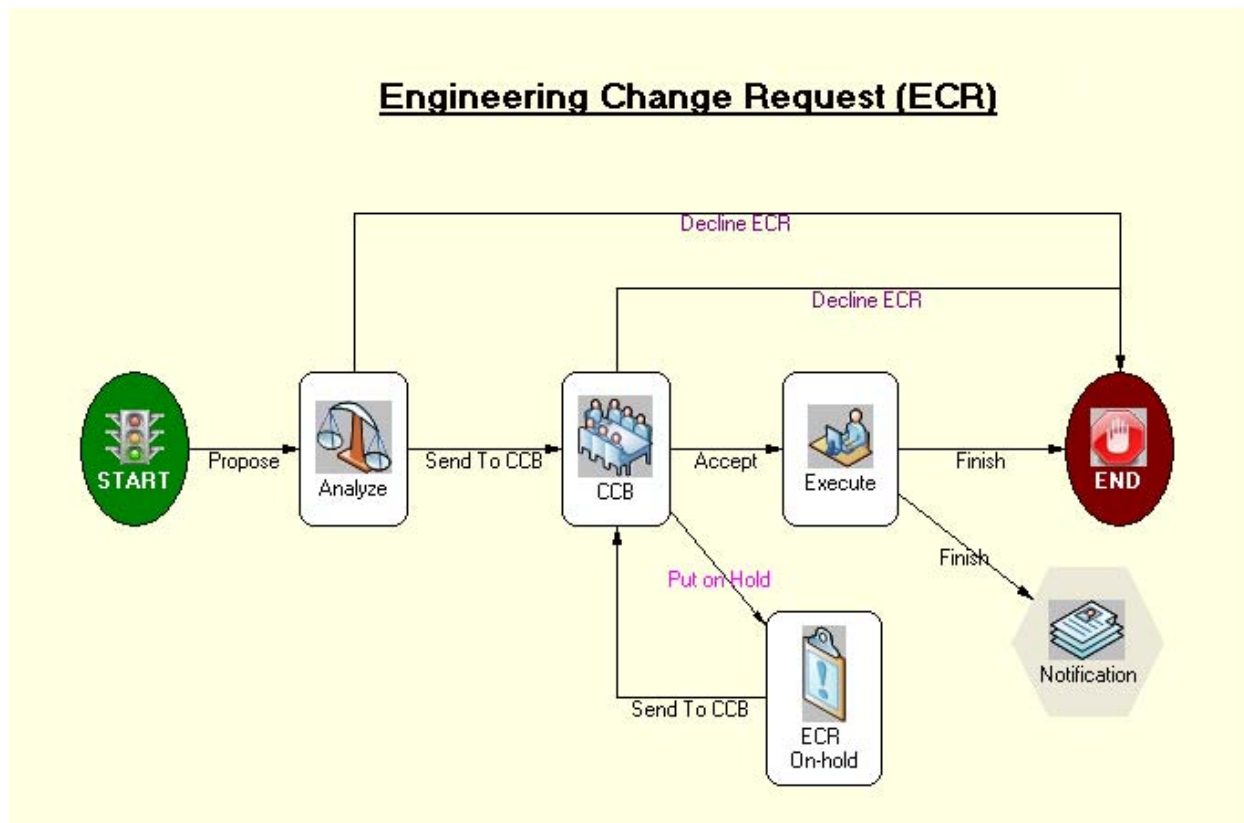
- Affected
- Solution
- References

Note: The description of the folder should describe what it contains. For example: "Affected objects in ECR-123". The description should contain the value from the Admin Settings and the folder ID.

The description of each folder is taken from the following Admin Setting values:

- First value
 - Second value
 - Third value.
- 3 The object(s) that were selected by the user in Step 1 will be added to the process root as general link and as a child of the Attachment folder. If the user links another object(s) to the ECR process by dragging and dropping, or copying/cutting and pasting after the process has been initiated, s/he must manually link these objects to the Affected <ECR_ID> folder.
 - 4 The user performs the required operation on the object(s) in the Affected <ECR_ID> by clicking the right mouse button.

The results of these operations are added to the Solution folder as related objects. The link type is the same standard link allowed between these types of objects in SmarTeam.
 - 5 After approval of the ECR, the user can initiate an ECO on the related object of the ECR and then the ECO will be linked to the ECR. This enables a quick view of the ECR's related ECO.

ECR Flowchart**ECR Flowchart Node Description**

Node	Assigned Group	Task
Start	Current user	Defines the ECR
Analyze	Lead Engineer	Analyzes/verifies the ECR
CCB	Engineer Lead Engineer Testing Engineer Production Engineer Purchaser Sales Engineer	Approves the ECR
Execute	Lead Engineer	Executes the ECO for the solutions Sends to the relevant Engineer/Design Engineer to implement the change Updates the ERP
ECR On-hold	Lead Engineer	
Notification	All reviewers	

Engineering Change Order (ECO)

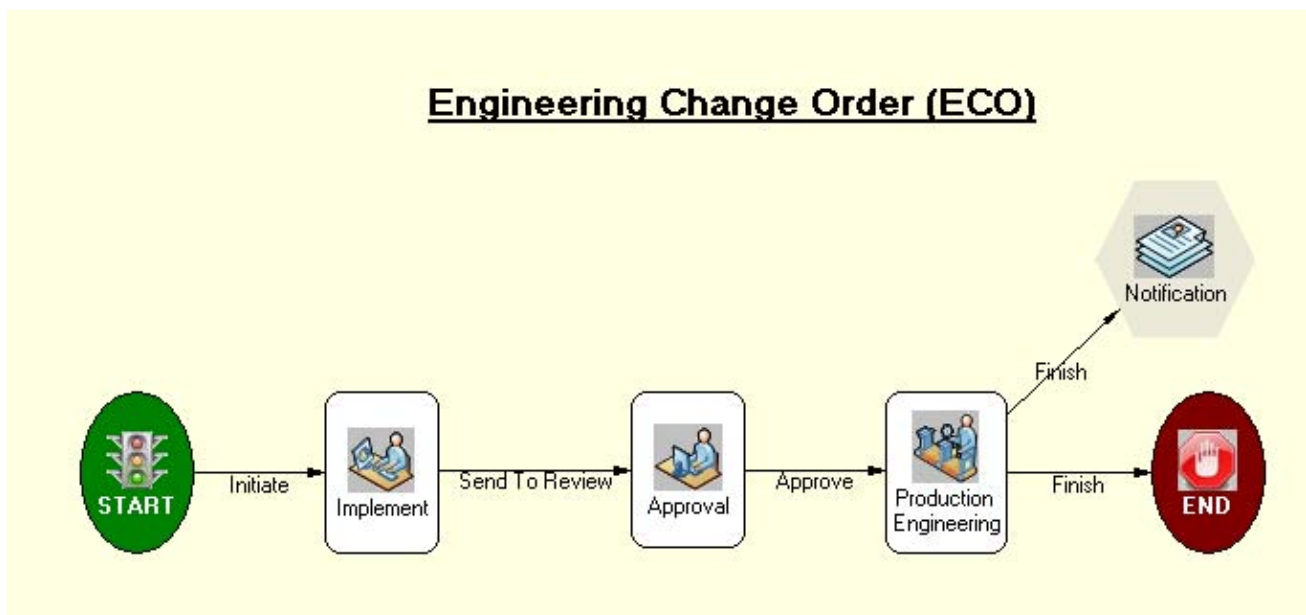
A process that is created after an ECR is approved or when there is a need to modify an item/document without an ECR.

The results of an ECO are:

- the revising of an item/document
- creation of an item/document

Note: A general link is created between the ECO and the ECR if the same item exists in both, and the item in the ECR is located under the folder named **Affected**.

ECO Flowchart



ECO Flowchart Node Description

Node	Assigned Group	Task
Start	Current user	
Implement	Engineer Designer	Implements the change

Node	Assigned Group	Task
Approval	Lead Engineer, Lead Designer	Approves quality assurance AUTO promotes to "Release" Lifecycle operation Performs "Release" Lifecycle operation on documents Lead engineer approval / Project manager approval
Production Engineering		Creates M-BOM Promotes to "Production" Lifecycle operation Production Engineer approval Automatically exports BOM as XML for ERP usage hooked in the Before Accept node
Notification	All reviewers	

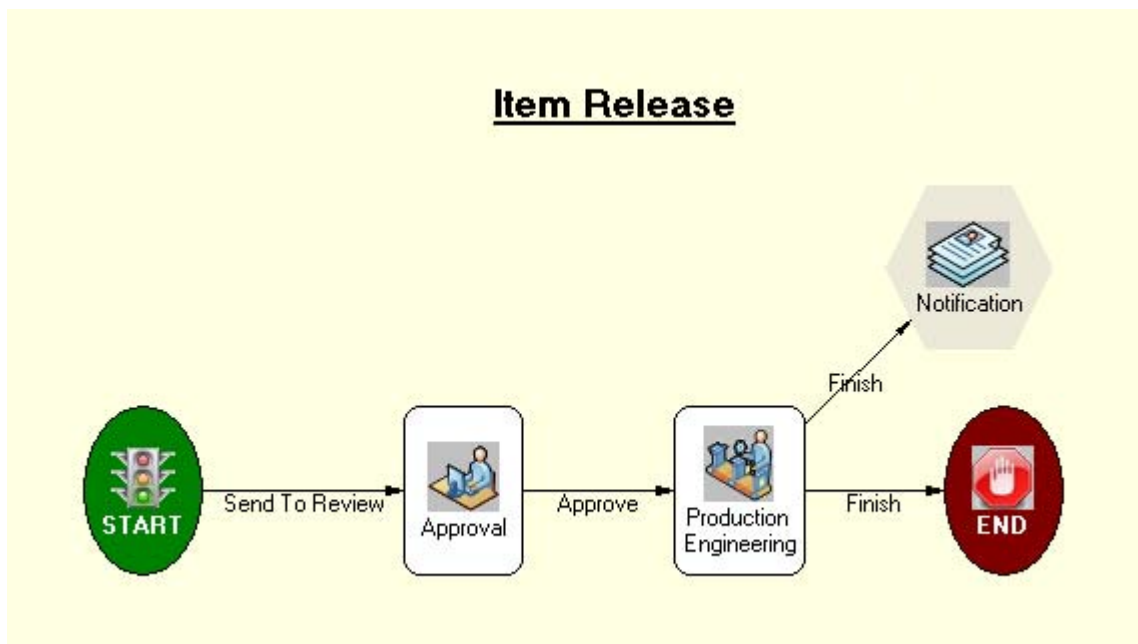
Item Release

The Item Release process is used when a new item or software item is created and needs to be approved, for example, release of the EBOM structure or items imported from an Excel file.

Note that for temporary items and standard items, a different process is used.

At the end of this process, the item state is updated to Released.

Item Release Flowchart



Item Release Flowchart Node Description

Node	Assigned Group	Task
Start	Current user	Implements the change
Approval	Lead Engineer, Lead Designer	Approves quality assurance Automatically performs "Release" Life-cycle operation on documents Lead engineer approval / Project manager approval
Production Engineering		Creates M-BOM Promotes to "Production" Lifecycle operation Production Engineer approval Automatically exports BOM as XML for ERP usage hooked in the Before Accept node
Notification	All reviewers	

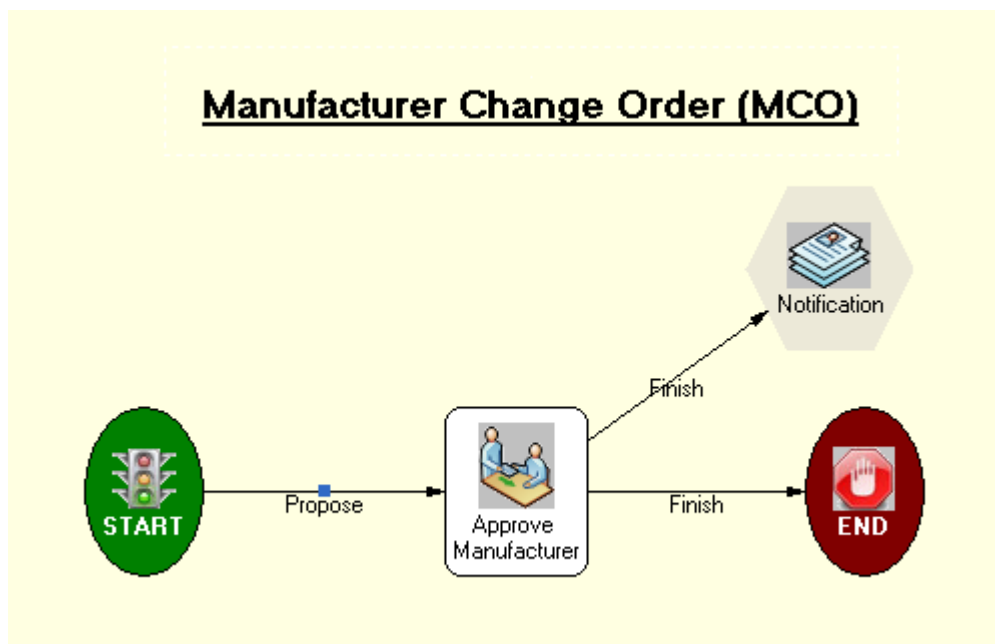
Manufacturing Change Order

The Manufacturing Change Order process is used in order to replace a manufacturer for an item due to one the following reasons:

- The Manufacturer stopped manufacturing the item
- The quality of the manufacturer no longer fits the company's needs
- The customer requests delivery from a specific manufacturer.

As a result of this process, the manufacturer can be made obsolete and a new manufacturer item may be created.

MCO Flowchart



MCO Flowchart Node Description

Node	Assigned Group	Task
Start	Current user	Proposes new manufacturer
Approve Manufacturer	Purchaser	Approves new manufacturer
Notification	All reviewers	Notification

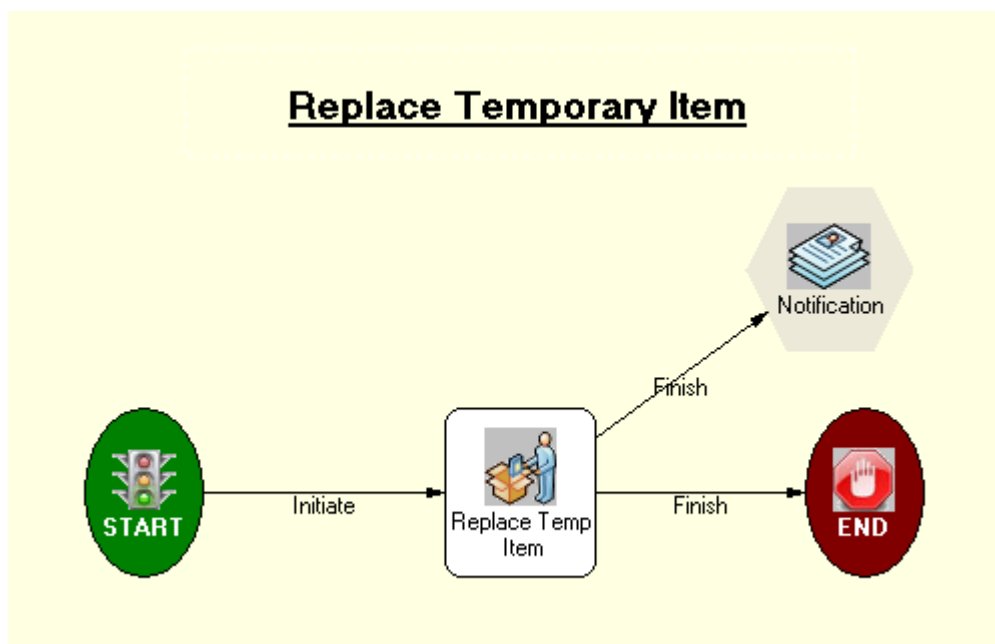
Replace Temporary Item

The Replace Temporary Item process is initiated by the Component Engineer in order to replace a temporary item that has been inserted into the Bill of Material after the true item is available.

The new item is approved and replaces the temporary item in all its instances. Also, all related objects, such as documents, that were attached to the temporary item will be unlinked and attached to the new item.

The temporary item is either made obsolete or deleted from the system. See "Replace Temporary Items in BOM" in SmarTeam – Editor Online Help for the Admin Settings of the Replace Temporary Item process.

Replace Temporary Item Flowchart



Replace Temporary Item Flowchart Node Description

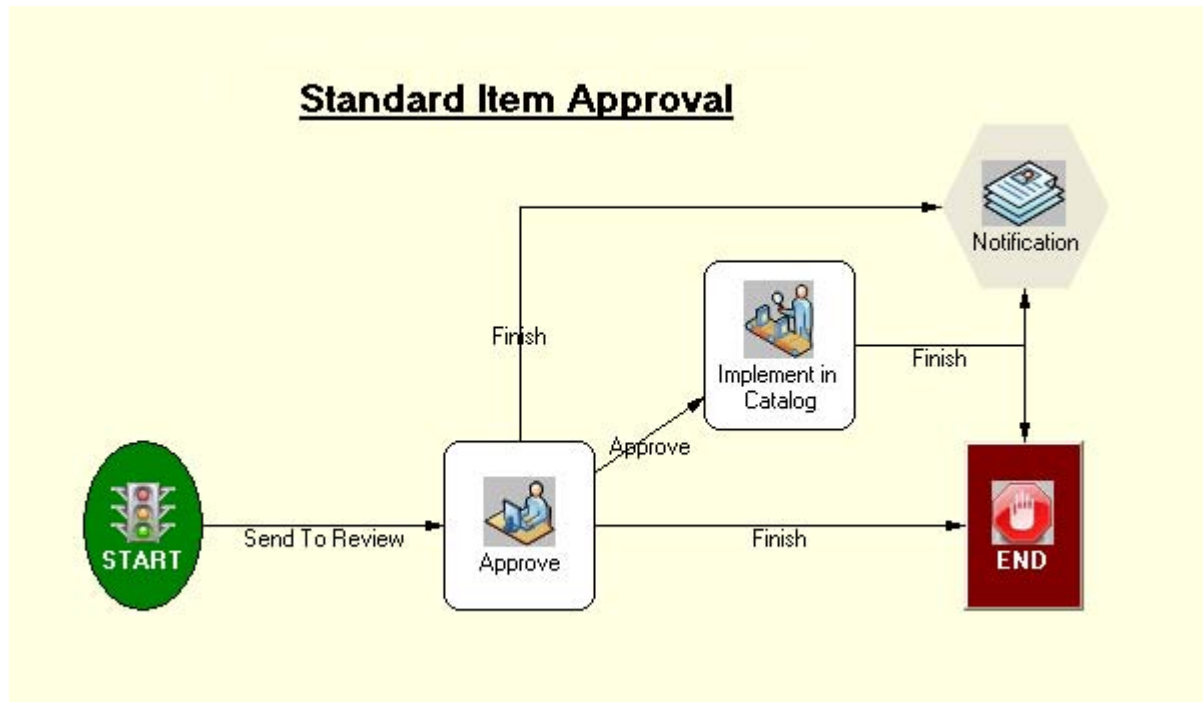
Node	Assigned Group	Task
Start	Current user	
Release Temp item	Lead Engineer; Component Engineer	Searches for the replacement item in order to replace temporary item
Notification	All reviewers	Notification

Standard Item Approval

The Standard Item Approval process is initiated by the Component Engineer in order to approve a standard item in a case where a temporary item has not been created as a standard item.

At the end of the process the standard item is approved and released.

Standard Item Flowchart



Standard Item Nodes Definition

Node	Assigned Group	Task
Start	Component Engineer	
Approve	Component Engineer	Manually releases the item Automatically exports BOM as XML for ERP usage hooked in the Before Accept node
Implement in Catalog	Librarian	
Notification	All reviewers	Notification

Users and Authorizations

SmarTeam – Engineering Express comes with the following predefined groups for implementation.

Note: User Joe is now obsolete. Use the Admin user instead.

Group	Description
Admin	System administrator who holds all authorizations in the system
Designer	Person creating CAD designs, documents and items (Design-to-Configure)
Lead Designer	Person who has advanced capabilities to create new CAD designs and documents
Librarian	Person who is responsible for the standard information in the design department
Navigator	Person who can only (re)view data in the system
Engineer	Person who is responsible for managing product definition, such as items and related designs
Component Engineer	Person who is responsible for definition and approval of new standard items
Testing Engineer	Person who is responsible for verifying the product with regard to specifications and requirements
Lead Engineer	Person who has advanced capabilities to decide on items and modifications
Sales Engineer	Person who is responsible for the early product definition and bidding information
Production Engineer	Person who works on preparing the engineering BOM and completes it for production
Purchaser	Person who is responsible for all items to be purchased in products
Project Manager (PGM)	Not in the scope of SNE
Project Member (PGM)	Not in the scope of SNE
Product Manager	Not in the scope of SNE

Menu Definitions

In SmarTeam Engineering Express, different menus appear when different users are logged in. The menus that appear are defined according to user groups.

The following table presents the menus available in SmarTeam Engineering Express, and shows the names of the groups for whom these menus appear.

Menu Name	Group(s)
Design	Designer Lead Designer Librarian
Engineering	Engineer Component Engineer Testing Engineer Lead Engineer Sales Engineer Production Engineer Purchaser
Navigation	Navigator
Project Manager	Project Manager (PGM)
Project Member	Project Member (PGM)
Administrator	Admin

Application Tool Setup

SmarTeam has been configured with a wide range of file types for working with different applications. For a complete list of all the Application Tool Setup parameters, refer to the SmarTeam Engineering Express Implementation Guide.

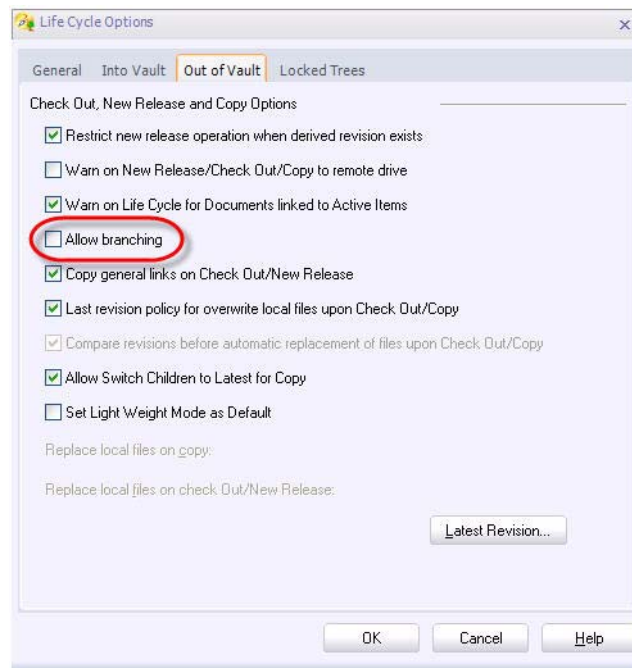
Documents Revision Branching

The PLMDB is not configured and tested with the branching functionality.

To prevent the user from using branching:

- 1 From the SmarTeam - Editor menu, select **Admin > Administrator Options > Life Cycle Options**.
- 2 Select the tab **Out of Vault**.

- 3 Unselect the **Allow branching** checkbox.



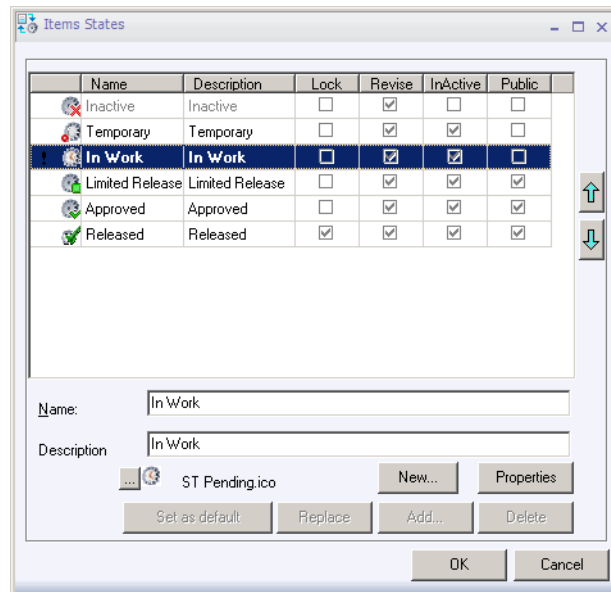
Item State in SmarTeam Engineering Express

Definition

An item may have one of the following states during its lifecycle, according to its maturity level as shown in the Item States window:

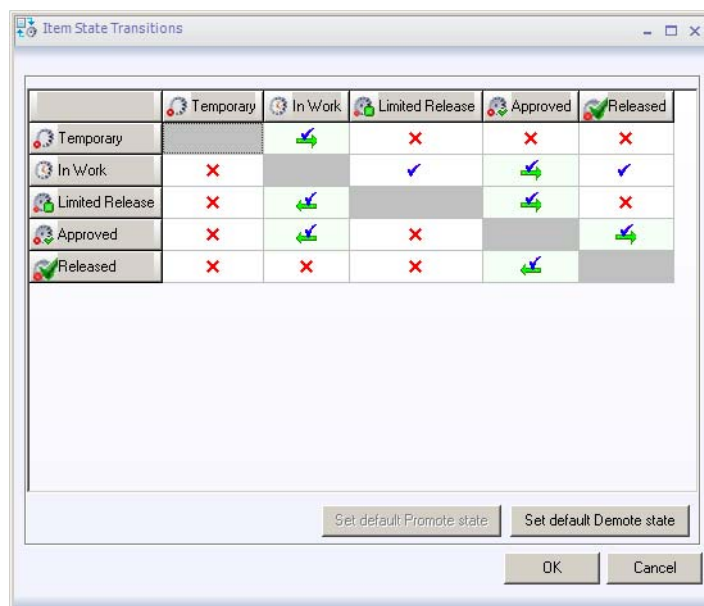
- **Inactive:** A state that the user can demote to from any other state.
- **Temporary:** An optional state for implementation. It defines the early lifecycle of the item. If it is not implemented, the class Temporary Item should be implemented instead.
- **In Work:** An intermediate state representing the Item lifecycle during its development phase. This state is the default state in the SmarTeam Engineering Express implementation.
- **Limited Release:** A state that is used to release an item for purchasing in the ERP system while its parent item has not yet been released. This state indicates that the item may be a long-lead item, and it should be released at a early stage of the parent product development.
- **Approved:** A state that indicates that the item is approved for Production planning, prior to releasing to ERP. This state is generally applied to the Engineering BOM (EBOM). After the EBOM is approved, it can no longer be modified as the MBOM is already created, and it is the only BOM that can be adjusted.

- **Released:** A state that indicates final approval of an item to be released to production in ERP. This state is generally applied to the Manufacturing BOM (MBOM).



Item State Transitions

The following table represents the possible transitions between the different Item States. Note that the Temporary state is not implemented in the implementation shown below:



For details on this window, see "Lifecycle Rules Setup" in SmarTeam – Editor Online Help.

Lifecycle Rules Setup

In SmarTeam, there are specific lifecycle rules defined for each CAD application that works with the PLMDB. Lifecycle Rules Setup determines the behavior of the lifecycle operations.

To view the lifecycle rules, run the SmarTeam Admin Console and select Lifecycle Rules Setup.

Express Scripts

In SmarTeam Express, there are predefined scripts in Script Maintenance (Hooks and User Defined), Form Designer and Workflows. These expand SmarTeam capabilities in order to support the SmarTeam Express scenarios.

The following table presents the list of script files:

Script Name	Description
PLMDatabase.bs	Contains SNE functions that call Express DLLs
PLMDB_CadBomExport.ebs	Creates a BOM for updating an Assembly Drawing
PLMDB_ObjectInitialization.ebs	Fills in attributes on first save of the document
PLMDB_OnBeforeUpdateProject.ebs	Disables the option of changing the Project Template
PLMDB_Standard.ebs	Enables the Express Standard Part Methodology
PLMDB_UpdateDirtyFlag.bs	Updates the 'TDM_CAD_DIRTYFLAG' attribute on CATIA document copy
PLMDB_DesignCopy.bs	Performs a Design Copy operation updated for SDE usage
PLMDB_LocateInCATIA.bs	Locates a CATIA instance inside CATIA from SmarTeam – Editor
ProjectManagement.ebs	Contains PGM functions

Hooks

In the Script Maintenance tool, the administrator can define scripts that run on SmarTeam Hooks.

PLMDatabase.bs

Function Name	Description	Class Name	Stage	Operation
PLMDB_AuthorizationOnUpdate	For a Workflow Process that has started, prevents non-authorized users from updating the process. Authorized users are Workflow node users and administrators.	Flow Process	Before	UPDATE
PLMDB_CleanRevisionField_Before	Enters a space character in the Revision field in order not to show the folder revision during an Add command.	Folder	Before	ADD
		Folder	Before	AddAsCopy
PLMDB_CleanRevisionField_After	Clears the contents of the the Revision field of the folder.	Folder	After	ADD
		Folder	After	AddAsCopy

Function Name	Description	Class Name	Stage	Operation
PLMDB_CreateFolders	Creates a single level of Folders linked to the Project Desktop as defined in Admin Setting.	Projects	After	ADD
		Projects	After	AddAsCopy
PLMDB_ItemLCRestriction	Extends the checking of Item Specification Document to include checking 3D documents by following the 2D link and also checking its status during a Promote operation.	Software Item	Before	Life Cycle Stage 2
		Standard Item	Before	Life Cycle Stage 2
PLMDB_LockStructure	Supports the locking of the Item Tree per State and Configuration View as defined in the Admin Settings	Items Tree	Before	ADD
		Items Tree	Before	UPDATE
		Items Tree	Before	DELETE
PLMDB_PurgeSpecificationLinks	Purges Specification Links between Items and Documents	Item	After	Promote
		Software Item	After	Promote
		Standard Item	After	Promote

PLMCadBomExport.ebs

Function Name	Description	Class Name	Stage	Operation
SDEAfterAdd	Disabled by default. If not disabled, behaves as SDEAfterUpdate	Drawing	After	ADD
SDEAfterUpdate	Exports a BOM Table from a CAD Drawing to an Excel file that is saved as a SmarTeam Document and links it to a CAD Drawing	Drawing	After	UPDATE

PLMDB_ObjectInitialization.ebs

Function Name	Description	Class Name	Stage	Operation
PLMDB_ObjectInitialization	Creates Doc ID, Description, CAD Identifier and File Name (if they do not exist) on the first Save of a document.	Analysis	Before	ADD
		Analysis Result	Before	ADD
		Assembly	Before	ADD
		Design Manufacturing	Before	ADD
		Design Specification	Before	ADD
		Document	Before	ADD
		Drawing	Before	ADD
		ECAD Document	Before	ADD
		ECAD Package	Before	ADD
		Exchange	Before	ADD
		NC File	Before	ADD
		Part	Before	ADD
		Representation	Before	ADD
		Software Package	Before	ADD
		Standard	Before	ADD

PLMDB_OnBeforeUpdateProject.ebs

Function Name	Description	Class Name	Stage	Operation
PLMDBOnBeforeUpdateProject	Neutralizes the CATIA function 'Current Template Project', i.e., prevents CN_TEMPLATE_PROJECT from being updated.	Projects	Before	UPDATE

PLMDB_Standard.ebs

Function Name	Description	Class Name	Stage	Operation
KeepStandardLocalFile	Sets 'AllowAutomaticDelete' = False on Catalog file for Into Vault operations in the Standard Class	Documents	After	Life Cycle Stage 2
SetKeepLocalFile	Specifies that if a file is located in the Shared directory, do not delete it for 'Into Vault' operations on the selected class.	Standard	Before	Check In
		Standard	Before	Release
SetStandardDirectory	Sets the target directory to the Shared directory for Copy operations on the selected class.	Standard	Before	Life Cycle Stage 1

PLMDB_UpdateDirtyFlag.bs

Function Name	Description	Class Name	Stage	Operation
Update_DirtyFlag	Updates the TDM_CAD_DIRTYFLAG attribute when a document is copied during a Check Out operation.	Design	After	Edit

ProjectManagement.ebs

Function Name	Description	Class Name	Stage	Operation
AfterRetrieveTaskObjects	Filters the tasks for the tasks of the current user	Planned Activities	After	Retrieve objects
OnBeforeUpdateAssignmentLogic	Runs the Project Management update assignment logic.	User Task Assignments	Before	UPDATE
OnBeforeUpdateTaskLogic	Runs the Project Management update task logic.	Task	Before	UPDATE
OnAfterSmarTeamLogin	Verifies if user participates in PGM and if so take a license for him (on Start-Up of the Editor)	As defined		

User Defined Tools

In the Script Maintenance tool, the administrator can define scripts that run on User Defined Tools.

PLMDBatabase.bs

Function Name	Description	Class Name
PLMDB_ImportXML	Runs the ImportXML tool to upload Items from the XML file created by ERP	Class Browser
PLMDB_QuickCreate	Launches the Quick Create tool for quick creation of new SmarTeam objects	Class Browser
PLMDB_QuickSearch	Launches the Quick Search tool for a simple search for SmarTeam objects	Class Browser
PLMDB_Report	Launches the SmartQuickReport tool to create a report on the selected object	Class Browser
PLMDB_DeleteMinorRevisions	Deletes Minor Revisions of selected Document if they are not linked to other SmarTeam objects except for Folders	Document
		Planning Document
PLMDB_DisplayDrawingFromItem	Displays Drawings that are linked to 3D CAD objects linked to the selected Item	Items
PLMDB_ECADImport	Imports Electrical Components as children of the selected Item, and imports related ECAD data (design zip file and viewing documents)	Item

Function Name	Description	Class Name
PLMDB_SearchAndLink	Opens a Quick Search to select objects to be linked to the first object selected.	Documents
		Items
		Projects
		Favorite Definitions
		Smart Servers
		Manufacturer Items
		Products
		Contacts
		Baseline
PLMDB_SendBOM	Exports the BOM data from the selected Item to an XML file in the directory defined in the Admin Setting, while taking into account the active Configuration View.	Items
PLMDB_SendXML	Sends the Item data from the selected Item to an XML file in the directory defined in the Admin Setting.	Items
PLMDB_UploadDocuments	Launches the Upload Documents tool for quick selection, defining attributes and uploading files as SmarTeam documents.	Items
		Contacts
		Manufacturer Items
		Projects
		Folder
		Products
PLMDB_UseAsTemplate	Duplicates the selected Document structure (Folder and Document) to be linked to a new Project.	Document
		Folder

PLMDB_CadBomExport.ebs

Function Name	Description	Class Name
SDEBOMTable	Calls the SDEAfterUpdate function that exports the BOM Table from a CAD Drawing to an Excel file.	Drawing

PLMDB_DesignCopy.bs

Function Name	Description	Class Name
DesignCopy	Runs the Design Copy function while storing a global value for use in the ObjectInitialization script.	Assembly
		Part
		Drawing

PLMDB_LocateInCATIA.bs

Function Name	Description	Class Name
LocateInCATIA	Highlights a document in the CATIA session if the object selected in the SmarTeam Window is open in CATIA.	Part
		Assembly
		Drawing

PLMDB_Standard.ebs

Function Name	Description	Class Name
PreSetStandardClass	Sets the default Class for the 'Save As' operation to the Standard Class if the file is saved in the Shared directory.	Standard

ProjectManagement.ebs

Function Name	Description	Class Name
OpenInMsProject	Opens the selected Project Plan in MS-Project.	Project Plan
PromotePlanning	Promotes the Project Plan to the next state.	Project Plan
PromoteTasks	Promotes the Tasks to the next state.	Task

Form Designer

In the Form Designer, the administrator can define scripts that run on Profile Card Hooks (Start Up and Exit).

PLMDBatabase.bs

Function Name	Description	Class Name	Operation
PLMDB_SetProjectStartDate		Project	Screen StartUp

Note: PLMDB_SearchAndLink runs when clicking the Search and Link button that appears in many Profile Cards.

PLMDB_ObjectInitialization.ebs

Function Name	Description	Class Name	Operation
PLMDB_BeforeScreenStartup	Creates Doc ID, Description, CAD Identifier and File Name (if they do not exist) on the first Save of a document.	Assembly	Screen StartUp
		Drawing	
		Exchange	
		Part	
		Standard	

Workflow Scripts

In the Flow Chart Designer, the administrator can define scripts that run on Workflow Hooks.

Document Release

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Approval	OnSendAfter	PLMDB_ShowFlowStatus
Initiate	OnSendAfter	PLMDB_ShowFlowStatus
QA Review	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Engineering Change Order (ECO)

Node Description	Event Name	Script Function Name
NULL	AfterAttachObject	PLMDB_CreateECO
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Approval	OnSendAfter	PLMDB_ShowFlowStatus
Implement	OnSendAfter	PLMDB_ShowFlowStatus
Production Engineering	OnSendAfter	PLMDB_ShowFlowStatus
Production Engineering	OnSendBefore	PLMDB_ExportBOMtoXML
QA Review	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Engineering Change Request

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Analyze	OnSendAfter	PLMDB_ShowFlowStatus
CCB	OnSendAfter	PLMDB_ShowFlowStatus
Define	OnSendAfter	PLMDB_ShowFlowStatus
ECR On-hold	OnSendAfter	PLMDB_ShowFlowStatus
Execute	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSmartFlowViewOpen	PLMDB_CreateECRFolders

Standard Item Approval

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Implement in Catalog	OnSendAfter	PLMDB_ShowFlowStatus
Release Item	OnSendAfter	PLMDB_ShowFlowStatus
Release Item	OnSendBefore	PLMDB_ExportBOMtoXML
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Item Release

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Approval	OnSendAfter	PLMDB_ShowFlowStatus
Initiate	OnSendAfter	PLMDB_ShowFlowStatus
Production Engineering	OnSendAfter	PLMDB_ShowFlowStatus
Production Engineering	OnSendBefore	PLMDB_ExportBOMtoXML
QA Review	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Manufacturer Change Order (MCO)

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Approve Manufacturer	OnSendAfter	PLMDB_ShowFlowStatus
Propose Manufacturer	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Replace Temporary Item

Node Description	Event Name	Script Function Name
NULL	BeforeAttachObject	PLMDB_FlowBeforeAttachObject
NULL	BeforeDetachObject	PLMDB_FlowBeforeDetachObject
Replace Temp Item	OnSendAfter	PLMDB_ShowFlowStatus
Start Node	OnSendAfter	PLMDB_ShowFlowStatus

Notes:

- For all references to Script Function Name, the Script File Name is **PLMDatabase.bs**
- NULL = Script is linked to the Workflow and not to a specific node

Scripts Implementation**Sequence Patterns used for CAD**

If you want to change the Sequence Patterns used for CAD objects, the 'PLMDB_ObjectInitialization.ebs' constants definition must be changed. The constants definition that currently exist in the script file are:

```
'Constant Sequence Patterns - used to compare an string to a sequence
Const ID_SEQUENCE_PART As String          = "PRT-#####"
Const ID_SEQUENCE_ASSEMBLY As String      = "ASY-#####"
Const ID_SEQUENCE_PRODUCT As String       = "ASY-#####"          'For CATIA
Const ID_SEQUENCE_DRAWING As String       = "DRW-#####"
Const ID_SEQUENCE_STANDARD_PART As String = "STD-#####"
Const ID_SEQUENCE_STANDARD_PRODUCT As String= "STD-#####"        'For CATIA
Const ID_SEQUENCE_CFO As String           = "###" 'For SolidWorks
Const CFO_SEQUENCE_NAME As String         = "CFO Sequence" 'For SolidWorks
```

Chapter 6: Admin Settings

The Admin Settings in SmarTeam Engineering Express are used by the system administrator to specify default settings for the various tools available in SmarTeam Engineering Express.

Admin Settings are defined as a private saved search for the Administrator.

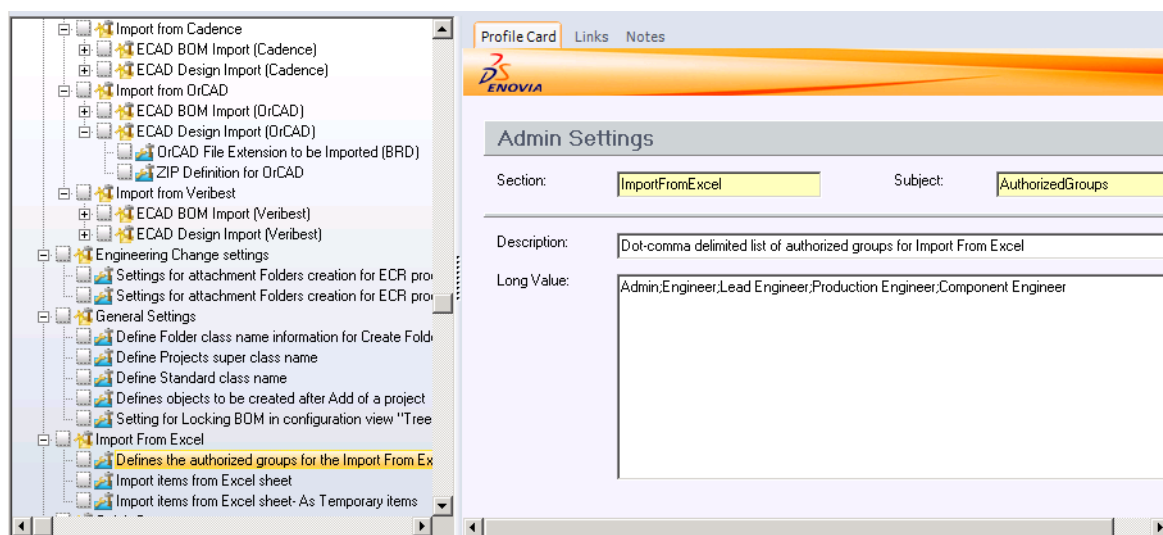
Admin Settings are defined on a company level and are mandatory.

User Settings are on a user level created during work. User Settings are not mandatory, but the administrator should know about these in order to be able to set behaviors for specific users.

Refer to the SmarTeam Engineering Express Implementation Guide for details on how to implement Admin Settings in your organization.

To enter default values for the individual utilities:

- 1 Select a utility from the Project tree in the left pane.
The utility's attributes are presented.
- 2 Select the attribute whose value you want to update.
- 3 Select the Long Value tab.
- 4 In the Long Value field, enter the desired options delimited by commas. For example:



IMPORTANT! All the values defined in the Admin Settings fields (First Value, Second Value, Third Value, Fourth Value and Long Value) are delimited and are *case-sensitive*. Therefore, care should be taken when defining these values.

Understanding the Admin Settings

In this section, Admin Settings are presented in table format. In each table, the following topics are presented, when relevant:

- Section
- Subject
- First Value
- Second Value
- Third Value
- Fourth Value
- Long Value

In addition, User Settings are defined automatically or defined by the administrator for certain users.

Note: To enable the user to select an option or to change an existing selected option, such as in the "Do not show this window again" in the Upload documents tool, the administrator should either delete the user settings or modify the values of the user settings.

To do so, the admin should search for the user setting according to the "Related User" and/or "Section" (that holds the tool name) attributes, then remove or modify the relevant value(s).

The following table lists all the tools whose user settings can modified/created by the administrator

Tool	User Setting
Quick Search	User setting is automatically defined when the user selects the option [Set Criteria as Default] Section: QuickSearch
Duplicate	User setting is automatically defined when the user selects the option [Do not ask me again]. In case the user ask not to open the file of the duplicated document Section: UseAsTemplate
Upload Documents	User setting is automatically defined when the user selects a path to upload documents from Section: UploadDocuments

Admin Settings List

General Settings

Define Folder Class Name Information for Create Folder UDT		
Attribute Name	Value	Description
Section	FolderClassInfo	Folder class name and link for Create Folder
Subject	Folder	
First Value	Folder	Class Name
Second Value	Documents Projects Relation	Link between folder and project class - for create folder script

Define Standard Class Name (Used in SolidWorks for defining the Toolbox definition)		
Attribute Name	Value	Description
Section	StandardClassName	Define Standard class name
Subject	Standard	
First Value	Standard	Class Name

Defines objects to be created after add a project		
Attribute Name	Value	Description
Section	CreateFolders	Folder names to be created after an Add Project operation
Subject	Folder	
Long Value	Requirements; Specifications; Design; Testing; Production	Description of the created folders

Setting for Locking BOM in Configuration View "Tree View"		
Attribute Name	Value	Description
Section	Locked per ConfView	Settings for locking BOM in configuration view "Tree view"
Subject		
First Value	Admin	Excluded group names for this script in a semi-colon delimited list
Long Value	Approved; Limited Release	Item State names in a semi-colon delimited list

Duplicate Admin Settings

Define attributes to be copied in Duplicate (Use As Template)		
Attribute Name	Value	Description
Section	UseAsTemplate	Attributes to be copied for Duplicate operation
Subject	CopiedAttributes	
Long Value	TDM_DESCRIPTION; TDM_DOCUMENT_TYPE	Set of attributes to be copied during the process of copying from one object to the other in a semi-colon delimited list.

Define classes to be excluded for Duplicate (Use As Template)		
Attribute Name	Value	Description
Section	UseAsTemplate	Excluded for Duplicate operation
Subject	ExcludedClasses	
Long Value	Assembly;Part;Drawing; Exchange	Classes to be excluded in a semi-colon delimited list. These classes cannot be copied by the Duplicate process as they should be duplicated through the CAD Integration or with the Design Copy tool.

ECAD Import

General Settings for ECAD BOM File Import		
Attribute Name	Value	Description
Section	ECAD Import	General Settings for ECAD BOM File Import
Subject	BOM_General	
First Value	ECAD Document	Class for storing the imported BOM file
Second Value	Text	Imported BOM file type
Third Value	Released	Lifecycle state for the ECAD Document after creation

Engineering Change Settings

ECR Folder description		
Attribute Name	Value	Description
Section	ECMsetting	Creation of attachment folders in ECR process
Subject	ECRfolders	
First Value	Attachment Folders	Name of the class that will automatically be created when creating an ECR process
Long Value	Affected; Solutions;References	Attachment folder description for ECR process

Import Items/BOM to SmarTeam

Authorized Groups for the Import Items/BOM to SmarTeam		
Attribute Name	Value	Description
Section	ImportFromExcel	Authorized groups for Import From Excel
Subject	AuthorizedGroups	
Long Value	Admin;Engineer; Lead Engineer; Production Engineer; Component Engineer	Authorized groups for Import From Excel in a semi-colon delimited list

Import items from an Excel sheet into SmarTeam		
Attribute Name	Value	Description
Section	ImportFromExcel	The Import process applies the following rules: - The attributes of existing items in SmarTeam are updated where applicable - New items (not yet in SmarTeam) are imported into the Item class
Subject	Import as Items	Import items from an Excel sheet

First Value	Items	First Class
Second Value	Items Tree	Link Class
Third Value	Item	Class for items that do not exist in the SmarTeam database
Fourth Value	TDMX_ID;REVISION	Unique identifier to search for an Item
Long Value	Admin;Engineer; Lead Engineer; Production Engineer; Component Engineer	Authorized groups for Import From Excel in a semi-colon delimited list

Import items from Excel sheet - As Temporary items		
Attribute Name	Value	Description
Section	ImportFromExcel	Import items from Excel sheet - As Temporary items
Subject	Import as Temporary items	
First Value	Items	First Class
Second Value	Items Tree	Link Class
Third Value	Temporary Item	Class for new items that do not exist in the SmarTeam database
Fourth Value	TDMX_ID	Unique identifier to search for an Item without REVISION
Long Value	The Import process applies the following rules: - The attributes of existing items in SmarTeam are updated where applicable - New items (not yet in SmarTeam) are imported into the Temporary Item class	Description of the Import Process

Quick Create

Quick Create		
Attribute Name	Value	Description
Section	QuickCreate	Excluded Classes for Quick Create
Subject	ExcludedClasses	
Long Value	Users;Admin	Excluded Classes for Quick Create in a semi-colon delimited list Specifies the list of classes that will not be presented in the Class Browser in the Quick Create screen.

Replace Temporary Items in BOM

Statuses for the Process "Replace Temporary Item"		
Attribute Name	Value	Description
Section	ReplaceTemporaryItem	General definition for "Replace Temporary Items" in BOM
Subject	General	
First Value	Temporary Item	Class name representing the temporary item
Second Value	Delete	Action on Temporary Item after replacement (Delete, Inactive)

Set Flow Process Status

Global definitions

Define Global values for all processes (Global 1).

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Global_1	The definitions will be applied to all processes
First Value	INITIATE;Started	Status after first Accept
Second Value	REJECT TO START;Rejected	Status after Reject to Start
Third Value	REJECT TO PREVI- OUS;Rejected	Status after Reject to Previous
Fourth Value	SEND TO REVIEW;In Review	Status after Send to Review

Define Global values for all processes (Global 2)

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Global_2	
First Value –	ACCEPT;In Progress	Status after Accept
Second Value	FINISH;Completed	Status of a process that has ended

Definition per Flow Process

Define statuses for ECO

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Engineering Change Order_1	
First Value –	APPROVE;In Progress	Status after Approve

Define statuses for ECR

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Engineering Change Request_1	
First Value –	DECLINE ECR;Declined	Status after Decline ECR
Second Value	SEND TO CCB;In Progress	Status after Send to CCB

Third Value	PUT ON HOLD;On Hold	Status after Put on Hold
Fourth Value	PROPOSE;Proposed	Status after Propose

Define statuses for Item Release

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Item Release_1	
First Value –	APPROVE;In Progress	Status after Approve

Define statuses for Manufacturer Change Order

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Manufacturer Change Order_1	
First Value –	PROPOSE;Proposed	Status after Propose

Define statuses for Standard Item Approval

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Standard Item Approval_1	
First Value	APPROVE;In Progress	Status after Approve

Define statuses for Replace Temporary Item

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Replace Temporary Item_1	
First Value	APPROVE;In Progress	Status after Approve

Define statuses for Document Release

Attribute Name	Value	Description
Section	SetFlowStatusByResponse	
Subject	Document Release_1	
First Value	APPROVE;In Progress	Status after Approve

Smart XML Settings

1.1 General Settings		
Attribute Name	Value	Description
Section	Smart XML	1.1 General Settings
Subject	General	
First Value	SmartXML	Name of the Primary Node
Second Value	dd-mm-yyyy	Date Format
Third Value	NUM	Logical values or numeric LOG or NUM
Fourth Value		DEL in the event that the file needs to be deleted after import

1.2 XML Node Names		
Attribute Name	Value	Description
Section	Smart XML	1.2 XML Node Names
Subject	XML	
First Value	ItemsTable	Item Group Name
Second Value	BOMTable	Header Group Name
Third Value	BOM	Line Group Name
Fourth Value	Attributes	[Attribute Group Name]

1.3 Export Settings		
Attribute Name	Value	Description
Section	Smart XML	1.3 Export Settings
Subject	Export	
First Value	C:\Program Files\SMARTTEAM\Express_R20\SNE\ERP\Export	Directory (Obsolete)
Second Value	Manufacturing BOM	Exported view(s) in a semi-colon delimited list. Use <empty value> if you did not define any views in SmartTeam.
Third Value	NO	YES/NO Treat No BOM as error in Workflow
Fourth Value	YES	YES/NO Export Item if no BOM in Workflow

1.4 Import Settings		
Attribute Name	Value	Description
Section	Smart XML	1.4 Import Settings
Subject	Import	
First Value	C:\Program Files\SMARTTEAM\Express_R20\SNE\ERP\Export	Directory (Obsolete)

1.5 Data Model Mappings		
Attribute Name	Value	Description
Section	Smart XML	1.5 Data Model Mappings
Subject	DataModel	
First Value	Items	Super-class into which to import
Second Value	Item	Revision-managed item
Third Value	Standard Item	Created class if the imported item does not exist

1.6 File Name Convention for BOM		
Attribute Name	Value	Description
Section	Smart XML	1.6 File Name Convention for BOM
Subject	Items_Tree	
First Value	BOM	Prefix
Second Value	EXBOM	Sequence Name (if defined)

1.7 File Name Convention for Standard Item		
Attribute Name	Value	Description
Section	Smart XML	1.7 File Name Convention for Standard Item
Subject	Standard_Item	
First Value	STD_ITEM	Prefix
Second Value	EX STD ITEM	Sequence Name (if defined)

1.8 File Name Convention for Item		
Attribute Name	Value	Description
Section	Smart XML	1.8 File Name Convention for Item
Subject	Item	
First Value	ITEM	Prefix
Second Value	EXITEM	Sequence Name (if defined)
Third Value		Primary ID

2.1 Mandatory Item Attributes		
Attribute Name	Value	Description
Section	Smart XML_ITEM	2.1 Mandatory Item Attributes
Subject	MandatoryItemAttributes	
Long Value	TDMX_ID;REVISION;STATE;EFFECTIVE_FROM;EFFECTIVE_UNTIL	Mandatory SmarTeam attributes in Export

2.2 Included Item Attributes		
Attribute Name	Value	Description
Section	Smart XML_ITEM	2.2 Included Item Attributes
Subject	IncludedItemAttributes	
Long Value	TDMX_ITEM_TYPE;TDMX_PHANTOM_ITEM;TDM_UOM;TDMX_TOP_ITEM;TDMX_LONG_LEAD_ITEM;TDMX_SERVICE_ITEM;TDMX_COST	Included SmarTeam attributes in Export

3.1 Mandatory Header Attributes		
Attribute Name	Value	Description
Section	Smart XML_BOM	3.1 Mandatory Header Attributes
Subject	MandatoryHeaderAttributes	
Long Value	TDMX_ID;TDM_DESCRIPTION.EFFECTIVE_FROM;EFFECTIVE_UNTIL;REVISION	Mandatory attributes in a semi-colon delimited list

3.2 Included Header Attributes		
Attribute Name	Value	Description
Section	Smart XML_BOM	3.2 Included Header Attributes
Subject	IncludedHeaderAttributes	
Long Value	TDMX_ITEM_TYPE;TDMX_PHANTOM_ITEM;TDM_UOM;TDMX_TOP_ITEM;TDMX_LONG_LEAD_ITEM;TDMX_SERVICE_ITEM;TDMX_COST	Included ST attributes in a semi-colon delimited list

3.3 Mandatory BOM Line Attributes		
Attribute Name	Value	Description
Section	Smart XML_BOM	3.3 Mandatory BOM Line Attributes
Subject	MandatoryLineAttributes	
Long Value	L.TDM_QUANTITY;L.TDM_UOM;L.TDM_OPERATION_SEQUENCE	Mandatory SmarTeam attributes in a semi-colon delimited list

3.4 Included BOM Line Attributes		
Attribute Name	Value	Description
Section	Smart XML_BOM	3.4 Included BOM Line Attributes
Subject	IncludedLineAttributes	
Long Value	L.TDM_FIND_NUMBER; L.TDM_UOM; L.TDM_PROD_VIEW_CXTXT; L.TDM_OPERATION_SEQUENCE;L.TDM_REFERENCE_DESIGNATOR	Included SmarTeam attributes in a semi-colon delimited list

Included Import Items Attributes		
Attribute Name	Value	Description
Section	Smart XML_ITEM	Included Item Attributes
Subject	IncludedImportItemsAttributes	
Long Value	TDMX_ITEM_TYPE; TDMX_UOM; TDMX_COST; TDMX_CURRENCY; TDMX_WEIGHT; TDMX_WAREHOUSE; TDMX_STOCK_ON_HAND; TDMX_STOCK_UNIT; TDMX_ITEM_UPDATE_FROM_ERP	Included SmarTeam attributes in Import

Upload Documents

Excluded Extensions		
Attribute Name	Value	Description
Section	UploadDocuments	The extensions that cannot to be uploaded
Subject	Excluded Extensions	
Long Value	txt	Extensions excluded for upload documents in a semi-colon delimited list

Default File Type		
Attribute Name	Value	Description
Section	UploadDocuments	General definitions for Upload Documents
Subject	DefaultFileType	
First Value	General	Default file type assigned, if the file type is not defined in SmarTeam
Second Value	<Default Class Name>	The default class name, e.g., Document. Note: If no value is defined, the default class will be the first class in the Documents super-class defined in the database.

Purge Specification Links

Attribute Name	Value	Description
Section	PurgeSpecification-Links	
Subject	General	
First Value	True or False	True - Keep link only to the last Released revision False - Purge links to the minor revisions and keep all links to the Released revisions
Long Value	Item states	Item Mature States – the command will run on items promoted to these states. The list of values should be separated using a semi-colon (e.g. Released; Limited Release)

Quick Report Admin Settings

Setting Public Templates: System Administrator

The following information is intended for System Administrators only and explains how to set up Public templates and make them available for defined SmarTeam users.

The Quick Report tool enables the creation of two types of templates:

Private	This template is created by individual Quick Report users for their own private use and saved in the Quick Report Wizard. (The template is saved on a per machine basis.)
Public	This template is created and saved by the SmarTeam System Administrator and made available for sharing by designated SmarTeam users. This template can only be changed by the System Administrator.

To create a Public template and make it available for SmarTeam Express users and/or groups:

- 1 Locate the SmartQuickReport.ini file located in the \\LocalConfig\ directory and use a text editor, such as Notepad, to open and edit the file.

By default, the SmartQuickReport.ini file contains the following sections:

[Location]	The parameter Public_Ini= is initially empty by default.
[General]	This section is completed with default values .
[Templates]	This section is initially empty by default. Parameters are entered in this section after creating and saving one or more templates via the SmartQuickReport Wizard.

- 2 In the SmartQuickReport.ini file, [Location] section, enter a path, directory name and ini file name for the ini file that will contain specific predefined templates that you can make available for SmarTeam users. For example:

```
[LOCATION]
Public_Ini=\\mainserver\smartreport\market_report.ini
```

where:

mainserver	is the server name
smartreport	is the directory name where the ini file is located
market_report.ini	is the name of the ini file

- 3 Launch the [Quick Report Wizard](#) to create and save one or more templates. In the Quick Report Wizard, in the Sharing Template As section, select Public to make the selected template available to defined SmarTeam users.
- 4 Forward the path and directory information as defined in step 2 to all users who need to use the predefined templates that you created in step 3 above.
 - Advise each user to enter this path information for the parameter Public_Ini= in the Smart-QuickReport.ini file, [Location] section located on their computer in the \\LocalConfig directory.
 - When a user runs the Quick Report Wizard, all Public templates for a selected super-class will be shown in the List of Templates window.

Setting Public Templates: User

The following information is intended for SmarTeam users and explains how to enable access to [Public](#) templates provided by the SmarTeam System Administrator.

A Public template is created and saved by the SmarTeam System Administrator and made available for sharing by designated SmarTeam users. This template can only be changed by the SmarTeam System Administrator.

To access Public templates as predefined by the SmarTeam ExpressSystem Administrator:

- 1 Locate the SmartQuickReport.ini file located in the \\LocalConfig\ directory and use a text editor, such as Notepad, to open and edit the file.

By default, the SmartQuickReport.ini file contains the following sections:

[Location]	The default parameter Public_Ini= is initially empty.
[General]	This section is completed with default values .
[Templates]	This section is initially empty by default. Parameters are entered in this section after creating and saving one or more templates via the SmartQuickReport Wizard.

- 2 In the SmartQuickReport.ini file, [Location] section, enter the path, directory name and file name forwarded to you by the SmarTeam System Administrator. For example:

```
[LOCATION]
Public_Ini=\\mainserver\smartreport\market_report.ini
```

where:

mainserver	is the server name
smartreport	is the directory name where the ini file is located
market_report.ini	is the name of the ini file

- 3 Launch the [Quick Report Wizard](#) to load a predefined Public template.

When you run the Quick Report Wizard, all Public templates for a selected super-class will be shown in the List of Templates window.

Note:

- All Public templates can only be changed by the System Administrator.
- You can proceed through each step in the Quick Report Wizard to view defined settings for a selected Public template, and/or click Finish at any step to output the report.

Customized Settings

According to your report requirements, you can make the following customization changes in the SmartQuickReport.ini file, located in the \\LocalConfig\ directory:

[Location]

Public_Ini=	When provided by the System Administrator, enter the path, directory name and ini file name for the ini file that contains specific predefined templates that can be shared by SmarTeam – Editor users and/or groups.
-------------	---

For example:

```
Public_Ini=\\mainserver\smartreport\market_report.ini
```

where:

mainserver	Server name
smartreport	Directory name where the ini file is located
market_report.ini	Name of the ini file

[General]

Maximum_Portrait_Columns	The number of columns permitted for a report set to portrait orientation in the Output Properties window. This setting affects the number of attributes the user can select for output when designing his/her report.
Space_Between_Columns	The space in pixels that a user can set for the distance between columns for presenting the report. The recommended value is 150.

[Templates]

This section is completed automatically whenever a template is saved.

Licenses Used in SmarTeam Engineering Express

The SmarTeam – BOM license is used in the following SmarTeam Engineering Express tools:

- Import Item/BOM from Excel
- ECAD Import
- Purge Specification Document Revisions
- Import / Export as XML
- Locking BOM Structure

For details on these tools, refer to the SmarTeam Express User Tasks section in the SmarTeam – Editor Online Help.

Chapter 7: PGM for SmarTeam Express

For the implementation of PGM in a SmarTeam Express Environment, new classes and links are added in the Data Model Designer.

These are listed in the sections below.

Classes

Class Name	Description
Documents	Super-class for Documents (not unique to PGM)
Planning Document	Used to save the MS-Project file
Planned Activities	Super-class for PGM object
Project Plan	Represents the Project definition
Task	Represents a Task in a project
User Task Assignments	Link between a Task to the User who should perform this Task
Project Plan Link	Link between a project to a project plan.
Task Dependency Link	Link between two Tasks in order to define Successors and Predecessors
Task Attachment Link	Link between a Task and another Class in order to define Attachment of the Task
Task Deliverable Link	Link between a Task and another Class in order to define Deliverable of the Task
Planning Document Link	Link between Project Plan to Planning Document in order to save the MS-Project files of a Project
Planned Activities Tree	Hierarchical Link between a Project Plan and a Task or between two Tasks

Authorization Groups

Group Name	Description
Project Manager	Creates new projects, assigns and synchronizes the tasks.
Project Member	Performs tasks assigned to him/her by the Project Manager.

Note: A PGM User should have one of these groups assigned in addition to another group such as Navigator.

Menus

There are two menu profiles that are added to the Database: Project Manager and Project Member. Each menu profile has its own PGM toolbar:

- Project Manager Toolbar - contains the following icons: My Tasks, Open in MS-Project and Promote.
- Project Member Toolbar - contains the following icons: My Tasks.

Note: Both menu profiles have pop-up menus with an Update menu item.

Scripts

The PGM license is taken with a function **OnAfterSmarTeamLogin** called from a script file **ProjectManagement.ebs**. This function should run on the hook **After - On Authenticate User** or **After - On Login**. The **On Authenticate User** hook runs on login to SmarTeam Editor and not to other SmarTeam Applications.

Chapter 8: Adding the Express Engineering (SNE) Behavior to an Existing SmarTeam Database

"Express - Engineering (SNE)" Behavior is intended for V5R18 customers and above who want to implement Item Centric, BOM Management and Change Management on top of their current implementation.

The customer database can be created from SmDemo or built from scratch.

Solution Description

This solution enables the customers to enrich their SmarTeam implementation by adding Engineering capabilities for Item and BOM management. This is done by applying the "Express - Engineering (SNE)" mechanism in the Data Model Designer tool (DMD). This enables you to quickly implement the following:

- Items (physical components that are manufactured or purchased, and are the backbone for the product structure)
- Bills of Material - BOM (Product Structure)
- Manufacturer Items and Approved Manufacturer list (AML)
- Connection to Electronic CAD systems (ECAD)
- Bidirectional connection to ERP systems (Enterprise Resource Planning)
- Change Management: Engineering Change Request (ECR), Engineering Change Order (ECO) and more processes

Implementing the "Add SNE" Process in the Database

IMPORTANT! Adding SNE requires mapping to be performed between the customer database and the Express database. The mapping between the two environments is a one-time step and cannot be redone on the same database after SNE has been added to it. Therefore, it is highly recommended to follow the procedure carefully and accurately.

There are two types of **Add SNE** processes. The type to be used depends on the Customer Database:

- Type 1 - The database includes the **Documents and Parts** mechanism and the customer does not want to retain the Item objects.
- Type 2 - The database does not include the **Documents and Parts** mechanism

Adding the SNE capabilities to an existing customer database is done using the DMD mechanism window.

Note: It is very important to backup your database before starting this procedure.

Add SNE While Deleting Items - Type 1

In this case, the SNE mechanism will only be visible if the **Part Behavior** class mechanism is not selected for any class in the specific database. If the **Part Behavior** class mechanism is selected, you will need to perform the relevant steps as described below.

Prerequisites

Delete the class with **Part Behavior** class mechanism from the database.

To import Items data after performing an **Add SNE** operation, export the following data:

- Objects of this class
- Objects links (Hierarchical and General to all super-classes)
- Objects links to Workflows as attached objects
- References of these objects to any other class (Reference to Class objects referring to the class).

Note: You can use the SmarTeam Export tool to export some of the data listed above.

Admin Console

If the **Documents and Parts** mechanism is selected in this Database, perform the following procedure:

- 1 Open the Admin Console.
- 2 From the Items Rules, delete all the lifecycle rules in the following order:
 - Promote
 - Demote
 - Inactivate
- 3 From the menu, select the **Tools > Items States** option.
 - Delete/update states and make sure that the following states remain: Active, Inactive and Pending (Default).

Run DMD

- 1 Open the database in DMD.
- 2 Delete the classes that have **Part Behavior** class mechanism selected.
- 3 Go back to the "Available Mechanisms" window.
- 4 Select the **Express – Engineering (SNE)** mechanism and click **Next**.
The "User-defined Class Mapping "tool appears.
- 5 Perform the mapping as described in [Mapping the SNE Data Model to the Database](#) below.
- 6 Click **Create**.

IMPORTANT! No other DMD operations should be done in this DMD run as it may cause problems, and the DMD may fail to complete successfully.

- 7 Continue with the scenario described in [Post DMD Run](#) below.

Add SNE with No Items Mechanism - Type 2

For this option, there are no prerequisites or Admin Console actions necessary.

Run DMD

- 1 Open the database in DMD.
- 2 Delete the classes that have **Part Behavior** class mechanism selected.
- 3 Go back to the 'Available Mechanism' window.
- 4 Select the **Express – Engineering (SNE)** mechanism and click **Next**.
The "User-defined Class Mapping "tool appears.
- 5 Perform the mapping as described in [Mapping the SNE Data Model to the Database](#) below.
- 6 Click **Create**.

IMPORTANT! No other DMD operations should be done in this DMD run as it may cause problems, and the DMD may fail to complete successfully.

- 7 Continue with the scenario described in [Post DMD Run](#) below.

Mapping the SNE Data Model to the Database

Mapping the SNE data model to an existing customer database is done using a tool that is run from the DMD named User-defined Class Mapping.

This tool enables the mapping of the following elements:

1 Classes:

- a Mapping the Express classes to the existing customer classes.
- b Mapping will assign an internal class name to the existing class.
- c If the Express class is not yet mapped, a new class will be created.

Note:

- Mapping of the customer super class that has a CLB of "Product behavior" checked is **MANDATORY!** This class must be mapped to the express class "Products".
- When mapping the Process class, the workflow of the SNE Process will be available in the mapped Process.

2 Attributes:

- a Mapping the Express attributes to the existing class attributes.
- b Mapping will change the existing attribute name.
- c If the Express attribute is not yet mapped, a new attribute will be created.

Note:

- If there are Express attributes that are not needed (such as attributes related to SDE), do not map them to the Customer database and do not use them after running the DMD (they will be added automatically to the Customer database).
- Attributes generated from a mechanism, such as 'TDM_DESCRIPTION', will not appear in the mapping tool.

3 Lookup values:

- a** For the mapped attribute from type lookup, map the values from the Express lookups to the existing customer lookups.
- b** Mapping will change the existing lookup values.
- c** If the Express lookup value is not yet mapped, the new value will be created

Note: The lookup mapping may take some time before showing the mapping options. This depends on the number of the amount of values to map (such as Country in the Contacts super-class).

IMPORTANT! The mapping is performed as part of the DMD run. Once the mapping is defined, the user should continue running the DMD without modifying any other data in the DMD, such as modifying/renaming attributes!

For more details on the Mapping Tool, refer to the topic "The DMD Mapping Tool" in the SmarTeam – Editor Online Help.

Post DMD Run

IMPORTANT! You must clean all Configuration Settings from the Mapped Attributes, i.e., delete all preferences at the User level and update/delete preferences at the other levels.

After running the DMD, perform the following mandatory operations:

- 1 Perform all the steps described in [After Database Creation](#).
- 2 For the mapped attributes the administrator must perform the following operations:
 - a** Customer scripts must be modified according to the new attribute names.
 - b** Admin Settings that contain class names must be modified according to the new class names.
 - c** Admin Settings that contain attribute names must be modified according to the new attribute names
 - d** Configuration Settings: Delete all preferences in User level and update/delete preferences in other levels to the new attribute names.
- 3 If the customer Database is not in English, the new classes and attributes can be translated using the Translation utility.
- 4 The Admin menu profile will be changed and commands will be added. Some of these menus will be duplicated to existing menus. You can delete them using the Menu Editor.
- 5 If SmarTeam – Web Editor is used, use the Web Form Designer to:

- a** Update Profile Cards for new classes.
 - b** Change the controls for attributes that were mapped (both for the same attribute type and for different attribute types such as Lookup to String).
- 6** SNE added attributes named TDMX_START_DATE and TDMX_END_DATE. TDMX_START_DATE are filled in by the script named PLMDB_SetProjectStartDate in PLMDBDatabase.bs.

If TDMX_START_DATE appears in your project's profile card, you can replace it using the Form Designer or change the script to update this attribute instead.

In order to work as you do in the SNE environment, perform the following optional operations:

- 1** Set the key **General.SuppressDisabledPopupMenuItems** to True in the domain level to disable grayed out actions in the pop-up menu.
- 2** Add the "Search and Link" button to the profile card of the Project, Product, etc.
- 3** Add all permissions to the users for the new tools.
- 4 Browse desktop object and Top Down Tree icons:** After adding SmarTeam Engineering Express (SNE) to a non-Express database, the menu icons for "Browse desktop objects" and "Top Down Tree" are not defined and text is seen instead of the icon. In order to solve this problem, define the icon for the command using Menu Editor.

Icons can be found in ICONS folder (default path is **Smarteam\Icons**).

For "Top Down Tree" use **PLMDB_TopDownTree.BMP** and for "Browse Desktop Objects" use **Desktop.ico**.

Limitations

IMPORTANT! If the Folder class under the Documents super-class has mandatory attributes that need to be filled in manually, when creating a new project the folders will not be added automatically to the project.

Chapter 9: Upgrade Old SDE Procedure

Note: Upgrading R17 SDE should be done using the Upgrading R17 SDE to R19 procedure described in "SmarTeam Express Configuration Guide - R19 SP5.pdf". For upgrading to R20, see [Chapter 10, Upgrading an Express Database to R20](#).

Upgrade Procedure

Preparation

Backup the following files and folders:

- 1 SmarTeam folders: Icons, Scripts and System Configuration (not default level)
- 2 All customer changes from the original package
- 3 PLMDatabase.dll that was provided in the R17 SDE package
- 4 Customer database

Upgrading to R19

Follow the upgrade procedure in SmarTeam_Procedure_for_Upgrading_to_V5R19.pdf.

- 1 After upgrading the server installation:
 - Run **SmarTeamWizSrcUpgradeWizard.exe**.
 - Run the [Post Installation](#) instructions.
- 2 Install the latest Service Pack of R19 before running the Data Model Designer.
- 3 The first Data Model Designer run should perform upgrade only.
- 4 If you want to perform an **Add SNE** operation, run it in a second DMD run.

Post Installation

General

Before running the Data Model Designer, restore the following files and folders if needed:

- SmarTeam folders:
 - Icons and Scripts.
 - System Configuration:
 - Do not restore xml files for the default level.

- The xml file named **smarteam.std.legacypreferences.config.xml** for system level should be changed. Refer to the instructions per CAD and for Add SNE.
- All customer changes from the original package.
- **PLMDatabase.dll** (check if it exists and that the DLL is registered).
- **PLMDatabase.bs** script file in both the old SDE and SNE:
 - If you are not performing **Add SNE**, you can keep the old script file.
 - If you are performing **Add SNE**, you should merge the old script file with the new version. If no changes were done in the old script file, you can use the merged script file.

SDE CATIA

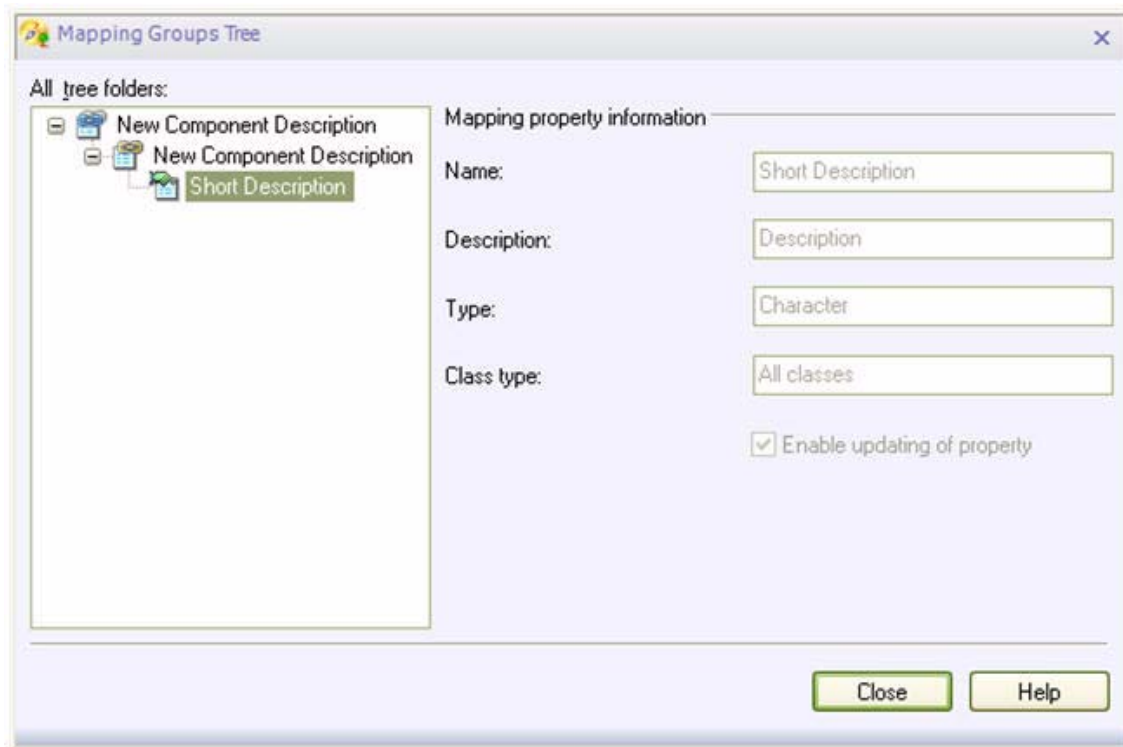
- System Configuration: Check that the key **CATIA.ExposeMode** is set to **No** on the Domain level.
- You can merge the Open Dialog Customization. Keys can be taken from **Open_Dialog_CATIA.txt**.

Note: After CATIA upgrade, configure all CATIA SmarTeam settings according to the R17 methodology.

SDE SolidWorks

- System Configuration: Set the key **SolidWorks.DisplayShortDescription** to **True** on the System/Domain level:
<SolidWorks.DisplayShortDescription>True</SolidWorks.DisplayShortDescription>
- You can merge the Open Dialog Customization. Keys can be taken from **Open_Dialog_SW.txt**.

- Integration Tools Setup: Add mapping for the Short Description as shown below. For details, see the SmarTeam – Solidworks Integration Online Help.



- For new features of SolidWorks Integration review the What's New section in the SmarTeam – Solidworks Integration Online Help.

Note: After the SolidWorks upgrade, configure all SolidWorks integration settings according to the R17 methodology.

Chapter 10: Upgrading an Express Database to R20

Running the SmarTeam Data Model Designer on R20 will update some of the Express definitions.

After running the SmarTeam Data Model Designer, perform the operations described below.

User Maintenance

- 1** Open the Admin Console.
- 2** Run the User Maintenance.
- 3** Enter the Authorization window and make sure that for all Express groups and users (excluding the Admin group and users) the Set Admin Authorization option is not checked. If it is checked, uncheck it.