TCI Release 3.13
User Manual

T Systems

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Brief details

User manual for TCI.

This guide describes the usage of TCI.

Before using this guide, be sure you understand:

- the usage of 3DEXPERIENCE,
- the usage of Teamcenter.

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Teamcenter is a registered trademark of Siemens Digital Industries Software.

Oracle is a registered trademark of Oracle Corporation.

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1 Overview

1.1 Introduction TCI

TCI was developed by T-Systems as an end-to-end integration between the PDM systems 3DEXPERIENCE and Teamcenter. With this integration it is possible to exchange CAD and PDM data between 3DEXPERIENCE and Teamcenter.

3DEXPERIENCE uses assemblies similar to Teamcenter. TCI makes a bidirectional mapping between the Teamcenter structure and the 3DEXPERIENCE structure.

2 TCI in Teamcenter

The TCI functionality is seamlessly embedded into the Teamcenter Rich Client. The functionality is available in Teamcenter via *My Teamcenter* and *Structure Manager*.

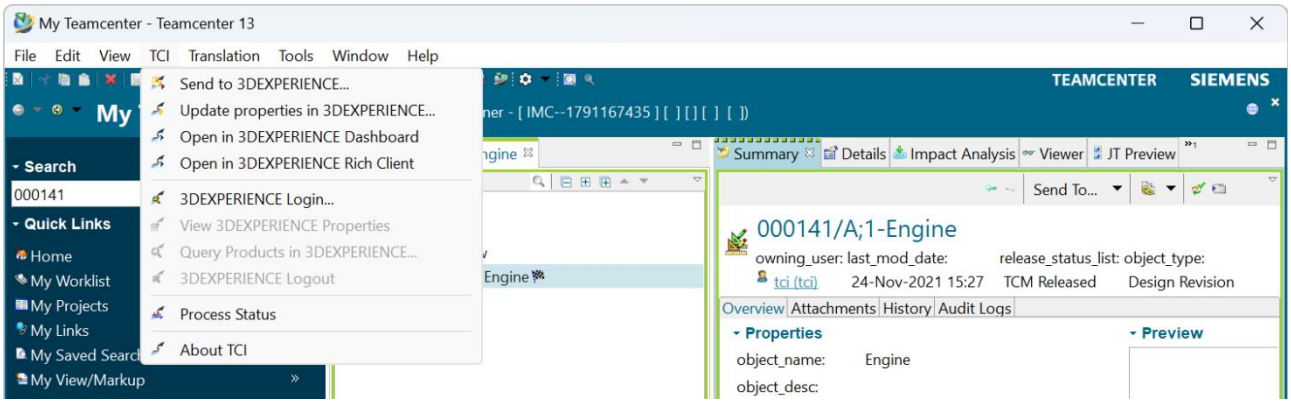

Figure 1: TCI toolbar in Teamcenter before login in 3DEXPERIENCE

The commands View 3DEXPERIENCE Properties, *Query Products in 3DEXPERIENCE* and *3DEXPERIENCE Logout* are only available, after a successful performed 3DEXPERIENCE login.

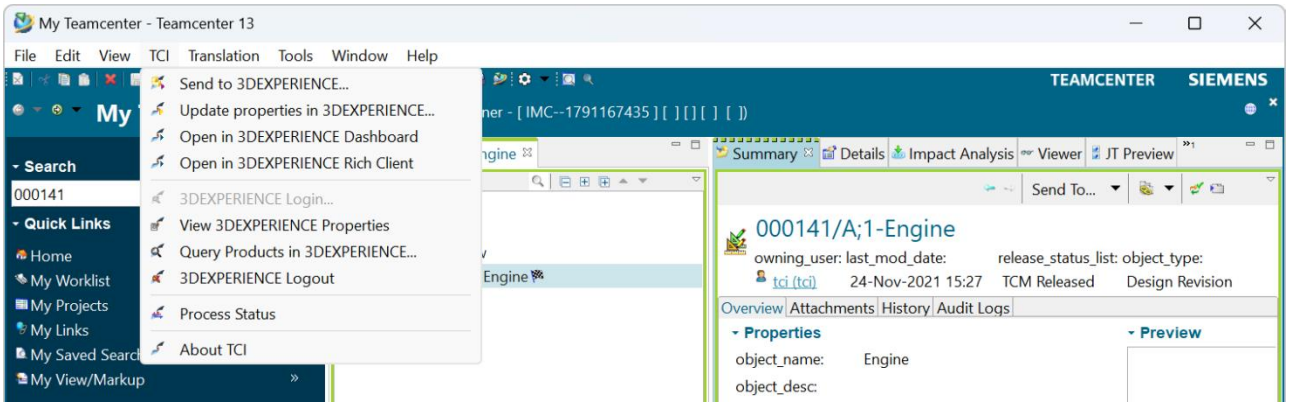

Figure 2: TCI toolbar in Teamcenter after login in 3DEXPERIENCE

The following TCI commands are provided:

Send to 3DEXPERIENCE

Update properties in 3DEXPERIENCE

Open in 3DEXPERIENCE Rich Client / Dashboard

3DEXPERIENCE Login

Query Products in 3DEXPERIENCE

3DEXPERIENCE Logout

Process Status

About TCI

2.1 TCI command *Send to 3DEXPERIENCE*

TCI menu icon:

The command *Send to 3DEXPERIENCE* is always available if a Teamcenter Item Revision is active.

In case of *My Teamcenter* context, the command *Send to 3DEXPERIENCE* is also available in the corresponding pop-up menu. In case of active *Structure Manager*, you have to use the TCI toolbar.

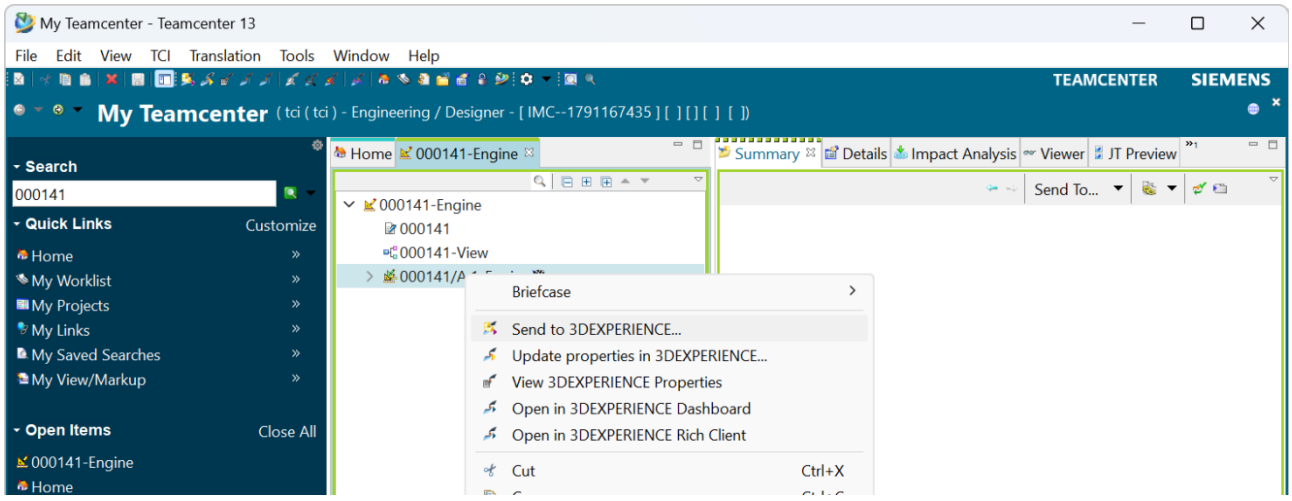

Figure 3: Pop-up menu with TCI command Send to 3DEXPERIENCE

If you have an Item Revision active in the *My Teamcenter* context and select the TCI command *Send to 3DEXPERIENCE*, the following dialog window will appear.

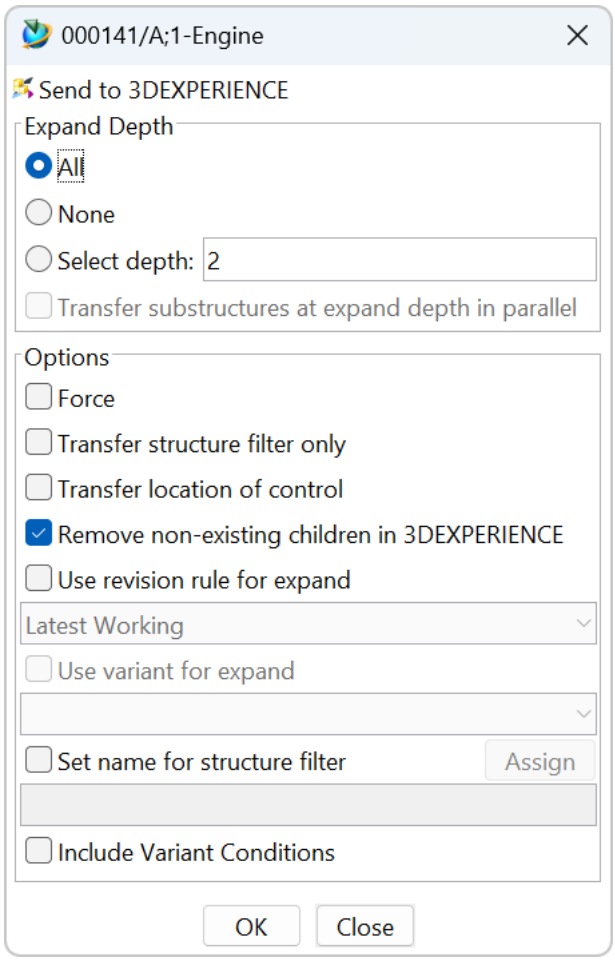

Figure 4: *Send to 3DEXPERIENCE* dialog in My Teamcenter context

In this dialog you have the following options, to configure the TCI export functionality:

- Expand Depth:

  With these radio buttons you can define the depth of the structure export.

  - "All"

    This is the default configuration. In this case, the whole structure will be exported.

  - "None"

    Only the top structure level will be exported.

  - "Select depth:"

    If you select this configuration, you can define the number of structure levels to be exported (Default number is: 2).

  - "Transfer Substructures at expand depth in parallel"

    If not activated (default), the Item will be expanded to the specified level and only this part of the structure will be sent. If activated, the Items at the specified level in the structure will be send separately and in parallel (constrained by load of TCI server). When processing of those Items is finished, the top part of the structure will be sent. If transfer of one of the Items

on the expand level fails, and the error cause is fixed without modification of the Item in Teamcenter, this specific Item must be sent with force to update the structure in 3DEXPERIENCE.

- Options:

  To configure different options for the export, the following checkboxes are available:

  - “Force”

    Exports the structure without skipping or caching.

    For example, when the configuration of the export was changed in the settings, but the data itself is not modified, it may be necessary to “Force”.

  - “Transfer structure filter only”

    With this checkbox, you can transfer only a structure filter to 3DEXPERIENCE without transferring the structure itself. A valid name for the structure filter is necessary and has to be defined in input field *Structure Name*. For further information please see also configuration option *Set name for structure filter*.

  - “Transfer location of control”

    By activating this checkbox, you can transfer the location of control to 3DEXPERIENCE. This means, that all transferred items are owned by 3DEXPERIENCE after the successful data transfer.

  - “Remove non-existing children in 3DEXPERIENCE”

    If you activate this checkbox, all non-existing children are removed while performing the data transfer to 3DEXPERIENCE. The structure in Teamcenter stays unchanged.

  - “Use revision rule for expand”

    If you want to define a specific revision rule for the export, you have to switch on the toggle button *Use revision rule for expand* and select the name of the desired revision rule in the pull-down menu.

    In case of *Structure Manager* context the configured revision rule will be used and this option is not available inside the TCI export dialog window.

  - “Use variant for expand”

    If you want to define a specific variant for the export, you have to switch on the toggle button *Use variant for expand* and select the name of the desired variant in the pull-down menu.

    In case of *Structure Manager* context the configured variant will be used and this option is not available inside the TCI export dialog window.

  - “Set name for structure filter”

    If you want to define a filter name for the exported structure, you have to switch on the toggle button *Set name for structure filter* and define a name in the input field.

    If you select the *Assign* button, a proposal for the filter name, based on the current revision rule and variant rule, is entered in the input field *Structure Name*. If neither revision rule nor variant rule is selected, the default revision rule is used as filter name. Assign will overwrite any typed in value. The filter name can be changed manually.

Defining a filter name for a structure gives you the advantage to transfer the Teamcenter visibility of structure items to 3DEXPERIENCE. On Teamcenter side you have only to define a unique filter name in the *Send to 3DEXPERIENCE* dialog. On 3DEXPERIENCE side you can choose this filter name to filter the transferred structure.

- "Include Variant Conditions"

  Export Variant Conditions from the Items in the structure and create the corresponding Effectivities in 3DEXPERIENCE.

  Only accessible if enabled by your administrator.

After starting the *Send to 3DEXPERIENCE* command, a status message is displayed (see Figure 5).

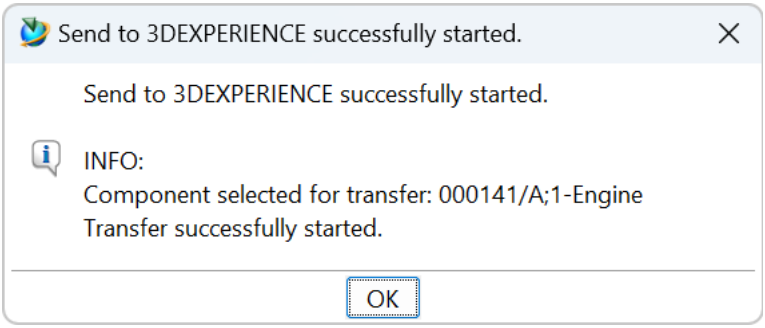

Figure 5: *Send to 3DEXPERIENCE* status message.

2.2 TCI command *Update properties in 3DEXPERIENCE*

TCI menu icon:

The command *Update properties in 3DEXPERIENCE* is always available if a Teamcenter Item Revision is active in the My Teamcenter Application.

The command *Update properties in 3DEXPERIENCE* is also available in the corresponding pop-up menu in the My Teamcenter Application.

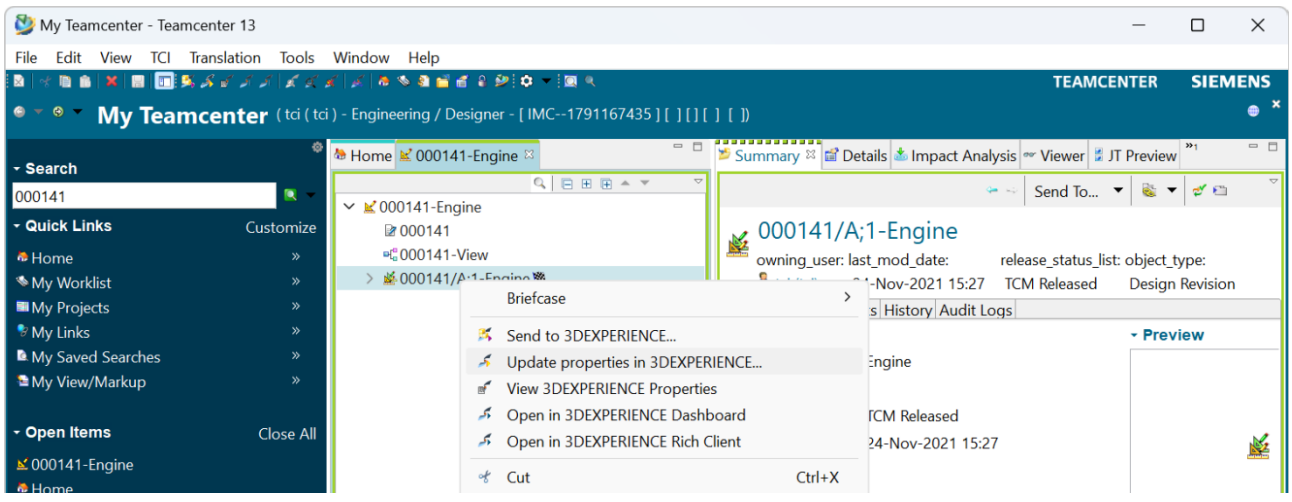

Figure 6: Pop-up menu with TCI command *Update properties in 3DEXPERIENCE*

The command will synchronize current Teamcenter properties to 3DEXPERIENCE. The attributes to be synchronized must be configured by your administrator.

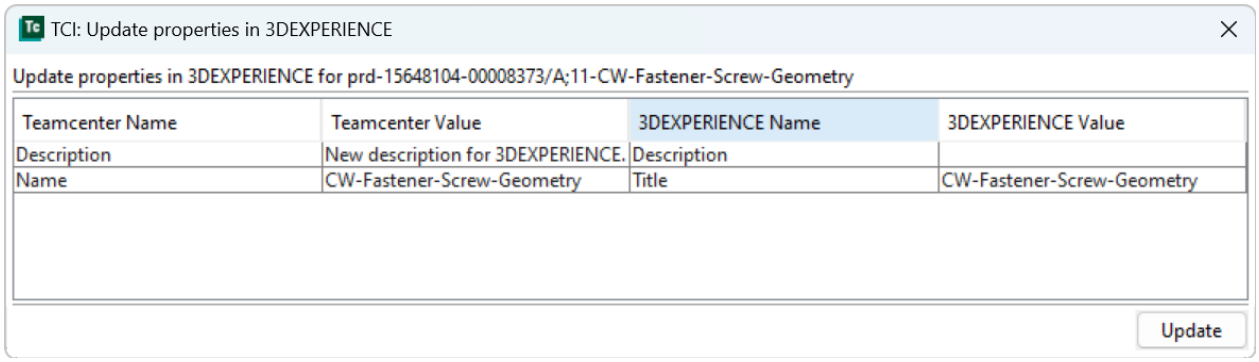

Figure 7: *Update properties in 3DEXPERIENCE* dialog.

2.3 TCI command *Open in 3DEXPERIENCE …*

TCI menu icon:

Both *Open in 3DEXPERIENCE …* commands must be enabled by configuration (see InstallationManual_TCI section 7 Installing the TCI Teamcenter Rich Client Plugin – Environment variables).

2.3.1 TCI command *Open in 3DEXPERIENCE Rich Client*

The command *Open in 3DEXPERIENCE Rich Client* is used to open the transferred 3DEXPERIENCE object for the selected Item Revision in an already opened 3DEXPERIENCE application.

2.3.2 TCI command *Open in 3DEXPERIENCE Dashboard*

The command *Open in 3DEXPERIENCE Dashboard* is used to open the transferred 3DEXPERIENCE object for the selected Item Revision in the 3DEXPERIENCE Dashboard in the Product Structure Explorer widget.

2.4 TCI command *View 3DEXPERIENCE Properties*

TCI menu icon:

This command *View 3DEXPERIENCE Properties* provides the ability, to display the 3DEXPERIENCE properties of the active item revision without leaving the Teamcenter application or switching to the 3DEXPERIENCE application.

The command is available in *My Teamcenter* and in *Structure Manager* context if a Teamcenter Item Revision is active.

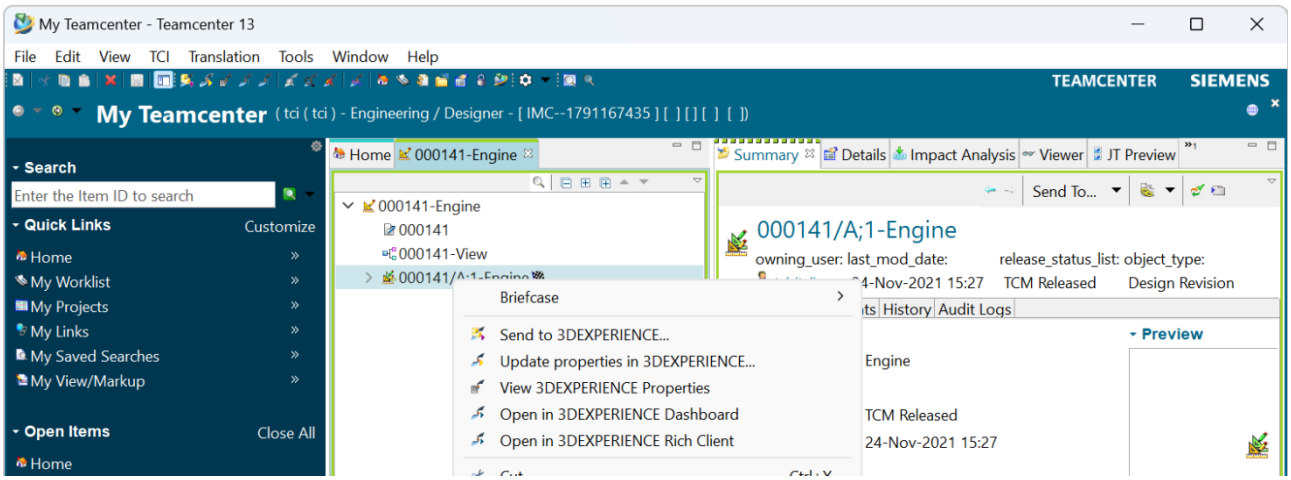

Figure 8: Pop-up menu with TCI command View 3DEXPERIENCE Properties

If the 3DEXPERIENCE server connection is configured, the 3DEXPERIENCE properties will be listed in the dialog window.

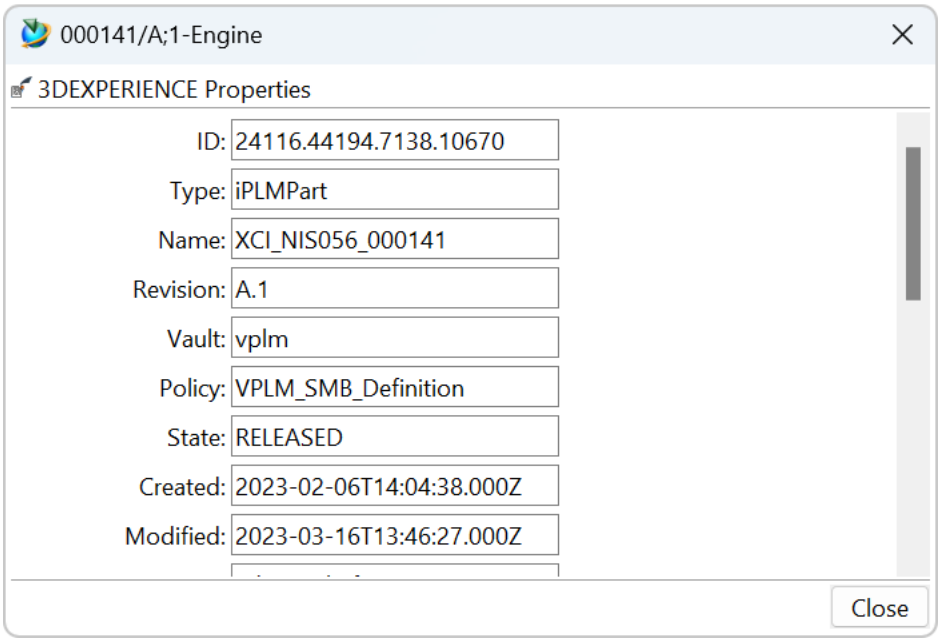

Figure 9: 3DEXPERIENCE Properties dialog

If the 3DEXPERIENCE server connection is not configured, the 3DEXPERIENCE properties from the TCI database will be listed in the dialog window.

2.5 TCI command *3DEXPERIENCE Login*

TCI menu icon:

The command *3DEXPERIENCE Login* is available inside the TCI toolbar and in the Teamcenter icon toolbar. It is not available in any pop-up menu.

The login to 3DEXPERIENCE is necessary to perform a data query in 3DEXPERIENCE. See *TCI command Query Products in 3DEXPERIENCE* for further information.

If the TCI command *3DEXPERIENCE Login* is selected, a new input dialog window appears to configure the 3DEXPERIENCE login parameters:

- Username
- Password
- Role
- Vault

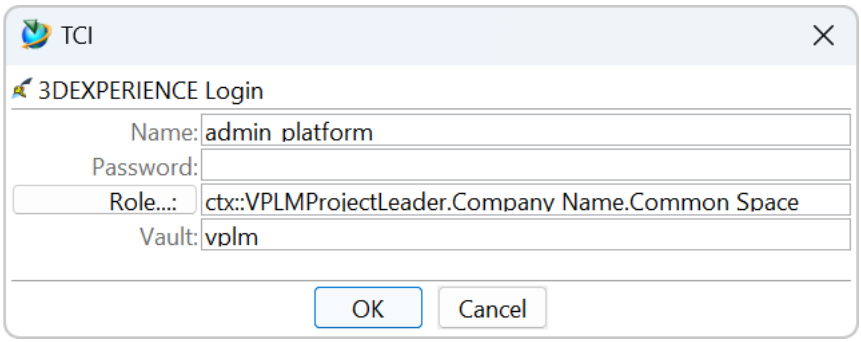

Figure 10: 3DEXPERIENCE Login dialog

For performing the 3DEXPERIENCE login, enter your valid 3DEXPERIENCE account data and press the *OK* button. The role can be entered manually or by using the Credentials Dialog opened with the “Role …” button.

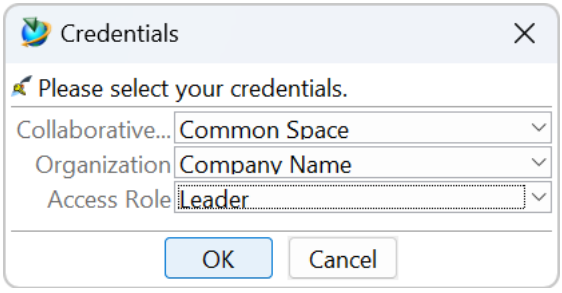

Figure 11: 3DEXPERIENCE Credentials dialog

If the 3DEXPERIENCE login is successful, the TCI commands *Query Products in 3DEXPERIENCE* and *3DEXPERIENCE Logout* are selectable.

If the 3DEXPERIENCE login fails, an error message will appear. In this case, please check your 3DEXPERIENCE account data or ask your system administrator for help.

2.6 TCI command *Query Products in 3DEXPERIENCE*

TCI menu icon:

The command *Query Products in 3DEXPERIENCE* is available inside the TCI toolbar and in the Teamcenter icon toolbar. It is not available in any pop-up menu.

If the TCI command *Query Products in 3DEXPERIENCE* is selected, a new input dialog window appears to define the query.

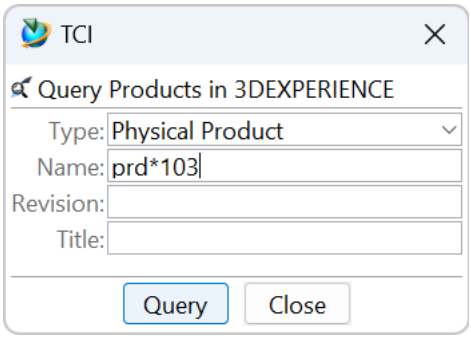

Figure 12: Query Products in 3DEXPERIENCE dialog

The query in 3DEXPERIENCE is a combination of *Type*, *Name*, *Revision,* and *Title*.

To define the query parameter *Type*, the user has to select one item of the predefined values list.

Parameter *Name* and *Revision* must be a string. The following wildcards are supported:

- Wildcard “*” for a set of characters
- Wildcard “?” for a single character

After the *Query* button is selected, the defined query will be performed in 3DEXPERIENCE and the result will be presented in a new window.

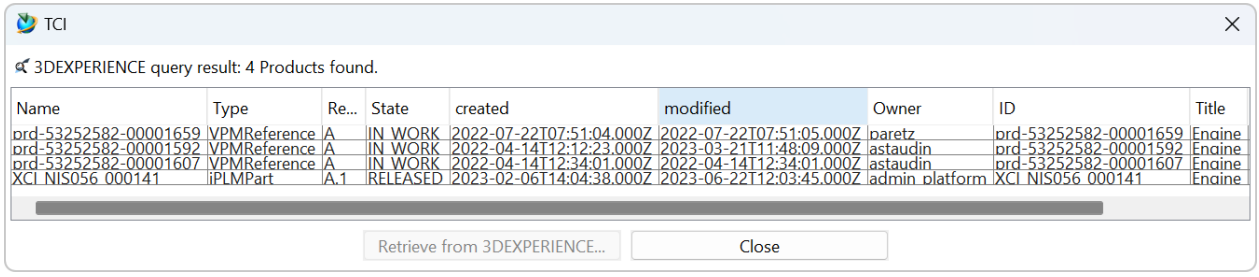

Figure 13: 3DEXPERIENCE query result dialog

Each line represents one 3DEXPERIENCE product. In the top area of the dialog window, the number of query results is presented.

To avoid heavy load of 3DEXPERIENCE, the maximum number of query results is limited. If more matching objects are available in 3DEXPERIENCE, an information message will appear:

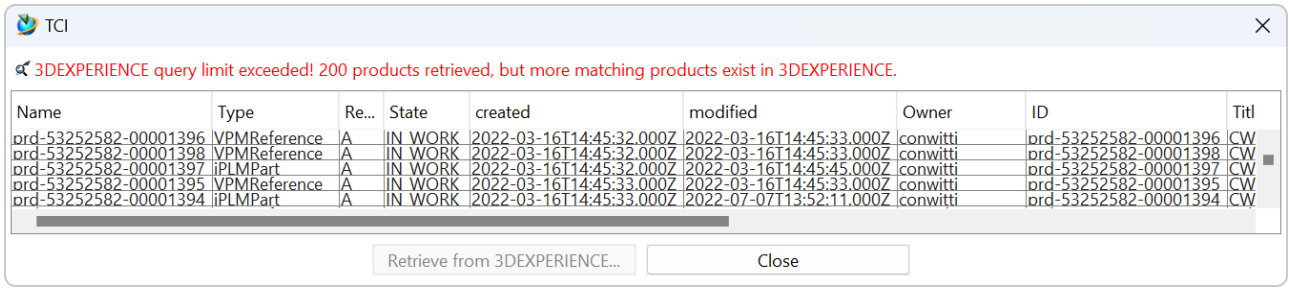

Figure 14: Information message: 3DEXPERIENCE query limit exceeded

Sorting of the query results is possible. By selecting a column header, all results will be sorted ascending or descending.

Reordering of attributes (table columns) by moving a column is also possible.

If one product (one query result line) is selected, the transfer button *Send from 3DEXPERIENCE* is selectable. After selecting the button, the transfer from 3DEXPERIENCE to Teamcenter will be initiated for the selected product and the user will get a confirmation message.

For details, please refer to *chapter 4.7 TCI command Send to Teamcenter*.

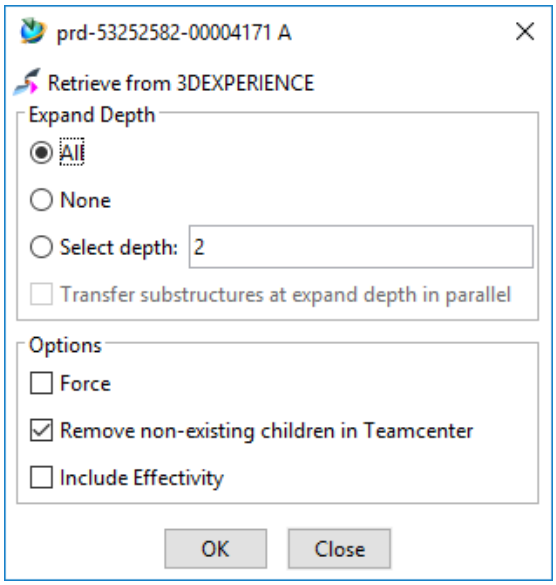

Figure 15: Send to PDM dialog – Options

The data transfer itself will be performed as background job. You can resume your work in Teamcenter after closing the confirmation message window.

2.7 TCI command *3DEXPERIENCE Logout*

TCI menu icon:

The command *3DEXPERIENCE Logout* is available inside the TCI toolbar and in the Teamcenter icon toolbar. It is not available in any pop-up menu.

If you select the TCI command *3DEXPERIENCE Logout* the logout will be performed. To perform a 3DEXPERIENCE query, you have to login again.

2.8 TCI command *Process Status…*

TCI menu icon:

The command *Process Status…* is available inside the TCI toolbar and in the Teamcenter icon toolbar. It is not available in any pop-up menu.

The command *Process Status…* will display the *Process Status* dialog with TCI process information.

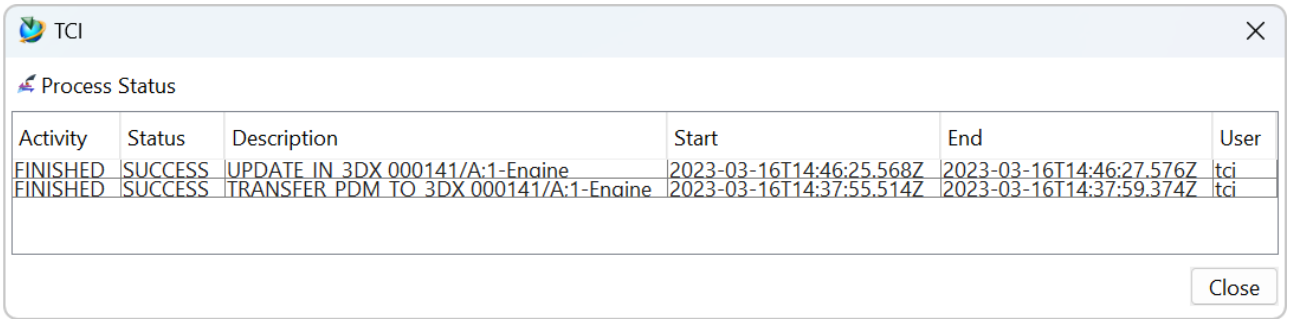

Figure 16: Process Status dialog

The Process Status information shows the process information Activity, Status, Description, Start and End Time and the client user who started the process. If a Process status is FAILED the fail message of the selected process is displayed at the bottom of the dialog.

2.9 TCI command *About TCI*

TCI menu icon:

The command *About TCI* is only available inside the TCI toolbar and will display some general product information.

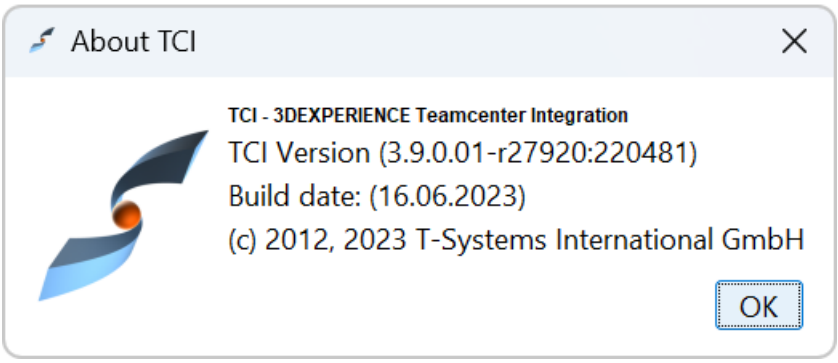

Figure 17: About TCI dialog

3 TCI in Teamcenter Active Workspace

The TCI functionality is embedded into Teamcenter Active Workspace and available from the TCI menu from the right sidebar menu. Commands may be hidden if not applicable to current selection.

Available commands:

- Send to 3DEXPERIENCE (if ItemRevision is selected)
- Send Folder to 3DEXPERIENCE (if Folder is selected)
- Open in 3DEXPERIENCE (if ItemRevision is selected)
- View 3DEXPERIENCE properties (if ItemRevision is selected and user is logged into 3DEXPERIENCE)
- Update 3DEXPERIENCE properties (if ItemRevision is selected)
- 3DEXPERIENCE Login
- 3DEXPEIRENCE Logout (if user is logged into 3DEXPERIENCE)
- Query Products in 3DEXPERIENCE (if user is logged into 3DEXPERIENCE)
- Process Status
- About TCI

3.1 TCI command *Send to 3DEXPERIENCE*

Transfers the selected ItemRevision to 3DEXPERIENCE. You can define transfer options in the opened dialog. For details on the options please refer to section 2.1

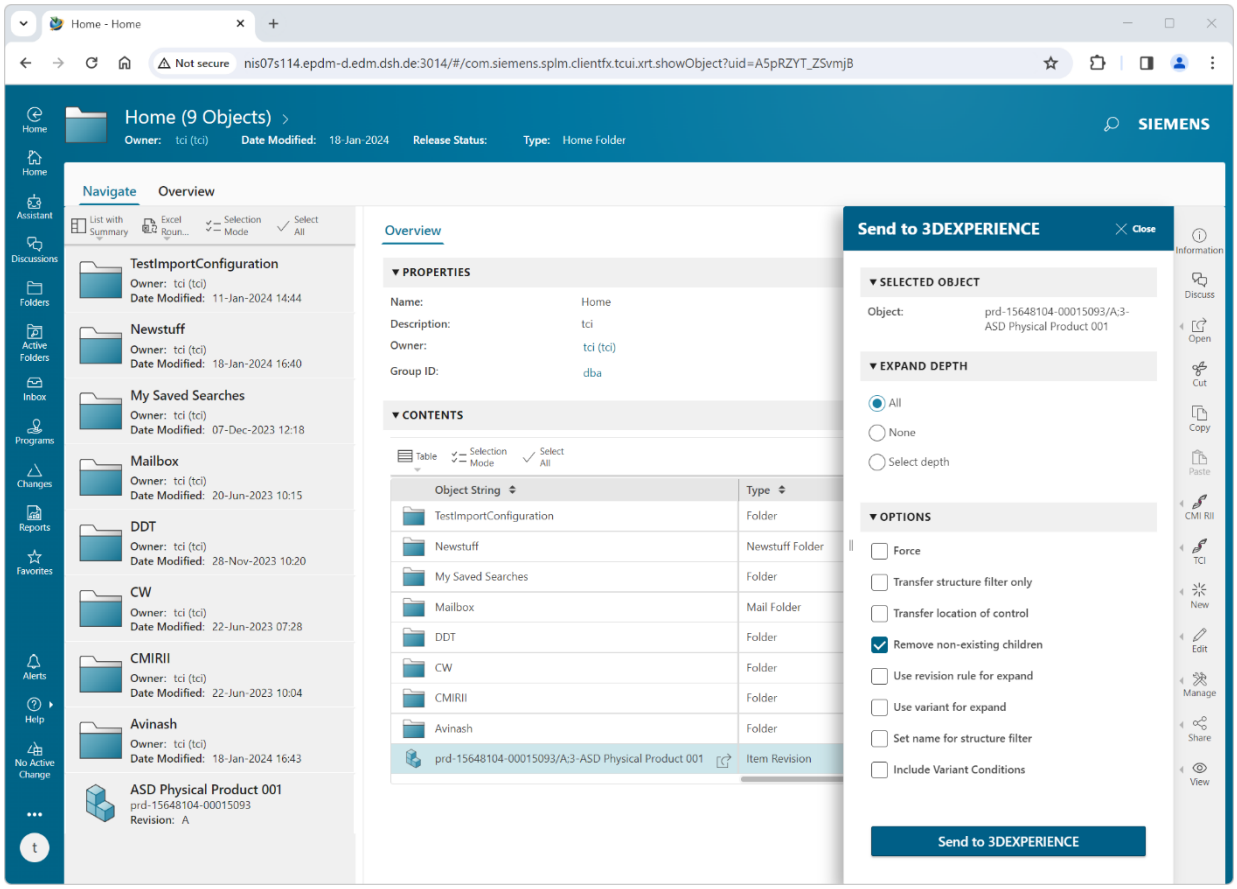

Figure 18: TCI – Active Workspace - Send ItemRevision to 3DEXPERIENCE.

3.2 TCI command Send Folder to 3DEXPERIENCE

Transfers the selected Folder to 3DEXPERIENCE. You can define transfer options in the opened dialog.

Available options:

- “Force”

  Exports the structure without skipping or caching.

  For example, when the configuration of the export was changed in the settings, but the data itself is not modified, it may be necessary to “Force”.

- “Remove non-existing children in 3DEXPERIENCE”

  If you activate this checkbox, all non-existing children are removed while performing the data transfer to 3DEXPERIENCE. The structure in Teamcenter stays unchanged.

- “Use revision rule for expand”

  If you want to define a specific revision rule for the export, you have to switch on the toggle button *Use revision rule for expand* and select the name of the desired revision rule in the pull-down menu.

- “Only Folder Structure”

  Transfer only the Folder structure without any attached ItemRevisions.

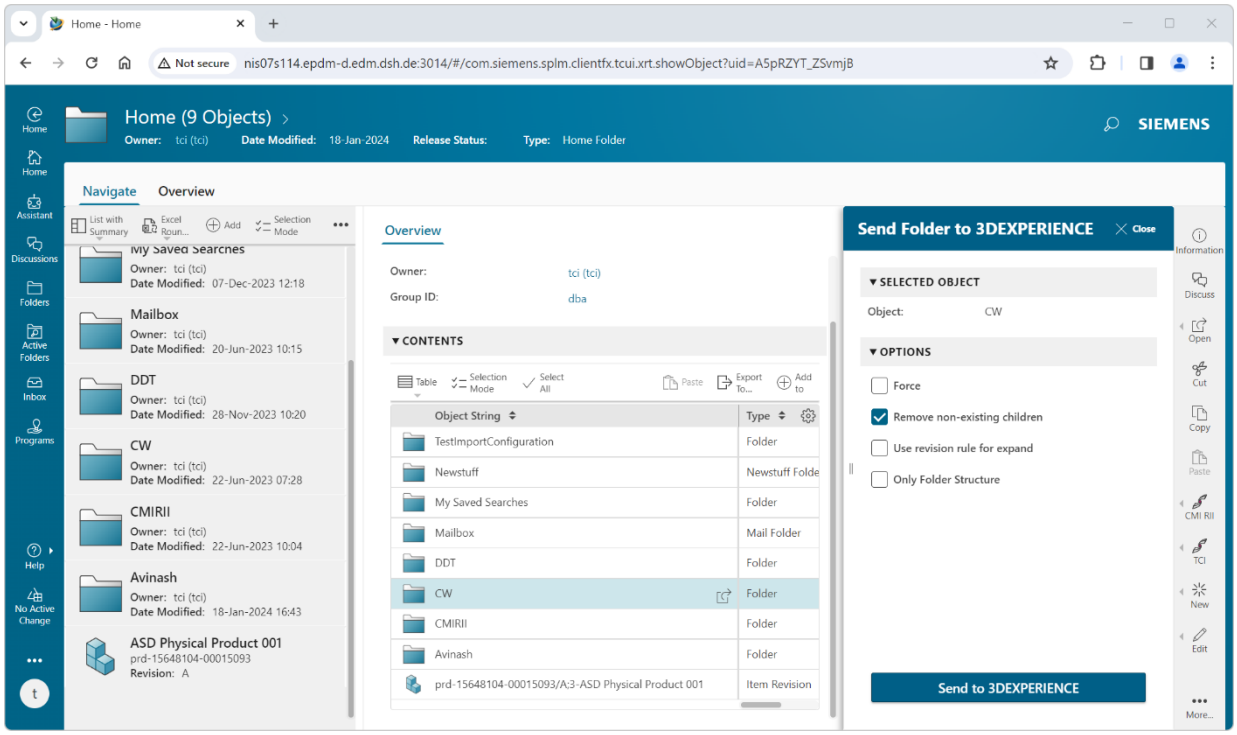

Figure 19: TCI – Active Workspace - Send Folder to 3DEXPERIENCE.

3.3 TCI command Open in 3DEXPERIENCE

Opens the selected ItemRevision in 3DEXPERIENCE Dashboard. The ItemRevision must have been previously transferred to 3DEXPERIENCE.

Connection to 3DEXPERIENCE Dashboard must be configured by your administrator.

3.4 TCI command View 3DEXPERIENCE properties

Shows 3DEXPERIENCE properties of the selected ItemRevision. The ItemRevision must have been previously transferred to 3DEXPERIENCE.

This command is available after successful 3DEXPERIENCE login.

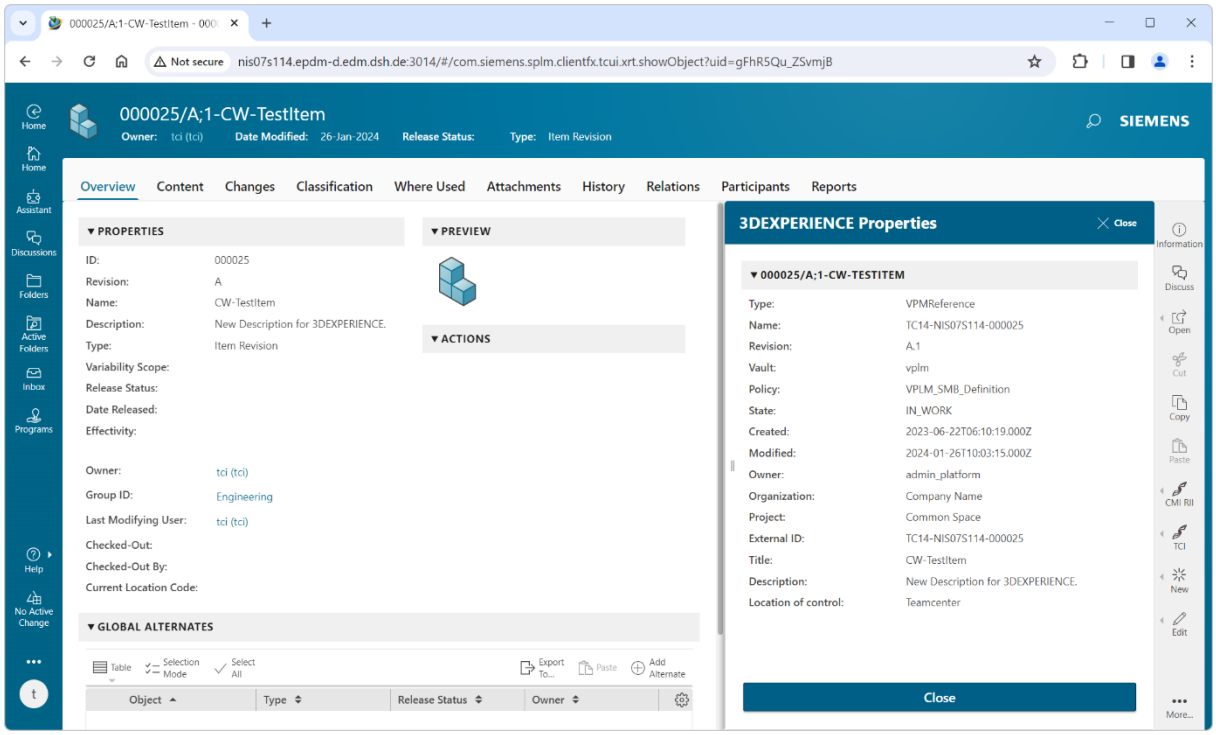

Figure 20: TCI – Active Workspace – View 3DEXPERIENCE properties.

3.5 TCI command Update 3DEXPERIENCE properties

Synchronizes current Teamcenter properties of the selected ItemRevision to 3DEXPERIENCE. The ItemRevision must have been previously transferred.

The properties to be synchronized must be configured by your administrator.

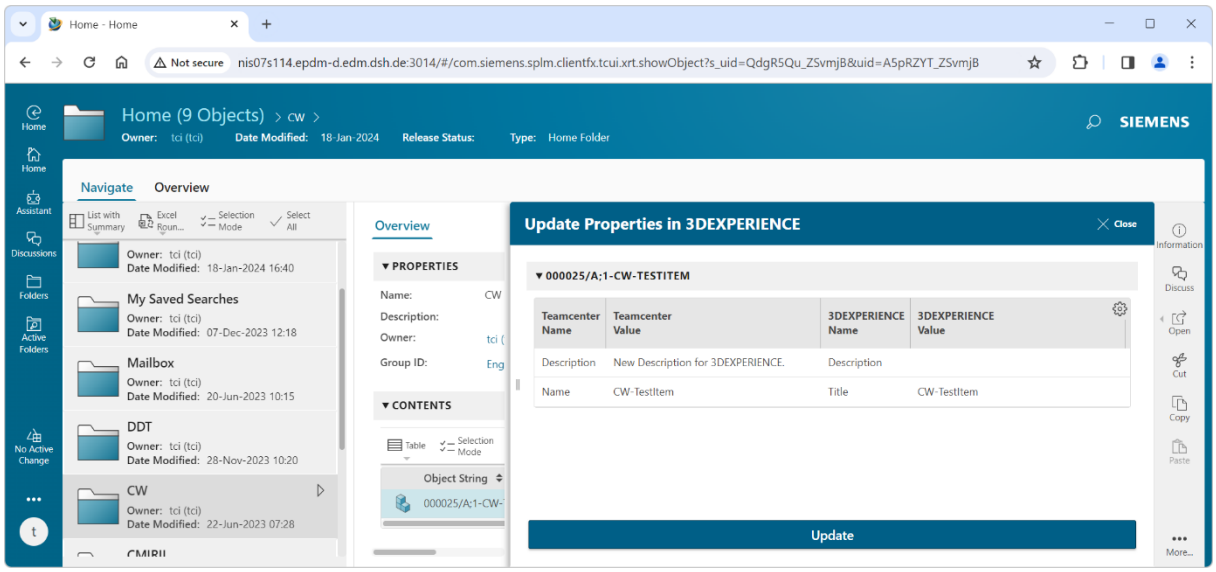

Figure 21: TCI – Active Workspace – Update 3DEXPERIENCE properties.

3.6 TCI command 3DEXPERIENCE Login

Login to 3DEXPERIENCE to be able to use commands *Query Products in 3DEXPERIENCE* and *View 3DEXPERIENCE properties*.

Define the login parameters in the login dialog:

- Username
- Password
- Role

  The role can be manually defined or you can use the Select 3DEXPERIENCE role button to select role, organization and collaborative space from the available options for the username specified in login dialog.
- Vault

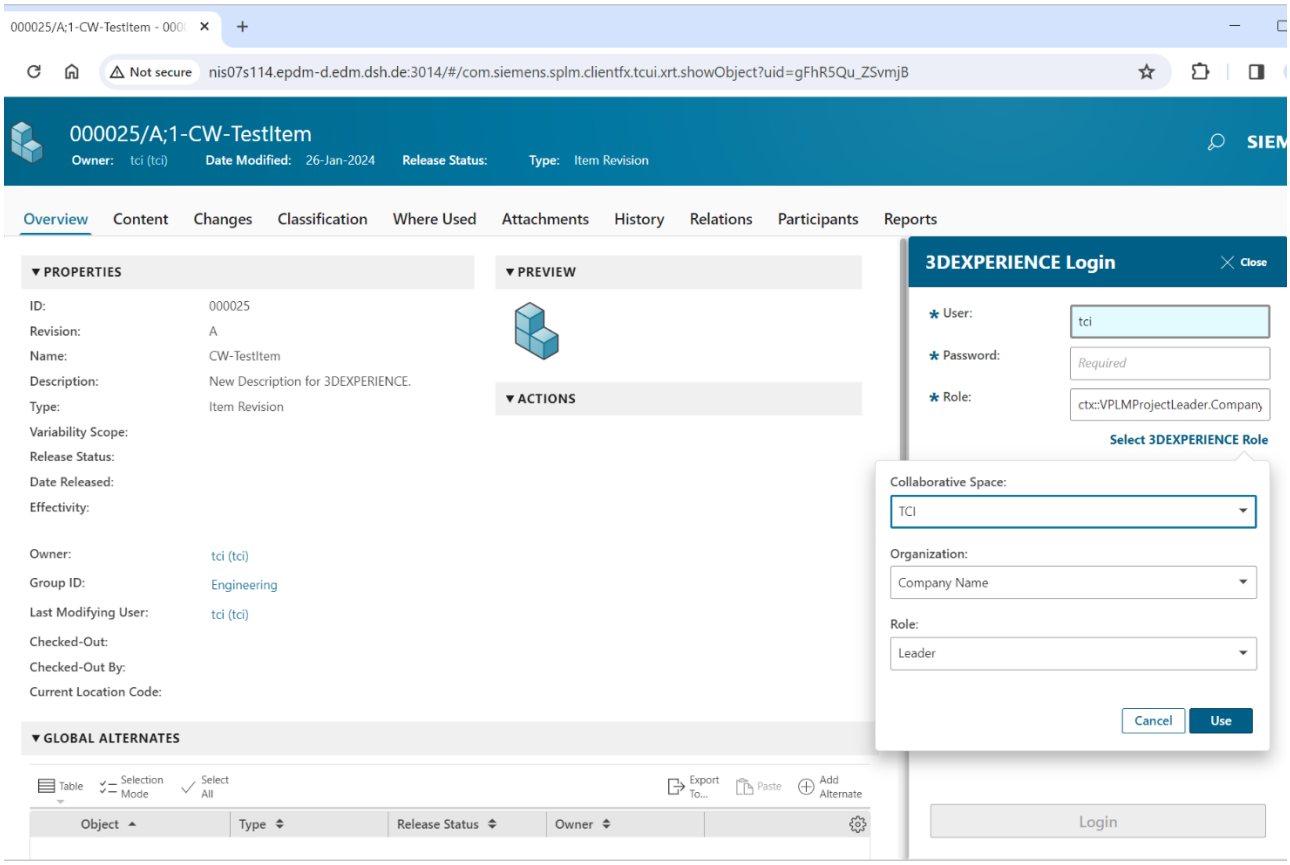

Figure 22: TCI – Active Workspace – Login to 3DEXPERIENCE.

3.7 TCI command Query Products in 3DEXPERIENCE

Search for Physical Products in 3DEXPERIENCE and transfer them to Teamcenter.

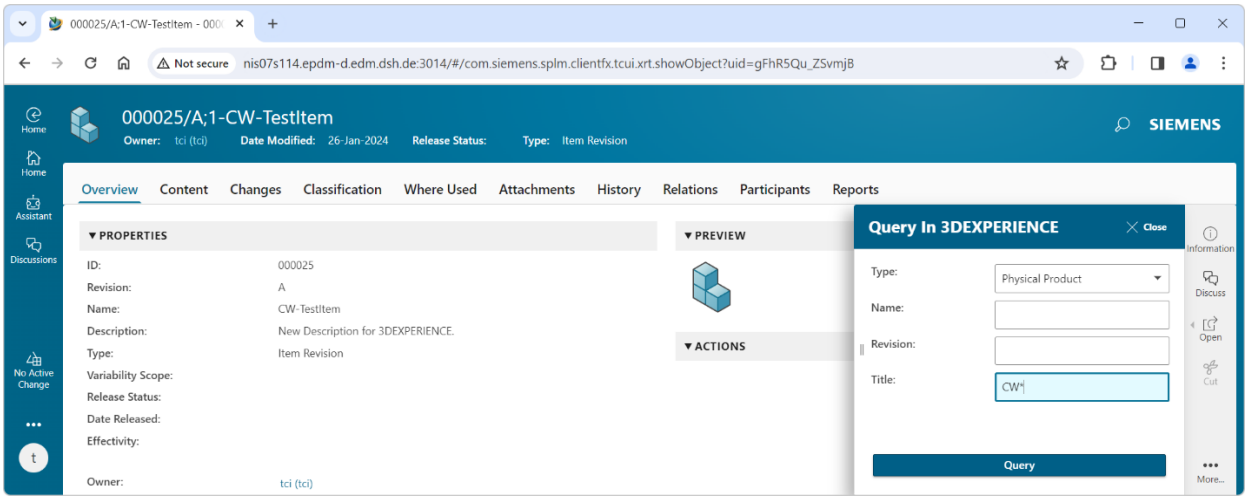

Figure 23: TCI – Active Workspace – Query in 3DEXPERIENCE dialog.

The query in 3DEXPERIENCE is a combination of *Type*, *Name*, *Revision,* and *Title*. To define the query parameter *Type*, the user must select one item of the predefined values list. Parameter *Name* and *Revision* must be a string. The following wildcards are supported:

- Wildcard “*” for a set of characters
- Wildcard “?” for a single character

The query result will be displayed in a new tab.

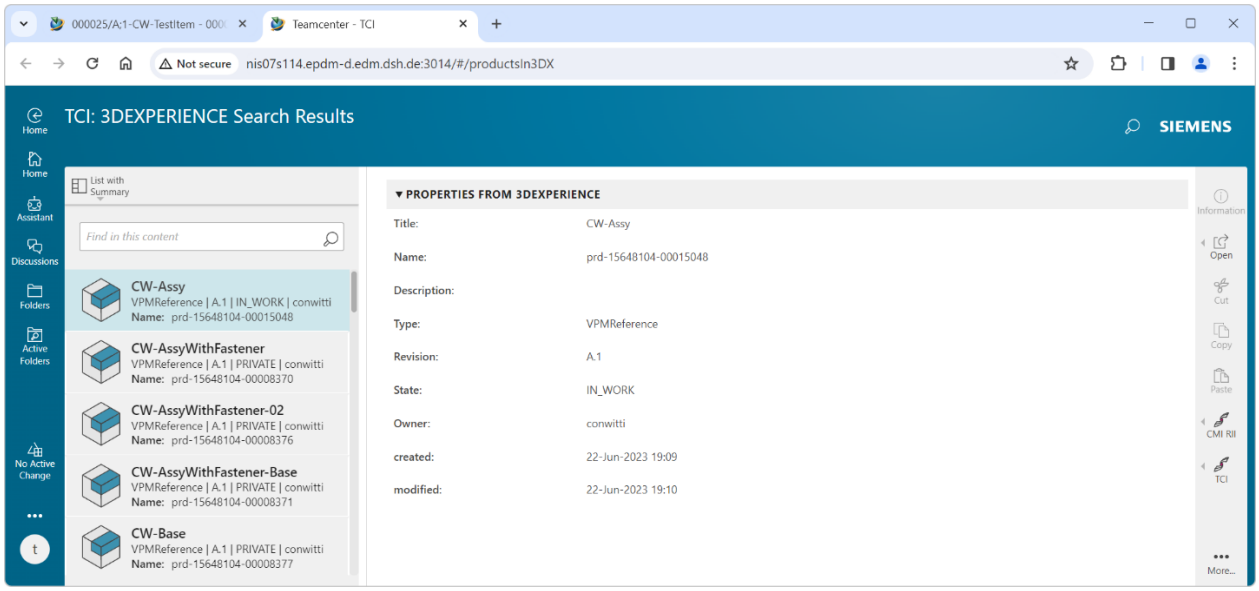

Figure 24: TCI – Active Workspace – 3DEXPERIENCE query result.

After selecting a query result, the command Retrieve from 3DEXPERIENCE will be available in the TCI menu. This will transfer the selected Physical Product from 3DEXPERIENCE to Teamcenter.

For details on the available transfer options please refer to section 4.7.

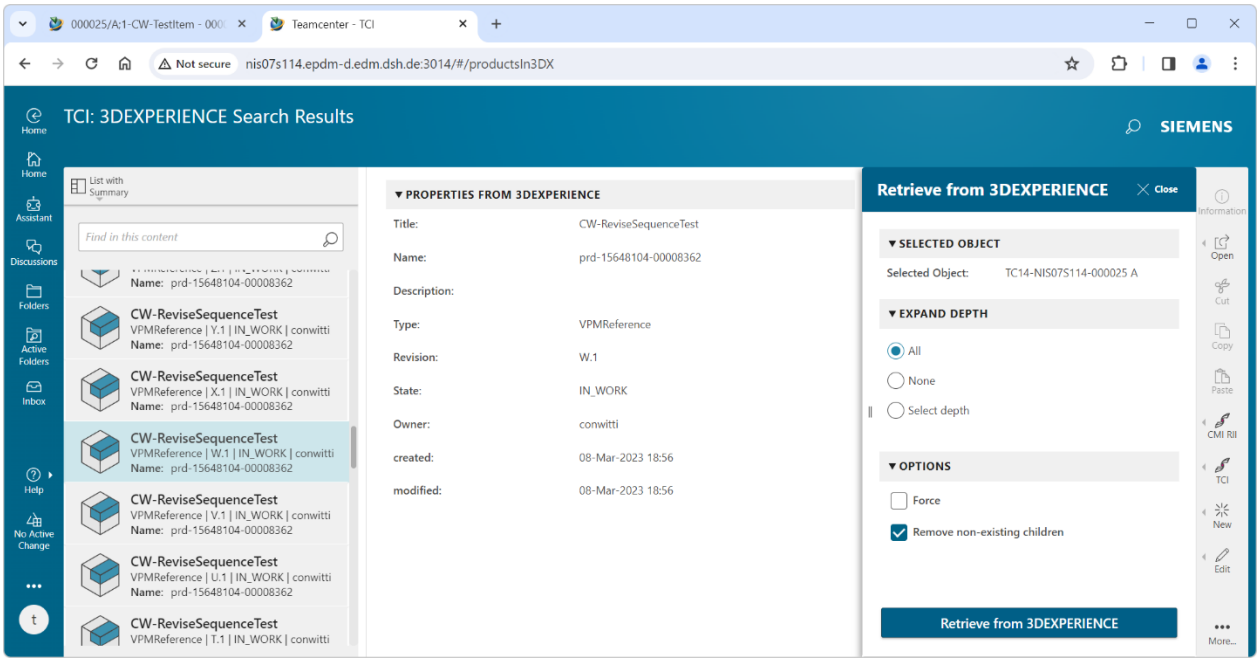

Figure 25: TCI – Active Workspace –Retrieve from 3DEXPERIENCE dialog.

3.8 TCI command 3DEXPERIENCE Logout

Logout from 3DEXPERIENCE. To use commands *Query Products in 3DEXPERIENCE* or *View 3DEXPERIENCE properties* you would need to login again.

3.9 TCI command Process Status

Show process status information about transfers started by the current user. Displays the process information Activity, Status, Description, Start and End Time and the client user who started the process.

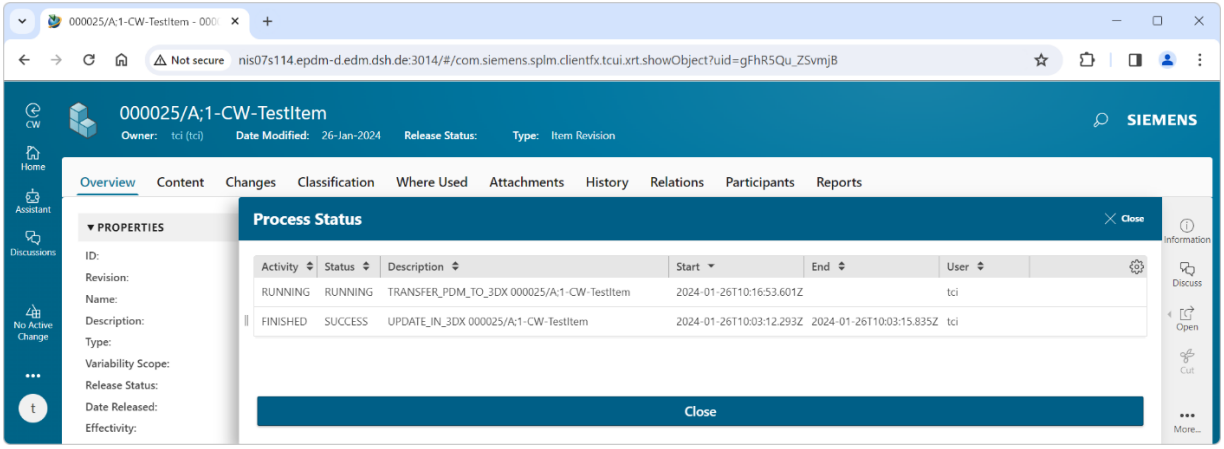

Figure 26: TCI – Active Workspace – Process status information.

3.10 TCI command About TCI

Display general information about TCI.

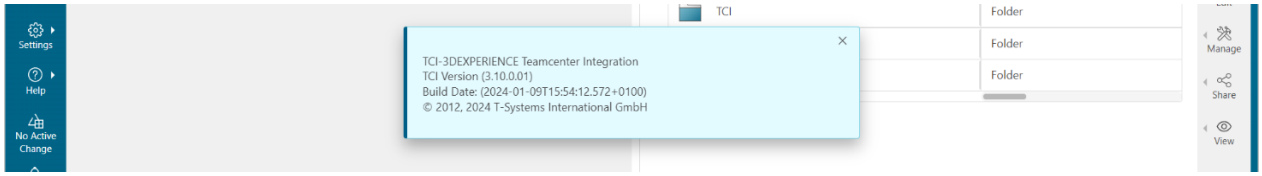

Figure 27: TCI – Active Workspace – Update 3DEXPERIENCE properties.

4 TCI in 3DEXPERIENCE

The TCI functionality is seamlessly embedded into 3DEXPERIENCE. You can find the TCI menu in the fixed area of the 3DEXPERIENCE Action Bar with common tools that are not app-specific. The TCI menu is available in Explore Mode and in Open Mode of 3DEXPERIENCE.

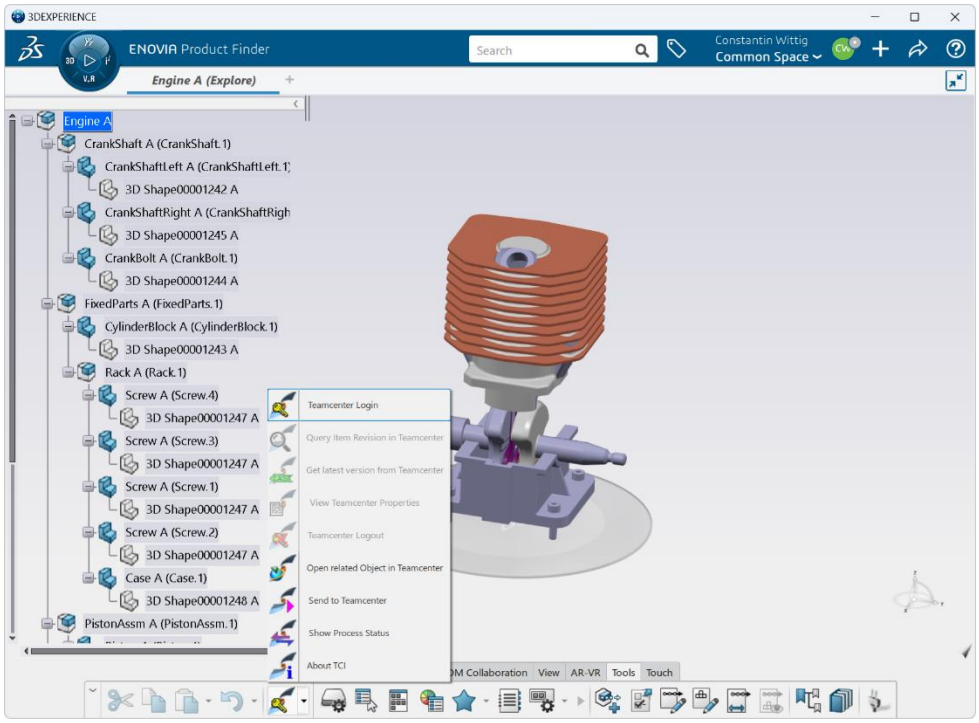

Figure 28: TCI menu in 3DEXPERIENCE before login in Teamcenter

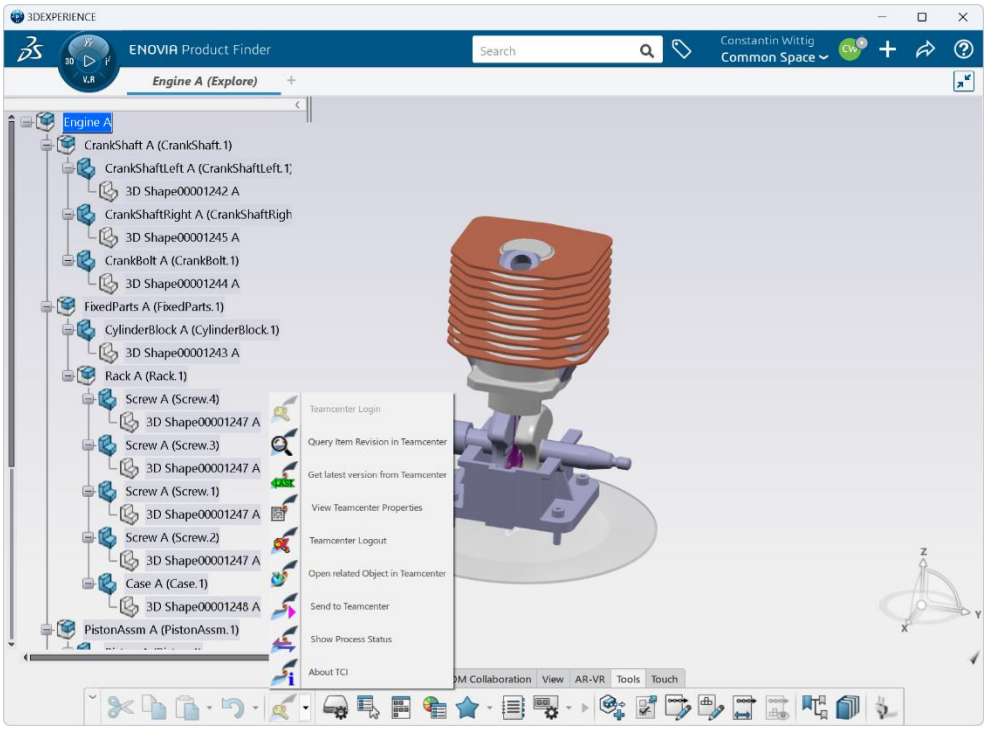

Figure 29: TCI menu in 3DEXPERIENCE after login in Teamcenter

The following commands are available inside the TCI menu:

Teamcenter Login

Query Item Revision in Teamcenter

Get latest version from Teamcenter

View Teamcenter Properties

Teamcenter Logout

Open related Object in Teamcenter

Send to Teamcenter

Show Process Status

About TCI

4.1 TCI command *Teamcenter Login*

TCI menu icon:

A Teamcenter Login is required to use the functionality of the TCI commands *Query Item in Teamcenter*, *Get latest version from Teamcenter* and *View Teamcenter Properties* of selected item. After selecting the icon *Teamcenter Login* the following dialog window appears:

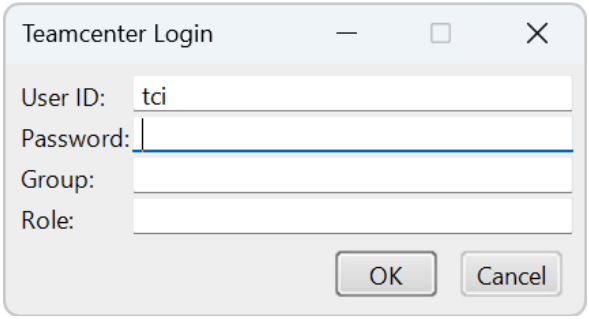

Figure 30: Teamcenter Login dialog

For performing the Teamcenter Login, enter your valid Teamcenter account data and press the *OK* button.

If the Teamcenter login is successful, the TCI commands *Query Item in Teamcenter*, *Get latest version from Teamcenter* and *View Teamcenter Properties* are selectable.

If the Teamcenter login fails, the error message “Login failed” will appear. In this case, please check your Teamcenter account data or ask your TCI system administrator for help.

4.2 TCI command *Query Item Revision in Teamcenter*

TCI menu icon:

This dialog offers the possibility to define and execute different types of item queries inside Teamcenter without leaving your active 3DEXPERIENCE window. It is only available, when a Teamcenter session is active.
After selecting the TCI command *Query Item Revision in Teamcenter* the following dialog window will appear:

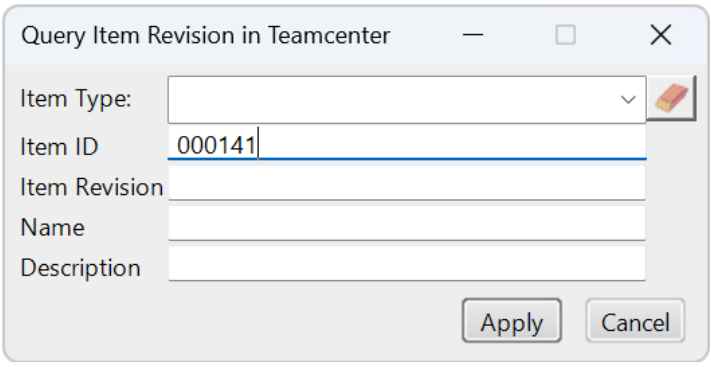

Figure 31: Query Item Revision in Teamcenter dialog

The query can be a combination of Item Type, Item ID, Item Revision, Name, and Description.

To define the query parameter Item Type, the user has to select one of the predefined values:

- --- BLANK --- (all Item Types allowed)
- ItemRevision
- Design Revision
- Part Revision

After selecting the *Query* button, the query will be performed inside Teamcenter and the result will be presented in a new window. In case of no result data, an empty result window will appear.

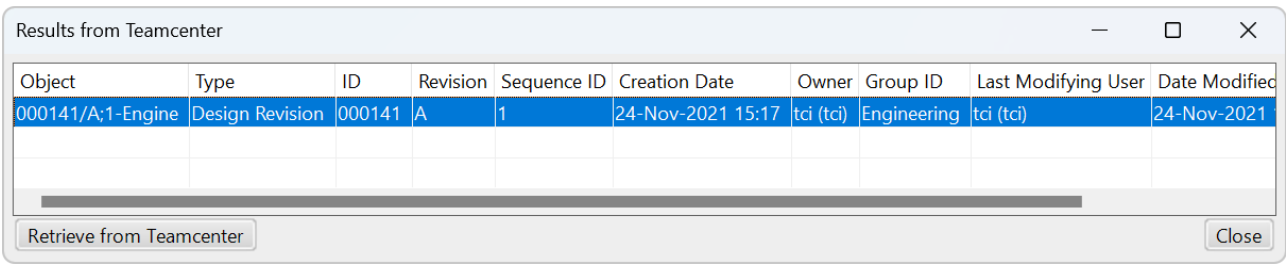

Figure 32: Query Result from Teamcenter

Inside the result list it is possible to select one object. After selecting an object, the button *Receive from Teamcenter* will become active.

By selecting this button, you are able to start the data transfer from Teamcenter to 3DEXPERIENCE for the selected object. To start the transfer, check the options inside the upcoming dialog window and press the *OK* button.

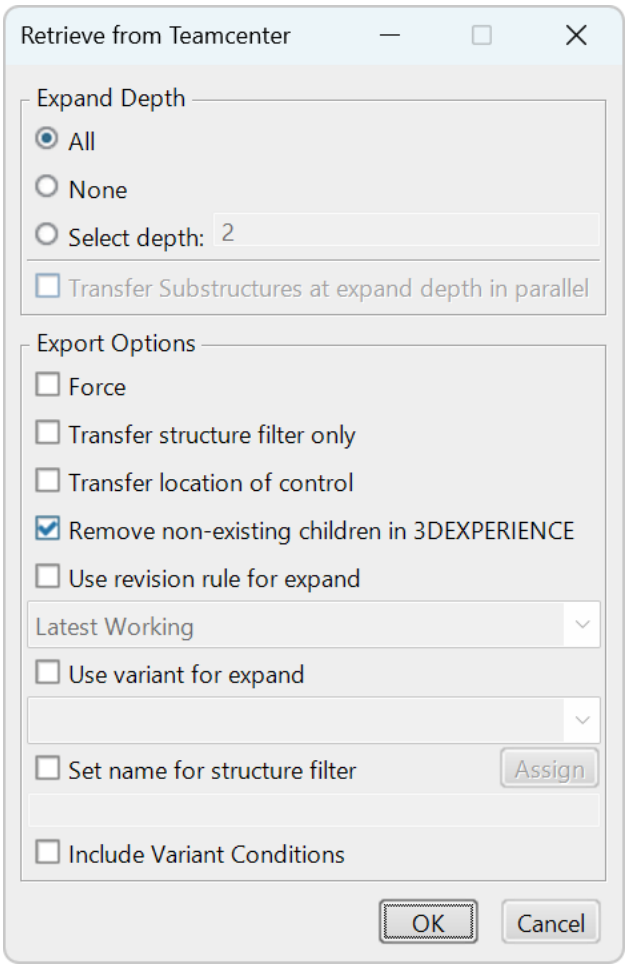

Figure 33: Send from Teamcenter dialog

For details, please refer to *chapter 2.1 TCI command Send to 3DEXPERIENCE*.

The data transfer is performed as background job and will take some time according to the utilization of the Teamcenter and 3DEXPERIENCE server processes.

In case of “Expand Depth” defined as “All”, please keep in mind that the entire structure below the selected object, including all children, is transferred from Teamcenter to 3DEXPERIENCE.

4.3 TCI command *Get latest version from Teamcenter*

TCI menu icon:

With the command *Get latest version from Teamcenter* you can start an update process to transfer the latest version of the selected object from Teamcenter to 3DEXPERIENCE. The versions of the entire structure below the selected object, including all children, will be checked. The latest version of each object will be transferred to 3DEXPERIENCE.

The data transfer is performed as background job and will take some time according to the utilization of the Teamcenter and 3DEXPERIENCE server processes.

This command is only available, when a Teamcenter session is active.

4.4 TCI command *View Teamcenter Properties*

TCI menu icon:

To retrieve the attribute values for a selected object, you can use the command *View Teamcenter properties*. Activate an object in 3DEXPERIENCE and select the command. An online query will be started immediately and the available Teamcenter attributes and values will be displayed in a new window.

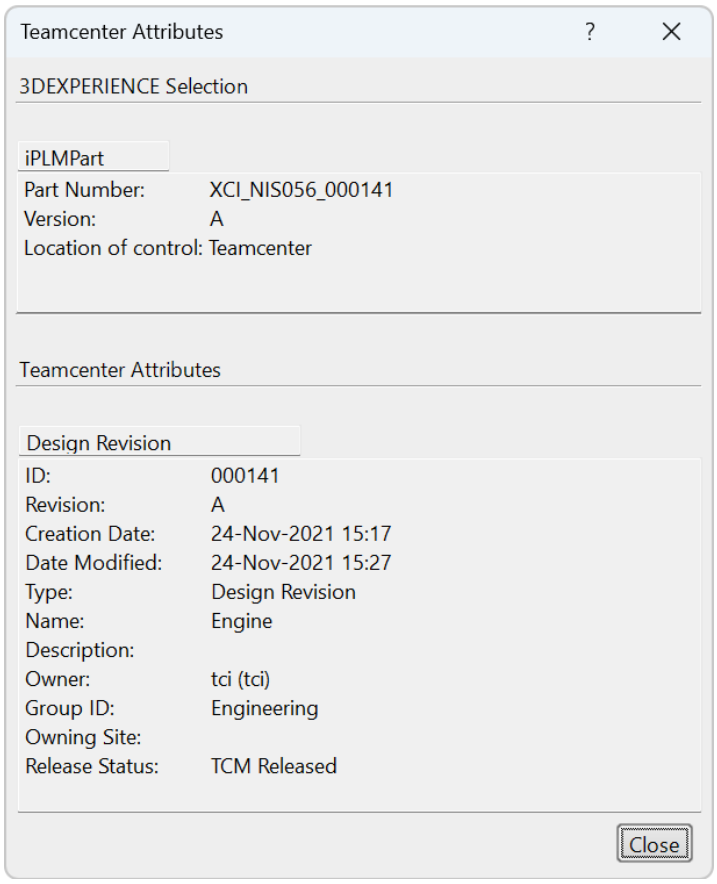

Figure 34: Teamcenter Attributes dialog

If the selected object in 3DEXPERIENCE does not exist in Teamcenter, an appropriate error message is displayed. Please note, only object type Product is supported.

This command is only available, when a Teamcenter session is active.

4.5 TCI command *Teamcenter Logout*

TCI menu icon:

If you select the command *Teamcenter Logout* the logout will be performed. To perform one of the before described commands, you have to login again.

4.6 TCI command *Open related Object in Teamcenter*

TCI menu icon:

If you select the command *Open related Object in Teamcenter* the selected object is opened in the Teamcenter Rich Client.

4.7 TCI command *Send to Teamcenter*

TCI menu icon:

The command *Send to Teamcenter* can be used to start a data transfer of a product structure node selected in 3DEXPERIENCE to Teamcenter. If no product structure node is selected the root node is used for the transfer. If more than one product structure node is selected, a warning message will be displayed.

In this dialog you have the following options, to configure the TCI export functionality:

- Expand Depth:

  With these radio buttons you can define the depth of the structure export.

  - "All"

    This is the default configuration. In this case, the whole structure will be exported.

  - "None"

    Only the top structure level will be exported.

  - "Select depth:"

    If you select this configuration, you can define the number of structure levels to be exported (Default number is: 2).

  - "Transfer substructure at expand depth in parallel"

    If not activated (default), the Physical Product will be expanded to the specified level and only the expanded part of the structure will be sent. If activated, the Physical Products at the specified level in the structure will be sent separately and in parallel (constrained by load of TCI server). When processing of those Items is finished, the top part of the structure will be sent. If transfer of one of the Physical Products on the expand level fails, and the error cause is fixed without modification of the Physical Product in 3DEXPERIENCE, this specific Physical Product must be sent with force to update the structure in Teamcenter.

- Export Options:

  To configure different options for the export, the following checkboxes are available:

  - "Force"

    If you activate this checkbox, the object import to Teamcenter will be forced even it is already imported.

    For example, when the configuration of the import was changed in the settings, but the data itself is not modified, it may be necessary to "Force".

- “Remove non existing children in PDM”

  If you activate this checkbox, all non-existing children are removed while performing the data transfer to Teamcenter. The structure in 3DEXPERIENCE stays unchanged.

- “Save selected component before send to Teamcenter”

  If you activate this checkbox, the component will be saved before the transfer is started.

- "Include Effectivity"

  Send effectivities from 3DEXPERIENCE to Teamcenter.

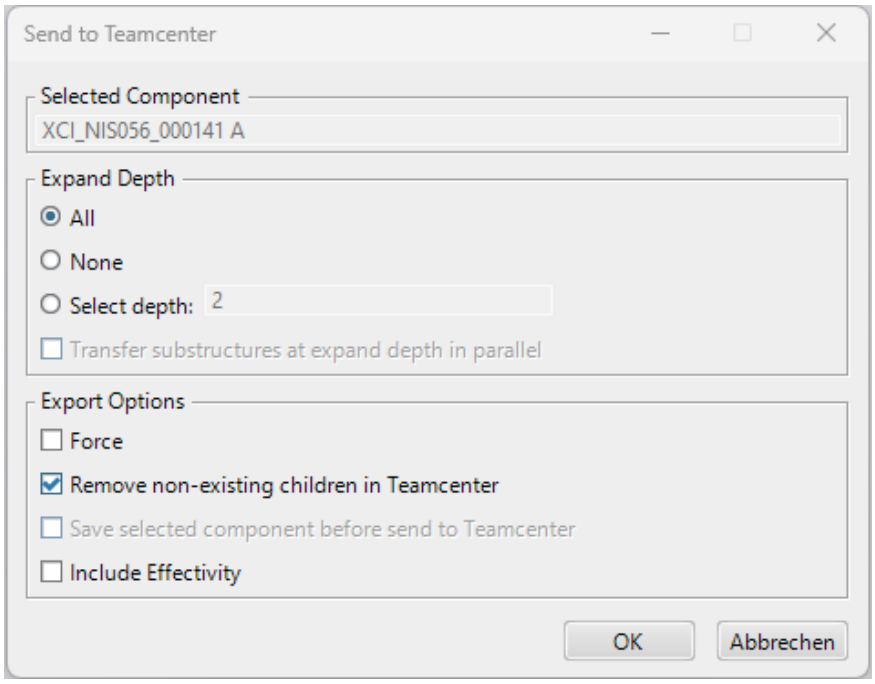

Figure 35: Send to Teamcenter dialog – Options

When you click the *OK* button, the selected structure will be exported from 3DEXPERIENCE and imported into Teamcenter. The Mastership of the authoring system will not be changed. That means only product structure nodes that are mastered by 3DEXPERIENCE will be updated or created in Teamcenter eventually.

A confirmation message box will be displayed:

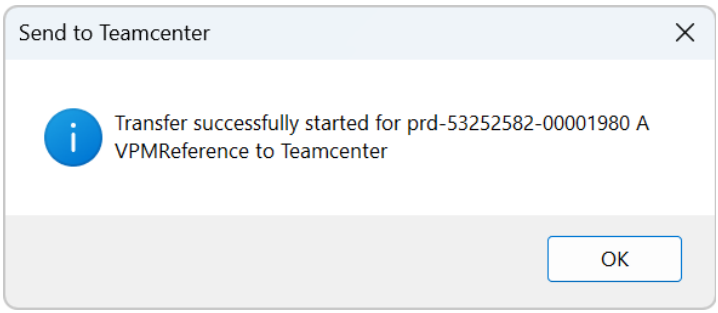

Figure 36: Send to PDM dialog – Confirmation message box

4.8 TCI command *Show Process Status*

TCI menu icon:

The command *Show Process Status* shows the Process Status dialog with the actual Process Status information.

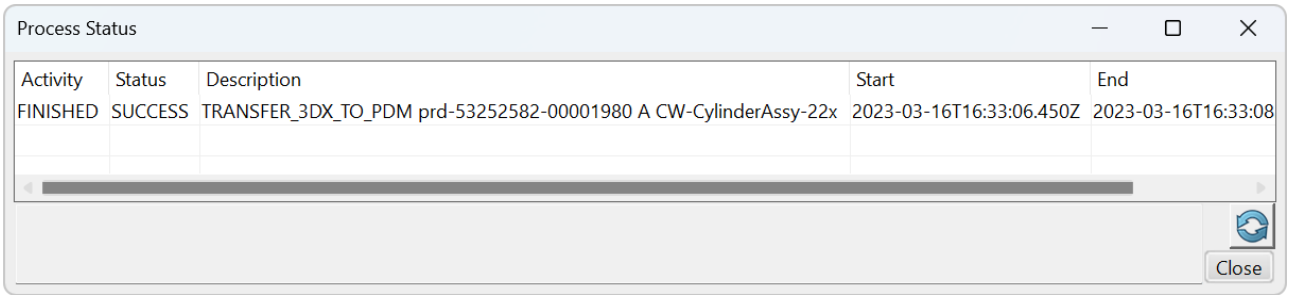

Figure 37: Process Status dialog

If the Status is FAILED, the failed message is displayed at the bottom of the dialog.

4.9 TCI command *About TCI*

TCI menu icon:

The command *About TCI* displays some general product information. The availability of the TCI server can be checked by clicking *Check Server*.

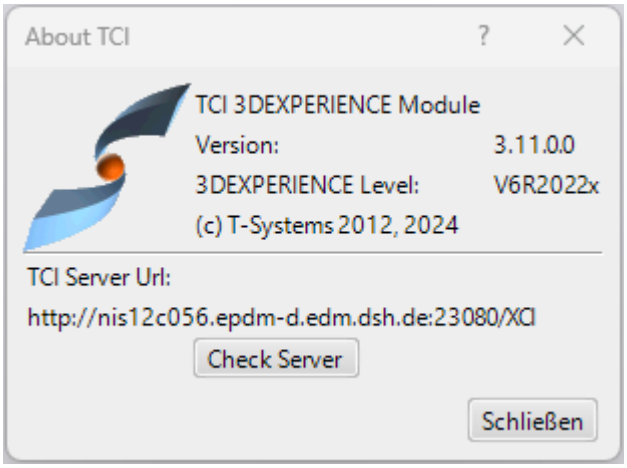

Figure 38: About TCI dialog

5 TCI web interface

The TCI Web provides some export functionality and information. You can retrieve this information with a standard web browser at the URL http://my.tci-integration-server.url:port/XCI.

Please login with the administration user “xci-admin”.

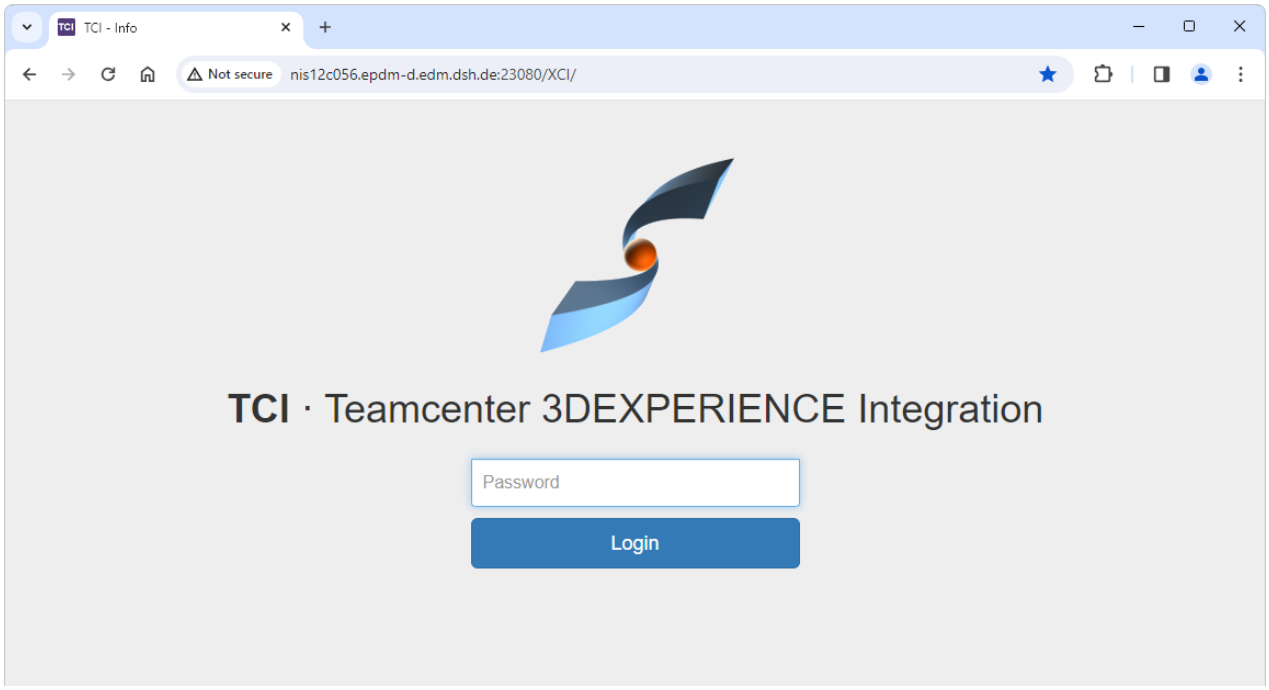

Figure 39: TCI Web – Login

5.1 About

On the *About* page you can find information about the TCI software version, XCI_HOME directory, and the setting path.

The Teamcenter version link will provide more information about the Teamcenter Server.

The 3DEXPERIENCE version link will provide more information about the 3DEXPERIENCE server.

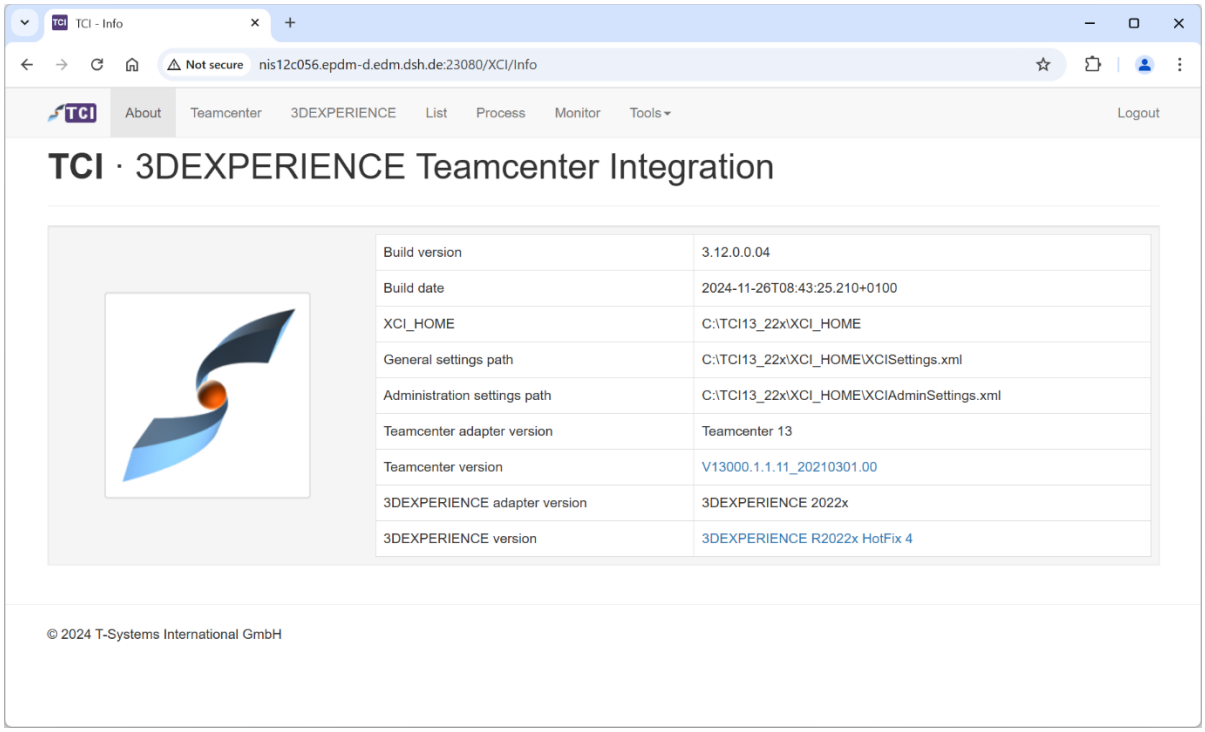

Figure 40: TCI Web – start page

5.2 Teamcenter

On the *Teamcenter* page you can query for Teamcenter objects of different types:

- ItemRevision
- Item
- Folder
- VariantRule (only accessible if enabled by your administrator)

In the query criteria fields you can use wildcards. Click on the *find* button to start the query.

The query result will be displayed in the table below. When you click on the display name of the object the object will be shown on a new page.

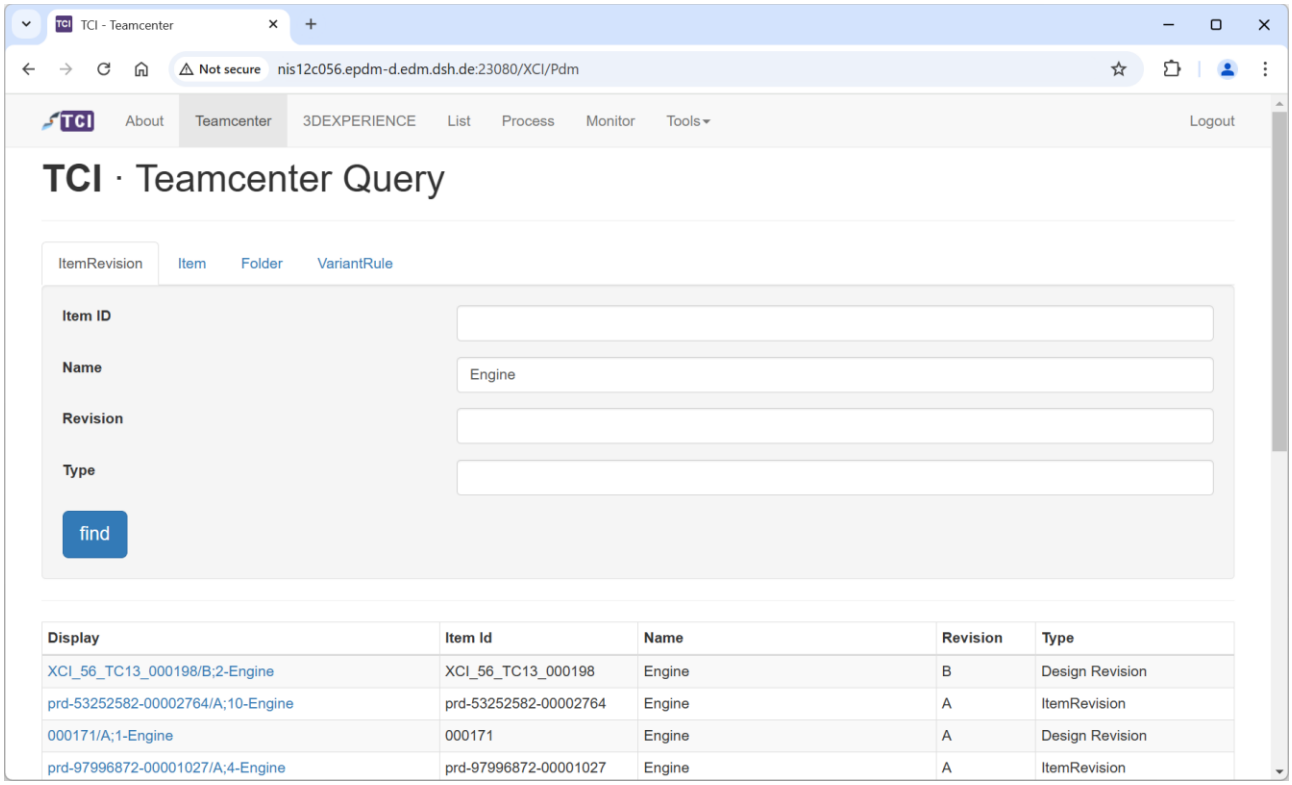

Figure 41: TCI Web – Teamcenter – Query result

When opening a result from the query, information about that object are displayed:

- structure tree to expand the structure below the selected object in Teamcenter
- Teamcenter properties of the selected object
- commands, for example transfer to 3DEXPERIENCE or structure comparison with 3DEXPERIENCE

  Some commands need to be activated by your administrator to be accessible.

5.2.1 ItemRevision actions

By default, *send to 3DEXPERIENCE* and *structure compare* actions are enabled. Other actions must be enabled on TCI server before accessible from the client.

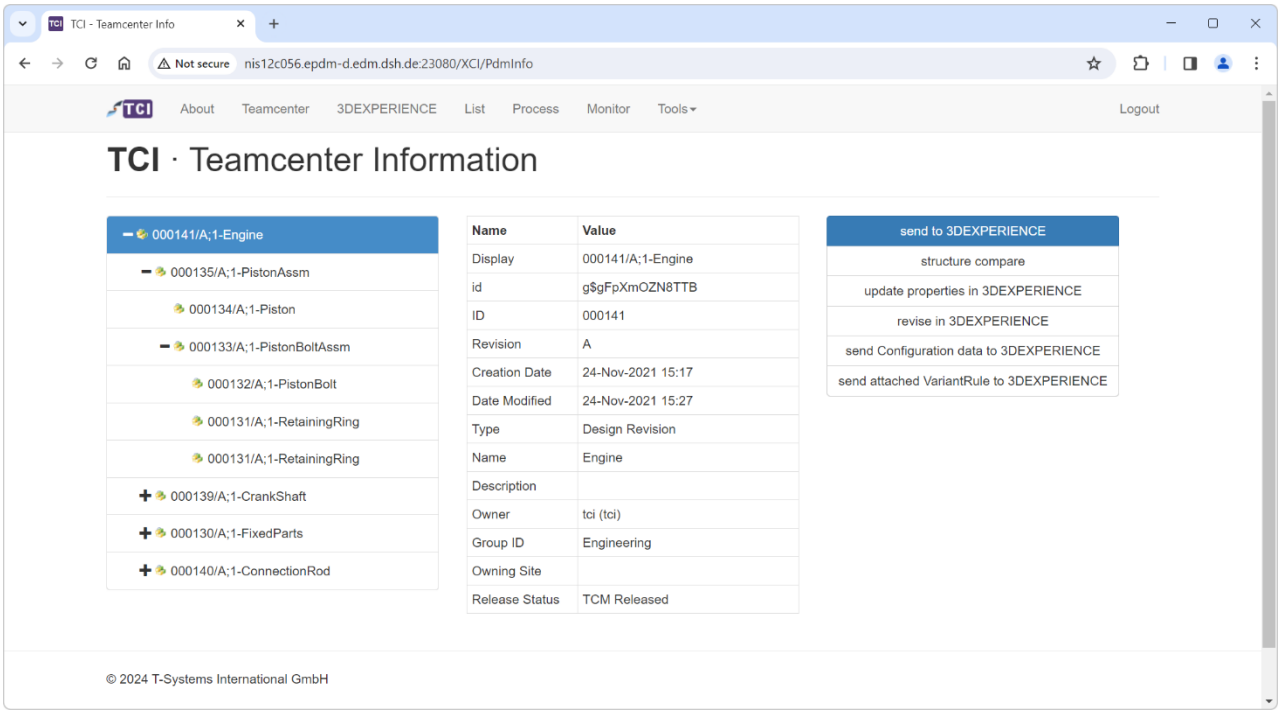

Figure 42: TCI Web – Teamcenter – Teamcenter ItemRevision properties and actions

5.2.1.1 ItemRevision: send to 3DEXPERIENCE

In the send to 3DEXPERIENCE dialog you have some options, to configure the *Send to 3DEXPERIENCE* functionality.

For details, please refer to *chapter 2.1 TCI command Send to 3DEXPERIENCE*.

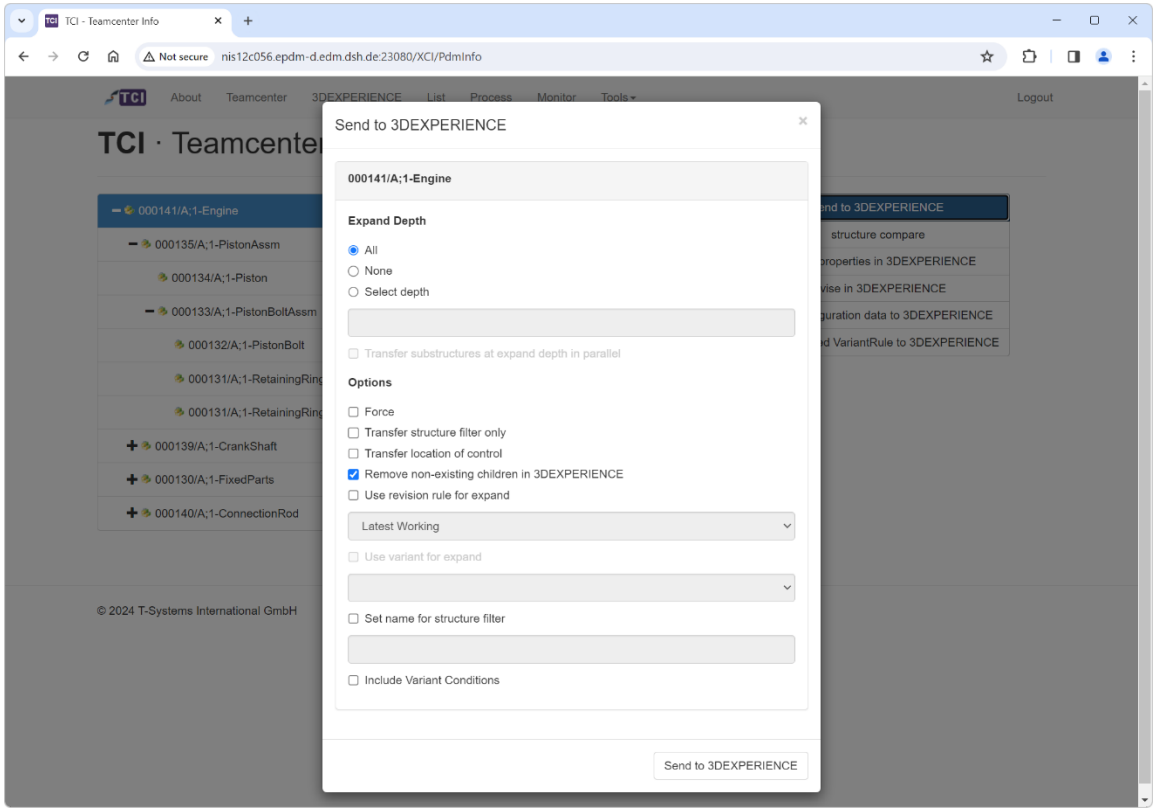

Figure 43: TCI Web – Teamcenter – Send to 3DEXPERIENCE options

5.2.1.2 ItemRevision: update properties in 3DEXPERIENCE

update in 3DEXPERIENCE synchronizes current Teamcenter properties on the object to properties in 3DEXPERIENCE. The property mapping is configured in the XCISettings.xml. The Update is started with the *Update in 3DEXPERIENCE* button.

This command needs to be enabled by your administrator to be accessible.

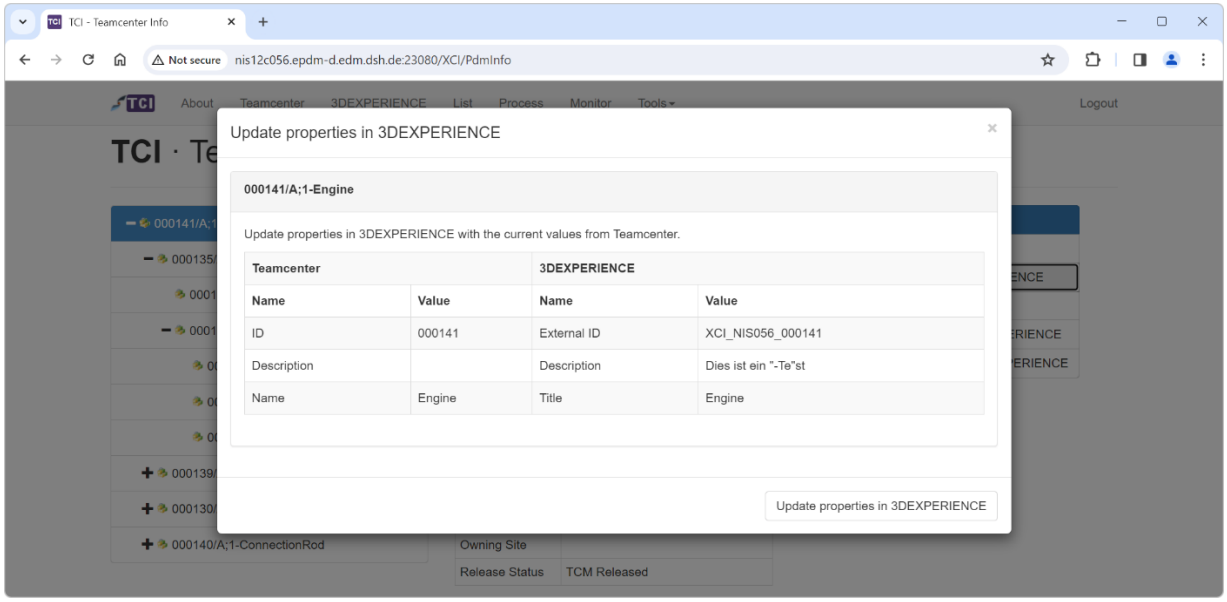

Figure 44: TCI Web – Teamcenter – Update in 3DEXPERIENCE

5.2.1.3 ItemRevision: revise in 3DEXPERIENCE

revise in 3DEXPERIENCE revises the selected object in 3DEXPERIENCE. The object must have been previously transferred and the object mastership must be with 3DEXPEIRENCE The revise is started with the *Revise in 3DEXPERIENCE* button.

This command needs to be enabled by your administrator to be accessible.

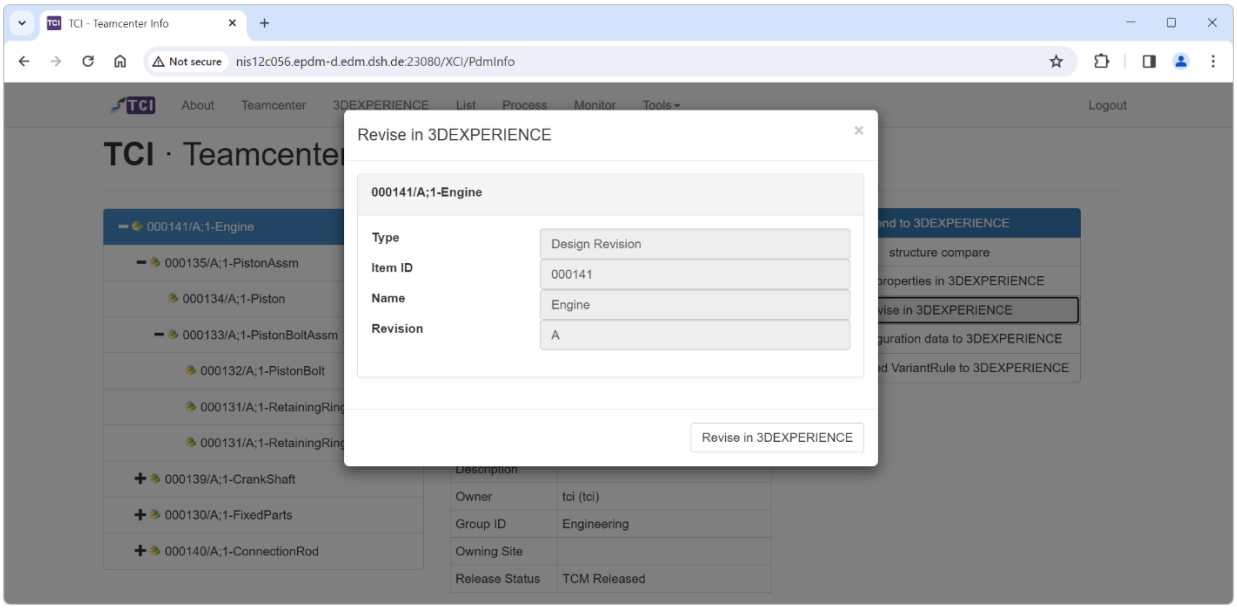

Figure 45: TCI Web – Teamcenter – Revise in 3DEXPERIENCE

5.2.1.4 ItemRevision: structure compare

Compare the structure in Teamcenter and 3DEXPERIENCE to check if all Items in the structure have been successfully transferred to 3DEXPERIENCE.

This command can be disabled by your administrator.

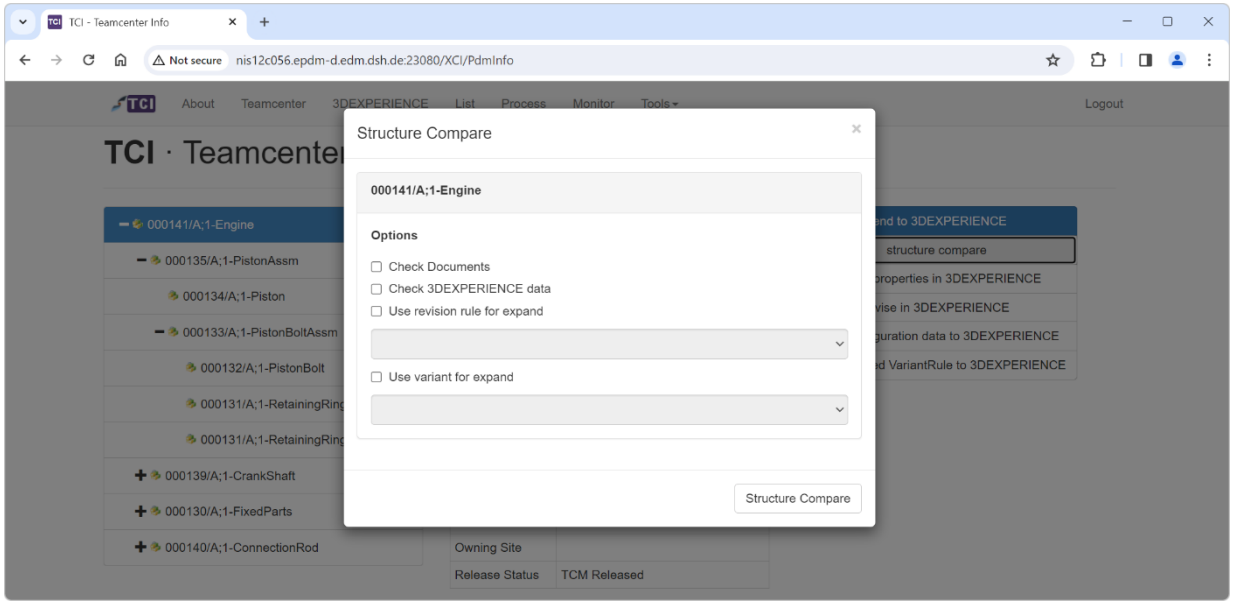

Figure 46: TCI Web – Teamcenter – Structure Compare

Options for the structure compare:

- Check Documents

  Activate to compare Dataset transfer status between Teamcenter and 3DEXPERIENCE.

- Check 3DExperience data

  If not activated, the Teamcenter structure is checked against the TCI mapping database only. Checking against 3DEXPERIENCE data can take considerably more time due to query and expand for the objects in 3DEXPERIENCE.

- Use revision rule for expand

  Activate the checkbox and select a revision rule if a specific revision rule should be used for the structure expand in Teamcenter.

- Use variant for expand

  Activate the checkbox and select a variant if a specific variant should be used for the structure expand in Teamcenter.

For large structures the compare may take time due to query and expand of the structure in both Teamcenter and 3DEXPERIENCE. The compare is therefore executed asynchronously and the result can later be retrieved from the Process page:

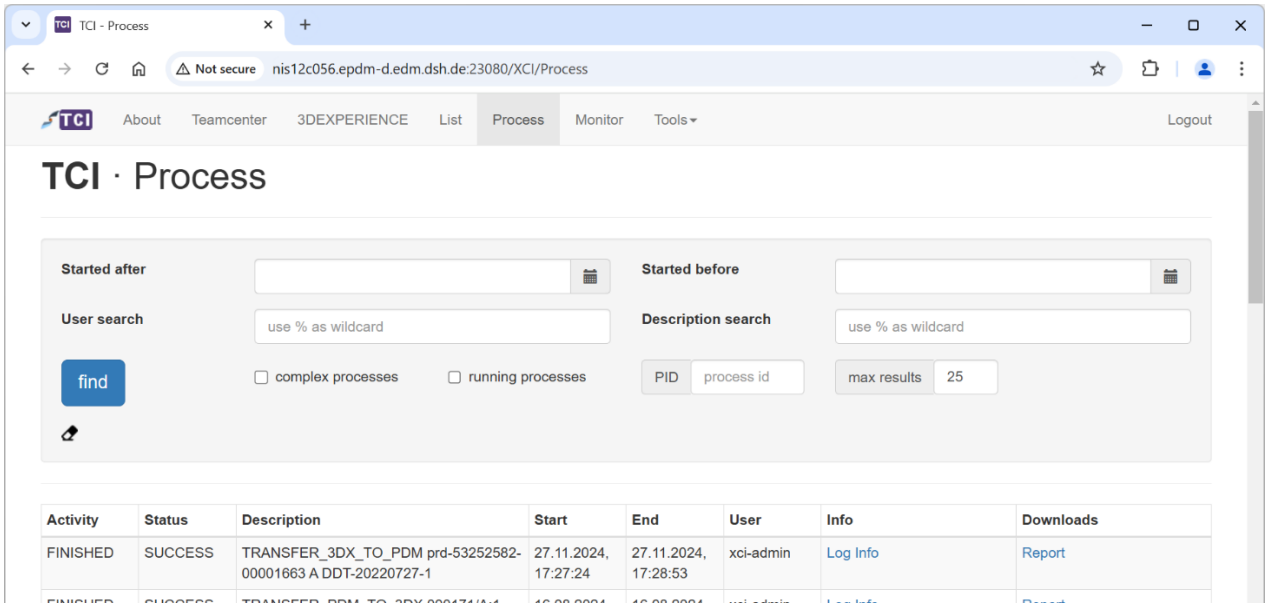

Figure 47: TCI Web – Process – Structure Compare Process Status

Compare Info opens a graphical representation of the comparison in a new browser tab. *Compare Result* downloads a .csv file containing the comparison result.

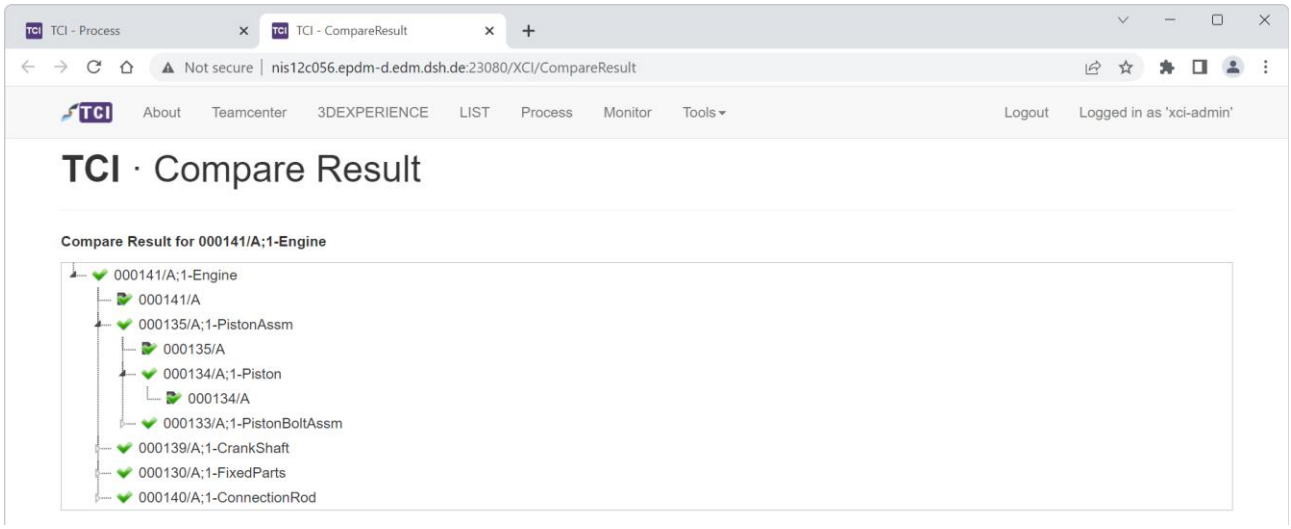

Figure 48: TCI Web – Structure Compare graphical result

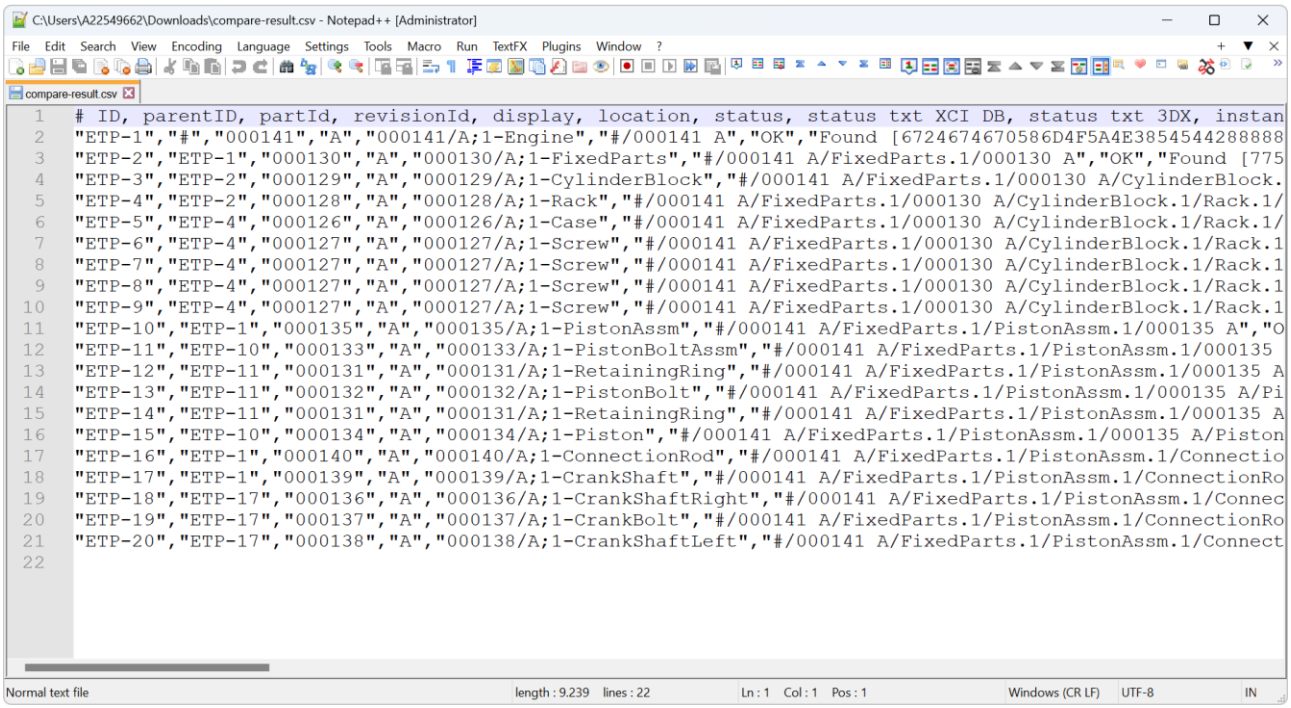

Figure 49: TCI Web – Structure Compare .csv result

5.2.1.5 ItemRevision: send Configuration data to 3DEXPERIENCE

This command reads the Teamcenter legacy Options from the selected ItemRevision and creates or updates the 3DEXPERIENCE Model, Model Version, Variants and Variant Values.

This command needs to be enabled by your administrator to be accessible.

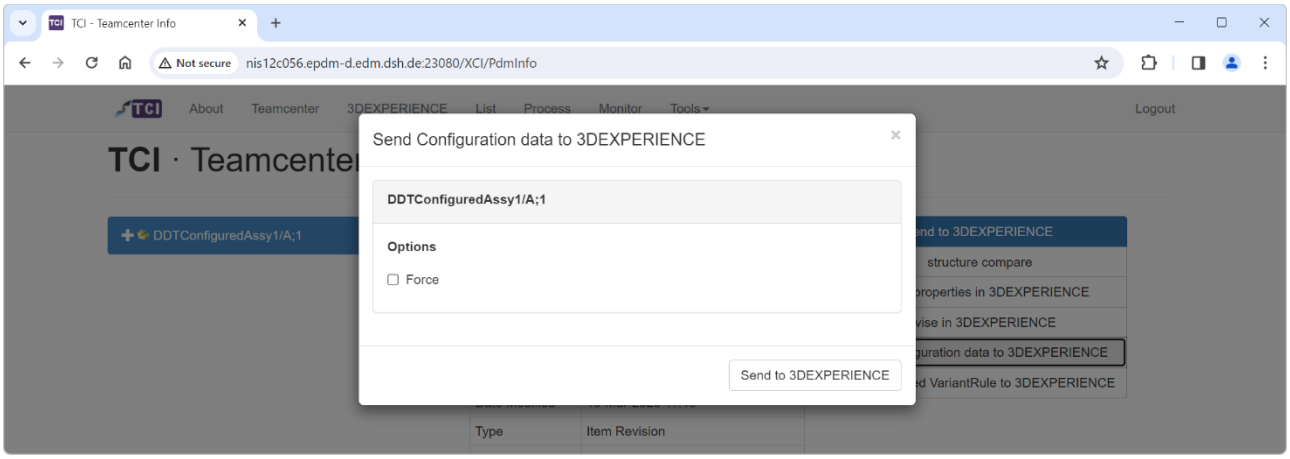

Figure 50: TCI Web – Teamcenter – Send Configuration data to 3DEXPERIENCE

5.2.1.6 ItemRevision: send attached VariantRule to 3DEXPERIENCE

The send attached VariantRule to 3DEXPERIENCE command reads all VariantRules that are attached to the selected ItemRevision in Teamcenter and creates or updates the Product Configuration in 3DEXPERIENCE. The Model, Model Version, Variants and Variant Values must already exist in 3DEXPERIENCE.

This command needs to be enabled by your administrator to be accessible.

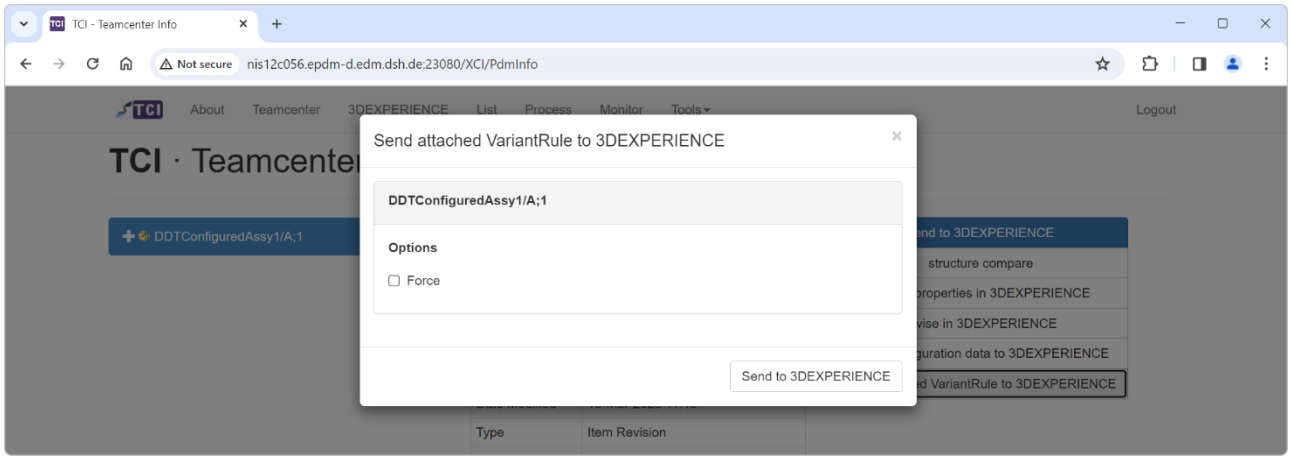

Figure 51: TCI Web – Teamcenter – Send attached VariantRule to 3DEXPERIENCE

5.2.2 Folder actions

5.2.2.1 Folder: send to 3DEXPERIENCE

The folder page displays the Items inside the folder in the structure tree on left and properties of the folder on the right. The folder can be transferred to 3DEXPERIENCE.

Options for folder transfer:

- Only Folder Structure

  If enabled, the folder structure without containing Items is transferred to 3DEXPERIENCE. The folder structure may contain multiple levels.

- for the other options see chapter 2.1.

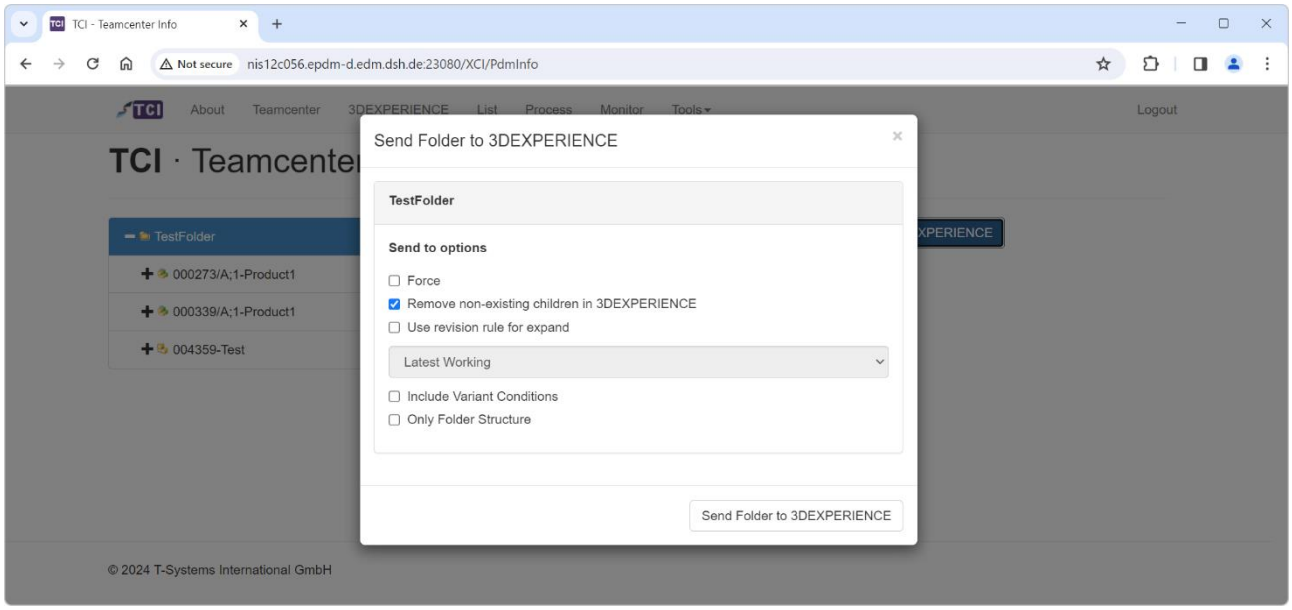

Figure 52: TCI Web – Teamcenter – Send Folder to 3DEXPERIENCE.

5.2.3 VariantRule actions

5.2.3.1 VariantRule: send to 3DEXPERIENCE

The VariantRule page displays the selected VariantRule. It can be transferred to 3DEXPERIENCE. The transfer creates or updates the Product Configuration in 3DEXPERIENCE. The Model, Model Version, Variants and Variant Values must already exist in 3DEXPERIENCE.

This command needs to be enabled by your administrator to be accessible.

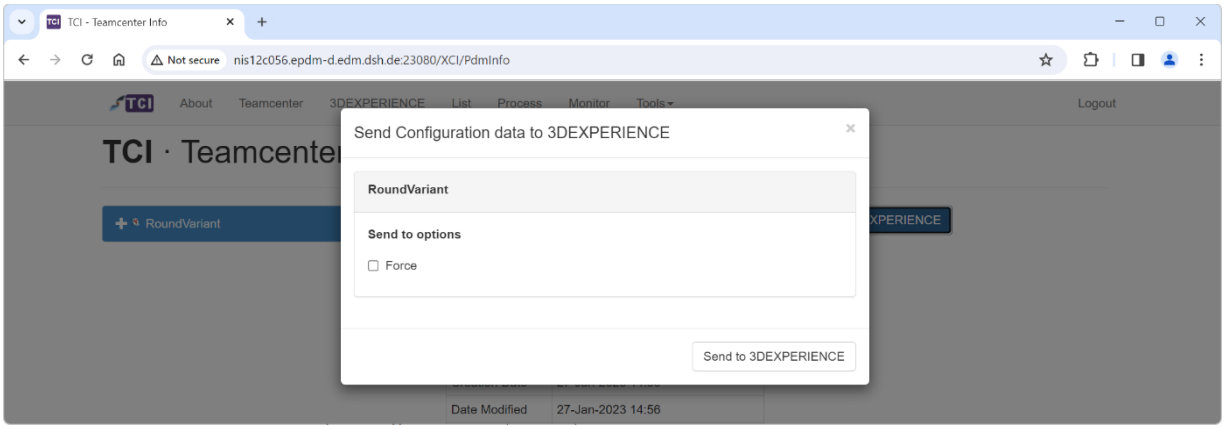

Figure 53: TCI Web – Teamcenter – Send VariantRule to 3DEXPERIENCE.

5.3 3DEXPERIENCE

On the *3DEXPERIENCE* page you can query for 3DEXPERIENCE objects of different types:

- Physical Product
- Bookmark / Engineering Folder
- Configuration Model

In the query criteria fields you can use wildcards. Click on the *find* button to start the query.

The query result will be displayed in the table below. When you click on the display name of the object the object will be shown on a new page.

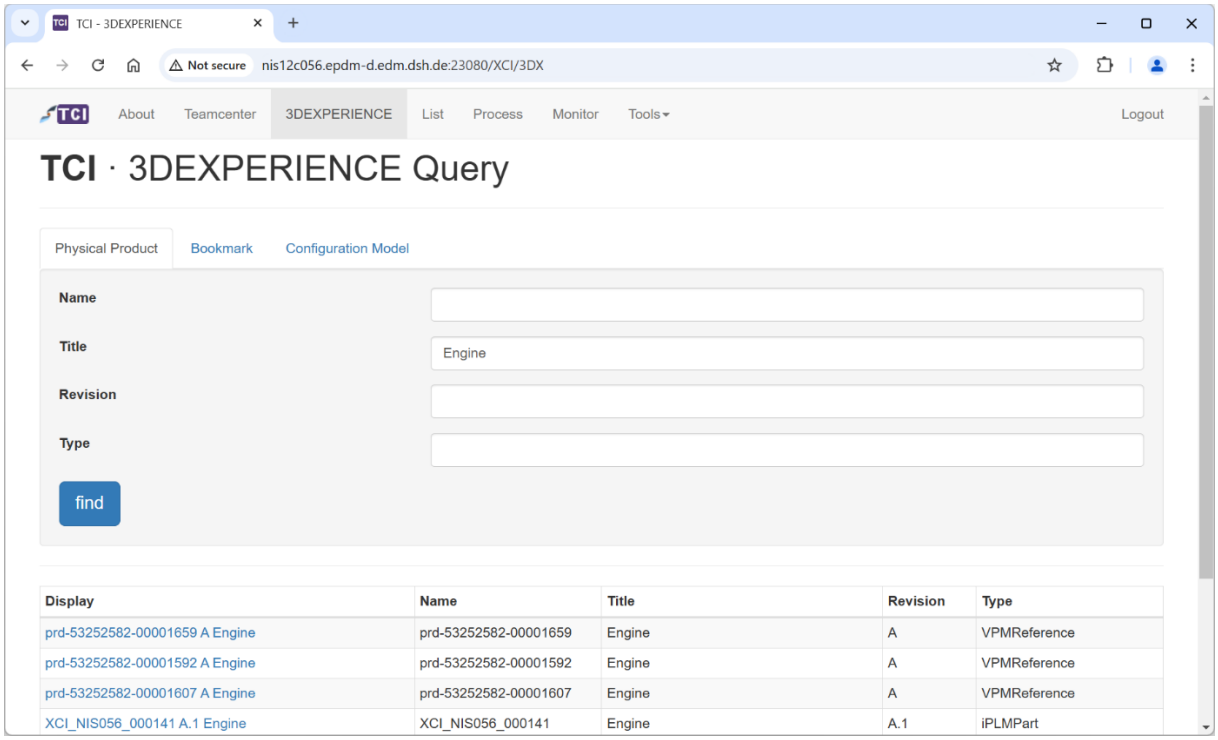

Figure 54: TCI Web – 3DX – Query result

When opening a result from the query, information about that object are displayed:

- structure tree to expand the structure below the selected object in 3DEXPERIENCE
- 3DEXPERIENCE properties of the selected object
- commands, for example transfer to 3DEXPERIENCE or structure comparison with 3DEXPERIENCE

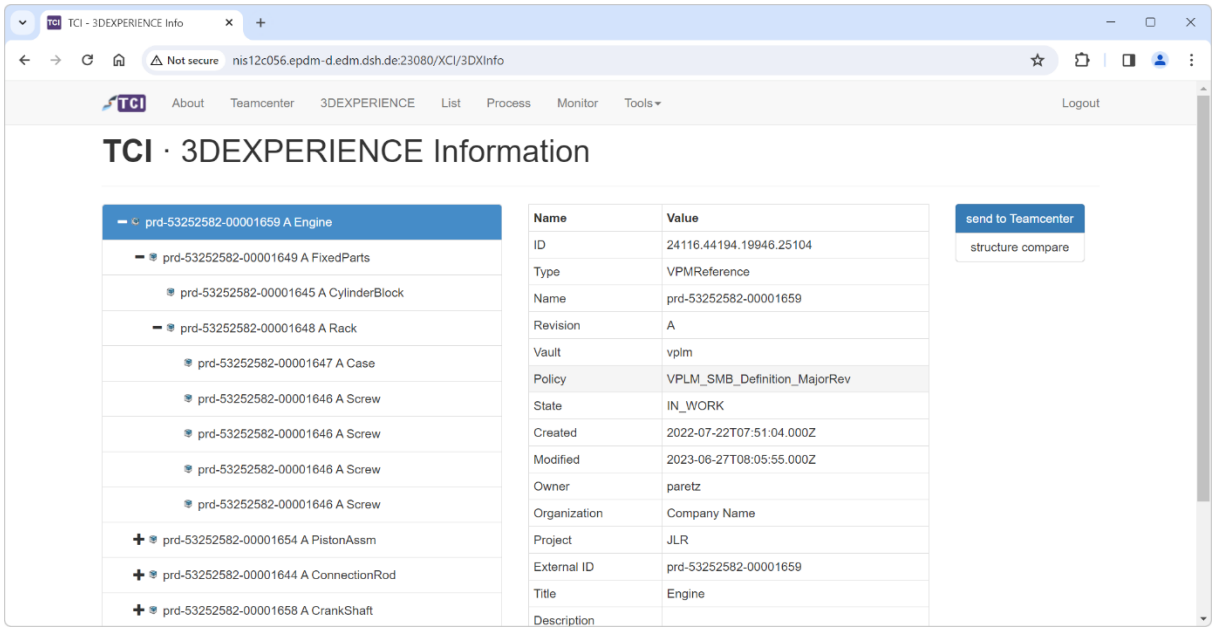

Figure 55: TCI Web – 3DX – Expanded structure

5.3.1 Physical Product: send to Teamcenter

By clicking the *send to Teamcenter* button you can start the transfer to Teamcenter.

In this dialog you have some options, to configure the *Send to Teamcenter* functionality.

For details, please refer to *chapter 4.7 TCI command Send to Teamcenter*.

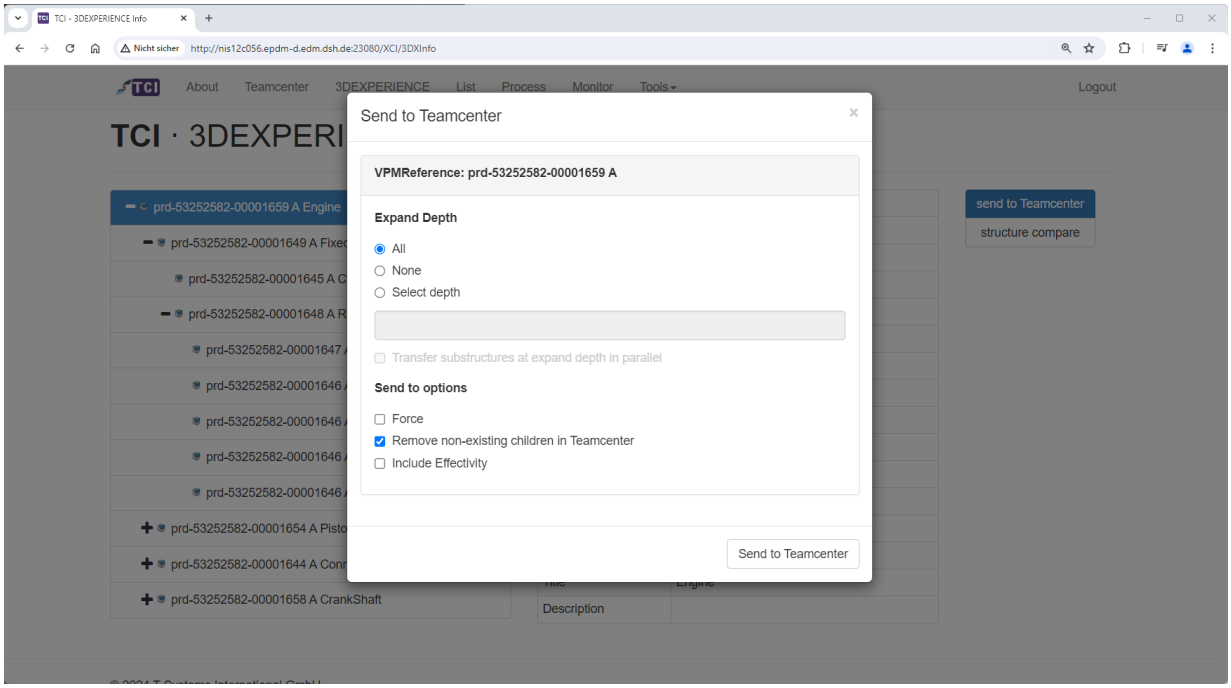

Figure 56: TCI Web – 3DX – Send to Teamcenter options

The Include Effectivity checkbox is only accessible if enabled by your administrator.

Include Effectivity will transfer the effectivity info from 3DEXPERIENCE to Teamcenter and creates the Variant Conditions (Configuration needed in XCISettings).

5.3.2 Physical Product: structure compare

Compare the structure in Teamcenter and 3DEXPERIENCE to check if all Items in the structure have been successfully transferred to Teamcenter.

This command can be disabled by your administrator.

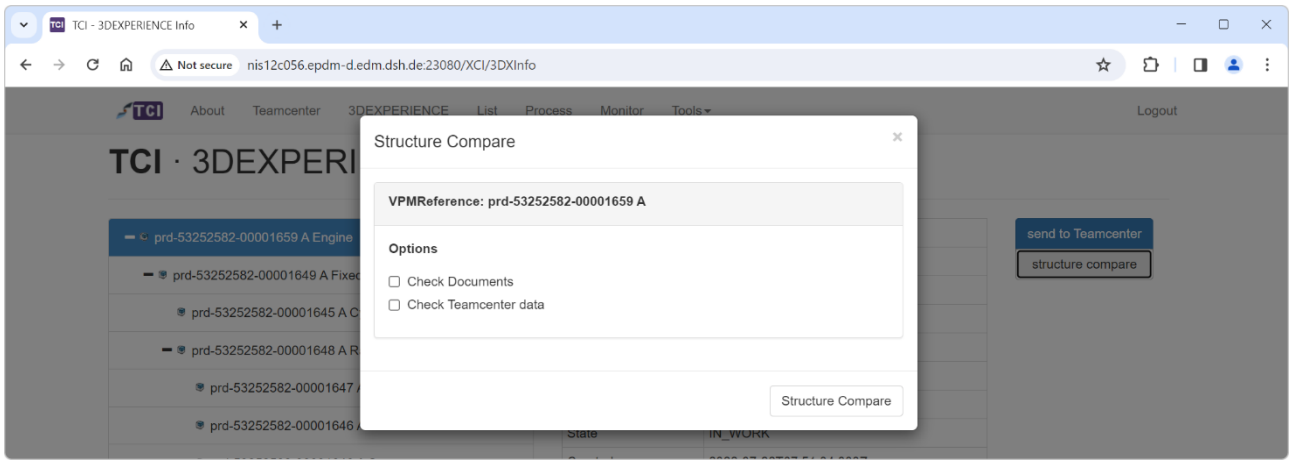

Figure 57: TCI Web – 3DX – Structure compare options

Options for structure compare:

- Check Documents

  Activate to compare Dataset transfer status between Teamcenter and 3DEXPERIENCE.

- Check Teamcenter data

  If not activated, the Teamcenter structure is checked against the TCI mapping database only. Checking against Teamcenter data can take more time due to query and expand for the objects in Teamcenter.

For large structures the compare may take time due to query and expand of the structure in both Teamcenter and 3DEXPERIENCE. The compare is therefore executed asynchronously, and the result can later be retrieved from the Process page by the *Compare Info* and *Compare Result* links:

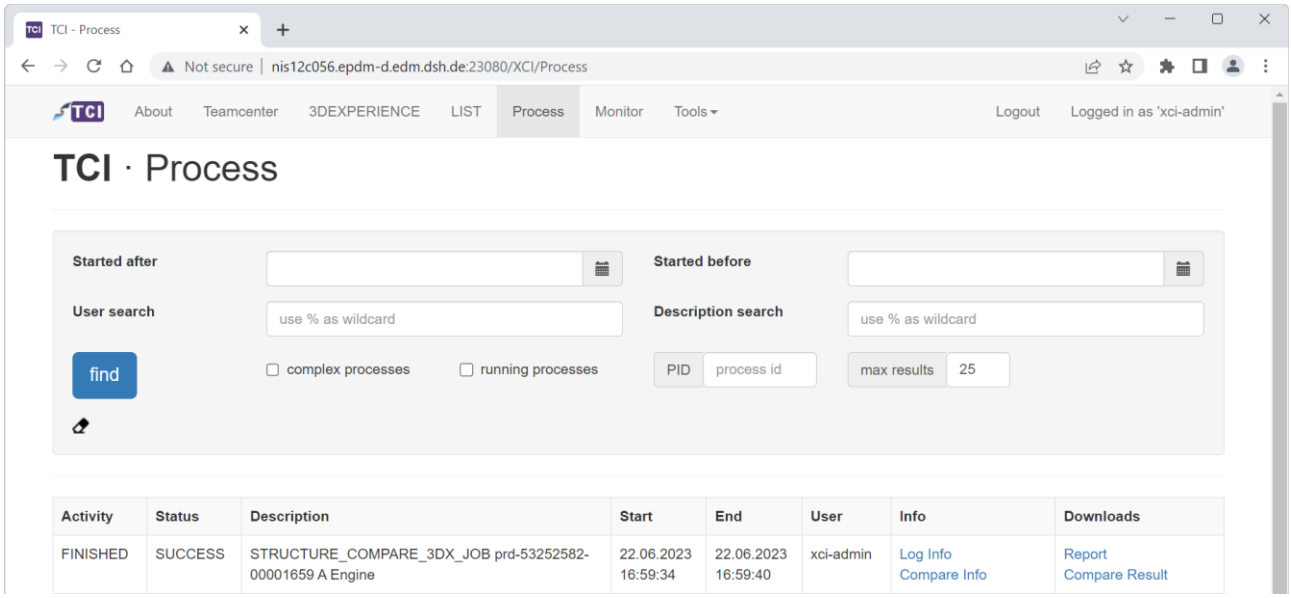

Figure 58: TCI Web – Process – Structure Compare Process Status

5.3.3 Bookmark / Engineering Folder: send to Teamcenter

Bookmarks or Engineering Folder can be transferred to Teamcenter. Depending on TCI configuration, only Bookmarks or only Engineering Folder can be transferred (see figure below).

The functionality is the same for both Bookmarks and Engineering Folder. In the following, it is only described for Bookmarks.

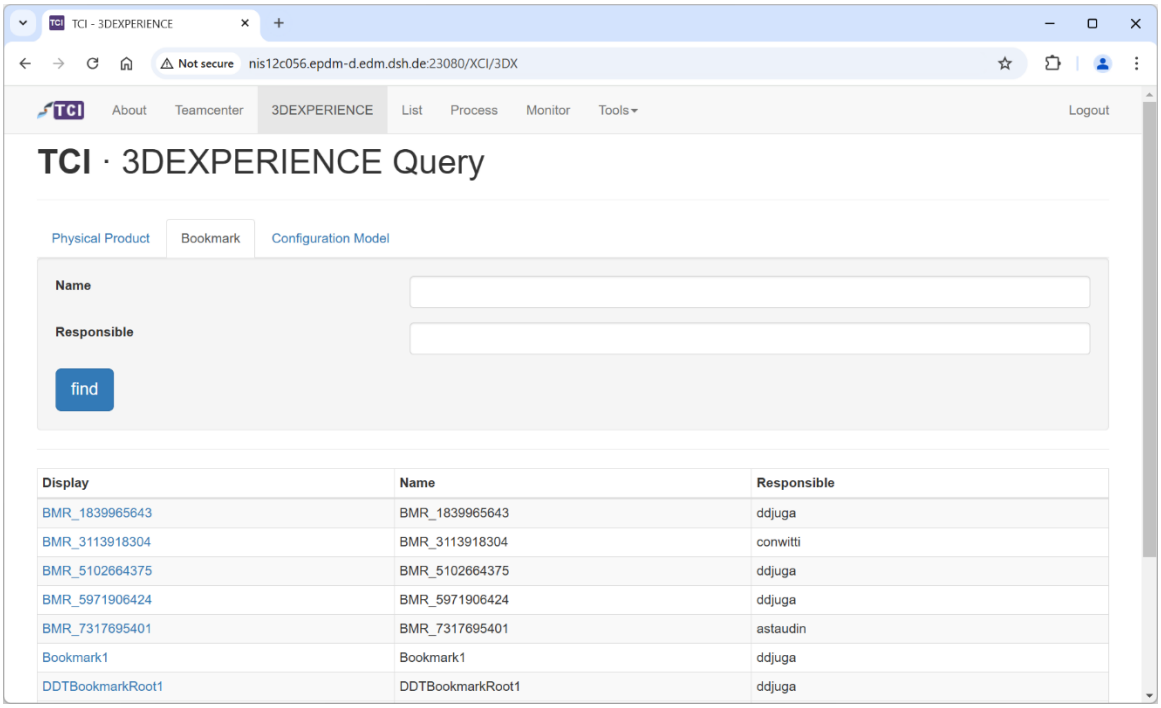

Figure 59: TCI Web – 3DX – Bookmark query

Selecting a query result displays the Bookmark structure and attributes. The Bookmark can be transferred to Teamcenter.

Options for Bookmark transfer:

- Only Bookmark Structure

  If selected, the Bookmark structure is transferred without attached Physical Products. The Bookmark structure may contain multiple levels.

- for the other options see chapter 5.3.1

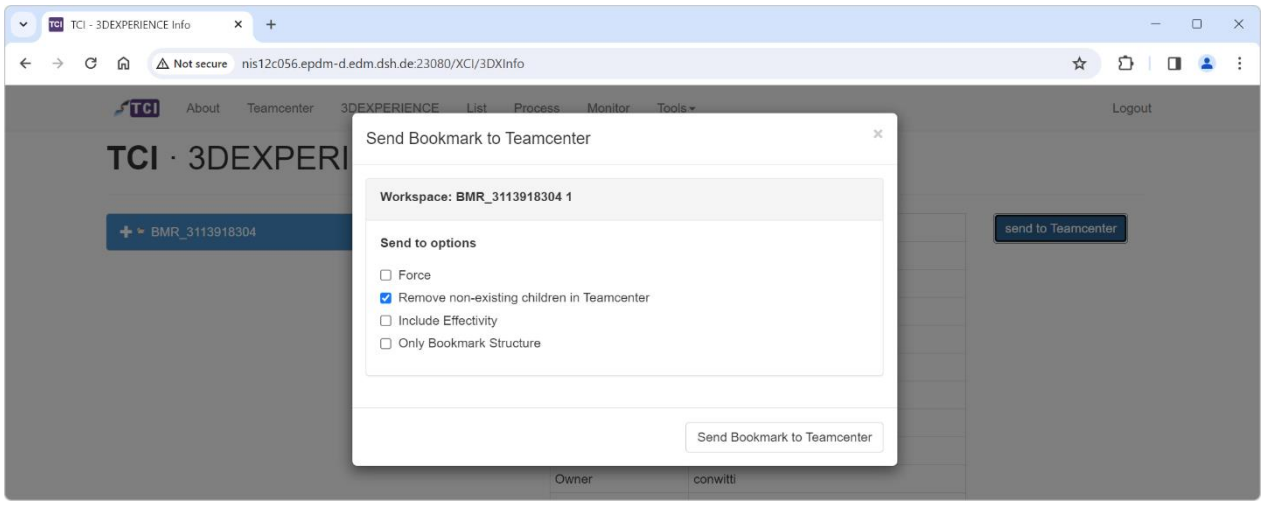

Figure 60: TCI Web – 3DX – Send Bookmark to Teamcenter

5.3.4 Configuration Model: send to Teamcenter

With the Configuration Model tab the query for 3DEXPERIENCE Models is shown.

This command needs to be enabled by your administrator to be accessible.

In the search filed you can use wildcards. Click on the *find* button to start the Configuration Model query.

The query result will be displayed in the table below. When you click on the display name of the object the object will be shown on a new page.

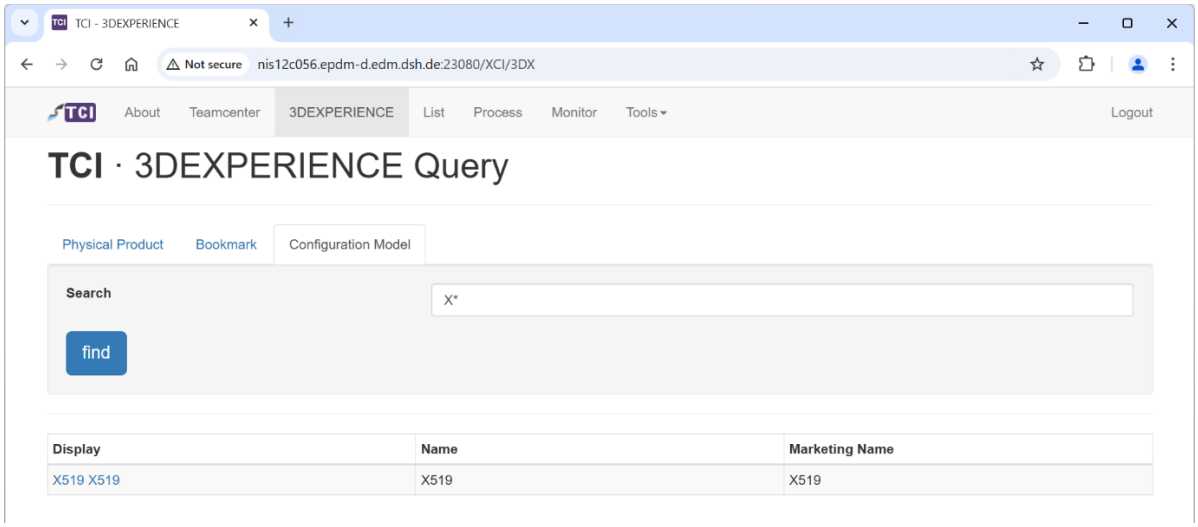

Figure 61: TCI Web – 3DX – Query result with Configuration Models

When opening a result from the query, information about that Model are displayed:

- structure tree to expand the Model Versions below the selected Model in 3DEXPERIENCE
- 3DEXPERIENCE properties of the selected Model or Model Version
- transfer to Teamcenter command

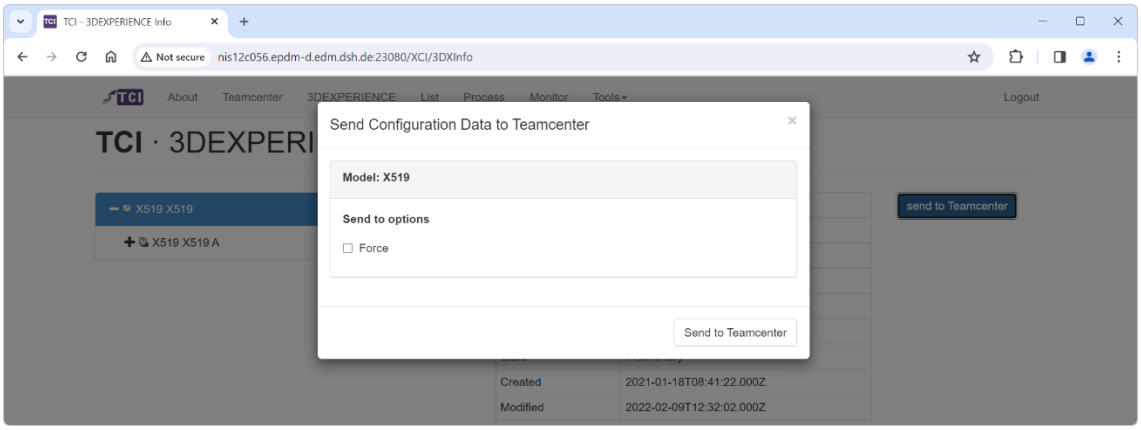

Figure 62: TCI Web – 3DX – Send to Teamcenter options for the Model

As a result, the Configuration Model and its Model Versions with Options and Configurations are exported from 3DEXPERIENCE and imported to the Legacy Configuration of Teamcenter. The Configuration Items in Teamcenter must be configured in XCISettings.

Legacy Options, Option Values and Variant Rules are transferred to Teamcenter.

5.4 List

With list processing you can transfer a list of objects between Teamcenter and 3DEXPERIENCE. Upload a .csv file containing the list of objects.

If sending a list to 3DEXPERIENCE, a revision rule can be selected to resolve incomplete information in the input list, i. e. only Item ID is provided but no revision. Before sending the list, it must be validated against Teamcenter to check if objects exist using the "Validate" button.

If sending a list to Teamcenter, the list is automatically validated against 3DEXPERIENCE to check if objects exist.

After validation the list can be send to Teamcenter or 3DEXPERIENCE. If there were errors during object validation, the erroneous objects will be highlighted. You can filter the list to only show these erroneous objects.

Using *Save* you can download the validated list.

The input format list transfer from Teamcenter to 3DEXPERIENCE is (type or revision may be empty):

```
#Item ID;Revision;Type
000141;A;ItemRevision
000142;C;Design Revision
000143;B;
000144;;
```

The input format list transfer from 3DEXPERIENCE to Teamcenter is (type may be empty):

```
#Name;Revision;Type
000010;A;Part
000005;F;Part
000011;A;
000015;A;
```

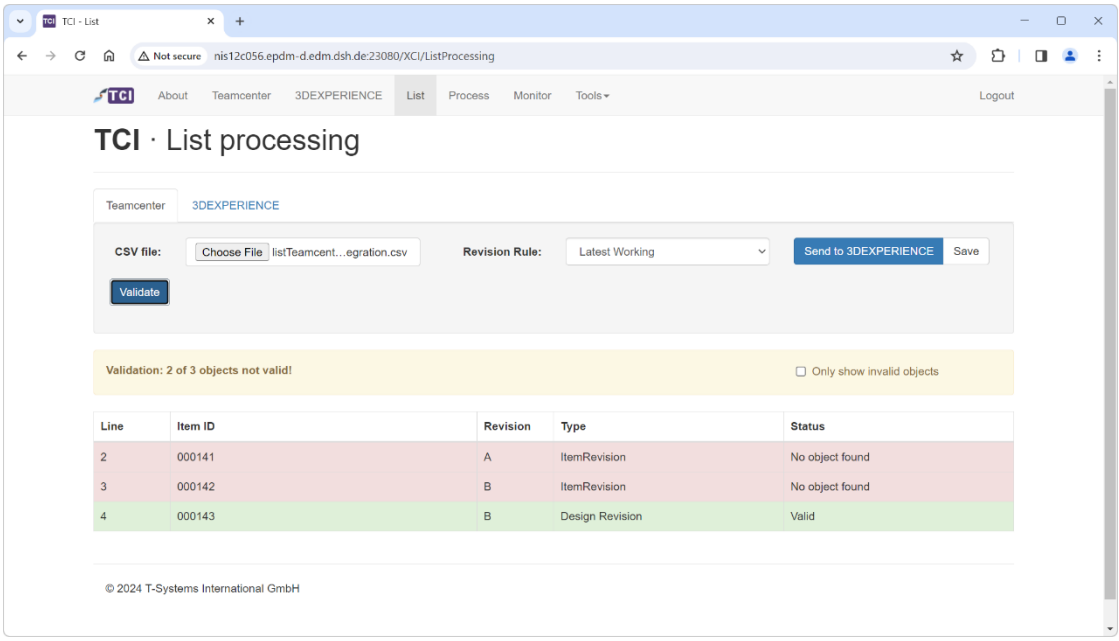

Figure 63: ACI Web – List – Teamcenter – List partially validated.

5.5 Process

On the *Process* page you can get the information about the processes of the transfer actions.

The search for specific data transfer jobs is possible by entering a started after date, started before date, username and/or a description search string. For the dates the calendar widget can be used. For the strings the wildcard % is possible.

Click the *find* button to start the query. The query result will be displayed in the table below.

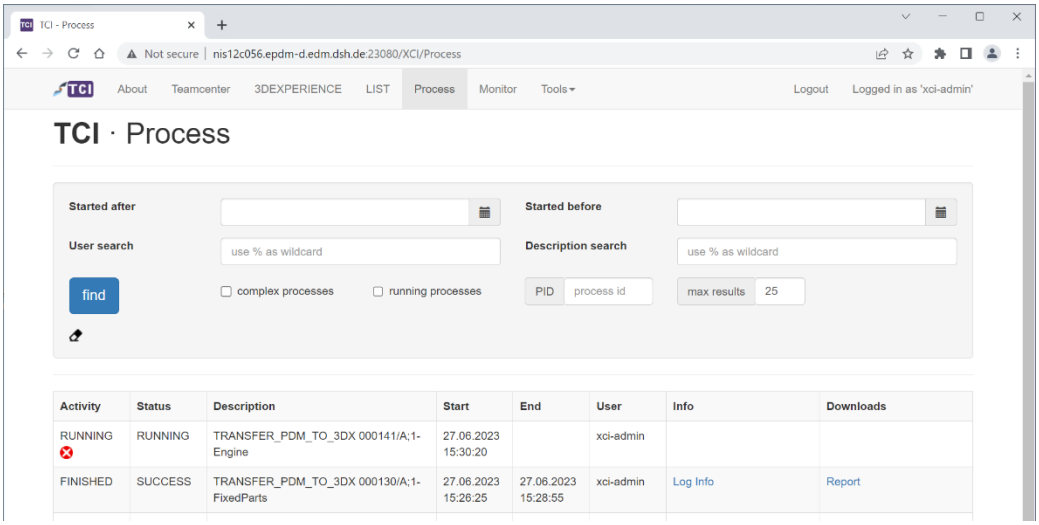

Figure 64: TCI Web – Tools – Process – Query result

The result will show the activity and the status with start and end date. The description includes the function and the display name of the object. If the Status is FAILED, more information is available with the tooltip and the link of the Status.

Running processes (Status RUNNING) can be stopped by clicking . Processes are not stopped immediately, instead processes check throughout processing if stop has been triggered to terminate gracefully.

When activating the "complex processes" checkbox, only complex processes are searched, e.g. Folder transfer or List transfers. The symbol in the result for a complex process shows all child processes of this complex process.

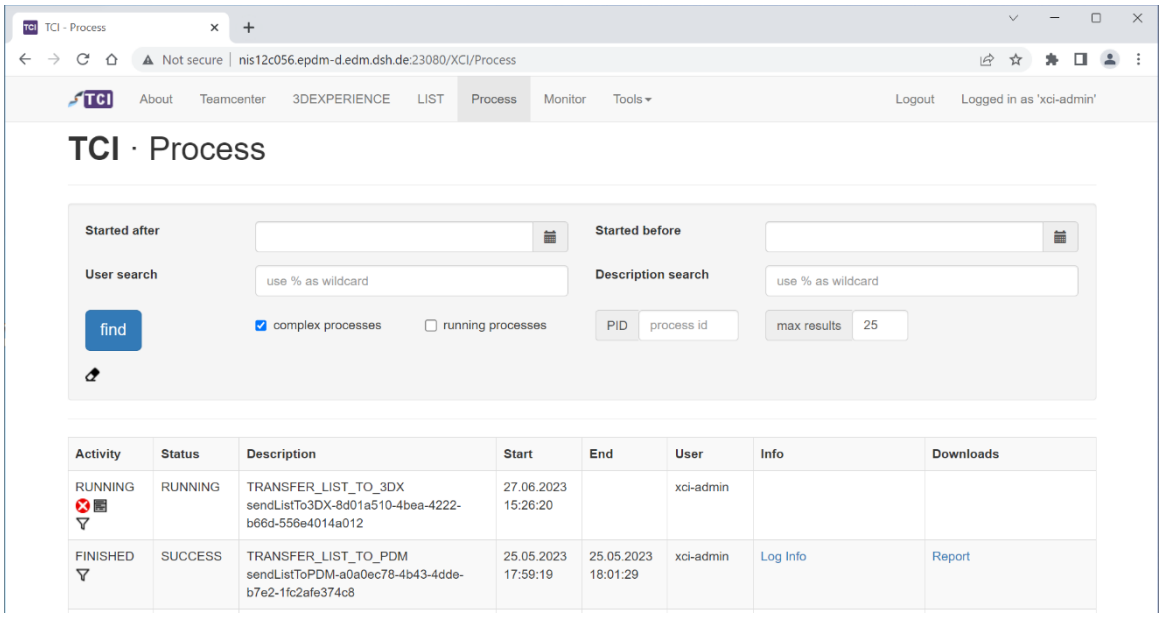

Figure 65: TCI Web – Tools – Process – Query result for complex processes.

Use to show all queued processes of a list (transfer that have been initiated by the user but have not been started by TCI yet).

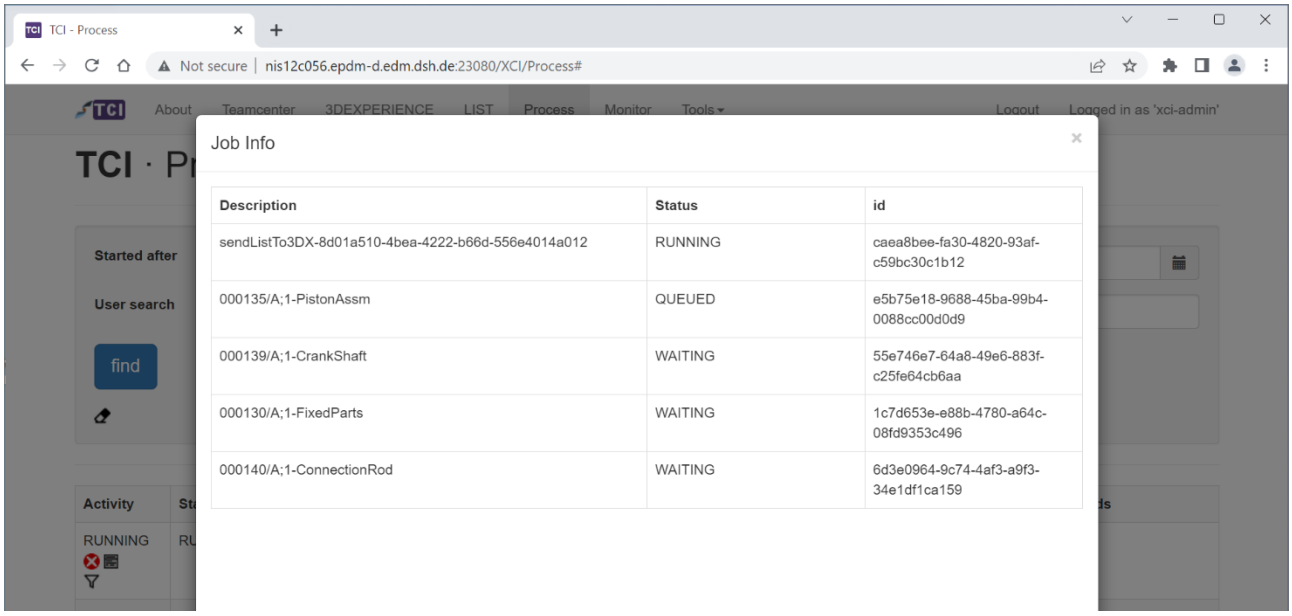

Figure 66: TCI Web – Tools – Process – Show queued jobs for a list process.

If Log files are available, the open Info link provide more information.

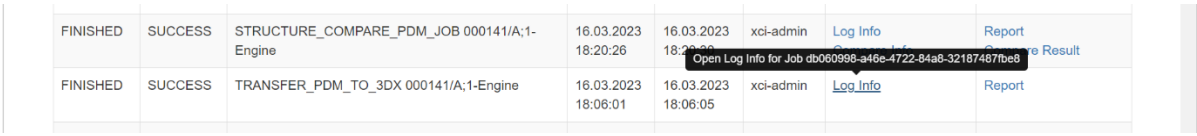

Figure 67: TCI Web – Tools – Process – open log info

The open Info link provides more Information about the process.

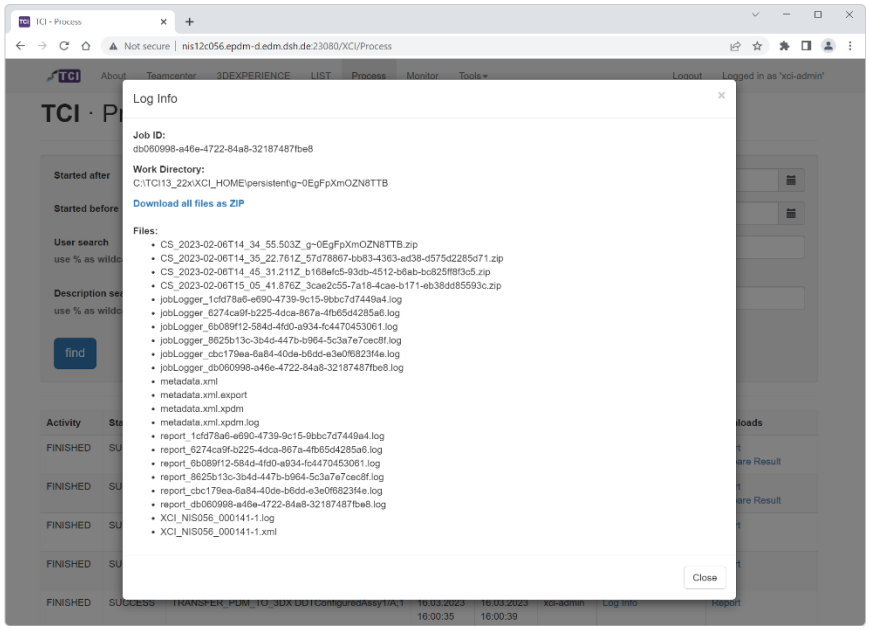

Figure 68: TCI Web – Tools – Process – log info dialog

The info contains the Work directory and the Files which can be downloaded from the Work directory as zip file. The downloadable files are logs, control and meta information files, but not CAD Files. The zip files starting with “CS_” are logs from the Conversion Server infrastructure.

The zip file can be downloaded with the **Download all files as ZIP** link.

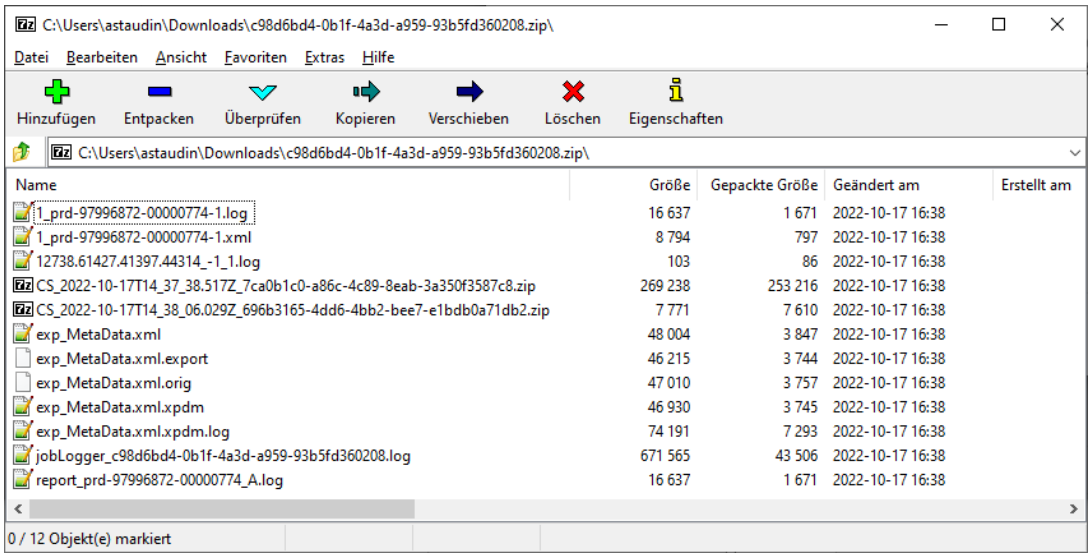

Figure 69: TCI Web – Tools – Process – downloaded ZIP file

The CS logs contain logs from the Converter Server and an info file with the CS info.

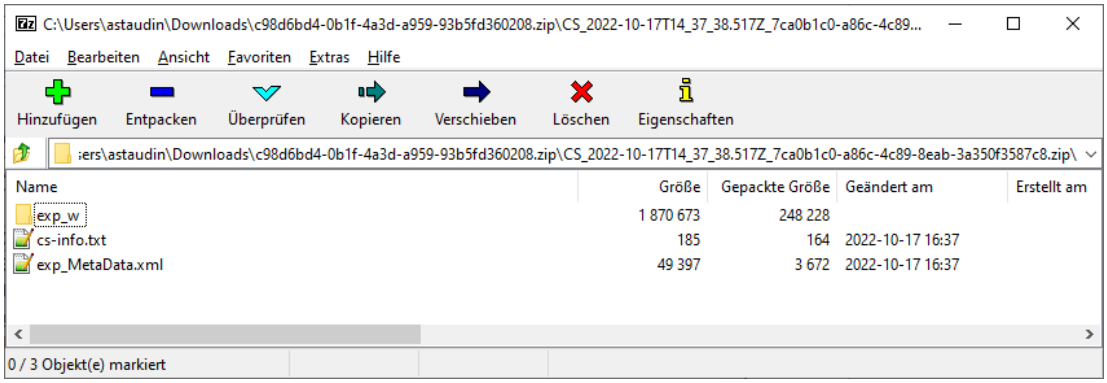

Figure 70: TCI Web – Tools – Process – downloaded CS ZIP file

The “cs-info.txt” contains the following info:

```
Date: 2022-10-17T14:37:38.517Z
CS-Host: NIS07C203.epdm-d.edm.dsh.de
CS-Port: 17080
Working directory: C:\XCI\XCI_CS_HOME\workdir\7ca0b1c0-a86c-4c89-8eab-3a350f3587c8
Type: v6XPDMExport
```

5.6 Monitor

The *Monitor* page will display an overview about the used resources and running processes.

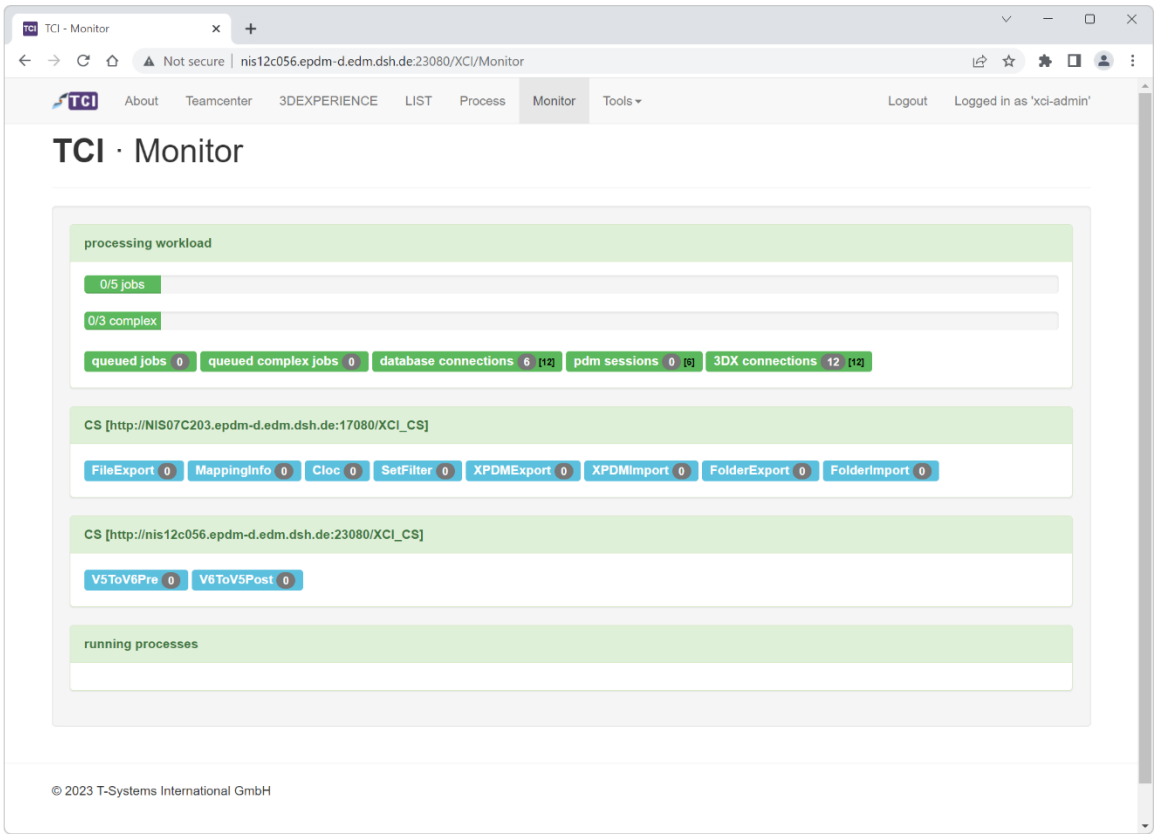

Figure 71: TCI Web – Monitor

The information is grouped in the following sections:

- processing workload: Overview of the job pool workload and the used resources.
- converter server: Overview of the converter server with their configured converters and their workload.
- running processes: Overview of the running processes.

5.7 Tools

There are several tools available in the *Tools* menu.

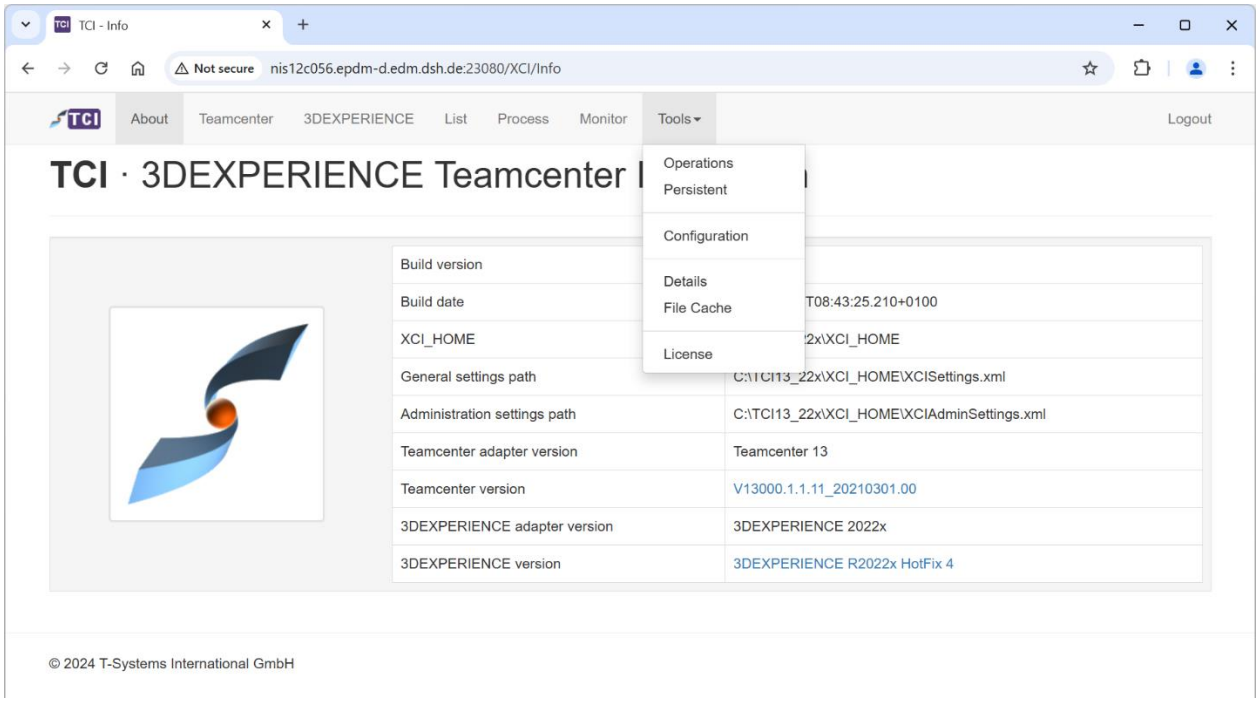

Figure 72: TCI Web – Tools – Operations

The following tools will be described:

- Operations
- Persistent
- Configuration
- Details
- File Cache
- License

Details and File Cache are disabled by default and must be enabled in TCI settings.

5.7.1 Operations

Select *Tools* → *Operations* to get the information about the operations of the transfer actions.

The search for specific data transfer jobs is possible by entering a start date, end date and/or an object search string. For the dates the calendar widget can be used. For the string the wildcard % is possible.

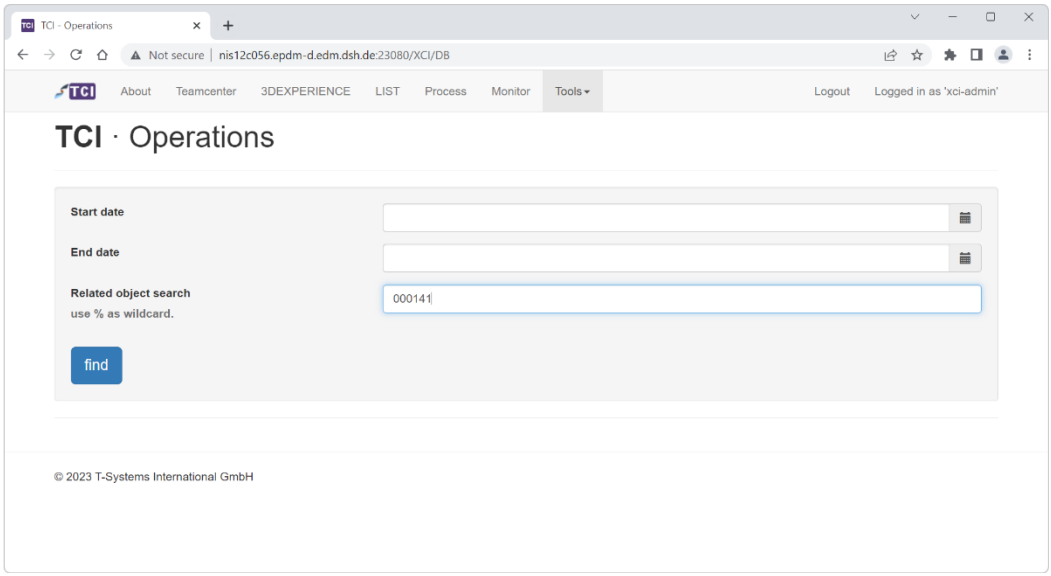

Figure 73: TCI Web – Operations – Query

Click the *find* button to start the query. The query result will be displayed in the table below.

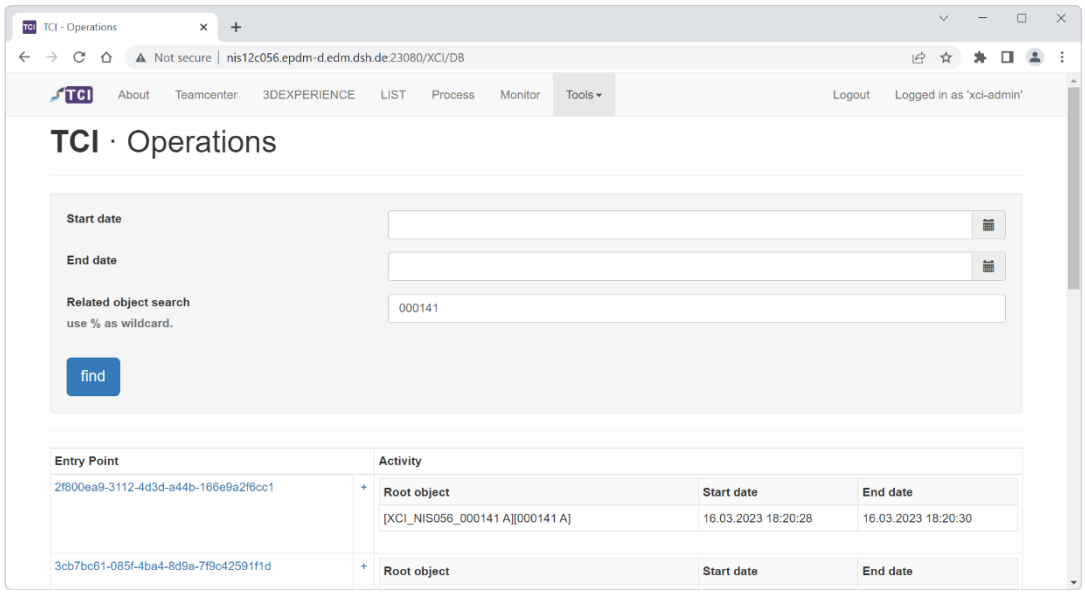

Figure 74: TCI Web – Operations – Query result

By selecting the respective plus sign + detailed information on the individual steps of an Entry Point are displayed.

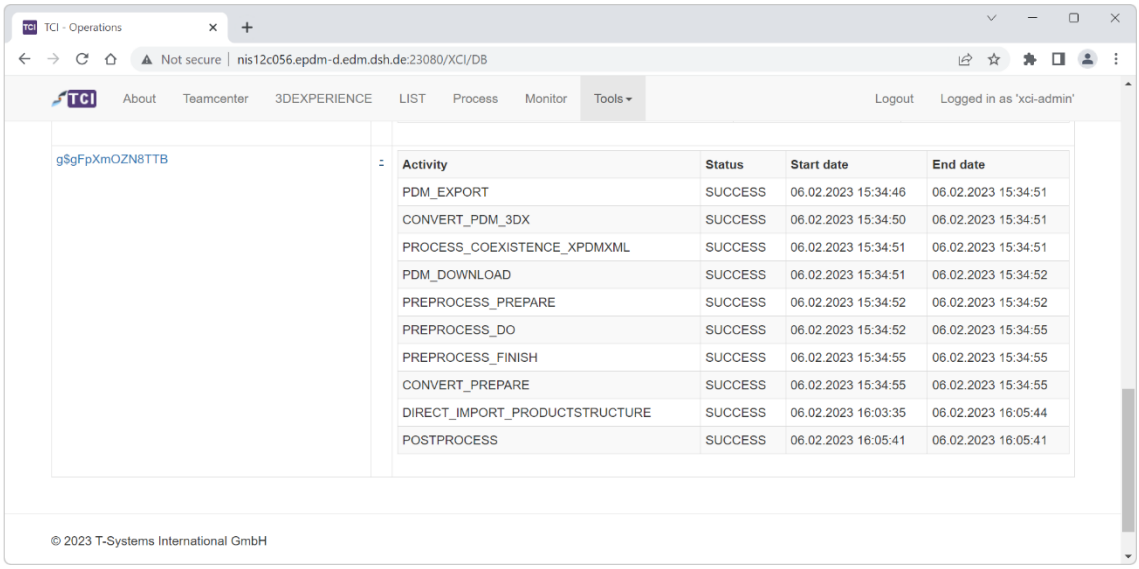

Figure 75: TCI Web – Operations – Details

By clicking on the Entry Point name, the related objects are displayed on a new page.

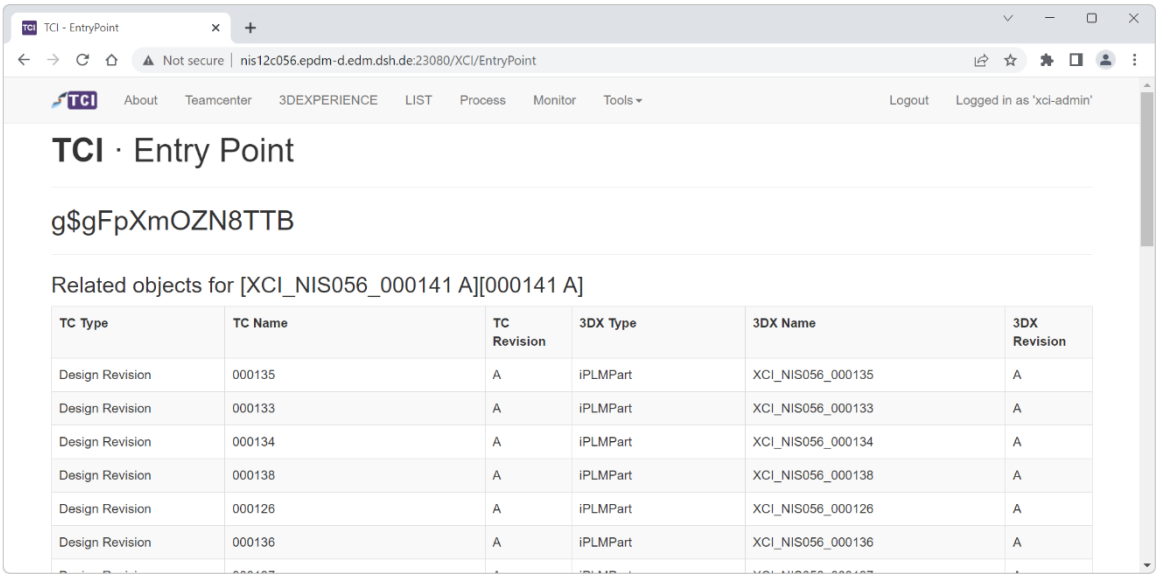

Figure 76: TCI Web – Operations – Entry Point

5.7.2 Persistent

Select *Tools* → *Persistent* to get the information about the operations of the transfer actions stored in the persistent directory.

The information is based on the existing files in the persistent directory.

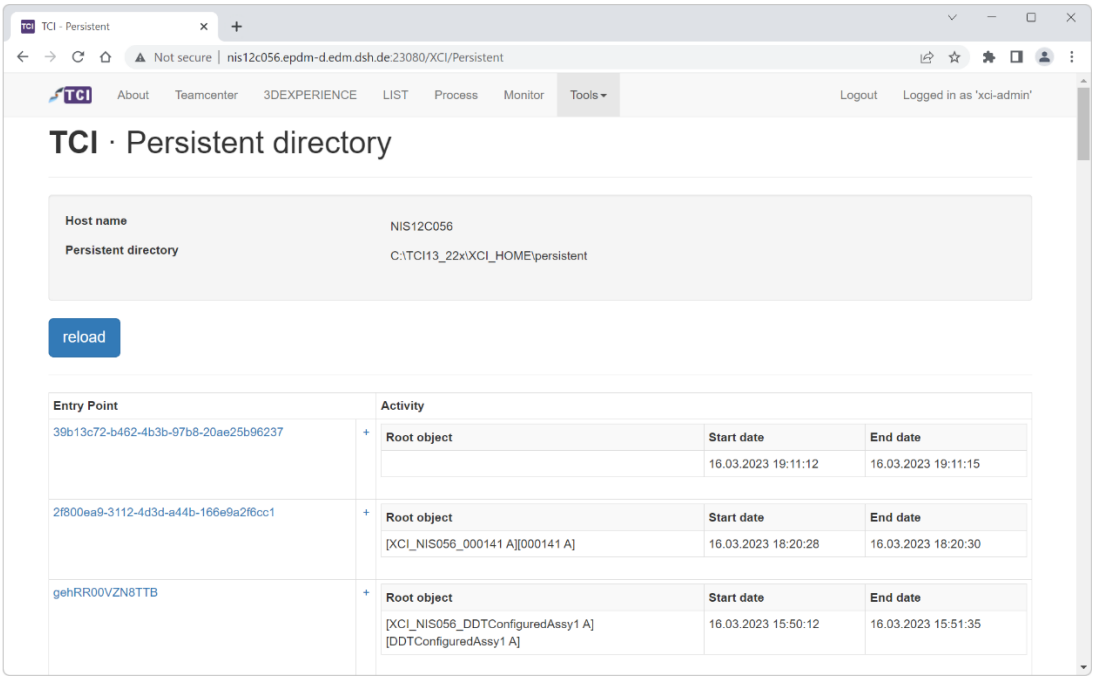

Figure 77: TCI Web – Persistent directory

By selecting the respective plus sign + detailed information on the individual steps of an Entry Point are displayed.

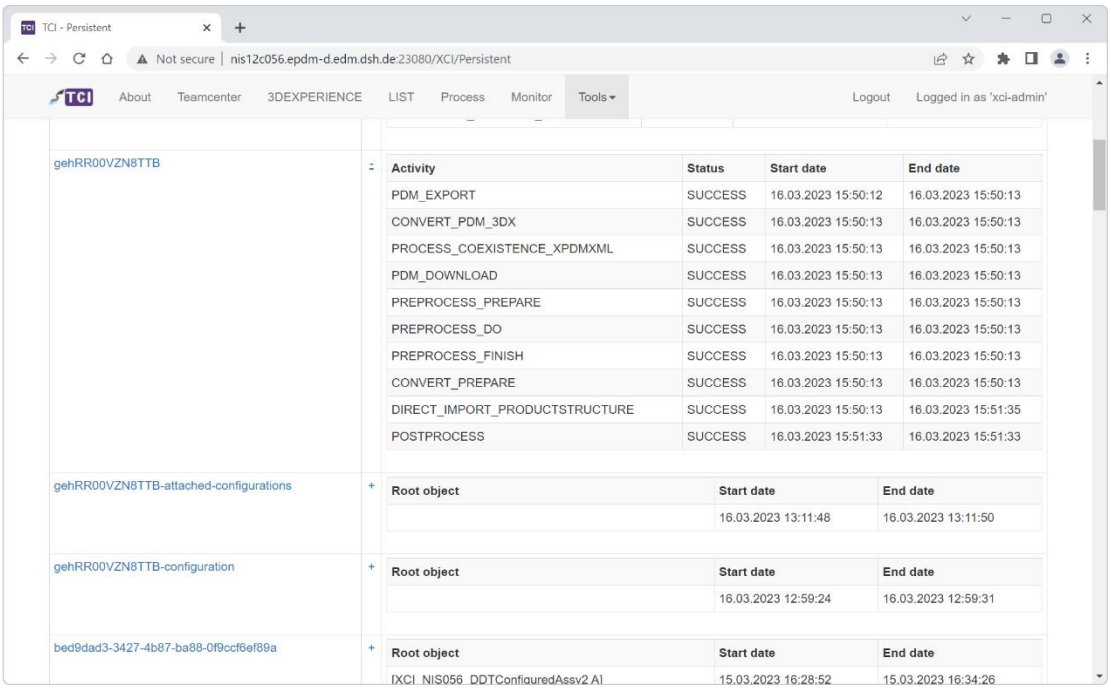

Figure 78: TCI Web – Persistent directory – Details

By selection the Entry Point name, the related objects are displayed on a new page.

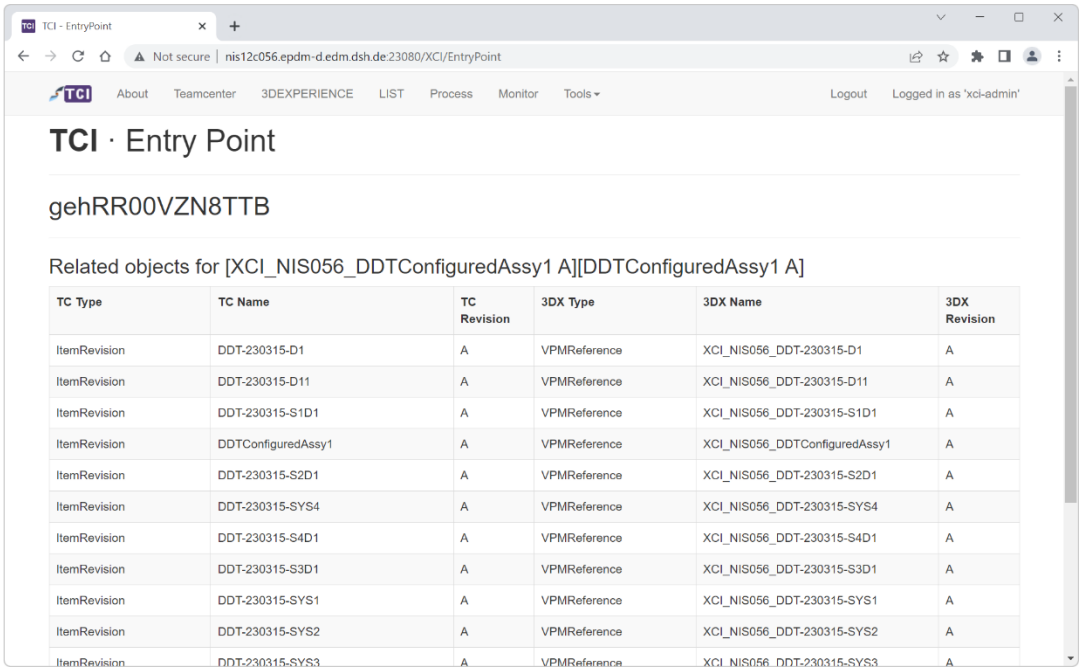

Figure 79: TCI Web – Persistent directory – Entry Point

5.7.3 Configuration

Select *Tools* → *Configuration* to see the TCI configuration.

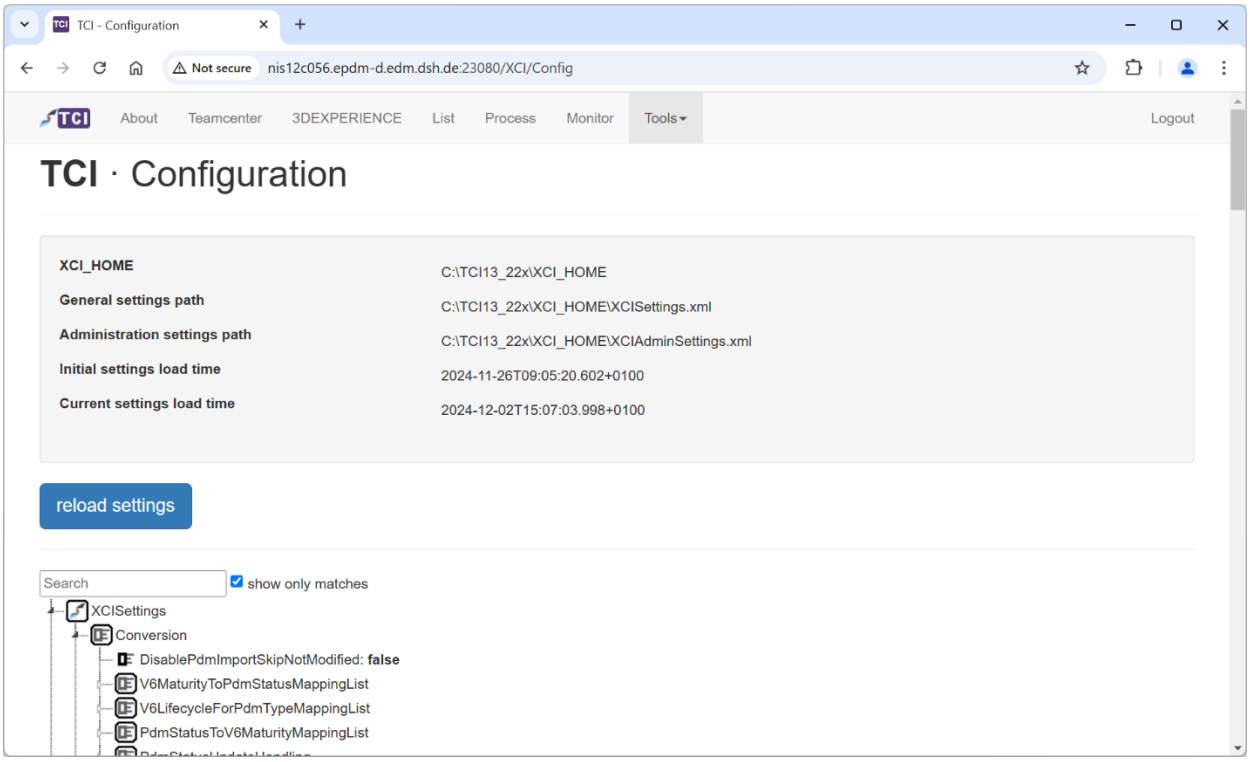

Figure 80: TCI Web – Tools – Configuration

The TCI configuration is displayed. You can search for specific settings, if found they are highlighted in red.

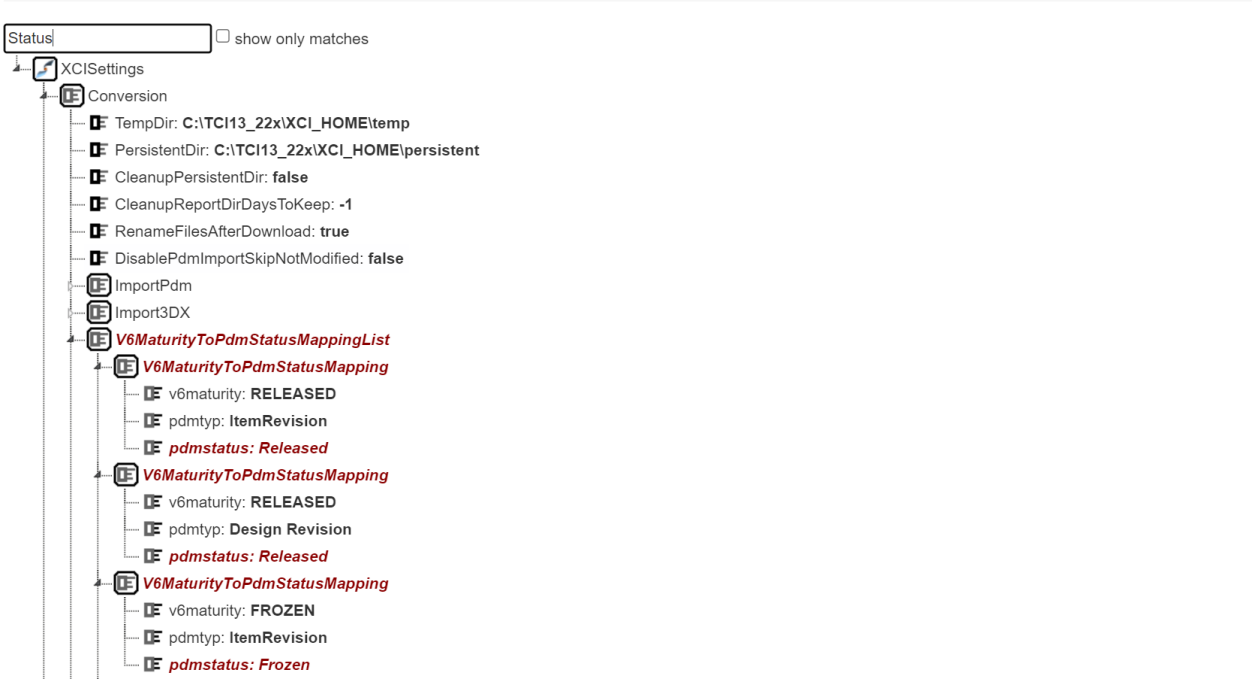

Figure 81: TCI Web – Tools – Configuration: searching configuration values.

By clicking the *reload settings* button, the settings will be reloaded from the *XCISettings.xml* file.

If the settings are successfully loaded, the success message *Loaded new settings* is shown, otherwise an error is displayed.

5.7.4 Details

Select Tools → Details to get detail information for a given ID. The id can be from Teamcenter or 3DEXPERIENCE.

This view must be enabled by your administrator to be accessible.

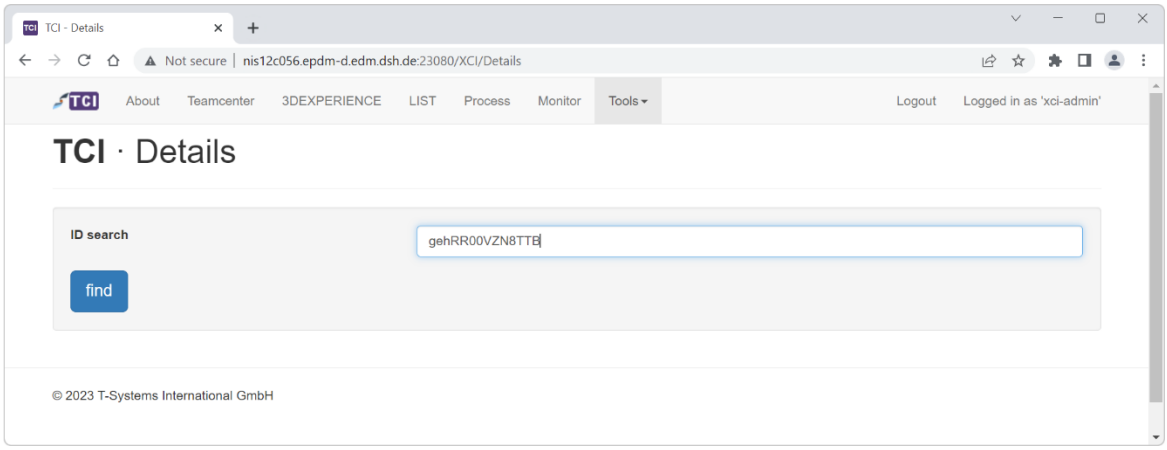

Figure 82: TCI Web – Details – Query page

Click on the *find* button to start the query. The query result will be displayed in the table below.

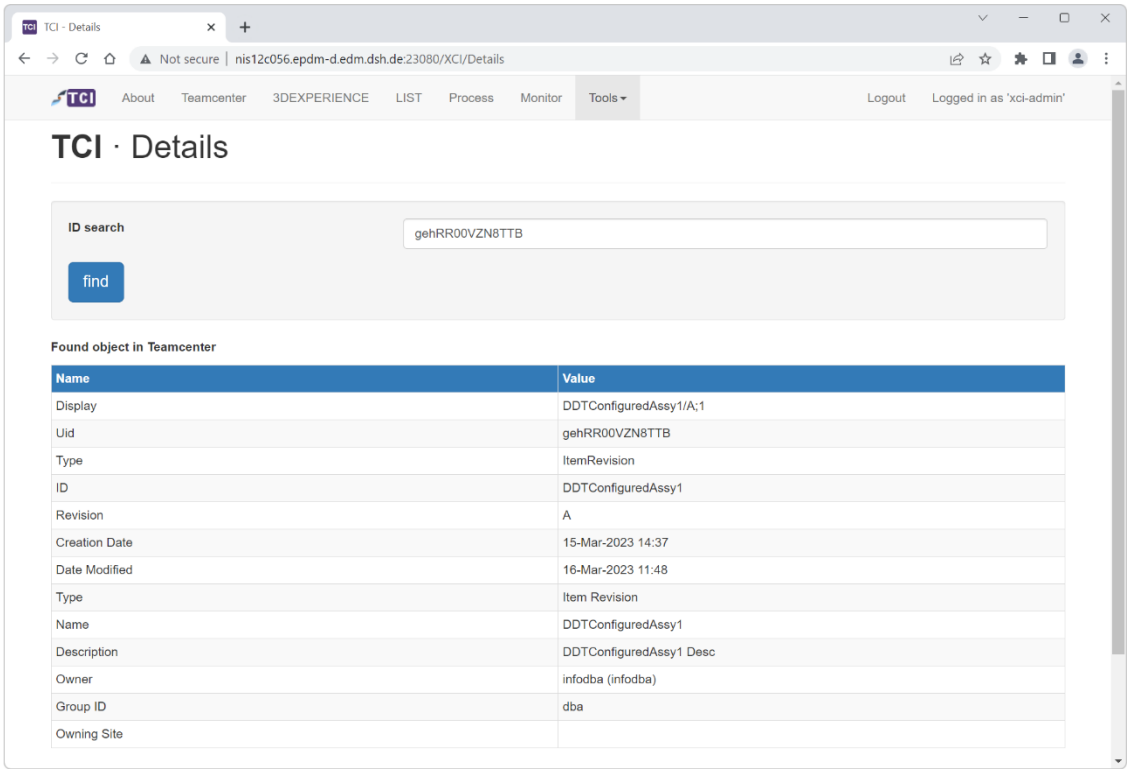

Figure 83: TCI Web – Details – Query result page

5.7.5 File Cache

Select Tools → File Cache to get information about File Cache content.

This view must be enabled by your administrator to be accessible.

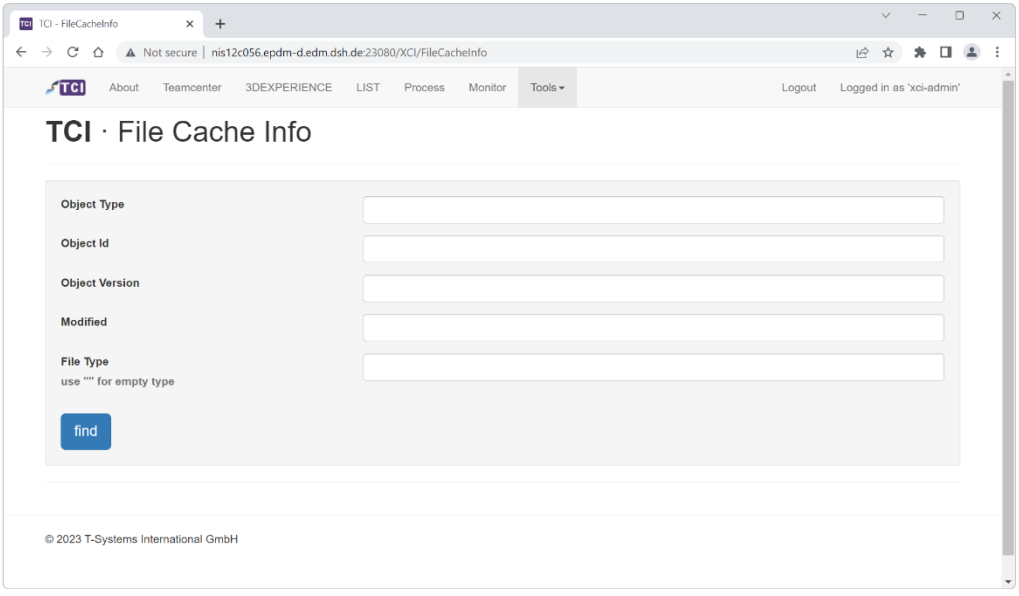

Figure 84: TCI Web – File Cache – Query page

Click on the *find* button to start the query. The query result will be displayed in the table below.

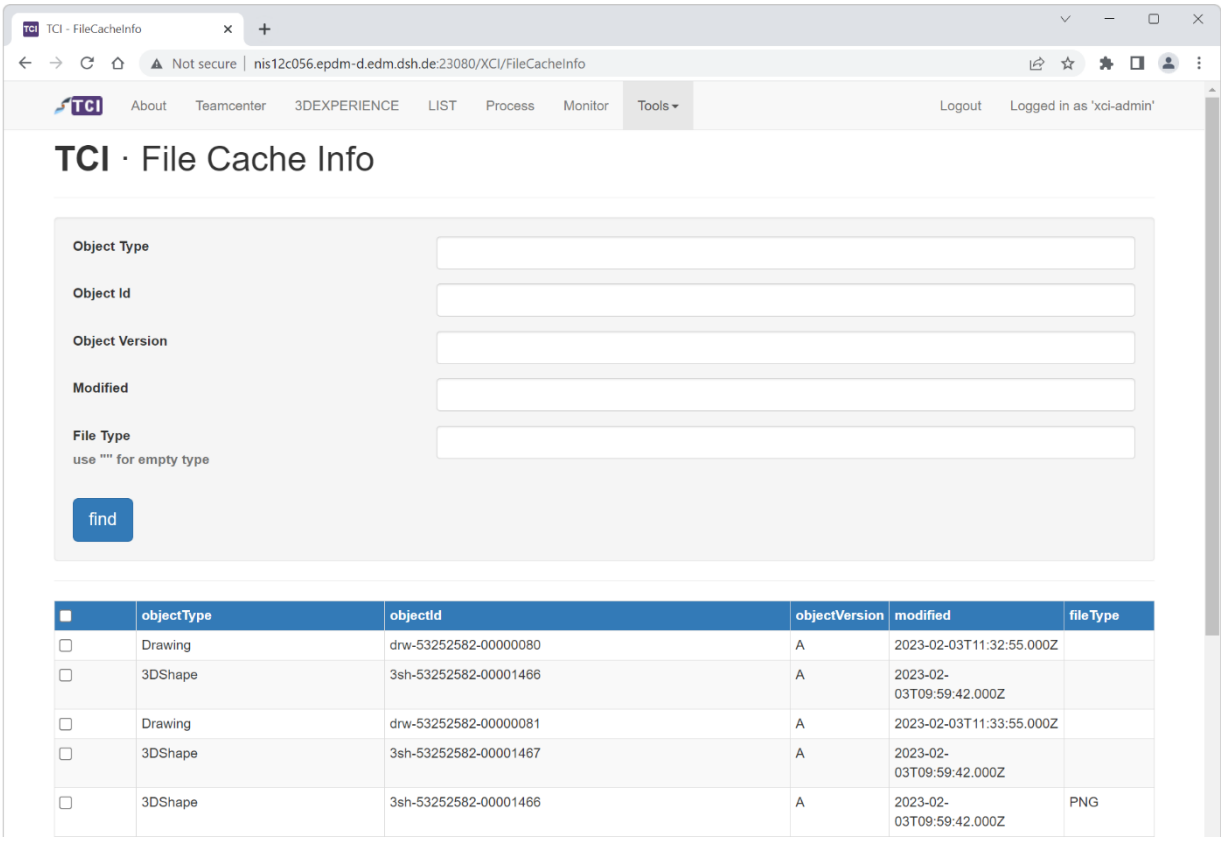

Figure 85: TCI Web – File Cache – Query result page

With the Remove File Cache Entries button the checked entries can be removed from the File Cache. The user is asked for confirmation before the entries are removed.

5.7.6 License

The *License* page displays information about the license server, how many TCI server and job licenses are consumed and how many are available.

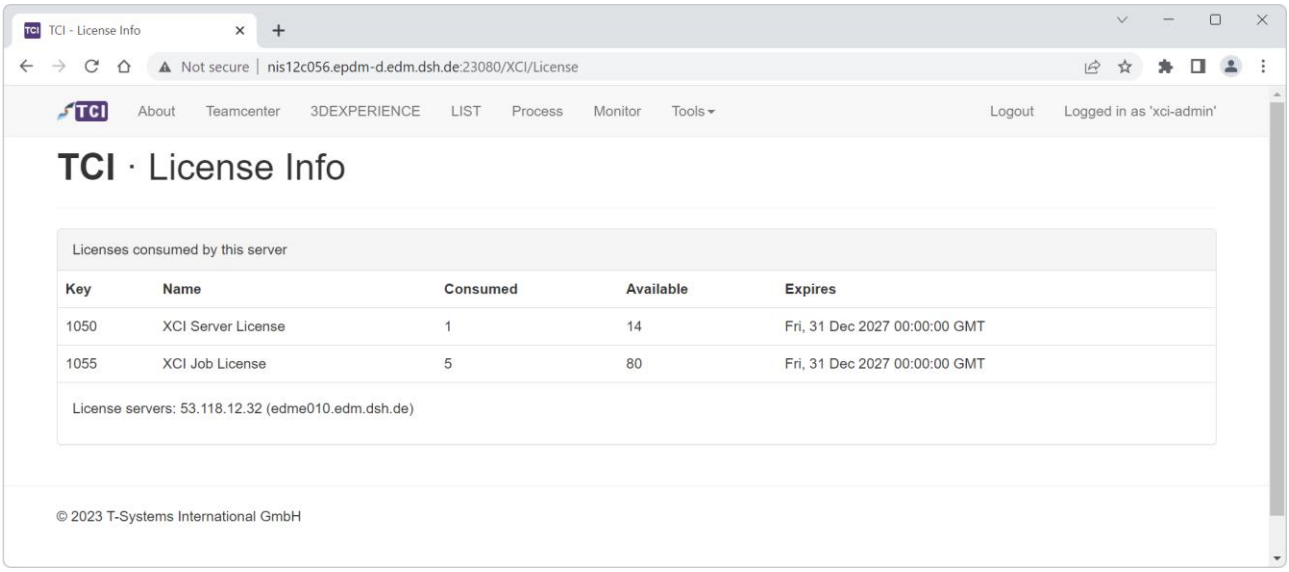

Figure 86: TCI Web – License – Details about the license server and allocated licenses