MechWorks PDM R20

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Behavior Changes

Activate previous revision

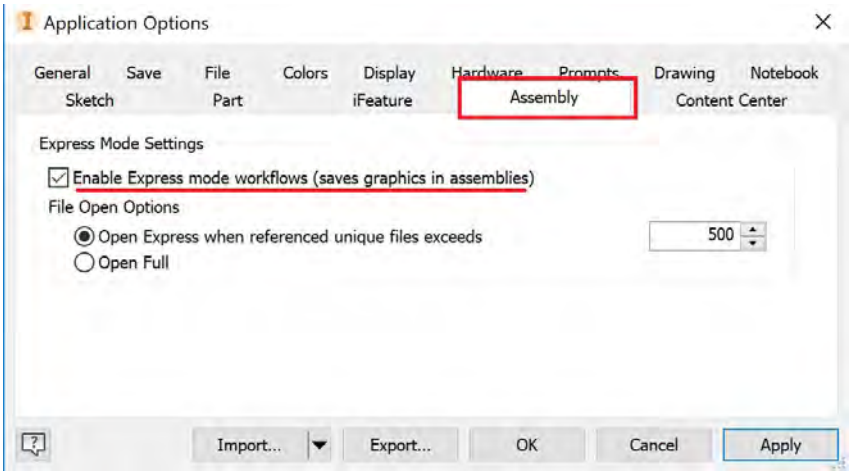
Removed the command "Activate previous revision" form StandAlone platform

The "Activate previous revision" button on right mouse button menu has been grayed if the action is performed from StandAlone platform in order to ensure a better UI uniformity. The function was enabled only for parts components and that behavior could generate some confusion in the user.

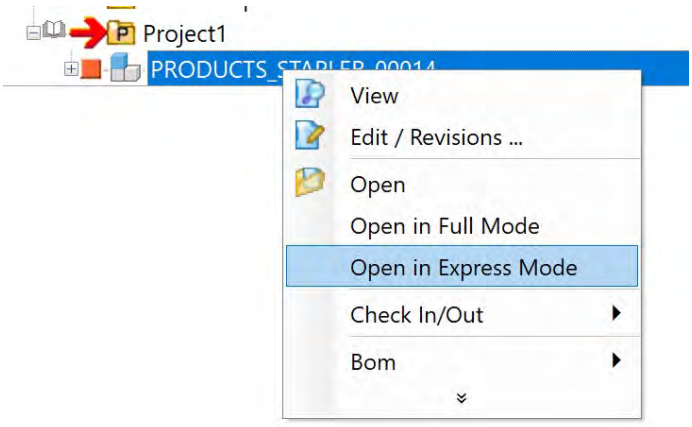
DBInventor

DBInventor Assembly Open

With R20 the Open command of an Assembly will now check the relative Inventor options to see if it must use Full or Express Mode:



One can also use the preferred Open method from the RMB menu of Assemblies:

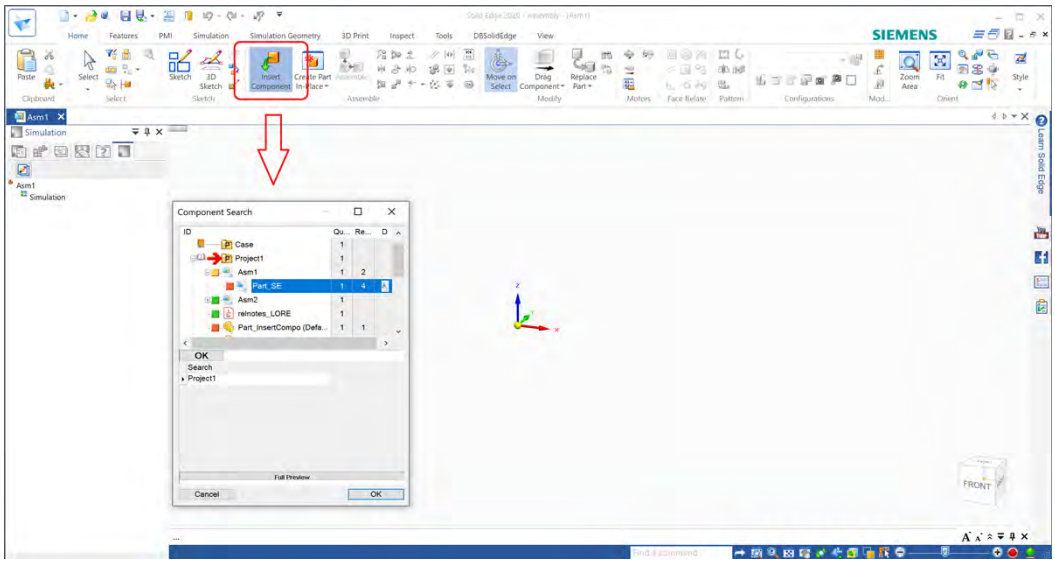


which means that "Open" will follow the Inventor Options to open an Assembly (in the example, must exceed 500 unique files), while "Open in Full Mode" and "Open in Express Mode" force the preferred modality.

DBSolidEdge

DBSolidEdge "Component search" prompt

The DBW "Component search" prompt is now shown when adding a new component to an assembly in Solid Edge. It allows to browse across all the components registered in the PDM.



Projects

"Create a New Project" button

The "Create a New Project" toolbar button takes now into account the selected item in the tree. If it is a project and the current user has the permissions, the new project will be created as sub-project. If the current logged user has not the permission will be notified with a message box. If the selected item is not a project, the new project will be created as top-level.

Standalone Client

Automation mode

In order to improve product usability and license management, by default the Standalone automation instance is now created with no user interface and without license usage to access the powerful API/Shell features.
With the new behavior, a typical custom usage is:

```
Set DBWAloneApp = CreateObject("DBWAlone.Api")
DBWApp.Callback("@StartApplication")
' all possible code
DBWAloneApp.CallBack("@EndApplication")
```

where the new `"@EndApplication"` callback is called to ensure a cleanup process termination.

In case of user interface requirement via automation, after the `CreateObject`, the new `"@SetVisible"` callback must be invoked:

```
Set DBWAloneApp = CreateObject("DBWAlone.Api")
DBWAloneApp.CallBack("@SetVisible")
DBWAloneApp.Callback("@StartApplication")
' all possible code…
```

In case of interactive usage (based on license acquirement) via automation, after the `CreateObject`, the new `"@SetInteractive"` must be invoked:

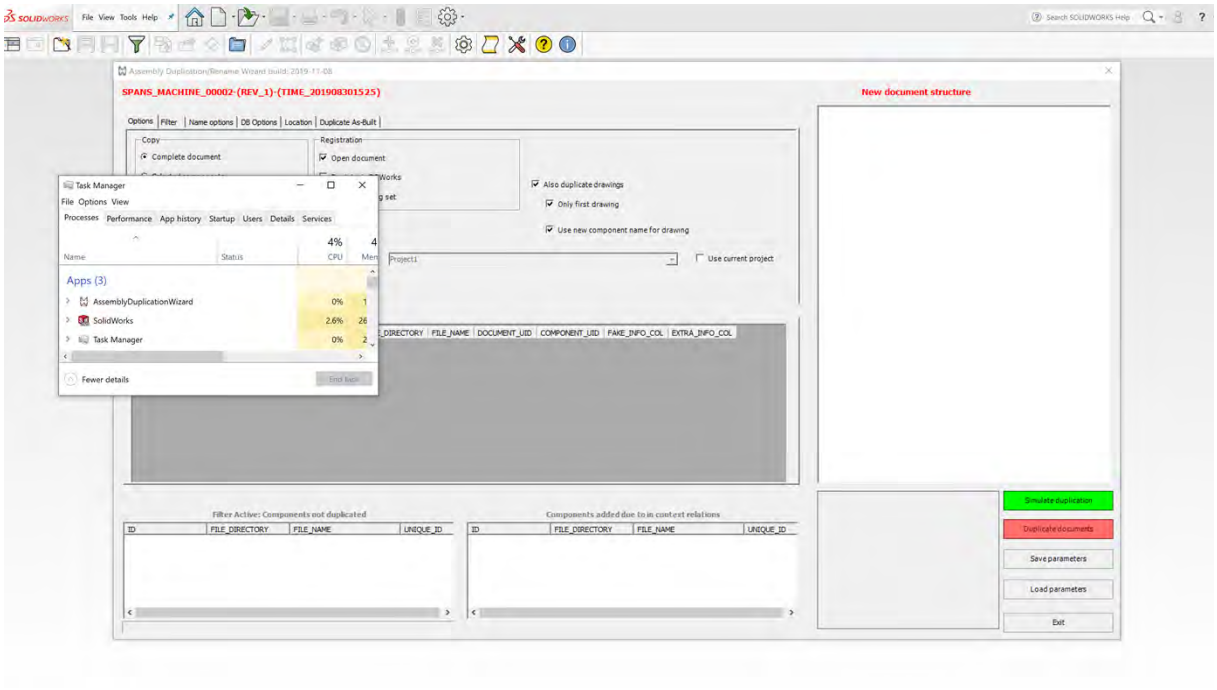
```
Set DBWAloneApp = CreateObject("DBWAlone.Api")
DBWAloneApp.CallBack("@SetInteractive")
DBWApp.Callback("@StartApplication")
' all possible code…
```

With the new `"@SetInteractive"` callback, the Standalone automation instance becomes automatically visible and it is possible to access any command menu or browser functionalities interactively.

Wizards

Assembly Duplication Wizard, Cleanup Wizard, Drawing Creation Wizard modal execution

The TopMost state of those wizards usually presented some usability problems, hiding messages from the CAD application and/or other OS windows like TaskManager. In R20 the above listed Wizards execution will become modal to the CAD window, allowing user interaction and not interfering with other windows.



Enhancements

Administrative Tools

Improved protection against recursions in the hierarchical structures of assemblies and projects

The tool that detects recursions in the hierarchical structures of assemblies and projects has been rewritten to remove the limitation on the level of nesting and dramatically improve the performance. The new version of the tool has a performance improvement of 50.000% (50 times faster), allowing to scan 150.000 assemblies in less than 4 minutes and the projects tree in a matter of seconds. This is relevant to the security of the system because a recursion in the projects tree could result in a crash of the application while a recursion in the assemblies' structure could keep the assemblies from displaying inside their project.

Improved credentials management to avoid redundant login

Administrative Tools now store the user credentials used to login to avoid redundant login request to accede to other sub tools such as DBWARM, Projects Document Manager or Project User Assignment. The login process has been automated.

Assembly Duplication Wizard

Improved 'Duplicate As Built' logic

With the option 'Duplicate As Built' activated, it is now automatically greyed out the 'Auto Check-In Check-Out' option to keep the current status of involved assembly. By design, the expected state of built components is NEW.

BOM

Create a New BOM Item

In a StandAlone application, when no CAD is installed on the machine (the CAD environment is unknown), if a fake component is created by RMB clicking on a project, its extension is now calculated based on the most common CAD document type (only within part files) stored into the DB.
Example: if the user is willing to create a fake part and most of the part files stored in the DB are SolidEdge file, the fake part will be generated with .par extension

Excel BOM faster for large assemblies with projects and drawings

Creating a BOM output for a large assembly including information on projects and drawings of each item could be time expensive, in the worst-case scenario tens of minutes. In R17 a large assembly generating a BOM output of 3000 lines and including for each item a list of projects and drawings would take around 16 minutes; in R20 the same assembly requires approximately 2 minutes, 8 times faster.
For large assemblies that don't include specific information on the items' parents, the time required is up to 20 seconds, both for buy lists and indented BOMs.

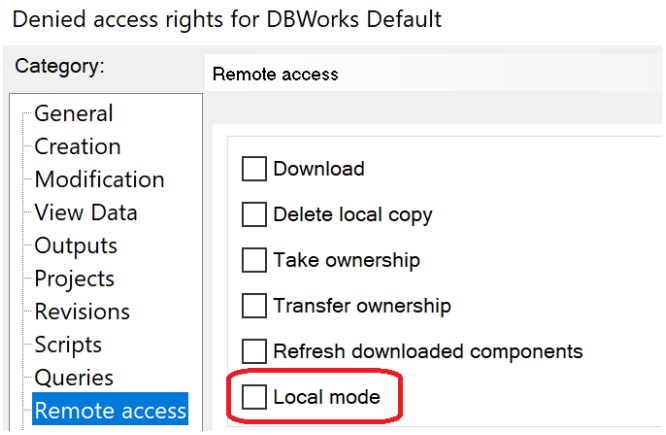
DBWARM

Removed the option "System Administration -> [X] Execute Administrative Tools"

That option was no more necessary since the Administrative Tools application require an admin account login to be run.

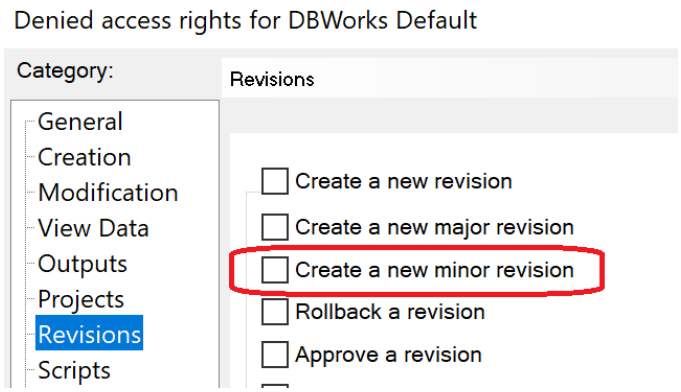
Added the option "Remote access -> [X] Local mode"

If checked the users belonging to the selected group won't be able to use the Remote Access Local Mode. The PDM option "User Options -> [X] Work Locally" will be disabled for those users.



Added the option "Revisions -> [X] Create a new minor revision"

If checked the users belonging to the selected group won't be able to create a new minor revision. If they try to create a new one, it will be automatically interpreted as a major.



DBWACLServer

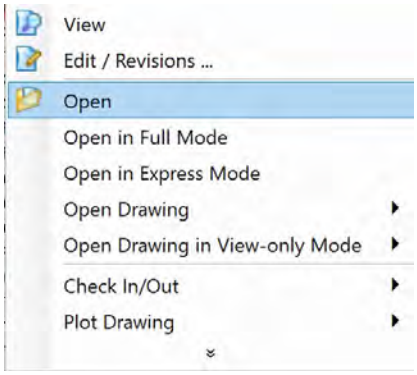
Clients perform registry keys check when encountering network slowdown

After the tenth time the client encounters slowdowns trying to contact the ACLServer a registry key check is perform to ensure that the suggested values for cache lifetime are set. If not a warning message is prompt on the Activity Console.

DBInventor

DBInventor Assembly Open Full or Express Mode

With R20 it is now possible to define the open mode for managing an Assembly opening.
Selecting an assembly document at DBInventor Tree or Grid level (RMB), new commands are available: the user can select between the default "Open", "Open in Full Mode" or "Open in Express Mode".
By default, DBInventor will check the Assembly options to see how it must behave; it is also possible to force the opening in Full or Express Mode.



DBSolidEdge

Variant Notes handling in Blocks

DBSE is now able to support Variant Notes within Blocks (on *background* or *working* layer).
As always, DBSolidEdge variant notes must be created as callout type, like explained in Help Page (Drawings -> Drawing Title Block).

DBWorks

New option: General->Assemblies->[X] Ignore saved configuration when inserting SolidWorks routing components

By enabling this new option (default: unchecked), when inserting a routing component from the DBWorks Component Selector dialog (that pops up automatically when a new assembly is created), with the routing component already registered in the DBWorks database, DBWorks will not automatically apply the registered configuration, but it will let SolidWorks display the configuration selection dialog.

Revision Output: new protocol for STEP files AP214

By default, Revision Output saves the related STEP files with protocol AP203, if specified in the SCHEMA\ DBWRevisionsOutputFileExtensions.txt with EXTENSION STEP or EXTENSION STP.
With R20 the Revision Output handles the AP214 protocol for STEP files (.step or .stp). To add the new extension, edit the parameter file SCHEMA\ DBWRevisionsOutputFileExtensions.txt adding: EXTENSION STEP.AP214 or EXTENSION STP.AP214.

Event Log

New Event Log Viewer executable

When launching the commands "Event Log Browser", "Event Log RemoteAccess", "BC EventLog", "Current user BC EventLog" from the Browser, the .vbs script associated that executes a new out-of-process executable EventLogViewer.exe, that replaces the older ones (VsGroup.exe and BCEventLogsStarter.exe), improving the user interface.

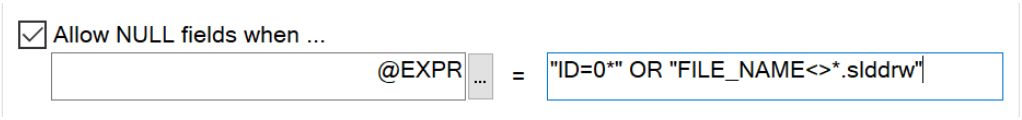
Expressions

Not equal operator supported

It is now possible to use the “<>” (not equal) operator in the regular expressions in every case that the “=” (equal) could be applied.
Affected scopes:

- Options -> Data Input -> Not Null fields -> [X] Allow NULL fields when ...
- Options -> Open/Save -> Save -> Always calculate mass properties on save -> [X] Calculate mass properties only when ...
- Options -> Data input -> Avoid duplicated IDs -> [X] Except when ...
- Options -> Revisions -> Approval -> Avoid approval if children are not released -> [X] Accept approval if ...
- Schema files -> Dataentr2_X.txt

Example:



Full Preview

Improved engine: simplified algorithm, less code to maintain, more stability

In R20 the full preview engine has been drastically changed: a deep code redesign has removed some obsolescent functions and solutions that in the past had brought a lot of troubles with hangs and crashes. We still guarantee, as long as the third-party software companies provide the controls able to show their proprietary files, to show the full preview of our three managed CAD software (SolidWorks, Solid Edge and Inventor), plus Pdf and Office documents. Furthermore, we will be able to add some more full preview extensions, once the aided graphic control is available.

In some circumstances (such as from the replace component dialog or from the external child tree dialog), in R17 the full preview was available only for SolidWorks files. On some integrations (for example in Solid Edge or Inventor) the full preview button, where present, was disabled. In R20 we made the full preview available for all the above-mentioned file types everywhere the full preview functionality was planned to be.

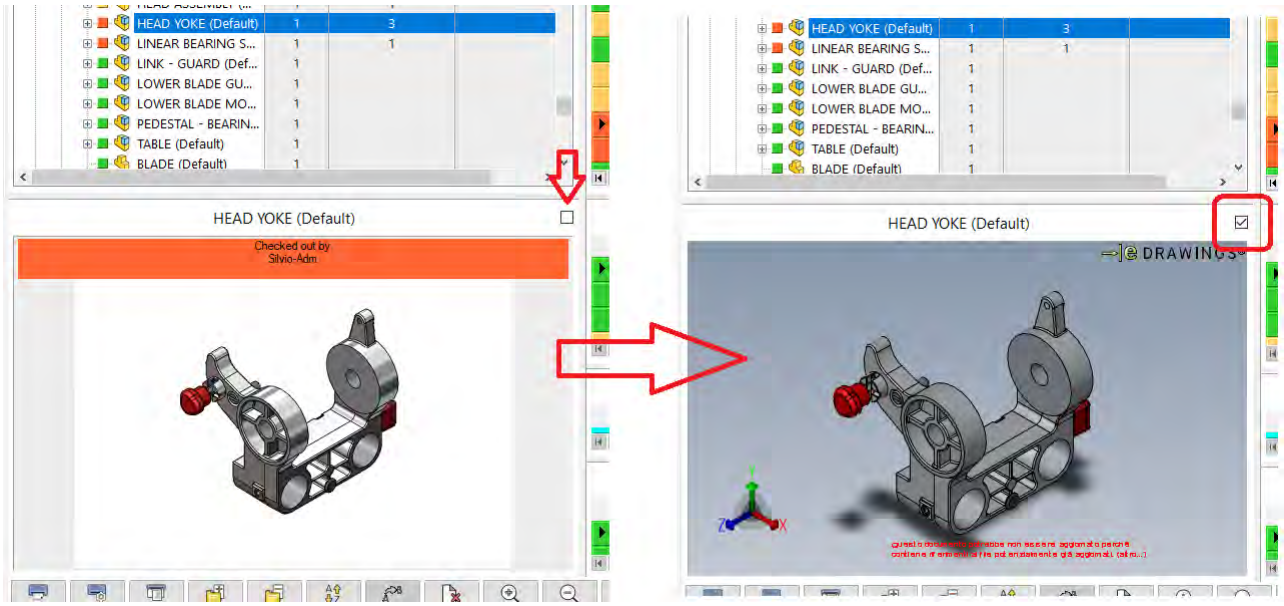
Core-embedded full preview and external full preview

There are two different types of full preview in R20: the core-embedded one and the external one.

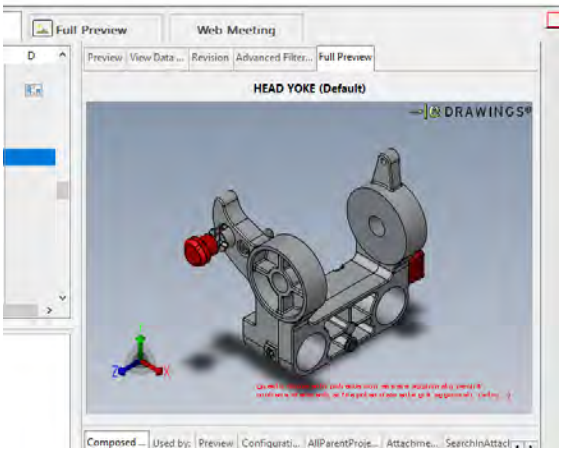
Core-embedded full preview

The core-embedded one can be activated in the document page, the tree page and, of course, in the full preview page. From the user perception point of view, the full preview display is very similar to the previous release one, even if the involved components are a lot reduced, giving more strength to the stability. There are no more external scripts involved, as well as no Internet Explorer control usage.

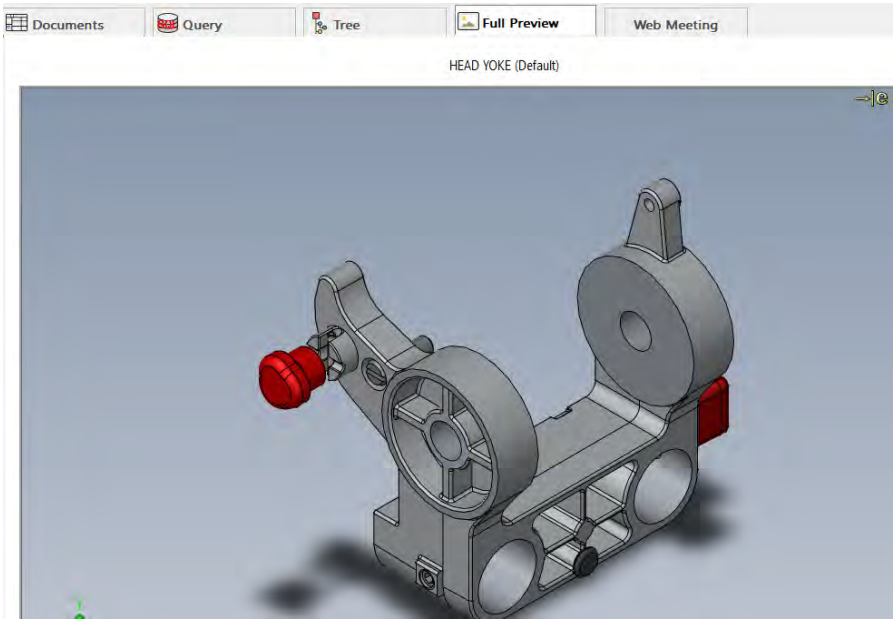
In the document page you can see the full preview by activating the checkbox above the static preview:



In the tree page, the full preview has its own tab:



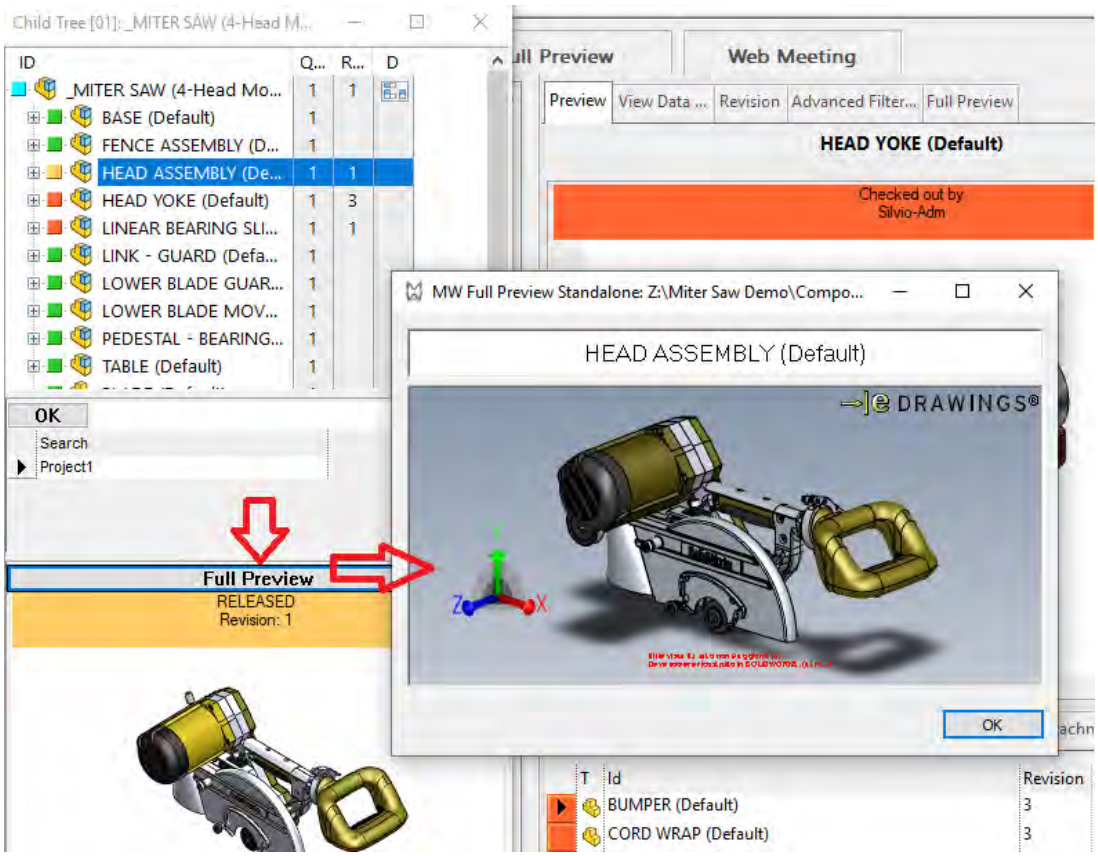
The full preview page is pretty similar to the older releases:



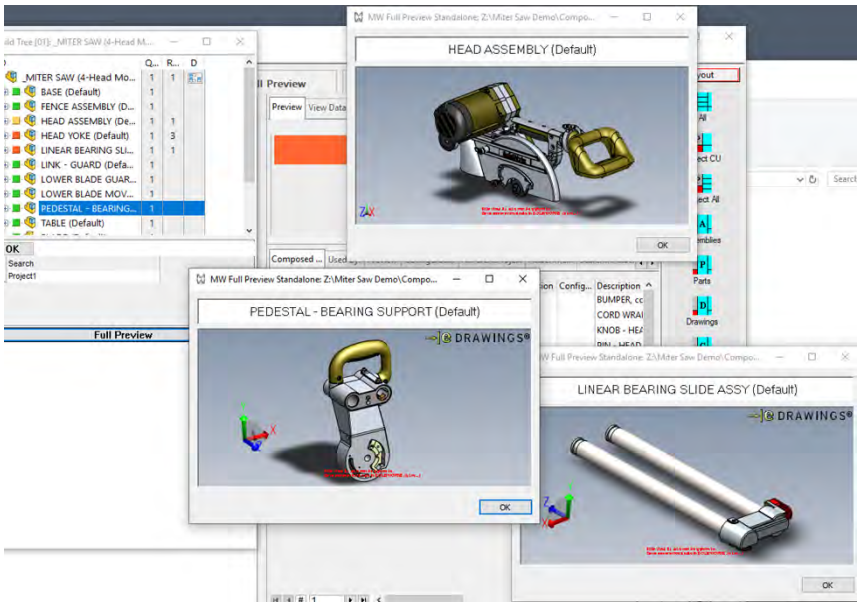
You can notice that the full preview title has been enlarged to host a larger font writing.

External full preview
The external one is now managed by an external application, demanding to it the rendering of the full preview aided dialog and it is invoked by clicking on each “full preview” button which may appear on dialogs (such as replace component dialog, document selector dialog, child tree dialog, embedded feature manager inside the CAD UI). Some of those dialogs have been changed the old “eDrawings” button to “Full Preview” since now, as mentioned above, the full preview is now possible for any supported file from anywhere the full preview button was appearing.

External full preview in child-tree dialog
Here, for example, how it appears the new child tree external window:

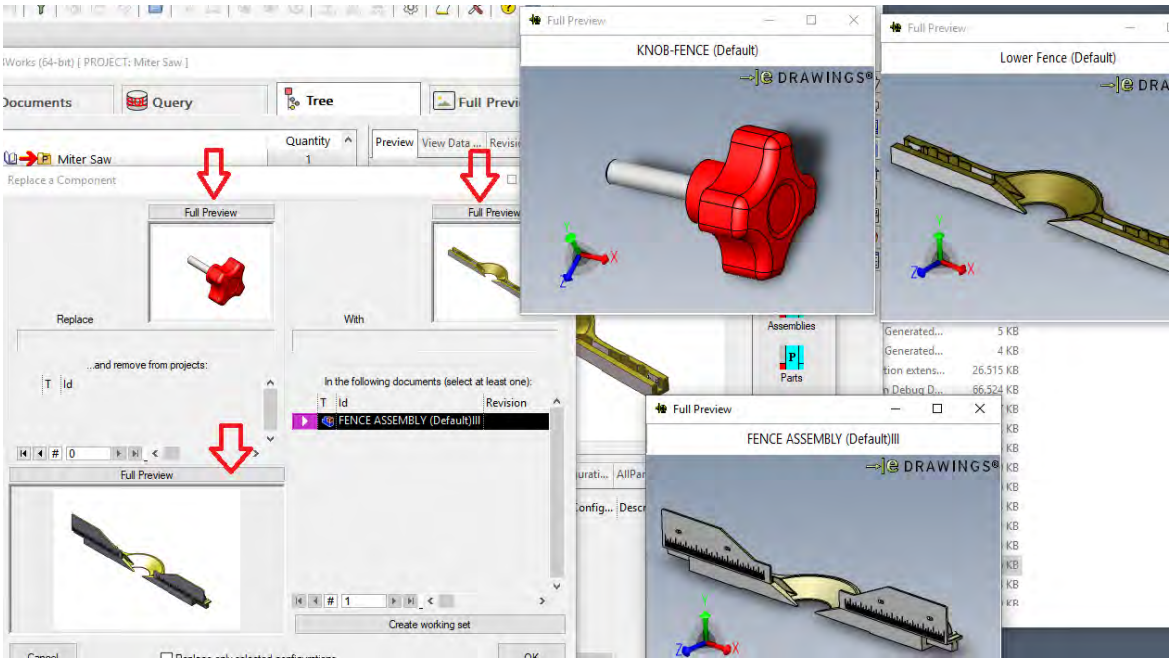


The appearing full preview external dialog is actually an external process, hence the PDM is offloaded of such a management which in the past was creating the conditions for hangs of the application: this dialog is not modal so it is possible to click to another item on the tree and again on the full preview button, so opening more full preview dialogs at the same time:



Closing the tree mini-dialog will close all the opened full preview windows (and therefore their processes).

External full preview in replace component dialog
A similar situation can be very useful in the replace component dialog where you can get three full preview buttons:



It is possible to see the full preview of the three objects which, in this case will stay until the dialog is closed.

New shell API and .NET API: ShowFullPreviewExternal and UserInterface.ShowFullPreviewExternal.

SHELL API

It has been added a new SHELL API command, called ShowFullPreviewExternal, to allow to open a full preview external application on demand from scripts. Please pay attention that only supported file types can be shown: an error will be raised if trying to open an unsupported file type.

Syntax:
ShowFullPreviewExternal (fullFilename, ID)

Parameters
fullFilename = full path name of the object being previewed
ID = the ID of the object, which will appear at the top of the window

Example:
call DBWShell("ShowFullPreviewExternal C:\MyAssemblies\MyAsm.asm MyAsm")

.NET API

It is available also a .NET api version of the command:

```
public bool ShowFullPreviewExternal(
    string fullFilename,
    string documentId
)
```

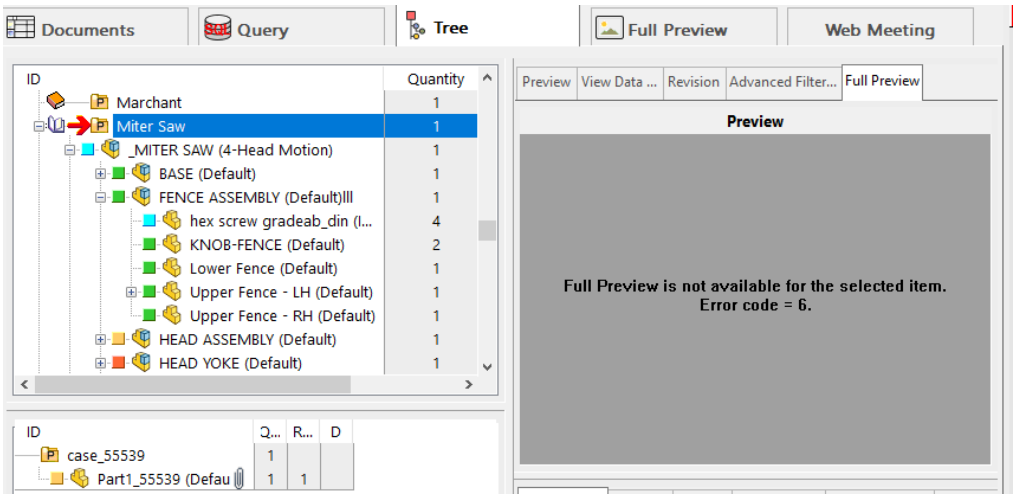
Parameters
fullFilename
Type: System.String
the full pathname of the file being shown
documentId
Type: System.String
the document ID of the file being shown

Return Value
TRUE if the application is showing the document successfully, FALSE otherwise

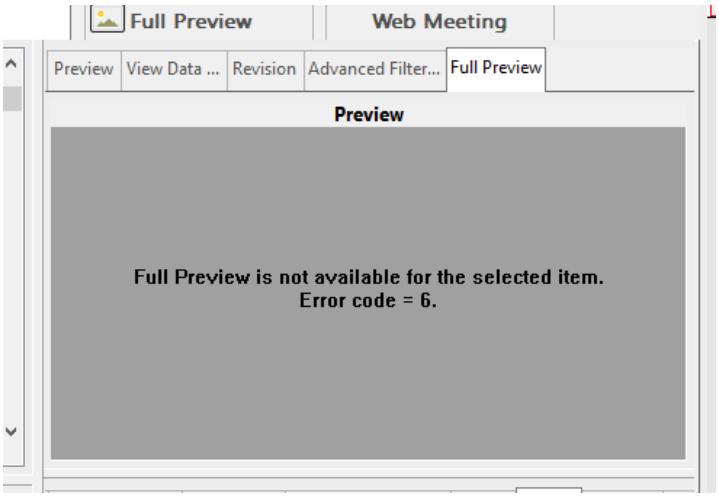
Improved error message handling

When an error occurs the box ,which is supposed to show the full preview, will actually show an error message plus an error code: this, together with the log file, will help support to understand which was the error. Here some managed cases.

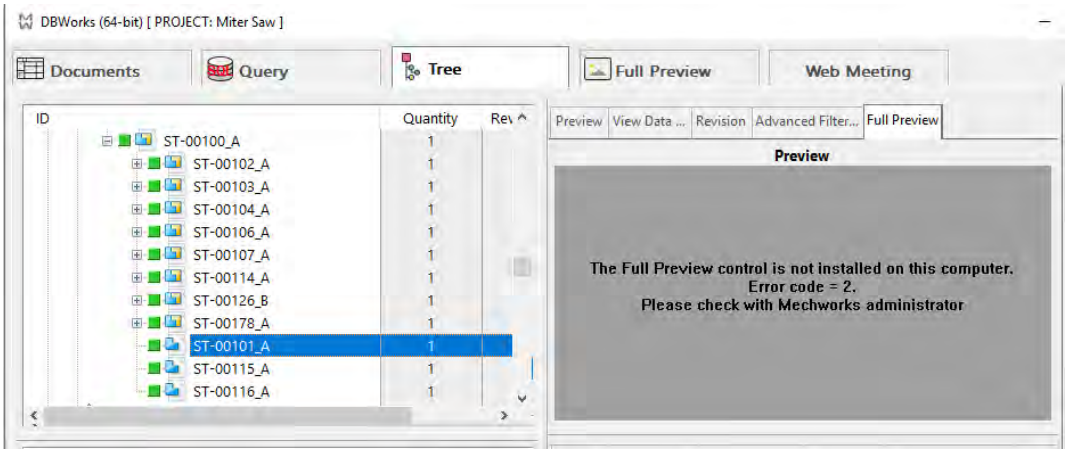
No full preview for projects



No full preview for unsupported files:



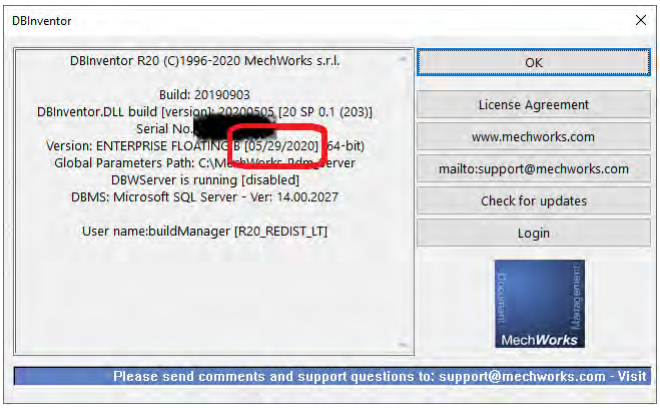
No full preview for missing third-party control:



MwLicense

Added expiration date info in About box dialog for borrowed licenses

The About.. info dialog now shows the expiration date information if the license is borrowed (type “B”). The expiration date is positioned next to the license type.



MwPDMApi

Initialize: new method StartConnection3

StartConnection3 creates an instance of MwPDM Application working with referenced application (SolidWorks, SolidEdge, Inventor, DBWorks Standalone). If referenced application is not running, it creates a new instance of DBAlone Server (with login specification) according to the DBAloneMode enum:

0 - do not create a new instance
1 - creates a new instance according to the context (like StartConnection2 with createDBAlone = true)
2 - start the 32-bit executable
3 - start the 64-bit executable

```
public Application StartConnection3(
  string appName,
  DBAloneMode dbAloneMode = 1,
  string login = ""
)
```

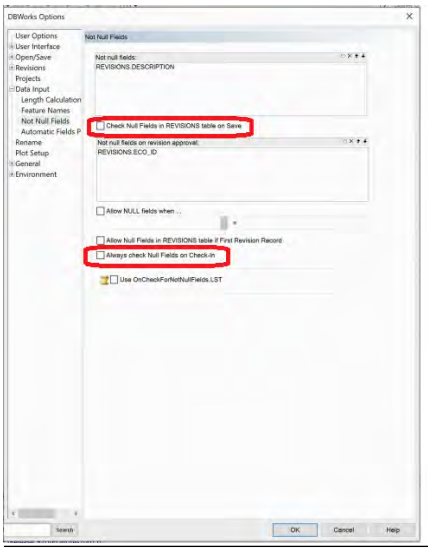
Not Null Fields

New Option: Data Input->Not Null Fields->[ ] Check Null Fields in REVISIONS table on Save

When saving a component, if the option is checked, it’s now possible to check the Null Fields defined for the REVISIONS table. If the option is not checked only the Null Field defined on DOCUMENT table will be checked. By default (option unchecked) the fields defined on REVISIONS table won’t be checked.
If the option User Interface -> [ ] No input when saving or the option User Interface -> [ ] No input on save of checked out documents are checked the Null Fields check won’t be executed neither on DOCUMENT and REVISIONS fields.

New Option: Data Input->Not Null Fields->[ ] Always check Null Fields on Check-In

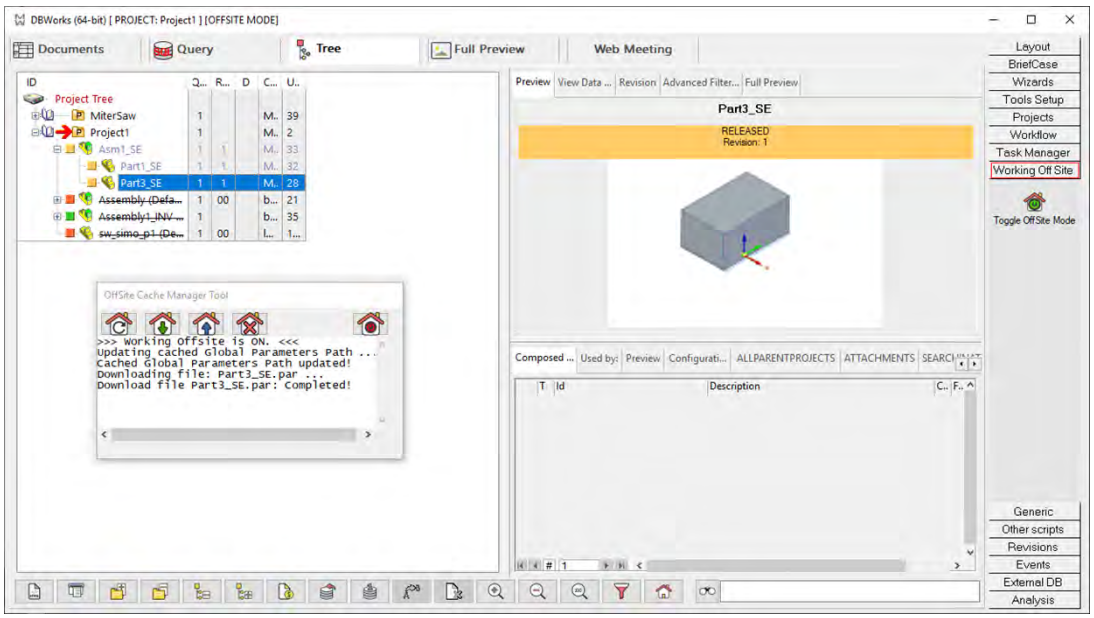
When checking-in a component, if the option is checked, it’s now possible to check the Null Fields even if the option User Interface -> [ ] No input on check-in is checked. In this case a message in the activity console is shown warning about DOCUMENT table null fields first, and then REVISIONS table in second instance (once the DOCUMENT fields has been filled). In other way the Null Fields check won’t be executed.



OffSite Mode

Overview

The OffSite mode has been designed with the goal of give costumers an easy to setup and easy to use way to work outside their company in the same way they would have done in their offices, no overhead costumer side is required. The new environment supports all PDM features and it requires network connection.



A new entry has been added to the shortcut bar, containing the button that enable or disable the mode. Entering the OffSite mode will download on the local machine the needed CAD files and cache some PDM files in order of minimize the remote accesses and also show a new designed window “OffSite Cache Manager” that has been implemented to log the download and upload operations and interact with the local stored CAD files.
The enabling and disabling process will require you to restart the CAD application to correctly setup the environment.

Prerequisites

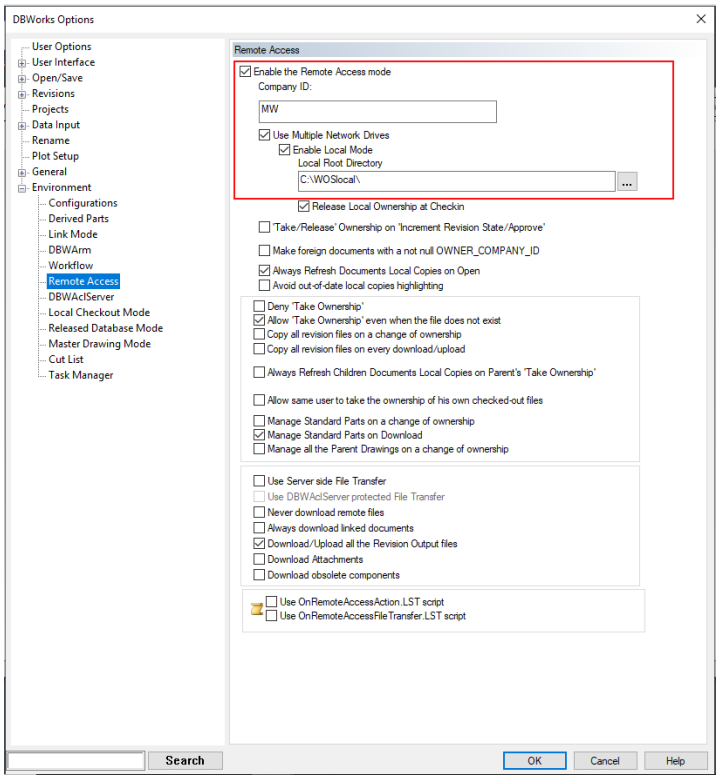
VPN connection
A VPN connection is required to always have access to the remote database and remote file system in order to download and\or upload files and data.

Valorize the Company_ID field in database

A necessary prerequisite to use Offsite Mode is to valorize the Company_id field for each entry into the Document table. To accomplish that it's possible to use "Company ID manger" tool. You can find it into the Admin Tools under the section "Remote Access".

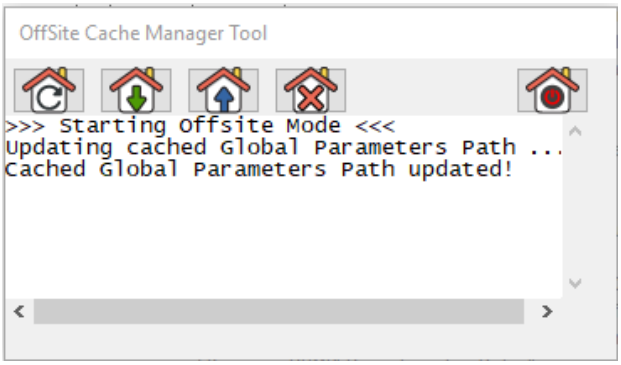
Set Remote Access environment

In order to enable the OffSite Mode is necessary to setup the Remote Access environment correctly. To do so it's required to set the following options:



OffSite Cache Manager Tool

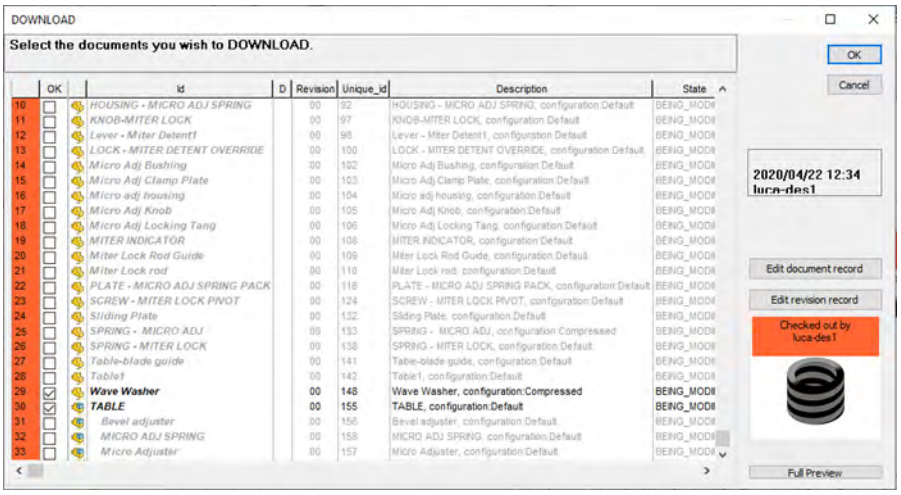
The OffSite Cache Manager Tool has been designed to log the user about every upload and download operation is going on. The window can't be closed while the OffSite Mode is enabled because it's needed to give user immediate feedback on operation that could require a bit of time to be completed due to connection reasons.



The OffSite Cache Manager windows contains four buttons:

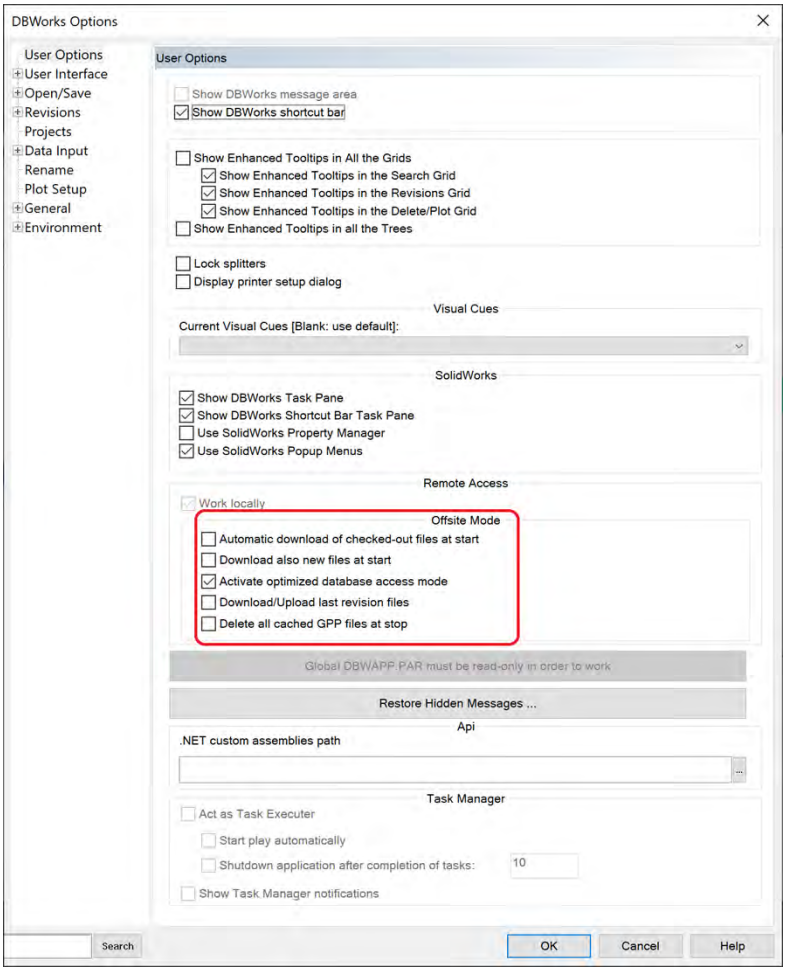
- Refresh Offsite local cache: Updates all the GPP cached files.
- Update local files: Shows a document selector dialog populated with the local Checked-in and Released files. You can choose which you want to download from the server file system.
- Upload local files: Shows a document selector dialog populated with the local Checked-out and New files. You can choose which you want to upload to the server file system.
- Delete local files: Shows a document selector dialog populated with the local Checked-in and Released files. You can choose which you want to delete from local cached files.
- Exit Offsite mode: Exit from the OffSite Mode.

Attention: All the above Update listed operations could be time consuming.



OffSite Mode User Options

In the PDM User Options, has been added a new section called “Offsite Mode” containing four option. These options will be enabled only if the correct Remote Access option are set.
The new options let you customize the behavior of the PDM in OffSite Mode at his start, end and during everyday work.



- Automatic download of checked-out files at start: If checked, detect and automatically download in local all the checked-out files by the current user. Default FALSE.

- Activate optimized database access mode: If checked, the PDM introduces a series of limitations in the user interface to speed up its execution (like the VPN MODE). It is suggested in case of degraded connection. Default TRUE.
- Download/Upload last revision files: If checked the revision files (.gz and .TREE) of the last revision will be downloaded and uploaded as the same time of the corresponding CAD file. Default FALSE.
- Delete all cached GPP files at stop: If checked, deletes the cached GPP files when exit the OffSite Mode. Default FALSE.

OffSite Mode Script Environment

Has been implemented a script hook on start and stop events of the OffSite Mode. The engine checks if exist the file OnOffSiteModeStart.lst (for the start hook) and OnOffSiteModeStop.lst (for the stop hook) in the LST folder of the GPP, if exist they will be fired. The script are completely customizable and they are designed to setup the client environment if some non-standard operations need to be performed.
The input parameters for the scripts are:
`@CACHED_GPP_PATH=`Local folder where the GPP is cached
`@CACHED_FILES_DIRECTORY=`Local folder where the files are cached (there can be multiple instances depending on the number of entry in the DBW_COMPANY_INFO table).

Performances

Improved file loading algorithm

In R20 the message files, resource files and other PDM handled files are now loaded from installation path instead of from global parameter path. All the tools that are deployed with R20 will follow the same behavior.
That enhancement will improve performance and fix some updating issues shown up in the previous releases.
The policy will affect also the custom files (for example DBWFields_Custom.msg), that must be placed into the installation language specific folder.

Example:
Environment: Installation language = English
File to load: DBWFields_Custom.msg
Algorithm: The file will be searched into the folder InstallationPath\Lang\English\
If the file won't be found, it will be searched into the folder GlobalParameterPath\Lang\English\
If the file won't be found, the system assumes that it doesn't exists

It is possible to define user path to load every type of file if desired. You can create the file DBWUserDefinedPaths.txt into GPP\Schema\ and define your entry in this way
FileName = FilePath
The file will be loaded from the specified path if it exists.

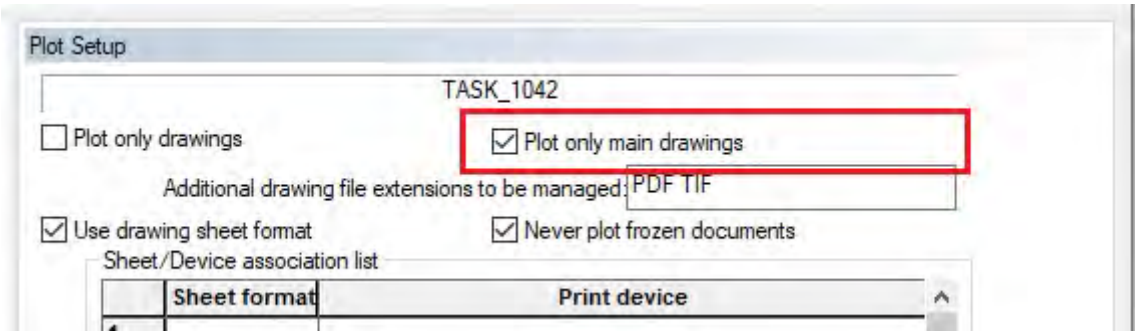
Remote Access

The algorithm used in processing Document Local Copies refresh has been reviewed to optimize internal checks and to reuse database stored information, with better performance in case of medium-large assembly document management.

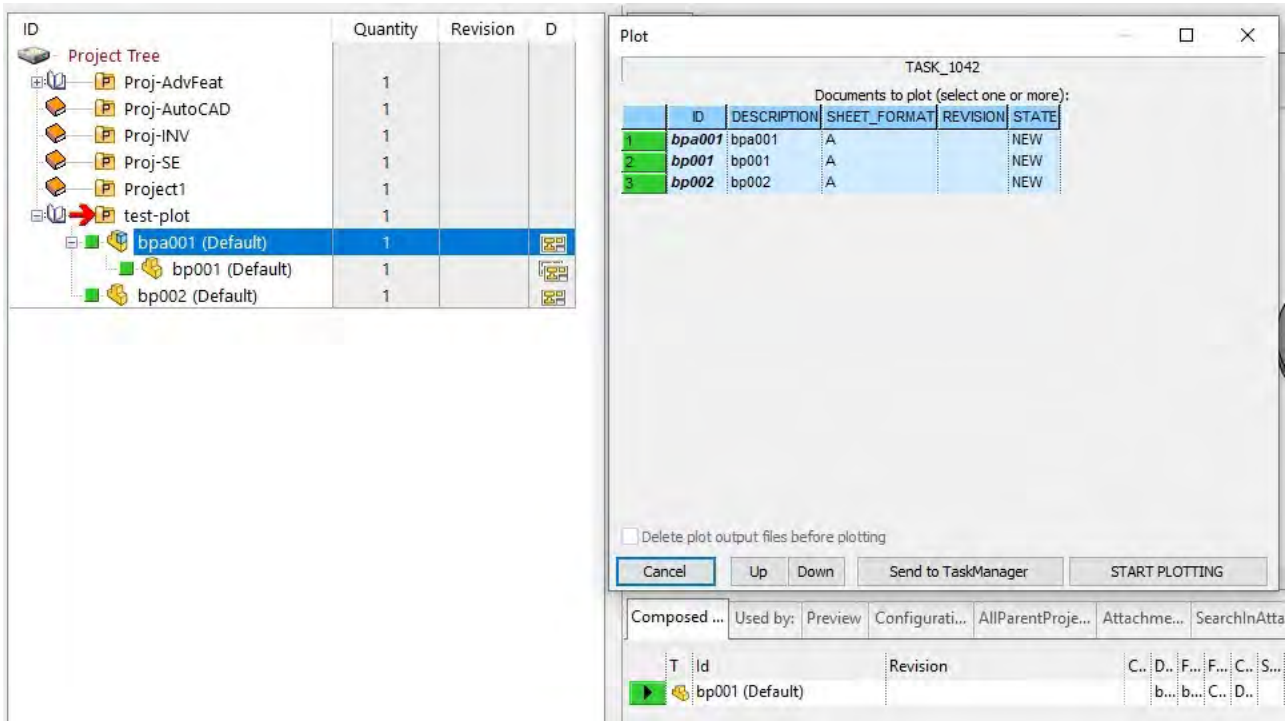
Plot Setup

New Option: Plot Setup->[ ]Plot only main drawings

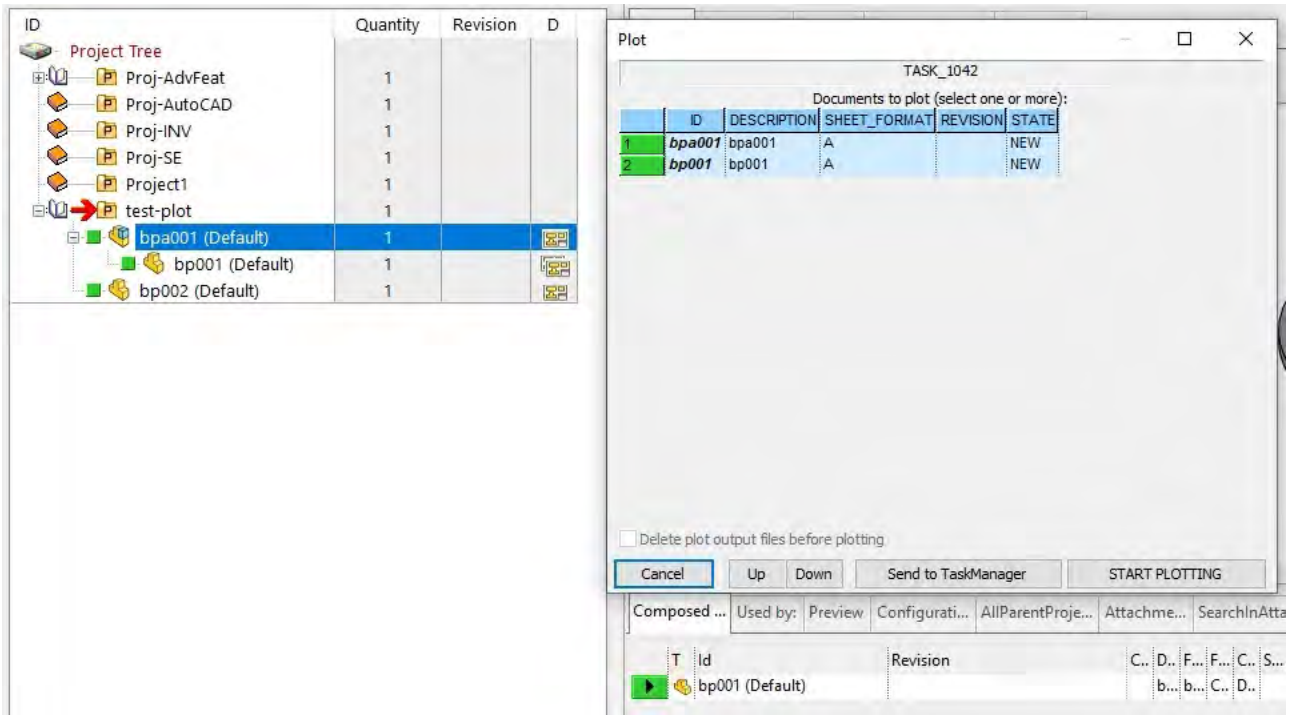
It is added a new option in "Plot Setup", to take into account plotting only the drawings having a principal relation with involved documents. This option is near the standard "Plot only drawings": they both can be unchecked (to plot part/asm), and for drawing, only one can be checked.



Usually, the option "Plot only drawings" takes into account all drawings having a parent-child relation with the involved documents (i.e. even drawings containing secondary views). In particular, for drawing documents, the PARENT_CHILD reports relationship with all referenced/linked document.



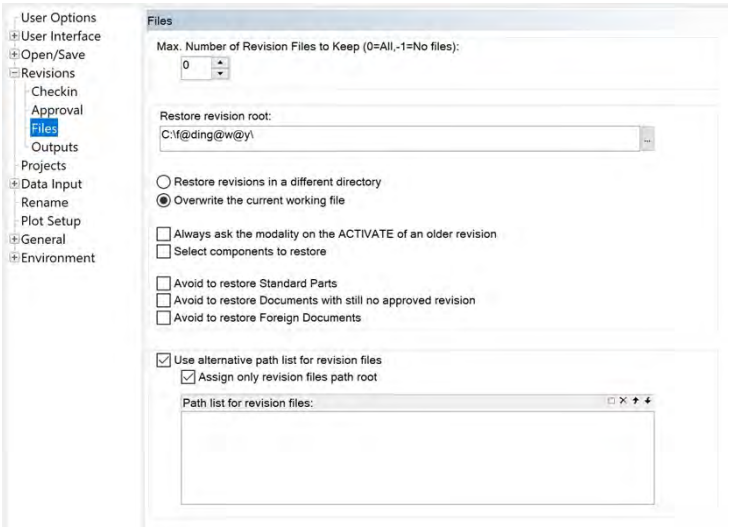
with the new option, it is now possible to plot only the drawings having a principal relation with involved documents:



Revisions

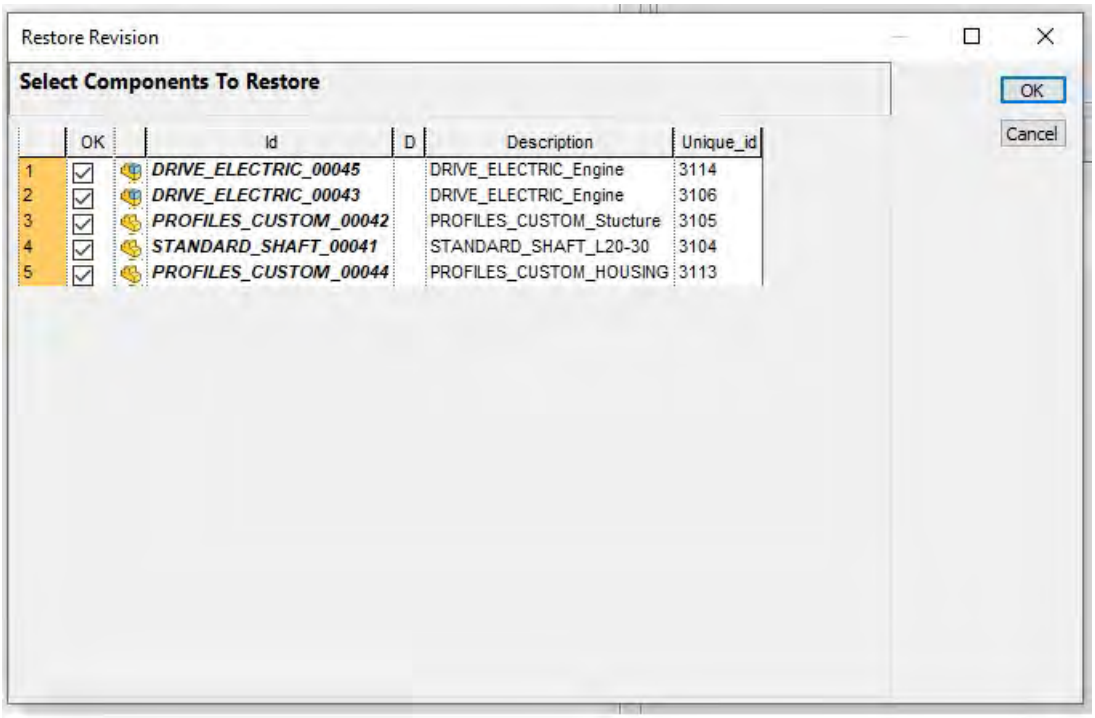
New Option: Revisions->Files->[ ]Select components to restore

When restoring a revision of an assembly, it is now possible to restore single components of that revision. The process will read the .TREE file associated to the selected revision and will show in a Dialog all the relative components.

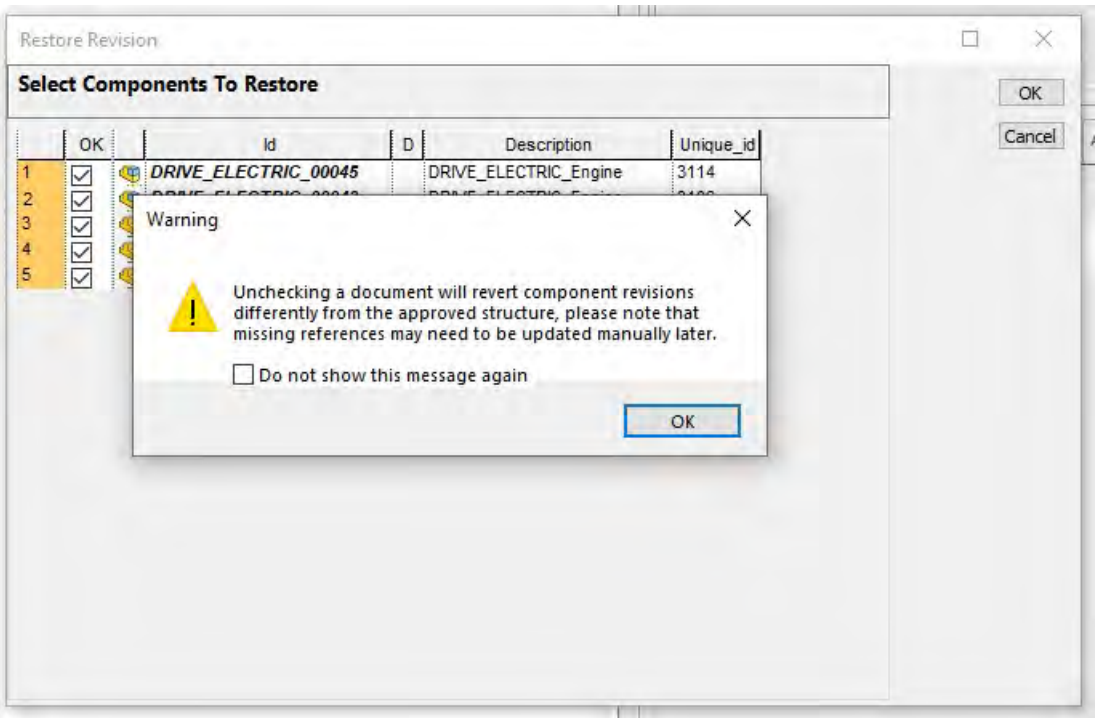


New layout for the Dialog in Revisions->Files

As always, one can select to "Restore revisions in a different directory" or "Overwrite the current working file": in R20 we made explicit this choice in two radio-buttons, allowing also the usage of option "Always ask the modality on the ACTIVATE of an older revision" in both ways.



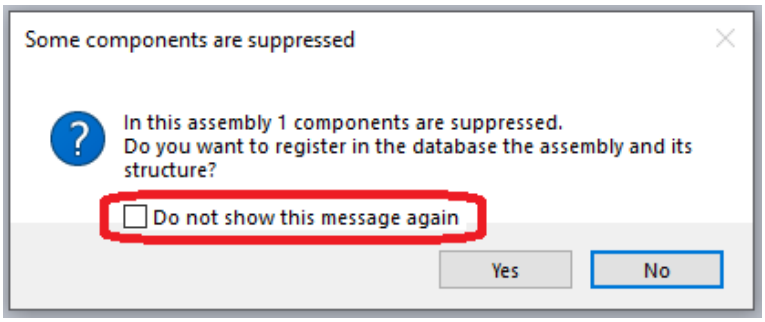
The new Dialog will show all the documents that are going to be restored: when de-selecting a file, it is reminded (once deselecting the first component) that the operation could create possible references breaks that have to be fixed manually.



Save Process

Suppressed Component warning message: added checkbox for not showing this message again

A checkbox has been added for not showing the warning message again when saving an assembly containing suppressed components.



Save Wizard

Added control for coding values

When the auto number approaches the roof value assigned in the options of Category Maker, the script that calculates the next value displays a warning to reconsider the coding policy

Server-Side Setup (ACLServer and License Manager)

New setup available for server-side products

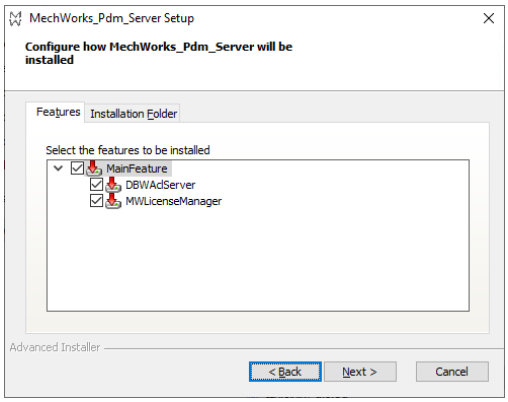
R20 has been added a new setup to help customers to install two server-side products that are used by the PDM:

- DBWAclServer
- License Manager

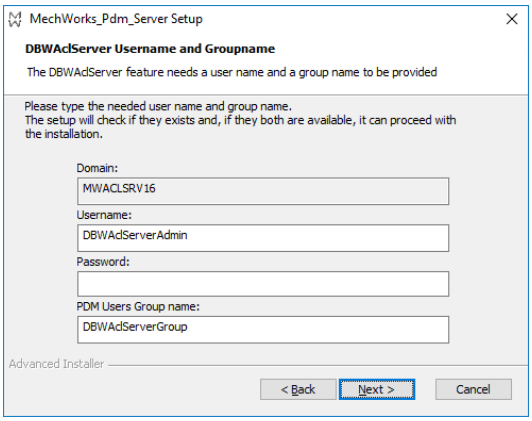
With this enhancement we are giving to administrators/installers an important tool to avoid some troubles usually encountered during the manual procedures (already documented in the help file), which include small but important system administration steps that have to be done in order to guarantee the successful installation.

The wizard in details

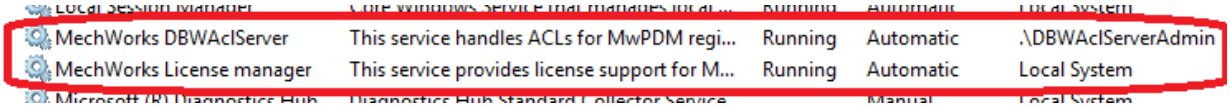
Starting the server-side setup (named as *MechWorks_Pdm_Server_Msi_R20_SPx_y*) a wizard will guide all along the installation of the two above mentioned products, checking if all the needed redistributables or other components are present or not and therefore starting their installation:



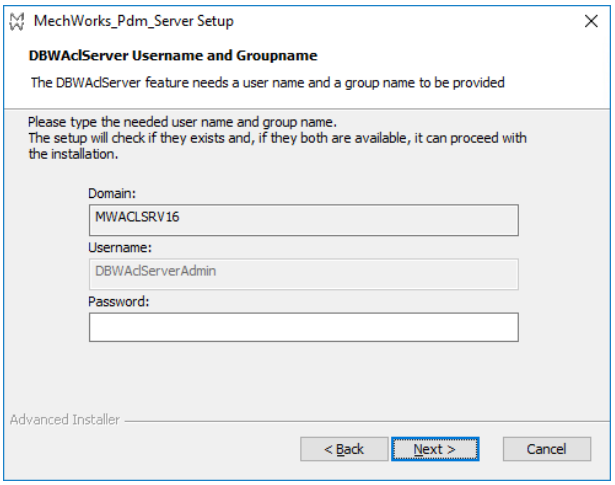
Depending on the selected product, a specific wizard pages set will be shown.
For example, in the case of the DBWAclServer, a logon info page is shown, to ask the credentials of the user that is going to be used to run the service and the groupname used to group all the PDM involved designers.



The setup expects those two identities to be already existing and it performs a check denying the completion if those checks reveal one of them not existing in the system (machine or domain).
Please note that, if the user or the group have to be created yet, we suggest names that reminds DBWAclServer (i.e. DBWAclServerAdmin or DBWAclServerGroup). The setup will grant needed privileges to the user in order to let him run the service. For sure the user must be added into the Administrator group before starting the setup.
Some minor checks are performed before starting the actual setup execution (i.e. password valid), raising an alert if there's been a problem.
After the installation process is completed, the two product services are installed and running, as this can be seen from the services list:



For an upgrade, i.e. a new service pack has been released, you can run the new setup on a server where a previous setup has been installed already: it will find out that the service and its username is already there so it won't allow to specify another username and the groupnames (the textfields will be disabled), but it will only require the password:



Scripting

DBWShell("GetRevisionOutputFiles"): new optional parameter <bFullPathName>

This new optional parameter (default "0") allows to include full path names.

Syntax:
DBWShell("GetRevisionOutputFiles docUid bFullPathName")

Parameters:
<uid> unique id of the document
<bFullPathName> a boolean expressing wheter or not to include the complete path names

Results:
@REVISION_OUTPUT_FILE_PATH_NAME =<revision output file #1 path name>
@REVISION_OUTPUT_FILE_PATH_NAME =<revision output file #2 path name>

…
@REVISION_OUTPUT_FILE_PATH_NAME =<revision output file #N path name>

Example:

```
'…
call DBWShell( "CurrentDocument" )
docUId = DBWResult( "@DOCUMENT_UNIQUE_ID" )
call DBWShell("GetRevisionOutputFiles " & docUId & " 1")
Set fs = CreateObject("Scripting.FileSystemObject")
Set tfolder = fs.GetSpecialFolder(TemporaryFolder)
Set a = fs.OpenTextFile( tfolder & "\" & "dbwreslt.in" , ForReading, True )
Do While a.AtEndOfStream <> True
line = a.ReadLine
tokens = Split( line, "=", 2, 1)
DBWMsgBox tokens(1)
Loop
a.Close
'…
```

DBWShell("Rename "): preserved hidden filenames

The command "Rename" of DBWShell renamed the hidden files of a document uppercase.

DBWStandardLibrary command: DBWSelectDir TopMost of PDM

The DBWStandardLibrary comand "DBWSelectDir" shows a directory dialog box interface that is now automatically child of the running PDM; to customize the Parent of the dialog box, please refer to DBWSelectDir2.

New DBWShell Command: FileSetProperty <FileName> <Configuration> <PropertyName> <PropertyValue>

The command set a custom property on the specified file for the specified configuration.

Syntax:
DBWShell("FileSetProperty FileName Configuration PropertyName PropertyValue ")

Parameters:
<FileName> path of the file
<Configuration> name of the configuration where the custom property must be set
<PropertyName> the name of the property to set
<PropertyValue> the value of the property to set

Example:

```
...
call DBWShell( "FileSetProperty C:\part1.SLDPRT Default DescrCode 10" )
result = DBWResult( "@FILESETPROPERTY_RETCODE" )
...
```

New DBWShell Command: IsCompSuppressedInAssembly<AssemblyFilePath> <AssemblyConfigurationName> <ComponentName>

The command returns True if the selected component is suppressed in the selected assembly. False otherwise.

Syntax:
DBWShell("IsCompSuppressedInAssembly FileName AssemblyFilePath AssemblyConfigurationName ComponentName ")

Parameters:
< AssemblyFilePath > path of the assembly
< AssemblyConfigurationName > name of the configuration containing the component
< ComponentName > name of the component (without extension)

Example:

```
...
call DBWShell( "IsCompSuppressedInAssembly C:\Assem1.SLDASM Default Part1" )
result = DBWResult( "@IS_COMP_SUPPRESSED_IN_ASSEMBLY" )
...
```

New DBWStandardLibrary command: DBWSelectDir2

This new command allows to specify the handle parent window for of the directory dialog box interface. In general, it must be used in situation where another form is in front of the PDM, like a DBWFRM.

Syntax:
DBWSelectDir2 Root, TitleMsg, HandleParentWindow

Parameters:
< Root > the starting selected folder
<TitleMsg> title of the dialog box
<HandleParentWindow> integer of the parent window handle

Example (in a DBWFRM):

```
…
rootdir="c:\program files\dbworks"
TitleMsg="Select a dir for MechworksPDM"
msgbox DBWSelectDir2(rootdir, TitleMsg, TheFormViewerWhnd)
```

New DBWStandardLibrary command: DBWSendEmail3

The command allows to specify more than one email address in the receiver list.
The first receiver of the list will be considered for the TO field while the remaining ones will be send as CC contacts.

Syntax:
DBWSendEMail3 SendTo, Subject, MailBody, HTML, SendFrom, DisplayMsg, AttachmentPath, SMTPServer, LoginUser, LoginPassword

Parameters:
<sendTo> a semicolon separated list of the email receivers
<Subject> the subject for the email
<MailBody> the body of the email
<HTML> <0/1> if 1 sets the email format to HTML
<SendFrom> the sender of the email
<DisplayMsg> <0/1> if 1 shows a confirmation dialog before sending the email
<AttachmentPath> the full file name of the file to be attached
<SMTPServer> the smtp server
<LoginUser> the login for the smtp server
<LoginPassword> the password for the smtp server

Example:

```
…
SendTo="John Office <john@mycompany.com>; John Doe <john.doe@gmail.com>; Mary Shelley
<mary.shelley@mycompany.com>"
Subject="test e-mail Lib"
MailBody="this is a test message<BR>this is a <FONT COLOR=red>red message</font>"
SendFrom="Brian Hoff <brian.hoff@mycompany.com>"
DisplayMsg=TRUE
HTML=TRUE
AttachmentPath= "c:\temp\test_file.zip"
SMTPServer="mailserver.mydomain.com"
LoginUser="john@mydomain.com"
LoginPassword="myStrongPWD@@"

DBWSendEMail3 SendTo, Subject, MailBody, HTML, SendFrom, DisplayMsg, AttachmentPath,
SMTPServer, LoginUser, LoginPassword
...
```

OnShowPreviewLabel.lst: support for image customization

It is now possible to add custom icons to the Preview Label.
A new output parameter has been added to OnShowPreviewLabel.lst:

```
IMAGE1 1,120,Image_One.bmp
IMAGE2 32,120,Image_Two.bmp
....
```

Where IMAGEx is the tag to add an image, the first parameter is the left image coordinate, the second parameter is the top image coordinate and the third is the name of the image file.

The supported extensions are .ico and .bmp.
The image file must be present in the …\SCHEMA\IMG\ folder.
It is possible to add up to 10 images to the Preview Label.
The image will have fixed size 35x35 pixels.

To properly select coordinates where you want to draw the icon, four new input parameter in the OnShowPreviewLabel.LST script will be added:

```
@RECT_TOP
@RECT_BOTTOM
@RECT_LEFT
@RECT_RIGHT
```

that specify the coordinate of the Preview Label rectangle. You can use them to calculate the relative coordinates where the icon will be drawn.

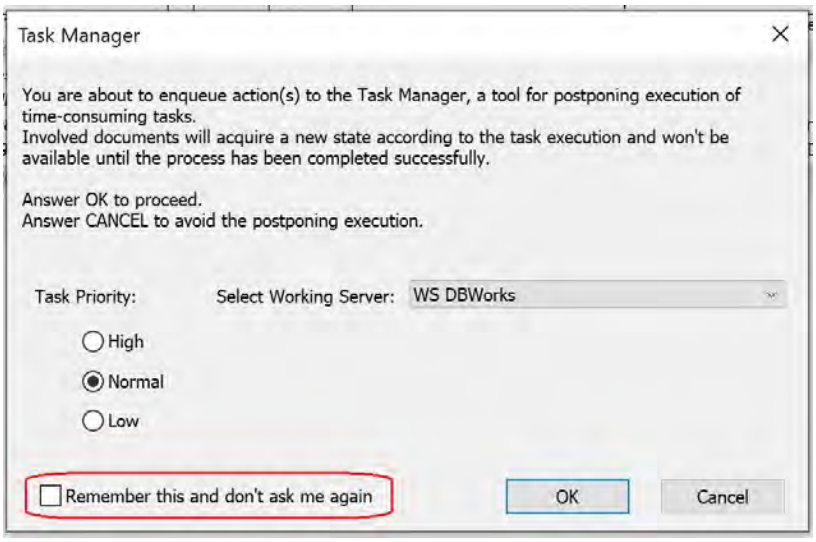
Example:

```
...
DBWOutput "TEXT1","Custom",ForWriting
DBWOutput "TEXT2","Text",ForAppending

rectTopCoordinate = DBWInput("@RECT_TOP")
rectLeftCoordinate = DBWInput("@RECT_LEFT")
rectRightCoordinate = DBWInput("@RECT_RIGHT")
rectBottomCoordinate = DBWInput("@RECT_BOTTOM")

img2Left = CInt(rectRightCoordinate) - 45

DBWOutput "IMAGE1",rectLeftCoordinate & "," & rectTopCoordinate & "," &
"DBW_Warning.ico", ForAppending
DBWOutput "IMAGE2",img2Left & "," & rectTopCoordinate & "," & "dbwscbar73_LARGE.BMP",
ForAppending
...
```

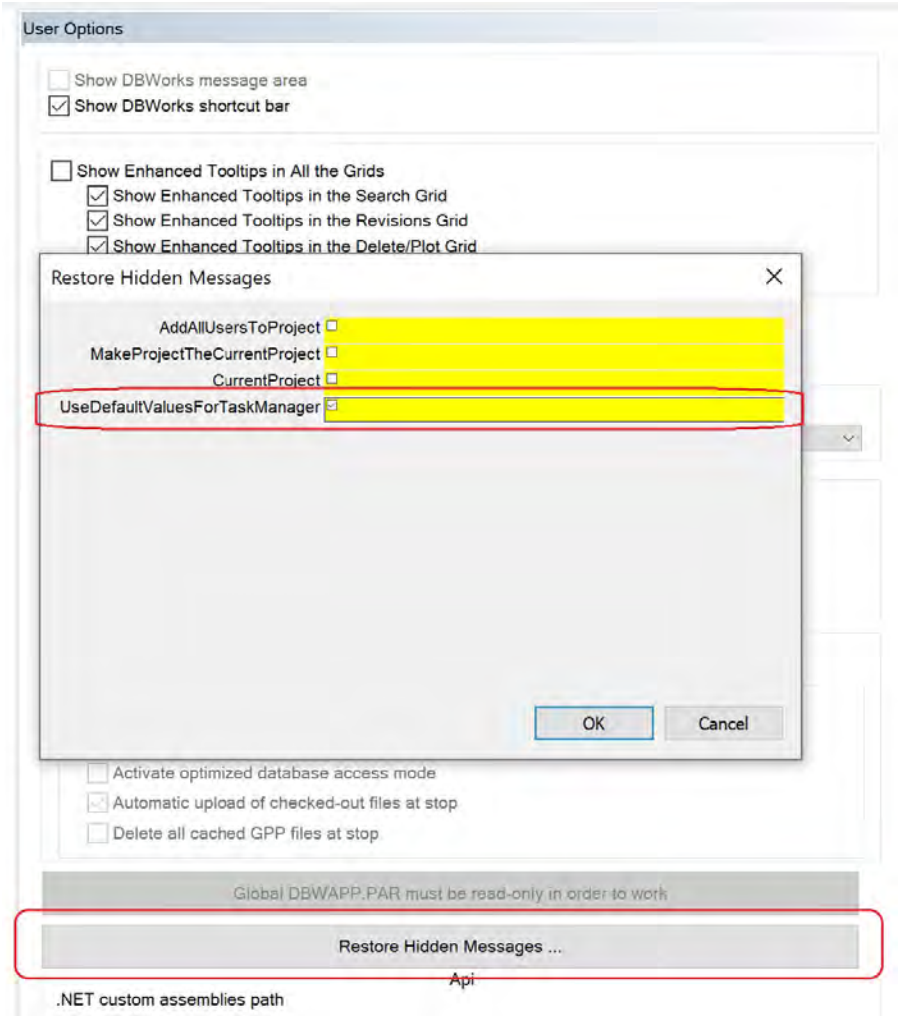
Task Manager

Default Options: Priority and Working Server Name

It is now possible to define a default Priority and default Working Server Name for accoding tasks: the task manager dialog will not be prompted again.



As per other options, to uncheck this behavior and return to manually select Priority and Working Server, use the User Options tab:



New field for Task Executor: VISIBLE_NAME

Added a new field for Execution Nodes, VISIBLE_NAME, that is an alias to better handle the situations where Machine Names on the Networks are hardly recognizable during the queuing process.
If this value is NULL will be displayed as always the Machine Name of the Network. This value has to be different for every machine and different from every other WS Machine Name.

New Shell API: TaskCreateScript

Added a new Shell API to enqueue and execute a generic .vbs script: *TaskCreateScript*.
This command allows to start programmatically the definition of a generic .vbs script to be processed later by the TaskManager: it could have a list of document unique id's as input parameters or not.
The method should be used together with the TaskAppend (if there are any document to append as input parameters) and the TaskSubmit (to submit the task definition as a new effective task of the TaskManager) shell methods.

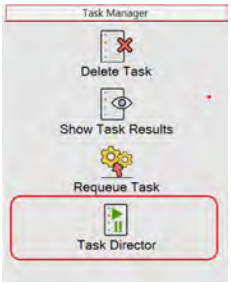
Syntax:
TaskCreateScript (scriptName taskWsName taskPriority)
Parameter
scriptName = full path name of the script
taskWsName = involved working server name
taskPriority = task execution priority [1:low, 2:normal, 3:high]

Example:

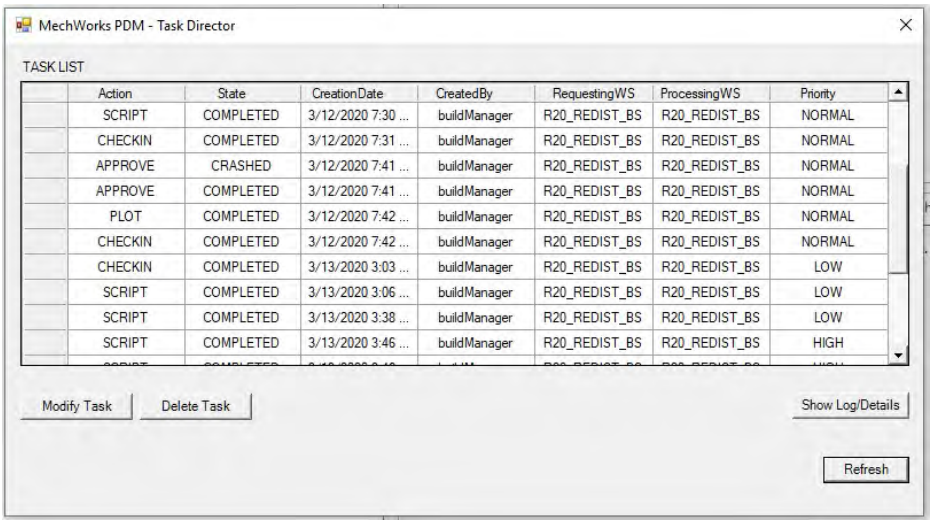
call DBWShell("TaskCreateScript C:\MechWorks_Pdm_Server\lst\Test.vbs DBWorksExecuter1 2")
(optional) call DBWShell("TaskAppend 241,242,245")
call DBWShell("TaskSubmit")

Task Director

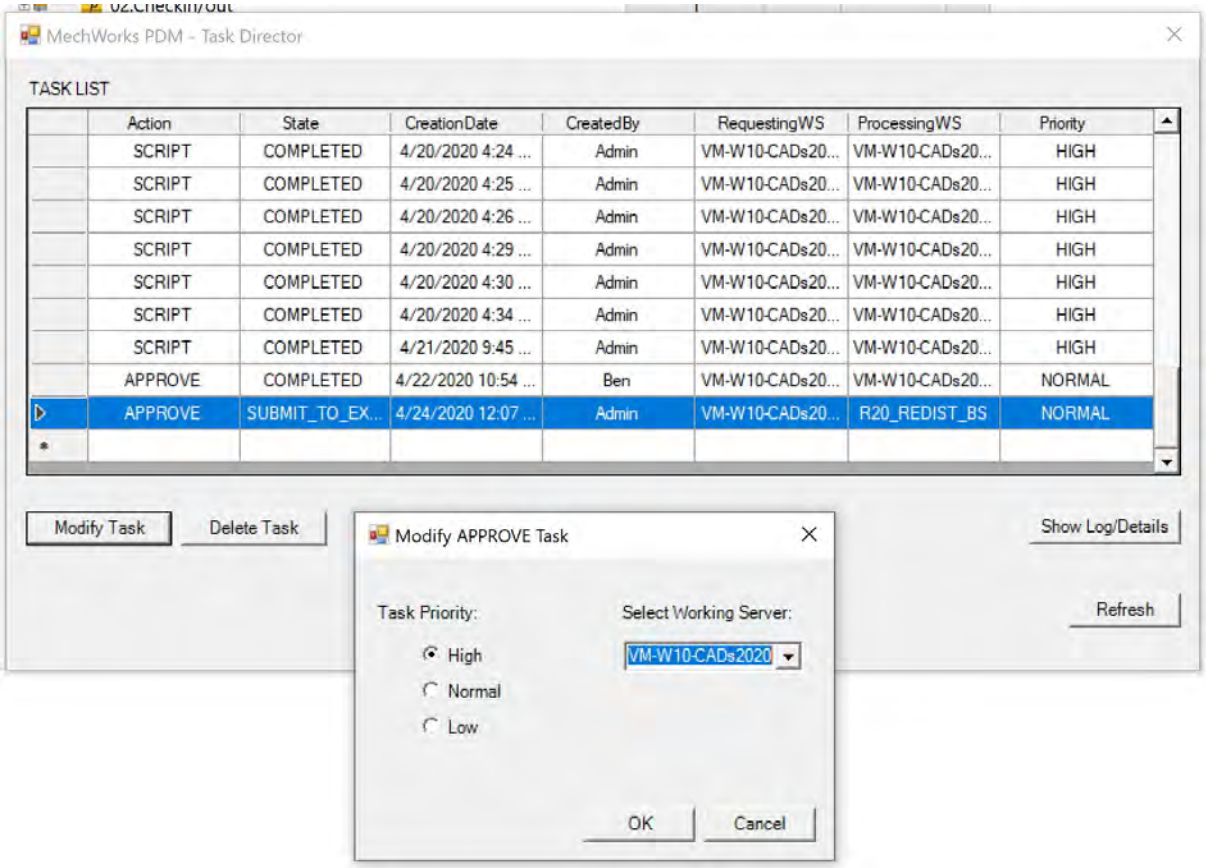
DBW Task Director is a new external application to allow administrative operations on tasks (view, edit or delete). It's a new tool in addition to the existing ones for allowing the redefinition of a task (like modify its priority, delete the task) independently of the requesting user.
This tool, available only for users of the DBWARM Group "DBWorks Admin", can be launched from the *Task Manager* shortcut bar section:



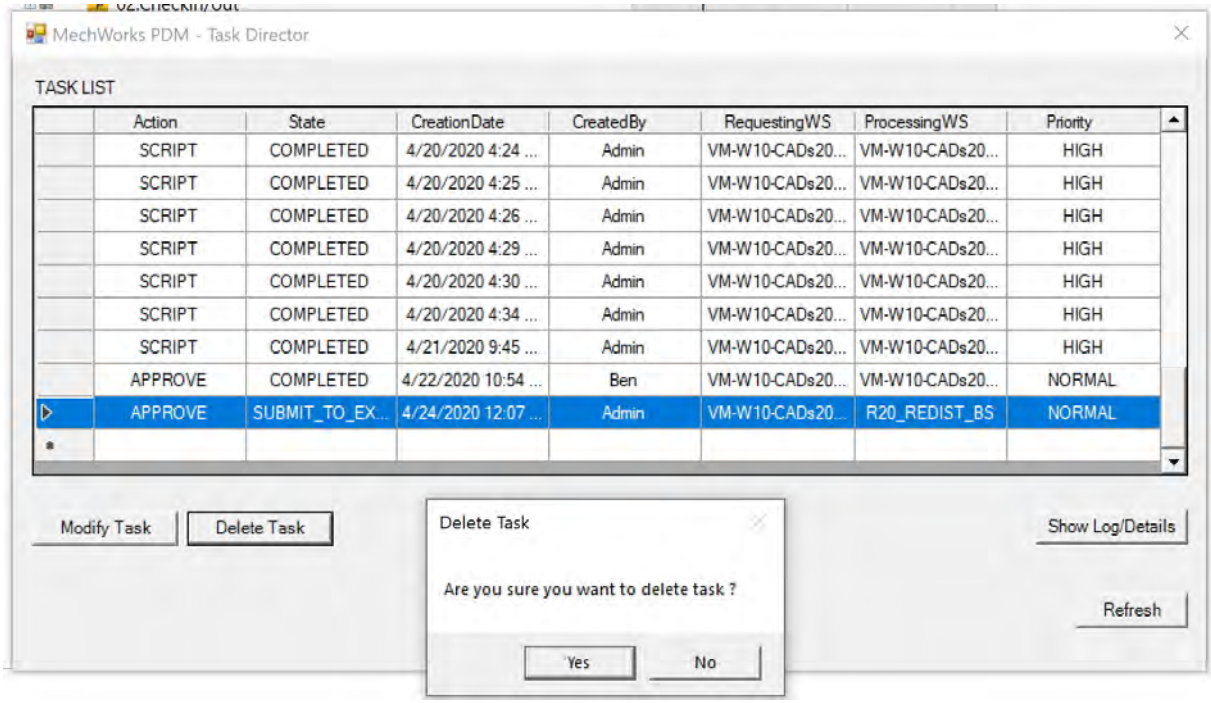
Running the new application, a complete Task List is shown and, once a task has been selected, it can be modified:



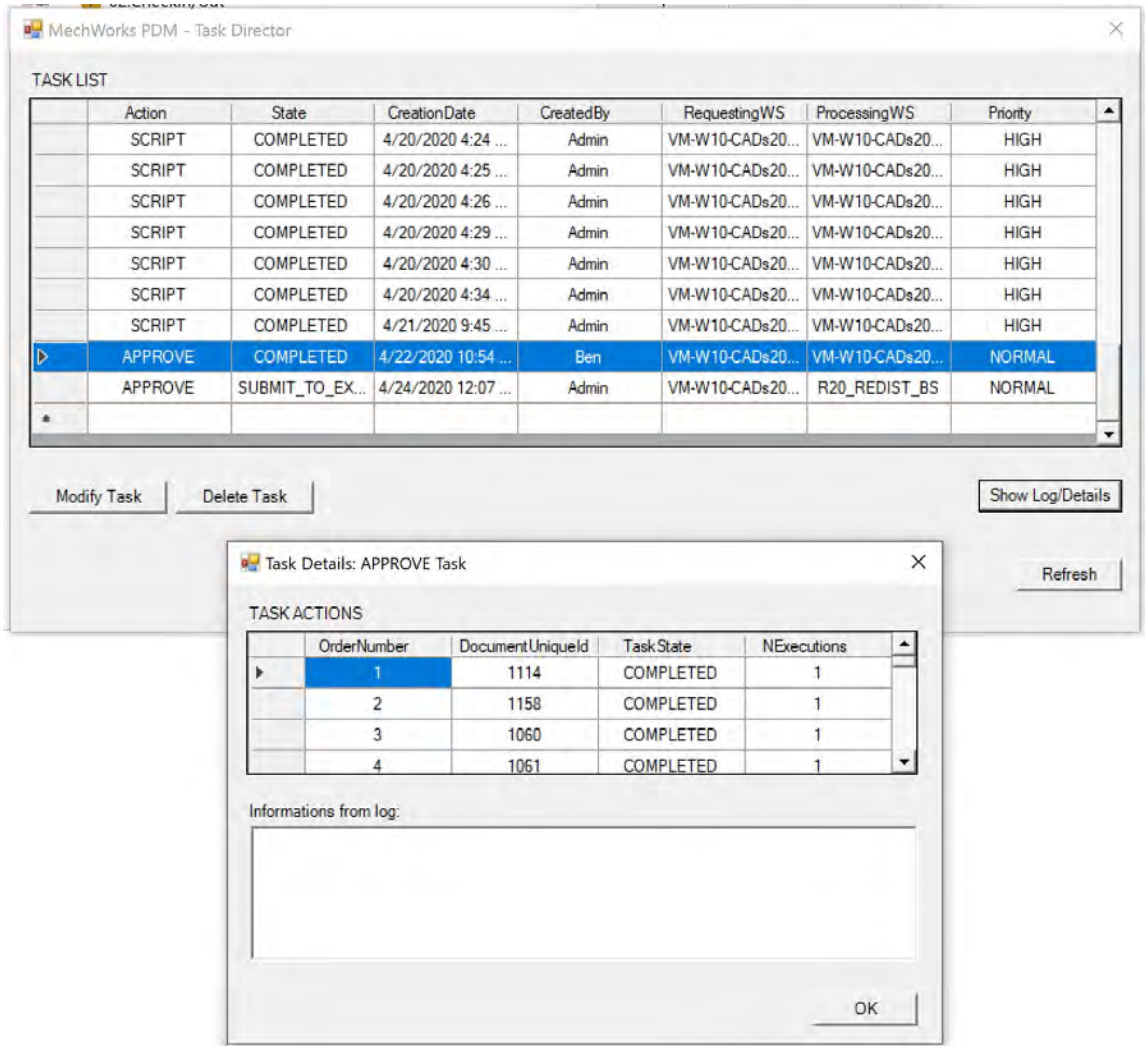
The "Modify Task" button shows a Dialog for selecting the new Priority and the new Processing Working Server:



The "Delete Task" button shows a confirmation dialog:



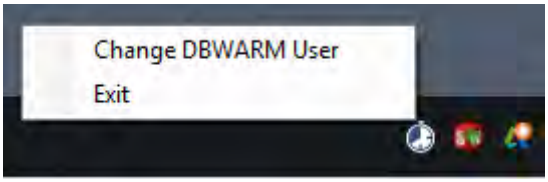
The Show Log/Details shows every Action connected to the selected Task, and Log information (if any):



Task Agent

DBWTask Agent is a new external application to be run on **task executor only machines**. It will search every interval time for a new task to be executed on the machine and if it discovers one, it will **start the target application** (SolidWorks, SolidEdge, Inventor or StandAlone) end automatically execute the task. If a **hang state** of the application is detected it will close and automatically restart it to ensure that the submitted task will be completed. If an application is running but no tasks are detected to be running on it will be closed to **save potential floating licenses**.

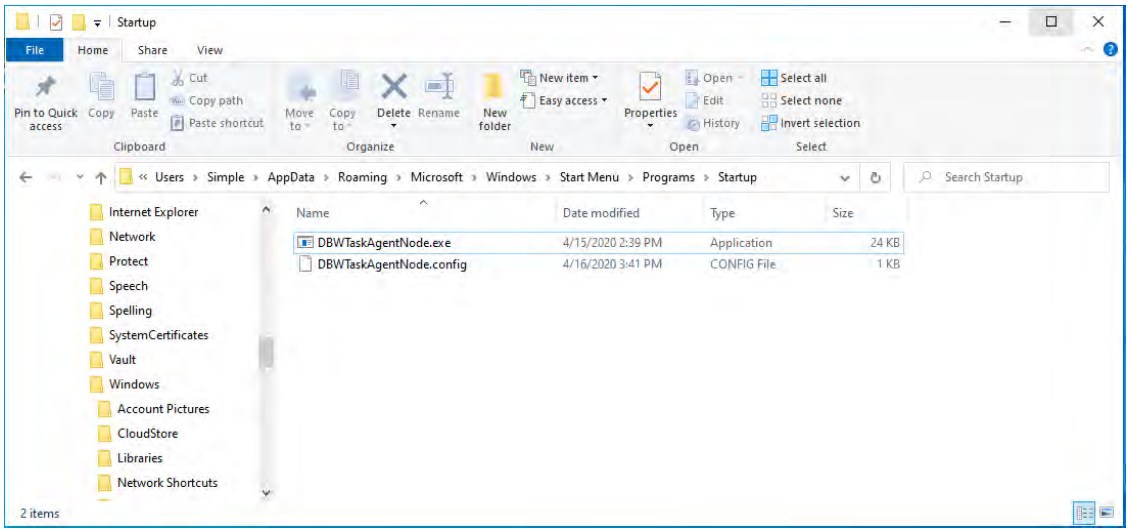
DBWTask Agent has no user interface, but while running an icon will be shown in the system tray. By right mouse button clicking on the icon you will be able to exit the application that otherwise will continue running until the machine is shut down.



DBWTask Agent can be customized by using a parameters file called DbwTaskAgentNode.config that must be placed in the same folder of the executable. The input parameters are the following and must be written with the following syntax:

- CHECK_INTERVAL_MINUTES=1
- HANG_CPU_USAGE_PERCENTAGE_THRESHOLD=2
- SW_EXECUTABLE_PATH= C:\Folder \SLDWORKS.exe
- SE_EXECUTABLE_PATH=C:\Folder\Edge.exe
- INV_EXECUTABLE_PATH=C:\Folder\Inventor.exe

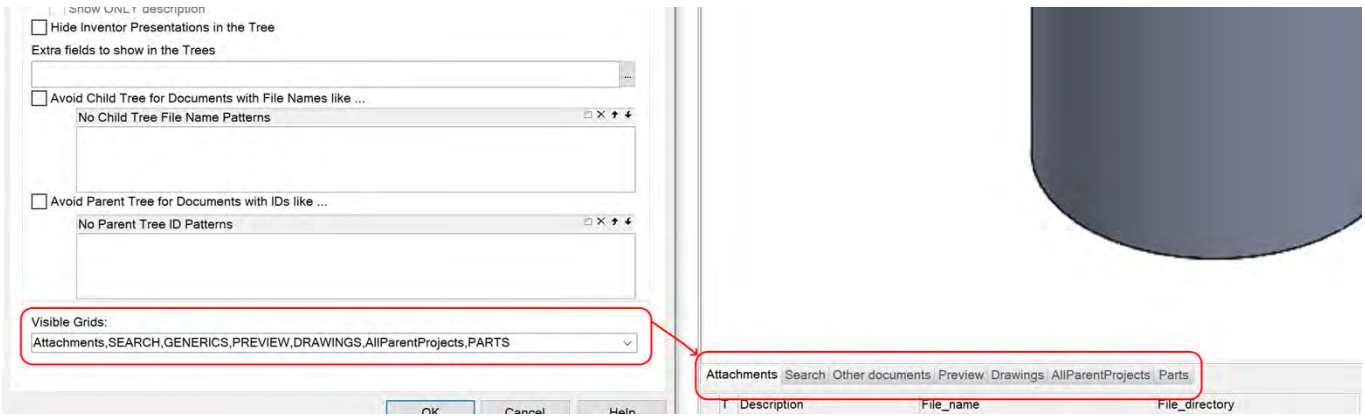
DBWTaskAgentNode.exe executable file can be found into InstallationPath\bin\ folder and it is suggested to be placed into C:\Users\XXX\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup\ folder, in that way when the Task Executor machine is started DBWTask Agent will automatically be run and start checking for new tasks to be executed.



Tree Page

Ability to sort the Tabs

It is now possible to customize the sequence of the tabs shown in Tree Page, selecting them with the option ‘Visible Grids’; the ‘Search’ tab will be added if not specified.
When no ‘Visible Grids’ are declared, the Browser will maintain the default behavior.



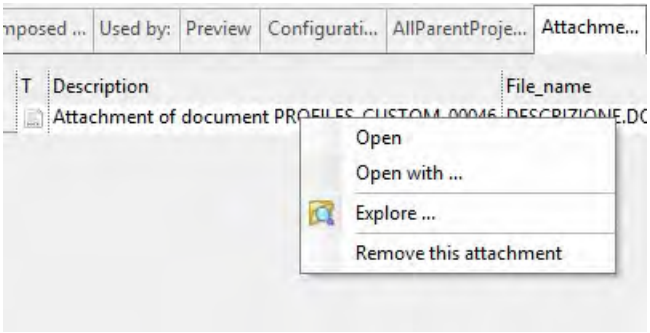
User Interface

Show Parent/Child Tree in External Window

The results section of a Parent/Child Tree in External Window were not handling the input on the records: ENTER command was closing the Dialog. It is now handled correctly, opening the document.

RMB of Attachments: Removed entries "Parent Tree" and "Parent Tree in external window"

The Right Menu Button of an attachment file now shows only the related entries:



User interface graphics and layout

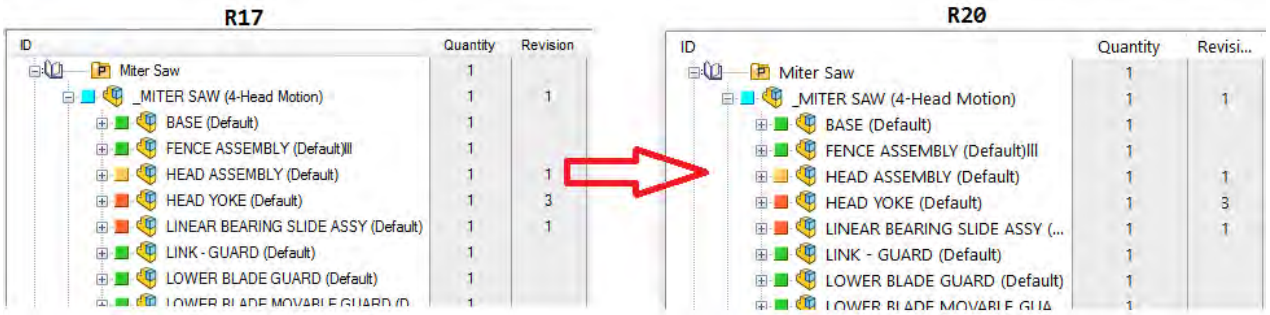
R20 brings some UI improvements on the graphical appearance of some widgets and the layout of some pages and dialogs.

Font change

In order to improve the reading capabilities, especially with high resolution monitors, we have changed the font on some dialogs and pages, passing from “MS Sans Serif” to “Segoe UI”. This font change has been inspired by the typical one used on most .Net applications, making the PDM appearing more homogeneous to the other MechWorks tools. In some cases the font change has brought also a font size modification, to improve spaces and readability.

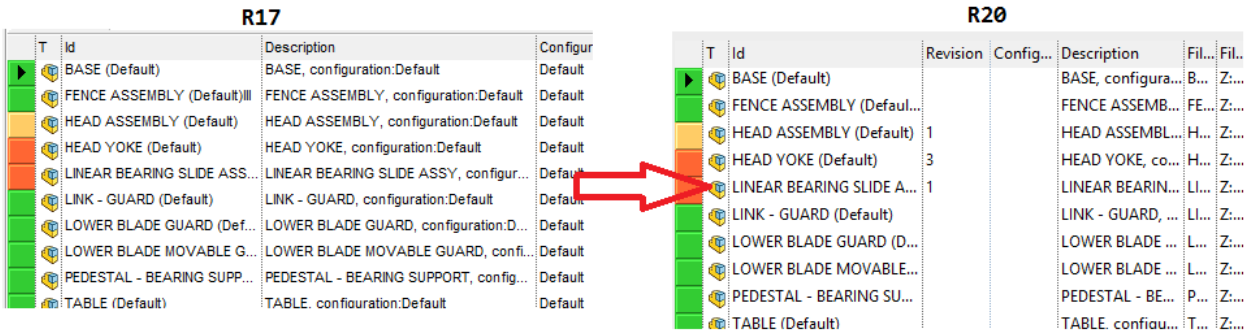
The tree

The tree widget, for example, has been set with a larger font size on both tree items and tree columns header:



The grid

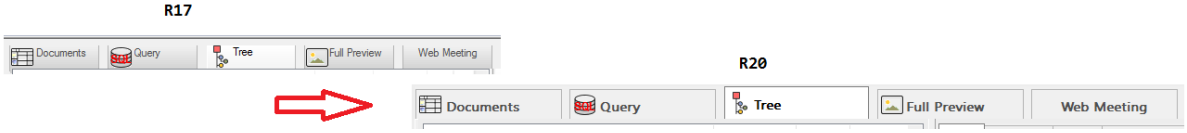
The grid widget has been updated as well on font type and size:



The tabs

Finally, we also changed the tabs widgets look&feel, removing the shading effect and giving them a more “metro”-like appearance: each tab item has been increased on its height and the font size has been enlarged to improve readability.

Here how the main pages tab will look like:



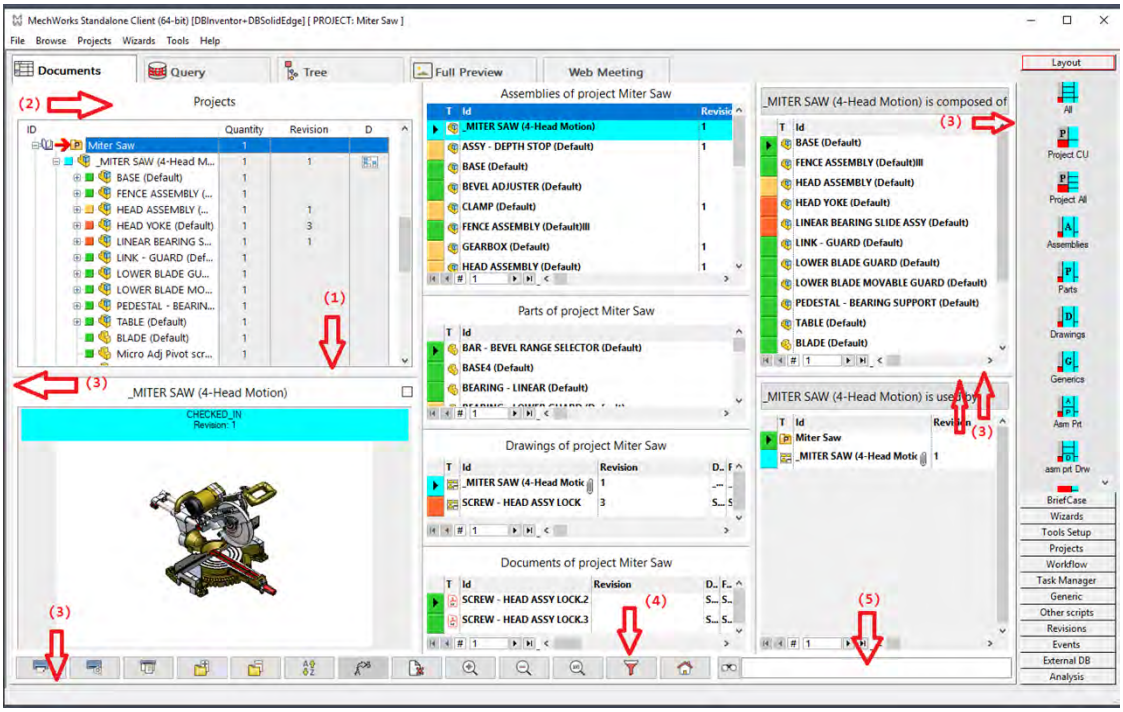
the tab of properties and the tabs of data and revision view:

Document page layout

The layout of the document page has been improved with these modifications:

- increasing the size of the splitters (1)
- increasing the size of the section titles (2)
- better padding among the page and the remaining objects of the browser (3)
- buttons with a metro-like shape (4)
- search box block with closer search button, all anchored to the end of the page (5)

as shown on the following picture:

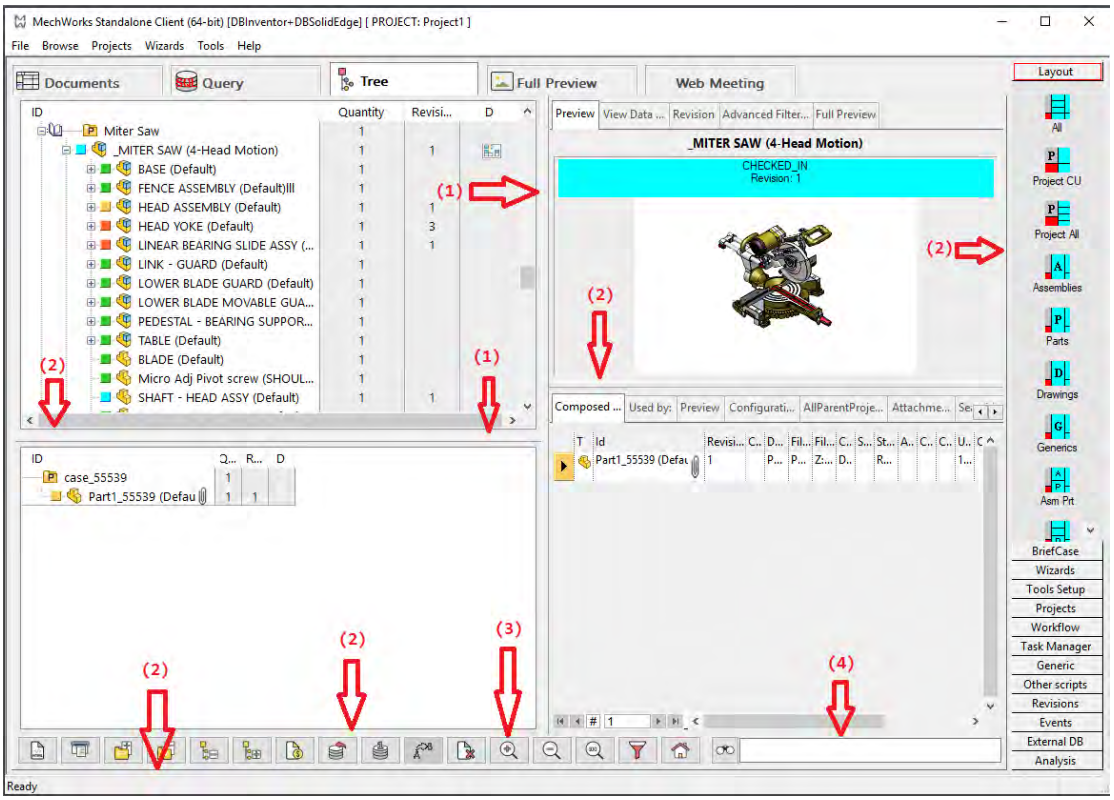


Tree page layout

The layout of the tree page has been improved, in addition to the tree, grid and tabs improvements, the page has been modified by:

- increasing the size of the splitters (1)
- better padding among the page and the remaining objects of the browser (2)
- buttons with a metro-like shape (3)
- search box block with closer search button, all anchored to the end of the page (4)

as shown on the following picture:



Web Client

New Setup

The setup of Web Client is now provided as a small set of MSIs that can be installed on a web server for testing in a matter of seconds. The setup performs all the required updates to the database automatically allowing to install a test/demo environment quickly and safely, without restarting the server.
A smaller, partial setup is also being provided for providing Service Packs on the server quickly and safely

Porting to .NET 4

Web Client has been ported to .NET4 with a slight performance improvement both on the server and on the client

Wizards

Conversion Wizard

Enhanced the logging capability of the wizard.

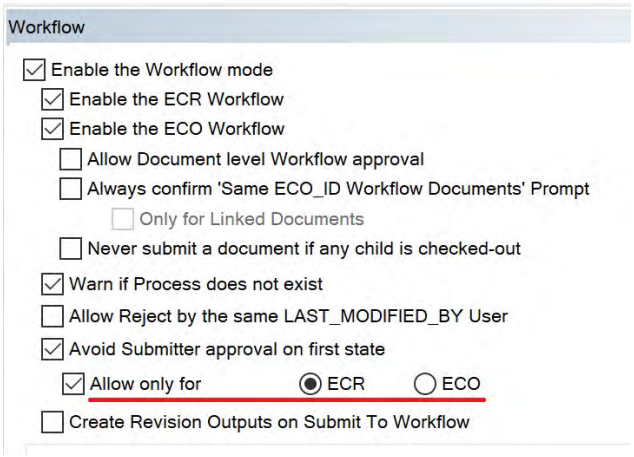
Workflow

Better handling of names with apostrophes

The Workflow process is now capable of handling table names (such as `ECO_DESCRIPTION`) with apostrophes. This is done also in the related .lst files.

New sub-option for "Avoid Submitter approval on first state"

The option "Avoid Submitter approval on first state" apply to the Workflow selected mode: when both ECR and ECO are selected, it was not possible to set separately. Now the sub-option "Allow only for" is available to specify which Workflow mode can ignore the above option.


Workflow
Enable the Workflow mode
Enable the ECR Workflow
Enable the ECO Workflow
Allow Document level Workflow approval
Always confirm 'Same ECO_ID Workflow Documents' Prompt
Only for Linked Documents
Never submit a document if any child is checked-out
Warn if Process does not exist
Allow Reject by the same LAST_MODIFIED_BY User
Avoid Submitter approval on first state
Allow only for
ECR
ECO
Create Revision Outputs on Submit To Workflow