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ERP Link for

SOLIDWORKS PDM

Professional

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This document describes functionality of the ERP link for SOLIDWORKS PDM Professional which is an independent add-in SOLIDWORKS PDM Professional.

Installation

Integration is installed as SOLIDWORKS PDM PROFESSIONAL add-in which consist of five different dll files (Fig. 1). In addition, one can add configuration files to add-in files or use them from shared network drive. It's recommended to use configuration files from outside SOLIDWORKS PDM PROFESSIONAL when they are changing often for instance in testing and implementation phase. In that case changes will take place immediately.
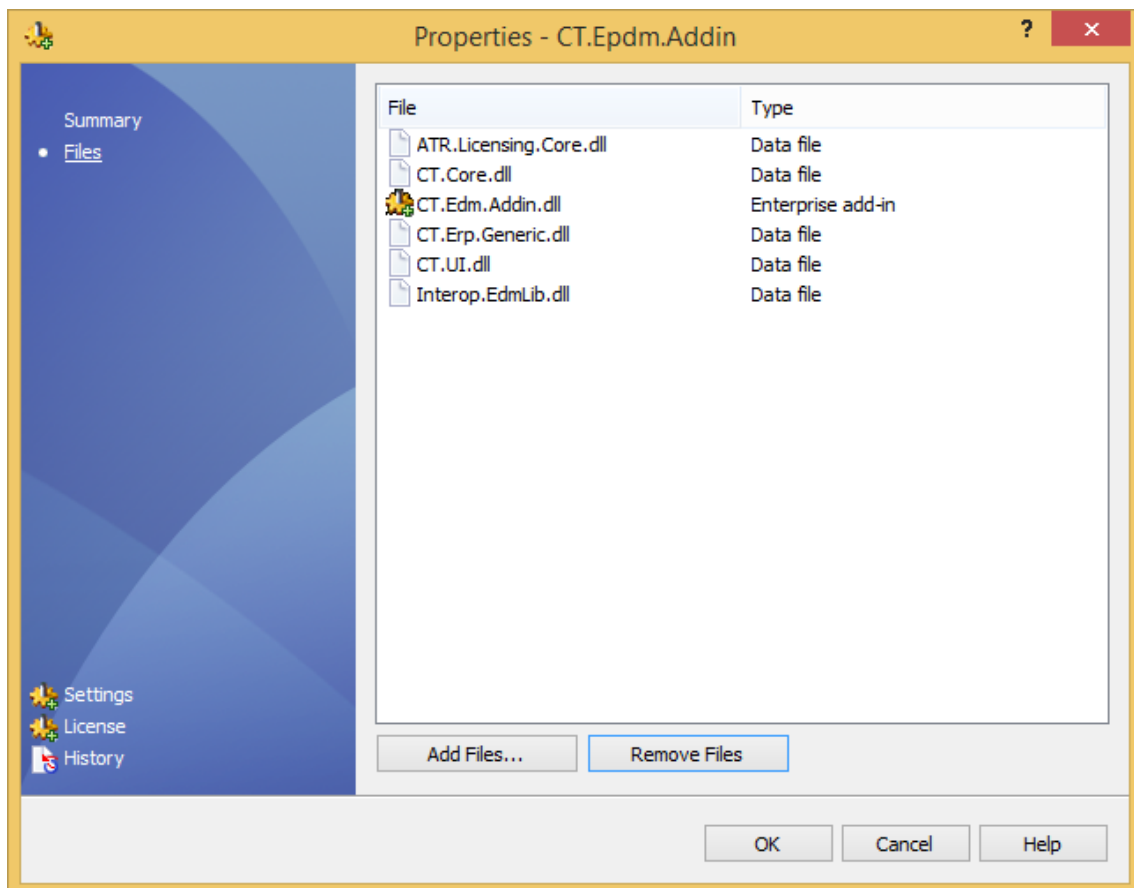

Fig 1. CT SOLIDWORKS PDM PROFESSIONAL ERP Add-in

After installing license you need to configure settings and give license information when using licensed version of add-in.

Licensing

You are allowed to use the add-in for evaluation purposes for time period of 30 days. License is bound to SOLIDWORKS PDM PROFESSIONAL vault and domain/workgroup name that client computer connecting to SOLIDWORKS PDM PROFESSIONAL vault belongs to. You may enter several license keys in case workstations connected to SOLIDWORKS PDM PROFESSIONAL vault belongs to different domains/work group.

To access license information expand Add-ins in SOLIDWORKS Enterprise PDM administration and right-mouse-click CT:EDM.Addin and click **License**. In order to obtain license from ATR Soft or from official value added reseller, provide identifier (see Fig. 2). After obtaining a valid license key you can enter it by clicking **Add Key** in the **License** dialog and type key in **License Key**. After that click **Add** to register license key and **OK** to register license in **License** dialog.
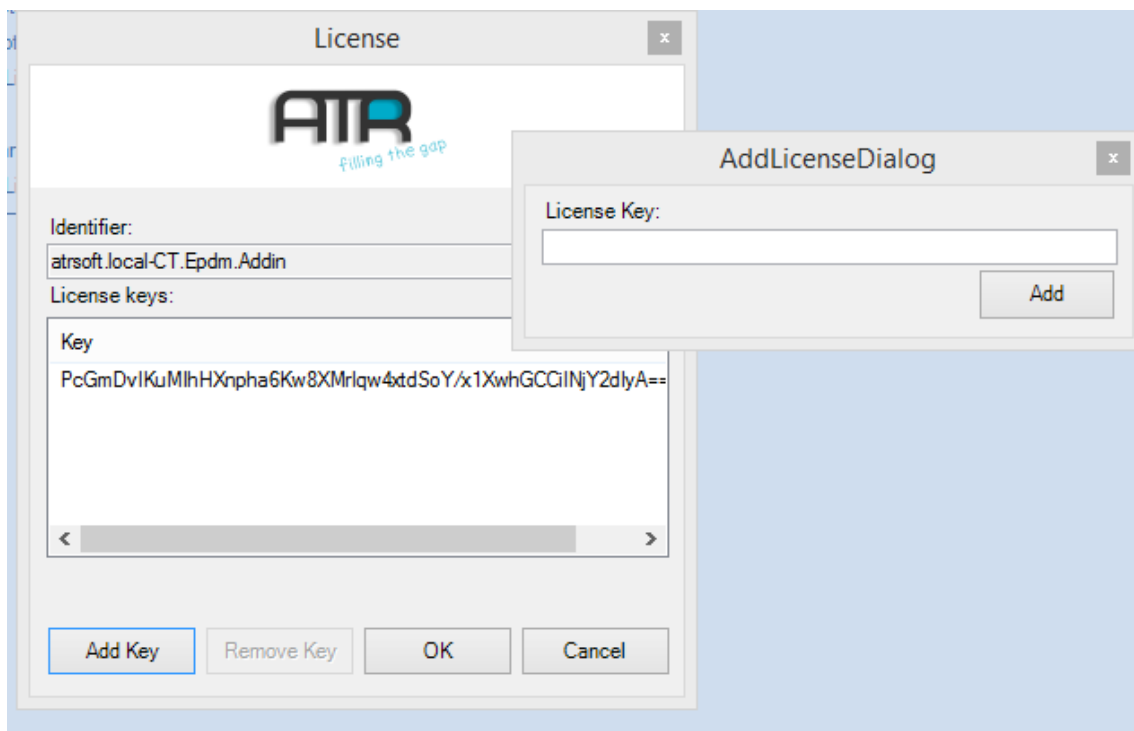

Fig 2. Registering a license

Settings

After applying a valid license settings needs to be configured before using ERP link. In order to access SOLIDWORKS PDM PROFESSIONAL setting in SOLIDWORKS Enterprise PDM Administration click to expand **Add-ins** and right-mouse-click **CT.Edm-Addin**. Click **Settings** in order to access settings windows. Settings dialog appears as shown in figure 3.
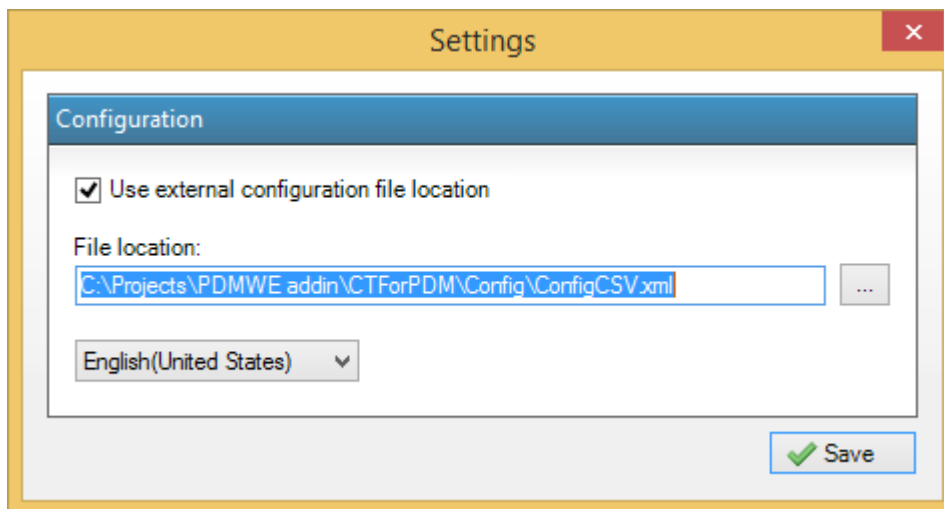

Fig 3. Settings dialog

If you have included configuration file in the add-in files you don't have to specify **File location**. If you prefer external configuration file click to select **Use external configuration file location** and specify file location in the **File location** box. In addition to configuration file location you may select preferred user interface language from available languages. Click the **Save** button in order to apply changes. Note that when using external configuration file the file location needs to be defined so that it's accessible from SOLIDWORKS PDM PROFESSIONAL clients.

Log file

Add-in writes a log file to every client computer connected to SOLIDWORKS PDM PROFESSIONAL vault. Log file may appear useful when investigating possible problems. Log file is written in CT folder which is located under user's local application. Log file is named after *log.txt*. Absolute file path is dependent on Windows version and language but it is e.g. *C:\users\tsalonen\AppData\Local\CT*. One can access log file directly by typing %LOCALAPPDATA%\CT\log.txt in File Explorer's address bar.
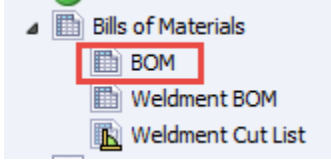
CUSTOMTOOLS
Structure of Configuration File

Behavior of integration add-in is configured with help of XML based configuration file. Structure of configuration file is described below. Compulsory tags are represented as **bold** font.

AppConfig /AppConfig	Contains all settings related to add-in.
ErpDll /AppConfig/ErpDll	Customized dll interface that implements ERP interface. This enables easily ERP specific implementations for different customers.
Debug /AppConfig/Debug	Possible values [true|false]. True to save generated BOM as XML on local hard drive. False is default which deletes file after transfer.
BomExports /AppConfig/BomExports	Contains settings for BOM export.
BomExport /AppConfig/BomExports/BomExport	Contains settings for specific BOM export.
BomExport[@Name]	Unique name of BOM export. This identifies BOM export from other BOM exports. This is not visible to user but is used to map menu command to executed BOM export.
BomExport[@Command]	Name of the command to show in SOLIDWORKS PDM PROFESSIONAL menu. Used to trigger export as user operation.
BomExport[@Extensions]	File extensions for which BOM export command is available. E.g. ".sldprt;.sldasm".

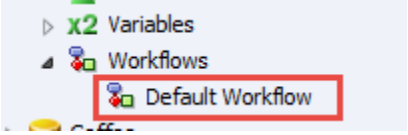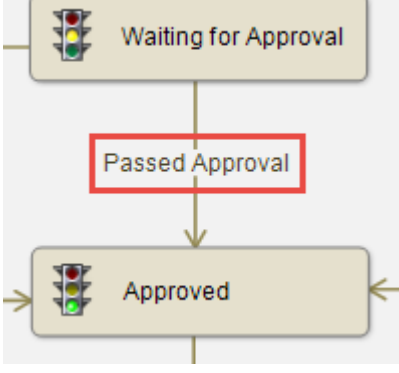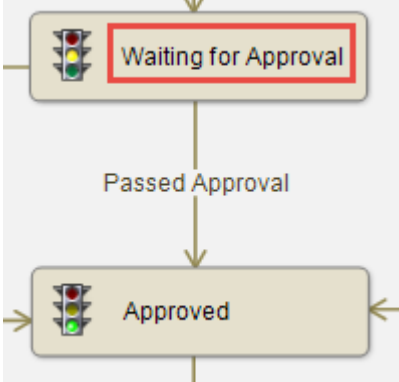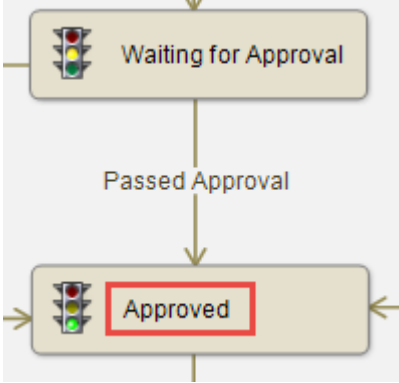|	
BomExport[@EdmMenuFlags]	EdmMenuFlags enumeration which defines how to show command in SOLIDWORKS PDM PROFESSIONAL menu. E.g. value 35 means that command is available only in popup menu when at least one file is selected. Possible values are described in SOLIDWORKS PDM PROFESSIONAL help.
BomExport[@UseOnlyTopmostItems]	Possible values [true|false]. True to export only top level of BOM. False to export all levels.
BomName /AppConfig/BomExports/BomExport/BomName	Name of the SOLIDWORKS PDM PROFESSIONAL BOM to use in export. E.g. BOM in example below.
AllLevels /AppConfig/BomExports/BomExport/AllLeves	Possible values are [true|false]. Defines whether to export recursively all sub-assembly BOMs that belongs to main assembly or just the highest level. Default is false.
Workflows /AppConfig/BomExports/BomExport/Workflows	Contains workflow specific definitions for BOM export.
Workflow /AppConfig/BomExports/BomExport/Workflows/Workflow	Contains BOM export settings for given workflow.

Workflow[@Name]	Workflow name in SOLIDWORKS PDM PROFESSIONAL.
Workflow[@AutoSendConfigs]	Name of the configurations in semi-colon (;) separated list from which to export BOM. You can define also *all* in which case BOM is exported from all configurations except from those listed in *NeverSendConfigs*. If you don't specify *AutoSendConfigs* attribute then user is prompted to selected configurations from which to export BOM.
Workflow[@NeverSendConfigs]	See also *AutoSendConfigs* attribute. You can defined configurations from which BOM is not exported if *AutoSendConfigs="all"*. You can defined for instance @ if @ configuration is not used at all.
Transitions /AppConfig/BomExports/BomExport/Workflows/Workflow/Transitions	Defines workflow state transitions in which BOM export occurs.
Transition /AppConfig/BomExports/BomExport/Workflows/Workflow/Transitions/Transition	Contains BOM export definition for a single workflow state transition.
Transition[@Name]	Name of the workflow state transition.

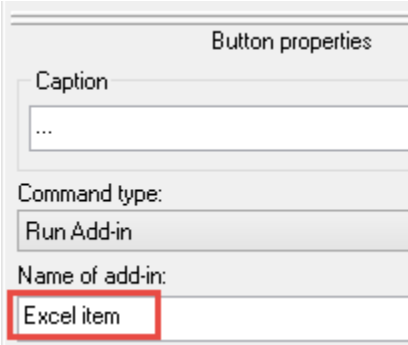|	
Transition[@From]	Name of the source workflow state.
Transition[@To]	Name of the destination workflow state.
States /AppConfig/BomExports/BomExport/Workflows/Workflow/States	Defines workflow states in which is allowed to manually trigger

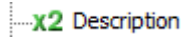|	
	BOM export without need to change workflow state.
State /AppConfig/BomExports/BomExport/State	Name of the SOLIDWORKS PDM PROFESSIONAL workflow state in which BOM export is allowed as user operation. For instance Approved in example below.
Destination /AppConfig/BomExports/BomExport/Destination	Target XML filename for BOM export. *<Filename>* tag is replaced with file name of exported file. E.g. if one is exporting file *Magnet.sldprt* and *<Destination>* tag is defined as *C:\Temp\<Filename>.xml* then target filename will be *c:\Temp\Magner.sldprt.xml*.
Transform /AppConfig/BomExports/BomExport/Transform	Contains settings for XSL transformation applied during export.
Xslt /AppConfig/BomExports/BomExport/Transform/Xslt	Location of xslt file which is used to transform XML file. If file is specified without path then it is used from add-in files. Otherwise file is used from given path.
Destination /AppConfig/BomExports/BomExport/Transform/Destination	Output file for XSL Transformation. *<Filename>* tag is replaced with filename and extension of transferred file.

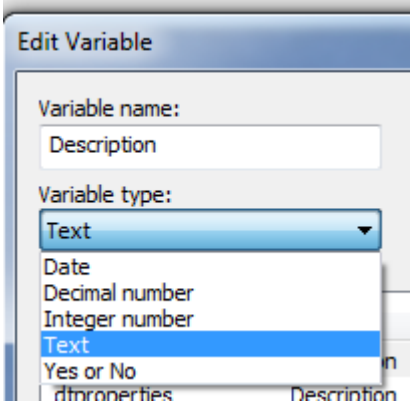|	
Actions /AppConfig/Actions	Contains settings to search for an item information in SOLIDWORKS PDM PROFESSIONAL data card.
Action /AppConfig/Actions/Action	Settings for individual item search definition from external datasource such as from Excel worksheet.
Action[@Name] /AppConfig/Actions/Action[@Name]	Identifier for item search action which corresponds **Name of add-in** setting for button in SOLIDWORKS PDM PROFESSIONAL data card. When user clicks the button corresponding action defined in *<action>* node is run.
Action[@MaxRows]	With this setting you can limit number of rows returned in item search. This is considered only if used **ErpDll** respects the setting.
Connection /AppConfig/Actions/Action/Connection	Settings for database connection in *ConnectionString* format. See examples in http://www.connectionstrings.com.

Source	Name of the database table or Excel worksheet from which to search data from.
/AppConfig/Actions/Action/Source	
Properties	Contains information about columns from which to search and to which attributes to apply data to.
/AppConfig/Actions/Properties	
Property	Defined individual search or search result attribute.
/AppConfig/Actions/Properties/Property	
Name	Name of the column to search in database or Excel worksheet.
/AppConfig/Actions/Properties/Property/Name	
Link	Name of the SOLIDWORKS PDM PROFESSIONAL variable to store search result. E.g. *Description*.
/AppConfig/Actions/Properties/Property/Link	x2 Description
Property[@Searchable]	Possible values [**true**|false]. *True* to use given attribute as search condition.
/AppConfig/Actions/Properties/Property[@Searchable]	
Property[@Result]	Possible values [**true**|false]. *True* if value is displayed in a column in search results. *False* if value is not displayed in the search results.
/AppConfig/Actions/Properties/Property[@Result]	
Property[@Visible]	Possible values [**true**|false]. *True* if attribute is visible in the search conditions to type search condition. *False* to hide search condition from user. In that case search condition is read from *Value* element. This is useful to
/AppConfig/Actions/Properties/Property[@Vsible]	

	restrict returned rows with fixed search condition.
Title /AppConfig/Actions/Properties/Property/Title	Label to show in the user interface for attribute.
Value /AppConfig/Actions/Properties/Property/Value	Value of the attribute. A value can be defined for attribute. That's useful for hidden attributes when a fixed search condition is applied.
@Type /AppConfig/Actions/Properties/Property[@Type]	Possible values [Text|Date|Integer|Decimal]. Corresponds SOLIDWORKS PDM PROFESSIONAL variable type. This defines also data type of the database column.

BOM Export

Bill of material is exported to pre-defined target folder in defined XML-format (see example 1). XSLT transformation can be applied to created XML file enabling transforming created file to different kind of formats such as csv file.

BOM structure can be read from any defined SOLIDWORKS PDM PROFESSIONAL BOM. Name of BOM can be configured.

BOM can be exported in two alternative ways

1. Manually as user triggered process (Fig. 4)

2. Automatically during workflow state transition. Workflow state transitions for automatic BOM export are configurable in the XML configuration file.