

ENOVIA Solutions Version 5 Release 19

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Print Solution

New Functionalities

Customizing Search Drop-Down Objects

The search type list for parts, documents and change management objects can be modified to remove the default object types and/or add new customized types. For more information, refer to:

- [Customizing Search Drop-Down Objects](#)

Change Management

Enhancements

Creating a New Version of a Change Order

You must have permission to create a change order, and to version a change order, in order to create a new version of a change order.

Creating a Product Specification Affected Object

A product specification linked to a change order of type **Service** has a special lifecycle. This lifecycle now includes a new Not Incorporated stage.

Engineering Lifecycle

New Functionalities

Load Impacting Instances - All Levels

When working with Assembly Requirements Model (ARM) instances it is helpful to determine which instances are impacted by various parts, or other ARM instances. Now you can find out all the impacted instances, not just the first level. For more information, refer to Loading Impacting Instances in ENOVIA.

Deleting Multiple Configuration Handlers

Occasionally, you may need to delete several configuration handlers. Having to delete each configuration handler individually is inconvenient and time-consuming. If you have permission to delete configuration handlers, you can delete multiple configuration handlers from the search results at one time. For more information, refer to Deleting Multiple Configuration Handlers.

Customizing the Operations Panel to Include a Keep Column

Occasionally, you may move or replace numerous part instances, and want to keep the existing effectivity for the new part instances. As a result, you will be assigning a null effectivity to the original part instances. This operation could be performed manually, but you would have to generate each modification and effectivity separately. Instead, you can customize the Operations Panel to include a "Keep" column in the **Operations** window. You can make a selection in this column and have the system automatically generate a modification with the same effectivity of the object that has been moved or replaced in your product structure. For more information, refer to Customizing the Operations Panel.

Wide Cut Support when Cutting Part Instances

When cutting a part instance from a configured product, you may perform a wide cut, in which the starting point of the cut, the ending point of the cut, or

both fall outside the boundaries of the effectivity or action associated with that part instance. For more information, refer to Copying, Cutting, and Pasting part Instances.

Enhancements

Larger Description Field

The Description field in the Part Editor and the Product Editor now displays 39 characters instead of 24.

Parent PRC and Parent II Attributes are Public

The Parent PRC and Parent II attributes are now public and can be viewed on the Part Instance properties page and in the Search Results for Part Instances.

Working with NULL Effectivities

You can perform the following functions on part instances having NULL effectivity:

- Replace
- Create a New Version
- Move a part instance within CATIA

Document Links

The type of link connecting a document to its parent object can be determined visually in the Documents Tab. For more information, refer to Inserting a Document into the Product Structure.

Extend Effectivity Security

To use the Extend Effectivity functionality, you must have the proper privilege. For more information, refer to Extend Instance Effectivity.

Translating Effectivity Domain Information

Effectivity domain information is stored in the database in language-neutral form (ENGLISH). When this domain information is displayed, it is converted to the user's specific language settings. This allows users with different language environments to use the same domain or configuration information. For more information, refer to [Translating Effectivity Domain Information](#).

Ignore Unsolved Operations

While working with a product, you can filter the instances contained in the product based on the various configurations. Occasionally, this may include instances that have unsolved operations. When defining the configuration filter, you can use the **Ignore Unsolved Operations** option to determine which instances with unresolved operations are filtered in and which are filtered out. For more information, refer to [Ignoring Unsolved Operations When Filtering](#).

Deleting CATIA Reports

When you delete a CATIA workpackage report, the Template document and Query document are not deleted. The Template and Query documents are still present in the database and are available for generating other CATIA workpackage reports. For more information, refer to [Deleting CATIA Reports and Generating and Viewing CATIA Reports](#).

Roles Guide

The Licensing Matrix spreadsheet for new licensing information has been updated.

Product Interference Management

Enhanced Functionalities

Using Product Interference Management in Batch Mode (ENOVClashUpdate)

The ENOVClashUpdate batch now supports the **-delete** option as well as the following arguments:

-group1, **-group2**, **-context1**, **-context2**, **-length1**, **-length2**.

Supported Scenarios

The work package mode is now fully supported with **-clean**, **-fullclean**, **-check** and **-delete** options.

64-bit Architecture Support for both the Clash Server and Client on UNIX/AIX

The ENOVIA clash server is now supported on a 64-bit architecture (32 bits on a 64-bit computer) and launches the ITFCheck process (64 bits on a 64-bit computer).

32-bit Architecture Support for both the Clash Server and Client on Windows

The ENOVIA clash server is now supported on 32-bit architecture (32 bits on a 32-bit computer and launches the ITFCheck process (32 bits on a 32-bit computer).

New Functionalities

Managing Groups and Contexts with the ENOVClashUpdate Batch

You can now take advantage of the group and context capabilities (respectively GCO and PVS) when running the ENOVClashUpdate batch.

Installing the Clash Server on Windows (under construction)

The PIM installation procedure is now fully implemented.

Installing the Clash Server on Unix (under construction)

The PIM installation procedure is now fully implemented.

Engineering Change Management Web Product

Enhancements

Creating a Product Specification Affected Object

A product specification linked to a change order of type **Service** has a special lifecycle. This lifecycle now includes a new Not Incorporated stage.

Creating a New Version of a Change Order

You must have permission to create a change order, and to version a change order, in order to create a new version of a change order.

Lifecycle Administration Guide

New Functionality

VPM Product Editor Administration Guide

Iteration Filtering for Document Replication

Iteration filtering allows the exchange of the latest iteration of a design between the two sites (emitting and receiving) without the older iterations of that same design.

Adding Parent Info to the Properties Page and Search Results

Part Instance or a Product Instance can be made available for viewing in the properties view, search results, etc, by including one or both attributes in masks defined in the APPLI.custo file. Refer to the link above for more information.

Using the Configuration Prefilter

When an expand/filer process is performed with a configuration filter, first, all instances that pass other non-configuration filters such as attribute, volume, etc. are retrieved from the database. Refere to the link above for more information.

Enhanced Functionalities

VPM Product Editor Administration Guide

ReplicationPackageManage process

This process allows you to change the status, delete and examine the contents of replication packages without having an administrator privileges. New information is also displayed in the Replication Package Manager

window:

- **Target Site** information has been added in **Replication Packages**.
- Site Transfer **Ownership** information has been added in **Replication Requests**.

VPM Lifecycle Navigator Web Administration

Supporting CATProduct Schematic

In order to generate CATProduct Schematic (light objects) properly at opening in the 3D viewer, the **DMU3DXMLTESSEL** variable must be created by an administrator.

VPM Navigator

New Functionalities

Creating a New Revision with New Revision Command

You can now create a revision to non-CATIA documents using this new contextual menu command.

Saving CATIA Instance Information in ENOVIA V5 VPM

This task shows you how the following aspects of the instances in your CATIA session can be saved in ENOVIA V5 VPM using attribute mapping.

- Hidden objects.
- Color of objects.
- Visualize in Bill of Materials setting.
- Visualize the product or part instances in a drafting view.

Memory Management

Memory Warning and Memory Stopper are used to warn you (the user) if maximal allowed use of memory is reached when saving a large data to ENOVIA V5 VPM, and opening of the data from the ENOVIA V5 VPM.

Creating and Using Customized Non-CATIA Documents

See this topic for information on creating and managing customized non-CATIA documents.

Linking Revisioning of Documents with Revisioning of Part Versions|

You can now forbid the revisioning of a Document Revision without also revisioning the Part Version. This option is controlled by a checkbox under the ENOVIA V5 VPM Options.

Filtering on Attributes Directly from the VPM Navigator Tree

This command gives you the ability to make a direct selection in the VPM Navigator or CATIA Product Structure tree of part instances for use as filter attributes.

Alternate Save: Saving Documents as Alternatives to the Original

See this topic for information on saving a document in ENOVIA that has been modified from the original as a new document while leaving the original one intact.

Discard Save

Using the **Discard Save** command, you will have the option to select or reject part of your data that is available for saving. See the above link for more information.

Locate Instances from the Save Panel

New options are introduced in the Save Dialog box that will provide more information about the objects being saved.

Automatic Data Save/Backup

When working with documents saved as Publications Exposed in ENOVIA V5 VPM, you have an option to have your data automatically backed up in a temporary directory in the case your session is unexpectedly interrupted. See this topic for more information.

Changing Status

Promote/Demote functionality is available for part versions, part instances and document revisions and can be found in the contextual menu of an object displayed in VPM Navigator or search results window.

Authorize Document Revision According to Status

A new setting for authorizing revision according to status of documents is available. See this topic for more information.

VPM Subscriptions Toolbar

A new toolbar has been added to include:

- Publish/Subscribe
- Unsubscribing from an Event.
- Retrieving Published Events.

Update Links to exclude documents

You have the ability to make the intersite transfer of a subset assembly by determining which document has changed since the last exchange, and only sent the delta of the modified document instead of the whole assembly. All the pointers of the document will be resolved on the receiving side without breaking the structure layout.

Forbid the Revisioning of Documents without the Versioning of its Parts

A new ENOVIA V5 VPM option was created which will enforce the versioning of a Part in case its own document is being revisioned. See ENOVIA V5 VPM Options to learn more about this function.

Working with DMU Applicative Data

You can save DMU applicative data directly under the PVR. See this topic for more information.

Enhanced Functionalities

Saving Child Components Without Locking the Parent

The **CV5EV5_ADD_WITHOUT_PARENT_LOCK** parameter is replaced by the new **CV5EV5_PARENT_LOCK_REQUIRED** parameter.

Editing Filter and Search Captures

You can now edit or re-use an existing filter or search capture by executing and loading it, changing the search or filter settings, and then saving the modified capture under the same name or a different name.

MultiSite History tab

MultiSite History tab is provided for you to view the owner sites of a particular object in your tree.

The name of the current lock owner is provided in the error message dialog box when Save operation fails due to the insufficient lock privileges.

Displaying Maturity in the Save Panel

The maturity status of objects can now be viewed in the VPM Navigator Save panel.

Sending GCO's to new VPM Navigator sessions

Functionality of the **Send to new VPM Navigator** command was extended to include GCO's.

Most Recently Used PVS's and Documents

Each time the **Execute Capture and Open** command is run, the used PVS is added to the most recently used list where it can be easily accessed later. Documents are similarly stored when using **Open>Out of Context>Document** commands.

Opening Objects with and without visible children

Functionality is enhanced to allow you to open objects for editing in context with only visible children or with all children.

Execute and Open Command for Filter Captures

From search results, it is now possible to execute a saved filter capture and open it from one command. See [Creating, Editing and Using Saved Filters](#) from the above link.

Editing and Overwriting Captures (PVS's)

Saved filters can now be edited and overwritten. See [this topic](#) for more information.

Unlocking Instances Only in the Save Dialog Box

See [this topic](#) for information on unlocking instances and references from within the Save dialog box.

Force Lock/Unlock Choice at Save

A new option is available in ENOVIA V5 VPM Options that defines if the user will be required to select the lock policy at the time of a save of data. In addition to the above link, also see [Saving Objects](#) for more information.

Document Management Enhancements

Several new enhancements to how documents are managed in VPM Navigator were added:

- The Documents tab under Part Properties now has the same contextual menu as search results and from this tab you may now **Attach** and **Detach** documents from the product structure as well as **Refresh** the list of objects. See [Showing Documents in Part Properties](#).
- Non-CATIA documents are open and viewed in their native editor through the **Open** command. See [Opening Objects](#).
- In a VPM Navigator session, you can hover over a highlighted document attached to a part to see information about that document. See [Attaching an Existing Document](#).

Product View Result Enhancements

Several new enhancements were added to improve the usability of Product View Results:

- Create a new PVR from an existing PVR
- Product View Results tab for PVR creation options
- Create Nested PVR's
- Expanded PVR usability in Batch Mode

Customize Mask Definition to Display Parent PRC and Item Instance Information

Parent PRC and Parent ItemInstance information can be displayed in Search Results and Properties view instead of in a VPM Navigator or Product Editor session by modifying mask definition files. See this topic for more information.

Improve Session Refresh Command

The enhanced capability of Refresh command allows you to retrieve the document from the database even if you have modified the document in the session. Also you can visualize the iteration status of the document in the database before you retrieve the document.

Memorize Error List Window Size

Whenever you change size of the **Reporting** dialog box the changes will be stored in the CATSetting and consequent **Reporting** dialog box will be opened with settings preferred by you.

Improve Search and Filter in Error List

When an error message is displayed indicating insufficient lock privileges on an object, you can perform the **Lock/Unlock** operations from the **Reporting** dialog box using contextual menu. Also you can search the impacted object in the database from the **Reporting** dialog box by using **Search in DB** button.

Move Taken into Account in Refresh

The enhanced capability of **Refresh Documents** command updates the modified position of an instance of a CATPart in an assembly while refreshing the document in the session.

Displaying and Modifying Object Attributes

The Properties panel has been enhanced to allow the attaching and detaching of documents as well as a preview of 3D geometry.

Forcing the versioning of Parts when making revisions to associated Documents

Under **Revision Options** in the **ENOVIA V5 VPM Options** tab, you have the option to force part versioning when saving revised Documents. See information under Considerations About Saving under the above link.

Separate Layout Customization for Result Windows

You can also select the type of search window to which customizations can be applied. See this topic for more information.

Lock Reference by Default

In the **Lock** dialog, **Reference** is now selected by default. See this link for more information.

Defining Configuration Filter dialog box has been modified.

Perform Lock/Unlock functionality directly from the Error Dialog box

Via contextual menu options, you can lock/unlock objects directly from the Error dialog box.

Customized Actions

VPM Navigator now supports the creation and use of Customized Actions.

Display Action/Modification Chooser

You can choose an Action/Modification when you save or synchronize in VPM Navigator. See the above link for more information.

Insert a Component from ENOVIA

The **Replace Component** command available in the Product Structure workbench is enhanced to allow the selection of Parts Versions in the document chooser when the user is connected to the database. Also, you can now replace a component with a stored stand alone Part Version.

VPM Supply Chain Engineering Exchange

New Functionalities

Partial Replication Process Management

You can now create and simulate Replication Packages in VPM Navigator.

ENOVIA 3d com

Enhanced Functionalities

Supporting CATProduct Schematic

In order to generate CATProduct Schematic (light objects) properly at opening in the 3D viewer, the **DMU3DXMLTESSEL** variable must be created by an administrator.

MultiPDM CDM/VPM Plug-in User Guide

New Functionalities

Working with the PSN

Using the Space Mouse in the PSN

You can now use the SpaceMouse to explore the Product Structure in the PSN and the impact graph.

Enhanced Functionalities

Versioning

Managing Versioning in MML Links

You can now manage versioning in MML links using the three options Upissue, Accept and Ignore.

Configuration

Defining Effectivities Link by Link

When you want to modify the effectivity of an Action, you can check, before validating, the compatibility of this new effectivity with the effectivity already defined on the link concerned.

Human Activity Analysis

New Functionalities

3D Display of Biomechanics Results

A better way to display the results in 3D, each segment results are highlighted in the list when the related segment in the 3D model is selected.

Defining Loads on Other Segments

This provides a more realistic behavior of the Biomechanics Analysis by allowing the use of loads positioned on segments other than just the hands. Therefore, Biomechanics Analysis can be applied on manikin having loads on shoulders, forearms and back.

Enhanced Functionality

Increased the number of analyzed joints - wrists

For a more complete analysis of the human biomechanics Results a new analysis will cover both wrists in flexion-extension and Radial-Ulnar deviation

Human Builder

New Functionalities

Displaying Balance

This displays the support polygon of manikin's balance in the viewer. The color of the support polygon will change from green to red if the manikin loses his balance.

Defining the color of the Manikin Referential

Choosing the color of the manikin referential for each manikin enables the client to differentiate them and to make sure that it doesn't blend with the environment.

Auto Grasp Offset

The need for this highlight comes from wanting more control over an existing function that automatically generates a grasp posture of the hand by checking the collision between the hand and one or several objects to be grasped. A new option would allow you to edit the offset that control the reaching position of the hand which is currently automatically set to a default value.

Enhanced Functionality

none

Real Time Rendering

New Functionality

Variant Management

Allows you to apply material variants to an object and also to browse for a variant.

Enhanced Functionalities

Car Paint and External Shader

Allows you to define Car Paint and External shaders.

Creating a Standard Environment

Allows you to select and apply wall textures to an environment.

Applying a Material

Allows you to apply complex materials to objects.

Applying and Rendering Shadow Stickers

With this enhancement you can apply shadow stickers to the models

Creating Object-to-Object Shadows

Allows you to project several shadows at the same time.

Applying Material Properties

Allows you to apply different types of materials to an object.

Creating Object-to-Object Shadows

Object shadows are now compatible CgFx shaders on Windows platform.

Photo Studio

Enhanced Functionalities

Rendering Images

Allows you to store your favorite scenes, or customize a scene and save it.

Using Materials for Rendering

Allows you to apply different types of materials to an object.

DMU Fitting Simulator

New Functionality

Generate Track command has been added

Users can select edges on the geometry, and generate tracks from the edges. Once the initial track has been generated from the edges, the track can be modified.

Enhanced Functionalities

Dragging the slider on the Player pop-up toolbar enables users to see the track simulation

In previous releases, users could not see the effects of attaching a section to a track until after a simulation was run; now users can see it as they move the slider.

The Player toolbar has a distance parameter

Users can interpolate along the track with a set distance. Also, the **Sampling Step** option in the **Player Parameters** dialog box can be set for distance as well as time.

When you select Shuttle, the Preview window now has a Tree tab

This tab enables users to see the names of all parts selected as part of the shuttle. Users can still preview the graphical representations of the parts via the 3D tab.

Shuttles may contain multiple groups and manufacturing assemblies

In previous releases, shuttles could only contain one group and a parent shuttle could reference another shuttle. In this release, each group is treated as an object, and users can select as many objects as they like. Similarly, users can include manufacturing assemblies within shuttles.

When you click the Activate Analysis button from the Track dialog box, you can edit the analysis object

Users have the option to edit one analysis object at a time while using the Track command; they do not have to exit the Track command and use the analysis commands.

The format options for Generate a Video have changed

VFW Codec and DirectShow Filter have replaced Microsoft AVI and Microsoft MPEG.

Customizing Settings

Snap Sensitivity in the DMU Manipulation tab has been altered

The default value for the **Orientation** option has been changed to 20 deg.

Kinematics Simulator

Enhanced Functionalities

Deleting Joints

The Delete All Children option is now selected by default in the Delete dialog box.

Copying and Pasting a Mechanism

You can now copy and paste a dress-up.

DMU Space Analysis

Enhanced Functionalities

Sectioning

Exporting Section Results

You can now export sectioning results to VPM Navigator using the **Open and Export** command available in the **Result** tab in the **Sectioning Definition** dialog box.

Exporting Section Results

Polyline results have been improved and thus increased the quality of a smoothed curve.

DMU Space Analysis Interoperability

Performing DMU Space Analysis Tasks with VPM Navigator

Interference object is now integrated within VPM Navigator (you can thus perform open, send to and delete operations).

MULTICAx AD Plug-in

Enhanced Functionalities

ACIS R16 and R17 are now supported on Windows 32 bits.

MULTICAx PD Plug-in

Enhanced Functionalities

Indirect Mode is no longer available.

MULTICAx SE Plug-in

Enhanced Functionalities

Parasolid V17 and V18 and SolidEdge 20 are now supported on Windows 32 bits.
SolidEdge .psm files are supported.

MULTICAx SolidWorks Plug-in

Enhanced Functionalities

Parasolid V17 and V18 and SolidWorks 2007 and 2008 are now supported on Windows 32 bits.

MULTICAx UD Plug-in

Enhanced Functionalities

Parasolid V17 and V18 are now supported on Windows 32 bits.

ENOVIAVPM Installation & Administration Guide

New Functionalities

Multisite Management

Delta Replication

For both CATIA V5 and CATIA V4, you can define what open modes are to be selected by default (depending on their availability).

New Declaration Parameters

catcdma.VPM.INTEROP.SINGLE_CONF

catcdma.VPM.MML.LOST_PUBLICATION_EVOLUTION

ENOVIAVPM User Guide

New Functionalities

Using CATIA V5 Multimodel Link Dependencies

Icon Display

A declaration parameter allows a more consistent approach to the display, in the PSN and the MML graph, of a broken link to a published V4 entity or V5 Publication.

Enhanced Functionalities

Interoperability

Mapping CDMA and Assembly Attributes

You can now declare new attributes in addition to the five attributes you can map under PART_LIST and the three attributes you can map under CATIA_MODEL.