# PTC®

PTC Windchill® What's New PTC Windchill 11.0 F000

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# **Contents**

٩b	out This Guide	9
De	ployment and Configuration	11
	Attribute Display: Graphical Attributes	13
	Business Administrative Change Promotion Utility	13
	CAD Data Management: Bulk Build Utility for Parts Related to CAD	
	CAD Data Management: CAD Documents Revise Only the Latest Version of Associated Windchill Parts	45
		15
	CAD Data Management: Configure Auto Associate to Automatically Find Matching Windchill Parts	15
	CAD Data Management: Creo Design Exploration Files Supported in PTC	13
	Windchill as CAD Documents	16
	CAD Data Management: Synchronizing a New CAD Document Number with its	10
	Related Windchill Part Base Number	16
	CAD Data Management: Updating CAD Document Usage Link Line Number	
	and Find Number Attributes During a Reverse Build	17
	Change Associations: Deprecated APIs	
	Desktop Integration: Enhanced DTI Installer	20
	Discussions: API and Property Changes	22
	Document Management: Java Applet Upload and Download Mechanisms	
	Removed	25
	Download Events Enabled OOTB in Auditing Administration	26
	Error Page Stack Trace Report Off by Default	26
	ESI Enhancements	
	Info*Engine Adapters: DOORS Adapter Retirement	
	Interoperability: Configure Scheduled Synchronization in Projects	
	Launching Applets in Chrome Browser	
	Manage Security User Interface Component Migrators	
	New Recommendation for Encryption Key Length	32
	Options and Variants: Converting Assigned Expressions to Independent	
	Expressions	
	Oracle Database Encryption Using Transparent Data Encryption	
	Part Structure: Defining Valid Context Types for Service Effectivity	
	Part Structure: Thumbnail Images	
	Preferences and Properties	
	Product Structure Explorer Functionality Included In Part Structure	
	PTC Windchill Business Reporting: Cognos Version Support Change	
	PTC Windchill CAPA: Access Control Rules	
	PTC Windchill Customer Experience Management: Access Control Rules	
	PTC Windchill PartsLink: Autonaming Rules	
	PTC Windchill PartsLink: ClassificationReportGenerator	53

	PTC Windchill PartsLink: CSVToXMLGenerator Utility	53
	PTC Windchill PartsLink: Properties and Profiles	
	Queue Management: Delete Queue Entry Action Enhanced	56
	Query Builder and Report Builder Enhancements	56
	Search: Indexing Administration Utility	59
	Search: Properties and Preferences	60
	Search: Solr and Tika Updates	65
	Security Label Preference for Object Versions	65
	Service Parts: Generic Parts Lists Transformed to True Parts Lists When Using Templates	67
	Support Changes: Browser Support	
	Support Changes: Database Support	68
	Support Changes: Java Support	69
	Support Changes: Platform Support	69
	Support Changes: Web Server and Servlet Engine Support	70
	Terminology Update for Adobe Product	71
	Type and Attribute Management Enhancements	71
	Workflow: Complete Task Transition	76
Fnc	l User	70
	Action Groups on User's Home Page	
	Applicability for Parts Lists	
	Security Labels Set With Workspace Check In	
	CAD Data Management: Applying Security Labels from a CAD Authoring	
	Environment is No Longer Supported	84
	CAD Data Management: CAD Document Drawings with a Calculated Windchill	
	Part Association After Revise Are Now Supported	84
	CAD Data Management: Choose Whether to Build Associated Parts Upon	
	Check In of CAD Documents	85
	CAD Data Management: Edit Attachments User Interface	86
	CAD Data Management: New Reference Link Between Dynamic Documents and Windchill Parts	86
	CAD Data Management: Part Subtype Selection is Now Possible During an Edit	
	Association or Auto Association Action	87
	CAD Data Management: Rename Support Using a Same Base Number	
	Scheme for Related CAD Documents and Windchill Parts	87
	CAD Data Management: Revise Single or Multiple Design Objects	88
	CAD Data Management: Starting a New Promotion Request During Checkin	88
	CAD Data Management: Support for Autonumbering CAD Documents With a File Extension Included	88
	Change Associations	
	Change Management: Annotation Table Enhancements	
	Changed Interference Detection Terminology	
	Common Parent Level Column in Interference Results Tables	
	Delete Preference	
	Desktop Integration: User Enhancements	
	Enhanced Ability to Copy. Cut. and Paste in Manufacturing BOMs	

Filter Manufacturing BOMS by Paths	
Find Participants User Interface Enhancements	100
Import/Export User Interface Enhancements	101
Interference Results User Severity	104
Internet Explorer Support	104
Interoperability: Scheduled Synchronization for Shared Objects	105
Initiating Change Objects for Interference Results	108
License Usage Report Plugin	108
License Type Usage Tracking	109
Manage Alternate BOMs with Common Enterprise Data	110
Manage Consumption Links Using PTC Windchill MPMLink	110
Manage Security Action and Window Renamed	111
Modify Security Labels Permission	113
Move Preference	115
New Status Column on Interference Results Tables	116
Part and CAD Document Structure Related Information Display	116
Part Replacement Enhancements	119
Part Structure: Move Action	121
Part Structure: Visualization Tab Actions	122
Part Structure: Visualization Tab Incremental Loading	123
Part Structure: Visualization Tab Preference	124
Parts: Multiple Rename	
Performance Advisor for PTC Windchill	
Precision Column Added to Interference Results Tables	127
Project Management: Plan Templates	128
Promotion Requests: Need By Date	129
PTC Windchill Customer Experience Management: Aging and Cycling	
Reports	131
PTC Windchill Customer Experience Management: Audit Trail	404
Enhancements	131
PTC Windchill Customer Experience Management: Enhancements for Part Instances and Documents	122
PTC Windchill Help Center Changes  PTC Windchill PartsLink: Classification Search Integrated with Advanced	131
Search	137
PTC Windchill PartsLink: Enhanced Classification Explorer Available from the	157
Navigator	140
PTC Windchill PartsLink: Find Similar Parts	
PTC Windchill Quality Solutions: Batch Printing	
PTC Windchill Quality Solutions: Linking Quality Objects	
Search: Dynamic Result Columns	
Search: Faceted Results	
Search: Find Field Removed	
Search: Keywords in Context	
Search: Nested Queries and Enhanced Attribute Selection	
Search: Related Object Searches	
Security Label Columns in Custom Table Views	

Contents 5

Service Publishing: PDF of Source Languages	159
Service Publishing: Setting an Applicability Expression	159
Service Structure: Content Attribute and Content Holder Attribute	
Synchronization	159
Service Structure: Information Structure Ordering	160
Service Translation: Improved Support for Pivot Languages	162
Service Translation: Representation for Root Included in Translation Package	163
Shared Interference Detection Definitions	
Support for Variant Specs in Interference Detection Definitions	
System Quality Agent Renamed to Performance Advisor for PTC Windchill	
Team Templates Page Enhanced to Replace Team Administration Java Applet	
Updating Parts Lists after Changes to their Source	
Workflow: Process Manager in HTML	
Optionally Enabled Features	
PTC Windchill Workgroup Manager	1/5
Documents	177
Autodesk Inventor, NX, SolidWorks: Mapping Attributes with Unit Support	
Autodesk Inventor, NX, SolidWorks: Out-of-Date Notification	
Autodesk Inventor, NX, SolidWorks: Replace Assembly Components Without	
Closing/Reopening Entire Assembly	178
CATIA V5: Abstraction Builder Enhancements	
CATIA V5: Asynchronous Download Preference Option	179
CATIA V5: Larger Toolbar and Menu Icons in CATIA V5	
CATIA V5: Performance Testing Guidelines	
Enhancing the PTC WWGM Zuken PDM Adapter	
NX: Implementation of PTC Windchill File System	
NX: Map CAD Assembly Attribute to Usage Link Attribute	
Page Level Data Management for TDO	
PTC Creo Elements/Direct Modeling: Compare a Local Model in the PTC Creo Elements/Direct Modeling Session with a Different Version in PTC	
Windchill	183
PTC Creo Elements/Direct Modeling: Delay PTC Windchill Autonumbering of Objects	184
PTC Creo Elements/Direct Modeling: Improved Performance for PDM Actions	
on Small Sets of Objects in Large Workspaces	184
PTC Creo Elements/Direct Modeling: Improved Top Level Instance	
Visualization	185
PTC Creo Elements/Direct Modeling: Locking or Unlocking Objects in	
Workspace or CAD Application	186
PTC Creo Elements/Direct Modeling: Use Windchill Part Product Structure for	
BOM Tables and Position Flags on Annotation Drawings	186

PTC Creo Elements/Direct Modeling: Workgroup Manager Notifications for Objects with Out-Of-Date Information with Respect to the	
Commonspace	187
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting:	
Enhanced Format Conversion of the New Creo View Adapter and CAD Workers	188
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Mod Manager to PTC Windchill Text Reference Mapping	el
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Oper Creo Elements/Direct Drawings in PTC Windchill with Modeling and Drafting Workgroup Manager	n
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Support Attributes of Type Real Number with Units in the Workgroup	109
Manager	190
PTC Windchill Workgroup Manager Documentation Consolidation and Restructuring	190
PTC Windchill Workgroup Manager Toolkit: New and Enhanced Toolkit API Functions to Read Subfolder Structure, Enable Export From Workspace, Reg or Unregister Authoring Applications, and Access PTC Windchill File	
System	193
PTC Windchill Workgroup Manager Toolkit: Removing Dependency on PTC Libraries for CATIA V5	10/
SolidWorks: Autonumbering of Mirrored Components	
SolidWorks: Enable SolidWorks BOM Item Number Propagation to	107
Windchill	195

Contents 7

### **About This Guide**

This section describes the changes included in the PTC Windchill 11.0 F000 release:

- Deployment and Configuration—Relevant to administrators who deploy and configure the target system.
- End User—Relevant to administrators or trainers who create training for end users of the target system.
- Optionally Enabled Features—A new property that controls new features that may impact the default user experience of established end-user capabilities.



This area does not have any additions for PTC Windchill 11.0 F000.

 PTC Windchill Workgroup Manager—Relevant to PTC Windchill Workgroup Managers, which support the integration of authoring engineering applications with PTC Windchill.

# **Deployment and Configuration**

Attribute Display: Graphical Attributes	13
Business Administrative Change Promotion Utility	13
CAD Data Management: Bulk Build Utility for Parts Related to CAD	15
CAD Data Management: CAD Documents Revise Only the Latest Version of Associated Windchill Parts	15
CAD Data Management: Configure Auto Associate to Automatically Find Matching Windchill Parts	15
CAD Data Management: Creo Design Exploration Files Supported in PTC Windchill as CAD Documents	16
CAD Data Management: Synchronizing a New CAD Document Number with its Related Windchill Part Base Number	16
CAD Data Management: Updating CAD Document Usage Link Line Number and Find Number Attributes During a Reverse Build	17
Change Associations: Deprecated APIs	17
Desktop Integration: Enhanced DTI Installer	20
Discussions: API and Property Changes	22
Document Management: Java Applet Upload and Download Mechanisms Removed	25
Download Events Enabled OOTB in Auditing Administration	26
Error Page Stack Trace Report Off by Default	26
ESI Enhancements	27
nfo*Engine Adapters: DOORS Adapter Retirement	27
nteroperability: Configure Scheduled Synchronization in Projects	28
aunching Applets in Chrome Browser	30
Manage Security User Interface Component Migrators	31
New Recommendation for Encryption Key Length	32
Options and Variants: Converting Assigned Expressions to Independent	
Expressions	33
Dracle Database Encryption Using Transparent Data Encryption	34
Part Structure: Defining Valid Context Types for Service Effectivity	34
Part Structure: Thumbnail Images	36
Preferences and Properties	37

Product Structure Explorer Functionality Included In Part Structure	48
PTC Windchill Business Reporting: Cognos Version Support Change	49
PTC Windchill CAPA: Access Control Rules	49
PTC Windchill Customer Experience Management: Access Control Rules	50
PTC Windchill PartsLink: Autonaming Rules	
PTC Windchill PartsLink: ClassificationReportGenerator	53
PTC Windchill PartsLink: CSVToXMLGenerator Utility	53
PTC Windchill PartsLink: Properties and Profiles	54
Queue Management: Delete Queue Entry Action Enhanced	56
Query Builder and Report Builder Enhancements	56
Search: Indexing Administration Utility	59
Search: Properties and Preferences	
Search: Solr and Tika Updates	65
Security Label Preference for Object Versions	65
Service Parts: Generic Parts Lists Transformed to True Parts Lists When Using	
Templates	67
Support Changes: Browser Support	68
Support Changes: Database Support	68
Support Changes: Java Support	69
Support Changes: Platform Support	69
Support Changes: Web Server and Servlet Engine Support	70
Terminology Update for Adobe Product	71
Type and Attribute Management Enhancements	71
Norkflow: Complete Task Transition	76

This section of the PTC Windchill 11.0 F000 *PTC Windchill New and Changed for This Release* contains changes that are relevant to administrators who deploy and configure the target system.

### **Attribute Display: Graphical Attributes**

Product: PTC Windchill

### Benefit

Graphical attributes can be configured to provide "at a glance," visual representations of object information.

#### **Additional Details**

From the **Type and Attribute Management** utility, customers can now configure a calculated attribute to display object information using one of three graphical representations: a traffic light, progress bar, or percent complete bar:



Graphical attributes can represent persisted data, such as the life cycle state of an object or data resulting from simple or complex calculations. Graphical attributes can be displayed in tables, information pages, and create or edit windows.

As with any other attribute, users can add graphical attributes as a column on a table by customizing the table view, remove or reposition the column, or sort the column by value. If table content is exported (for example, to a spreadsheet) the graphical attribute value is presented in the exported data as the tooltip text (for example, **Green**, **Yellow**, or **Red** for a traffic light graphical representation). Users can search for objects with specific values of the graphical attribute using the tooltip text.

# **Business Administrative Change Promotion Utility**

Product: PTC Windchill

### **Benefit**

The Business Administrative Change Promotion utility is enhanced to include support for administrative objects, such as object initialization rules (OIR) and Preferences, and improved filtering capability using XML files.

### **Additional Details**

The following enhancements have been made to the business administrative change promotion utility for this release:

Feature		PTC Windchill 10.2 M030	PTC Windchill 11.0 F000
Import/Export	Selective Mode	Yes	Yes
Modes	Selective Mode Advanced Filtering	_	Yes
	Synchronized Mode	Yes	Yes
Administrative Object Types	Policy Access Control Rules	Yes	Yes
	Profiles	Yes	Yes
	Preferences	_	Yes
	Object Initialization Rules (OIRs)	_	Yes
Conflicts and Reports	Conflict handling and resolution	Yes	Yes
-	Preview Change Report	Yes	Yes
	Import package to multiple targets	_	Yes
	Detail Import Report	_	Yes
	Override default conflict resolutions on import		Yes
Interface	Command Line Scripts	Yes	Yes

Enhance filtering capabilities through a Spec XML file to export all or specific administrative changes for all supported objects. In addition to using identity attributes of an object as filter criteria, you can filter objects at a container level using a GlobalContainerCriteria tag in the Spec file.

Enhance conflict handling capabilities through a conflict resolution XML file. The XML file enables you to specify a collection of resolution information for potential conflicts.

# CAD Data Management: Bulk Build Utility for Parts Related to CAD

Product: PTC Windchill PDMLink

### Benefit

A new bulk build utility enables you to migrate large numbers of parts from external systems and manage your entire eBOM in PTC Windchill PDMLink with support for associative links to existing CAD data.

### **Additional Details**

The utility is command-driven, runs in a Windchill shell with the server still running, and accepts an input file containing a list of either CAD documents or PTC Windchill parts as the build source. The utility always builds the latest iteration of a part and does not modify non-latest iterations. This utility is available on any new or upgraded PTC Windchill 11.0 server.

### CAD Data Management: CAD Documents Revise Only the Latest Version of Associated Windchill Parts

Product: PTC Windchill PDMLink

### **Benefit**

When a Windchill part is associated to a CAD document with a contributing image, image, or contributing content link, the CAD document now uses a build process that updates only the latest part version. This enables you to revise a Windchill part without having to artificially revise its associated CAD document to prevent a build error on the next checkin of the CAD document.

#### **Additional Details**

This behavior is consistent and supported across all actions that spawn a build process. Legacy data is supported without the need to upgrade.

# CAD Data Management: Configure Auto Associate to Automatically Find Matching Windchill Parts

Product: PTC Windchill PDMLink

#### **Benefit**

You can now configure the Auto Associate action to automatically find matching Windchill parts using the CAD document's base number.

### **Additional Details**

Two new server-side preferences control this behavior:

- Operation ➤ General ➤ Base Number Regular Expression
- Operation ➤ Auto Associate ➤ Auto Associate Find and Create Part Using Base
   Number

If no matching parts are found, a new part is created (if allowed). If the **Base Number Regular Expression** is invalid, an error is presented.

# CAD Data Management: Creo Design Exploration Files Supported in PTC Windchill as CAD Documents

Product: PTC Windchill PDMLink

#### **Benefit**

TMU files are fully supported in PTC Windchill as a CAD document object type.

#### Additional Details

Previously, Creo Design Exploration files were only supported in PTC Windchill as secondary content that had to be attached manually by the user to the top level object in the product structure. Now, TMU files are supported as an EPM document. Support for these files as CAD document objects enables rename and prevents loss of associativity and design data.

### CAD Data Management: Synchronizing a New CAD Document Number with its Related Windchill Part Base Number

Product: PTC Windchill PDMLink

### **Benefit**

When creating a new CAD document, a new **Same As Part Number** checkbox in the **New Part** window enables you to synchronize the number of the CAD document with the base number of its related Windchill part. When selected

(checked), the resulting CAD document number is set the same as the base number of the related Windchill part, with or without a file extension, based on a server-side preference.

### **Additional Details**

If the PTC Windchill preference **Drop File Extension from Number** is set to No (the default), then the file extension in the CAD document template (for example, .prt, or .asm), is included with the part number. Setting this preference to Yes drops the file extension.

# CAD Data Management: Updating CAD Document Usage Link Line Number and Find Number Attributes During a Reverse Build

Product: PTC Windchill PDMLink

#### Benefit

If you modify the **Line Number** or **Find Number** attributes in the **Uses** tab on a PTC Windchill part information page, you can now choose to update the same attributes on the usage link for the accompanying CAD document when the part is used to perform a reverse build of the CAD structure.

### **Additional Details**

This behavior is only supported for NX and PTC Creo 2, 3, and 4. EPM Service preferences must be set on the PTC Windchill server to enable this behavior.

### **Change Associations: Deprecated APIs**

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill Integrations for Embedded Software

### **Benefit**

To support change associations, several APIs have been deprecated and several supported APIs have been updated. Changes have also been made to workflow events and preferences.

### **Additional Details**

The following APIs have been deprecated. PTC recommends that you replace them with the new APIs when you are starting to convert to use change associations. These APIs are primarily located in WorkflowProcessHelper and StandardChangeService2.

Deprecated API	Replacement API
com.ptc.windchill.pdm link.change.server. impl.WorkflowProces sHelper.forcePRsToRe solved(ChangeRe quest2)	<pre>com.ptc.windchill.pdmlink.chan ge.server.impl.WorkflowProces sHelper.closeChangeChildren(Ob ject, Map<class, state="">) com.ptc.windchill.pdmlink.chan ge.server.impl.WorkflowProces sHelper.closeChangeParents(Ob ject, Map<class, state="">)</class,></class,></pre>
com.ptc.windchill.pdm link.change.server. impl.WorkflowProces sHelper.setCRResolu tionDate(ChangeRe quest2)	com.ptc.windchill.pdmlink.chan ge.server.impl.WorkflowProces sHelper.setResolutionDate(Versio nableChangeItem)
<pre>com.ptc.windchill.pdm link.change.server. impl.WorkflowProces sHelper.setECNResolu tionDate(ChangeRe quest2)</pre>	
com.ptc.windchill.pdm link.change.server. impl.WorkflowProces sHelper.setECNResolu tionDate(ChangeRe quest2, String)	
<pre>com.ptc.windchill.pdm link.change.server. impl.WorkflowProces sHelper.setPRResolu tionDate(ChangeIssue)</pre>	

Changes were also made to service APIs to support change associations. These APIs are located in StandardChangeService2. PTC recommends that you review any extensions or usages of these APIs before you start to use change associations:

- getAssociatedChanges (ChangeItemIfc, Class)
- getChangeOrders(ChangeRequestIfc, boolean)
- getChangeRequest (ChangeOrderIfc, boolean)
- deleteAddressedBy (ChangeRequestIfc, ChangeOrderIfc)
- saveAddressedBy (ChangeRequestIfc, ChangeOrderIfc)
- getLatestChangeOrder(ChangeRequestIfc)
- getLatestChangeRequest(ChangeOrderIfc)
- deleteAddressedBy (WTCollection, role)
- deleteFormalizedBy(ChangeRequestIfc, ChangeIssueIfc)
- getChangeIssues (ChangeRequestIfc, boolean)
- getFormalizingChangeRequest(ChangeIssueci)
- saveFormalizedBy(ChangeRequestIfc, ChangeIssueIfc)
- getChangeRequest(ChangeIssueIfc, boolean)
- deleteFormalizedBy(Class, ChangeRequestIfc, ChangeIssueIfc)
- getLatestChangeIssue (ChangeRequestIfc cr)
- getLatestChangeRequest(ChangeAnalysisIfc)

The **Change Notice State Change** workflow event has been replaced by the following workflow events:

- Parent Change Object State Change
- Child Change Object State Change

The following change management preferences perform no action for flexible change items; however, they remain functional for non-flexible change items to support backwards compatibility:

- Change Request to Problem Report Cardinality
- Change Request to Change Notice Cardinality
- Change Notice without Change Request
- Automatic Change Notice Creation

The following links have been replaced by ChangeProcessLink. When creating or deleting these links for change associations, use the FlexibleChangeHelper.getService().

- AddressedBy2
- AddressedByIfc

- FormalizedBy
- FormalizedByIfc

# Desktop Integration: Enhanced DTI Installer

Product: PTC Windchill

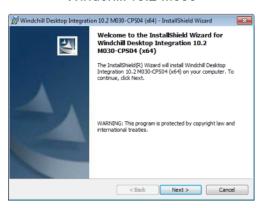
### **Benefit**

The PTC Windchill Desktop Integration installer has been updated and rewritten.

### **Additional Details**

The PTC Windchill Desktop Integration installer has been rewritten to provide more options and better support for updating an existing installation.

Windchill 10.2 M030

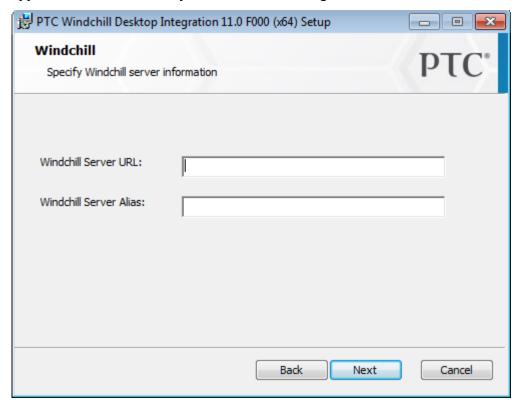


Windchill 11.0 F000

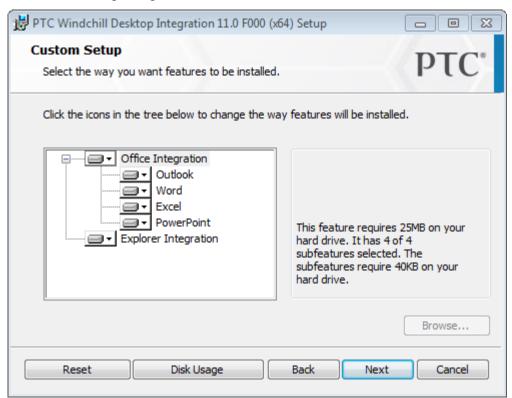


- Silent and remote installation is still supported, with additional support for Microsoft System Center Configuration Manager (SCCM).
- A new autoupdate feature automatically prompts the user to update DTI when the installed version does not match the server version.

• The installation process includes a new step that prompts the user to provide their PTC Windchill server URL and alias. This step is optional, and does not appear if a server is already connected and configured.



• You can now select separate Microsoft Office applications for which you want to install Desktop Integration:



• When the installation is complete, a **Windchill Documents** bookmark is automatically added to **Favorites**:



## **Discussions: API and Property Changes**

Product: PTC Windchill ProjectLink, PTC Windchill FlexPLM

### **Benefit**

As part of discussion enhancement work, several changes are being implemented that impact **wt.workflow.forum** APIs and properties.

### **Additional Details**

The following changes have been made to **wt.workflow.forum.ForumUtil** methods:

### API: countPostingsForTopicSinceLastVisit

A new API retrieves the number of new posts since a particular user's last visit.

If there are no new posts since the last visit (a count of 0), the API does not return any data.

```
/*
 * @param objects: List of discussion topic objects
 * @param userPrincipal: The user to check unread
posts against
 * @return List of HashMap: The HashMap key set
is: (LAST_POST_DATE, UNREAD_POST_COUNT, DISCUSSION_TOPIC)
 * @throws WTException
 */

public static List <HashMap<String, Object>

> countPostingsForTopicSinceLastVisit(List objects,
WTPrincipal userPrincipal) throws WTException
```

## With the implementation of **countPostingsForTopicSinceLastVisit**, the following APIs are deprecated:

```
@Deprecated
public static HashMap<String,Object> getUnreadPostDetails
(WTPrincipal userPrincipal,DiscussionTopic topic)

@Deprecated
public static HashMap<String,Object> getUnreadPostDetailsForTopic
(WTPrincipal userPrincipal,DiscussionTopic topic, TopicVisitData topicVisitData)

@Deprecated
public static HashMap<String,Object> countPostingsForTopicSinceLastVisit
(DiscussionTopic topicObject,Timestamp lastVisitedTime)
```

### API: getVisitDataOfUserForTopics

The following API is deprecated:

```
@Deprecated
  public static TopicVisitData getTopicVisitDataByUserAndTopic
(WTPrincipal userPrincipal, DiscussionTopic topic)
```

Instead, you can use the existing **getVisitDataOfUserForTopics** method to retrieve topic visit data when given a user and a list of topics:

```
/*
   * @param userPrincipal : The user for which to retrieve
visit data
   * @param topicList : List of discussion topic objects
   * @return HashMap : Key = DiscussionTopic, Value =
TopicVisitData
   * @throws WTException
   */

public static HashMap getVisitDataOfUserForTopics
(List objects, WTPrincipal userPrincipal) throws WTException
```

The following changes have been made to properties set in wt.properties:

### Property: wt.workflow.forum.ReplyToComment.enabled

This is a new property in PTC Windchill 11.0 F000. This property applies only to non-FlexPLM systems:

De-	false
fault	
Synop-	Enable or disable the <b>Reply to Comment</b> action for the <b>Discussions</b>
sis	table in a non-FlexPLM system.
scrip-	This property is available in wt.properties and is used to control the <b>Reply to Comment</b> action in a non-FlexPLM system.
tion	If set to true, users can reply to posted comments.

### Property: wt.workflow.forum.TreeViewAndReplyPosting.enabled

This is an existing property; however, starting in PTC Windchill 11.0 F000, this property applies only to FlexPLM systems:

De-	true
fault	
Synop- sis	Enable or disable the <b>Tree View</b> and the <b>Reply to Comment</b> action for the <b>Discussions</b> table in a FlexPLM system.
De- scrip-	This property is available in wt.properties and only applies to FlexPLM solutions.
tion	Use this property to control the availability of the <b>Tree View</b> and the <b>Reply to Comment</b> action for the <b>Discussions</b> table.
	If set to true, users can reply to posted comments and display the discussion using the <b>Tree View</b> .

### Property: wt.workflow.forum.CreateDefaultTopics.enabled

This is an existing property. Starting in PTC Windchill 11.0 F000, however, the default value is false; previously, the default value was true.

De-	false
fault	
Synop-	Enable or disable the creation of default topics and comments in the
sis	Discussions table.
De-	This property is available in wt.properties and is used to
scrip-	control the creation of default topics and comments. By default this
tion	property is set to false, meaning that default topics and comments are not created. When set to true, default topics and comments are created when the <b>Discussions</b> table is viewed.
	These default topics and comments are defined in <b>DiscussionForumTemplate</b> .

# Document Management: Java Applet Upload and Download Mechanisms Removed

Product: PTC Windchill

### **Benefit**

The Java applet upload and download functionality has now been entirely replaced by an HTML framework.

### **Additional Details**

PTC Windchill is no longer supporting the Java applet functionality for uploading and download content files. This affects two preferences available through the Preference Management utility:

### File Download Mechanism

The **Use Java applet functionality to download files**option has been removed from the list of possible values.

### • File Upload Mechanism

This preference has been removed.

In PTC Windchill 10.2 M020, a new drag-and-drop upload functionality was introduced. This enhancement allowed users to upload content using drag-and-drop without requiring a Java plugin. Users who still wanted to use the Java drop target had the option of setting the File Upload Mechanism

preference to **Use Java applet functionality to select and upload files**. Now, the Java target is no longer an option; instead, all drag-and-drop actions are supported through basic browser functionality.

Java Console Debugging Information Display

This preference is now obsolete and has been removed.

# Download Events Enabled OOTB in Auditing Administration

Product: PTC Windchill

### **Benefit**

Download events have been turned on out-of-the-box in **Auditing Administration**, which enables customers to be more aware of when information is being downloaded from the system. Increased awareness of download anomalies can alert customers when their IP may be at risk.

### **Additional Details**

**Download** and **View Representation** events are now tracked out-of-the-box in **Auditing Administration** for PTC Windchill. Increased download events of potentially sensitive information from the system can alert customers when their IP may be at risk from an attacker. Previously, administrators needed to configure **Auditing Administration** to track Download and View Representation events.

# Error Page Stack Trace Report Off by Default

Product: PTC Windchill

#### Benefit

The user error report stack trace option is now turned off out of the box by default. This change removes visibility of stack trace information to end users and improves security in PTC Windchill.

### **Additional Details**

Previously, when an end user was presented with an error page, the stack trace was displayed to provide useful details for troubleshooting. Now, the wt.servlet.errorPage.omitStackTrace property is set to true out of the box and stack trace information is omitted from error pages. This change improves security by making potentially sensitive information no longer visible to end user.

### **ESI Enhancements**

Product: PTC Windchill

### Benefit

PTC Windchill Enterprise Systems Integration (PTC Windchill ESI) has been updated to support new capabilities and configurations to enhance your integration experience.

### **Additional Details**

PTC Windchill ESI now supports integration with SAP ECC6 – EHP7 and Oracle Applications EBS 12.2.4.

In addition, PTC Windchill ESI provides the capability to publish the following items from PTC Windchill to ERP systems:

- Variant configuration logic like Option Sets, Choice Rules, and Expressions assigned to the Bill of Materials (BOM)
- Production BOMs for a resource
- Enterprise data
- Only material information
- Plant localization links

Also through PTC Windchill ESI, you can configure PTC Windchill in the following ways:

- Create a baseline while publishing information to the ERP systems
- Filter out subassemblies by making use of business rules while publishing BOMs to ERP systems

# Info\*Engine Adapters: DOORS Adapter Retirement

Product: PTC Windchill

### **Summary**

The Info\*Engine adapter for DOORS is retired.

### **Additional Details**

The documentation for this adapter is no longer available in the PTC Windchill Help Center or on the Reference Documents website for 11.0 and beyond. Additionally, orderability for this adapter has ceased.

For an alternative approach, contact your PTC representative to discuss using Integrity LM as an option to integrating with DOORs.

# Interoperability: Configure Scheduled Synchronization in Projects

Product: PTC Windchill PDMLink, PTC Windchill ProjectLink

### **Benefit**

New configuration options are available to administer the scheduled synchronization feature for projects.

### **Additional Details**

The following configuration options support the new scheduled synchronization feature available for projects. For more information on this enhancement, see Interoperability: Scheduled Synchronization for Shared Objects on page 105.

## wt.dataops.sandbox.autoUpdateProject.autoUpdateSchedu ledTime

Name	wt.dataops.sandbox.autoUpdateProject. autoUpdateScheduledTime
Default	2\:00
Synopsis	Sets the time for when shared objects in a project are automatically synchronized.
Description	Projects that are configured to synchronize automatically are updated on a daily basis. Use this property to set the time each day that the project should synchronize.
	Use a 24-hour format when specifying the time; for example, to perform the automatic synchronization at 6:45 P.M., enter 18\:45.
	The default value is 2:\00, meaning that the synchronization job executes at 2:00 A.M.

### wt.queue.PoolQueue.ProjectUpdateProcessingQueue.thread PoolSize

By default, this property is not set. For more information on setting this property, contact the PTC Technical Support performance tuning team.

	wt.queue.PoolQueue.ProjectUpdateProcessingQueue. threadPoolSize
Default	<not set=""></not>

Synopsis	Determines whether project auto synchronization jobs are run as single or multi-threaded.
Description	<ul><li>This property accepts integer values:</li><li>If not set, or if set to a value less than or equal to 1, the autosynchronization job is run as single-threaded.</li></ul>
	• If set to a value greater than 1, the auto synchronization job is run multi-threaded using the specified number of threads.
	When configured as multi-threaded, PTC Windchill attempts to start as many threads as the value
	specifies; however, resources might be restricted by the server operating system, which could result in fewer threads than specified.

### **Project Synchronization Users**

This is a new out-of-the-box group available at the Site level.

Populate this group with users who can act as the **Synchronization User** for projects.

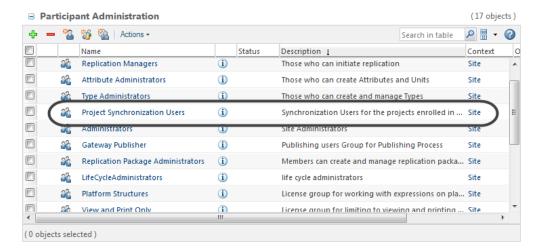
The scheduled synchronization job synchronizes shared objects within the parameters of this user's permissions. If the user does not have the necessary access to a shared object or to newly added dependents, then those objects are ignored. If necessary, a user with appropriate permissions can later manually perform the **Update**, **Update Project** or **Update Selected Shares** actions to synchronize shared objects that have restricted access.

To synchronize a shared object, the user must have the following permissions:

- READ permission for the source PDM context
- READ permission for the source object
- MODIFY permission for the SharedContainerMap object type (this is granted by default to members of the Project Synchronization Users group)

### Note

To share new dependents as part of the automatic synchronization, the user must have READ, DOWNLOAD, and CHANGE\_PERMISSION permissions for the new dependent objects.



### **Sharing Folder**

This is a new preference in the Preference Management utility. It is located under **Integral Operations**.

Name	Integral Operations ► Sharing Folder
Default	Root project folder
Visibility	Project
Description	<ul> <li>This preference sets the default location of new dependents that are being shared as part of a shared object synchronization operation.</li> <li>If the preference is set to a folder that does not exist in the project, then the default location (root project folder) is used instead.</li> </ul>
	<ul><li>The folder name is case-sensitive.</li><li>You can change the folder when performing a manual</li></ul>
	synchronization operation.
	To share new dependents, the synchronization user must have READ, DOWNLOAD, and CHANGE_PERMISSION permissions for the new dependent objects.

## **Launching Applets in Chrome Browser**

Product: PTC Windchill

### **Benefit**

Most PTC Windchill applets continue to run in the Chrome browser, despite recent restrictive changes to Chrome.

### Additional Details

For the Chrome browser, most applets now launch with Java Web Start.



### Note

The Advanced Table Editor applet does not launch in Chrome. Use a different browser for this applet.

## Manage Security User Interface **Component Migrators**

Product: PTC Windchill

### **Benefit**

Members of profiles and roles that were previously able to view the Manage Security action are able to view the Edit Access Control and Edit Security Labels actions. Two required migrators set the visibility of the Edit Access Control and Edit Security Labels actions, which are replacing the Manage Security action, based on your settings for the Manage Security action in roles and profiles in the current installation.

### **Additional Details**

Two new migrators are a required part of the upgrade process that transfers your settings for visibility of the Manage Security action to make the Edit Access Control and Edit Security Labels actions visible to the appropriate roles and profiles. The Manage Security window is renamed Edit Access Control and the Security Labels tab is now a separate window named Edit Security Labels. The Manage Security action has been removed and the Edit Access Control and Edit **Security Labels** actions now appear directly on the **Actions** menu. For more information on these user interface changes, see Manage Security Action and Window Renamed on page 111.

### Note

Customers who have security labels enabled saw the **Manage Security** window renamed and split into Edit Access Control and Edit Security Labels windows in PTC Windchill 10.2 M030. Manage Security appeared on the Actions menu as a label group with submenu actions Edit Access Control and Edit Security Labels. In this release, these customers will observe that the Manage Security action has been removed, with the Edit Access Control and Edit Security **Labels** actions now appearing directly on the **Actions** menu.

Administrators are able to separately manage visibility of the Edit Access Control and Edit Security Labels actions when creating or editing a profile, and when configuring actions for roles from a team page.

Administrators and developers who work with container templates and customizations will see changes to the UI Component element PROJECT ACCESS CONTROL, which is the uiComponent element name for the Manage **Security** action. It is now replaced with elements named EDIT ACCESS CONTROL and EDIT SECURITY LABELS.

The following migrators have been added:

### Enable Visibility of Edit Access Control and Edit Security Label Actions to **Replace Manage Security Action**

This migrator sets the visibility of the new Edit Access Control and Edit Security Labels actions for roles and profiles within PTC Windchill based on the settings for the **Manage Security** action in the current installation.

### Split Manage Security UI Component (UIC) into Edit Access Control and **Edit Security Labels UICs in Context Templates**

This migrator updates all context (container) templates to replace the Manage Security action with the Edit Access Control and Edit Security Labels actions, within UI component elements defining profile and role-based visibility settings.

## New Recommendation for Encryption Key Length

Product: PTC Windchill

### Benefit

You can better protect sensitive data by implementing PTC's new recommendation to increase the length of an encryption key.

### Additional Details

PTC recommends modifying the length of the encryption key used to protect sensitive information, from 128 bits to 256 bits. The default value for the wt.intersvrcom.siteSecurity.encryptionKey.keyLength property must be modified using the xconfmanager utility. This change should be made immediately after successfully upgrading to or a new installation of PTC Windchill 11.0.

## **Options and Variants: Converting Assigned Expressions to Independent Expressions**

Product: PTC Windchill PDMLink. Platform Structures

### **Benefit**

You can now use a PTC Windchill utility to convert previously created assigned expressions to independent expression. This utility is available only to members of the Platform Structures module.

### **Additional Details**

You can now use a PTC Windchill utility to convert previously created assigned expressions to independent expression. The conversion utility converts only the dependent expressions assigned to usage links and occurrences for the latest iteration of the revisions for parts that have assigned expressions. The utility provides a mechanism for a business administrator to set up a mapping between configurable module life cycle states and independent assigned expressions life cycle states. Once you successfully run this utility, the system is configured to create independent expressions only.

To convert dependent expressions, use the com.ptc.windchill.option.tools.ConvertToIndependentEx pression utility.



### Note

This utility is available only to members of the Platform Structures module.

# Oracle Database Encryption Using Transparent Data Encryption

Product: PTC Windchill

#### **Benefit**

PTC Windchill now supports using Oracle Transparent Data Encryption (TDE) to protect data at rest.

#### **Additional Details**

Protect data at rest by turning on Oracle Transparent Data Encryption (TDE). Encrypting the data in the PTC Windchill database prevents data visibility from unauthorized access. This provides an additional layer of protection for your intellectual property and reduces the overall attack surface of your PTC Windchill solution.

Both existing and new PTC Windchill databases can be configured to use TDE.

# Part Structure: Defining Valid Context Types for Service Effectivity

Product: PTC Windchill Service Information Manager, PTC Windchill Service Parts

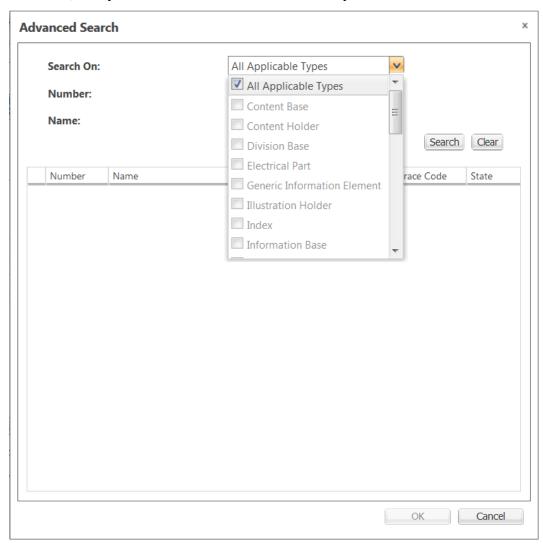
### **Benefit**

PTC Windchill Service Information Manager allows administrators to define valid service effectivity contexts. When these contexts are defined, only valid contexts are presented when searching for context objects in the **Manage Applicability** window.

### **Additional Details**

Administrators can define valid service effectivity contexts by entering a type in the ServiceEffectivityConfig.xml file.

When users apply filters in the Advanced Search option on the Service Effectivity tab in the Edit Filter window or the Add Service Effectivity window, the Advanced Search option limits the search to the types corresponding to the properties defined in the ServiceEffectivityConfig.xml file. If there are no values in the file, the system defaults to WTPart as the only valid context.



- If the authoring system is only for InService, it should be configured to only allow product hierarchy roots and product hierarchy nodes as valid contexts. This eliminates any confusion or mistakes from authors creating invalid data.
- If the authoring system is for both InService and other business cases, customers should include both of these types in the list of supported types. Data with invalid effectivity contexts is sent to InService. InService ignores any invalid effectivity records, which could result in invalid applicability being displayed in the delivery system. Data management processes should be

implemented to ensure valid data is being sent to the delivery system. Segregating data intended for delivery from data intended for other purposes could minimize confusion.

• If the authoring system is not authoring data for InService, there is no need to restrict the valid effectivity context unless customers have specific business processes that call for this.

### Part Structure: Thumbnail Images

Product: PTC Windchill PDMLink

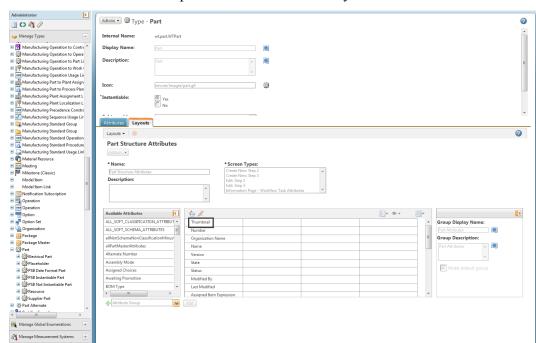
### **Benefit**

Now you can add thumbnail images of parts to the attributes under the **Structure** tab of part information pages.

### **Additional Details**

The **Attributes** tab under the **Structure** tab of a part information page can include a thumbnail image of the part.





An administrator must use the **Type and Attribute Management** utility to add the Thumbnail attribute to the part structure attributes layout.

With the addition of thumbnail images, your site may choose to hide the **Visualization** tab on part information pages. For more information, see Part Structure: Visualization Tab Preference on page 124.

## **Preferences and Properties**

Product: PTC Windchill

## **Benefit**

Several preferences and properties have been changed in, added to, or removed from PTC Windchill.

### **Additional Details**

The following preferences (listed by functional area) have been changed in, added to, or removed from PTC Windchill:

Func- tional Area	Name	Sta- tus	Description	Default Value
CAD Data	Auto Associate Find and Create Part Using	New	Configures the Auto Associate action to automatically find matching	No

Man- age- ment	Base Number		Windchill parts using the CAD document's base number. For more information, see CAD Data Management: Configure Auto Associate to Automatically Find Matching Windchill Parts on page 15.	
	Base Number Regular Expression	New	Configures the Auto Associate action to automatically find matching Windchill parts using the CAD document's base number. For more information, see CAD Data Management: Configure Auto Associate to Automatically Find Matching Windchill Parts on page 15.	[^\_\.]*
	CAD Document Structure Related Information	New	Show and hides related information in CAD document structures. For more information, see Part and CAD Document Structure Related Information Display on page 116.	The <b>Show</b> button displays related parts.
	Drop File Extension from Name	Pgy	Includes file extension in the CAD document template with the part name. For more information, see CAD Data Management: Support for Autonumbering CAD Documents With a File Extension Included on page 88.	No
	Drop File Extension from Number	Pgy	Includes file extension in the CAD document template with the part number. For more information, see CAD Data Management: Synchronizing a New CAD Document Number with its Related Windchill Part Base Number on page 16.	No

	Use the new Edit Attachments Tool	De- leted	This preference has been removed. For more information, see CAD Data Management: Edit Attachments User Interface on page 25.	N/A
CATIA V5	wwgm. download. method.upon. open	Cha- nged	Improves performance when loading and opening large CATIA V5 assemblies. For more information, see CATIA V5: Asynchronous Download Preference Option on page 179.	Full
	Change Request to Problem Report Cardinality	Cha- nged	Performs no action for flexible change items; however, they remain functional for non-flexible change items to support backwards compatibility. For more information, see Change Associations: Deprecated APIs on page 86.	No
Change Associ- ations	Change Request to Change Notice Cardinality	Cha- nged	Performs no action for flexible change items; however, they remain functional for non-flexible change items to support backwards compatibility. For more information, see Change Associations: Deprecated APIs on page 17.	No
	Change Notice without Change Request	Cha- nged	Performs no action for flexible change items; however, they remain functional for non-flexible change items to support backwards compatibility. For more information, see Change Associations: Deprecated APIs on page 17.	Yes
	Automatic Change Notice Creation	Cha- nged	Performs no action for flexible change items; however, they remain functional for non-flexible change items to support	Yes

			backwards compatibility. For more information, see Change Associations: Deprecated APIs on page 17.	
Docu-	File Download Mechanism	Cha- nged	The Use Java applet functionality to download files option has been removed from the list of possible values for this preference. For more information, see Document Management: Java Applet Upload and Download Mechanisms Removed on page 25.	
ment Man- age- ment	File Upload Mechanism	De- leted	This preference has been removed. For more information, see Document Management: Java Applet Upload and Download Mechanisms Removed on page 25.	N/A
	Java Console Debugging Information Display	De- leted	This preference has been removed. For more information, see Document Management: Java Applet Upload and Download Mechanisms Removed on page 25.	N/A
Interoperabil-ity	Sharing Folder	New	Sets the default location of new dependents that are being shared as part of a shared object synchronization operation. For more information, see Interoperability: Configure Scheduled Synchronization in Projects on page 105.	Root project folder
Object Actions	Delete	New	Controls the default behavior for the <b>Delete</b> action. For more information, see Delete Preference on page 95.	Delete all iterations of each object included in the table
	Move	New	Controls the default behavior for the <b>Move</b> action. For	Move all versions of

			more information, see Move Preference on page 115.	displayed objects
Part Struc- ture	Incremental Loading in Visualization Tab	New	Enables you to select only those parts you want to view on the <b>Visualization</b> tab. For more information, see Part Structure: Visualization Tab Incremental Loading on page 123.	No
	Part Structure Related Information	New	Show and hides related information in part structures. For more information, see Part and CAD Document Structure Related Information Display on page 116.	The <b>Show</b> button displays related documents, CAD documents, and replacements.
	Visualization Tab Display	New	Hides the Visualization tab that appears under the Structure tab on part information pages. For more information, see Part Structure: Visualization Tab Preference on page 124.	Yes
Product Struc- ture Explor- er	Enable Product Structure Explorer (PSE)	New	Enables the launch points for the PSE applet that are now hidden by default. For more information, see Product Structure Explorer Functionality Included In Part Structure on page 48.	No
PTC Creo Ele ments/ Direct Model ing	Update Top Level Instances	New	Ensures that PTC Creo View representations for the related top level instances are regenerated by the PTC Windchill Visualization Service, reflecting the correct geometry. For more information, see PTC Creo Elements/Direct Modeling: Improved Top Level Instance Visualization on page 185.	No
	Manage Top Level Instances	Cha- nged	Allows you to request top level instance generation irrespective of instance data	Modified Only

			changes. For more information, see PTC Creo Elements/Direct Modeling: Improved Top Level Instance Visualization on page 185.	
	Automatically lock objects added to workspace	New	Automatically locks checked-in objects in the Modeling session and the workspace. For more information, see PTC Creo Elements/Direct Modeling: Locking or Unlocking Objects in Workspace or CAD Application on page 186.	No
PTC Wind chill Cus- tomer Experi- ence Man- age- ment	Aging Bracket	New	Sets the values of aging brackets. For more information, see PTC Windchill Customer Experience Management: Aging and Cycling Reports on page 131.	30, 60, 90, 120
Search	Enable Related Object Search	New	Displays the Related Object Search field on the Advanced Search page. For more information, see Search: Properties and Preferences on page 60.	No
	Enable Search Facets	New	Displays facets with the <b>Search Results</b> table. For more information, see Search: Properties and Preferences on page 60.	No
Securi- ty Labels	Security Label Changes on Object Versions	New	Determines which object versions to which security label changes are applied. For more information, see Security Label Preference for Object Versions on page 65.	Display all versions option not selected
	Access Permission Configuration	Cha- nged	Determines if users can see or update permissions throughout PTC Windchill.	Hide (default for the new Modify

			A new value, Modify Security Labels, has been added. For more information, see Modify Security Labels Permission on page 113.	Security Labels value only)
	Access Permission Configuration (PDM)		Determines if users can see or update permissions throughout PTC Windchill. A new value, Modify Security Labels, has been added. For more information, see Modify Security Labels Permission on page 113.	Hide (default for the new Modify Security Labels value only)
Service Trans- lation	Include Representation	Cha- nged	Includes in the translation package the default representation for the service structure and any default representations for the dynamic documents in the structure. For more information, see Service Translation: Representation for Root Included in Translation Package on page 163.	Include the default representation

The following properties (listed by functional area) have been changed in, added to, or removed from PTC Windchill:

Func- tional Area	Name	Sta- tus	Description	Default Value
Discus- sions	wt.work flow.for um.ReplyTo Comment.en abled	New	Enables or disables the Reply to Comment action for the Discussions table in a non-FlexPLM system. For more information, see Discussions: API and Property Changes on page 22.	false
	wt.work flow.for um.TreeVie wAndReply Posting.en	Cha- nged	Enables or disables the Tree View and the Reply to Comment action for the Discussions table in a	true

	abled		FlexPLM system. For more information, see Discussions: API and Property Changes on page 22.	
	wt.work flow.for um.Create DefaultTo pics.ena bled	Cha- nged	Enables or disables the creation of default topics and comments in the <b>Discussions</b>	false
Intero-	wt.da taops.sand box.autoUp dateProjec t.autoUpda teSchedu ledTime	New	Sets the time for when shared objects in a project are automatically synchronized. For more information, see Interoperability: Configure Scheduled Synchronization in Projects on page 105.	2\:00
ity	wt.queue. PoolQueue. ProjectUp dateProces sing Queue.th readPool Size	New	Determines whether project auto synchronization jobs are run as single or multi-threaded. For more information, see Interoperability: Configure Scheduled Synchronization in Projects on page 105.	<not set=""></not>
PTC Wind chill Part	com.p tc.wind chill.part slink.in dex.ena bled	New	PartsLink: Properties and Profiles on page 54.	true
sLink	com.p tc.wind chill.part slink.show	New	Displays all node attributes as columns in the <b>Search Results</b> table, regardless of	false

NodeColumn s.enabled		search criteria. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	
com.p tc.wind chill. search. client.max ResultsClf PickerSug gest	New	Determines the maximum number of suggestions in the Classification field list on the advanced search page. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	15
classifica tionTable. defaultCo lumns.wt. part.WT		This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
com.p tc.wind chill.part slink.max BrowseCo lumnCount		This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
com.p tc.wind chill.part slink.de faultBrows eRootNode		This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
com.p tc.wind chill.part slink.floa tingPoint Precisio nOffset	De- leted	This property has been removed. Replaced with com.ptc.wind chill.search. floatingPoint PrecisionOffset. For more information, see PTC Windchill PartsLink: Properties and Profiles on page	N/A

			54.	
	com.p tc.wind chill.part slink.refi neCount Threshold	De- leted	This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
	com.p tc.wind chill.part slink.ena bleCommon ValueAttri bute		This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
	com.p tc.wind chill.part slink.dis playName NumberO fACLs		This property has been removed. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.	N/A
	com.p tc.wind chill. search.fu tureDateAt tributes	New	Define attributes for which a future date is invalid. For more information, see Search: Properties and Preferences on page 60.	<pre>thePersistIn fo.createStamp, thePersistInfo. modifyStamp</pre>
Search	com.p tc.wind chill.sear ch.rela tionQuery Limit	New	Defines the limit for the number of objects processed when searching on object relationships. For more information, see Search: Properties and Preferences on page 60.	<not set=""></not>
	wt.index.e nableText Preview	New	Enables the keyword in context tool. For more information, see Search: Properties and Preferences on page 60.	false
	wt.index. supported TypesFor	New	Content holder object types that support the keyword in context	wt.doc.WTDocu ment

	TextPre view		tool. For more information, see Search: Properties and Preferences on page 60.	
	tc.wind chill. search.fa cet.enum. maxItemsTo Display	New	Maximum number of results to display under an attribute group. For more information, see Search: Properties and Preferences on page 60.	5
	com.p tc.wind chill. search.fa cet.maxRe sultCount ForAcces sCheck	New	Maximum number of faceted results to check against access control. For more information, see Search: Properties and Preferences on page 60.	500
	com.p tc.wind chill. search. floating PointPreci sionOffset	New	Offset value to use when calculating tolerance. For more information, see Search: Properties and Preferences on page 60.	0
	com.p tc.wind chill. search. queryBuil der.enable NullCrite ria	Cha- nged	down menu. For more information, see Search: Properties and Preferences on page 60.	false
Securi- ty Infra- struc- ture	wt.in tersvrcom. siteSecuri ty.encryp tionKey. keyLength	New	Determines the length of an encryption key. For more information, see New Recommendation for Encryption Key Length on page 32.	128
	wt.servle t.errorPa		Removes visibility of stack trace information	true

	ge.omit StackTrace		to end users and improves security in PTC Windchill. For more information, see Error Page Stack Trace Report Off by Default on page 26.	
Securi- ty Labels	com.p tc.wind chill. uwgm.cadx. checkin.Se curityLabe lEditing	New	Sets security label values on new objects using the Workspace Check In window. For more information, see Security Labels Set With Workspace Check In on page 83.	By default, this property is not included in wt.properties. To use this functionality, add the property to wt.properties and set it to true.
Service Struc- ture	sortISByLi neNumber	New	Allows users to toggle between line number and name. For more information, see Service Structure: Information Structure Ordering on page 160.	true

## Product Structure Explorer Functionality Included In Part Structure

Product: PTC Windchill PDMLink

## **Benefit**

Functionality for part replacements and visualization that was previously only in the Product Structure Explorer (PSE) Java applet is now available from the **Structure** tab on part information pages.

## **Additional Details**

Enhanced functionality related to the following areas is now available for the **Structure** tab on part information pages:

- part replacements on page 119
- thumbnail images on page 36
- actions on the **Visualization** tab on page 122
- hiding the **Visualization** tab on page 124

Previously, this functionality was available only in Product Structure Explorer (PSE). As a result, the launch points for the PSE applet are now hidden by default and are enabled through a preference. Navigate to the **Utilities** page for the organization or site and click **Preference Management**. Select **PSE ► Enable Product Structure Explorer (PSE)** and change the setting to **Yes**. (However, this preference is temporary; in a future release, PSE will be removed from PTC Windchill PDMLink.)

## PTC Windchill Business Reporting: Cognos Version Support Change

Product: PTC Windchill

## **Summary**

With PTC Windchill 11.0, PTC Windchill Business Reporting now supports Cognos Business Intelligence 10.2.2.

PTC Windchill Business Reporting no longer supports HP-UX.

## **Additional Details**

After installing 11.0, customers using PTC Windchill Business Reporting must download and install Cognos 10.2.2 Fix Pack 2.

Customers using PTC Windchill on HP-UX must install and configure PTC Windchill Business Reporting on a non HP-UX system, such as Windows or Linux. For more information on supported platforms, see the *PTC Windchill 11.0 Software Matrices*, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## PTC Windchill CAPA: Access Control Rules

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill CAPA

## **Benefit**

Migrators have been added to enable features from previous maintenance releases. The Windchill Upgrade Manager allows administrators to automatically execute the migrators for access control rules instead of only being able to load the rules manually.

The following new processes have been added to the CAPA module:

- Create actions and initiate them prior to the planning state.
- Confirm the effectiveness of a CAPA after all actions are completed
- Revert the CAPA to the Investigation state when effectiveness fails

Administrators must either manually load the access control rules for the CAPAActionPlan and CAPAChangeActivity objects or allow the migrator in the Windchill Upgrade Manager to load these rules into the existing quality container and template.

Object	Group	Permission
CAPAActionPlan	CAPAREQUESTER	ALL
CAPAActionPlan	CAPAREVIEWER	ALL
CAPAActionPlan	CAPAINVESTIGATOR	ALL
CAPAActionPlan	CAPAMANAGER	ALL
CAPAActionPlan	CAPAVERIFIER	Modify
CAPAChangeActivity	CAPAREQUESTER	ALL
CAPAChangeActivity	CAPAREVIEWER	ALL
CAPAChangeActivity	CAPAINVESTIGATOR	ALL
CAPAChangeActivity	CAPAMANAGER	ALL

Regardless of whether you manually loaded the access control rules or ran the migrator, you must manually assign Create, Modify, and Modify Content permissions. These permissions allow users to create a CAPA request if they add an action to the **Action** table in the **New CAPA Request** window. Previously, team members had Read and Download permissions for the CAPAActionPlan object.

Object	Group	Permission
CAPAActionPlan	teamMembers	Create
		Modify
		Modify Content
		Read
		Download

## PTC Windchill Customer Experience Management: Access Control Rules

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill Customer Experience Management

#### Benefit

Migrators have been added to enable features from previous maintenance releases. The Windchill Upgrade Manager allows administrators to automatically execute the migrators for access control rules instead of only being able to load the rules manually.

## **Additional Details**

The **Returned Product Processing** object is now managed by policy access control rules. The rules are loaded at the **Root** level, which grants all users all permissions to the **Returned Product Processing** object. You can customize these rules at the container level.

To use these processes, administrators must either manually load the rules or allow the Windchill Upgrade Manager to execute the migrator to load these rules.

Object	Group	Permission
CEDecontamination	teamMembers	Read
CEDecontamination	COMPLAINT_PRODUCT_RECEIVER	ALL
CEDecontamination	COMPLAINT_MANAGER	ALL

Regardless of whether you manually loaded the access control rules or ran the migrator, you must manually assign Modify and Modify Content permissions. These permissions allow the customer experience creator to edit the intake node from the customer experience structure.

Object	Group	Permission
CustomerExperience	COMPLAINT_CREATOR	Modify
		Modify Content

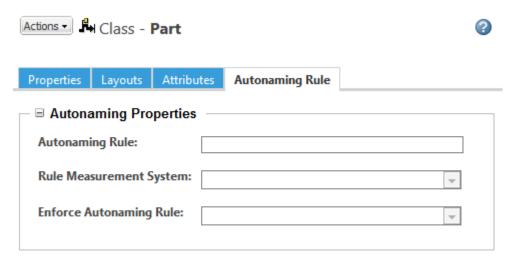
## PTC Windchill PartsLink: Autonaming Rules

Product: PTC Windchill PartsLink

#### **Benefit**

Classification administrators can configure rules to automatically generate classification part names.

An **Autonaming Rule** tab has been added to the classification node information page:



From here, you can set the following properties:

Autonaming Rule	Enter a rule to use when generating the name for a classified part.	
Rule Measurement System	The measurement system to use for converting attribute values when generating the classified part name.	
Enforce Autonaming Rule	You can use this field to enable or disable the autonaming rule.	

Autonaming rules are inherited. You can disable or modify autonaming properties on child nodes.

When you create a part and specify a node that has an autonaming rule enforced, the following changes appear in the **New Part** window:

 Any text provided in the Name field is removed and replaced with a (Generated) placeholder:

Name: (Generated)

 You can allow users to override the generated name using the Override Name profile action introduced in 11.0 F000. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.

## PTC Windchill PartsLink: ClassificationReportGenerator

Product: PTC Windchill PartsLink

#### **Benefit**

The **ClassificationReportGenerator** API allows administrators to locate parts that do not comply with autonaming rules.

### **Additional Details**

Now PTC Windchill has autonaming rules for classified parts. For more information, see PTC Windchill PartsLink: Autonaming Rules on page 51.

To support this, **ClassificationReportGenerator** allows an administrator to generate a report that returns all parts that do not comply with an enforced autonaming rule. For more information on supported APIs, see the Windchill Javadoc.

## PTC Windchill PartsLink: CSVToXMLGenerator Utility

Product: PTC Windchill PartsLink

### **Benefit**

A new utility transforms a CSV file to the classification structure XML format, which can then be imported into Windchill PartsLink.

#### **Additional Details**

To import a classification structure, the classification structure must be outlined in an XML file. Now, you can transform a CSV file into an importable XML file.

To transform a CSV file to an importable XML file, execute the following command from a Windchill shell:

Windchill com.ptc.windchill.csm.csvtoxml.CSVToXMLGenerator cpath to CSV file> -verbose

## Note

- The verbose parameter is optional and should be used for debugging purposes.
- The utility is not access controlled.

## PTC Windchill PartsLink: Properties and Profiles

Product: PTC Windchill PartsLink

## Benefit

Properties and profiles support new end user features.

## **Additional Details**

To support classification search enhancements, the following configuration options are now available:

com.ptc.windchill.partslink.index.enabled

Default	true
Synopsis	Enable indexing for classification searches.
Description	When enabled, indexing is enabled for classification searches.
	<b>₱</b> Note
	The <b>Find Similar Parts</b> action is not available when indexing for classification searches is disabled.

## $\verb|com.ptc.windchill.partslink.showNodeColumns.enabled|\\$

Default	false
Description	Display all node attributes as columns in the <b>Search Results</b> table, regardless of search criteria.
	This applies to searches performed from the <b>Classification</b> field on the advanced search page and from the <b>Keyword</b> field in the classification explorer.

## com.ptc.windchill.search.client.maxResultsClfPickerSug qest

Default	15	
Description	When using the <b>Classification</b> field on the advanced search page, a list of suggestions appears as you enter a node name. Use this property to determine the maximum number of suggestions in the list.	
	Part Classification  Part Clas	

#### **Find Similar Parts**

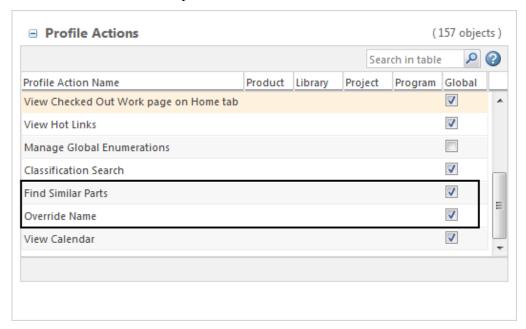
A new **Find Similar Parts** profile action is available.

Use this option to control access to the **Find Similar Parts** action through user profiles.

## **Override Name**

A new **Override Name** profile action has been added to support autonaming rules. For more information, see PTC Windchill PartsLink: Autonaming Rules on page 51.

When this action is enabled, a **Preview Name** link appears under the **Set Classification Attributes** step. From the **Preview Name** window, the user can select the **Override Name** option.



## The following properties are obsolete and have been removed:

```
classificationTable.defaultColumns.wt.part.WTPart
com.ptc.windchill.partslink.maxBrowseColumnCount
com.ptc.windchill.partslink.defaultBrowseRootNode
com.ptc.windchill.partslink.floatingPointPrecisionOff
set (replaced with
com.ptc.windchill.search.floatingPointPrecisionOffset)
com.ptc.windchill.partslink.refineCountThreshold
com.ptc.windchill.partslink.enableCommonValueAttribute
com.ptc.windchill.partslink.displayNameNumberOfACLs
```

## **Queue Management: Delete Queue Entry Action Enhanced**

Product: PTC Windchill

#### **Benefit**

The delete action for queue entries has been enhanced to make the service more robust and responsive.

### **Additional Details**

Previously, when a queue entry was deleted, the queue itself was stopped to complete the deletion. Now, the enhanced delete action does not need to stop or interrupt the queue to delete queue entries. Queue entries that are executing when they are deleted are immediately removed from the queue, but will run to completion before the queue moves on to execute the next entry.

## **Query Builder and Report Builder Enhancements**

Product: PTC Windchill

#### **Benefit**

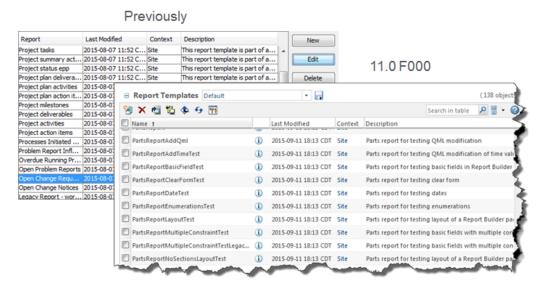
The **Report Management** and **Query Builder** utilities are now implemented using HTML. With this conversion comes a redesigned user interface, updated QML processing, tools for advanced report authors, and enhanced usability. The **Report Builder** and related functionality have also been updated in support of these enhancements.

### **Additional Details**

The updated QML (query markup language) format provides more seamless integration with the **Report Builder** user interface when users run reports and lays the groundwork for future enhancements.

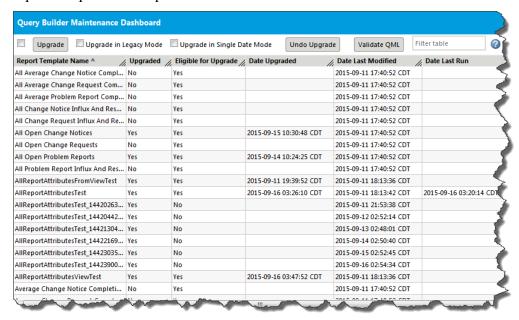
Report templates authored in previous PTC Windchill releases are automatically upgraded to use the current QML format when accessed for the first time, either by viewing the report in **Report Builder**, or by editing the report template in **Query Builder**. No additional action is required from users or administrators to upgrade report templates to the current QML format.

The applet-based **Report Management** utility accessed from the **Utilities** page of various contexts has been reimplemented using HTML as the **Report Templates** table.



The **Report Templates** table lists all report templates available from the current context, and provides the launching point for the **Query Builder** by creating a new report template, or choosing to edit an existing report template.

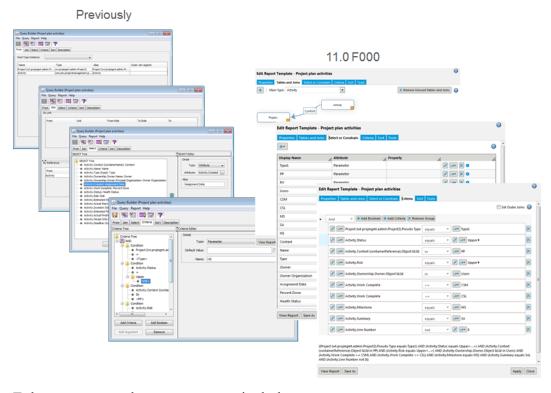
The new Query Builder Maintenance Dashboard, launched from the Report Templates table, provides administrators the ability to view the upgrade status of all report templates in a particular context and perform proactive upgrades on report templates from previous releases.



Additional upgrade modes are available from the **Query Builder Maintenance Dashboard** for those report templates from prior releases which administrators want to be presented as they were in previous releases.

The **Validate QML** action available from the dashboard validates the QML of new or upgraded report templates against the current database schema. The dashboard also displays the date on which a given report template was last run. This information is useful in determining if report templates have been recently used, or are unused and can be considered for removal.

The Java applet-based **Query Builder** utility from earlier releases has been replaced with a redesigned and enhanced HTML user interface.



Enhancements to the **Query Builder** include:

- The Tables and Joins tab provides a graphical interface for adding and viewing tables and joins in a single tab, including the ability to drag-and-drop tables for easier viewing.
- Where available, information and help links are provided when adding types
  or report templates to the Tables and Joins tab, providing hover-over
  descriptions and links to additional documentation, such as Javadoc or
  knowledge base articles.
- The **Criteria** and **Select or Constrain** tabs are now presented in a more readable tabular style.

- The **Select or Constrain** tab is now used to specify all items that appear on the Report Builder criteria pane. New functionality is available to control how attributes are displayed in the **Report Builder**, including whether they are available for the user to specify criteria, and whether they are automatically included in the report results.
- On the **Tools** tab, enabled by a preference, advanced report authors can now view the QML of the current report template. There is also a query results preview action, allowing for a quick preview of the currently defined report template, without needing to run the report in the **Report Builder**.

The **Report Builder** has been enhanced to support the updated QML format. Changes include:

- The updated QML on the criteria pane of the Report Builder now supports
  parameter values. Parameter values are no longer displayed in a separate Input
  Parameters section. They are now included in the main criteria pane, along
  with the other reportable items specified on the Select or Constrain tab of the
  Query Builder.
- Constants specified for items on the **Select or Constrain** tab of the **Query Builder** are now included in the main criteria pane, and no longer segregated in a separate **Constants** section.
- Time stamps can now also be specified along with date fields in the criteria pane, if the report template has been defined to include them on date fields.
- A **Generate** action launch point has been added to the results pane, allowing users to generate updated results without needing to access the criteria pane.
- New developer tools, enabled by preference, are available for advanced report authors to view the QML of the current report, and to view the QML and SQL as modified by user selections and entries on the criteria pane.
- When a report is opened in **Report Builder**, the attributes in the first section of the criteria pane are all automatically selected, and so are included in the report results when the report is generated. If there are no sections in the report, all attributes are automatically selected. This does not affect saved reports; only the attributes selected when the report was saved are selected when the report is run.
- Constraint operators such as **like** and **not like** can now be used with the pipe character ( | ) for entering multiple values.

## **Search: Indexing Administration Utility**

Product: PTC Windchill

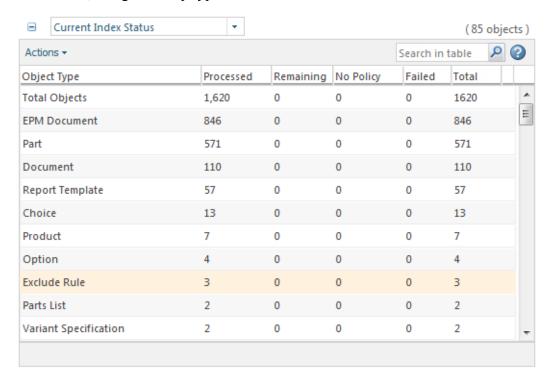
## Benefit

A new PTC Windchill Index Search utility makes it easier to view the status of the PTC Windchill search index.

A new Indexing Administration utility has been added to Site 

▶ Utilities ▶
Business Administration.

The **Indexing Administration** utility is a table that provides an overview of the index status, categorized by type.



This tool is similar to selecting option 7 from the Bulk Indexing Tool. However, it also provides the following enhancements:

- Indexing number totals are categorized by object type.
- The ability to export the information to different file types.
- The following table views are available:

**No Policy Objects**—A list of objects that are not indexed because the object type does not have an indexing policy.

**Failed Objects**—A list of objects that were not indexed, and the corresponding error message for each object.

**Objects for Which Content Indexing Failed**—A list of content holder objects whose content was not indexed, and the corresponding error message for each object.

## **Search: Properties and Preferences**

Product: PTC Windchill

### Benefit

Search properties and preferences support new end user features.

## **Additional Details**

To support advanced search enhancements, the following configuration options are now available:

com.ptc.windchill.search.futureDateAttributes

Default	thePersistInfo.createStamp, thePersistInfo.modifyStamp
Synopsis	Define attributes for which a future date is invalid.
Description	Use this property to provide a comma-separated list of date attributes for which future dates are invalid.
	As a result, when the attribute is added to the search criteria, "Tomorrow" is hidden in the drop-down value list.
	Modelled and soft attributes are supported. Use the internal name of the attribute when supplying the property value.

## com.ptc.windchill.search.relationQueryLimit

This property has been added to support the new search feature allowing users to search by object relationships. For more information, see Search: Related Object Searches on page 154.

Default	<not set=""></not>
Synopsis	Defines the limit for the number of objects processed when searching on object relationships.
Description	This property limits the number of objects processed when performing a relationship search. If this property is not set, then the relationship search processes all objects.  This property does not apply when performing a keyword
	search or a latest version search.

## wt.index.enableTextPreview

This property supports the keywords in context feature. For more information, see Search: Keywords in Context on page 150.

Default	false
Synopsis	Enables the keyword in context tool.
Description	This property determines whether the keyword in context functionality is available to users. When set to true, the <b>Text Preview</b> column is available to users when creating custom table views from the <b>Search Results</b> table.
	The <b>Text Preview</b> column includes a document preview tool line. Hover over the tool icon to view a preview where the keyword appears in file content.
	After enabling this preference, you must re-index the data before the preview tool can be used.

## wt.index.supportedTypesForTextPreview

This property supports the keywords in context feature. For more information, see Search: Keywords in Context on page 150.

Default	wt.doc.WTDocument
Synopsis	Content holder object types that support the keyword in context tool.
Description	Specify any additional objects types for which the keyword in context tool is enabled.
	When the wt.index.enableTextPreview property is set to true, the <b>Text Preview</b> column is available to users when creating custom table views from the <b>Search Results</b> table.

## com.ptc.windchill.search.facet.enum.maxItemsToDisplay This property supports the new faceted search results functionality. For more information, see Search: Faceted Results on page 148.

Default	5
Synopsis	Maximum number of results to display under an attribute group.
Description	If the result set includes multiple values for an attribute, the possible values are grouped under the attribute name. If there are a large number of values to display, the <b>Show All</b> link is displayed.
	Use this property to define how many values to display before providing the <b>Show All</b> link.

## com.ptc.windchill.search.facet.maxResultCountForAcces sCheck

This property supports access control for the new faceted search results functionality. For more information, see Search: Faceted Results on page 148.

Default	500
Synopsis	Maximum number of faceted results to check against access
	control.
Description	This property specifies the maximum number of SOLR results to check against access control rules before rendering the search result facets. If the result count is less than the specified limit, then facets are generated with only accessible facet attribute values. If the result count is greater than the specified limit, then facets are generated without checking against access control rules.
	The maximum limit should not exceed the maxBooleanClauses property specified in solrconfig.xml.

## $\verb|com.ptc.w| indchill.search.floatingPointPrecisionOffset|\\$

Default	0
Synopsis	Offset value to use when calculating tolerance.
Description	Configure how tolerance should be calculated for Real Number and Real Number with Units values.
	The tolerance value determines how range is calculated for numbers.

com.ptc.windchill.search.queryBuilder.enableNullCrite
ria

Default	false
Synopsis	Enable the <b>is null</b> and <b>is not null</b> operators in the advanced search interface.
Description	When set to true, the is null and is not null operators appear as options when specifying search criteria from the Advanced Search page:
	Name
	These operators are not valid when performing a classification search or an indexed search. Instead, an error message appears.
	<b>₱</b> Note
	This property is not new; however, its functionality has been extended to control the availability of the <b>is null</b> and <b>is not null</b> operators in the drop-down menu.

## **Enable Related Object Search**

This preference supports the new related object search functionality. For more information, see Search: Related Object Searches on page 154.

Default	No
Visibility	Site
Descrip- tion	Set this preference to <b>Yes</b> to display the <b>Related Object Search</b> field on the <b>Advanced Search</b> page.
	This field is available when you perform a search for a single object type. You can use this field to select different reports on object relationships. Once a report is selected, you are provided with options to select. The options available depend on the object and report type.

## **Enable Search Facets**

This preference supports the new faceted search results functionality. For more information, see Search: Faceted Results on page 148.

Default	No
Visibility	User
Descrip- tion	Set this preference to <b>Yes</b> to display facets with the <b>Search Results</b> table.
	When using faceted search results, a <b>Refine Results</b> side panel appears next to your search results. Use this panel to narrow your search results by selecting or deselecting available object attribute.
	<b>₱</b> Note
	This preference is only functional if Windchill Index Search (Solr) is installed and enabled.

## **Search: Solr and Tika Updates**

Product: PTC Windchill

## **Benefit**

Apache Tika and Apache Solr libraries supporting PTC Windchill Index Search have been updated to the latest release.

### **Additional Details**

Apache Tika toolkit has been updated from 1.6 to 1.9. Apache Solr has been updated from 3.6.0 to 5.2.0.

## **Security Label Preference for Object Versions**

Product: PTC Windchill

### **Benefit**

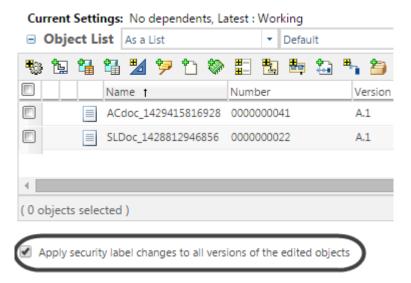
The **Security Label Changes on Object Versions** preference provides greater control over how security label changes are applied to object versions.

## **Additional Details**

The new preference Security Label Changes on Object Versions is used to determine which object versions security label changes are applied to. The preference is available from the Preference Management table under Security Edit Security Labels. This preference has the following options:

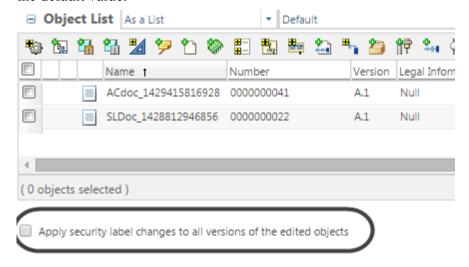
Display all versions option selected

Displays a preselected checkbox on the **Edit Security Labels** page. Users can choose to apply security label changes to all versions by keeping the checkbox selected or to edited versions by deselecting the checkbox.



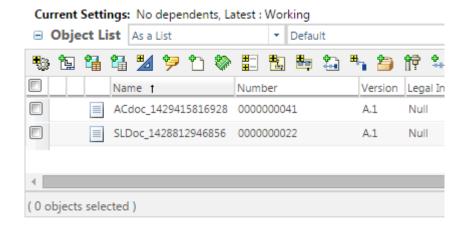
## Display all versions option not selected

Displays a checkbox on the **Edit Security Labels** page that is not preselected. Users can choose to apply security label changes to all versions by selecting the checkbox or to edited versions by leaving the checkbox deselected. This is the default value.



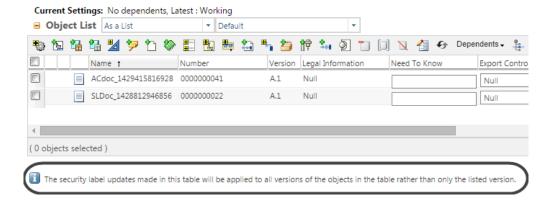
## Always apply to edited versions

No checkbox or message is displayed. Security label changes are always applied to edited objects.



## · Always apply to all versions

Displays a message on the **Edit Security Labels** page that security label changes are applied to all versions of the object.



# Service Parts: Generic Parts Lists Transformed to True Parts Lists When Using Templates

Product: PTC Windchill Service Information Manager, PTC Windchill Service Parts

### **Benefit**

You can choose a service structure template in PTC Windchill Service Information Manager when you are creating a new information structure or a new publication structure.

When a service structure is generated from a template and there are parts lists in the structure, generic parts lists are transformed to true parts lists and inserted into the structure.

## **Support Changes: Browser Support**

Product: PTC Windchill

#### **Benefit**

To take advantage of new features and capabilities introduced with new browser versions, and to remain current with browser versions that are no longer supported by their own vendors, PTC routinely updates its list of supported browsers.

## **Additional Details**

The following browsers are supported with PTC Windchill:

- Internet Explorer 11
- Mozilla Firefox ESR 38
- Google Chrome 64–bit

Support for Internet Explorer 10 has been dropped, as Internet Explorer 10 is no longer supported by Microsoft on our supported client operating systems.

For more information, see the *PTC Windchill 11.0 Software Matrices*, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## **Support Changes: Database Support**

Product: PTC Windchill

#### Benefit

Oracle and SQL Server database support with PTC Windchill has been updated to align with current release levels and functionality.

### **Additional Details**

Oracle Database 12c Release 1 (12.1.0.2) is supported with PTC Windchill.

SQL Server database support updates:

- SQL Server 2012 and 2014 both allow a database instance to use a different collation from the database master.
- Certain database columns have changed data types to align with SQL Server support and recommendations:
  - The PTC Windchill BLOB and InlineBLOB data base columns now use the varbinary (max) data type, replacing the image data type deprecated by SQL Server.
  - The PTC Windchill Date, Time, and Timestamp database columns now use the datetime2 data type, rather than datetime, following the SQL Server recommendation.
- SQL Server 2014 is now supported and bundled with PTC Windchill PDM Essentials.
- SQL Server 2008 R2 is no longer supported.

For more information, see the *PTC Windchill 11.0 Software Matrices*, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## **Support Changes: Java Support**

Product: PTC Windchill

## **Benefit**

To take advantage of new features and capabilities introduced with each new Java release, and to remain current with Java releases that are no longer supported by their own vendors, PTC routinely updates its list of supported Java releases. Each Java release is fully tested on all PTC Windchill server platforms.

## **Additional Details**

The following Java release is now supported on all platforms supported by PTC Windchill:

• Java 8 (JDK and JRE)

For more information, see the *PTC Windchill 11.0 Software Matrices*, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## **Support Changes: Platform Support**

Product: PTC Windchill

## Summary

To take advantage of new features and capabilities introduced with each new platform release, and to remain current with platforms that are no longer supported by their own vendors, PTC routinely updates its list of supported platforms.

## **Additional Details**

For this release, note the following supported server platform changes:

- Support added:
  - Red Hat Enterprise Linux (RHEL) 7 (64-bit)
  - O Solaris 11.2
- No longer supported:
  - Red Hat Enterprise Linux (RHEL) 5
  - O Solaris 10 and 11

For this release note the following supported client platform changes:

• Windows 10 is planned for post-release certification with 11.0

For more information on the most current server platform support, see the *PTC Windchill 11.0 Software Matrices*, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## Support Changes: Web Server and Servlet Engine Support

Product: PTC Windchill

## Benefit

PTC HTTP Server (powered by Apache) now uses Apache HTTP Server 2.4. PTC Embedded Servlet Engine (powered by Apache) now uses Apache Tomcat 8. Oracle iPlanet, also known in previous releases as Sun Java System Web Server (SJSWS), and Microsoft Internet Information Server (IIS) 32-bit are no longer supported with PTC Windchill.

PTC HTTP Server (powered by Apache) now utilizes Apache HTTP Server 2.4, the most current version.



## Note

HP-UX systems must still use Apache HTTP Server 2.2.

PTC Embedded Servlet Engine (powered by Apache) now utilizes Apache Tomcat 8. Additional steps are required to configure the embedded servlet engine to respond to remote hosts.

All new and upgraded installations of PTC Windchill are now configured with the PTC HTTP Server. The previous ability to reconfigure an installation to use Oracle iPlanet or the 32-bit version of Microsoft Internet Information Server (IIS) is no longer present.

For more information, see the PTC Windchill 11.0 Software Matrices, available from the PTC.com website here: http://support.ptc.com/view?im\_dbkey=167201.

## Terminology Update for Adobe Product

Product: WVS

## Summary

Adobe changed the name of their product from Adobe LiveCycle to Adobe Experience Manager.

## **Additional Details**

The terminology change has been implemented in the UI and in Installing and Configuring Adobe Experience Manager Software topics in the Advanced Configurations section in the PTC Windchill Help Center.

## Type and Attribute Management **Enhancements**

Product: PTC Windchill

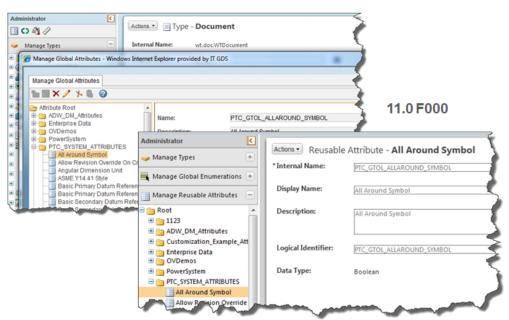
## **Benefit**

The Type and Attribute Management utility has been enhanced by moving functionality previously in applets into the main HTML utility. Related terminology has also been clarified.

### Enhancements include:

• The Manage Reusable Attributes functionality is now accessed from the navigation bar of the Type and Attribute Management utility. Previously, this functionality was the Manage Global Attributes applet, and was launched from the Manage Global Attributes icon in the navigation pane toolbar.

## **Previously**



The Name field from the applet is now named Internal Name.

As **Organization** is the only class is supported for reusable attributes with **Reference** data types, the selection in the **Data Type** drop-down list when creating a new reusable attribute has been renamed from **Reference** to **Organization Reference**, and the **Class Name** field has been removed from the user interface.

Along with this user interface change, the terminology has been clarified so that the attributes defined through the **Manage Reusable Attributes** window are

- referred to as "reusable attributes," while an attribute added to a type that is based on a reusable attribute is referred to as a "global attribute." The organizers for reusable attributes are now referred to as "attribute organizers."
- The Manage Measurement Systems functionality is now accessed from the navigation bar of the Type and Attribute Management utility. Previously, this functionality was launched from the Manage Measurement Systems icon in the navigation pane toolbar.

#### **Previously** Manage Measurement Systems ☆ X / ② 11.0 F000 CGS CGS Name: MKS Administrator K USCS Actions - Measurement System - CGS Manage Types +\* Name: Manage Global Enumerations + Description: Centimeter-Gram-Second System Manage Reusable Attributes Manage Measurement Systems -**Electrical Current:** kgs MKS Luminous Intensity: o SI

• The Manage Quantities of Measure functionality is now accessed from the navigation bar of the Type and Attribute Management utility. Previously, this functionality was launched from the Manage Quantity Of Measures icon in the navigation pane toolbar.

#### Manage Quantity of Measures \* × / @ Acceleration Name: Acceleration Activity Angle - Plane Description: Angle - Solid Angular Acceleration Display Units: 11.0 F000 Measurement System Default Angular Velocity cm/s\*\*2 Area Administrator Binary Size Actions • Quantity of Measure - Acceleration Capacity - Dry Manage Types + Capacity - Liquid Acceleration Charge Manage Global Enumerations Count Description: (+) Manage Reusable Attributes Manage Measurement Systems **Display Units** Manage Quantities of Measure Acceleration Activity

Measurement System

USCS

MKS

Default

in/s\*\*2

m/s\*\*2

Override

ft/s\*\*2

· Angle - Plane

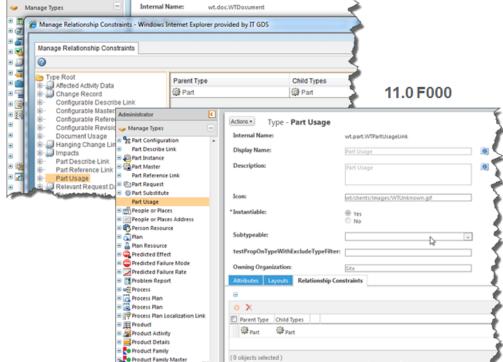
Angle - Solid

Angular Acceleration

Angular Velocity
 Area

• Relationship constraints are now managed from the **Relationship Constraints** tab of the information page for link types which support relationship constraints. Previously, this functionality was found in the **Manage Relationship Constraints** applet launched from the **Manage Relationship Constraints** icon in the navigation pane toolbar.

## Administrator Actions Type - Document Internal Name: wt.doc.WTDocu



- Additional terminology clarifications:
  - The organizers for global enumerations defined in the **Manage Global Enumerations** window are now referred to as "enumeration organizers."
  - The attribute type previously known as "standard attributes" is now referred to as "local attributes."
- The calculated attribute functionality has been enhanced to support more complex computations. Customers can implement a custom

  BusinessAlgorithm class, and use it in the formula for a calculated attribute.
- Multiobject APIs for retrieving and modifying business objects with improved performance are now supported through the BusinessObjectHelper APIs. For more information, see the BusinessObjectHelper Javadoc.

### **Workflow: Complete Task Transition**

Product: PTC Windchill

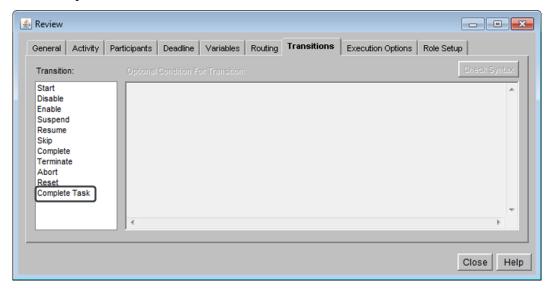
### **Benefit**

A new transition type invokes an expression when upon task completion. This allows workflow template administrators to complete tasks on the first reject without using a separate synchronization robot.

### **Additional Details**

A new **Complete Task** transition is available from the **Transitions** tab in the workflow template editor.

If the transition expression is true, an individual task associated with the activity node completes.



### New API supports tallying votes by individual roles:

```
/*
    * @param self : WfAssignedActivity ObjectReference
    * @param eventToMatch : Routing option to tally
    * @param assigneeRole : Role for which you want to tally
the routing option
    * @param locale : The locale in which you have specified
the assignee role
    * @return int : Number of votes from user in the specified role
    * @throws WTException
    */

public static int count (ObjectReference self,
String eventToMatch, String assigneeRole, Locale locale)
throws WTException
```

### New API supports tallying votes by routing event:

```
/*
 * @param self: WfAssignedActivity ObjectReference
 * @param eventToMatch: Routing option to tally
 * @param int: Number of votes for the routing event in
the activity * @throws WTException
 */

public static int count (ObjectReference self,
String eventToMatch) throws WTException
```

### New API supports activity completion when conditions are met:

```
/*
Supported API: True
Method to complete the activity
* @param self: WfAssignedActivity ObjectReference
* @param events: Routing event to follow
* @throws WTException
*/

public void completeActivity
(ObjectReference self, String events) throws WTException
```

## 

Action Groups on User's Home Page	82
Applicability for Parts Lists	82
Security Labels Set With Workspace Check In	83
CAD Data Management: Applying Security Labels from a CAD Authoring Environment is No Longer Supported	84
CAD Data Management: CAD Document Drawings with a Calculated Windchill Part Association After Revise Are Now Supported	84
CAD Data Management: Choose Whether to Build Associated Parts Upon Check In of CAD Documents	
CAD Data Management: Edit Attachments User Interface	86
CAD Data Management: New Reference Link Between Dynamic Documents and Windchill Parts	86
CAD Data Management: Part Subtype Selection is Now Possible During an Edit Association or Auto Association Action	87
CAD Data Management: Rename Support Using a Same Base Number Scheme for Related CAD Documents and Windchill Parts	87
CAD Data Management: Revise Single or Multiple Design Objects	88
CAD Data Management: Starting a New Promotion Request During Checkin	88
CAD Data Management: Support for Autonumbering CAD Documents With a File Extension Included	ΩΩ
Change Associations	
Change Management: Annotation Table Enhancements	
Changed Interference Detection Terminology	
Common Parent Level Column in Interference Results Tables	
Delete Preference	
Desktop Integration: User Enhancements	
Enhanced Ability to Copy, Cut, and Paste in Manufacturing BOMs	
Filter Manufacturing BOMS by Paths	. 100
Find Participants User Interface Enhancements	. 100
Import/Export User Interface Enhancements	. 101
Interference Results User Severity	. 104
Internet Explorer Support	. 104

Interoperability: Scheduled Synchronization for Shared Objects	105
Initiating Change Objects for Interference Results	108
License Usage Report Plugin	108
License Type Usage Tracking	109
Manage Alternate BOMs with Common Enterprise Data	110
Manage Consumption Links Using PTC Windchill MPMLink	110
Manage Security Action and Window Renamed	111
Modify Security Labels Permission	113
Move Preference	115
New Status Column on Interference Results Tables	116
Part and CAD Document Structure Related Information Display	116
Part Replacement Enhancements	
Part Structure: Move Action	121
Part Structure: Visualization Tab Actions	122
Part Structure: Visualization Tab Incremental Loading	123
Part Structure: Visualization Tab Preference	
Parts: Multiple Rename	
Performance Advisor for PTC Windchill	
Precision Column Added to Interference Results Tables	
Project Management: Plan Templates	
Promotion Requests: Need By Date	
PTC Windchill Customer Experience Management: Aging and Cycling Reports	
PTC Windchill Customer Experience Management: Audit Trail Enhancements	
PTC Windchill Customer Experience Management: Enhancements for Part	
Instances and Documents	
PTC Windchill Help Center Changes	137
PTC Windchill PartsLink: Classification Search Integrated with Advanced Search	137
PTC Windchill PartsLink: Enhanced Classification Explorer Available from the Navigator	140
PTC Windchill PartsLink: Find Similar Parts	
PTC Windchill Quality Solutions: Batch Printing	146
PTC Windchill Quality Solutions: Linking Quality Objects	
Search: Dynamic Result Columns	
Search: Faceted Results	148
Search: Find Field Removed	149
Search: Keywords in Context	
Search: Nested Queries and Enhanced Attribute Selection	151
Search: Related Object Searches	154
Security Label Columns in Custom Table Views	157
Service Publishing: PDF of Source Languages	159
Service Publishing: Setting an Applicability Expression	159
Service Structure: Content Attribute and Content Holder Attribute	
Synchronization	
Service Structure: Information Structure Ordering	
Service Translation: Improved Support for Pivot Languages	
Service Translation: Representation for Root Included in Translation Package	
Shared Interference Detection Definitions	164

Support for Variant Specs in Interference Detection Definitions	164
System Quality Agent Renamed to Performance Advisor for PTC Windchill	165
Team Templates Page Enhanced to Replace Team Administration Java Applet	165
Updating Parts Lists after Changes to their Source	166
Workflow: Process Manager in HTML	171

This section of the PTC Windchill 11.0 F000 PTC Windchill New and Changed for This Release contains changes that are relevant to administrators or trainers who create training for end users of the target system.

### **Action Groups on User's Home Page**

Product: PTC Windchill

### Benefit

Action groups allow users to perform common actions directly from their **Home** page.

#### **Additional Details**

With action groups, users can now perform common actions directly from their **Home**  $\widehat{\mathbf{n}}$  page.



Some actions groups are provided out-of-the-box with certain products, such as PTC Windchill Quality Solutions. If action groups are available, they can be added to the user's **Home**  page by selecting **Actions** from the **Customize** menu.

### **Applicability for Parts Lists**

Product: PTC Windchill Service Parts

### **Benefit**

You can assign applicability to a parts list object.

### **Additional Details**

Applicability based on ATO (option/choice selection) or Service Effectivity (information such as date or serial number) can now be assigned to a parts list in two ways:

- Applicability settings for a BOM part are copied forward to the parts list it generates during a Generate Parts List action in PTC Windchill Service Parts
- Option/choice selections can be configured for a parts list object with the Manage Applicability option in a service structure

The selections can be defined with basic expressions (simple selection) or advanced expressions (AND, OR, and NOT statements).

The items in the parts list will be affected when a filter based on applicability is applied to the parts list.

Applicability (ATO and Service Effectivity) settings for a parts list are synchronized between the parts list and its associated content holder in a service structure. The link between the parts list and the content holder is made when you insert a Parts List Information Element into a structure. Once the link is in place, the synchronization of applicability settings between the two objects takes place with two types of actions:

- Editing the parts list's applicability settings in PTC Windchill Service Parts, then checking in the parts list
- Editing the applicability settings for the relevant parts list content holder in the service structure, then checking in the content holder

Multiple parts lists with different applicability values can be maintained in a service structure in this way.

### Security Labels Set With Workspace Check In

Product: PTC Windchill

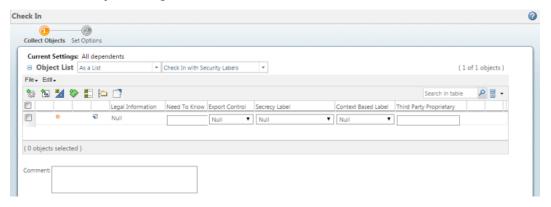
### **Benefit**

Users can efficiently set security label values on new objects using the Workspace **Check In** window.

### **Additional Details**

Users are now able to set security labels on **New** objects in the Workspace **Check In** window. To enable this functionality, the

com.ptc.windchill.uwgm.cadx.checkin.SecurityLabelEdit ing property must be added to the wt.properties file and set to true. On the Collect Objects step on the Check In window, select a table view that displays All Security Labels columns. After the first checkin, security label values can only be set on an object using the Edit Security Labels window.



# CAD Data Management: Applying Security Labels from a CAD Authoring Environment is No Longer Supported

Product: PTC Windchill PDMLink

### Summary

Previously, security labels could be applied from certain CAD authoring environments using a parameter or a property. This feature is no longer supported.

### **Additional Details**

Security labels are still available in CAD via read-only system parameters for use on drawings and annotations. Security labels are applied from the client- or server-side workspace using a **Check In** or **Edit Security Labels** action.

# CAD Data Management: CAD Document Drawings with a Calculated Windchill Part Association After Revise Are Now Supported

Product: PTC Windchill PDMLink

#### Benefit

A CAD document drawing that is associated with a Windchill part now retains its relationship when the Windchill part or CAD model is revised.

### **Additional Details**

#### When

com.ptc.core.collectionsrv.engine.isCompatibleDrawingAl waysEnabled is set to true, the system considers Windchill parts revised without the related model CAD document still compatible with the new part revision.

Previously, when a user revised a Windchill part and its related drawing only, the calculated associations were maintained from the Windchill part to the CAD document drawing, but not from the CAD document drawing to the Windchill part. Now, a CAD document drawing that is associated with a Windchill part retains its relationship when the Windchill part or the CAD model is revised. This is achieved using a system-calculated association.

# CAD Data Management: Choose Whether to Build Associated Parts Upon Check In of CAD Documents

Product: PTC Windchill PDMLink

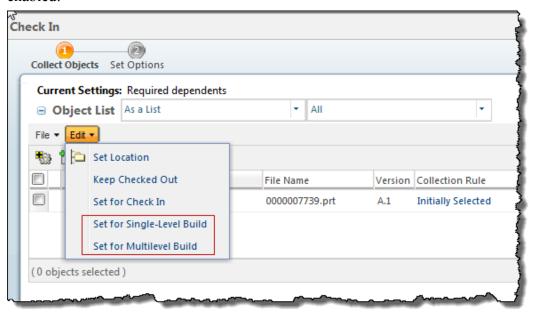
### **Benefit**

When checking CAD documents into PTC Windchill, you can choose whether to set associated part structures to build (update) using options available from the **Edit** menu in the **Check In** window.

### **Additional Details**

Upon selecting a build option, a related build icon displays in the **Build Status** column to indicate the build type that is set to commence upon completion of the checkin. This feature does not support building associated CAD structures of Windchill parts that are being checked in.

To enable the build options to display in the **Edit** menu of the **Check In** window, the server-side preference **Build After Check In** should be set to All (with the preference unlocked) or None. The following figure shows the build options enabled:



When you choose **Auto Check In** from the CAD tool, the behavior of building parts upon checkin follows the current setting of the server-side preference **Build After Check In**. In other words, build selection is not available during **Auto Check In**. You can either always build or never build associated part structures.

### CAD Data Management: Edit Attachments User Interface

Product: PTC Windchill PDMLink

### Benefit

The older Edit Attachments user interface has been retired. The newer applet-free user interface is now fully supported in both embedded and standalone browsers, and no longer requires you to set a preference to activate it.

### **Additional Details**

The server-side preference Attachments > Use the new Edit Attachments Tool, previously implemented in PTC Windchill 10.2 M030 to activate the newer applet-free user interface, is removed as part of the server upgrade to PTC Windchill 11.0.

For Creo releases that are supported in PTC Windchill 11.0, but do not support the new user interface, the message "Command is not recognized by current client application, either upgrade your client or use standalone browser for same procedure" is presented, indicating that you should either use a standalone browser or upgrade Creo.

# CAD Data Management: New Reference Link Between Dynamic Documents and Windchill Parts

Product: PTC Windchill PDMLink

### Benefit

A new reference link is available that relates a model item created by a dynamic document to a Windchill part.

### **Additional Details**

The link enables one dynamic document to link to multiple Windchill parts and is preserved when standard business processes are executed such as check in, check out, revise, and purge. A model item is created for each Windchill part that is referenced or crossreferenced inside the dynamic document. The Windchill part is not iterated when a link to a dynamic document is added or removed. This new link enables a dynamic document to maintain a general reference to a Windchill part. The new reference link is fully supported when using Windchill Import and Export.

### CAD Data Management: Part Subtype Selection is Now Possible During an Edit Association or Auto Association Action

Product: PTC Windchill PDMLink

### Benefit

During an **Edit Associations** or **Auto Associate** action for a CAD document and a new Windchill part, a default part subtype is now displayed in an **Object Type** column.

### **Additional Details**

The default part subtype is based on the type of CAD document being associated; however, you can modify the default type and select any part type available for creation. For existing Windchill parts, the **Object Type** value is read-only.

# CAD Data Management: Rename Support Using a Same Base Number Scheme for Related CAD Documents and Windchill Parts

Product: PTC Windchill PDMLink

### **Benefit**

You can now rename single or multiple CAD documents and Windchill parts such that each object, and all related objects, are renamed using the same base number.

### **Additional Details**

The base number is calculated using a default or a user-defined expression stored in the server-side preference Operation ➤ General ➤ Base Number Regular Expression. This feature is supported for all PTC Windchill 11.0 workgroup managers as well as the server commonspace. Rename conflicts regarding non-compliance of naming conventions as set by a Windchill Administrator are tracked and reported in the Event Manager. All objects involved in the rename must reside on the same server and be in a checked-in state.

### **CAD Data Management: Revise Single or Multiple Design Objects**

Product: PTC Windchill PDMLink

### Benefit

You can now revise either single or multiple design objects with a content or a calculated association in PTC Windchill; for example, you can revise just the Windchill part when making a change to the material type.

### **Additional Details**

Design objects that are not revised retain their association links to related objects. New versions of design objects remain associated to all related Windchill parts; in other words, their links are preserved.

### CAD Data Management: Starting a New Promotion Request During Checkin

Product:PTC Windchill PDMLink

### **Benefit**

A checkbox for starting a new promotion request is available in the **Check In** window

### **Additional Details**

When enabled and upon successful checkin of the selected objects, the **New Promotion Request** window opens to help you complete a promotion request action as part of the checkin process. When enabled, if the checkin fails, the promotion request is not launched. When enabled, if the checkin succeeds, a new promotion request is created with all objects that were checked in treated as "initially selected" objects for the request.

# CAD Data Management: Support for Autonumbering CAD Documents With a File Extension Included

Product: PTC Windchill PDMLink

#### **Benefit**

You can autonumber CAD documents with a standard file extension included in both the name and number of the object based on a server-side preference.

### **Additional Details**

This feature is available with the following actions from both the workspace and the commonspace:

- Save As
- Rename
- New CAD Document
- New Part (CAD document only)

The PTC Windchill **Drop File Extension from Number** and **Drop File Extension from Name** preferences control the behavior of this feature. For more information, refer to the descriptions for these preferences located in the PTC Windchill Preferences Utility. Previously, autonumbering provided a generated number without a file extension.

### **Change Associations**

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill Integrations for Embedded Software

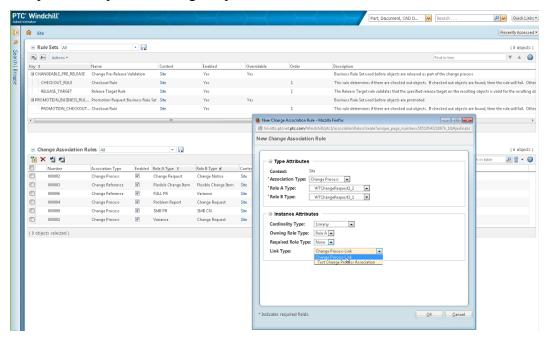
### **Benefit**

Change associations enable users to configure relationships between change objects (for example, a manufacturing change notice to an engineering change notice, a problem report to a change notice, or an item-specific change request to a block change request). This capability allows the PTC Windchill system to better align with the actual change management processes in a company instead of having to customize the system to meet these needs. Additionally, if a closure mechanism is enabled, an organization can configure closing of processes based on states specific to the type and process. The new **Associated Process Objects** table renders associated changes with parent and child relationships for a context change in one consolidated table. This consolidation makes it easier to view and manage change management objects. Previously, these changes were rendered in different tables for parent and child relationships for each type of change.

### **Additional Details**

Now, administrators can create, read, update, delete, export, import, and perform other actions on change association rules under **Utilities** ▶ **Business Administration** ▶ **Business Rules**. The **Change Association Rules** table gives administrators the ability to dictate how change objects can associate to one another through both the

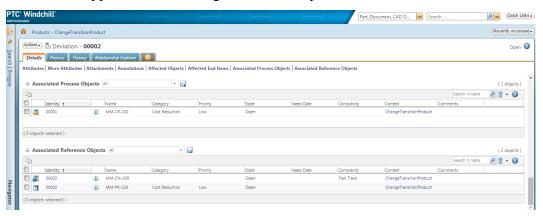
user interface and the Windchill services; for example, the objects in this table can allow linking of change requests to change notices, variances to change requests, and problem reports to change requests:



### Note

PTC Windchill provides some rules by default, and these rules are identical to the existing change object relationship model. You can create change association rules at any time in PTC Windchill 11.0; however, to make the PTC Windchill system enforce the rules, the system must be in Mixed or Flexible mode. If the system is still in Legacy mode, then the association rules changes make no changes to the system.

The business rules determine which objects can be linked in the **Associated Process Objects** and **Associated Reference Objects** tables. Process links support closure through a workflow process, so the objects can be closed at the same time if each object is in the correct state. Reference links are references to other objects and do not support closure through a workflow process.



The **Associated Process Objects** table renders associated changes in one consolidated table on the **Details** tab of the information page. This table supports problem reports, variances, defects, change requests, and change notices, along with several quality objects. The table defaults to the **All** view. Customers can define a unique set of table views for the associated changes table in the information pages and windows of the following change management object types:

- Problem reports
- Variances (deviations and waivers)
- Change requests
- Change notices

The **Associated Process Objects** table replaces the following related tables in the **Details** tab of a change object:

- The Change Requests table on the problem report information page
- The Change Requests table on the variance information page
- The Change Requests table on the defect information page
- The Issues and Variances and Change Notices tables on the change request information page
- The Change Requests table on the change notice information page

If these components are used in custom tabs of information pages or in the configurable workflow task form templates, PTC recommends that you replace these components with the new **Associated Process Objects** component.

For information on how these changes apply to quality objects, see PTC Windchill Quality Solutions: Linking Quality Objects on page 147.

### **Change Management: Annotation Table Enhancements**

Product: PTC Windchill, PTC Windchill PDMLink

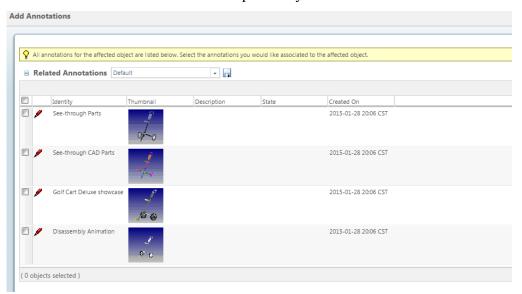
### **Benefit**

Several enhancements have been made to the annotation tables on change objects, including additional configurable columns, consolidated views, a new right-click **Remove** action, and a new default view.

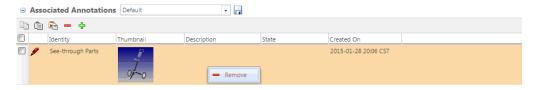
### **Additional Details**

The annotation tables for change objects are now easier to use and configure:

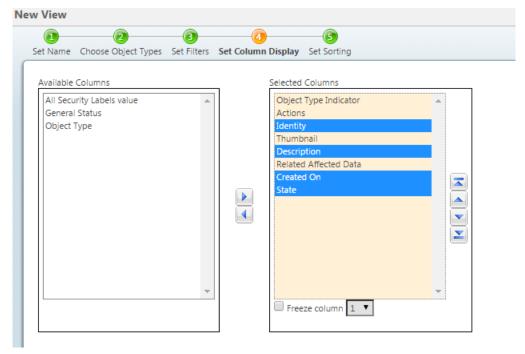
• The change annotation picker table and the change annotation table have been consolidated into one table with consistent views. The previous views with and without thumbnails have been replaced by one default view:



• There is a new right-click **Remove** action on the annotation table for convenience:



• Configurable columns for **Identity**, **Description**, **Created On**, and **State** are now available for the annotation table:



### **Changed Interference Detection Terminology**

Product: WVS

### **Benefit**

In the Interference Detection Settings, under Calculation Mode, the term "Approximate" replaces "Quick", which describes the option more accurately.

### **Additional Details**

There is no change in the process, and no change in user behavior is required.

### **Common Parent Level Column in Interference Results Tables**

Product: WVS

### Benefit

The common parent level provides an indication of how deeply nested an interference may be.

### **Additional Details**

**Common Parent Level** is a new column added to the **Related Interferences** report. The deeper the common parent level, the more likely it is to resolve the interference easily. The column is sortable.

### **Delete Preference**

Product: PTC Windchill

### **Benefit**

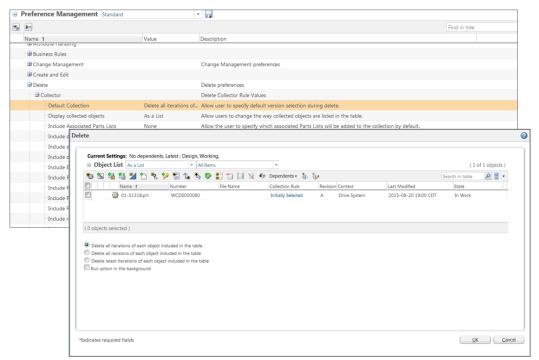
A new preference controls the default behavior for the **Delete** action, allowing sites, organizations, contexts, or users to select the default behavior used most frequently.

### **Additional Details**

Three options are available from the **Delete** window:

- Delete all iterations of each object included in the table
- Delete all revisions of each object included in the table
- Delete latest iterations of each object included in the table

Previously, the default selection was always **Delete all iterations of each object included in the table**. Now you can set a preference to select one of the other options as the default. In **Preference Management**, navigate to **Delete ► Collector ► Default Collection**.



### **Desktop Integration: User Enhancements**

Product: PTC Windchill

### **Benefit**

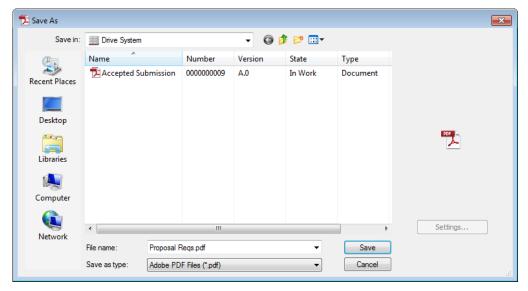
Several enhancements have been made to PTC Windchill Desktop Integration.

### **Additional Details**

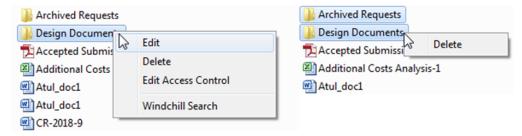
The following enhancements are now available to PTC Windchill Desktop Integration users:

- Desktop Integration now uses a common local cache for documents opened from PTC Windchill. Previously, local versions of documents were saved to different directories depending on whether they were downloaded from a web browser or accessed from the Windchill Documents node. Now, all documents are saved under a common folder in your default file path.
- The General tab in the Windchill Desktop Integration Configuration window has been replaced by the User and System tabs.

You can use the Save As action to create a new PDF document in PTC
Windchill. Previously, this was only available when performing Save As from
a Microsoft Office document:

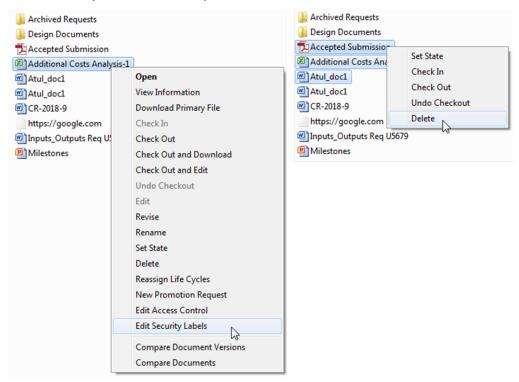


- The right-click actions menu for folders has changed:
  - The Manage Security action has been renamed to Edit Access Control.
  - You can now delete one or more folders at once.

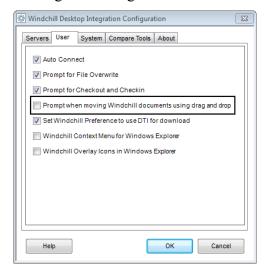


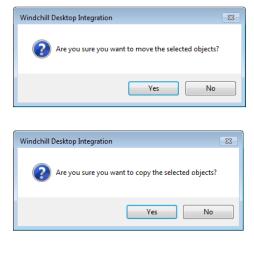
- The right-click actions menu for documents has changed:
  - The Edit Access Control action has been added to the right-click actions menu of documents. If security labels are enabled, Edit Security Labels also appears.

You can now delete multiple files at once from Windows Explorer.
 Previously, users could only delete one file at a time.



• A new configuration option allows users to display a confirmation prompt when dragging and dropping documents between folders or contexts under the Windchill Documents node. The prompt asks the user to confirm that they want to copy or move the document. This helps prevent users from unintentionally moving or deleting documents in Windows Explorer:





• The **Revise** action under the **Windchill** tab now displays the current document version:



 The Shared Status column can now be added to the Windows Explorer detailed view:



### **Enhanced Ability to Copy, Cut, and Paste in Manufacturing BOMs**

Product: PTC Windchill, PTC Windchill PDMLink, Windchill MPMLink

### **Benefit**

The ability to modify BOM structures using PTC Windchill MPMLink has been enhanced with improvements to how parts can be moved from upstream to downstream BOMs.

### **Additional Details**

Cut and paste data in the context of a single tree (upstream or downstream) using Associative Structure Browsers. Copy and paste data in the context of a single tree (upstream or downstream) using Associative Structure Browsers. This allows users to continue to restructure BOMs until all data management expectations have been met, with the corresponding increases in productivity.

Typically, a manufacturing engineer uses an existing upstream, or design BOM to transform it into a downstream, or manufacturing BOM. Then, to restructure the downstream BOM, you can move (cut and paste) or duplicate (copy and paste) nodes from one parent to another. With PTC Windchill MPMLink, restructuring nodes in a given tree in this fashion preserves the associativity between upstream and downstream objects, preserves usage information, and recalculates absolute positioning information in the 3D Mock-Up (if necessary).

### Filter Manufacturing BOMS by Paths

Product: PTC Windchill, PTC Windchill PDMLink, Windchill MPMLink,

### Benefit

The capability to filter BOMs by identifying specific nodes in the structure is critical for all manufacturing activities supported by PTC Windchill MPMLink, and is now supported by PTC Windchill MPMLink.

### **Additional Details**

In order to efficiently define their work (for example. process plans, work instructions, operations), manufacturing engineers need the ability to focus this work context in any given PTC Windchill MPMLink BOM. Many manufactured products have large and complex BOMs and it is therefore of great importance to be able to restrict the work context to specific BOM nodes (or 3D components). You can now:

- Populate a path filter in usage mode
- Populate a path filter in occurrence mode
- Display path filters in all locations where a product filter is displayed
- Set a path filter in all PTC Windchill MPMLink filters where the plant is displayed
- Define the filter criteria when nodes ares selected either in tree or in 3D
- Display in the tree only the filtered paths (including the children of them if they exist)
- Define a path filter in conjunction with other filters
- Save path filter for later reuse
- Add or remove new paths in the filter
- Enable or disable the path filter

### Find Participants User Interface Enhancements

Product: PTC Windchill

### **Benefit**

A new **Find Participants** window has been introduced that unifies the features found in other participant selection tools throughout PTC Windchill.

### **Additional Details**

A new participant selection window has been introduced that will eventually replace all participant selection applets throughout PTC Windchill. It provides additional search capabilities that allow the user to more accurately and quickly identify and select the appropriate participant. PTC Windchill customer administrators and developers are able to configure the new participant selection user interface to use in PTC Windchill customizations. It is being used in the Calendar Management and Team Administration functional areas.

### New features include:

- The ability to search for roles.
- Previously, users could select one or all types. Now, they can pick and choose multiple participant types to include in their search.
- In some configurations, users can choose the LDAP service they want to search in.
- In some configurations, users are presented with a simple search field with auto-suggest capabilities for fast searches. Users can choose more search options to expand their search.

### Import/Export User Interface Enhancements

Product: PTC Windchill

### **Benefit**

The Import/Export Management utility has been updated with an HTML client that features a few minor updates to the user interface that make it more intuitive to use.

### **Additional Details**

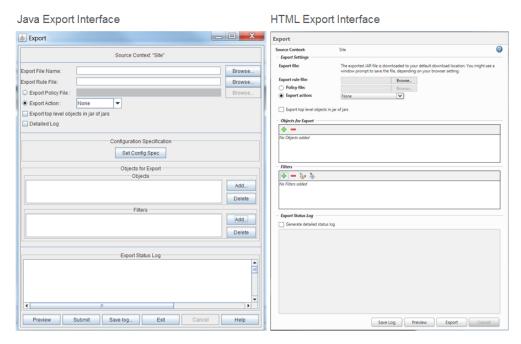
The HTML user interface was introduced in PTC Windchill 10.2 M030 as an optin feature; in PTC Windchill 11.0 F000, it is the default Import/Export Management client, so no additional steps are required to enable it.

The HTML **Import/Export Management** client features an updated user interface that is more intuitive to use, but remains mostly similar to the Java applet user interface that it is replacing.

### Note

The HTML Import/Export Management client may already be familiar to you if you are upgrading from PTC Windchill 10.2 M030 to PTC Windchill 11.0 F000 and your administrator opted to enable the HTML Import/Export Management client in PTC Windchill 10.2 M030.

• The buttons across the bottom of the **Export** window have been streamlined:



- Submit has been renamed to Export.
- Exit has been removed. Instead, you can close the window using the browser Close button (this also cancels the current export task).
- **Help** has been replaced with an online help icon ② at the top right corner of the HTML window.
- In the Java applet **Export** window, you specify a file name in the **Export File**Name field and click **Browse** to select a location to save the JAR file:



In the HTML export window, the **Export File Name** field has been removed and the JAR file is saved to your browser's default download location, or you may be prompted to select a location:

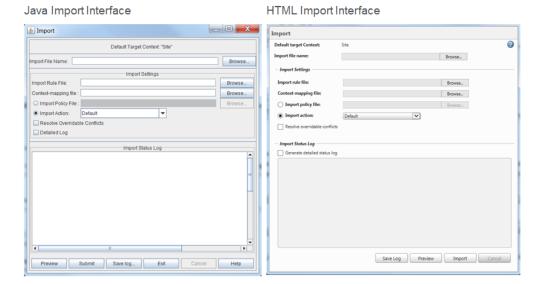


- The Filters box in the HTML Export window has two icons that replace Set Config Spec that is in the Java applet user interface:
  - Edit filter icon opens an HTML Edit Filter window with a Configuration Specification tab.
  - Current filter icon opens the Current Filter window which displays the current configuration specification settings.
- In the Objects for Export and Filters boxes, Add and Delete have been replaced with the add # and remove = icons.
- The **Detailed Log** checkbox has been renamed **Generate detailed status log** and moved to the **Export Status Log** field.
- The Export Status Log in the HTML Export window functions slightly differently from the Java Export window. When exporting large sets of data, the Export Status Log field may display a web link instead of the complete log. Clicking the link allows you to download the complete log for your current export job from the PTC Windchill server.

The **Import** user interface in the HTML window has also been enhanced to provide a more intuitive experience.

- The buttons across the bottom of the window have been streamlined:
  - Submit has been renamed to Import.
  - Exit has been removed. Instead, you can close the window using the browser Close button (this also cancels the current import task).

• **Help** has been replaced with an online help icon ② at the top right corner of the HTML window.



- The **Detailed Log** checkbox has been renamed **Generate detailed status log** and moved to the **Import Status Log** field.
- Import Status Log in the HTML Import window functions slightly differently from the Java Import window. When importing large sets of data, the Import Status Log field may display a web link instead of the complete log. Clicking the link allows you to download the complete log for your current import job from the PTC Windchill server.

### **Interference Results User Severity**

Product: WVS

### Benefit

A user-defined interval scale to determine task priority within the team.

#### Additional Details

You can view and manually edit **User Severity** for one or more selected interferences. You can sort and filter interferences according to the severity ascribed to them. When editing user severity, selected interferences must have the same user severity.

### **Internet Explorer Support**

Product: PTC Windchill

### **Benefit**

When using Internet Explorer, PTC Windchill pages perform according to the capabilities of the Internet Explorer release you have installed.

### **Additional Details**

Previously, when using Internet Explorer, PTC Windchill pages used Internet Explorer 8 capabilities even if you had a later version installed. Now, PTC Windchill pages perform according to the capabilities of the Internet Explorer release you have installed.

### Interoperability: Scheduled Synchronization for Shared Objects

Product: PTC Windchill PDMLink, PTC Windchill ProjectLink

### **Benefit**

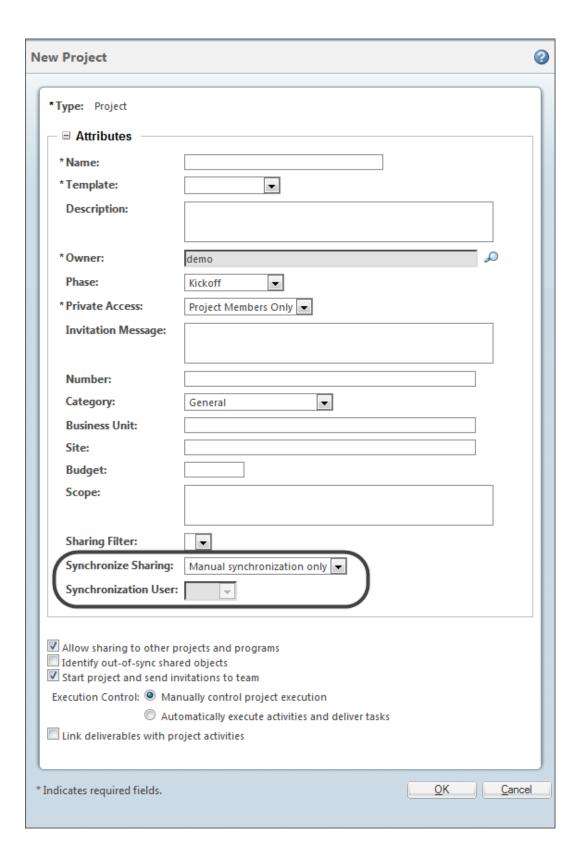
Automatically synchronize shared objects based on a schedule and designated user permissions.

### **Additional Details**

Previously, project members were required to manually synchronize out-of-sync shared objects using the **Update Project** action. Now you can configure a project to automatically perform this action.

Two new fields have been added to the **Create Project** and **Edit Project** windows:

Synchronize Sharing	Scheduled synchronization—Allow automatic synchronization of shared objects.
	Manual synchronization only—Only allow manual synchronization of out-of-sync shared objects.
Synchroniza- tion User	Select a user for whom the scheduled synchronization is performed. By default, this is the project owner.



For information on new configuration options to support scheduled synchronization, see Interoperability: Configure Scheduled Synchronization in Projects on page 28.

### **Scheduled Synchronization**

Scheduled synchronization works the same as if the Synchronization User were to manually complete the **Update Project** action; therefore, the same rules that apply when using the **Update Project** action also apply for scheduled synchronization.

- Enabling automatic synchronization does not prevent individual users from performing manual synchronization for shared objects.
- Scheduled synchronization is only executed when the project is in the Running state.
- The project **Details** page now includes the following fields:
  - Synchronization User—The user for whom the scheduled synchronization is performed.
  - **Synchronize Sharing**—Indicates whether scheduled synchronization is enabled.
  - **Last Auto-Synchronized**—The date and time in which the project was last synchronized using scheduled synchronization. Manual updates do not affect this field.
- By default, synchronization occurs once daily at 2:00 A.M. This is controlled by a property and can be changed by administrators.
- An automated notification is sent to project managers if a scheduled synchronization job fails.

### **Synchronization User**

The purpose of selecting a user is to determine which permissions are applied. Only objects to which the user has the required permissions are synchronized. Objects that are not included in the scheduled synchronization can still be manually updated by a user with appropriate access.

Candidates for this field are users who have been added to the **Project Synchronization Users** group. By default, this is the project owner.



### Note

Your synchronization selections are included when performing a Save as Project Template or Save as New Project operation.

This functionality is not available for programs.

### **Initiating Change Objects for Interference Results**

Product: WVS

### **Benefit**

You can now initiate change objects from interference results to send interference results for review.

### **Additional Details**

You can initiate the creation of change objects from one or more interferences in interference tables. The tables can be from Interference Reports, Related Interferences, Assigned Interferences, and Compare Interferences. This applies to the all Change Objects (Change Request, Problem Report, Change Notice, Variance).

### **License Usage Report Plugin**

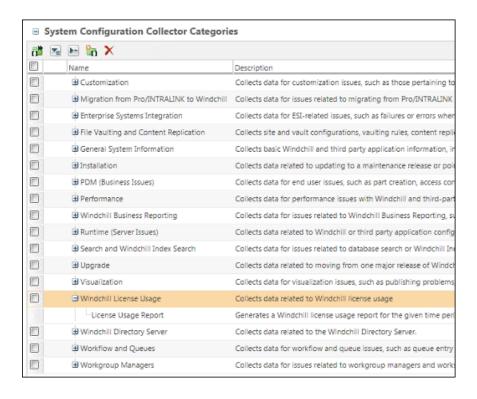
Product: PTC Windchill

#### Benefit

A new **License Usage Report** plugin has been introduced that can be used to collect data and generate license reports.

### **Additional Details**

A new category, Windchill License Usage, is added under the SCC categories. The Windchill License Usage contains the License Usage Report plugin. Use the License Usage Report plugin to collect data and generate a license report. The report contains information about application usage for the various license types for each user that logs on to the system.



### **License Type Usage Tracking**

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink

#### Benefit

Three license types are now tracked in PTC Windchill PDMLink and PTC Windchill ProjectLink, allowing administrators to determine if a site is in compliance with license usage.

#### **Additional Details**

The following three license types are tracked based on user actions and group memberships in PTC Windchill PDMLink and PTC Windchill ProjectLink:

- PDMLink
- ProjectLink
- View and Print Only

License usage can be viewed in the Performance Advisor for PTC Windchill or in a report generated by the **License Usage Report** plugin for the **System Configuration Collector**. License usage reporting is only one function of the Performance Advisor for PTC Windchill and customers can choose whether that functionality is enabled. At the customer's discretion, license usage data can be sent to PTC.

## Manage Alternate BOMs with Common Enterprise Data

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill MPMLink

#### Benefit

You can now manage enterprise data that is common for all revisions and iterations of a part.

#### **Additional Details**

View-Specific Enterprise Data without creating the corresponding View-Specific Part. Common enterprise data consists of attributes and related objects that are shared across all revisions and iterations of a particular master. View-specific enterprise data consists of attributes and related objects that are shared across all revisions and iterations of a particular view.

View the associated process plans for all alternate BOMs in the Manufacturing Associative Product Structure Browser, through Enterprise Data objects. In the Manufacturing Associative Product Structure Browser, a new process plan tab has been implemented for both upstream and downstream BOMs. This tab allows you to view the associated process plans of each part in the structure.

You can view the history of how this enterprise data has evolved over time. Enterprise data includes attributes that capture textual or numeric values, as well as related objects. You can also manage enterprise data that is common for all revisions and iterations of a particular view of a part. As with enterprise data that is common at the master level, you can view the history of how the view-level enterprise data has evolved over time. With enterprise data, you can define planning information at a global level so that this information can be consumed at any facility. Some customers spend between 6 to 9 months moving the production of a particular product from one plant to another partly because of the absence of a global layer that is separate from the ERP or MES systems that are tied to specific plants. PTC Windchill can alleviate this problem by managing this common enterprise data.

## Manage Consumption Links Using PTC Windchill MPMLink

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill MPMLink

#### Benefit

The ability to define the upstream/downstream equivalency link at an occurrence level, or what is known as a Consumption Link, enables you to model the consumption of parts from the upstream BOM into the downstream BOM. This can now be done in the 3D mock-up, where the part occurrences can be displayed, identified, and selected most intuitively.

#### **Additional Details**

The quality and efficiency of BOM transformations job is increased by exposing the status of Consumption Links. The precision of eBOM / mBOM equivalency is refined by tracking granular changes within subassemblies (position, addition/removal of constituents). The 3D mock-up becomes a greater focal point for the manufacturing team, which facilitates communication with the engineering design team.

## Manage Security Action and Window Renamed

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink, PTC Arbortext Content Manager

#### **Benefit**

Customers with security labels enabled are now able to separately control the visibility of the Edit Access Control and Edit Security Labels actions that now appear directly on the actions menu and replace the Manage Security action group, which has been removed. For customers without security labels enabled, the Manage Security action and window have been renamed Edit Access Control to provide a consistent experience for the user by matching the name to the functional area that it manages.

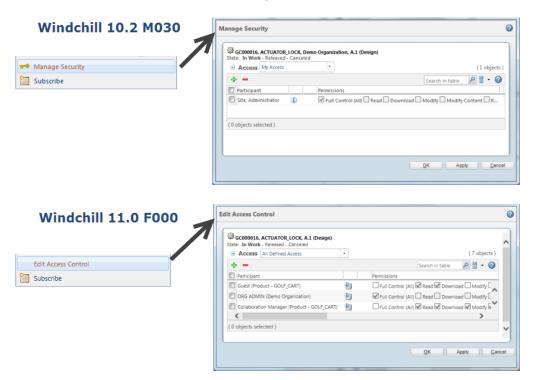
#### **Additional Details**

• For customers without security labels enabled:

The Manage Security window is renamed Edit Access Control and the Manage Security action is replaced with Edit Access Control. Previously in PTC

Windchill 10.2 M030, Actions ► Manage Security opened the Manage Security window from which access controls are managed.

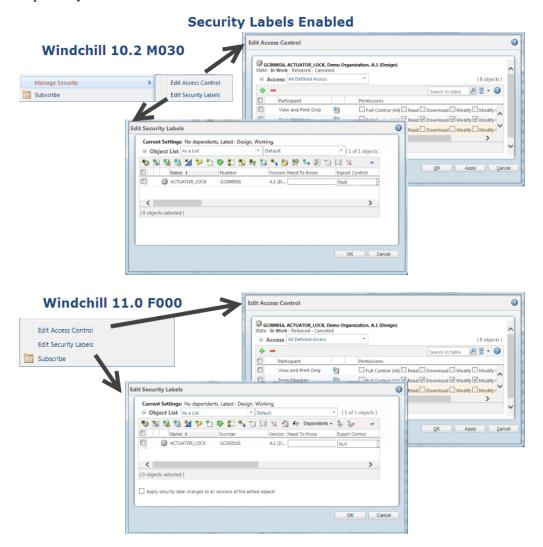
#### **Without Security Labels Enabled**



• For customers with security labels enabled:

Previously, in PTC Windchill 10.2 M030, when security labels were enabled, the Edit Access Control and Edit Security Labels actions were submenu actions under the Manage Security action group, which was available from an object's Actions menu. The Manage Security window was renamed Edit Access Control and the Security Labels tab from the Manage Security window was separated into a new window named Edit Security Labels. Now, customers with security labels enabled will observe that the Manage Security action group has been removed and the Edit Access Control and Edit Security Labels actions now appear directly on the Actions menu. In addition, when configuring actions for

roles or managing profiles, visibility of the actions can be controlled separately.



## **Modify Security Labels Permission**

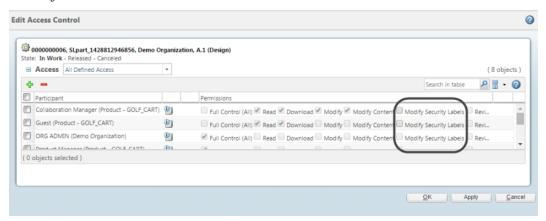
Product: PTC Windchill

#### **Benefit**

The new Modify Security Labels permission provides more precise control to administrators when specifying which users can modify security labels.

Previously, a security label could be modified by participants who were granted the Modify permission, provided they were also an authorized participant for the security label value on the object. Modify Security Labels is a new permission that determines which participants can change security labels values. This allows administrators to separately manage access controls for modifying security labels and other object attributes. Now, participants must have the Modify Security Labels permission instead of the Modify permission in order to modify security labels; however, the participant must still be an authorized participant for the object's security label value that the participant wants to modify.

Modify Security Labels permission has been added to permission tables throughout PTC Windchill, including the following areas: **Policy Administration** utility; **Edit Access Control** window; workflow, life cycle, and container templates; and object creation windows.



Visibility of the Modify Security Labels permission can be controlled with two **Security** preferences in the **Preference Management** utility. **Access Permission Configuration** and **Access Permission Configuration** (**PDM**) determine if users can see or update permissions throughout PTC Windchill.

Four data migrators have been introduced in the upgrade process that by default grant the new Modify Security Labels permission to participants in PTC Windchill 11.0 who were granted Modify permission in previous releases. Previously, if a participant had either the Modify or Full (All Control) access control permission on an object and they were an authorized participant for an object's security labels, then the participant was able to modify security labels on that object. Similarly, if the participants were denied or absolutely denied Modify permission, then they are denied or absolutely denied the new Modify Security Labels permission.

The migrators check for access control rules in the following areas in PTC Windchill:

- Policy access control rules defined in the Windchill system
- Ad hoc access control rules defined for individual objects in the Windchill system
- Policy and ad hoc access control rules specified by container templates
- Ad hoc access control rules specified by variables in workflow templates
- Ad hoc access control rules specified by life cycle templates

#### Note

Optionally, you can configure the migrators to check for access control rules with a permission other than Modify, when adding the new Modify Security Labels permission.

### **Move Preference**

Product: PTC Windchill PDMLink

#### **Benefit**

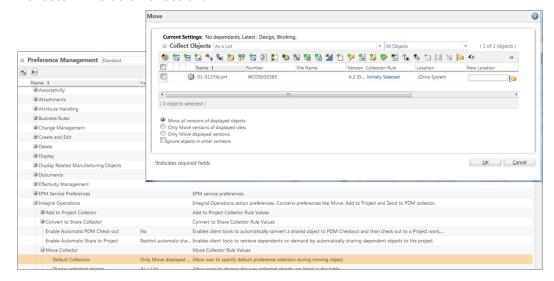
A new preference controls the default behavior for the **Move** action, allowing sites, organizations, contexts, or users to select the move behavior used most frequently.

#### **Additional Details**

Three options are available from the **Move** window:

- Move all versions of displayed objects
- Only Move versions of displayed view
- Only Move displayed versions

Previously, the default selection was always Move all versions of displayed objects. Now you can set a preference to select one of the other options as the default. In Preference Management, navigate to Integral Operations > Move Collector > Default Collection.



### **New Status Column on Interference Results Tables**

Product: WVS

#### **Benefit**

Clarification of type of change made between an existing interference and the previous interference, and whether the interference is new or not.

#### **Additional Details**

Additional states of interferences added to new and previously found interference states. The new states indicate if parts in an interference were modified, and whether the modification is of location or part geometry.

## Part and CAD Document Structure Related Information Display

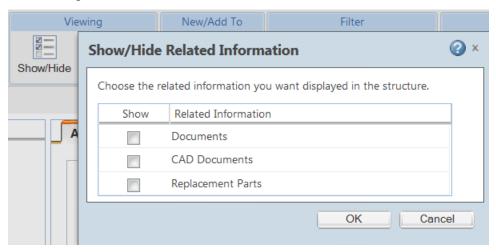
Product: PTC Windchill

#### **Benefit**

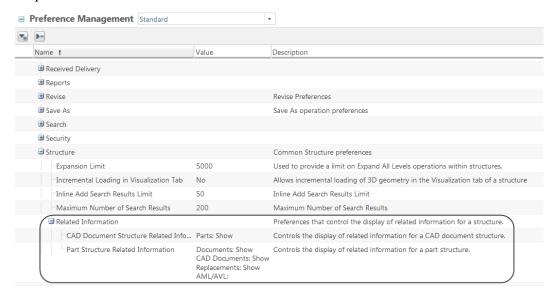
Now you can easily show and hide related information in part and CAD document structures, including a new preference to select the related information that displays automatically in the structure or when you click **Show**.

#### **Additional Details**

Previously, you manually selected the related information displayed in each individual part and CAD document structure:



Now, you can set the following preference for the related information to display in all part and CAD document structures: **Structure** ▶ **Related Information**.



From these preferences, you determine the following settings:

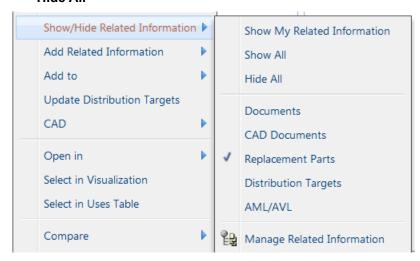
- Related information that displays with the **Show** button
- Related information that displays automatically when initially navigating to a structure

**Show** and **Hide** are now two separate actions in the **Structure** tab toolbar:

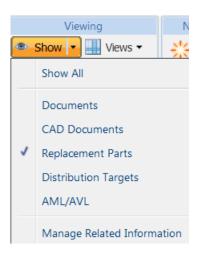


You can still manually modify the related information that displays in individual structures. Use the following options:

- Right-click actions menu, including these new actions:
  - Show My Related Information
  - O Show All
  - O Hide All



• New **Show** drop-down menu:



## **Part Replacement Enhancements**

Product: PTC Windchill PDMLink

#### **Benefit**

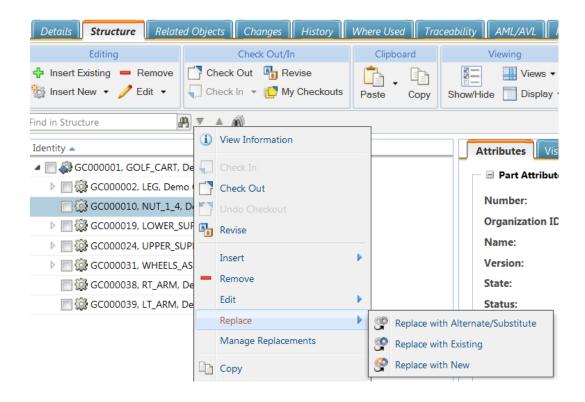
Replacing parts on the **Structure** tab of a part information page is quicker and easier.

Three new actions are available under the Replace menu when you right-click in a part structure:

Action	Description
Replace with Alternate/ Substitute	Opens a window displaying the alternate and substitute parts defined for the current part. Select a part and click <b>OK</b> .
	If the parent part is not checked out, launching the <b>Replace with Alternate/Substitute</b> window checks out the parent part.
Replace with Existing	Opens a window from which you can select an existing part to use as a replacement.
	Use this action for parts that are not defined as a replacement (alternate or substitute) for the selected part. This action is similar to a remove and insert action. It does not create a replacement relationship.
Replace with New	Opens the <b>New Part</b> window from which you can create the part to be inserted into the structure as the replacement of the selected part.
	<b>₱</b> Note
	This action is similar to a remove and create action. It does not create a replacement relationship.

#### Note

The Manage Replacements action remains available in the right-click menu. Now it appears below the **Replace** menu. From this window, you add alternate and substitute parts for the existing part. These replacement parts are then available when you select Replace ▶ Replace with Alternate/Substitute.



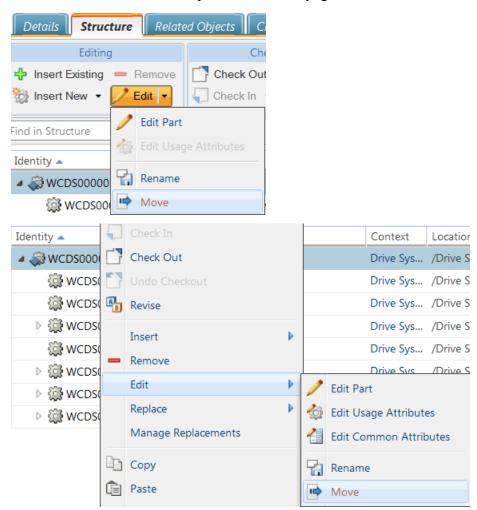
### **Part Structure: Move Action**

Product: PTC Windchill PDMLink

#### **Benefit**

To move an entire structure or large portions of a structure into a new folder or context, the **Move** action is available from the part structure.

Now, the **Move** action is available from the **Edit** menu and the right-click actions menu on the **Structure** tab of part information pages:



### **Part Structure: Visualization Tab Actions**

Product: PTC Windchill PDMLink

#### **Benefit**

New actions related to viewing, shading, and measuring 3D images are available from the **Visualization** tab for part structures.

#### **Additional Details**

The following toolbar actions, previously only available in the Product Structure Explorer, are now available on the **Visualization** tab for part structures:



## Part Structure: Visualization Tab Incremental Loading

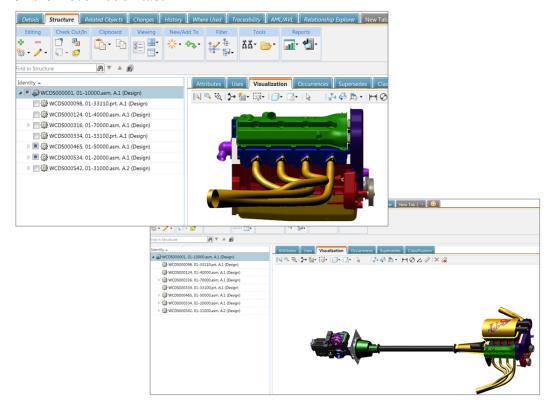
Product: PTC Windchill

#### Benefit

On the structure of a part information page, now you can select specific parts or assemblies to appear in the **Visualization** tab of a part structure. This improves performance and allows you to more easily visualize the parts you are interested in.

#### **Additional Details**

When this functionality is enabled, checkboxes appear in the part structure pane under the **Structure** tab, enabling you to select only those parts you want to view on the **Visualization** tab.

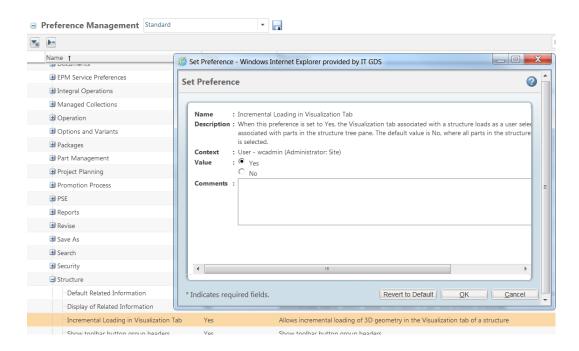


This option must be turned on using the following preference: **Structure** > **Incremental Loading in Visualization Tab.** By default, the preference is set to **No**.



#### 👎 Tip

Preferences are set in the **Preference Management** utility available from the **Utilities** page for the context, organization, or site. Users can set preferences from Quick Links ► My Settings ► Preferences.



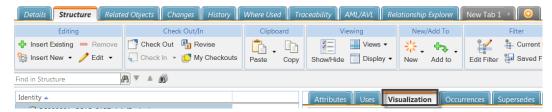
### **Part Structure: Visualization Tab Preference**

Product: PTC Windchill

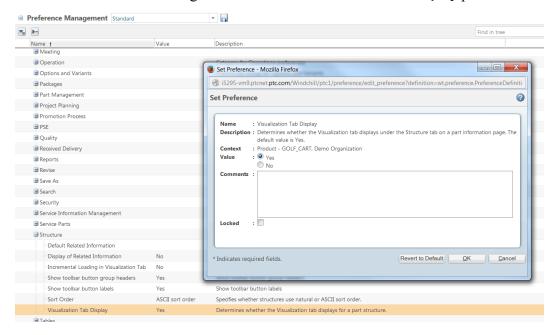
#### **Benefit**

Through a preference, you can hide the **Visualization** tab that appears under the Structure tab on part information pages, which may improve performance and reduce the time to display the part structure.

By default, a **Visualization** tab appears under the **Structure** tab on a part information page:



This tab can be hidden using the **Structure** > **Visualization Tab Display** preference:





#### Tip

Preferences are set in the **Preference Management** utility available from the **Utilities** page for the context, organization, or site. Users can set preferences from **Quick Links** > **My Settings** > **Preferences**.

## Parts: Multiple Rename

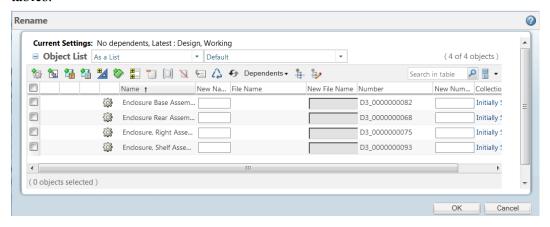
Product: PTC Windchill

#### **Benefit**

You can rename multiple parts at once to save time and ensure consistency.

#### **Additional Details**

Previously, if you wanted to rename parts, you had to launch the **Rename** action for each part individually. Now, you can select multiple parts and rename them all at once. Multiselect for **Rename** is available from the **Search Results** and **Folders** tables



### **Performance Advisor for PTC Windchill**

Product: PTC Windchill

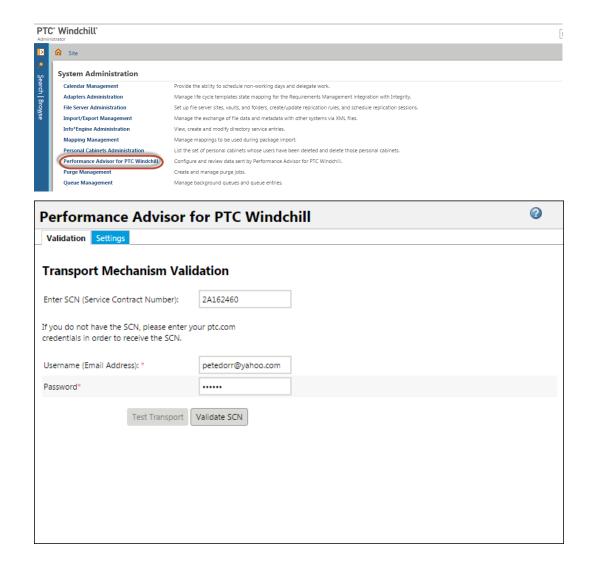
#### **Benefit**

A new **Performance Advisor for PTC Windchill** utility has been introduced to collect and send diagnostic data to PTC.

#### **Additional Details**

The Performance Advisor for PTC Windchill utility validates the user identity using the Service Contract Number (SCN) and login credentials. You can then configure the utility to collect diagnostic data periodically and send it to PTC. You can also download the data locally and review it before sending the data to PTC. The utility collects the following types of data:

- Windchill System Information
- License Reporting



## **Precision Column Added to Interference Results Tables**

Product: WVS

#### **Benefit**

When viewing interference results, you can see which interferences were calculated using accurate precision, and which by approximate precision.

#### **Additional Details**

Precision is a new column added to the **Related Interferences** report. Approximate precision is indicated by  $\sim$ , whereas accurate precision displays no symbol. You can sort the column by precision type.

## **Project Management: Plan Templates**

Product: PTC Windchill ProjectLink

#### Benefit

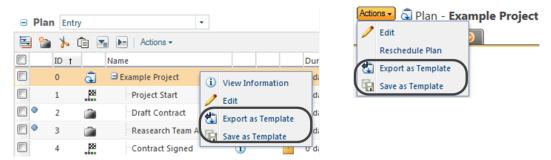
Create and manage plan templates using new actions and additional **Templates** table functionality.

#### **Additional Details**

Previously, to create a plan template, you were required to export a project to a ZIP file and then extract TAG-plan-1.xml.

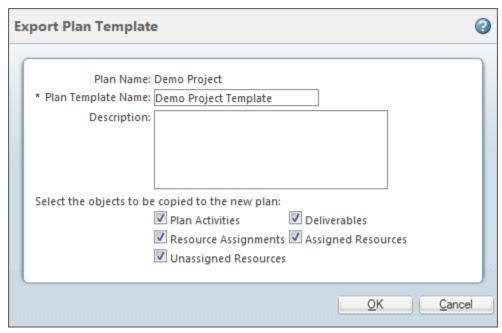
Now, the following actions are available from the **Plan** table and from the **Actions** menu available from the plan information page:

Save as	Save a copy of the plan template and add it to the <b>Templates</b>
Template	table.
Export as	Export the plan template to a ZIP file.
Template	



These actions are available for project, program, and product plans.

When exporting or saving a plan template, you can select which elements to include:



The **Templates** table view named **Product Plan Templates** has been replaced with the **Plan Templates** view. The following actions have been added to the **Plan Templates** view:

- Delete
- Import from file
- Enable
- Disable
- Edit
- Download

## **Promotion Requests: Need By Date**

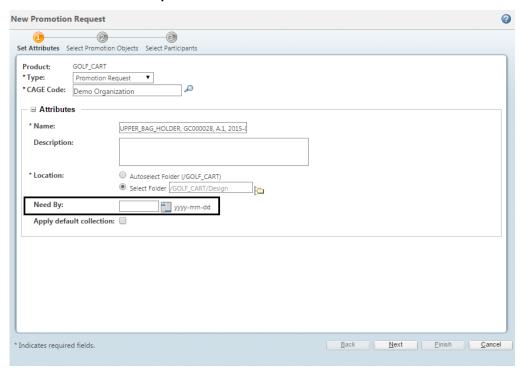
Product: PTC Windchill, PTC Windchill PDMLink

#### **Benefit**

Promotion request contains a new **Need By** attribute, which can be used to indicate when a promotion request must be completed. This attribute helps communication and transparency between promotion request approvers and reviewers.

The **Need By** attribute appears in three layouts by default:

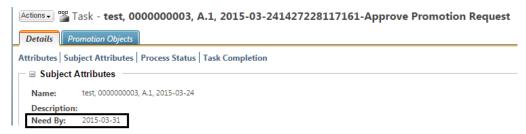
The New Promotion Request window:



• The **Details** tab on the information page:



• The configurable workflow task attribute layout:



## PTC Windchill Customer Experience Management: Aging and Cycling Reports

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill Customer Experience Management

#### **Benefit**

PTC Windchill Customer Experience Management has been updated with new aging and cycling reports to assist with managing customer experiences.

#### **Additional Details**

The aging report shows how long each workflow task (workitem) of a customer experience is in the **Running** state. This time is calculated as the duration between the start date and the current date along with the aging bracket they belong to. The values of aging brackets can be set using the **Aging Bracket** preference. You can set the preferences for the aging report under **Preference Management** > **Reports** > **Query Builder** > **Aging Bracket**. The values for the **Aging Bracket** are set to 30, 60, 90, 120 by default. These values correspond to the duration of the workflow state in days.

The cycling report shows the total workflow cycle days of each workflow task (workitem) of a customer experience in a particular state, along with the workflow cycle time between the **Intake** and the **Closed** state of a customer experience.

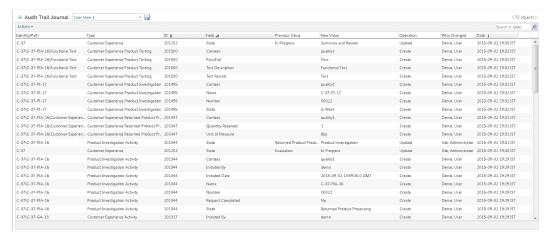
## PTC Windchill Customer Experience Management: Audit Trail Enhancements

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill Customer Experience Management

#### **Benefit**

The audit report has been updated so these users can quickly search for individual field changes over time.

On the **Timeline** tab, in the **History** table, click the audit trail journal icon **1**. The audit trail appears for the customer experience object:



Only users in the customer experience manager and quality system manager roles can access this function. Users can customize and create views for the audit trail table. The table sorts by the **Date** field in ascending order by default. Users can export the information from the table to an Excel spreadsheet. Select **Actions Export to Excel**. Users can quickly search for individual field changes over time; for example, if a user wants to find out when the reporting date was changed and by whom, they can search by the **Date** field and filter by user. The date is important because it can alter the regulatory reporting requirements for the customer experience.

Previously, customer experience managers and quality system managers had to look through each audit report for a customer experience to determine when a given field was changed or who had changed it.

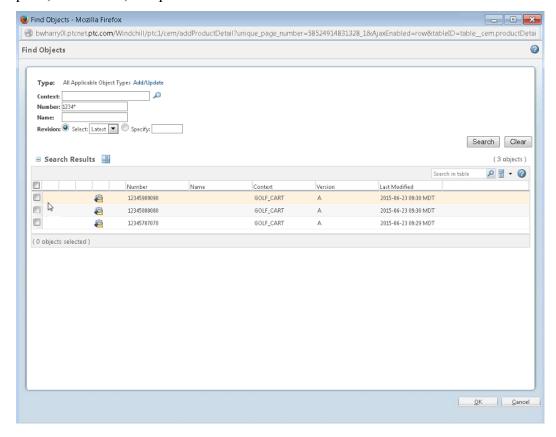
## PTC Windchill Customer Experience Management: Enhancements for Part Instances and Documents

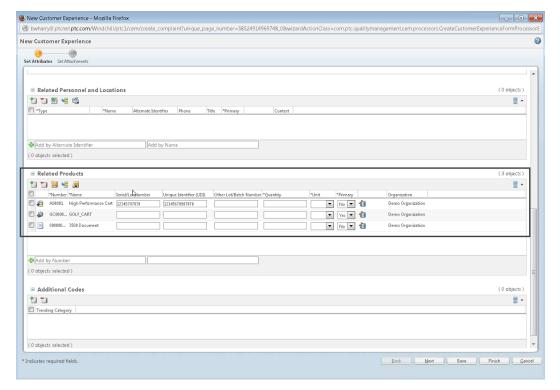
Product: PTC Windchill Customer Experience Management, PTC Windchill Quality Solutions

#### **Benefit**

Functionality has been expanded to allow users to associate part instances and documents to a product.

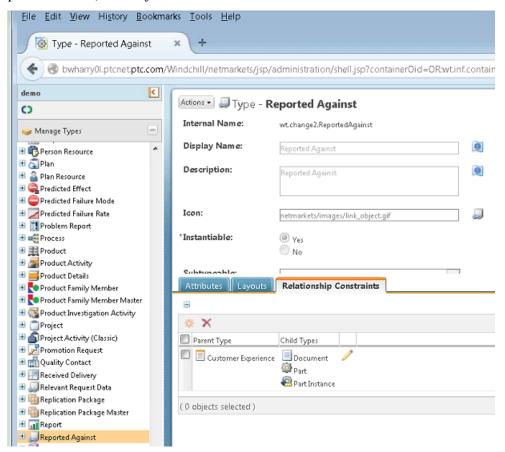
Previously, when you were selecting objects in the **Find Objects** window to add to the **Related Products** table, you could only associate parts to a product. Now, you can select other object types in addition to parts. Out-of-the-box, you can select parts, documents, and part instances.





- In the **Find Objects** window, you can search for and select one or more objects. The search defaults to all applicable object types. To limit the search to specific object types, click **Add/Update**, select the object types, and click **OK**.
  - O If you know the part number, but not the serial number of the product, you can search using the part number. You can enter the serial number manually when you know it later, or you can advance the workflow without it.
  - If you know the part number and serial number, you can search on either number.

- If you do not know either the part number or the serial number, use the add as reported product icon to record the information you have in the Related Products table.
- To control the object types that appear in the **Find Objects** window, edit the selections in the **Relationship Constraints** tab for the **Reported Against** type in the **Type and Attribute Management** utility. The default object types are parts, part instances, and objects.



- When you select an object type, the system automatically completes certain fields in the Related Products table. This saves you from entering this information manually.
  - If the object is a part instance, the system completes the **Serial/Lot Number** field.
  - If the object is associated with a unique device identifier, the system completes the **Unique Identifier (UDI)** field.
- After you have added a part or part instance to the **Related Products** table, you can assign a failure code. If a failure code is added to a part instance, the failure code is reported against the part and not the part instance. You cannot enter failure codes for other objects, such as documents.

You need to create your own part instances. You can create part instances for every product or specific products you choose.

- When creating the part, create it as an end item and set the default trace code to Serial Number, Lot, or Lot/Serial Number.
- When creating the part instance, enter the Serial Number, Lot, or Lot/Serial Number to make the part instance searchable in the quick lookup and in the Find Objects window.

To configure attributes on the Related Products table, update the CEProductDetail object using the CEM.ProductDetailAttributePopulator.properties.xconf file located in <Windchill>\codebase\com\ptc\qualitymanagement\cem\xconfs.

- The property name value in the file contains a concatenation of the type, period character, and internal name of an attribute that exists on the From type.
- The property default value contains the internal name of an attribute that exists on the CEProductDetail type.
- Any Changeable2 type and attribute combination can be defined in the property name value.
- All CEProductDetail attributes can be defined in the property default value
- All attributes are supported on both the From types and the CEProductDetail type.
- For example, the out-of-the-box entry for mapping the uniqueIdentifierNumber from a part instance to the uniqueIdentifierNumber attribute on the CEProductDetail type is

```
<Property name="wtpart.WTProductInstance2.uniqueIdentifierNumber"
default="uniqueIdentifierNumber"/>
```

To add an **Organization** attribute to the **Product Details** window, do the following:

- 1. Create a calculated attribute on the **Product Details** (CEProductDetail) type. The data type should be **String**.
- 2. Add the calculated attribute to the layouts where you want to display the organization.
- 3. Right-click the new attribute in the layout and select **Edit Group Attribute Properties**. In the **Data Utility Id** field, enter

  productDetailOrganizationDataUtility.
- 4. Save the changes to the layout. The organization appears on the windows where you added the calculated attribute.

### **PTC Windchill Help Center Changes**

Product: PTC Windchill

#### **Benefit**

A number of enhancements have been made to the PTC Windchill Help Center for PTC Windchill 11.0 F000.

#### **Additional Details**

Highlights of enhancements to the PTC Windchill Help Center include:

- All of the PTC Windchill Workgroup Manager documentation, formerly in its own help center, is now combined with the PTC Windchill Help Center. You can access the PTC Windchill Help Center directly from the PTC Windchill Workgroup Manager client by selecting Help ► Help Center.
- To increase findability and organization, PTC Windchill Workgroup Manager New and Changed entries are now at the same table of contents level as the PTC Windchill New and Changed entries.
- To enhance usability, much attention was given to topic title quality in this release, including improvements in:
  - Removal of duplicate titles
  - Consistency, clarification, meaningfulness, disambiguation
  - Enhancement and restructuring of topics with too-thin content

These efforts are on-going for PTC Publications as we work to make the PTC Windchill Help Center more functional and streamlined.

• The Info\*Engine adapter for DOORS is retired. As a result, documentation for this adapter is no longer available in the PTC Windchill Help Center or on the Reference Documents website for 11.0 and beyond. For more information, see Info\*Engine Adapters: DOORS Adapter Retirement on page 27.

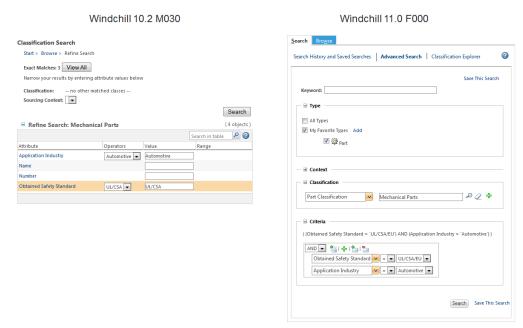
## PTC Windchill PartsLink: Classification Search Integrated with Advanced Search

Product: PTC Windchill PartsLink

#### **Benefit**

The **Classification Search** utility has been fully integrated with the core PTC Windchill advanced search.

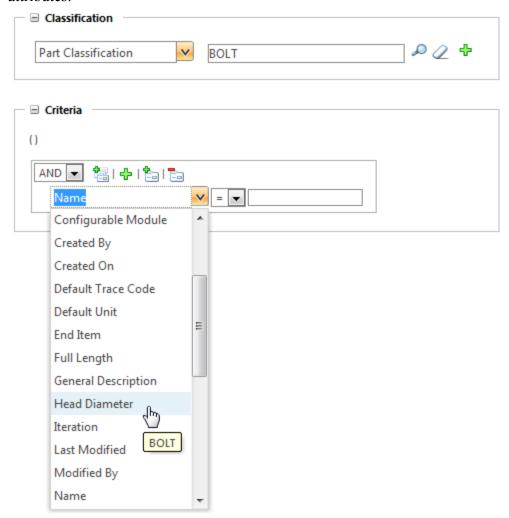
You can now use the PTC Windchill **Advanced Search** page to search for classification parts using node and attribute values. Previously, you could specify classification nodes in the **Criteria** field; however, if you wanted to search for classification parts using attribute values, you had to use the **Refine Search** table that was only available from a separate **Classification Search** utility.



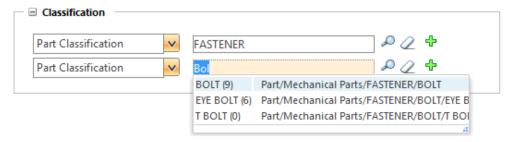
When an applicable part type is selected, a new **Classification** field appears in the **Advanced Search** window. Use this field to specify one or more classification nodes:



Once a node is specified, the criteria selection menu refreshes to include relevant attributes:



- The **Classification** field does not appear if the **Type** field includes ineligible object types.
- The node name field supports predictive search:

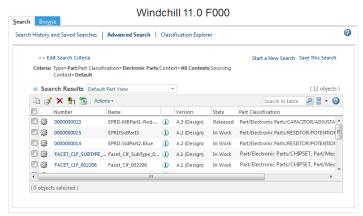


• If you specify more than one node, they are joined using an AND operator.

As part of this enhancement, classification search results now appear in the core **Search Results** table. Previously, classification searches appeared in a separate **Classification Search Results** table.

To support this change, the **Search Results** table is now compatible with classification attributes:





- You can create custom table views that include classification attribute columns. This is restricted to searches that only use one classification attribute and corresponding node value.
- You can use the new search facets utility to filter by classification nodes and attributes. For more information, see Search: Faceted Results on page 148
- You can also launch the Find Similar Parts search action from the right-click actions menu.

To browse through classification parts, you can use the enhanced classification explorer available from the PTC Windchill **Navigator**.

# PTC Windchill PartsLink: Enhanced Classification Explorer Available from the Navigator

Product: PTC Windchill PartsLink

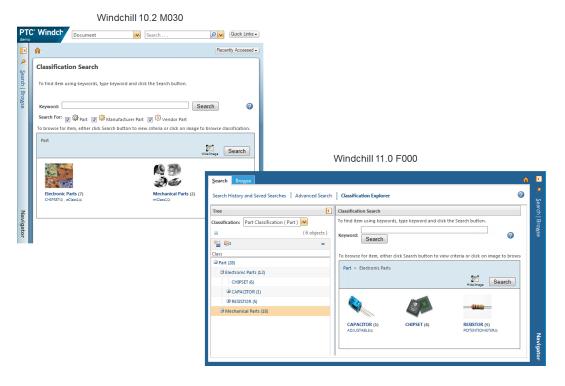
#### **Benefit**

Access the classification explorer from the PTC Windchill **Navigator**. From here, you can use a new tree panel to browse the classification hierarchy.

#### **Additional Details**

Previously, the classification explorer was part of the **Classification Search** page. Now, classification search is fully integrated with PTC Windchill advanced search. For more information, see PTC Windchill PartsLink: Classification Search Integrated with Advanced Search on page 137.

As part of this enhancement, the classification explorer is now available from the **Search** tab of the PTC Windchill **Navigator**:

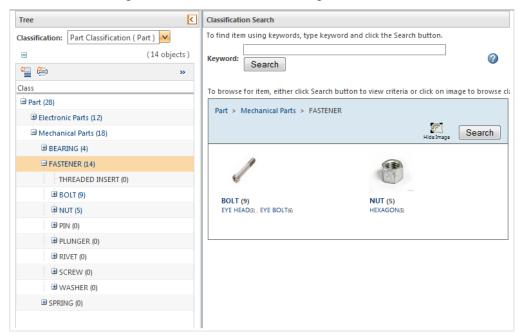


This change includes the following enhancements:

• A new Classification Explorer link is available from the Navigator. Click this link to open the Classification Search page. You can also continue to use the link available from the global search drop-down menu:



- You can continue to perform keyword searches from the Classification Search
  pane. When you click Search, the results are displayed in the core PTC
  Windchill Search Results table. Previously, classification search results were
  displayed in a separate Classification Search Results table.
- A new **Tree** panel allows you to navigate the classification hierarchy by expanding and collapsing node groups:
  - When you click the link in a parent node, the visual explorer automatically updates to display your selection.
  - When you click the lowest level node in a group, the Search Results table opens to display all applicable parts.
  - Click the collapse action to hide the Tree panel.



## PTC Windchill PartsLink: Find Similar Parts

Product: PTC Windchill PartsLink

#### **Benefit**

Launch the Find Similar Parts action from various locations in PTC Windchill.

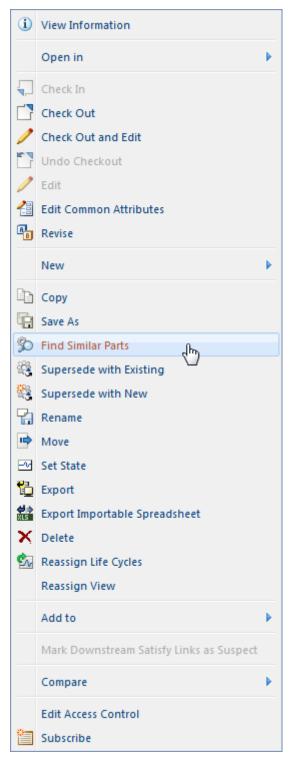
#### **Additional Details**

Classification search has now been fully integrated with the core PTC Windchill advanced search. As part of this change, there is no longer a separate **Classification Search Results** table. For more information, see PTC Windchill PartsLink: Classification Search Integrated with Advanced Search on page 137.

Previously, the **Find Similar Parts** action appeared as a column in the **Classification Search Results** table. Now, it is available from the following locations:

• The right-click actions menu in the **Folder Contents** table, **Search Results** table, and the structure browser

The Actions menu on the part information page



Selecting this action opens a new **Find Similar Parts** window. There are no other changes in functionality for how the **Find Similar Parts** action executes.

## Note

You can control the visibility of the Find Similar Parts action using profiles. For more information, see PTC Windchill PartsLink: Properties and Profiles on page 54.

## PTC Windchill Quality Solutions: Batch **Printing**

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill Customer Experience Management, PTC Windchill CAPA, PTC Windchill Nonconformance

## **Benefit**

PTC Windchill Customer Experience Management, PTC Windchill CAPA, and PTC Windchill Nonconformance have been updated with the ability to print multiple customer experiences, CAPAs, or nonconformances at the same time. Previously, you had to manually print each item.

## **Additional Details**

If you have multiple customer experiences, CAPAs, or nonconformances, you can now print them as a batch to save time. You can print one type of batch (for example, customer experiences) at a time. From the Actions menu, select Batch **Print** or **Batch Print With Audit Trail Journal**. When the report is complete, the system generates an email with an attachment. An email address must be configured on the user account. If you do not receive an email with your report within a few hours, look in the system log to determine if there is an error. Only users in the quality system manager role can print batches of quality objects. Quality objects can be printed through the history report in Cognos and the audit trail on the **Timeline** tab. Some items that do not appear in Cognos might appear on the audit trail. The Cognos report is intended to be a company-configured electronic record, but the audit trail prints all fields. The date in the footer can differ from the individual report date. The footer prints the date and time when the batch started. The header for each record prints the date and time that the report for that complaint ran.

## PTC Windchill Quality Solutions: Linking Quality Objects

Product: PTC Windchill, PTC Windchill Quality Solutions, PTC Windchill Customer Experience Management, PTC Windchill Nonconformance, PTC Windchill CAPA

### **Benefit**

PTC Windchill Quality Solutions allows users to link customer experiences, nonconformances, and CAPAs to each other. Users can now easily see a list of similar issues so they can provide consistent responses to customers. This functionality also helps track duplicate issues, similar solutions to a problem, or a problem with multiple solutions.

## **Additional Details**

Customer experiences, nonconformances, and CAPAs can be associated with multiple quality objects (for example, customer experience to customer experience, CAPA to nonconformance, and so on) at any state in their life cycle. Data is not copied between the objects. You can view data for each object on the information page, **Structure** tab, **History** table, and query builder reports.

To add a link to the other objects, use the **Associated Process Objects** table and the **Associated Reference Objects** table:

- Use the **Associated Process Objects** table for links that have processing associated with them. When you close one object, the other object closes automatically if all processing has been completed.
- Use the **Associated Reference Objects** table for links that have no process rules associated with them. This table is simply a reference to another object.

For information on using these tables with change management objects, see Change Associations on page 89.

Available objects depend on the business rules defined in your system. By default, you can link any flexible change item (customer experience, nonconformance, or CAPA) to any other flexible change item. If you create a CAPA from an existing nonconformance, customer experience, or CAPA, the existing object appears in the **Associated Reference Objects** table for the new CAPA.

## Search: Dynamic Result Columns

Product: PTC Windchill

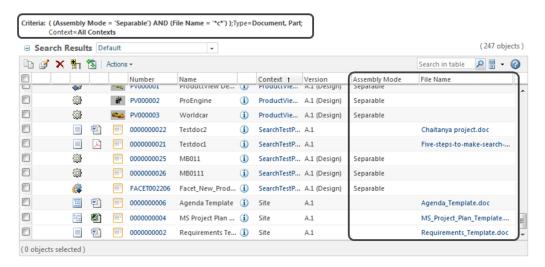
### **Benefit**

The **Search Results** table automatically includes a column for each additional attribute included in the search criteria.

## **Additional Details**

Previously, the default search results displayed a standard column set. To view additional attribute information, users were required to create a custom table view. If a search included multiple object types, only common attributes were displayed and could not be added with a custom view.

Now, the default **Search Results** table view automatically includes a column for each additional attribute specified in the search criteria, even if a search includes more than one object type:



## Search: Faceted Results

Product: PTC Windchill

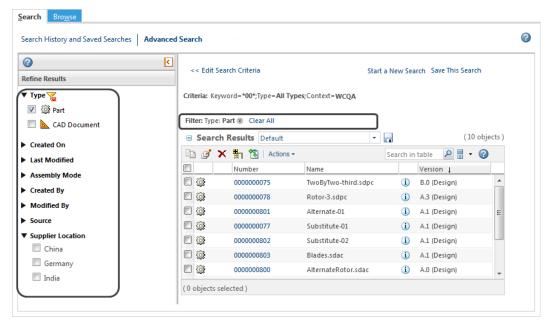
### Benefit

Faceted search results allow users to narrow their results by selecting from a list of applicable object attributes.

#### **Additional Details**

You can now narrow your search results by selecting attributes available in the current result list. When enabled, a **Refine Results** pane appears next to the **Search Results** table. This pane displays attribute groups that are relevant to the objects

already returned by the search. Select the desired attributes to further narrow the search results. Faceted results are only available to users with PTC Windchill Index Search installed and enabled. By default, faceted results are disabled.



To support faceted results, new configuration options are also being introduced at 11.0 F000. For more information, see Search: Properties and Preferences on page 60.

## Search: Find Field Removed

Product: PTC Windchill

## **Benefit**

As part of the advanced search redesign, the **Find** field has been removed.

#### **Additional Details**

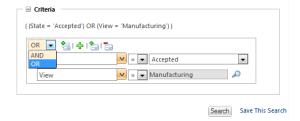
The **Find** field on the PTC Windchill **Advanced Search** page has been removed. It is replaced by the AND and OR options that are part of the redesigned **Criteria** field:

- All keyword search strings are now joined by the AND operator.
- When performing an indexed keyword search—To use an OR operator between keyword strings, users must set the **Search Mode** preference to **Advanced**. Once enabled, users can explicitly specify the AND and OR operator between strings.
- When performing a keyword search without indexing—Use a semi-colon (;) to signify OR.

## Windchill 10.2 M030

#### Windchill 11.0 F000





## **Search: Keywords in Context**

Product: PTC Windchill

## **Benefit**

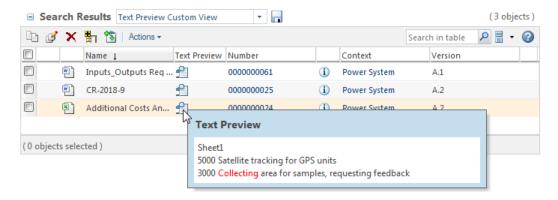
When performing a keyword search against indexed content, the **Search Results** table includes a tool that allows you to preview the keyword as it appears in the file.

### **Additional Details**

A new column named **Text Preview** is available from the **Search Results** table. Hover over the keyword icon to view a preview of the keyword as it appears in the context of the file text. The preview displays the first time the keyword appears in the file content. PTC Windchill Index Search must be installed and enabled. The **Text Preview** column does not appear by default. You must create a custom table. This feature is not enabled by default. An administrator must enable it using the wt.index.enableTextPreview property. By default, this functionality is only available when searching for document objects. To include more content holder object types, use the

wt.index.supportedTypesForTextPreview property.

Criteria: Keyword=collect\*;Type=Document;Context=All Contexts



## **Search: Nested Queries and Enhanced Attribute Selection**

Product: PTC Windchill

### **Benefit**

A fully redesigned **Criteria** field provides multiple enhancements, including the ability to perform nested attribute searches and greater usability when adding, removing, and specifying attribute criteria.

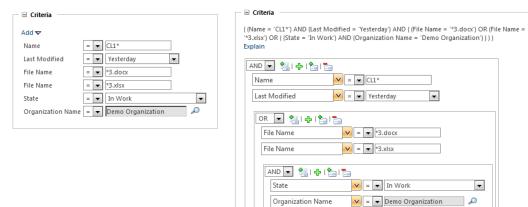
## **Additional Details**

The **Criteria** field on the PTC Windchill **Advanced Search** page has been redesigned to include several new actions and enhancements.

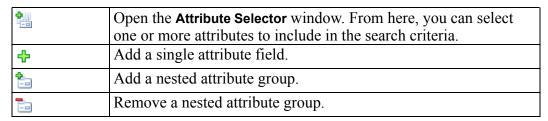
Users can now perform nested search queries using AND and OR operators.

Windchill 10.2 M030

Windchill 11.0 F000

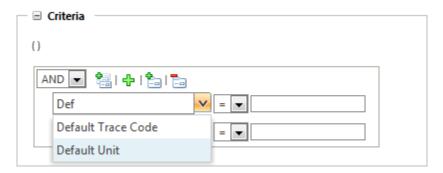


The following actions have been added:

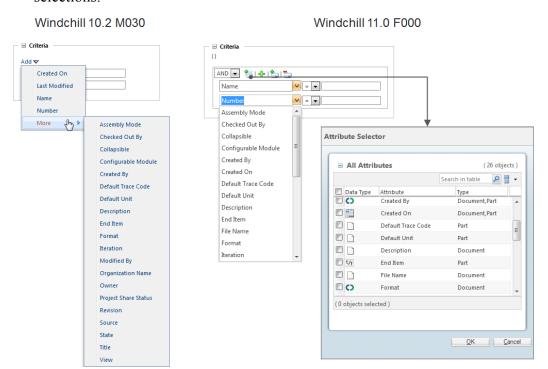


It is now easier to change your attribute selections:

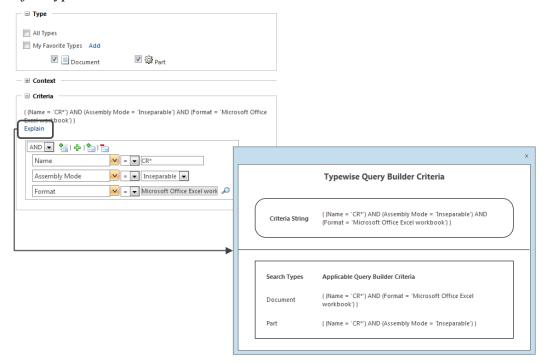
• The criteria field now accepts predictive text searches:



- You can add multiple attribute fields at once. When selecting multiple attributes, the **Attribute Selector** window opens. This window also provides guidance as to which object types are applicable for an attribute. Previously, users did not have an option of adding multiple attributes at once.
- You can change your attribute selections using a drop-down menu. Previously, users were required to add or remove attributes when changing their criteria selections.



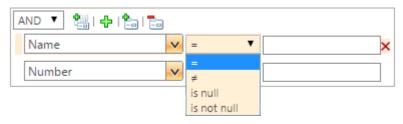
A new **Explain** action is available. This action appears when advanced search criteria is applied to more than one specific object type. Click the **Explain** link to open a window providing a breakdown of how search criteria is applied based on object type:



## P Note

This feature is not available when **All Types** is selected under the **Type** field.

When specifying attribute criteria, you can now use **null** and **is not null** operators for applicable attribute types. Previously, only the equal to and not equal to operators were available.



## Note

Use the enableNullCriteria property to control whether **null** and **is not null** appear. By default, they are disabled.

The **null** and **is not null** operators are not compatible when performing an indexed search or a classification search. Instead, an error message appears.

Note the following when implementing the nested criteria redesign:

- Saved searches created in previous releases are still supported.
- The Find field has been removed and is replaced by the AND and OR options. For more information, see Search: Find Field Removed on page 149.

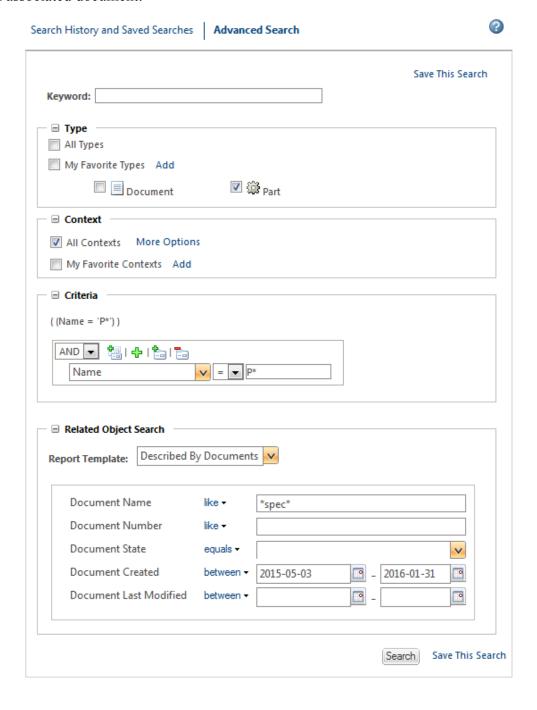
## **Search: Related Object Searches**

Product: PTC Windchill

## **Benefit**

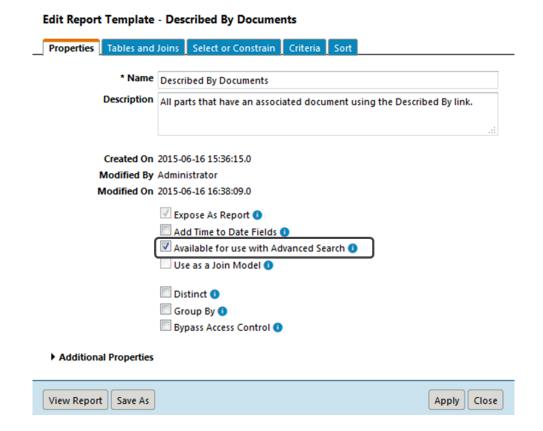
A new advanced search utility allows users to perform searches based on object relationships.

A new **Related Object Search** field is available from the **Advanced Search** page. This field uses PTC Windchill report management to execute searches based on object relationships; for example, you can perform a search for all parts that have an associated document:



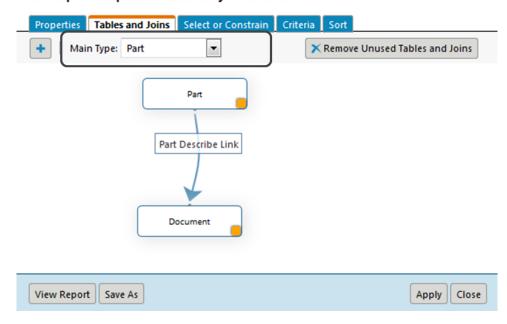
The **Related Object Search** field appears when the following conditions are true:

- The Search Enable Related Object Search preference is set to Yes. This preference is set at the site level.
- Only one object type is selected.
- The selected object type has at least one associated report template that is available for advanced searches. To support this, the query builder now includes the following options:
  - Available for use with Advanced Search—You must select this option to make the report template available from the Related Object Search dropdown menu:



Main Type—Use this field to designate a main object type for the report template. The Related Object Search field appears when the main type is selected on the **Advanced Search** page:

## **Edit Report Template - Described By Documents**



## Note

Report criteria is joined by the AND operator and can be included in saved searches.

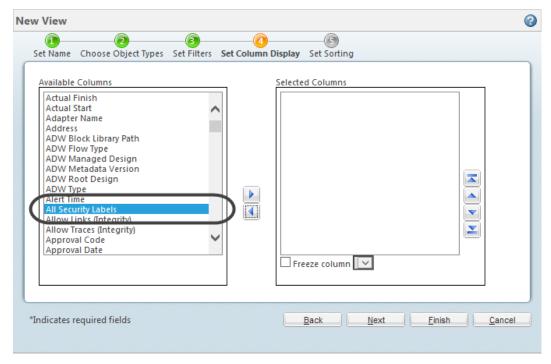
## **Security Label Columns in Custom Table Views**

Product: PTC Windchill

## **Benefit**

You can quickly skim all security label values set on a list of objects in a table by selecting the All Security Labels column when creating or editing a custom table view.

Security label values can now be viewed in custom table views. This allows you to quickly view all security label values set on an object. To add the security label columns to a customized table, select **All Security Labels** from the **Available Columns** list when creating or editing a table view.



A column displays for each security label that is configured for your site, in addition to the other columns you select when creating the custom view.



Changes made to a security label attribute column, such as width and height adjustments, designating it as hidden, or removing the column, are not saved when you save the view if it was added to the table by selecting **All Security Labels**. If you hide a security label column and save the view, the security label column will appear the next time the view is accessed. Changes to other column types are saved.

An individual security label attribute column can be selected from the **Available Columns** list if the AvailableAttributesSite.xml file has been configured to make the security label attribute available for your site. If the security label attribute has been selected individually, then changes made to it are saved when the table view is saved.

## Service Publishing: PDF of Source Languages

Product: PTC Windchill Service Information Manager

#### Benefit

You can publish a PDF of the source language content for a publication structure. When choosing **Publish Representation**, select the **Publish untranslated source** checkbox, which publishes the service structure and its content in all authored languages.

## **Additional Details**

Publishing untranslated source is disabled for XML bundle publishing. Previously, a user was required to choose specific languages, which made it more difficult to publish only multilanguage source content.

## Service Publishing: Setting an Applicability Expression

Product: PTC Windchill Service Information Manager

### **Benefit**

You can set filtering for both the service structure and inline applicability within dynamic documents using the **Filter** action set on the toolbar of the **Structure** tab; for example, you can publish a publication structure to PDF with filtering applied from the **Filter** action set on the toolbar of the **Structure** tab.

## **Additional Details**

Publishing applies the filters to the publication structure and to inline applicability for its dynamic documents. You can save the filter to make it available for future publishing jobs. The rootApplicabilityExpression publishing rule parameter overwrites the applicability expression defined in the **Filter** action set on the toolbar of the **Structure** tab.

## Service Structure: Content Attribute and Content Holder Attribute Synchronization

Product: PTC Windchill Service Information Manager, PTC Windchill Service Parts

### **Benefit**

In PTC Windchill Service Information Manager, the presentation of content information has been simplified by ensuring common attributes between the content and content holder are synchronized after updates.

## **Additional Details**

Information in content holders and content objects is synchronized. This includes parts lists, information elements, and WTDocument types.

Changes to one object are reflected in the other object, including the following:

- Name
- State
- Description
- Version
- Checkout state

Exceptions include the following:

- If the life cycle templates are different, the state is not synchronized
- The description attribute for a dynamic document cannot be edited after creation
- If the content and content holder are not using the same versioning scheme, versioning is not synchronized
- If the content object is a textual content information element and the holder is a textual content holder, the checkin and checkout states are not synchronized

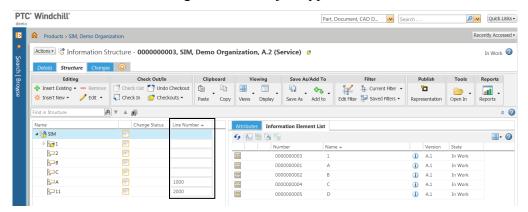
## Service Structure: Information Structure Ordering

Product: PTC Windchill Service Information Manager, PTC Windchill Service Parts

#### Benefit

In PTC Windchill Service Information Manager, information structures can be reordered using line numbers.

• Line numbers are now assigned for all object types:



- A line number is automatically assigned to any new object added to the information structure using the following actions:
  - Insert New
  - Insert Existing
  - Copy and Paste
  - ◆ Replace with Local Copy
- Objects are added as the first child of the selected node by default. Objects can be moved by changing the line number value.
- If siblings need to be renumbered on an insert, only the siblings with existing line numbers are renumbered. Items with no line number remain unchanged and are sorted alphabetically.
- Line numbers are numbered in increments of 1000.
- When **Insert Existing** is used, new line numbers are added for the existing object, but its children remain unchanged.
  - If its children have objects with line numbers, those line numbers are retained.
  - If its children do not have objects with line numbers, new line numbers are not included.
- The Line Number column for an information structure is now displayed out-ofthe-box
- The default sort column for the information structure tree is the **Line Number** column.
- Users can toggle between line number and name. The toggle can be configured by administrators using the sortISByLineNumber property in

- the site level xconf file. This property is set to true by default to sort by line number. Setting the property to false sorts by name by default.
- Users can edit the line number on any object within an information structure. The line number can be set to any integer value. If a user sets the value to an existing line number, the line numbers automatically recalculate to avoid duplication.
- When generating a publication structure or a new information structure from an existing information structure, the line number is copied. Line numbers are generated to reflect the order of the information structure.
  - If all siblings have line numbers, all line numbers are carried over from the information structure.
  - If only some of the siblings have line numbers, all siblings are renumbered. They are sorted by line number, then by type, then by name.
  - If new items are added to the publication structure and these items do not have a line number, these items are inserted as the first or last child within the publication structure.

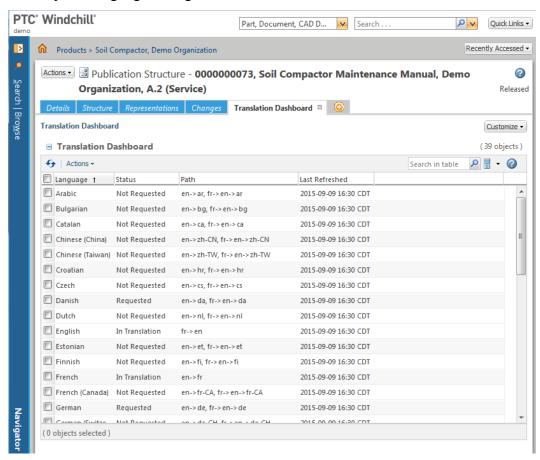
## Service Translation: Improved Support for Pivot Languages

Product: PTC Windchill Service Information Manager

#### **Benefit**

PTC Windchill Service Information Manager translation users who use pivot languages can now see the path from each source to target language and can cancel an in-progress translation package, even if it is a pivot language.

PTC Windchill Service Information Manager **Translation Dashboard** now displays a **Path** column that shows the path from source to target language, including a pivot language if one is configured. In the following example, French is a source, and its pivot language is English:



Previously, in-progress translation packages could not be cancelled if the package in translation was a pivot language for another target. Now an in-progress package can be cancelled for pivot languages as well. Any target languages that are waiting for the pivot to be translated will also be cancelled when the pivot is cancelled.

## Service Translation: Representation for Root Included in Translation Package

Product: PTC Windchill Service Information Manager

### **Benefit**

When a PTC Windchill Service Information Manager translation package is created for a publication structure or information structure, the default representation for the root of the service structure is included in the package.

## **Additional Details**

The translation package now includes the default representation for the root of the service structure, if one exists. Having a default representation such as a PDF may be useful for translators who want to see the published version of the full document; for example, there might be a PDF default representation for the service structure published in its source language. Translation packages previously included only the default representations for dynamic documents if they exist, and these are still included. The **Include Representation** translation preference now applies to both cases.

## **Shared Interference Detection Definitions**

Product: WVS

### Benefit

The new Shared Interference Detection Definition enables the user to view generated interference results from different analyses related to same or similar assemblies and subassemblies.

#### **Additional Details**

The Shared IDD is a type of interference detection definition that contains a unique name that groups interference detection results together. This enables the recognition, for example, of an interference between two instances of Part A and Part B from definition X and interferences of Part A and Part B from definition Y where both definitions have the same share name. In the regular interference detection definition, each set of interference detection results is independent of others.

## **Support for Variant Specs in Interference Detection Definitions**

Product: WVS

#### Benefit

Save time and steps by filtering variants within the interference detection definition.

Bypass the need to filter results from possibly long lists of filters.

## System Quality Agent Renamed to Performance Advisor for PTC Windchill

Product: PTC Windchill

## **Summary**

The System Quality Agent under Preference Management has been renamed to Performance Advisor for PTC Windchill.

### **Additional Details**

There are no additional details for this change.

## Team Templates Page Enhanced to Replace Team Administration Java Applet

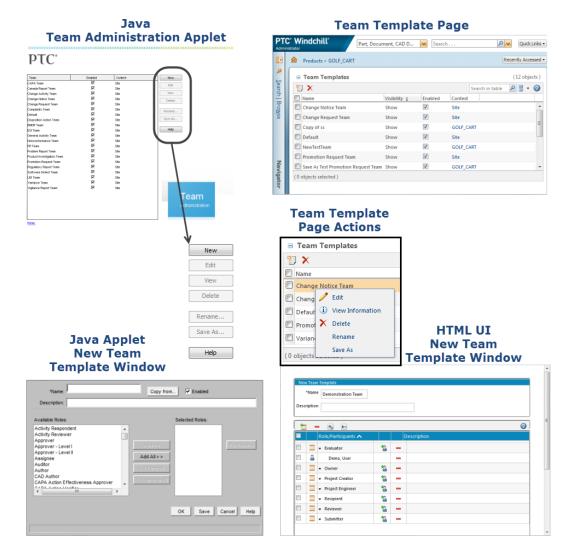
Product: PTC Windchill PDMLink

## **Benefit**

The enhanced **Team Templates** page user interface provides a unified user experience for managing team templates throughout PTC Windchill and replaces the Java-based **Team Administration** utility to resolve usability concerns stemming from the use of Java applets with changes to JRE 7 and later, which prompts multiple security warning messages.

## **Additional Details**

The Java-based **Team Administration** utility from earlier releases has been replaced with HTML user interface elements on the **Team Templates** page. In previous releases, and after changes to Java 7 and later, users frequently encountered security prompts when opening the Java **Team Administration** utility. The **Team Administration** link on the **Utilities** pages for **Products**, **Libraries**, **Organizations**, and **Site** now opens the **Team Templates** page. Additionally, the **Team Templates** view on the **Templates** page for **Products**, **Libraries**, **Organizations**, and **Site** has the same team template management functionality as the **Team Templates** page.



The Java-based team template create and edit windows have also been replaced with HTML user interfaces: **New Team Template** and **Edit Team Template**.

## **Updating Parts Lists after Changes to their Source**

Product: PTC Windchill Service Parts

## **Benefit**

Parts lists display indicators when changes to their source Service BOM or generic parts list (template) have been made, so the Parts List Author can update any associated or generated parts lists.

When changes to a Service BOM have been made and checked in, any parts lists that are associated to the BOM display an **Update Required** flag. The flag indicates that there are changes to the BOM that could be replicated in the parts list.

The flag is shown as an icon or column in these locations for a parts list associated with the updated BOM:

• The **Details** page for the parts list



The Information Element List of an information structure

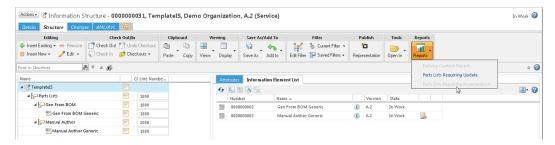
You can customize the view of the **Information Element List** to expose the **Update Required** column.



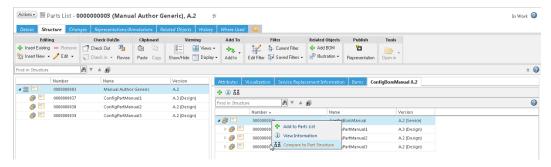
Folders view

You can customize the view of **Folders** to expose the **Update Required** column.

You can also run a report that lists the parts lists in an information structure that need an update after changes to the source BOM. Select the **Reports** > **Parts Lists Requiring Update** menu option from the **Structure** tab of an information structure to generate the list.



You can select the **Compare to Part Structure** option from the context menu for a parts list's source BOM to outline the changes that were made to the BOM.

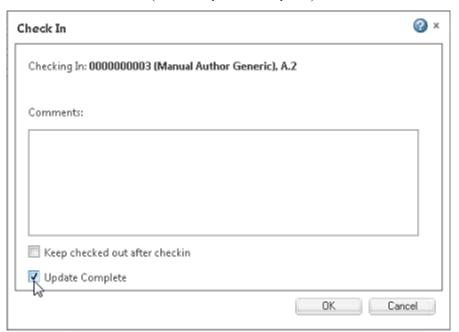


You can decide whether to update some, all, or none of the parts lists associated with the BOM. Two options available in the PTC Windchill Service Parts UI confirm which action has been taken for each parts list:

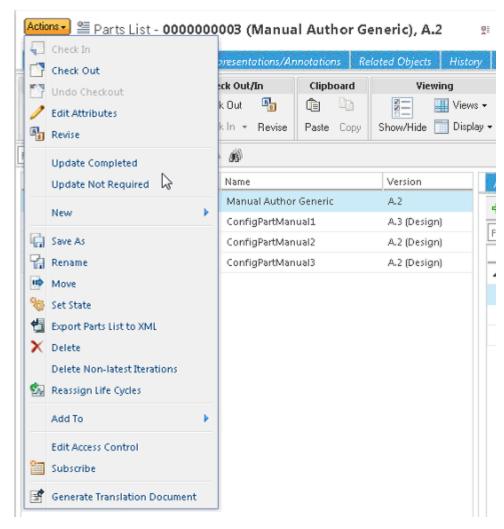
## • Update Completed

The option is available from these locations for a parts list:

• The Check In window (named Update Complete)



• The **Actions** menu



The context menu

## Update Not Required

The option is available from these locations for a parts list:

- The **Actions** menu
- The context menu

Both of these actions remove the **Update Required** flag from each parts list.

After completing an update for a parts list that was the generic parts list (template) source for any generated spare part parts lists, the spare part parts lists display a **Regenerate Required** flag. The flag indicates that the spare part parts lists can be updated to match their source generic parts list (template).

The addition of a **Regenerate Required** flag depends on the current setting for the Service Parts preference Parts Lists Auto-Regeneration. The preference has two values:

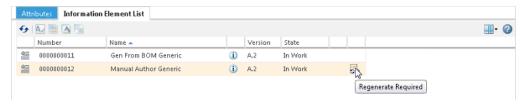
- Yes Spare part parts lists are regenerated automatically when their source generic parts list (template) has been updated.
- No (default) Spare part parts lists have the Regenerate Required flag set when their source generic parts list (template) has been updated

Affected spare part parts lists can be regenerated manually.

PTC Windchill Service Parts provides a report that lists the parts lists in an information structure that need to be regenerated.

The Regenerate Required flag is shown as an icon or column in these locations for a spare part parts list:

The Information Element List of an information structure



You can customize the view of the **Information Element List** to expose the Regenerate Required column.

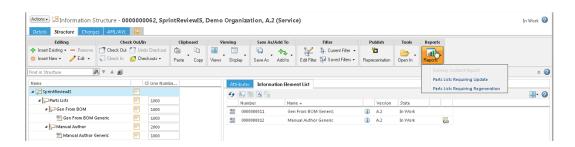
Folders view

You can customize the view of Folders to expose the Regenerate Required column.

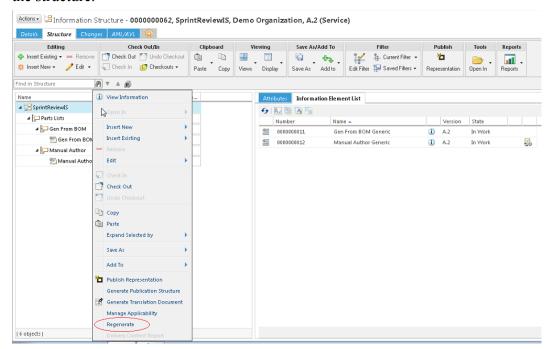
You can also run a report that lists the spare part parts lists in an information structure that need to be regenerated after an update to the generic parts list (template). Select the Reports ➤ Parts Lists Requiring Regeneration menu option from the **Structure** tab of an information structure to generate the list.



The Parts Lists Requiring Regeneration menu option is only available from PTC Windchill Service Information Manager when PTC Windchill Service Parts is installed.



You can decide whether to regenerate all or none of the spare part parts lists. Choosing the **Regenerate** action from the context menu for an information structure regenerates spare part parts lists from any generic parts lists (template) in the structure.



The action removes the **Regenerate Required** flag from each parts list.

## Workflow: Process Manager in HTML

Product: PTC Windchill

## **Benefit**

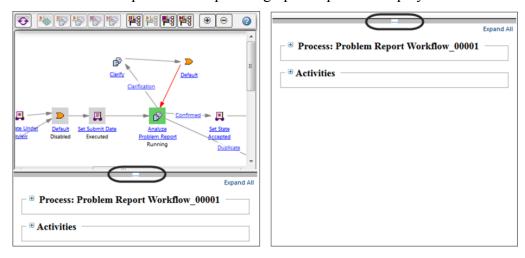
The workflow Process Manager has been rewritten in HTML and no longer requires Java.

The Process Manager also includes the following enhancements:

• Use toolbar actions to zoom in and zoom out:



• Double-click to expand or collapse the graphical process display:



Previously, the Process Manager utility was launched as a Java applet. Now, the Process Manager renders in HTML.

## **Optionally Enabled Features**

In PTC Windchill 10.2 M030, PTC provided a new property that controls new features that may impact the default user experience of established end-user capabilities.



## Note

This area does not have any additions or changes for PTC Windchill 11.0 F000.

4

## PTC Windchill Workgroup Manager

Autodesk inventor: Manage Spreadsneets related to inventor Models as CAD	4
Documents	
Autodesk Inventor, NX, SolidWorks: Mapping Attributes with Unit Support	
Autodesk Inventor, NX, SolidWorks: Out-of-Date Notification	. 178
Autodesk Inventor, NX, SolidWorks: Replace Assembly Components Without	
Closing/Reopening Entire Assembly	
CATIA V5: Abstraction Builder Enhancements	
CATIA V5: Asynchronous Download Preference Option	
CATIA V5: Larger Toolbar and Menu Icons in CATIA V5	. 180
CATIA V5: Performance Testing Guidelines	. 181
Enhancing the PTC WWGM Zuken PDM Adapter	. 181
NX: Implementation of PTC Windchill File System	. 181
NX: Map CAD Assembly Attribute to Usage Link Attribute	. 182
Page Level Data Management for TDO	. 183
PTC Creo Elements/Direct Modeling: Compare a Local Model in the PTC Creo	
Elements/Direct Modeling Session with a Different Version in PTC Windchill	. 183
PTC Creo Elements/Direct Modeling: Delay PTC Windchill Autonumbering of	
Objects	. 184
PTC Creo Elements/Direct Modeling: Improved Performance for PDM Actions on	
Small Sets of Objects in Large Workspaces	. 184
PTC Creo Elements/Direct Modeling: Improved Top Level Instance	
Visualization	. 185
PTC Creo Elements/Direct Modeling: Locking or Unlocking Objects in Workspace or	. 186
CAD Application	. 100
PTC Creo Elements/Direct Modeling: Use Windchill Part Product Structure for BOM Tables and Position Flags on Annotation Drawings	. 186
	. 100
PTC Creo Elements/Direct Modeling: Workgroup Manager Notifications for Objects with Out-Of-Date Information with Respect to the Commonspace	. 187
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Enhanced	
Format Conversion of the New Creo View Adapter and CAD Workers	. 188

PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Model  Manager to PTC Windchill Text Reference Mapping	. 189
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Open Creo Elements/Direct Drawings in PTC Windchill with Modeling and Drafting Workgi Manager	roup
PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Support Attributes of Type Real Number with Units in the Workgroup Manager	. 190
PTC Windchill Workgroup Manager Documentation Consolidation and Restructuring	. 190
PTC Windchill Workgroup Manager Toolkit: New and Enhanced Toolkit API Functions to Read Subfolder Structure, Enable Export From Workspace, Register of Unregister Authoring Applications, and Access PTC Windchill File System	
PTC Windchill Workgroup Manager Toolkit: Removing Dependency on PTC Libraries for CATIA V5	. 194
SolidWorks: Autonumbering of Mirrored Components	. 194
SolidWorks: Enable SolidWorks BOM Item Number Propagation to Windchill	. 195

This section of the PTC Windchill 11.0 F000 PTC Windchill New and Changed for This Release describes the features from previous releases of PTC Windchill Workgroup Manager that have changed or been removed, new features that have been added, API changes, and changes in behavior, as well as provides references to related documentation. PTC Windchill Workgroup Managers support the integration of authoring engineering applications with PTC Windchill.

# Autodesk Inventor: Manage Spreadsheets related to Inventor Models as CAD Documents

Product: PTC Windchill Workgroup Manager for Autodesk Inventor

### Benefit

Microsoft Excel spreadsheets that control multiple Autodesk Inventor models can now be saved in PTC Windchill as CAD documents.

### **Additional Details**

Previously, there was no support for managing Microsoft Excel spreadsheets referenced by Autodesk Inventor models. Because of this, it was necessary for customers to manage these spreadsheets separately, outside of PTC Windchill. This enhancement allows these spreadsheets to be saved as CAD documents, as part of the overall PTC Windchill Workgroup Manager for Autodesk Inventor experience.

## Autodesk Inventor, NX, SolidWorks: Mapping Attributes with Unit Support

Product: PTC Windchill Workgroup Manager for Autodesk Inventor, PTC Windchill Workgroup Manager for NX, PTC Windchill Workgroup Manager for SolidWorks

## **Benefit**

Now you can map CAD parameters with units to PTC Windchill global attributes with units. In addition, Unit Conversion from CAD to PTC Windchill is also supported.

## **Additional Details**

Customers can now roll up mass properties for E-BOMs, and use these collected mass properties for downstream business applications such as Integrated Simulation and Testing. Mass properties supported by this enhancement are Mass, Volume, Surface Area, and Center of Mass. If the value of a PTC Windchill unit and a CAD model unit is not same, PTC Windchill automatically converts the value.

## Autodesk Inventor, NX, SolidWorks: Outof-Date Notification

Product: PTC Windchill Workgroup Manager for SolidWorks, PTC Windchill Workgroup Manager for NX, PTC Windchill Workgroup Manager for Autodesk Inventor

### **Benefit**

You can now keep a reference model up-to-date in a CAD session, and receive notification from colleagues of upcoming changes to the model. This reduces rework due to miscommunication, and allows customers to better work in a concurrent environment.

## **Additional Details**

Customers now have a mechanism to deliver information into the CAD tool when the PDM status of data that is open in a CAD session has been changed by others —most importantly, when the status is out-of-date or checked out by another user. This enhancement "pushes" the information to users, eliminating the need to ask for the information, as is the case today. Once notified, users can perform the **Update** PDM Action on the selected object.

## Autodesk Inventor, NX, SolidWorks: Replace Assembly Components Without Closing/Reopening Entire Assembly

Product: PTC Windchill Workgroup Manager for SolidWorks, PTC Windchill Workgroup Manager for NX, PTC Windchill Workgroup Manager for Autodesk Inventor

## **Benefit**

You can replace out-of-date assembly components in session without closing and then reopening the entire assembly. This enhancement decreases system and operator processing time, thus enhancing productivity.

## **Additional Details**

Previously, it was necessary to close an open assembly in order to replace out-of-date components in the assembly, and then reopen the assembly all over again. This was a time-consuming process that often resulted in productivity delays when the assembly was reopened. Now this process is eliminated. Using the **Update** PDM action, you can replace assembly components in the Local Workspace with updated components while the assembly is open and in-work.

## CATIA V5: Abstraction Builder Enhancements

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink, PTC Windchill Workgroup Manager for CATIA V5

## **Benefit**

The process for creating the CATIA V5 abstraction library has been simplified. By providing an automated environment validation check for CATIA V5 abstraction building and performing a runtime validation check, the time and effort required to investigate issues is reduced.

## **Additional Details**

The abstraction builder now automatically verifies prerequisites, including installation of compatible versions of CATIA V5, CAA, RADE, and Microsoft Visual Studio. Additional verifications take place when CATIA V5 is registered with PTC Windchill Workgroup Manager and when CATIA V5 is run. These checks ensure compatibility between the versions of PTC Windchill Workgroup Manager and CATIA V5 that were used to build the abstraction library, and the ones currently being used. If issues are detected, a message appears with information about what needs to be corrected.

Once the abstraction library has been built, it must be placed in the installation image location so that it is included in client installations. This location has changed from previous releases.

## CATIA V5: Asynchronous Download Preference Option

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink, PTC Windchill Workgroup Manager for CATIA V5

## Benefit

Performance has been improved when loading and opening large CATIA V5 assemblies. Additionally, the response time for design mode requests has been improved.

## **Additional Details**

A new asynchronous option is available for the

wwgm.download.method.upon.open preference. When this preference is set to async, CGR files and secondary files are downloaded first during operations to add a CATIA V5 assembly to the workspace or open a CATIA V5

assembly in CATIA V5 from the PTC Windchill commonspace. After those files have been downloaded, primary content files (.CATPart and .model files) are downloaded.

## CATIA V5: Larger Toolbar and Menu Icons in CATIA V5

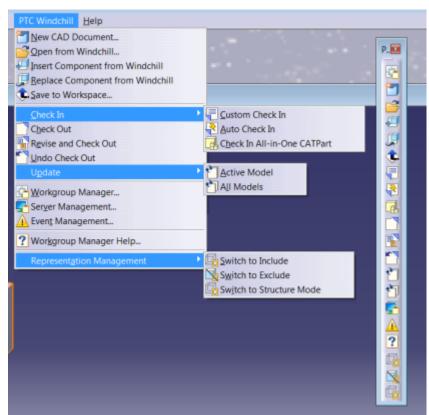
Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink, PTC Windchill Workgroup Manager for CATIA V5

## **Benefit**

To improve visibility, the PTC Windchill Workgroup Manager for CATIA V5 user interface includes larger toolbar and menu icons for PDM actions.

## **Additional Details**

The PTC Windchill Workgroup Manager for CATIA V5 icons are now the same size as the native CATIA V5 icons.



## **CATIA V5: Performance Testing Guidelines**

Product: PTC Windchill, PTC Windchill PDMLink, PTC Windchill ProjectLink, PTC Windchill Workgroup Manager for CATIA V5

### **Benefit**

The performance benchmark test guidelines provide a method to measure and evaluate the performance of CATIA V5 data management of your PTC Windchill system.

### **Additional Details**

By executing the benchmark test using the provided guidelines and comparing the results to those measured in the PTC R&D lab, you can determine if your system is performing within expected limits. PTC provides performance testing guidelines, including a data set and test cases, that you can use to test performance at your site.

For more information, see *PTC Windchill Workgroup Manager for CATIA V5 Data Management Performance Benchmark Test*, available at the following URL: http://support.ptc.com/view?im\_dbkey=167313.

# Enhancing the PTC WWGM Zuken PDM Adapter

Product: PTC Windchill Workgroup Manager for ECAD

### **Benefit**

The handling of data by the PTC Windchill Workgroup Manager Zuken PDM Adapter has been enhanced through the use of a new utility that zips the board-related and schematic-related files for storage in PTC Windchill.

### **Additional Details**

The list of these files is determined by a Zuken API. This ensures that the layout and the schematic data are properly separated and in a way that is consistent with how the Zuken tools expect to find them.

# NX: Implementation of PTC Windchill File System

Product: PTC Windchill Workgroup Manager for NX

The PTC Windchill File System is now implemented out-of-the-box for PTC Windchill Workgroup Manager for NX. The PTC Windchill File System also enables PTC Windchill support of the NX Reuse Library, a common repository for locating reusable knowledge on an enterprise basis.

### **Additional Details**

The PTC Windchill File System (WFS) exposes PTC Windchill as part of the native file system, enabling the CAD application to access files in PTC Windchill as though they were in folders on the local file system.

In the context of PTC Windchill, the KRX, CGM, and BMP files needed to fully support the NX Reuse Manager features can now be managed in PTC Windchill.

WFS is a component of, and is installed with, the PTC Windchill Workgroup Manager client. WFS exposes PTC Windchill as a set of folders on the file system which mirrors the PTC Windchill Commonspace and Workspace folder structure seen through the web browser. This folder structure allows the CAD tool to access data in PTC Windchill as though it were files on the local file system. WFS requires you to login to PTC Windchill, and adheres to PTC Windchill security policies, so you will not be able view data through WFS that you cannot ordinarily view in PTC Windchill. You can configure the PTC Windchill folder entry location within your existing file system.

Now, WFS is enabled out-of-the-box, Workspace Local Directory mode is disabled, and the WFS installer is downloaded automatically. In WFS, the Local Workspace replaces the Workspace Local Directory as the local repository for CAD data.

# NX: Map CAD Assembly Attribute to Usage Link Attribute

Product: PTC Windchill Workgroup Manager for NX

### **Benefit**

PTC Windchill Workgroup Manager for NX allows exposing Line Numbers and/ or Find Numbers from NX designs into the engineering BOM in PTC Windchill as reference designators, which can be transferred to downstream business applications such as ERP. Support for mapping NX assembly component attributes to EPM Document Usage Link attributes helps the overall process for traceability of components through the product life cycle from design to manufacturing.

### **Additional Details**

The value of the attribute reads from the **Instance** context. The value is taken if it was set at the component level of the direct parent assembly that is saved, or at the part level. The NX Attribute applied to the Instance in the assembly is mapped to the Usage Attribute having the same name in the PTC Windchill CAD structure. Attribute Mapping is used to map the NX Attribute applied to the Instance in the assembly to the Usage Attribute in the PTC Windchill CAD structure.

### Page Level Data Management for TDO

Product: PTC Windchill Workgroup Manager

### **Benefit**

Updates have been made to page level data management for Team Design Option (TDO).

### Additional Details

TDO 16.6 supports only hierarchical designs where the schematics are grouped into blocks, and project integrators can assign work to users at the block level. TDO 17.0 supports hierarchical as well as flat designs where the schematics are broken into pages, and project integrators can assign work to users at the page level. Flat designs give more flexibility to project integrators in assigning work to users.

## PTC Creo Elements/Direct Modeling: Compare a Local Model in the PTC Creo Elements/Direct Modeling Session with a Different Version in PTC Windchill

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

### **Benefit**

You can now compare different versions of a model side by side in a PTC Creo Elements/Direct Modeling session.

### **Additional Details**

This allows you to identify specific changes in the version history of a model. You can also review changes made in the current Modeling session, or validate externally modified and reimported models before checking them back into PTC Windchill. To compare model versions in PTC Creo Elements/Direct Modeling:

- 1. Select a model or an object in the Structure Browser.
- 2. Right-click the selected model and click Windchill Workgroup Manager ► Compare Model Versions.

A load UI, which is preset to display the different versions of the same model in Windchill Commonspace, allows you to select the specific compare version and load it into Modeling.

## PTC Creo Elements/Direct Modeling: Delay PTC Windchill Autonumbering of Objects

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

### **Benefit**

You can set a preference to assign PTC Windchill numbers to PTC Creo Elements/ Direct Modeling objects only when you save the objects and not when you create the objects.

### **Additional Details**

This ensures that PTC Windchill numbers are not assigned to transient objects that are created in a Modeling session but are not saved. Delaying PTC Windchill autonumbering also improves performance in operations, such as Sheet Metal, that create a large number of transient objects. It prevents the need to contact the PTC Windchill server to assign each transient object with a PTC Windchill number.

## PTC Creo Elements/Direct Modeling: Improved Performance for PDM Actions on Small Sets of Objects in Large Workspaces

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

Shorter response time of PDM actions through optimized and idle-time workspace refresh with respect to server information (commonspace).

### **Additional Details**

Previously, a workspace refresh was executed at the end of each PDM action. This added a performance penalty to PDM actions that scaled with the number of objects in the workspace. Now, the workspace refresh is postponed to the PTC Windchill Workgroup Manager client idle period after completion of a PDM action. The workspace refresh performance benefits from the featured object display, which refreshes only those objects that are shown in the current view.

### PTC Creo Elements/Direct Modeling: Improved Top Level Instance Visualization

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

### **Benefit**

Top level instances in PTC Windchill that are related to content objects which are modified in a Modeling session, can be automatically checked in with the modified content object. This ensures that PTC Creo View representations for the related top level instances are regenerated by the PTC Windchill Visualization Service, reflecting the correct geometry.

### **Additional Details**

The behavior is controlled by the new **Update Top Level Instances** preference. Set to **No** (default) or **Iterate**. The **Manage Top Level Instances** preference has a new option, **All**, that allows you to request top level instance generation irrespective of instance data changes.

Previously, PTC Creo View representations for top level instance objects were not updated when related content objects underwent changes such as geometry modifications. As a result, users only had the following options for reviewing objects with top level instances:

- Inspect the Creo View viewables of the instance objects, showing correct instance information (such as color or position), but with potentially outdated geometry.
- Inspect the Creo View viewables of the content objects, reflecting the content modifications correctly, but not using the instance information.

## PTC Creo Elements/Direct Modeling: Locking or Unlocking Objects in Workspace or CAD Application

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

### **Benefit**

Locking a workspace object gives it a read-only status in the workspace and in a Creo Elements/Direct Modeling session. You can lock as well as unlock an object, either from an active workspace in PTC Windchill Workgroup Manager or the CAD application.

### **Additional Details**

You may want to make an object read-only to:

- Avoid inadvertent modification
- Prevent the object from being saved

With PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling, users can locally modify models in the CAD session without checking out the models. However, if designers want to prevent such inadvertent or unwanted changes, they can set the **Automatically lock objects added to workspace** preference to **Yes**, so that checked-in objects are automatically locked in the Modeling session and the workspace.

From the PTC Windchill Workgroup Manager client, you can individually lock instance or content objects to selectively prevent instance or content modifications, respectively.

# PTC Creo Elements/Direct Modeling: Use Windchill Part Product Structure for BOM Tables and Position Flags on Annotation Drawings

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

The new BOM Report action Export List to PTC Creo Elements/Direct Modeling allows you to send a Windchill part BOM directly to a Modeling session that is connected to PTC Windchill Workgroup Manager. You can then use the Windchill part BOM to draw BOM tables or create position flags on Annotation drawings.

### **Additional Details**

The new BOM transfer action is available in the embedded browser of the PTC Windchill Workgroup Manager client for the following BOMs:

- Single-Level BOM
- Single-Level BOM with Notes
- Multi-Level BOM
- Multi-Level BOM with Replacements

The columns configured in the BOM Report view determine the Windchill part attributes that are sent to Annotation. The Annotation module comes with sample BOM Table layouts (WGM-DIN, WGM-ISO, WGM-Custom) that you can customize. You can also customize the list of Windchill BOM attributes that are available for text reference assignment in the BOM table layout UI (user interface).

## PTC Creo Elements/Direct Modeling: Workgroup Manager Notifications for Objects with Out-Of-Date Information with Respect to the Commonspace

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling

### **Benefit**

PTC Creo Elements/Direct Modeling users now receive notifications for relevant status changes of models, which are loaded in the CAD session; for example, a new version checked in by another user triggers a notification.

### **Additional Details**

Notifications are received as pop-up messages also shown in the PTC Windchill Workgroup Manager client message area. Out-of-date information is reflected in the Status column of the Modeling Structure Browser in Windchill view. With the new 'Out of Date' filter, you can easily locate those models that need an update.

Notifications are triggered periodically after a workspace refresh with respect to server information (commonspace). For an immediate status check:

- To refresh an individual object or model:
  - 1. Select a specific object in the Modeling Structure Browser.
  - 2. Right-click the selected object and click Windchill Workgroup Manager ► Refresh.
- To refresh all models in the session, click File ➤ Workgroup Manager ➤ Refresh All.

# PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Enhanced Format Conversion of the New Creo View Adapter and CAD Workers

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling, PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Drafting

### **Benefit**

You can now automate the conversion of 2D drawings and 3D models into a variety of standard and native geometry formats and additional viewing formats using the PTC Windchill Visualization Service (WVS), enhanced PTC Creo View adapter, and PTC Creo Elements/Direct CAD workers.

### **Additional Details**

With enhancements to the PTC Creo View adapter for PTC Creo Elements/Direct, you can now configure the Drafting and Modeling CAD workers to generate additional file formats. Controlled by publishing rules, the PTC Windchill Visualization Service (WVS) can automatically publish additional file formats, which can be accessed from the Representations view in PTC Windchill.

# PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Model Manager to PTC Windchill Text Reference Mapping

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling, PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Drafting

### **Benefit**

For PTC Creo Elements/Direct drawings migrated from PTC Creo Elements/Direct Model Manager to PTC Windchill, you can dynamically map PTC Windchill attributes to Model Manager text references where applicable. This new customization capability can help you to reduce the effort of manually changing text references for a potentially large number of drawings migrated from Model Manager to PTC Windchill.

### **Additional Details**

You can enable text reference mapping for Model Manager and PTC Windchill attributes with same names, or individually define the mapping of Model Manager text references to specific PTC Windchill attributes using the following functions or commands:

- For Modeling/Annotation, new LISP functions in the uwgm\_customize\_ 2d file.
- For Drafting, new commands in the uwgm customize drft.m file.

# PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Open Creo Elements/Direct Drawings in PTC Windchill with Modeling and Drafting Workgroup Manager

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling, PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Drafting

Drafting users can now work with drawings saved through the Modeling Workgroup Manager, and Modeling (Annotation) users can open drawings generated with Drafting and the Drafting Workgroup Manager.

### **Additional Details**

Previously, there was a strict separation between the Drafting and Modeling Workgroup Managers so that you could open PTC Creo Elements/Direct drawings (.mi files with authoring application COCMOD or CODDRAFT) in the respective CAD application (Modeling/Annotation or Drafting) only.

# PTC Creo Elements/Direct Modeling, PTC Creo Elements/Direct Drafting: Support Attributes of Type Real Number with Units in the Workgroup Manager

Product: PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling, PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Drafting

### **Benefit**

PTC Windchill Workgroup Manager for PTC Creo Elements/Direct Modeling now enables you to exchange custom attributes of type real number with units between PTC Windchill and Modeling or Drafting. If you use both Creo and PTC Creo Elements/Direct with PTC Windchill, you can now capture common parameters with units, such as weight, in both CAD applications, as well as map them to the same custom attribute with units in PTC Windchill.

### **Additional Details**

You can use attributes of type real number with units to display their values in PTC Windchill as text references on Annotation and Drafting drawings. You can customize the Structure Browser in Modeling to show, allow editing, and send modified values back to PTC Windchill.

# PTC Windchill Workgroup Manager Documentation Consolidation and Restructuring

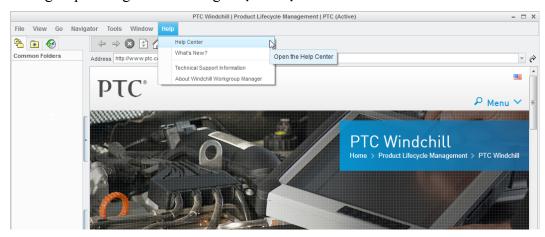
Product: All PTC Windchill Workgroup Managers

Documentation for PTC Windchill Workgroup Manager is delivered in the PTC Windchill Help Center available on your company's PTC Windchill server.

### **Additional Details**

With this enhancement, you no longer need to install a separate PTC Windchill Workgroup Manager Help Center. This consolidation enables you to easily navigate between PTC Windchill and PTC Windchill Workgroup Manager topics, and take advantage of the PTC Windchill Help Center search.

You can access the PTC Windchill Help Center from the PTC Windchill Workgroup Manager client using **Help > Help Center**:



In addition, the contents of the PTC Windchill Workgroup Manager documentation have been reorganized to consolidate basic information that applies to all CAD applications in one section. Installation documentation has been consolidated in the *PTC Windchill Workgroup Manager Installation Guide*, available from the product root directory and on the Reference Documents page at: https://support.ptc.com/appserver/cs/doc/refdoc.jsp.

Highlights of the reorganization include:

- The introductory material describes basic concepts that are applicable to all integrations that use PTC Windchill Workgroup Manager. It includes the overview, getting started, and common information about PTC Windchill preferences.
- Now, PTC Windchill Workgroup Manager is installed using a new dedicated installer. The Installation section has been removed from the individual PTC Windchill Workgroup Manager guides, and has been consolidated in the PTC Windchill Workgroup Manager Installation Guide, available from the product root directory and on the Reference Documents page at: https://support.ptc.com/appserver/cs/doc/refdoc.jsp.

- For each integration, the top page of the section in the PTC Windchill Help Center provides quick links to the major sections for this application:
  - Integration with Other Applications
  - Managing CAD Data
  - Managing CAD and Part Structures in Windchill
  - Using Creo Parametric with Windchill
  - Windchill Workgroup Manager Help Center Overview

  - Autodesk Inventor
  - AutoCAD
  - CADDS 5
  - CATIA V5
  - Dreo Elements/Direct Drafting
  - Creo Elements/Direct Modeling
  - Creo Illustrate
  - Creo Schematics

  - Arbortext IsoDraw
  - Mathcad
  - ₩ NX
  - SolidWorks
  - Windchill Workgroup Manager Toolkit
- A PDF version of the PTC Windchill Workgroup Manager guide for each application is also available on the Reference Documents page at: https://support.ptc.com/appserver/cs/doc/refdoc.jsp. The PDF version contains only information specific to your integration.

## PTC Windchill Workgroup Manager Toolkit: New and Enhanced Toolkit API **Functions to Read Subfolder Structure**, **Enable Export From Workspace, Register** or Unregister Authoring Applications, and **Access PTC Windchill File System**

Product: PTC Windchill Workgroup Manager Toolkit

#### Benefit

New and enhanced PTC Windchill Workgroup Manager Toolkit API functions enable the following operations: programmatically (automatically) read PTC Windchill folder and subfolder structure information, programmatically export objects from workspace to local file system, register or unregister authoring applications, access to PTC Windchill File System, and the ability to copy or delete files in the PTC Windchill File System.

### **Additional Details**

A new API function "UwgmFolderReader" is introduced to programmatically read PTC Windchill folder structure information.



### Note

The API function UwgmFolderReader only reads the folder and subfolder structure or information. It does not read the contents of the folder.

A new API function enables you to programmatically export objects from workspace to the local file system.

A new API function registers and unregisters authoring applications, so you can ensure that users configure their clients correctly. The API also enables you to list all registered authoring applications.

A new API function is introduced so that PTC Windchill Workgroup Manager Toolkit has access to the PTC Windchill File System and can copy or delete files in the PTC Windchill File System.

### PTC Windchill Workgroup Manager Toolkit: Removing Dependency on PTC Libraries for CATIA V5

Product: PTC Windchill Workgroup Manager Toolkit

### **Benefit**

Removing dependency on PTC libraries for CATIA V5-side customization.

### **Additional Details**

To remove dependencies on PTC libraries, from the make (.mk) file, the following library files have been removed:

- baselibmtz.lib
- cipsoapmtz.lib
- cipstdmtz.lib
- rtlcoremtz.lib

The signature of the method that could be invoked through PTC Windchill Workgroup Manager Toolkit was modified to use only standard 'stl' types, as shown in the following example: void method\_to\_call (const map<wstring, wstring>& in, map<wstring, wstring>& out).

# SolidWorks: Autonumbering of Mirrored Components

Product: PTC Windchill Workgroup Manager for SolidWorks

### **Benefit**

Parts created using the SolidWorks **Mirror Components** command are allocated autonumbers in the same way as parts created using **File > New** in SolidWorks. Once the autonumber has been applied to the mirrored component, the new part can be uploaded and checked in like any other file.

### **Additional Details**

Previously, when PTC Windchill PDMLink autonumbering was enabled, new components created using the Insert ► Mirror Components ► Opposite Hand Version command in SolidWorks were not autonumbered. This enhancement applies autonumbers to mirrored components, and the new part can be uploaded and checked in like any other file. When there are multiple mirrored files (for example, in the mirroring of an assembly) all files created with Opposite Hand Version are saved with PTC Windchill autonumbering.

### Note

PTC Windchill autonumbering is not provided for Derived Configurations or suppressed Mirror Components as part of this enhancement.

## SolidWorks: Enable SolidWorks BOM Item Number Propagation to Windchill

Product: PTC Windchill Workgroup Manager for SolidWorks

#### Benefit

Expose Line Numbers or Find Numbers from SolidWorks designs into the engineering BOM in PTC Windchill as reference designators, which can be transferred to downstream business applications such as ERP. Support for mapping SolidWorks BOM Item Number information to EPM Document Usage Link attributes helps the overall process for traceability of components through the product life cycle from design to manufacturing.

### **Additional Details**

This enhancement propagates the BOM item number information in SolidWorks to "Find Number" and/or "Line Number" of a Part Structure in PTC Windchill. In this downstream process, the BOM item information in SolidWorks components is propagated to the CAD Document Uses Link Attribute.

When a SolidWorks assembly is saved, component attributes are assigned to each component separately.

The name of an attribute on the CAD Document Uses Link that should be copied to the Part Usage's Find Number or Line Number is defined in PTC Windchill Preference Management. Navigate to EPM Service Preferences ▶ Build Service Preferences ► Find Number Attribute (or Line Number Attribute) and define the attribute in the **Value** field.