



HOME

User Manual

DELMIA Process Engineer®

IPD Server



Foreword

This manual provides an introduction to the basic operations and functions of the IPD Server.

While developing these functions we have made every effort to create a clearly organized, easy-to-understand program structure.

A user-friendly interface as well as a clear menu guide will enable you to quickly learn how to operate the program and to get familiar with its functions so that you can carry out your planning tasks in a quick and reliable way.

Nevertheless, there will certainly be some things that we could do even better. If you have any suggestions for improving our software, please be sure to let us know.

We look forward to receiving your constructive feedback. It helps us to make it even easier for you to work with the Process Engineer functions.

The same holds true for the manual that you are now reading. If, at any point when using these instructions, you feel you are not being provided with the clear, unambiguous, and proper guidance necessary to work with this application, please be sure to let us know. We look forward to receiving your comments and tips.

Please feel free to call, send us an E-mail, or contact our user hotline.

Please Send your Suggestions to:

DELMIA GmbH

Raiffeisenplatz 4

D-70736 Fellbach

Phone: +49/711/27 300-0

Fax: +49/711/27 300-599

E-mail: delmia.de.info@3ds.com

User Hotline:

If you have problems when using DELMIA products, please contact our user hotline at:

Phone: +49/711/27 300-400

Fax: +49/711/27 300-599

E-mail: delmia.de.support@3ds.com

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DELMIA GmbH

Raiffeisenplatz 4

D-70736 Fellbach, Germany

Phone: +49 (-400)711/27 300-0

Fax: 49/711/27 300-599

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1. Introduction

This manual explains how to use the Process Engineer IPD- Server for your planning purposes.

It shows how to install and set up the IPD-Server so you can use it when working with DELMIA software.

Change Management Controlled (CMC) deals with constraints regarding data consistency. The functionality is necessary to mark objects being under the CMC control and to ensure, that the data consistency according to the Change Management is never broken.

The versions can represent the evolution of an object through successive stages (revisions) or parallel alternatives (variants). The versioning services capture the history of modifications by tracking different versions as affected objects to actions managed by ENOVIA. The configuration services evaluate version selection rules over modification history, in order to control the visibility of the versioned objects.



Note

The Change Management Control options are enabled only when the Manufacturing Hub project is Change Management (CMC) controlled. Otherwise, these options are shown in a disabled state.

The availability of the Change Management Control options functionality is controlled by a separate license. You must have this license installed to open a project which is Change Management (CMC) controlled.

The configuration services allow to:

- Label projects to be CMC versioned
- Work with CMC in detached mode
- Perform CMC related consistency checks
- Perform filtering necessary for displaying of versioned objects

1.1 How to Use this Manual

This manual enables you to get familiar with the operation and functions of the Process Engineer. This manual briefly describes:

- IPD- Server Functions



Note

When handling the IPD- Server functions, please also refer to the general introduction to Process Engineer in the General Introduction Manual.



Click [General Introduction](#) to access the manual.

1.2 Documentation Conventions and Symbols

The symbols used in this manual are intended to provide you with keys to the contents in an immediately understandable manner.



This symbol is used to introduce key concepts that are covered in the sections immediately following this symbol. As a result, this symbol most frequently appears at the beginning of chapters or sections.



Note

*This symbol is used to mark notes, which provide you with additional information you need to have for further work. You will either find the Note sign at the beginning of a chapter or in a particular text passage in the chapter. Texts bearing this sign are additionally marked with **Note**. The text is always in italics.*



Caution

*This symbol indicates that the text that follows describes particular circumstances that you must avoid to avoid potential errors with the operation of the program or harm to data. You will either find the Caution sign at the beginning of a chapter or near a particular text passage in the chapter. Texts that are introduced by this sign are additionally marked with **Caution**. The text is always in italics.*

Example

This symbol marks examples which serve to illustrate a certain situation.



This symbol marks the individual operational steps involved in a particular operating instruction. Operating instructions describe operational steps, for example, how to open a menu or execute a function.



This symbol marks listed subjects. The symbol for listed subjects can be either used to structure a continuous text or to list main subject keywords.



This symbol marks list inside a bulleted or numbered list.



This symbol marks cross reference information that is available in another manual.

1.3 New Functions in IPD Server

No new functionality has been added for this release.

2. Customization

This chapter provides you with information necessary to customize the Manufacturing Hub to properly support the Change Management functionality.

The entire customization is done within a plantype set. Furthermore, the paragraph will include additional information about how Default-PRO-DPM-IGRIP_V5_CMC has been prepared.

2.1 Customizing Plantypes

This paragraph provides you with information necessary to customize the Manufacturing Hub to properly support the Change Management functionality. The entire customization is done within a plantype set. Furthermore, the paragraph will include additional information about how Default-PRO-DPM-IGRIP_V5_CMC has been prepared.

For each plantype that is in scope of Change Management the property '**Has versions**' has to be set to '**Yes**'. Only versionable plantypes are tracked by Change Management; in order to modify them, an action and a modification statement are required. Non-versionable plantypes are not in scope of Change Management, and for them the property '**Has versions**' has to be explicitly set to 'No'. It is especially important for product-plantypes not to be versionable in order to allow their import through the Bridge.



Note

For plantypes in R15 this property is usually set to 'Yes', therefore the focus should also be on those plantypes, which are not in scope of Change Management, especially products.

In Default-PRO-DPM-IGRIP_V5_CMC only processes are versionable.

The property '**Is Configured**' describes the kind of effectivity the object obtains.

| | |
|--------------------------------------------|--------------------------------------------|
| By Category Alphabetical | |
| <input type="checkbox"/> Basics | |
| Base class type name | Process Component (ergocompprocessdefault) |
| Caption singular | Operation |
| Caption plural | |
| Plantype UUID | 2793bcb4-ac27-4d19-9d95-23b00f5f314f |
| Description | |
| <input type="checkbox"/> Display | |
| Bitmap | process |
| Attributes per row | 1 |
| Dialog Type | Property Sheet |
| Special attribute | |
| Depends on values | No |
| <input type="checkbox"/> Flags | |
| Has versions | Yes |
| Is searchable | No |
| Is abstract | No |
| Has attachments | No |
| Is relevant | No |
| Own rights | Inherited from parent type |
| Display parent/child relations in dbeditor | Inherited from parent type |
| Is configured | Max. Configured |
| Defined by | Customer |

Figure 1: Configuration

We distinguish:

- No (Not configured)
- Yes (Standard configuration mode)
- Max. Configured (maximum configuration mode)
- Notes to Configurable



Note

In Default-PRO-DPM-IGRIP_V5_CMC processes are Max. Configured and the plantype Manufacturing Assembly (non-versionable) applies the standard configuration.

- If plantypes are not configurable, no effectivity is applied on them. In case of standard configuration we distinguish whether plantypes are versionable or not.
- For versionable plantypes, the newly created objects or checked-out versions obtain the effectivity from the modification statement.
- While checking-in a version, the effectivity of any version with a planning state equal to that is cut with the effectivity from the selected modification statement. There is a special handling for non-versionable plantypes that are configurable. This requires a modification statement to be selected when these objects are created. Their effectivity is then again obtained from the selected modification statement.
- Maximum configuration means plantypes hold either “always” or “never valid” effectivity.

- When these objects are created or checked-out no effectivity is applied on them; when they are checked-in, the effectivity of any predecessor version, which has a planning state equal to that, is set to 'never valid'. The maximum configured plantypes don't support parallel versioning.

2.2 Customizing Parent Child Relations

Only the parent child relations that have an owner, which is a versionable plantype, are in scope of Change Management.

Before the parent child relation is customized for Change Management, it should be first overwritten in the plantype set. This has to be done for each plantype which participates in the relation. It also has to be done for the so called *reverse* relation.

2.2.1 Examples

An example on how to customize the parent child relation "process_implementation_requirements" is described here.

The relation is customized such that the operation is the owner.

First step is to overwrite the relation, which is described in the figures below. For this purpose, the 'overwrite' on the source plantype has to be selected in the context menu, and then the target plantype is selected.

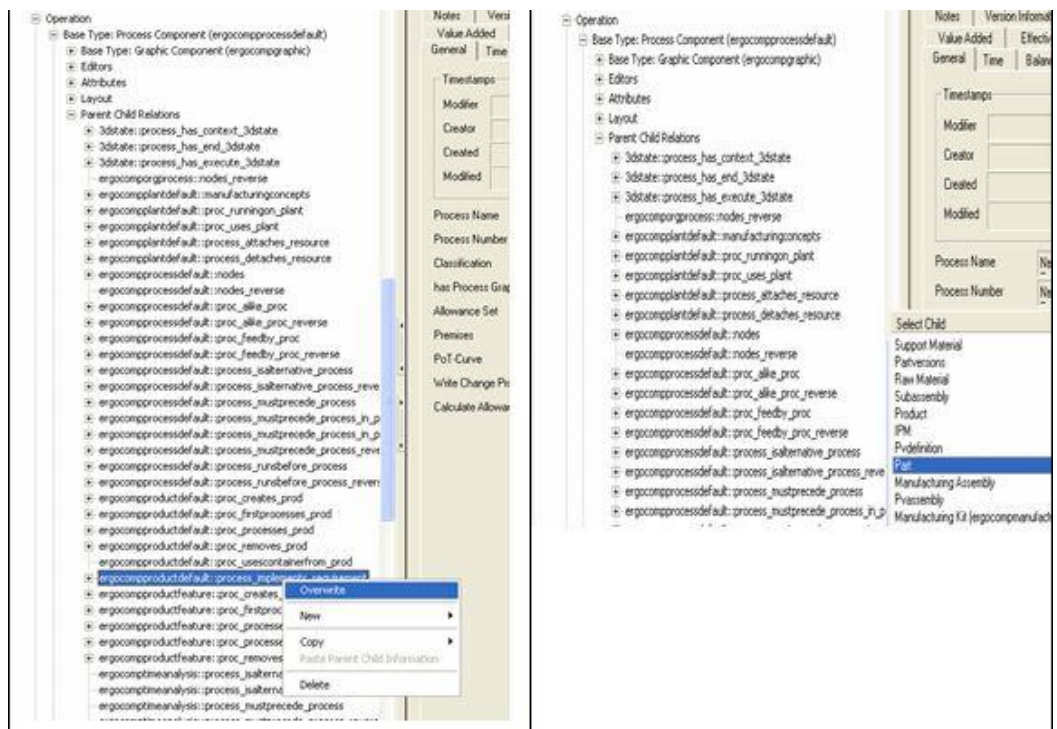


Figure 2: Example - process_implementation_requirements

We now have to customize the relation for Change Management. Properties marked red are important. The first three of them turn off some functionality that conflict with Change Management. We have to set them always to these values; otherwise Change Management won't work properly.

- The property '**Copy link to child (Change Management Controlled)**' has to be set to 'Yes' for all relations that are copied when a new version is created.
- For relations that are in scope of Change Management, 'Yes' is mandatory.

The property '**Owner type**' specifies how the owner plantype is related to the relation.

We distinguish among:

- No Owner
 - Source Owner
 - Target Owner
 - Explicit Owner
 - Common Parent Owner
- If the relation does not have an owner, it's not in scope of Change Management.
 - 'Source owner' and 'Target owner' declare source or target plantype respectively to be owner of the relation. This information can be deduced at the runtime, and the owner doesn't have to be specified explicitly, if the relation is created using API.
 - Explicit owner can be an object of any valid plantype. DPE is not able to deduce this information, so the reference to the explicit owner has to be passed to API, when the relation is created.
 - 'Common Parent owner' refers to the direct common parent of source and target according to the relation *nodes* (BOM). DPE is not able to deduce this information, so the reference to the common parent owner has to be passed to API, when the relation is created.

Copy Link to Child

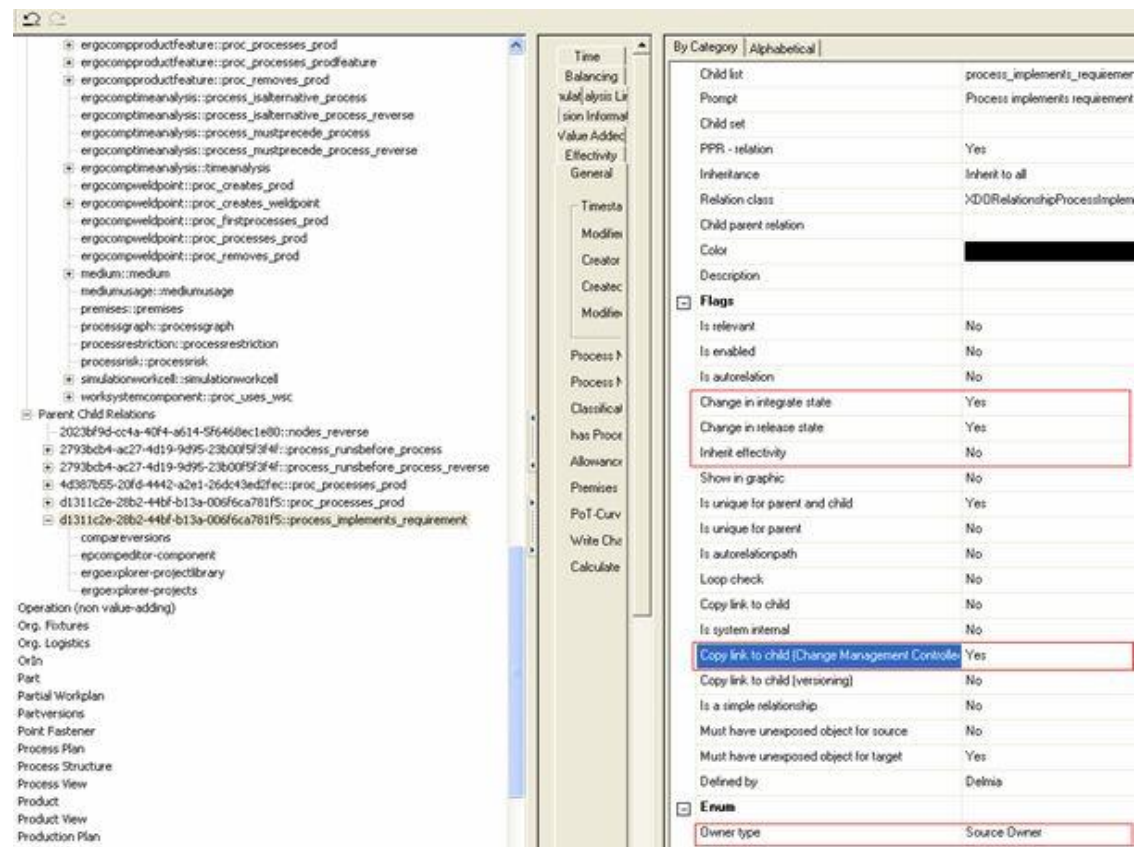


Figure 3: Example Copy Link to Child

We have to repeat this procedure for the reverse relation.

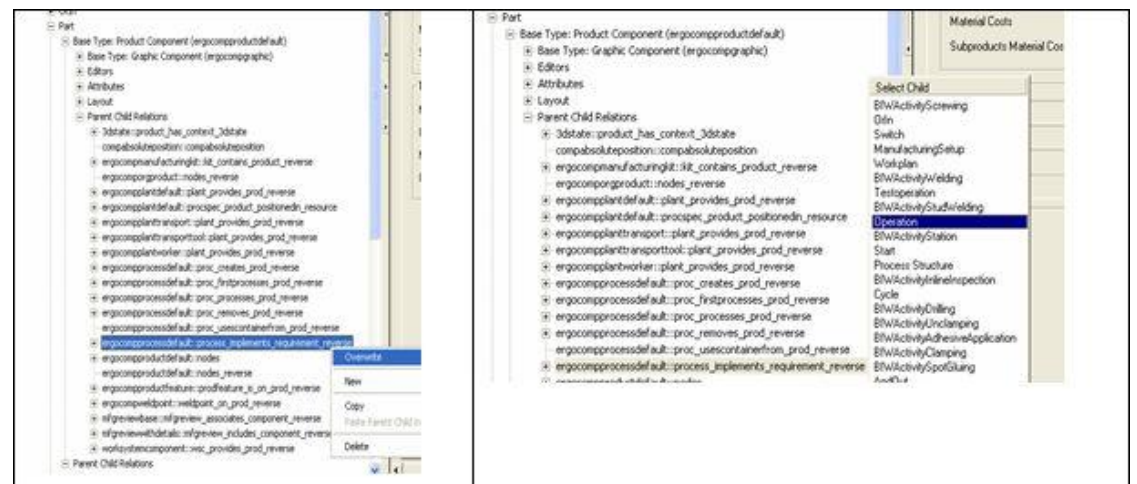


Figure 4: Example Reverse Relation

We use the same settings except for 'Owner type' in the case that the owner is the source or target plantype. If so, we have to use the opposite value, as the Figure 5 shows.

| By Category | Alphabetical |
|---------------------------------------------------|---------------------------------------------|
| Child list | process_implements_requirement_reverse |
| Prompt | Requirement is implemented by process |
| Child set | |
| PPR - relation | PPR Reverse Relation |
| Inheritance | Inherit to all |
| Relation class | XDRRelationshipProcessImplementsRequirement |
| Child parent relation | |
| Color | |
| Description | |
| <input checked="" type="checkbox"/> Flags | |
| Is relevant | No |
| Is enabled | Yes |
| Is autorelation | No |
| Change in integrate state | Yes |
| Change in release state | Yes |
| Inherit effectivity | No |
| Show in graphic | No |
| Is unique for parent and child | Yes |
| Is unique for parent | No |
| Is autorelationpath | No |
| Loop check | No |
| Copy link to child | No |
| Is system internal | No |
| Copy link to child (Change Management Controlled) | Yes |
| Copy link to child (versioning) | No |
| Is a simple relationship | No |
| Must have unexposed object for source | No |
| Must have unexposed object for target | Yes |
| Defined by | Delmia |
| <input checked="" type="checkbox"/> Enum | |
| Owner type | Target Owner |

Figure 5: Example Owner type

In Default-PRO-DPM-IGRIP_V5_CMC following relations are customized to be in scope of Change Management:

| Parent Child Relation | Involved Plantypes | Owner |
|---------------------------------------|------------------------------------|---------------------------|
| <i>nodes³</i> | <i>Process View – Process Plan</i> | <i>No Owner</i> |
| <i>Nodes</i> | <i>Process Plan – Workplan</i> | <i>Target Owner</i> |
| <i>Nodes</i> | <i>Workplan – Operation</i> | <i>Target Owner</i> |
| <i>process_runsbefore_process</i> | <i>Operation – Operation</i> | <i>CommonParent Owner</i> |
| <i>proc_processes_prod</i> | <i>Operation – Part</i> | <i>Source Owner</i> |
| <i>proc_processes_prod</i> | <i>Operation – Subassembly</i> | <i>Source Owner</i> |
| <i>process_implements_requirement</i> | <i>Operation – Part</i> | <i>Source Owner</i> |
| <i>process_implements_requirement</i> | <i>Operation – Subassembly</i> | <i>Source Owner</i> |
| <i>process_implements_requirement</i> | <i>Workplan – Part</i> | <i>Source Owner</i> |
| <i>process_implements_requirement</i> | <i>Workplan – Subassembly</i> | <i>Source Owner</i> |

Figure 6: Table of Change Management

Limitation 1

Mixed Mode (Interaction of objects created under Detached Mode and Non-Detached Mode) is not supported.

Limitation 2

Versioning of Ergoitems is not supported by CMC.

Limitation 3

Only non-versionable components (products and resources) can be transferred through the Bridge.

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