



ACI Release 3.11 Installation Manual

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Brief details

Installation manual for ACI.

This guide describes the installation and configuration of ACI.

Before using this guide, be sure you understand:

- the administration of 3DEXPERIENCE,
 - the administration of Aras Innovator.
-

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1 Overview

1.1 System and Software Requirements

ACI Installation on the following minimum operation systems and software prerequisites:

- Windows Server 2016
- Java runtime environment 17 for Windows x64
- Apache Tomcat 9.0.x

For the file cache, at least 500GB of disk space are recommended.

Each 3DEXPERIENCE batch server must have a graphics card, please consult the Dassault Systèmes recommendations:

http://media.3ds.com/support/certified_hardware/Windows_10_64-bit.html

https://media.3ds.com/support/certified_hardware/Windows_11_64-bit.html

The following systems are supported:

- 3DEXPERIENCE R2021x
- 3DEXPERIENCE R2022x
- 3DEXPERIENCE R2023x
- 3DEXPERIENCE R2024x
- 3DEXPERIENCE Public Cloud
- Aras Innovator 12 and above
- Aras Innovator Community Edition

The following DBMS are supported:

- Oracle Database 11g Release 2 and above
- H2 DB 1.4
- MS SQL Server 2012 and above

1.1.1 3DEXPERIENCE licenses and user rights

1.1.1.1 On Premise: Licenses

Product	Trigram
Collaborative Business & Industry Innovation, includes: CSV (Platform Contributor) IFW (Platform Member)	PCS
Engineering Adapter for X-PDM	MUX (not required for XPDM import with POWER'BY)
Engineering Data Exchange Manager	EXH (not required for XPDM import with POWER'BY)
Optional	
Product Manager	PDM (for Configuration / Variant Management) (required for authoring only)
Collaborative Designer for CATIA V5	UE5 (for CATIA V5 POWER'BY import)
Conversion Data Integrator	FO* (for XCAD conversion of specific format, e.g. FOJ for JT support)

Table 1: Required 3DEXPERIENCE licenses.

Note: Additional licenses depend on respective use cases.

1.1.1.2 On Premise: User rights

The 3DEXPERIENCE user executing the import and export operations needs to have Leader role assigned in the Collaborative Spaces to / from which data is transferred.

The user needs business and system administrator privileges as required by Dassault Systèmes. These rights can only be assigned using MQL:

```
modify person username access all admin all type system type business;
```

1.1.1.3 On Public Cloud: licenses

Product	Trigram
Collaborative Business & Industry Innovator Package: IFW-OC (Collaborative Business Innovator) CSV-OC (Collaborative Industry Innovator)	PCS-OC
Enterprise IP Exchange Manager	XXH-OC
Enterprise IP Exchange Package	XXK-OC
Engineering Data Exchange Manager	EXH-OC

Table 2: Required 3DEXPERIENCE licenses in Public Cloud environment

Note: Additional licenses depend on respective use cases.

1.1.1.4 CATIA V5 CAD Pre- and Postprocessing

Batch processing of native CAD file data may be required for 3DEXPERIENCE Import (preprocessing) and 3DEXPERIENCE Export (postprocessing). A CATIA V5 license for the respective CAD system e.g. for example HD2, M3D, PX1 (optional), EHI (optional for electric data support).

1.1.2 Software Requirements for Oracle Database

Copy the OJBDC driver matching your database version (e.g. ojdbc8.jar) from your Oracle installation or download it from Oracle website. Place the driver in the lib folder of the Tomcat that runs ACI.

The recommended database character set is al32utf8.

1.1.3 Software Requirements for MS SQL Server

Download the JDBC driver for your database and Java runtime version from Microsoft (e.g. mssql-jdbc-11.2.1.jre8.jar) and place the .jar file in the lib folder of the Tomcat that runs ACI.

MS SQL Server must be configured with TCP connections enabled.

1.2 Shipment

The software delivery contains the following:

- ACI
- ACI Converter Server (XCI_CS)
- ACI File Cache (XCI_FC)
- ACI Aras Data Model Extension (ACI_ARAS_DM)
- ACI 3DEXPERIENCE Web Client Extension (ACI_3DX_UI)
- XCI 3DEXPERIENCE Batch (XCI_3DX_BATCH)
- COM/ReconV5 (COMReconV5)
- Licman21
- ACI documentation

The product makes use of 3rd Party and Open Source Software. A list of the used products and its licenses is distributed with the software.

2 Infrastructure Overview

2.1 Overview

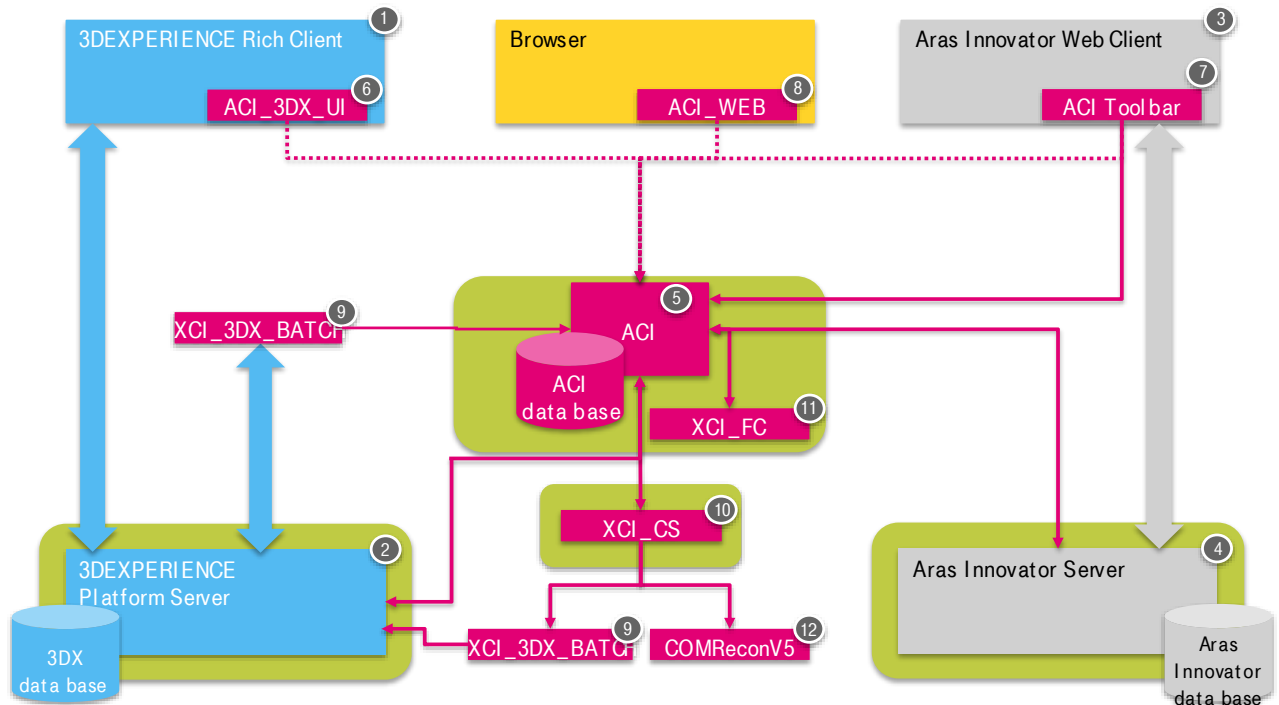
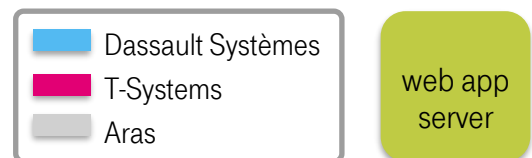


Figure 1: ACI Infrastructure Overview

1. 3DEXPERIENCE Rich Client
2. 3DEXPERIENCE Server
3. Aras Client
4. Aras Server
5. ACI
6. ACI 3DEXPERIENCE Web Client Extension
7. ACI Aras Data Model Extension (ACI_ARAS_DM)
8. ACI Web Client
9. XCI 3DEXPERIENCE Batch
10. ACI Converter Server (XCI_CS)
11. ACI File Cache (XCI_FC)
12. CATIA V5 CAD data processing (COM/ReconV5) Batch



2.2 Infrastructure Remarks

The XCI 3DEXPERIENCE Batch must be installed at each ACI Converter Server that is used to run 3DEXPERIENCE utilities. A 3DEXPERIENCE rich client environment (CATIA V6) is a prerequisite.

If CATIA V5 Preprocessing or CATIA V5 Postprocessing is enabled, the COMReconV5 package must be installed at the configured hosts. A CATIA V5 client environment with the same CATIA V5 version is a prerequisite.

3 Installing ACI

3.1 Prerequisites

3.1.1 Enable secure communication via https

You can skip this step if no secure communication (https) is used.

For secure communication (https) with the connected servers (Aras Innovator and 3DEXPERIENCE) make sure that the necessary certificates are installed at the ACI host. The certificates must be copied from the Aras Innovator server and the 3DEXPERIENCE server respectively and imported into the Java installation.

Open a command shell as administrator and check or set the proper Java home directory:

```
set JRE_HOME=<yourJreDir>
```

Use the keytool.exe in your Java installation. The default password is "changeit".

```
"%JRE_HOME%\bin\keytool.exe" -import -keystore
"%JRE_HOME%\lib\security\cacerts" -storepass changeit -noprompt -trustcacerts -
alias <yourAlias> -file <yourFile.crt>
```

3.1.2 Aras Innovator

The Aras Innovator server has been installed.

3.1.2.1 Prerequisite Configuration of MS Internet Information Services

The ACI Aras Innovator Connectivity module sends files via a HTTP Post request to Aras Innovator. The Microsoft IIS Server has a default size limit for Post requests of roughly 30 MB. If a larger file is transferred, a HTTP 413 error is returned.

To change the size limit of Post requests:

- Open Internet Information Services (IIS) Manager
- Navigate to the connection, site and application
- Open the Request Filtering and click 'Edit Feature Settings' in the Action Pane
- Change the value of 'maxAllowedContentLength' to the desired limit in bytes. For example, 2147483648 allows files of up to 2 GB.

For further information refer to the Microsoft documentation: <https://docs.microsoft.com/en-us/iis/configuration/system.webserver/security/requestfiltering/requestlimits/>

3.1.2.2 ACI Aras Data Model Extension (ACI_ARAS_DM)

The ACI Aras Data Model Extension (ACI_ARAS_DM) must be installed. The Extension extends the data model and provides a UI Extension in the Aras Innovator Client.

3.1.3 3DEXPERIENCE

3.1.3.1 Direct access to 3DEXPERIENCE server (On Premise)

ACI requires access to the 3DEXPERIENCE server. As a prerequisite the following libraries must be copied from the 3DEXPERIENCE server installation:

```
<3DEXPERIENCE install path>
```

```
\3DSpace\win_b64\docs\javaserver\eMatrixServletRMI.jar
```

```
<3DEXPERIENCE install path>\3DSpace\win_b64\docs\javaserver\FcsClient.jar
```

to a directory on the ACI server host, for example C:\ACI\3dexp-lib. This directory will be called <3DEXP-LIB> in this document.

3.2 ACI setup

This section describes how you should install the ACI, XCI_FC, and XCI_CS.

3.2.1 Setup ACI as web application

ACI will be deployed to a web application server.

ACI will be installed in a directory on the host machine. This directory will be called <ACI_INSTALL_DIR> in the following steps.

For example:

```
C:\ACI
```

The web application server Tomcat must be installed to a known directory. We recommend installing Tomcat and other packages (e.g. XCI 3DEXPERIENCE Batch) in <ACI_INSTALL_DIR> to keep all components in one place.

For example, for Tomcat this is then:

```
C:\ACI\apache-tomcat-9.0.89.
```

The Tomcat installation directory will be called <CATALINA_HOME> in this document.

3.2.1.1 Package

Locate the package XCI_Aras_3DX_<3DX Version>-<ACI Version>.zip (for example XCI_Aras_3DX_2023x-3.11.0.0.01.zip) and unzip to temporary location.

In the next steps we will move and edit some of the delivered files.

3.2.1.2 XCI_HOME directory

Copy the XCI_HOME directory from the software package to <ACI_INSTALL_DIR> and remove the .sample from XCISettings.xml.sample.

This directory will be the main working directory for ACI. The settings file controls behavior of ACI.

3.2.1.3 Tomcat: 3DEXPERIENCE libraries

The web application must have access to 3DEXPERIENCE libraries in the classpath (see section 3.1.3.1). The following lines have to be added to the Tomcat configuration file <CATALINA_HOME>/conf/context.xml in the Resources section:

```

...
<Resources>
  <PostResources>
    className="org.apache.catalina.webresources.JarResourceSet"
    base="<3DEXP-LIB>/eMatrixServletRMI.jar"
    webAppMount="/WEB-INF/classes">
  </PostResources>
  <PostResources>
    className="org.apache.catalina.webresources.JarResourceSet"
    base="<3DEXP-LIB>/FcsClient.jar"
    webAppMount="/WEB-INF/classes">
  </PostResources>
</Resources>
...

```

Where `<3DEXP-LIB>` needs to be replaced by the absolute or relative path to the 3DEXPERIENCE library locations.

If ACI has been customized using the Java customization endpoints, please add additional entry pointing to the directory containing the customization .jar file.

```

<PostResources>
  className="org.apache.catalina.webresources.DirResourceSet"
  base="<XCI_HOME>/custom"
  webAppMount="/WEB-INF/lib">
</PostResources>

```

3.2.1.4 Tomcat: start script

Copy the sample start script `start-tomcat.bat.sample` from the software package to `<ACI_INSTALL_DIR>` and remove the `.sample` file extension. This script is used to start Tomcat.

Environment Variable	Example Value	Description
XCI_HOME	C:\ACI	XCI home directory
CATALINA_HOME	C:\ACI\apache-tomcat-9.0.89	Tomcat Catalina home directory
JRE_HOME	C:\Program Files\Java\jre-17.0.11+9	JRE home directory
JAVA_OPTS	%JAVA_OPTS% -Djlicman.platform="Windows_2003_amd64" -Xms256m -Xmx2048m	Append additional Java options

Table 3: ACI web application environment variables

3.2.1.5 Deploy ACI web application

From the software package, copy the main application `XCI.war`, to the `webapps` directory of the web application server: `<CATALINA_HOME>\webapps`.

3.2.2 Setup XCI_FC as web application

The `XCI_FC` module provides a file cache for 3DEXPERIENCE export.

If 3DEXPERIENCE export file caching is configured, XCI_FC must be deployed to a web application server as described in the next steps.

3.2.2.1 Package

Locate the package `XCI_FC-<ACI Version>.webapp.zip` (for example `XCI_FC-3.9.0-01.webapp.zip`) and unzip to temporary location.

In the next steps we will move and edit some of the delivered files.

3.2.2.2 XCI_FC_HOME directory

Copy the XCI_FC_HOME directory from the software package to `<ACI_INSTALL_DIR>`.

This directory will be the main working directory for the file cache.

3.2.2.3 Tomcat: start script

If XCI_FC is deployed in the same Tomcat as ACI, then edit the Tomcat start script described in previous chapter and set the `XCI_FC_HOME` variable.

If XCI_FC is deployed in a different Tomcat, create the start script as described next.

Copy the sample start script `start-fc-tomcat.bat.sample` from the software package to `<ACI_INSTALL_DIR>` and remove the `.sample` file extension. This script is used to start Tomcat.

Set the following environment variables in the start script.

Environment Variable	Example Value	Description
XCI_FC_HOME	C:\ACI\XCI_FC_HOME	XCI_FC home directory
CATALINA_HOME	C:\ACI\apache-tomcat-9.0.89	Tomcat Catalina home directory
JRE_HOME	C:\Program Files\Java\jre-17.0.11+9	JRE home directory
JAVA_OPTS	%JAVA_OPTS% -Xms128m -Xmx512m	Additional Java Options

Table 4: XCI_FC web application environment variables

3.2.2.4 Deploy XCI_FC web application

From the XCI_FC software package, copy the main application `XCI_FC.war`, to the `webapps` directory of the web application server: `<CATALINA_HOME>\webapps`.

3.2.3 Setup XCI_CS as web application

The XCI_CS module is used to distribute batch processing loads like COMRecon or XCI 3DEXPERIENCE Batch to different hosts.

If the XCI_CS is configured (`usecs` is true in one of the following settings: *V5ToV6Preprocessing*, *V6ToV5Postprocessing*, *SendToXPDMProcessing*, *XPDMExportProcessing*, *XPDMImportProcessing*, *FolderExportProcessing*, *FolderImportProcessing*, *FileExportProcessing*) the XCI_CS must be deployed to a web application server as described in the next steps.

3.2.3.1 Package

Locate the package `XCI_CS-<ACI Version>.webapp.zip` (for example `XCI_CS-3.11.0.0.01.zip`) and unzip to temporary location.

In the next steps we will move and edit some of the delivered files.

3.2.3.2 XCI_CS_HOME directory

Copy the `XCI_CS_HOME` directory from the software package to `<ACI_INSTALL_DIR>`.

This directory will be the main working directory for the file cache.

3.2.3.3 Tomcat: start script

If `XCI_CS` is deployed in the same Tomcat as ACI, then edit the Tomcat start script described in previous chapter and set the `XCI_CS_HOME` variable.

If `XCI_CS` is deployed in a different Tomcat, create the start script as described next.

Copy the sample start script `start-cs-tomcat.bat.sample` from the software package to `<ACI_INSTALL_DIR>` and remove the `.sample` file extension. This script is used to start Tomcat.

Set the following environment variables in the start script.

Environment Variable	Example Value	Description
<code>XCI_CS_HOME</code>	<code>C:\ACI\XCI_CS_HOME</code>	<code>XCI_CS</code> home directory
<code>CATALINA_HOME</code>	<code>C:\ACI\apache-tomcat-9.0.89</code>	Tomcat Catalina home directory
<code>JRE_HOME</code>	<code>C:\Program Files\Java\jre-17.0.11+9</code>	JRE home directory
<code>JAVA_OPTS</code>	<code>%JAVA_OPTS% -Xms128m -Xmx512m</code>	Additional Java Options

Table 5: `XCI_CS` web application environment variables

3.2.3.4 Deploy XCI_CS web application

From the `XCI_CS` software package, copy the main application `XCI_CS.war`, to the `webapps` directory of the web application server: `<CATALINA_HOME>\webapps`.

3.3 ACI configuration

After the installation ACI must be configured in the following configuration files in the installation directory.

3.3.1 Logging configuration

ACI will read and apply the log4j configuration from the following file in the `XCI_HOME` directory:

```
log4j2.xml
```

By default, ACI will log to directory `XCI_HOME\logs`.

If the configuration file is not present when starting ACI it will apply its embedded default configuration, logging only to the standard output.

To reconfigure logging or changing the log directory please refer to <https://logging.apache.org/log4j/2.x/>.

3.3.2 General ACI configuration

The file `XCISettings.xml` in `XCI_HOME` defines all the functional settings for ACI. The settings file can be evaluated using the `XCISettings.xsd` file delivered with ACI.

It is divided into the seven sections *Conversion*, *Pdm*, *Aras*, *Enovia*, *XciWeb*, *Features* and *Scheduler*.

In the next chapters the configuration of these sections will be described in detail.

3.3.2.1 Conversion

In the following chapters the configuration options for the tag *Conversion* are described.

3.3.2.1.1 Database configuration

ACI makes use of a database to store and keep track of required data. The used database can be configured using the resource definition of the application server. ACI will read the resource defined as `"jdbc/xciDB"`.

The default resource can be overridden by defining the *PersistenceUnitName* in the settings (`/XCISettings/Conversion/Database`).

```
<Database>
  <PersistenceUnitName>jdbc/myXciDB</PersistenceUnitName>
</Database>
```

The resource must be configured at the Tomcat application server in

```
<CATALINA_HOME>/conf/context.xml.
```

Example resource definition for Oracle:

```
<Resource name="jdbc/xciDB" type="javax.sql.DataSource"
  auth="Container" driverClassName="oracle.jdbc.OracleDriver"
  maxTotal="100" maxIdle="10" maxWaitMillis="-1"
  url="jdbc:oracle:thin:@my.db-server-url.com:1521:orcl"
  username="XCI"
  password="XCI" />
```

Example resource definition for MS SQL:

```
<Resource name="jdbc/xciDB" type="javax.sql.DataSource"
  auth="Container" driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
  maxTotal="100" maxIdle="10" maxWaitMillis="-1"
  url="jdbc:sqlserver://my.db-server-url.com\SQLEXPRESS;databaseName=XCI"
  username="XCI"
  password="XCI" />
```

Example resource definition for H2:

```
<Resource name="jdbc/xciDB" type="javax.sql.DataSource"
  auth="Container" driverClassName="org.h2.Driver"
  maxTotal="100" maxIdle="10" maxWaitMillis="-1"
  url="jdbc:h2:C:\XCI\XCI_HOME\xciDB\xciDB;AUTO_SERVER=TRUE"
  username="XCI"
  password="XCI" />
```

If the resource is not defined at the application server, a local and file based H2DB will be created in the home directory.

3.3.2.1.2 General settings

```
<TempDir>C:\temp</TempDir>
```

Optional definition of a temporary directory to be used by ACI. ACI must have read and write access to this directory.

If the value is not defined the path “<ACI_HOME>\temp” will be used.

```
<PersistentDir>C:\persistent</PersistentDir>
```

Optional definition of a directory to be used by ACI to store persistent data. ACI must have read and write access to this directory.

If the value is not defined the path “<ACI_HOME>\persistent” will be used.

```
<RenameFilesAfterDownload>true</RenameFilesAfterDownload>
```

Rename the files after download from Aras Innovator to the value of the `original_file_name` attribute.

The default setting is “true”.

```
<RenameFileTypesAfterDownload enabled="true">  
  <FileType>CATDrawing</FileType>  
</RenameFileTypesAfterDownload>
```

List of file types which will be renamed to `obid.extension`, to support multiple objects with the same file name. Should only be used with file types which are not referenced by other files (CATDrawing, JT, etc.). This setting is ignored if `RenameFilesAfterDownload` preference is set to “false”.

```
<ImportPdm enableLevelSplitUp="true"  
  enableLevelSetBased="false"  
  enableQueuing="false"  
  timeoutQueuing="600000"  
  enableLevelQueuing="true"  
  timeoutLevelQueuing="600000" />
```

Strategy how to import the V6 structures to Aras Innovator:

enableLevelSplitUp: The default value is “false”. True will enable the split up of the Aras Innovator import in a level-based import.

enableLevelSetBased: The default value is “false”. True will enable the set-based approach for the import of one level.

The level-based import will start at the deepest level nodes of the product structure and will first import these leaf nodes, then the parent objects up to the top level are imported including the direct children. If *enableLevelSetBased* is set to “true” then the same levels are imported in one import process (using the set-based import), else each object is imported in its own import process.

enableQueuing: true will enable the functionality to not handle the same part number in parallel running PDM imports.

timeoutQueuing: Timeout for the import queuing [ms]. Default value 10 minutes.

enableLevelQueuing: true will enable the functionality to not handle the same part number in parallel running PDM level imports.

timeoutLevelQueuing: Timeout for the import queuing [ms]. Default value 10 minutes.

<ExportPdm enableQueuing="true"/>

enableQueuing: true will enable the functionality to not handle the same part number in parallel running PDM exports.

timeoutQueuing: Timeout for the export queuing [ms]. Default value (600000) 10 minutes.

<Import3DX enableQueuing="true"/>

enableQueuing: true will enable the functionality to not handle the same part number in parallel running 3DX imports.

timeoutQueuing: Timeout for the import queuing [ms]. Default value (600000) 10 minutes.

<DisablePdmImportSkipNotModified>true</DisablePdmImportSkipNotModified>

To disable the skipping the import of objects to Aras Innovator which are not modified since the last import, it must be set to "true".

The default setting is "false".

<IgnoreNon3DPartGeometries enabled="true" />

Enables the ignoring of geometries which are not 3DPart in 3DEXPERIENCE if *enabled* is set to "true".

The default setting is "false".

3.3.2.1.3 PdmExportValidation definition

< PdmExportValidation>

 <AttributeCheck enabled="true">

 <XType xname ="Product">

 <XAttribute xname="Description"
 mappingtype="DefaultCustomization"
 maxlength="60"
 truncate="true" />

 </XType>

 </AttributeCheck>

 <InstanceNameCheck enabled="true" />

 <FileRefCheck enabled="false" />

 <FileNameCheck enabled="false" />

 <ProductLeafRepresentationCheck enabled="false" onlyWarning="true" />

 <RepNameCheck enabled="true" />

 <ValidateMainFileCount enabled="true" />

 <ValidateMissingFileForDocument enabled="true" />

 <ValidateMultipleReferencedDocument enabled="true" />

```
<ValidateMultipleRevisions enabled="true" />  
<ValidateIncorrectRevisionSequence enabled="true" />  
</ PdmExportValidation >
```

Definition of the export checks.

Each *AttributeCheck* must be enabled and disabled with the *enabled* attribute. The optional *onlyWarning* attribute can be set to “true” for each check. Then the check is handled as warning condition not as error condition.

The *AttributeCheck* is used to check the *maxlength* attribute in the *CustomAttribute* (see chapter 3.3.2.2.1) setting.

Additionally, the standard attribute length can be checked. The example above shows the limitation of the “Description” to maximum length of “60”. If the maximum length of the attribute is defined, the *truncate* attribute flag enables the truncate functionality which will truncate the attribute to the maximum length.

The *InstanceNameCheck* checks the uniqueness of instance name per parent object.

The *FileRefCheck* checks the multiple use of a File Ref from different Objects.

The *FileNameCheck* checks the uniqueness of file names in the files section.

The *ProductLeafRepresentationCheck* checks the existence of an attached Representation at a Product node if the Product node is a leaf node.

The *RepNameCheck* checks for duplicate representation names. ID Attribute in Rep3D, Drawing, Document, and GenericDocument Object.

The *ValidateMainFileCount* checks if more than one main file is attached.

The *ValidateMissingFileForDocument* checks if a file for document is attached.

The *ValidateMultipleReferencedDocument* checks if a document is referenced by more than one part.

The *ValidateMultipleRevisions* checks if more than one revision of the same part is found.

The *ValidateIncorrectRevisionSequence* checks if the revision sequence is correct.

These five tags have the attributes *enabled* and *onlyWarning*. The attribute *enabled* is required. The attribute *onlyWarning* is optional and has the default “false”.

3.3.2.1.4 PdmImportValidation Definition

```
< PdmImportValidation >  
  <AttributeCheck enabled="true">  
    <XType xname="Product">  
      <XAttribute xname="Description"  
        mappingtype="DefaultCustomization"  
        maxlength="60"  
        truncate="true" />  
    </XType>  
  </AttributeCheck>  
<UnknownDocumentTypeStrategy>WARNING</UnknownDocumentTypeStrategy>  
</ PdmImportValidation >
```

Definition of the import checks.

See chapter 3.3.2.1.3 for details on AttributeCheck.

The *UnknownDocumentTypeStrategy* defines the handling of unmapped document types during transfer. If there is no *V6FileFormat* available for the given fileextension, this setting will define how to handle the transfer. The following options are possible:

- WARNING: Default. No unmapped files will be transferred. The transfer activity will finish in state "Warning" and more information can be found in the report.
- ERROR: Unmapped files will cause the activity to fail! No data will be transferred.
- IMPORT: Unmapped files will be transferred using the settings in *GenericDocumentFormat*. See chapter 3.3.2.1.9 for more information. No warning or error will be reported in the activity.

3.3.2.1.5 3DEXPERIENCE Project definitions

<Projects>

```

<DefaultProject name="Default">
  <ProjectName>Standard</ProjectName>
  <Organization>Company Name</Organization>
  <Owner>DemoDesigner</Owner>
  <LifeCycle>VPLM_SMB</LifeCycle>
  <Maturity>RELEASED</Maturity>
  <MaturityNoStatus>IN_WORK</MaturityNoStatus>
</DefaultProject>

```

</Projects>

Definition of projects and the corresponding values for *ProjectName*, *Organization*, *Owner*, *LifeCycle*, *Maturity* and *MaturityNoStatus*. The *Projects* section must include one *DefaultProject* that will be used when no other defined project matches.

The defined values for the projects define which values will be set to the parts when sending them to 3DEXPERIENCE. If no project is defined or no values are defined for a project the values from the default project are used.

The values for *Organization* and *Owner* can be left blank. These will be set to the values of the importing administration user on the 3DEXPERIENCE import.

The value for *MaturityNoStatus* will be used for objects without status. If this value is not defined, the value for *Maturity* will be used.

For the Non-CATIA document import the Maturities and LifeCycle can be defined for Document and GenericDocument types.

The defaults for Document and GenericDocument types are:

- Default Document Maturity: *Exists*
- Default Document Lifecycle: *Document*
- Default GenericDocument Maturity: *WIP*
- Default GenericDocument Lifecycle: *Controlled Production Release Rev2*

These defaults can be set in the Project settings:

```

<DefaultProject name="Default">
  ...
  <DocumentLifeCycle>Document Release</DocumentLifeCycle>
  <DocumentMaturity>RELEASED</DocumentMaturity>
  <DocumentMaturityNoStatus>IN_WORK</DocumentMaturityNoStatus>
  <GeneralDocumentLifeCycle>Controlled Production Release Rev2</GeneralDocumentLifeCycle>
  <GeneralDocumentMaturity>Released</GeneralDocumentMaturity>
  <GeneralDocumentMaturityNoStatus>WIP</GeneralDocumentMaturityNoStatus>
</DefaultProject>

```

3.3.2.1.6 Aras Innovator Revision cleanup setting

```
<RevisionCleanupForPdm>
  <cleanChildren enabled="true"/>
  <cleanDocuments enabled="true">
    <ExpandRelationType>Part CAD</ExpandRelationType>
    <ExpandType>CAD</ExpandType>
  </cleanDocuments>
</RevisionCleanupForPdm>
```

If *cleanChildren* is enabled, all children are removed for new created Revisions during Aras Innovator import. The default for the *enabled* flag is “false”.

If *cleanDocuments* is enabled, all documents configured by type (*ExpandType*) and relation (*ExpandRelationType*), are removed for new created Revisions during Aras Innovator import. The default for the *enabled* flag is “false”.

3.3.2.1.7 Revision mapping

```
<PdmRevisionMapping>alphabetical</PdmRevisionMapping>
```

The *RevisionMapping* defines the revision numbers in Aras Innovator as *numerical* or *alphabetical*.

If *PdmRevisionMapping* is configured, ACI will perform a direct assignment between the revisions of Aras Innovator and 3DEXPERIENCE via XPDMXML (e.g. Aras Innovator revision “D” will be transferred as revisionindex “4” to 3DEXPERIENCE). As a result of this configuration, the revisions in Aras Innovator or 3DEXPERIENCE may have gaps if only selected revisions are transferred.

If the *PdmRevisionMapping* is not configured the next free revision/index will be used.

3.3.2.1.8 Document Revision mapping

```
<PdmDocumentRevisionMapping>alphabetical</PdmDocumentRevisionMapping>
```

The *PdmDocumentRevisionMapping* defines the revision numbers for documents in Aras Innovator as *numerical* or *alphabetical*.

If *PdmDocumentRevisionMapping* is configured, ACI will perform a direct assignment between the revisions of Aras Innovator and 3DEXPERIENCE via XPDMXML (e.g. Aras Innovator revision “D” will be transferred as revisionindex “4” to 3DEXPERIENCE). As a result of this configuration, the revisions in Aras Innovator or 3DEXPERIENCE may have gaps if only selected revisions are transferred.

If the *PdmDocumentRevisionMapping* is not configured the next free revision/index will be used.

3.3.2.1.9 File type mapping definitions

3.3.2.1.9.1 V6 to Aras Innovator file type mapping

```
<V6PdmFileType>
  <V6FileFormat v6format = "CATPart">
    <Main>
      <PdmDocType>CAD</PdmDocType>
      <PdmDocRelation>Part CAD</PdmDocRelation>
      <PdmRefType>native_file</PdmRefType>
    </Main>
  </V6FileFormat>
  <ImportFormat fileFormat = "PNG">
    <PdmDocType>CAD</PdmDocType>
    <PdmDocRelation>Part CAD</PdmDocRelation>
    <PdmRefType>thumbnail</PdmRefType>
```

```

    <RemoveOrigExtensionForPdm>>true</RemoveOrigExtensionForPdm>
  </ImportFormat>
  <GenericDocumentFormat>
    <PdmDocType>Document</PdmDocType>
    <PdmDocRelation>Part Document</PdmDocRelation>
    <PdmRefType>native_file</PdmRefType>
  </GenericDocumentFormat>
</V6PdmFileType>

```

The *V6PdmFileType* can contain multiple *V6FileFormats* defining how the specified file should be imported to Aras Innovator.

Each *V6FileFormat* defines a *PdmDocType*, a *PdmDocRelation*, and a *PdmRefType* in the *Main* section. The same is defined for *Aux* documents. The *Aux* definition is used for shared representations.

The *ImportFormat* block defines additional files besides the main geometry file, for example images for thumbnails, or secondary geometry files, for example .dxf files for Drawings if the main file is .CATDrawing.

For both *V6FileFormat* and *ImportFormat* the filename handling can additionally be controlled.

- Set *RemoveOrigExtensionForPdm* to true if the original file extension should be removed from the filename, e.g. rename the image myfile.CATPart.png to myfile.png. Default is false.
- Set *UseOrigFileNameForPdm* to true to use the original filename as exported from 3DEXPERIENCE. Default is false.
- Set *UseOrigFileNameForDocumentName* to true to use the original filename as exported from 3DEXPERIENCE for the Document created in Aras. Default is false.

The *GenericDocumentFormat* defines, how unmapped document types will be handled, when the strategy is set to IMPORT (see chapter 3.3.2.1.4 for more details).

3.3.2.1.9.2 Aras Innovator to V6 file type mapping

```

<PdmV6FileType>
  <V6Representation fileextension="CATPart" doctype="CAD">
    <RepresentationType>Rep3D</RepresentationType>
  </V6Representation>
</PdmV6FileType>

```

The *PdmV6FileType* can contain multiple *V6Representations* defining how the specified file should be exported from Aras Innovator. The *V6Representation* has the optional attribute *aux* with default "false". The *fileextension* can also contain wildcards. The *fileformat* can be used if the file extension is not the file format in the XPDMXML file.

Each *V6Representation* defines a *RepresentationType* and a *DerivedType*.

RepresentationType can be *Drawing*, *Rep3D*, *Rep3DAndOriginalDocument*, *Product*, *ProductOrRep3D*, *Document*, or *GenericDocument*.

3.3.2.1.10 Customization registration

```

<Customizations>
  <CustomizationPoint custpoint="com.tsystems.xci.customization.CustomizationPointX"
    endpoint="my.customization.MyCustomizationPointImpl" />
</Customizations>

```


The behavior of the integration can be modified using customization points. The *Customizations* tag may contain multiple *CustomizationPoints* defining which customization implementation should be used. Each *CustomizationPoint* defines a *custpoint* to be overridden and an *entrypoint* specifying the overriding implementation. The optional attribute *enabled* has the default "true".

It is not necessary to set a customization point. All customization points are implemented using the integration default behavior.

If you require any kind of customization please contact the support team.

3.3.2.1.11 SetTimeModified setting

```
<SetTimeModified>
  <Rep3D disabled="true" />
  <Drawing disabled="true" />
  <Document disabled="true" />
  <GenericDocument disabled="true" />
  <ProductFile disabled="true" />
  <Product disabled="true" />
  <ProductInst disabled="true" />
</SetTimeModified>
```

The *<TimeModified>* tag is by default written to the *<Rep3D>*, *<Rep3DAggr>*, *<Drawing>*, *<DrawingAggr>*, *<Document>*, *<GenericDocument>*, *<Product>*, and *<ProductInst>* tags in the *Metadata.xml* import file. With this time information the import can skip already imported files and optimize the performance of the import process.

This optimization can be disabled, e.g. to resolve multi model links in several contexts.

SetTimeModified has the attribute *enabled* with default "true".

3.3.2.1.12 SharedFileTypeExtensions setting

```
<SharedFileTypeExtensions>
  <SharedFileTypeExtension>model</SharedFileTypeExtension>
  <SharedFileTypeExtension>cgr</SharedFileTypeExtension>
  <SharedFileTypeExtension>CATDrawing</SharedFileTypeExtension>
</SharedFileTypeExtensions>
```

Documents are by default written as *Rep3DAggr* or *DrawingAggr* object in the *metadata.xml* input file. All file extensions which are defined in the *SharedFileTypeExtensions* setting are written as shared object type *Rep3DInst/Rep3D* or *DrawingInst/Drawing* objects in the *metadata.xml* input file and they will be created as a shared object in the 3DEXPERIENCE.

3.3.2.1.13 Exclusion List File settings

```
<ExclusionListFile replaceWithDummy="false">C:\tmp\exclusionlist.xml</ExclusionListFile>
```

Define *ExclusionListFile* containing Parts that should not be exported from Aras. Set *replaceWithDummy* to true to replace excluded Parts with Dummy Parts defined in *DummyProductData* setting. The Dummy will be imported into 3DEXPERIENCE. Please note, that every excluded Part will be replaced with the same Dummy Part.

```
<DummyProductData>
  <Type>Part</Type>
  <ID>MyDummy</ID>
  <Revision>1</Revision>
  <Name>Replace</Name>
  <Description>DummyPart for ExclusionList</Description>
```

<Owner>Owner</Owner>
</DummyProductData>

<ExclusionCATProductsListFile>C:\tmp\exclusioncplist.xml</ExclusionCATProductsListFile>

The *ExclusionCATProductsListFile* is the exclusion list with the CAD objects for which the CATProduct files should be ignored.

<TimeModifiedExclusionListFile
 removeTimeStamp="false">C:\tmp\exclusiontmlist.xml</TimeModifiedExclusionListFile>

The *TimeModifiedExclusionListFile* is the exclusion list with the CAD objects for which the *TimeModified* tag should be changed/removed. The optional attribute *removeTimeStamp* has the default "false".

Example for an Exclusion list settings file.

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes"?>
<EL>
  <ItemRev>
    <Id>DREP2-TSI2-0001</Id>
    <Type>Design Revision</Type>
    <Revision>1</Revision>
  </ItemRev>
  <Item>
    <Id>DREP2-TSI2-0001</Id>
    <Type>Design Revision</Type>
  </Item>
</EL>
```

3.3.2.1.14 V5ToV6Preprocessing setting

The functionality for the V5 Preprocessing with COMReconV5 (For installation of COMRecon please see that chapter 8) must be enabled to use the COMReconV5 tool from T-Systems.

If the COMReconV5 installed locally where your ACI is installed, you can use the following configuration which does not need the CS server to run the script.

```
<V5ToV6Preprocessing enabled="true">
  <V5PreprocessingCommand>C:\ACI\COMReconV5_R28\go\COMReconV5.bat
  C:\ACI\COMReconV5_R28\go\XCI_V5_V6.opt</V5PreprocessingCommand>
</V5ToV6Preprocessing>
```

If the COMReconV5 installed on another server you need the XCI_CS Server (Please see the 0 for the configuration) to run the application remotely.

```
<V5ToV6Preprocessing enabled="true"
  usecs="true"
  tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <V5PreprocessingHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>C:\ACI\COMReconV5_R28\go\COMReconV5.bat
  C:\ACI\COMReconV5_R28\go\XCI_V5_V6.opt</Command>
  </V5PreprocessingHost>
</V5ToV6Preprocessing>
```

If *usecs* is set to "true" the *V5PreprocessingHost* setting is used. The timeout can be set with a *Timeout* sub-tag in the *V5PreprocessingHost* setting, the default value is 0 (no timeout).

The timeout for the setup without Converter Server can be set by a *timeout* attribute in the *V5PreprocessingCommand* setting, the default value is 0 (no timeout).

Details for *tdsUrl* please see in chapter 3.3.2.4.8.

3.3.2.1.15 V6ToV5Postprocessing setting

The functionality for the V6 Postprocessing with COMReconV5 COMReconV5 (For installation of COMRecon please see chapter 8) must be enabled to use the COMReconV5 tool from T-Systems.

If the COMReconV5 installed locally where your ACI is installed, you can use the following configuration which does not need the CS server to run the script.

```
<V6ToV5Postprocessing enabled="true">
  <V6PostprocessingCommand>C:\ACI\COMReconV5_R28\go\COMReconV5.bat
  C:\ACI\COMReconV5_R28\go\XCI_V6_V5.opt</V6PostprocessingCommand>
</V6ToV5Postprocessing>
```

If the COMReconV5 installed on another server you need the XCI_CS Server (Please see the 0 for the configuration) to run the application remotely.

```
<V6ToV5Postprocessing enabled="true"
  usecs="true"
  tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <V6PostprocessingHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>C:\ACI\COMReconV5_R28\go\COMReconV5.bat
  C:\ACI\COMReconV5_R28\go\XCI_V6_V5.opt</Command>
  </V6PostprocessingHost>
</V6ToV5Postprocessing>
```

If *usecs* is set to "true" the *V6PostprocessingHost* setting is used. The timeout can be set with a *Timeout* sub-tag in the *V6PostprocessingHost* setting, the default value is 0 (no timeout).

The timeout for the setup without Converter Server can be set by a *timeout* attribute in the *V6PostprocessingCommand* setting, the default value is 0 (no timeout).

Details for *tdsUrl* please see in chapter 3.3.2.4.8.

3.3.2.1.16 CoexistenceXpdmXmlProcessing setting

```
<CoexistenceXpdmXmlProcessing disabled="true" />
```

The coexistence processing functionality (remove of objects which are not controlled by XPDM) can be disabled with this setting.

The default setting is "false".

3.3.2.1.17 DwcProductStructureExport setting

```
<DwcProductStructureExport enabled="true" />
```

The downward compatibility product structure export functionality (export CATPart and CATProduct files from 3DEXPERIENCE with one call) can be enabled with this setting.

The default setting is "false".

3.3.2.1.18 FileConversion setting

The file conversion functionality (convert non importable file types to importable file types) can be enabled with this setting.

Import without the Converter Server:

```
<FileConversion enabled="true">
  <SingleFileConversionCommand inputtype="iges" outputtype="cgr">
    <Command>C:\converter\iges_cgr_converter.bat</Command>
  </SingleFileConversionCommand>
</FileConversion>
```

The timeout can be set by a timeout attribute in the SingleFileConversionCommand setting, the default value is 0 (no timeout).

Import with the use of the Converter Server:

```
<FileConversion enabled="true" resource="CV" usecs="true" tdsUrl="http://my.aci-integration-
server.url:port/XCI/XCI_TDS">
  <FileConversionHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>Command1</Command>
  </FileConversionHost>
  <FileConversionCommand commandName="Command1">
    <ConversionCommand inputtype="iges" outputtype="cgr">
      <Command>C:\converter\iges_cgr_converter.bat</Command>
    </ConversionCommand>
  </FileConversionCommand>
</FileConversion>
```

The timeout can be set with a *Timeout* sub-tag in the *FileConversionHost* setting, the default value is 0 (no timeout).

For configuration details, please see chapter 3.3.2.4.8. For all CS the same converter functionality must be available.

The following windows batch file can be used to start a third-party converter:

```
REM get the input file path
set INPUTFILE=%ACI_CONVERTINPUTFILE%
REM get the output file path
set OUTPUTFILE=%ACI_CONVERTOUTPUTFILE%

if EXIST %INPUTFILE% GOTO CONTINUE1
echo "cannot find >%INPUTFILE%<"
GOTO END_ERROR
:CONTINUE1

if NOT EXIST %OUTPUTFILE% GOTO CONTINUE2
del %OUTPUTFILE%
:CONTINUE2

echo "converting %INPUTFILE% to %OUTPUTFILE%"

REM call the converter
converter.exe %INPUTFILE% %OUTPUTFILE%

set retval=%ERRORLEVEL%
```

```
:END
exit /b %retval%

:END_ERROR
REM not equal 0 for error
exit /b 1
```

3.3.2.1.19 V6MaturityToPdmStatusMappingList setting

```
<V6MaturityToPdmStatusMappingList enabled="true">
  <V6MaturityToPdmStatusMapping v6maturity="RELEASED"
    pdmtyp="Part"
    pdmsubtyp="Component"
    pdmstatus="Released"/>
  <V6MaturityToPdmStatusMapping v6maturity="RELEASED"
    pdmtyp="Part"
    pdmstatus="Released"/>
  <V6MaturityToPdmStatusMapping v6maturity="RELEASED"
    pdmtyp="CAD"
    pdmstatus="Released"/>
</V6MaturityToPdmStatusMappingList>
```

The maturity status mapping list defines the mapping between the V6 Maturity and the Status object name in Aras Innovator. When the functionality is enabled all 3DEXPERIENCE Objects with the Maturity defined in the *v6maturity* attribute will get a Status object with the name from the *pdmstatus* attribute. The attribute *enabled* has default "false".

3.3.2.1.20 PdmStatusUpdateHandling setting

```
<PdmStatusUpdateHandling enabled="true">
  <AdditionalPdmStatusUpdate sourceType="Part"
    targetRelationType="Part CAD"
    targetObjectType="CAD"/>
</PdmStatusUpdateHandling>
```

Used to set the Part Status to Documents which are not directly mapped to a 3DEXPERIENCE object, e.g. PDF document.

The *sourceType* defines the Revision type under which the additional objects should be updated. The attribute *enabled* has default "false".

If specified relation and target object are found below the source object, then the target object is mapped according to *V6MaturityToPdmStatusMapping* based on the maturity of the source object. If the target is not configured in *V6MaturityToPdmStatusMapping*, the status of the parent object is used.

3.3.2.1.21 PdmStatusToV6MaturityMappingList setting

```
<PdmStatusToV6MaturityMappingList enabled="true">
  <PdmStatusToV6MaturityMapping v6maturity="RELEASED"
    pdmtyp="Part"
    pdmstatus="Released" />
</PdmStatusToV6MaturityMapping>
```

This status maturity mapping list defines the mapping between the Status object name in Aras Innovator and the V6 Maturity. When the functionality is enabled, the Aras Innovator objects of the type *pdmtyp* with a Status object *pdmstatus* will get the *v6maturity* in 3DEXPERIENCE. To define

the mapping for Documents, then the *pdmstatus* of the parent Part must be used in this setting and can be mapped to a different *v6maturity*.

The attribute *enabled* has default “false”.

3.3.2.1.22 UseXidFromOcclId setting

```
<UseXidFromOcclId>true</UseXidFromOcclId>
```

Use the Occurrence ID for the Instance XID generation and only the instance name for identification of instances. If the setting is “true” but the child does not match the last known child, the instance is marked for a post processing task to correct the children in 3DEXPERIENCE.

The default setting is “false”.

3.3.2.1.23 CleanupPersistentDir setting

```
<CleanupPersistentDir>true</CleanupPersistentDir>
```

Used to clean up the persistent directory when the content is successfully transferred.

The default setting is “false”.

3.3.2.1.24 CleanupReportDirDaysToKeep setting

```
<CleanupReportDirDaysToKeep>30</CleanupReportDirDaysToKeep>
```

Used to clean up the report directory, the *CleanupReportDirDaysToKeep* value is the number of days to keep the reports in the Report directory. -1 means cleanup disabled.

The default setting is “-1”.

3.3.2.1.25 RenameDuplicateInstanceNames setting

```
<RenameDuplicateInstanceNames>true</RenameDuplicateInstanceNames>
```

Used to rename duplicate instance names. Duplicates will be renamed to the Object Id of the relation.

The default setting is “false”.

3.3.2.1.26 CopyInstanceOrderNumberToV6 setting

```
<CopyInstanceOrderNumberToV6>>false</CopyInstanceOrderNumberToV6>
```

The default setting is “true”.

3.3.2.1.27 TDXExportMode setting

```
<TDXExportMode>ExportXPDM</TDXExportMode>
```

The 3DXExportMode can be configured.

Possible values are:

- *ExportXPDM*: Direct export of a structure from 3DEXPERIENCE using the ExportBatch utility.
- *ExportFiles*: Direct export of a structure from 3DEXPERIENCE using the DWC utility.
- *ExportDesign*: Direct export of a structure from 3DEXperience using the Rest API.
- *ExportStepx (DS Cloud only)*: Direct export of a structure from 3DEXperience using the Enterprise IP Exchange service.

Default setting is “ExportFiles”.

3.3.2.1.28 TDXImportMode setting

`<TDXImportMode>ImportXPDM</TDXImportMode>`

The TDXImportMode can be configured.

Possible values are:

- *ImportXPDM*: Direct import of a structure to 3DEXPERIENCE using the ImportBatch utility.
- *ImportDesign (DS Cloud only)*: Direct import of a structure to 3DEXPERIENCE using the Enterprise IP Exchange service.

Default setting is "ImportXPDM".

3.3.2.1.29 ProcessStatusOnlySessionUser setting

`<ProcessStatusOnlySessionUser>true</ProcessStatusOnlySessionUser>`

Filter the result of the ProcessStatus by the actual session user.

The default setting is "true".

3.3.2.1.30 ProcessStatusMaxReturn setting

`<ProcessStatusMaxReturn>50</ProcessStatusMaxReturn>`

The maximum number of ProcessStatus information to return for the ProcessStatus command.

The default setting is "50".

3.3.2.1.31 ProcessStatusMaxDuration setting

`<ProcessStatusMaxDuration>P7D</ProcessStatusMaxDuration>`

The search period until now used to search for ProcessStatus information for the ProcessStatus command.

The default setting is "P7D".

3.3.2.1.32 ReceiverMaxEventNumber setting

`<ReceiverMaxEventNumber>5</ReceiverMaxEventNumber>`

The maximum number of the events to handle. Minimum is "1". A restart is needed to use the new value.

The default setting is "1".

3.3.2.1.33 ReceiverThreadPoolSize setting

`<ReceiverThreadPoolSize>10</ReceiverThreadPoolSize>`

The size of the Receiver thread pool. Minimum is "1". A restart is needed to use the new value.

The default setting is "1".

3.3.2.1.34 JobReceiverThreadPoolSize setting

`<JobReceiverThreadPoolSize>10</JobReceiverThreadPoolSize>`

The size of the Job Receiver thread pool. Minimum is "3". Restart needed to use the new value.

The default setting is "5".

3.3.2.1.35 JobReceiverComplexThreadPoolSize setting

`<JobReceiverComplexThreadPoolSize>6</JobReceiverComplexThreadPoolSize>`

The size of the Job Receiver complex thread pool (used for Folder transfers). Minimum is 1. Restart needed to use the new value.

The default setting is “3”.

3.3.2.1.36 FolderNamingConcatenation setting

```
<FolderNamingConcatenation enabled="true">_</FolderNamingConcatenation>
```

Set *enabled* to “true” to build the new folder name in PDM from Root Folder Name, this setting, and the Folder Name.

The attribute *enabled* has default “false”.

3.3.2.1.37 ReconciliationMode setting

```
<ReconciliationMode>xPDMMaster</ReconciliationMode>
```

The Reconciliation Mode can be defined.

Possible values are:

- *CATProductMaster*: Use CATProduct structure information.
- *xPDMMaster*: Use XPDMXML structure information.

The default setting is *CATProductMaster*.

3.3.2.1.38 ConverterService Resource Balancing definition

```
<CSResourceBalancer>  
  <Resource>  
    <Name>V6</Name>  
    <MaxParallel>2</MaxParallel>  
  </Resource>  
</CSResourceBalancer>
```

Limits concurrent use of resources across all Converter Server hosts. Resource can be licenses etc. and is identified by a string.

Resources are then applied to different Processing Host types.

The resource names can be defined with the *Resource* attribute at the processing settings.

3.3.2.1.39 PartNumberMapping definition

```
<PartNumberMapping enabled="true">  
  <Default>  
    <To3DXPrefix>ACI_</To3DXPrefix>  
  </Default>  
  <TypeMapping typePDM="MyPart">  
    <Mapping>  
      <To3DXPrefix/>  
      <To3DXPostfix/>  
      <ToPDMPrefix/>  
      <ToPDMPostfix/>  
    </Mapping>  
  </TypeMapping>  
</PartNumberMapping>
```

The part number mapping is used to add pre and postfixes to part numbers in PDM and 3DX. The definition can be set for all types in the default section, or for types defined with *TypeMapping*. The

new mapping will only be used for new transfers, the old mapping from the database is used before using this part number mapping.

The attribute *enabled* has default “false”.

3.3.2.1.40 SetFilterIn3DX setting

```
<SetFilterIn3DX>true</SetFilterIn3DX>
```

Set *SetFilterIn3DX* to “true” to enable the functionality to set filter in 3DX when sending structure names.

The default for *SetFilterIn3DX* is “true”.

See also TCIXpgPostProcess_SETFILTER setting in ImportCompanyName XPGPostprocessing.

3.3.2.1.41 StoreNamedStructuresetting

```
<StoreNamedStructure>>false</StoreNamedStructure>
```

Set *StoreNamedStructure* to “true” to enable the functionality to store named structures.

The default for *StoreNamedStructure* is “false”.

3.3.2.1.42 HandleAuxFileAsMainFile

```
<HandleAuxFileAsMainFile>>false</HandleAuxFileAsMainFile>
```

Set *HandleAuxFileAsMainFile* to “true” to handle auxiliary files like main files -> Create Product and Rep3DAggr in XpdmXml.

The default for *HandleAuxFileAsMainFile* is false.

3.3.2.1.43 JobRetrySeconds

```
<JobRetrySeconds>0</JobRetrySeconds>
```

The number of seconds to wait for the Job retry if the job fails. 0 will disable the retry.

The default for *JobRetrySeconds* is “30”.

3.3.2.1.44 SkipRepWithoutFile

```
<SkipRepWithoutFile>>false</SkipRepWithoutFile >
```

True to remove Representations without file -> no document without file.

The default for *SkipRepWithoutFile* is false.

3.3.2.1.45 OverwriteReleasedWithForce

```
<OverwriteReleasedWithForce>>false</OverwriteReleasedWithForce>
```

True to update released objects if force is true.

The default for *OverwriteReleasedWithForce* is false.

3.3.2.1.46 JobQueuing

```
<JobQueuing enabled="true" timeout="1200000"/>
```

Set the enabled attribute to true to enable the job queuing. Enabled Job Queuing is used to not work on the same persistent directory in parallel. The default for *JobQueuing enabled* attribute is false.

The timeout attribute defines the timeout for the queuing in milliseconds. If the timeout is reached the Job is started. The default for timeout is 1 hour (3600000 milliseconds).

3.3.2.1.47 TypeMapping

```
<TypeMapping enabled="true">  
  <V6ToPdm>  
    <Mapping v6Type=" VPMReference" pdmType="Part"/>  
  </V6ToPdm>  
  <PdmToV6>  
    <Mapping v6Type="VPMReference" pdmType="Part"/>  
  </PdmToV6>  
</TypeMapping>
```

Set the enabled attribute to true to enable the type mapping. Enabled Type Mapping is used to define the Type mapping between 3DEXPERIENCE and Aras.

3.3.2.1.48 Part3DTypeList

```
<Part3DTypeList>  
  <Part3DType>CATPart</Part3DType>  
</Part3DTypeList>
```

List of types which should become Part3D product type, the default is 'CATPart'.

3.3.2.1.49 Fastener

```
<Fastener>  
  <ConvertToAssembly>>false</ConvertToAssembly>  
</Fastener>
```

On 3DEXPERIENCE export, convert Fastener to assembly products to process them the same way as Physical Products. Default is *false*.

3.3.2.1.50 Unit Conversion

```
<UnitConversionDefinition>  
  <UnitConversionname="kelvinToFahrenheit" unit="F" >  
    <Multiplier>1.7999999999999985600000000000012</Multiplier>  
    <Offset>-459.66999999999923226400000000061</Offset>  
  </UnitConversion>  
  <UnitConversion name="FahrenheitToKelvin" unit="K" >  
    <Multiplier>0.5555555555555556</Multiplier>  
    <Offset>255.372222222222</Offset>  
  </UnitConversion>  
</UnitConversionDefinition>
```

Defines a list of conversions between different units to be applied during Aras import or 3DEXPERIENCE import. Attributes exported from the source system might not be exported in the unit which is displayed in the user interface. For example, in 3DEXPERIENCE an attribute with input unit "cm" is exported with unit "m".

Conversion calculation: $new_value = old_value * multiplier + offset$.

The unit conversions are applied during import of custom attributes in Aras or 3DEXPERIENCE when the conversion is specified in the CustomAttributeMapping (see section for Aras 3.3.2.2.1 and section 3.3.2.4.9 for 3DEXPERIENCE import).

3.3.2.2 Pdm

3.3.2.2.1 Custom Attribute Mapping

```
<CustomAttributeMapping enabled="true">
  <CustomObject xname="Product"
    type="Part"
    mappingtype="DefaultCustomization">
    <CustomAttribute xname="Description"
      name="description"
      type="string"
      export="true"
      import="false"
      maxlength="128"
      truncate="true"
      defaultValue="FavoriteSupplier" />
  </CustomObject>
</CustomAttributeMapping>
```

Definition of the custom attribute mapping.

Each element defines the *xname* and the *name*.

The *xname* defines the name of the XPDMXML custom property to use.

The *name* defines the name of the Aras Innovator property to use.

```
<CustomAttributeMapping>
```

The mapping can be switched on or off using the *enabled* attribute.

It can contain multiple *CustomObject* definitions.

```
<CustomObject>
```

Each object definition can contain multiple *CustomAttribute* and *CustomFormAttributes* definitions.

```
<CustomAttribute>
```

The *type* defines the data type of the property to use.

The direction of the mappings is defined independently by the *import/export* attributes for each *CustomAttribute*. If *import* is "true" the attribute will be imported to Aras Innovator. If *export* is "true" the attribute will be exported from Aras Innovator.

The optional integer attribute *maxlength* defines the maximum length of the attribute. If the maximum length of the attribute is defined, the *truncate* attribute flag enables the truncate functionality which will truncate the attribute to the maximum length. This is checked if the setting *AttributeCheck* (see [chapter 3.3.2.1.3](#)) is enabled.

The optional attribute *defaultValue* defines a default value to set on import if the attribute is empty.

Optional attribute *unitConversionImport* can be set to convert the attribute value to a different unit on Aras import. Set attribute to name of a conversion as defined in *UnitConversionDefinition* (see [section 3.3.2.1.50](#)).

```
<CustomFormAttributes>
```

The *CustomFormAttributes* tag can be used to refer not the Aras Innovator object defined in the *CustomAttribute* but to a *formtype* attached to in with the specified *relationname*.

It can contain multiple *CustomAttribute* definitions.

3.3.2.2.2 MetaUpdate

```
<MetaUpdate enabled="true">
  <MetaObject type="Part">
    <MetaAttribute name="description" v6name="attribute[PLMEntity.V_description]"/>
    <MetaAttribute name="name" v6name="attribute[PLMEntity.V_Name]"/>
  </MetaObject>
</MetaUpdate>
```

The MetaUpdate section defines the Aras and 3DEXPERIENCE attributes for the metadata update command. The meta update functionality can be switched on or off using the *enabled* attribute.

MetaObject defines the Aras type with the type attribute. The *MetaAttribute* defines the attributes for the update functionality.

- name: the attribute name in Aras.
- v6name: the 3DEXPERIENCE attribute name

3.3.2.2.3 Other Pdm settings

```
<TemplateProductImport enabled="true">TemplateProduct.CATProduct</TemplateProductImport>
```

The location of the template product file to use on import. The product file will be added on the fly in Aras Innovator imports. The location may be relative to the ACI_HOME directory or an absolute path.

The format of the template file to be used must be defined in the V6 to TC file type mapping at /XCISettings/Conversion/V6TcFileType as V6FileFormat.

If the created product is required to get the same status as the parent object, this needs to be configured in /XCISettings/Conversion/StatusUpdateHandling like

```
<AdditionalStatusUpdate sourceType="Part"
  targetRelationType="Part CAD"
  targetObjectType="CAD" />
```

```
<ReallyRemoveExistingNotProvided enabled="true" />
```

Setting whether to remove unknown occurrences in Aras Innovator or not.

Default setting is “false”.

```
<OverwriteOriginal enabled="true" />
```

Set *enabled* to “false” to prevent overwriting of data originating from Aras Innovator (after CLOC).

Default setting is “true”.

```
<FileUploadChunkSize>1</FileUploadChunkSize>
<FileDownloadChunkSize>1</FileDownloadChunkSize>
```

Optional definition of the chunk sizes to be used to up- and download files using Aras Innovator.

The default settings are “1” each.

```
<GetPropertiesChunkSize>1000</GetPropertiesChunkSize>
<ExpandChunkSize>1000</ExpandChunkSize>
<RefreshChunkSize>1000</RefreshChunkSize>
```

Optional definition of the maximal chunk sizes to use when requesting metadata from the Aras Innovator server.

The default settings are “1000” each.

Warning: Modifying these settings can affect the performance of the tool and die utilization of the Aras Innovator server.

```
<DocumentRelations>
  <Relation>Part CAD</Relation>
</DocumentRelations>
```

Defines the relation types to be followed to documents when the export functionality of ACI is used.

```
<CreatePartClass>Part</CreatePartClass>
```

Name of the Aras Innovator type to use for new Parts.

The default class is “Item”. This behavior can be changed by overwriting the **com.tsystems.xci.customization.CustomPartType** class.

```
<Dispatchers>
  <Dispatcher enabled="true">
    <DocumentType>CAD</DocumentType>
    <FileType>CATIA Part</FileType>
    <Provider/>
    <Priority>0</Priority>
    <Servicename>Aras 3D CAD to PDF Conversion</Servicename>
    <Type/>
  </Dispatcher>
</Dispatchers>
```

Definitions for optional dispatchers to use. Each dispatcher can be enabled separately.

```
<RevisionQuerySettings>
  <RevisionTypes>
    <!-- Use empty RevisionType for search all types. -->
    <RevisionType>Part</RevisionType>
  </RevisionTypes>
  <RevisionAttributeNamees>
    <RevisionAttributeName display="Part Number" >item_number</RevisionAttributeName>
    <RevisionAttributeName display="Revision" >major_rev</RevisionAttributeName>
    <RevisionAttributeName display="Name" >name</RevisionAttributeName>
    <RevisionAttributeName display="Type" >classification</RevisionAttributeName>
    <RevisionAttributeName display="State" >state</RevisionAttributeName>
  </RevisionAttributeNamees>
  <!-- if ResultAttributeNamees tag does not exist, then all not empty attributes are returned. -->
  <ResultAttributeNamees>
    <ResultAttributeName>item_number</ResultAttributeName>
    <ResultAttributeName>major_rev</ResultAttributeName>
    <ResultAttributeName>name</ResultAttributeName>
    <ResultAttributeName>classification</ResultAttributeName>
    <ResultAttributeName>state</ResultAttributeName>
    <ResultAttributeName>created_on</ResultAttributeName>
    <ResultAttributeName>modified_on</ResultAttributeName>
  </ResultAttributeNamees>
  <MaxResultToReturn>25</MaxResultToReturn>
</RevisionQuerySettings>
```

RevisionTypes defines the settings for the Aras Innovator Part Query.

Use empty *RevisionType* for search all types.

If the *ResultAttributeNames* tag does not exist, then all not empty attributes are returned.

MaxResultToReturn sets a specified maximum number of matches to be returned. It has default "0", which means no limit.

```

<GetMetadataSettings>
  <!-- used for Aras Part -->
  <ResultAttributeNames pdmType="Part">
    <ResultAttributeName>item_number</ResultAttributeName>
    <ResultAttributeName>major_rev</ResultAttributeName>
    <ResultAttributeName>name</ResultAttributeName>
    <ResultAttributeName>state</ResultAttributeName>
    <ResultAttributeName>classification</ResultAttributeName>
  </ResultAttributeNames>
</GetMetadataSettings>

```

GetMetadataSettings defines the attributes which are returned from the Show Aras Innovator Attributes command in the ACI 3DEXPERIENCE Rich Client.

```

<SendJobNotifications enabled="true">
  <JobNotificationSetting name="width">300</JobNotificationSetting>
  <JobNotificationSetting name="height">200</JobNotificationSetting>
</SendJobNotifications>

```

If the *SendJobNotifications* is enabled, the User receives a Notification in the ARAS Notifications. The width and height setting can be used to format the width and height of the notification window.

If the configured Aras Innovator User does not belong to the "Administrators" Identity, the User must be added to the Identities list that "Can Add" an Message to allow the ACI integration user the creation of Message Notifications.

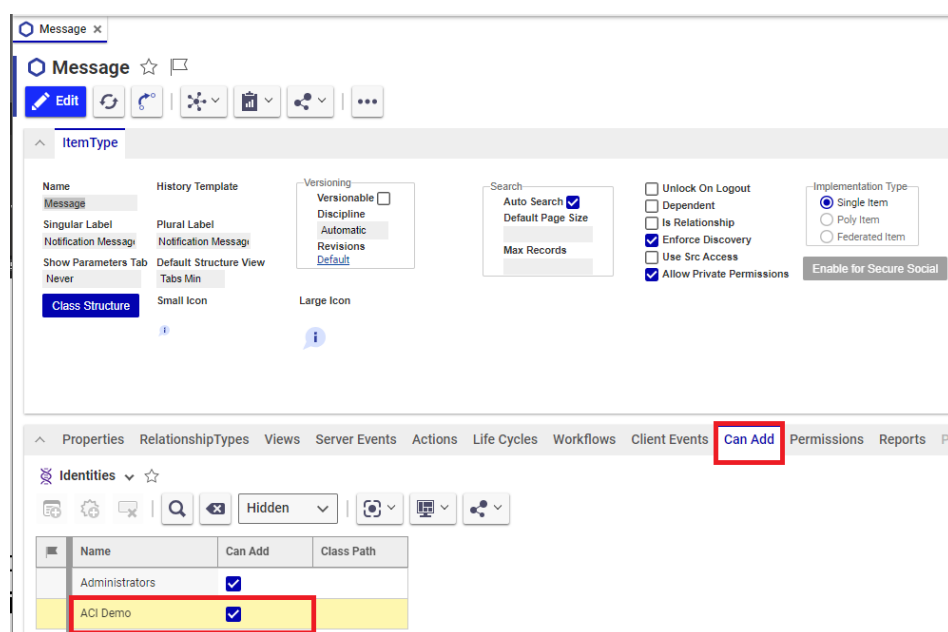


Figure 2 - Apply "Can Add" permission for Message Type

```
<ExportWithStateFilter enabled="true">Released</ExportWithStateFilter>
```

If enabled only objects with the configured state are exported from ARAS. The value is a comma separated list of allowed states.

```
<HoldConnectionOpenInSeconds>60</HoldConnectionOpenInSeconds>
```

Seconds to keep the Aras service connection open while waiting for new service connection request. The default value is 60.

```
<BulkOperation>
```

```
  <PartRevisionQueryParallelSize>20</PartRevisionQueryParallelSize>
```

```
</BulkOperation >
```

Specific operations can be parallelized by running multiple threads. Define how many threads can be started in parallel for:

- PartRevisionQueryParallelSize: query Parts in Aras. Default is 20.

```
<DocumentRevisionSeparator></DocumentRevisionSeparator>
```

The revision may be part of the document name. (e.g. 000123/B). If the document is copied with each revision, but the name changes to include the new revision (e.g. 000123/C), the mapped name in V6 would change as well. To get consistent naming, this separator can be defined. The document name will be split at the last occurrence of the configured separator and the revision will be discarded when naming the document in V6.

3.3.2.3 Aras

In the following chapters the configuration options for the tag *Aras* are described.

3.3.2.3.1 Aras Innovator Server definitions

```
<Server>
```

```
  <Url>http://my.aras-server.url:8080/InnovatorServer/Server/InnovatorServer.aspx </Url>
```

```
  <Username>myACIUser</Username>
```

```
  <Password plaintext="true">myACIPassword</Password>
```

```
  <Database>InnovatorSolutions</Database>
```

```
  <Vault>Default</Vault>
```

```
  <UseAccessToken>true</UseAccessToken>
```

```
  <AlgorithmForHash></AlgorithmForHash>
```

```
</Server>
```

Definition of the Aras Innovator server and the login credentials of the ACI user.

The *Username* and the *Password* belong to an existing Aras Innovator user. The *Database* defines the Aras Innovator database to use. The *Vault* is the Aras Innovator vault to use. An optional element is *Locale* to define the required locale for the user. The *UseAccessToken* must be set to true, if the Token Authentication must be used. For Aras Innovator 12 *UseAccessToken* should be set to true. *AlgorithmForHash* can be set to *MD5* or *SHA-256*, *MD5* is the default.

3.3.2.3.2 Server Password

The password in the `XCISettings.xml (/XCISettings/Aras/Server/Password)` can be stored as plain text or encrypted.

```
<Password plaintext="true">myACIPassword</Password>
```

To encrypt the password for ACI the following script can be used:

```

set XCI_HOME=C:\XCI\XCI_HOME
set WEBAPPS_FOLDER=C:\XCI\apache-tomcat-8.5.50\webapps
set WEB_APP_NAME=XCI

set JAVA_HOME=C:\Program Files\Java\jre8
set JAVA_OPTS=%JAVA_OPTS% -Djlicman.platform="Windows_2003_amd64"
set CLASSPATH=%WEBAPPS_FOLDER%\%WEB_APP_NAME%\WEB-INF\lib\*; %WEBAPPS_FOLDER%\%WEB_APP_NAME%\WEB-INF\classes

java com.tsystems.xci.Main --encryptPassword

pause

```

ACI will prompt the user to enter the password. The password will only be written out to the standard output and must be copied to the configuration file manually.

The command will generate a file named `passwordKey` and the encrypted password, that is printed to the command line.

Note:

If the `passwordKey` file exists it will not be overwritten.

The encrypted password may differ after each execution of the encryption. It can be set as follows.

```
<Password plaintext="false">INdlaJZMaTQO0MbIX+/C1Q==</Password>
```

3.3.2.3.3 Classification Mapping

```

<ClassificationMapping>
  <PartClassification type="Part"
    tdpart="false">/Part/Assembly</PartClassification>
  <PartClassification type="Part"
    tdpart="true">/Part/Component</PartClassification>
  <DocumentClassification
    type="CAD"
    filetype="CATPart">/CAD/Mechanical/Part</DocumentClassification>
  <DocumentClassification
    type="CAD"
    filetype="CATProduct" >/CAD/Mechanical/Assembly</DocumentClassification>
  <DocumentClassification
    type="CAD"
    filetype="CATDrawing">/CAD/Mechanical/Drawing</DocumentClassification>
</ClassificationMapping>

```

Classification mapping for the transfer from V6 to Aras Innovator.

Attributes for PartClassification:.

- type: The Aras Innovator type, e.g. Part, CAD, etc.
- tdpart: true if the Product is of productType 3DPart.
- tdxType (optional): The 3DEXPERIENCE type (property VPMLMType).
- propName (optional): A property name from the xpdm xml.
- propValue (optional): A property value from the xpdm xml.

Attributes for DocumentClassification:

- type: The Aras Innovator type, e.g. Part, CAD, etc.
- filetype: The extension of the native file for the document. Can be empty
- tdpart: true if the Product is of productType 3DPart.
- tdxType (optional): The 3DEXPERIENCE type (property VPMLMType).
- propName (optional): A property name from the xpdm xml.
- propValue (optional): A property value from the xpdm xml.

3.3.2.3.4 Other Aras settings

```
<StateList>  
  <State>Released</State>  
</StateList>
```

List of states representing a release state, the default is 'Released'.

```
<LoadProperties>  
  <PropertiesToLoad type="Part">  
    name,description,created_on,modified_on,state</PropertiesToLoad>  
  <PropertiesToLoad type="BOM Instance">  
    pwb_cad_instance_name,modified_on,sort_order,pwb_transformation_matrix  
  </PropertiesToLoad>  
  <PropertiesToLoad type="CAD">  
    description,state,modified_on,keyed_name,native_file,viewable_file,view_file,thumbnail  
  </PropertiesToLoad>  
  <PropertiesToLoad type="File">  
    modified_on,created_on,filename,file_size</PropertiesToLoad>  
</LoadProperties>
```

The Aras Adapter handles and caches the Aras Innovator standard properties for performance issues. The preload of additional properties can be configured in the *LoadProperties* section. The *PropertiesToLoad* is type specific and must contain all properties which should be cached. The value is a comma separated list of properties to load.

```
<HandledTypes>  
  <Type>Part</Type>  
  <Type>CAD</Type>  
  <Type>File</Type>  
</HandledTypes>
```

Types which are handled in Aras Innovator. default is Part, CAD, and File. This list must contain all types which should be handled in ACI.

```
<DocumentFileAttributes>  
  <AttributeName>native_file</AttributeName>  
  <AttributeName>neutral_file</AttributeName>  
  <AttributeName>viewable_file</AttributeName>  
  <AttributeName>view_file</AttributeName>  
  <AttributeName>thumbnail</AttributeName>  
</DocumentFileAttributes>
```

Attributes which are handled as document file attributes. The default is native_file, neutral_file, viewable_file, view_file, and thumbnail.

```
<CatiaAuthoringExtension>
  <Extension>CATProduct</Extension>
  <Extension>CATPart</Extension>
  <Extension>CATDrawing</Extension>
  <Extension>cgr</Extension>
  <Extension>model</Extension>
</CatiaAuthoringExtension>
```

Extensions for which the the authoring_tool attribute is set to CATIA, the default is CATProduct, CATPart, CATDrawing, cgr and model.

```
<AdditionalLatestSearchAttributes>
  <SearchAttributes name="is_released">1</SearchAttributes>
</AdditionalLatestSearchAttributes>
```

List of search attributes, used to find the *Latest* Revision.

```
<ActionExtraAttributes enabled="true">
  <TypeAndAction type="Part" action="version">
    <ActionExtraAttribute>item_number</ActionExtraAttribute>
    <ActionExtraAttribute>classification</ActionExtraAttribute>
  </TypeAndAction>
  <TypeAndAction type="CAD" action="version" getall="true"/>
  <TypeAndAction type="Part" action="update">
    <ActionExtraAttribute>item_number</ActionExtraAttribute>
    <ActionExtraAttribute>classification</ActionExtraAttribute>
    <ActionExtraAttribute>name</ActionExtraAttribute>
  </TypeAndAction>
</ActionExtraAttributes>
```

Provide extra attributes for action call's usable by customization in Aras Innovator.

```
<TransformationMatrixAttributeName>pwb_transformation_matrix</TransformationMatrixAttributeName>
```

The attribute name for the transformation matrix at the BomInstance. The default is pwb_transformation_matrix.

```
<CadInstanceNameAttributeName>pwb_cad_instance_name</CadInstanceNameAttributeName>
```

The attribute name for the CAD instance name at the BomInstance. The default is pwb_cad_instance_name.

```
<HandlePartBomWOBomInstance>true</HandlePartBomWOBomInstance>
```

Add fake instance objects for missing BOMInstances, quantity is relevant for the number of created Instances. The default is false.

```
<DeleteOrphanFilesAtUpdate>>false</DeleteOrphanFilesAtUpdate>
```

true to delete old, no longer referenced files after update of a File in Aras. The default is true.

```
<CADStructureClassification>Structure</CADStructureClassification>
```

The classification of an CAD Structure relation, used for aux/nobom files. The default is Structure.

3.3.2.3.5 PDM Workbench compatibility

To support as most as possible environments ACI can be configured to run in PDM Workbench compatibility mode. This will modify the default behavior to match some specialties of the environment.

To switch on the PWB compatibility mode the following configurations must be set in the ACI configuration file in the Aras section.

```
<Aras>
...
  <PWBCompatibility enabled="true"/>
...
</Aras>
```

Additionally, the following optional settings can be set:

- ExpandNonBomGeo: true to expand non bom geometry files for PWB, default is true

3.3.2.3.6 HTTPClient

```
<HTTPClient>
  <ConnectionRequestTimeout>15000</ConnectionRequestTimeout>
  <ConnectTimeout>15000</ConnectTimeout >
  <SocketTimeout>50000</SocketTimeout>
</HTTPClient>
```

Define HTTP connection settings when connecting to Aras:

- *ConnectionRequestTimeout*: timeout in milliseconds when requesting a connection from connection pool. Default: 15000. Set to 0 for no timeout and to negative to use system default.
- *ConnectTimeout*: timeout in milliseconds until connection is established. Default: 15000. Set to 0 for no timeout and to negative to use system default.
- *SocketTimeout*: timeout in milliseconds between two consecutive data packages. Default: 50000. Set to 0 for no timeout and to negative to use system default.

3.3.2.4 Enovia

In the following chapters the configuration options for the tag *Enovia* are described.

3.3.2.4.1 3DEXPERIENCE Server definition

The 3DEXPERIENCE connection for the 3DEXPERIENCE property information is defined in the *Server* section.

```
<Server>
  <Url>https://enovia-server.url:port/3dspace</Url>
  <Username>user</Username>
  <Password>XXX</Password>
  <Role>ctx::VPLMAdmin.Company Name.Default</Role>
  <Vault>vplm</Vault>
  <Use3DPassport>true</Use3DPassport>
</Server>
```

Definition of the 3DEXPERIENCE server URL and the login credentials of the ACI user.

The *Username* and the *Password* belong to an existing 3DEXPERIENCE user. You can also specify the *Role* and the *Vault*. Set *Use3DPassport*, if the login uses the 3DPassport service.

The encryption of the password is described in section Server Password in chapter 3.3.2.3.2.

3.3.2.4.2 3DEXPERIENCE TDXServer definition

The 3DEXPERIENCE Rest connection is defined in the *TDXServer* section.

```
<TDXServer>
  <ExchangeUrl></ExchangeUrl>
  <SpaceUrl>url to the 3dspace</SpaceUrl>
  <PassportUrl>url to the 3dpassport</PassportUrl>
  <Username>username</Username>
  <Password>encrypted password</Password>
  <SecurityContext>VPLMProjectLeader.Company Name.Common
Space</SecurityContext>
  <Tenant>OnPremise</Tenant>
  <Language>en</Language>
  <SessionTimeout enabled="true">30</SessionTimeout>
</TDXServer>
```

Definition of the 3DEXPERIENCE server for the Rest API.

The *Username* and the *Password* belong to an existing 3DEXPERIENCE user.

The encryption of the password is described in section Server Password in chapter 3.3.2.3.2.

The *SecurityContext* defines the security context to use.

The *Tenant* defines the tenant.

The *Language* defines the ISO code of the language, default is “en”, used to get translated messages from 3DEXPERIENCE.

The *SessionTimeout* defines the session timeout of the 3DEXPERIENCE session, used to renew the session if enabled.

3.3.2.4.3 General 3DEXPERIENCE settings

```
<FileCache enabled="true">
  <XciFcUrl>http://my.aci-integration-server.url:port/XCI_FC</XciFcUrl>
</FileCache>
```

Is only used if the *TDXExportMode* is set to “ExportFiles”.

Defines the File Cache URL used to cache files for the export files mode.

Default setting is “false”.

```
<SessionTimeout enabled="true">30</SessionTimeout>
```

Defines the timeframe of inactivity in the 3DEXPERIENCE session before a relogin is done in the next operation in the session.

Default setting is “30” minutes.

```
<MappingContextName>XPDM</MappingContextName>
```

The mapping context name to use, used to find the correct mapping in 3DEXPERIENCE.

```
<ReceiveInterval>4000</ReceiveInterval>
```

Optional definition in which interval the events should be received in milliseconds (ms).

Default setting is “5000” (5 seconds).

```
<SchemaPath>...resources\xsd\XPG\XPDMXML.xsd</SchemaPath>
```

Definition of the schema to be used to validate XPDM messages. If the file path is not defined or incorrect, the incoming and outgoing XPDMXML files will not be validated but processed.

```
<Customization>DefaultCustomization</Customization>
```

Definition of the customization to use in XPDM events. This customization must be defined in the `pdm-cust-config.xml` in the 3DEXPERIENCE installation.

The `com.tsystems.xci.customization.CustomTypeMapping` customization class can overwrite this setting.

```
<GetMetadataSettings>
```

```
  <ProductObject enoviaType="VPMReference">
```

```
    <AttributeName display="Type">type</AttributeName>
```

```
    <AttributeName display="Name">name</AttributeName>
```

```
    <AttributeName display="Revision">revision</AttributeName>
```

```
    <AttributeName display="Vault">vault</AttributeName>
```

```
    <AttributeName display="Policy">policy</AttributeName>
```

```
    <AttributeName display="State">current</AttributeName>
```

```
    <AttributeName display="Created">originated</AttributeName>
```

```
    <AttributeName display="Modified">modified</AttributeName>
```

```
    <AttributeName display="Owner">owner</AttributeName>
```

```
    <AttributeName display="Organization">organization</AttributeName>
```

```
    <AttributeName display="Project">project</AttributeName>
```

```
    <AttributeName display="External
```

```
  ID">attribute[PLMEntity.PLM_ExternalID]</AttributeName>
```

```
    <AttributeName display="Title">attribute[PLMEntity.V_Name]</AttributeName>
```

```
    <AttributeName display="">attribute[PLMEntity.V_description]</AttributeName>
```

```
  </ProductObject>
```

```
</GetMetadataSettings>
```

`GetMetadataSettings` defines the attributes which are returned from the “Show 3DEXPERIENCE Properties” command in the ACI Innovator Web Client.

```
<EnableNonCatiaExpand>>false</EnableNonCatiaExpand>
```

Is only relevant if the `TDXExportMode` is set to “ExportFiles”.

If set to “true” all geometries are exported, else only 3DPart geometries are exported.

Default setting is “false”.

```
<VPMReferenceDisplayPattern>{attribute[PLMEntity.PLM_ExternalID]}
{majorrevision}</VPMReferenceDisplayPattern>
```

Display pattern for VPMReferences (Physical Products).

Default setting is “{attribute[PLMEntity.PLM_ExternalID]} {revision} {attribute[PLMEntity.V_Name]}”.

<DocumentDisplayPattern>{name} {revision}</VPMReferenceDisplayPattern>

Display pattern for documents.

Default setting is “{name} {revision}”.

<FolderDisplayPattern>{attribute[PLMEntity.PLM_ExternalID]}</FolderDisplayPattern>

Display pattern for Folder.

Default setting is “{attribute[PLMEntity.PLM_ExternalID]}”.

<RootFolderDisplayPattern>{attribute[PLMEntity.PLM_ExternalID]}</RootFolderDisplayPattern>

Display pattern for Root Folder.

Default setting is “{attribute[PLMEntity.PLM_ExternalID]}”.

<FolderConnectionDisplayPattern>{attribute[PLMEntity.PLM_ExternalID]}</FolderConnectionDisplayPattern>

Display pattern for FolderConnections.

Default setting is “{attribute[PLMEntity.PLM_ExternalID]}”.

<BookmarkDisplayPattern>{name}</BookmarkDisplayPattern>

Display pattern for Bookmark.

Default setting is “{name}”.

<RootBookmarkDisplayPattern>{name}</RootBookmarkDisplayPattern>

Display pattern for Root Bookmark.

Default setting is “{name}”.

<ConfigurationModelDisplayPattern>{name} {attribute[Marketing Name]}</ConfigurationModelDisplayPattern>

Display pattern for Configuration Model.

Default setting is “{name} {attribute[Marketing Name]}”.

<ConfigurationModelVersionDisplayPattern>{name} {attribute[Marketing Name]} {revision}</ConfigurationModelVersionDisplayPattern>

Display pattern for Configuration Model Version.

Default setting is “{name} {attribute[Marketing Name]} {revision}”.

<ChildObjectExpandPattern>VPMReference</ChildObjectExpandPattern>

Optional expand pattern for child part objects. Comma separated list of types.

Default setting is "VPMReference".

<ChildRelationExpandPattern>VPMInstance</ChildRelationExpandPattern>

Optional expand pattern for child relations. Comma separated list of relation types.

Default setting is "VPMInstance".

<RepObjectExpandPattern>VPMRepReference</RepObjectExpandPattern>

Optional expand pattern for representation objects. Comma separated list of types.

Default setting is "VPMRepReference".

<RepRelationExpandPattern>VPMRepInstance</RepRelationExpandPattern>

Optional expand pattern for representation relations. Comma separated list of relation types.

Default setting is "VPMRepInstance".

<CatiaV5ExportVersion>V5R28</CatiaV5ExportVersion>

The CATIA V5 version used to store the info in Aras Innovator.

<ImportPowerBy enabled="true" />

Enable to activate 3DEXPERIENCE import in POWER'BY mode. Data will be imported in native V5 format into 3DEXPERIENCE and can then be loaded using the Dassault POWER'BY Integration of 3DEXPERIENCE and V5.

Default is false, i.e. data will be imported in V6 mode.

<ExportWithStateFilter enabled="true">FROZEN,RELEASED</ExportWithStateFilter>

If enabled only objects with the configured state are exported from 3DEXPERIENCE. The value is a comma separated list of allowed states.

<RemoveNon3DPartRep3D>>false</RemoveNon3DPartRep3D>

True to remove Rep3D/Rep3DInst and Rep3DAggr from the xpdm export which are not connected with a 3DPart.

<UseBookmark>>true</UseBookmark>

True to use Bookmark class for Folder functionality. Default is false.

<UseBookmarkRestApi>>true</UseBookmarkRestApi>

True to use the Bookmark Rest API for bookmark import (UseBookmark must be true). Default is false.

<EnableEnoauthoringApi>>true</EnableEnoauthoringApi>

True to use the enoauthoring Api. Default is true.

<HoldConnectionOpenInSeconds>60</HoldConnectionOpenInSeconds>

Seconds to keep the 3DEXPERIENCE service connection open while waiting for new service connection request. The default value is 60.

<RestApiUseOneSearchField>>true</RestApiUseOneSearchField>

True to use only one untyped search field for the 3DEXP search in the web client.

```
<BulkOperation>  
  <VPMReferenceQueryParallelSize>1</VPMReferenceQueryParallelSize>  
</ BulkOperation >
```

Specific operations can be parallelized by running multiple threads. Define how many threads can be started in parallel for:

- VPMReferenceQueryParallelSize: query for VPMReference objects. Default is 1 because ADK seems to serialize the queries and there would be a performance loss due to overhead. For REST / Cloud this should be set to a higher value (e.g. 20).

3.3.2.4.4 3DEXPERIENCE Rest meta definition

The *EnoviaRestMeta* setting is used to overwrite defaults used by the 3DEXPERIENCE rest api and to describe the 3DEXPERIENCE datamodel.

```
<EnoviaRestMeta>  
  <MetaObject superName="VPMReference">NewType1,NewType2</MetaObject>  
  <CadOriginExtensionMapping cadOrigin="CATIAV5">CATProduct</CadOriginExtensionMapping>  
  ...  
</EnoviaRestMeta>
```

MetaObject: *define Supertype - SubtypeList (comma separated list).*

CadOriginExtensionMapping: *mapping from cad origin to assembly file extension.*

DocTypeExtensionMapping: *mapping from document type to assembly file extension.*

TDDocumentRepresentationTypes: *Document Representation types separated by comma. Default is Document.*

TDDocumentRepRelation: *Relation name for Document Representation types. Default is PLMDocConnection.*

TDXCADProductRepresentationTypes: *Document Representation types separated by comma. Default is XCADAAssemblyRepReference.*

TDXCADProductRepRelation: *Relation name for Document Representation types. Default is XCADAAssemblyRepInstance.*

3.3.2.4.5 SecurityContext translation definition

The Aras client provides a 3DEXPERIENCE login enhancement to select a security context in 3DEXPERIENCE based on Role, Organization, and Collaborative space. The display values for Role, Organization and CollaborativeSpace can be configured.

```
<SecurityContextTranslation>  
  <Role name="VPLMAdmin" display="Administrator"/>  
  <Role name="VPLMCreator" display="Author"/>  
  <Role name="VPLMExperimenter" display="Contributor"/>  
  <Role name="VPLMProjectAdministrator" display="Owner"/>
```



```

<Role name="VPLMProjectLeader" display="Leader"/>
<Role name="VPLMViewer" display="Reader"/>
<Role name="VPLMSecuredCrossAccess" display="Public Reader"/>
<Role name="VPLMAdmin" display="Administrator"/>
</SecurityContextTranslation>

```

3.3.2.4.6 3DEXPERIENCE Query definition

The ACI integration inside Aras Innovator provides an online query in 3DEXPERIENCE without changing the application. Based on the query result a data transfer from 3DEXPERIENCE to Aras Innovator can be initiated. For the configuration of the data transfer please refer to chapter 3.3.2.4.8.

The corresponding configurations for the query in 3DEXPERIENCE are defined in the *QuerySettings* section.

```

<QuerySettings>
  <DefaultEnoviaRole>VPLMCreator</DefaultEnoviaRole>
  <DefaultEnoviaVault>vplm</DefaultEnoviaVault>
  <QueryLimit>200</QueryLimit>
  <QueryTypes>
    <QueryType display="Physical Product">VPMReference</QueryType>
  </QueryTypes>
  <QueryAttributes>
    <QueryAttribute display="Identification code" visible="true">id</QueryAttribute>
    <QueryAttribute display="Type" visible="true">type</QueryAttribute>
    <QueryAttribute display="Name" visible="true">name</QueryAttribute>
    <QueryAttribute display="Revision" visible="true">revision</QueryAttribute>
    <QueryAttribute display="Vault" visible="true">vault</QueryAttribute>
    <QueryAttribute display="Policy" visible="true">policy</QueryAttribute>
    <QueryAttribute display="Current State" visible="true">current</QueryAttribute>
    <QueryAttribute display="Originated" visible="true">originated</QueryAttribute>
    <QueryAttribute display="Modified" visible="true">modified</QueryAttribute>
    <QueryAttribute display="Owner" visible="true">owner</QueryAttribute>
    <QueryAttribute display="Organization" visible="true">organization</QueryAttribute>
    <QueryAttribute display="Project" visible="true">project</QueryAttribute>
    <QueryAttribute display="Major Revision" visible="true">majorrevision</QueryAttribute>
    <QueryAttribute display="Minor Revision" visible="true">minorrevision</QueryAttribute>
    <QueryAttribute display="ExternalID" visible="true">
      attribute[PLMEntity.PLM_ExternalID]</QueryAttribute>
    <QueryAttribute display="V_Name" visible="true">
      attribute[PLMEntity.V_Name]</QueryAttribute>
    <QueryAttribute display="V_description" visible="true">
      attribute[PLMEntity.V_description]</QueryAttribute>
  </QueryAttributes>
</QuerySettings>

```

DefaultEnoviaRole and the *DefaultEnoviaVault* are used as defaults for the 3DEXPERIENCE login. The configured values are presented in the 3DEXPERIENCE login dialog window and can be modified by the user. If no default values are configured, empty input fields are presented to the user.

QueryLimit defines the maximum number of query results presented to the user. If more matching objects are available in 3DEXPERIENCE, an information message will appear inside the user

interface.

The default setting is “100”.

QueryTypes defines a list of selectable object types for the 3DEXPERIENCE query. Each *QueryType* defines one 3DEXPERIENCE object type (3DEXPERIENCE internal type name). The *display* attribute defines the type name presented to the user. If no query type is configured, an empty input field is presented to the user. In this case, the user has to input the 3DEXPERIENCE internal type name, like “VPMReference”.

QueryAttributes defines the 3DEXPERIENCE attributes, which will be presented in the result table. The order of the attributes in the result table is also defined here and corresponds to the attribute sequence. Each *QueryAttribute* defines one 3DEXPERIENCE attribute, e.g. “majorrevision”. The *display* attribute defines a corresponding name used in the results window, e.g. “Major Revision”. If the *visible* attribute is set to “false”, the 3DEXPERIENCE attribute will not be visible inside the result window. The default for the *visible* attribute is “true”. If no query attributes are configured, a list of default attributes is used.

Each line in the result window represents one 3DEXPERIENCE object. The user can select each line and initiate the data transfer from 3DEXPERIENCE to Aras Innovator. To perform the transfer, the configured *TDXExportMode* will be used. See chapter 3.3.2.1.27 for detailed information.

3.3.2.4.7 Revision mapping 3DEXPERIENCE to Aras Innovator

Aras Innovator can be configured for dynamic relationship behavior, by setting the relationship behavior of “Part BOM” to “float”. This can conflict with exact revision mapping from 3DEXPERIENCE to Aras Innovator.

For example: Part_1 in revisions A, B, C has been transferred to Aras Innovator. Subsequently Part_2 is created in 3DEXPERIENCE and uses Part_1 revision B. after transfer to Aras Innovator Part_2 will point to Part_1 revision C in Aras Innovator due to “float” behavior.

If exact revision mapping from 3DEXPERIENCE to Aras Innovator is desired, the item behavior of the “Part BOM” relation in Aras Innovator has to be set to “fixed”. Additionally, the “Part” lifecycle state item behavior has to be set to “fixed” as well, because the lifecycle behavior takes precedence over the relationship behavior. Alternatively, the relationship behavior can be set to “hard fixed”, which will override the lifecycle state behavior.

For detailed information on item behavior in Aras Innovator, refer to the chapters “Item Behavior” and “RelationshipType Item Behavior” in the Aras Innovator Help.

3.3.2.4.8 TSI3DXBatch Definitions

The following tags are used in the TSI3DXBatch definitions below:

- *CatStartPath* defines the path to the batch tool CATSTART.exe.
- *CatStartDirEnv* defines the directory, where the CATSTART environment is located.
- *CatStartEnv* defines the CATSTART environment.
- *ServerUrl* defines the 3DEXPERIENCE server URL.
 - It is mandatory to include the port in the URL. :443 for https and :80 for http or your custom port.
- *Environment* defines the 3DEXPERIENCE environment.
- *Username* defines the 3DEXPERIENCE username, used to initiate the data transfer.
- *Password* defines the 3DEXPERIENCE user password for the 3DEXPERIENCE user.

- In a CAS environment, a permanent Login Ticket is required.
- *FileFormat2D* defines the 2D export file format.
- *FileFormat3D* defines the 3D export file format.
- *GeometryType3D* defines the 3D type of geometry.
 - “Exact” transfers the authoring data (exact geometry)
 - “Tesselated” transfers the visualization data
 - “AsSpecifications” exports all 3D Shapes with their specifications
- *SecurityCtx* defines the 3DEXPERIENCE security context (Role.Organization.Project).
- *SiteId* defines PLM Mapping Context for the target site.
- *WithFiles* used for XPDMLExport:
 - Yes (default): Export files with XPDMLExport.
 - No: do not export files with the XPDMLExport (use FileExportConfiguration).
 - IfModified: only export Modified Files. (Missing files are exported based on the FileExportConfiguration)
- *WithDocuments* used for XPDMLExport:
 - Yes (default): Export non cad documents with XPDMLExport.
 - No: do not export non cad documents with the XPDMLExport.
- *WithPLMParams* used for XPDMLExport:
 - Yes (default): Export PLM Parameter with XPDMLExport.
 - No: do not export PLMParameter with the XPDMLExport.
- *MappingInfoResult* used for mapping info export:
 - All (default): Export mapping info result to one file.
 - Each: one result file for each mapping info entry in the input file.
- *MappingInfoExposed* used for mapping info export.
 - TRUE (default): export only exposed mapping.
 - FALSE: export exposed and internal mapping.

The following attributes are used for the processing definitions:

- *usecs*: Set to “true” to use the Converter Server.
- *tdsUrl*: ACI directory service URL (http://my.aci-integration-server.url:port/XCI/XCI_TDS).
- *csTimeout*: Converter Server timeout in seconds used to wait for free Converter Server host. Default setting is “0” (no timeout).
- *resource*: Name of the resource (see chapter 3.3.2.1.38).

The following tags are used in the Host definition:

- *Url*: The URL to the processing application.
- *Command*: The command used on the processing host (see *Url*).

Optional tags are:

- *Timeout*: The timeout in seconds. Default setting is “0” (no timeout).
- *MaxParallel*: The maximum number of parallel conversions running on the host.
- *TaskkillCommand*: The task kill command used to stop the running command after the waiting time (Timeout) elapses. Default `taskkill /F /PID ___PID___ where ___PID___` will be replaced by the process id at execution time.
- *DisableTaskkill*: Set to true to disable forceful termination of the command when timeout is reached. Default: false.

The following attributes are used for the host definitions:

- *local*: Set to “true” will skip the file transfer via Converter Server and directly work in the persistent directory (must be accessible from the hosts). Default setting is “false”.
- *cleanupWorkdir*: Set to “true” will clean the Converter Server work directory after result files have been transferred to ACI. Default setting is “true”.

The *TDXExportMode* defines the 3DEXPERIENCE export mode; the *TDXImportMode* defines the 3DEXPERIENCE import mode.

In the following sections export and import definitions are described.

Optional attributes for the definitions without Converter Server settings are:

- *timeout*: The timeout in seconds. Default setting is “0” (no timeout).
- *taskkillCommand*: The task kill command used to stop the running command after the waiting time (Timeout) elapses. Default `taskkill /F /PID ___PID___` where `___PID___` will be replaced by the process id at execution time.
- *disableTaskkill*: Set to true to disable forceful termination of the command when timeout is reached. Default: false.

3.3.2.4.8.1 SetFilter definition

Set Filter in 3DEXPERIENCE using the 3DEXPERIENCE Batch utility.

<SetFilter>

```
<CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
<CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
<CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
<ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
<Environment>UnifiedTyping</Environment>
<Username>LoginTicket</Username>
<Password>XXX</Password>
```

</Cloc >

Set Filter without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<SetFilterProcessing usecs="true" tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <SetFilterHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>XPDMExportCommand</Command>
  </SetFilterHost>
  <SetFilterCommand commandName="XPDMExportCommand">
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password>XXX</Password>
  </SetFilterCommand>
</SetFilterProcessing>
```

Set Filter with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.2 ClocProcessing definition

Process CLOC in 3DEXPERIENCE using the 3DEXPERIENCE Batch utility.

```
<Cloc >
  <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
  <ContextName>XPDM</ContextName>
</Cloc >
```

Process CLOC without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<ClocProcessing usecs="true" tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <ClocHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>XPDMExportCommand</Command>
  </ClocHost >
  <ClocCommand commandName="XPDMExportCommand">
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password>XXX</Password>
    <ContextName>XPDM</ContextName>
  </ClocCommand >
</ClocProcessing >
```

Process CLOC with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.3 MappingInfo definition

Retrieve Mapping information from 3DEXPERIENCE using the 3DEXPERIENCE Batch utility.

```
<MappingInfo>
  <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
  <ContextName>XPDM</ContextName>
</MappingInfo >
```

Retrieve Mapping information without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<MappingInfoProcessing usecs="true" tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <MappingInfoHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>XPDMExportCommand</Command>
  </MappingInfoHost >
  <MappingInfoCommand commandName="XPDMExportCommand">
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password>XXX</Password>
    <ContextName>XPDM</ContextName>
  </MappingInfoCommand >
</MappingInfoProcessing >
```

Retrieve Mapping information with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.4 XPDM Export definition

Direct export of a structure from 3DEXPERIENCE using the XPGClientBatch utility.

```
<XPDMExport>
  <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
  <FileFormat3D>CATIAV5-6R2018</FileFormat3D>
  <GeometryType3D>AsSpecifications</GeometryType3D>
  <FileFormat2D>CATIAV5-6R2018</FileFormat2D>
  <SiteId>XPDM</SiteId>
  <WithFiles>No</WithFiles>
</XPDMExport>
```

Export without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<XPDMExportProcessing usecs="true" tdsUrl="http://my.aci-integration-server.url:port/XCI/XCI_TDS">
  <XPDMExportHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>XPDMExportCommand</Command>
  </XPDMExportHost>
  <XPDMExportCommand commandName="XPDMExportCommand">
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
```

```

    <Password>XXX</Password>
    <FileFormat3D>CATIAV5-6R2018</FileFormat3D>
    <GeometryType3D>AsSpecifications</GeometryType3D>
    <FileFormat2D>CATIAV5-6R2018</FileFormat2D>
    <SiteId>XPDM</SiteId>
    <WithFiles>No</WithFiles>
  </XPDMExportCommand>
</XPDMExportProcessing>

```

Export with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.5 XPDM Import definition

Direct import of a structure to 3DEXPERIENCE using the XPGClientBatch utility.

```

<XPDMImport>
  <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
  <SiteId>XPDM</SiteId>
</XPDMImport>

```

Import without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```

<XPDMImportProcessing usecs="true" tdsUrl="http://my.aci-integration-
server.url:port/XCI/XCI_TDS">
  <XPDMImportHost local="false" cleanupWorkdir="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>XPDMImportCommand</Command>
  </XPDMImportHost>
  <XPDMImportCommand commandName="XPDMImportCommand">
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env_XPP</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password>XXX</Password>
    <SiteId>XPDM</SiteId>
  </XPDMImportCommand>
</XPDMImportProcessing>

```

Import with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.6 Folder Export definition

Direct export of a root folder from 3DEXPERIENCE.

```

<FolderExport>

```

```
<CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>  
<CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>  
<CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>  
<ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>  
<Environment>UnifiedTyping</Environment>  
<Username>LoginTicket</Username>  
<Password>XXX</Password>  
<SecurityCtx/>
```

</FolderExport>

Export without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<FolderExportProcessing usecs="true" tdsUrl="http://my.aci-integration-  
server.url:port/XCI/XCI_TDS">  
  <FolderExportHost local="false">  
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>  
    <Command>FolderExportCommand</Command>  
  </FolderExportHost>  
  <FolderExportCommand commandName="FolderExportCommand">  
    <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>  
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>  
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>  
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>  
    <Environment>UnifiedTyping</Environment>  
    <Username>LoginTicket</Username>  
    <Password>XXX</Password>  
  </FolderExportCommand>  
</FolderExportProcessing>
```

Export with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.7 Folder Import definition

Direct import of a folder to 3DEXPERIENCE.

```
<FolderImport>  
  <CatStartPath>C:\enoviaV6R2018x\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>  
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>  
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>  
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>  
  <Environment>UnifiedTyping</Environment>  
  <Username>LoginTicket</Username>  
  <Password>XXX</Password>  
  <SecurityCtx/>  
</FolderImport>
```

Import without the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

```
<FolderImportProcessing usecs="true" tdsUrl="http://my.aci-integration-  
server.url:port/XCI/XCI_TDS">  
  <FolderImportHost local="false">  
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>  
    <Command>FolderImportCommand</Command>
```



```

</FolderImportHost>
<FolderImportCommand commandName="FolderImportCommand">
  <CatStartPath>C:\lenovia\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
</FolderImportCommand>
</FolderImportProcessing>

```

Import with the use of the Converter Server.

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.8.8 File Export definition

Direct export of a structure from 3DEXPERIENCE using the Downward Compatibility (DWC) utility. *FileExport* or *FileExportProcessing* define the 3DEXPERIENCE connection and batch specific settings.

FileExportConfiguration defines which files to export (see section 3.3.2.4.8.8.1).

Export without the Converter Server:

```

<FileExport>
  <CatStartPath>C:\lenovia\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
  <CatStartDirEnv>C:\TCI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
  <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password>XXX</Password>
  <SecurityCtx/>
  <BatchInactivityTimeout>0</BatchInactivityTimeout>
  <DownwardCompatibility>
    <Format>CATIAV5-6R2018</Format>
    <GeometryType3D>AsSpecifications</GeometryType3D>
  </DownwardCompatibility>
</FileExport>

```

Export with the use of the Converter Server:

```

<FileExportProcessing usecs="true" tdsUrl="http://aci-integration-server.url:port/XCI/XCI_TDS">
  <FileExportHost local="false">
    <Url>http://my.aci-integration-server.url:port/XCI_CS</Url>
    <Command>Command2</Command>
  </FileExportHost>
  <FileExportCommand commandName="Command2">
    <CatStartPath>C:\lenovia\B420\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv>TSI_3DX_EXP_Env</CatStartEnv>
    <CatStartDirEnv>C:\ACI\TSI_3DX_EXP_R2018x\config</CatStartDirEnv>
    <ServerUrl>https://enovia-server.url:port/3dspace</ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password>XXX</Password>
    <SecurityCtx/>
  </FileExportCommand>
</FileExportProcessing>

```

```

< BatchInactivityTimeout>0</ BatchInactivityTimeout>
<DownwardCompatibility>
  <Format> CATIAV5-6R2018</Format>
  <GeometryType3D>AsSpecifications</GeometryType3D>
</DownwardCompatibility>
</FileExportCommand>
</FileExportProcessing>

```

Use *BatchInactivityTimeout* to terminate *DownwardCompatibility* or *DataExchangePLMBatch* execution after inactivity. Default is 0 – no timeout.

The examples show configurations for the *DownwardCompatibility* batch. Settings for other batches are defined similarly.

- **DownwardCompatibility:**
 - **Format:** target CATIA V5 format, must match CATIAVRxx for R18 – R21 or CATIAV5-6Rxxx for 2012 or greater
 - **GeometryType3D:** export geometries with specification tree (AsSpecifications) or as solid body (Exact). Default: AsSpecifications.
 - **TemplateCATPart:** create CATParts based on a template CATPart. Must specify full path.
 - **RetryGeometryExport:** retry geometry export if export of a list of objects fails to isolate the failed object and export all other objects. Set to true or false.
 - **JTV5:** script to be executed after CATPart export to generate JT files. Must specify full path.
 - **JT_ContinueOnError:** continue exporting if JT generation fails. Set to true or false.
 - **CreateJtForClass:** create JTs only for these 3DEXPERIENCE object types. Separate multiple types with “,”. Types must be subtypes of PLMCoreRepReference. Default: 3DShape.
 - **CATFileFormatForJt:** create JTs only for these file formats of exported files (e.g. CATPart). Separate multiple formats with “,”. Default: CATPart.
- **DataExchangePLMBatch:**
 - **MaxXCadBatchObjects:** restrict maximum number of objects for a single DataExchangePLMBatch call. Default: 200.
 - **XCadInvalidCharacters:** replace invalid characters with “_” when constructing filenames for exported files. Default: \:*?<>| and tab character.
- **PLMPrintBatch:**
 - **PrintTemplate:** full path to print template file.
- **Export3DXML:**
 - **RepresentationExport:** export all representations (All), export 3DShapes (Yes) or export no representations (No). Default: Yes.
 - **Format:** export with (WithAuthoring) or without authoring information (ForReview). Default: WithAuthoring.
 - **PropagateDepth:** how many structure levels are included in the export: All, 1, 2, 3, ... Default: All
 - **CompatibilityMode:** export 3DXML in compatibility mode: Yes or No. Default: Yes.
 - **CompatibilityLevel:** Specify compatibility level when exporting in compatibility mode: CompatibilityLevel2013x, CompatibilityLevel2020x. Only available from 2021x onwards. If defined, CompatibilityMode will be automatically set to YES. Default: none.

3.3.2.4.8.8.1 File Export configuration

The configuration for the FileExport (*TDXExportMode* is set to ExportFiles) can be configured with FileExportConfiguration settings.

```
<FileExportConfiguration>
  <Source type="3DShape">
    <CATPart enableExport="true"/>
    <Thumbnail enableExport="true" viewableSize="300">PNG</Thumbnail>
    <XCAD enableExport="false" xCadFormat="wrl">VRML</XCAD>
    <XCAD enableExport="false" >JT_COMFOX</XCAD>
  </Source>
  <Source type="VPMReference">
    <TDXML enableExport="false" ignoreError="true" />
    <CustomAttributes enableExport="true">
      <CustomAttribute xName="cusXname">attrName</CustomAttribute>
    </CustomAttributes>
  </Source>
  <Source type="Drawing">
    <CATDrawing enableExport="true"/>
    <Thumbnail enableExport="true" viewableSize="300">PNG</Thumbnail>
    <Print enableExport="true"/>
  </Source>
  <RestApiExport enabled="true">
    <AssemblyExport enableExport="true" ignoreError="true"/>
    <PartExport enableExport="true" ignoreError="false"/>
    <DrawingExport enableExport="true" ignoreError="true"/>
  </RestApiExport>
</FileExportConfiguration>
```

The FileExportConfiguration can be used to disable the CATPart or CATDrawing export. Also, Thumbnails or neutral formats can be exported. For detailed information about the configuration see the documentation of the Export batch in the “Readme_TSI3DXBatch.txt” file.

For each source a set of custom attributes can be defined with the attribute name and the name in the XPDMXML file.

The *ignoreError* flag can be set to true to ignore error at file export.

The 3DXML export and the XCAD export can set the *enableAssemblyCaching* attribute to true to enable the Assembly file caching at export.

The *RestApiExport* section defines exports with the Rest API from 3DEXPERIENCE. The TDXServer must be configured in the Enovia section.

AssemblyExport: enableExport set to false will skip the assembly file (powerby) export. ignoreError set to true will continue on error.

PartExport: enableExport set to false will skip the part file (powerby) export. ignoreError set to true will continue on error.

DrawingExport: enableExport set to false will skip the drawing file (powerby) export. ignoreError set to true will continue on error.

3.3.2.4.8.9 Revise in V6 configuration

Trigger a revise in V6 from Aras. Location of Control must be 3DEXPERIENCE. The object must have been transferred to 3DEXPERIENCE previously

Direct revise without ConverterServer:

```
<ReviseInV6>
  <CatStartPath>path-to\B419\win_b64\code\bin\CATSTART.exe</CatStartPath>
  <CatStartEnv>TSI_3DX_EXP_XPP_XCI</CatStartEnv>
  <CatStartDirEnv>path-to-cat-env</CatStartDirEnv>
  <ServerUrl>https://enovia-server-and-enovia-port/3dSPACE</ServerUrl>
  <Environment>UnifiedTyping</Environment>
  <Username>LoginTicket</Username>
  <Password plaintext="true">XXX</Password>
</ReviseInV6>
```

Revise with ConverterServer:

```
<ReviseInV6Processing usecs="true" tdsUrl="http://localhost:20180/XCI">
  <ReviseInV6Host local="false">
    <Url>http://localhost:20182/XCI_CS</Url>
    <Command>ReviseInV6Command</Command>
  </ReviseInV6Host>
  <ReviseInV6Command commandName="ReviseInV6Command">
    <CatStartPath> path-to\B419\win_b64\code\bin\CATSTART.exe</CatStartPath>
    <CatStartEnv> TSI_3DX_EXP_XPP_XCI </CatStartEnv>
    <CatStartDirEnv> path-to-cat-env </CatStartDirEnv>
    <ServerUrl> https://enovia-server-and-enovia-port/3dSPACE </ServerUrl>
    <Environment>UnifiedTyping</Environment>
    <Username>LoginTicket</Username>
    <Password plaintext="true">XXX</Password>
  </ReviseInV6Command>
</ReviseInV6Processing>
```

The configurations are defined in the TSI3DXBatch Definitions section.

3.3.2.4.9 Custom Attribute Mapping

The CustomAttributeMapping in the Enovia section can be used to create a pdm-cust-config.xml file for xpdm import and export.

```
<CustomAttributeMapping enabled="true"
  createPdmCustConfigForExport="true"
  createPdmCustConfigForImport="true">
  <CustomObject xname="Product" type="VPMReference" mappingtype="VPMReference">
    <CustomAttribute xname="V_versionComment" name="V_versionComment"
      type="string" export="true" extensionname="MyExtension" />
  <CustomObject xname="Drawing" type="Drawing" mappingtype="Drawing"/>
  <CustomObject xname="DrawingAggr" type="Drawing" mappingtype="Drawing"/>
  <CustomObject xname="Rep3D" type="3DShape" mappingtype="3DShape"/>
  <CustomObject xname="Rep3DAggr" type="3DShape" mappingtype="3DShape"/>
  <CustomObject xname="Document" type="Document" mappingtype="Document"/>
</CustomAttributeMapping>
```

```
<CustomAttributeMapping>
```

The mapping can be switched on or off using the *enabled* attribute.

Set `createPdmCustConfigForExport` to *true* to create a pdm-cust-config.xml file for xpdm export.

set *createPdmCustConfigForImport* to *true* to create a *pdm-cust-config.xml* file for *xpdm* import.

It can contain multiple *CustomObject* definitions.

<CustomObject>

Each object definition has an *xname*, *type*, and *mappingtype* attribute and can contain multiple *CustomAttribute* definitions.

<CustomAttribute>

The *xname* defines the Property name in the *XpdmXml*. The *type* defines the data type of the property. The *name* is the 3DEXPERIENCE attribute name. The *export* and *import* flag define the attribute for import and/or export. The optional attribute *extensionname* must be set if this attribute belongs to an extension in 3DEXPERIENCE.

Optional attribute *unitConversionImport* can be set to convert the attribute value to a different unit on 3DEXPERIENCE import. Set attribute to name of a conversion as defined in *UnitConversionDefinition* (see section 3.3.2.1.50).

Optional attribute *xpdmExposed* can be set to false to export attributes from 3DEXPERIENCE that are not exposed with XPDM interface. These attributes are only exported if *TDXExportMode* is set to *ExportXPDM* (see section 3.3.2.1.27).

The example above defines the *V_versionComment* attribute for export of *VPMReference* types

3.3.2.4.10 ImportStep (DS Cloud only)

Settings for the step Import used by the Enterprise IP Exchange service.

<ImportStep>

 <ImportCompanyName>My Company name</ImportCompanyName>

...

</ImportStep>

ImportCompanyName: The company name for the STEP header. Default is "T-Systems International GmbH".

ImportCompanyId: The company id for the STEP header. Default is "www.t-systems.com".

ImportJobPollingSleepPeriod: Time to sleep in milliseconds for the Job result polling. Default is 10000.

ImportJobMaximumDuration: Time in minutes to wait for the job result. Default is 30.

ImportJobMaximumDurationResultsInError: true to set the job result to success if it runs longer than the *ImportJobMaximumDuration*. Default is true.

DisableRevisionOrderImport: true to not set the revision order property for *PartVersion* and *DocumentVersion*. Default is false.

EnableNon3DPartGeometryImport: True to enable the import of non 3DPart geometries, e.g. cgr, V4 model.

3.3.2.4.11 ExportStep (DS Cloud only)

Settings for the step export used by the Enterprise IP Exchange service.

<ExportStep>

 <ExportJobPollingSleepPeriod>10000</ExportJobPollingSleepPeriod>

```
<ExportJobMaximumDuration>60</ExportJobMaximumDuration>
</ExportStep>
```

ExportJobPollingSleepPeriod: Time to sleep in milliseconds for the Job result polling. Default is 10000 (10 seconds).

ExportJobMaximumDuration: Time in minutes to wait for the job result. 0 or negative for infinite. Default is 60.

3.3.2.4.12 HTTPClient

```
<HTTPClient>
  <ConnectionRequestTimeout>15000</ConnectionRequestTimeout>
  <ConnectTimeout>15000</ConnectTimeout >
  <SocketTimeout>50000</SocketTimeout>
</HTTPClient>
```

Define HTTP connection settings when connecting to 3DEXPERIENCE:

- *ConnectionRequestTimeout*: timeout in milliseconds when requesting a connection from connection pool. Default: 15000. Set to 0 for no timeout and to negative to use system default.
- *ConnectTimeout*: timeout in milliseconds until connection is established. Default: 15000. Set to 0 for no timeout and to negative to use system default.
- *SocketTimeout*: timeout in milliseconds between two consecutive data packages. Default: 50000. Set to 0 for no timeout and to negative to use system default.

3.3.2.5 Features

Enable or disable features if not required by use case. For example in case of unidirectional transfer from 3DEXPERIENCE to Aras Innovator only, you could disable Aras Innovator to 3DEXPERIENCE functionality.

```
<Features>
  <SendTo3DX enabled="true"/>
  <SendToPDM enabled="true"/>
  <BookmarkSendToPDM enabled="true"/>
  <ListTo3DX enabled="true"/>
  <ListToPDM enabled="true"/>
  <StructureCompare enabled="true"/>
  <Reviseln3DX enabled="false"/>
  <MetaUpdateIn3DX enabled="false"/>
  <Query3DXPhysicalProduct enabled="true"/>
  <Query3DXBookmark enabled="true"/>
  <QueryPDMPartRevision enabled="true"/>
  <DetailsServlet enabled="false"/>
  <FileCacheInfoServlet enabled="true" maxReturn="50"/>
  <JobServlet enabled="true"/>
  <TableInfoServlet enabled="true"/>
</Features>
```

Enable or disable by setting the enabled attribute:

- *SendTo3DX*: transferring Part revisions to 3DEXPERIENCE. Default is enabled.
- *SendToPDM*: transferring Physical Product to Aras. Default is enabled.
- *BookmarkSendToPDM*: transfer Bookmarks to Aras Innovator (or legacy Engineering Folder if configured). Default is enabled.
- *ListTo3DX*: transfer lists of Part revisions to 3DEXPERIENCE. Default is enabled.
- *ListToPDM*: transfer lists of Physical Products to Aras. Default is enabled.
- *StructureCompare*: compare transferred objects between Aras and 3DEXPERIENCE. Default is enabled.
- *ReviseIn3DX*: revise transferred objects in 3DEXPERIENCE without transferring structure. Default is disabled.
- *MetaUpdateIn3DX*: synchronize attributes from Aras to 3DEXPERIENCE without transferring structure. Default is disabled.
- *Query3DXPhysicalProduct*: search for Physical Products in 3DEXPERIENCE. Default is enabled.
- *Query3DXBookmark*: search for Bookmarks (or legacy Engineering Folders) in 3DEXPERIENCE. Default is enabled.
- *QueryPDMPartRevision*: search for Part revisions in Aras. Default is enabled.
- *DetailsServlet*: show Aras or 3DEXPERIENCE object details based on object UID in Tools -> Details. Default is disabled.
- *FileCacheInfoServlet*: show file cache entries in Tools ->File Cache. Use *maxReturn* to control how many results are shown. Default is disabled.
- *JobServlet*: show information about submitted jobs in Tools -> Job. Default is disabled.
- *TableInfoServlet*: query ACI Product and Document table in Tools -> Table Info. Default is disabled.

3.3.2.6 XciWeb

In the following chapters the configuration options for the tag *XciWeb* are described.

3.3.2.6.1 AdminPassword

```
<AdminPassword plaintext="true">XXX</AdminPassword>
```

Admin password for “xci-admin” user.

Default setting for *plaintext* is “false”.

3.3.2.6.2 SessionTimeout

```
<SessionTimeout>2000</SessionTimeout>
```

The session timeout in seconds used for the ACI web interface.

Default setting for *SessionTimeout* is “1800”.

3.3.2.6.3 MaxQueryReturnNumber

```
<MaxQueryReturnNumber>50</MaxQueryReturnNumber>
```

The maximum number of objects returned for the 3DX and PDM queries.

Default setting for *MaxQueryReturnNumber* is "25".

3.3.2.6.4 MaxDBReturnNumber

```
<MaxDBReturnNumber>50</MaxDBReturnNumber>
```

The maximum number of objects returned for the DB queries.

Default setting for *MaxDBReturnNumber* is "25".

3.3.2.7 Scheduler

The Scheduler functionality must be enabled with the enabled flag set to true.

```
<Scheduler enabled="true">
```

...

```
</Scheduler>
```

In the following chapters the configuration options for the tag *Scheduler* are described.

3.3.2.7.1 ThreadPoolSize

The *ThreadPoolSize* setting initializes the size of the Scheduler thread pool. The default is 5, minimum is 3. A restart is needed to use the new value.

```
<Scheduler enabled="true">  
  <ThreadPoolSize>5</ThreadPoolSize>
```

...

3.3.2.7.2 StartupDelay

The *StartupDelay* setting defines the startup delay for tasks without *startTime* setting in seconds. The default is 60 seconds.

```
<Scheduler enabled="true">  
  <StartupDelay>120</StartupDelay>
```

...

3.3.2.7.3 TaskList

The *TaskList* contains a list of *Task* objects to be run with the scheduler.

```
<Scheduler enabled="true">  
  <startupDelay>20</startupDelay>  
  <TaskList>  
    <Task name="PDM-Released" period="300" ...>...
```

The *Task* object is the definition of the Tasks to be scheduled. The *Task* contains a list of *TaskSettings*. The Task has the following attributes:

- enabled – true to run the task.
- name – the unique name of the Task.
- loadClass – the class to use which implements the java interface *TaskRunnable*
- startTime – the start time of the task, e.g. "14:12:00".
- period – the period in seconds to wait for next start of the task.
- type – the scheduler type *FixedRate* or *FixedDelay*

- FixedRate: enabled first after the given initial delay, and subsequently with the given period.
- FixedDelay: enabled first after the given initial delay, and subsequently with the given delay between the termination of one execution and the commencement of the next.

The two standard implementations are `com.tsystems.xci.scheduler.HandleReleasedPdmObjects` and `com.tsystems.xci.scheduler.HandleReleasedEnoviaObjects`.

3.3.2.7.3.0.1 HandleReleasedPdmObjects

The `HandleReleasedPdmObjects` task queries for objects with a defined state in Aras. If the found revision is a new version of a formerly transferred object a new Transfer Job is initiated for this revision.

The following *TaskSetting* are supported.

- `initialStartTime` – the initial start time if no further run of this task is known.
- `objectType` – the revision types to search for, default is Part.
- `objectName` – the name pattern.
- `itemId` – the part number pattern.
- `statusList` – list of status to search for.
- `classification` – list of classifications to search for.
- `force`, `removeExistingNotProvided`, and `withGeometricalConversion`, are the settings for the created Jobs.
 - `force` – true to disable skip functionality
 - `removeExistingNotProvided` – true to remove existing children in 3DEXPERIENCE.
 - `withGeometricalConversion` – true to convert the imports to 3DEXPERIENCE.
- `waitForDesignJobs` – true to wait for the Jobs to finish.
- `writeReport` – true to write a report in the persistent directory

The `objectType`, `objectName`, `itemId`, `statusList`, and `classification` can contain multiple entries with the “|” as delimiting character.

Example Task setting for `HandleReleasedPdmObjects`, start the task at 2:00 AM and repeat the task every 24 h.

<Task

```
name="PDM-Released"
startTime="2:00:00"
period="86400"
loadClass="com.tsystems.xci.scheduler.HandleReleasedPdmObjects"
type="FixedRate">
<TaskSetting name="initialStartTime">2020-11-09T00:00:00.000Z</TaskSetting>
<TaskSetting name="objectType">Part</TaskSetting>
<TaskSetting name="itemId"></TaskSetting>
<TaskSetting name="statusList">Released</TaskSetting>
<TaskSetting name="classification">Assembly|Component</TaskSetting>
<TaskSetting name="force">>false</TaskSetting>
<TaskSetting name="removeExistingNotProvided">>true</TaskSetting>
```

```
<TaskSetting name="withGeometricalConversion">true</TaskSetting>  
<TaskSetting name="waitForDesignJobs">false</TaskSetting>  
<TaskSetting name="writeReport">true</TaskSetting>  
</Task>  
...
```

3.3.2.7.3.0.2 HandleReleasedEnoviaObjects

The HandleReleasedEnoviaObjects task queries for objects with a defined state in 3DEXPERIENCE. If the found revision is a new version of a formerly transferred object a new Transfer Job is initiated for this revision.

The following *TaskSetting* are supported.

- initialStartTime – the initial start time, if not provided the time of the first run is used.
- objectType – the revision types to search for (comma separated to search for multiple types).
- objectName – the title (V_Name) search pattern.
- plmExternalId – the part number (PLMExternalId) search pattern.
- statusList – list of status to search for (comma separated to search for multiple types).
- collaborativeSpace – list of collaborative spaces to search for (comma separated to search for multiple types).
- force, and removeExistingNotProvided, are the settings for the created Jobs.
 - force – true to disable skip functionality
 - removeExistingNotProvided – true to remove existing children in Aras.
- waitForDesignJobs – true to wait for the Jobs to finish.
- writeReport – true to write a report in the persistent directory

Example Task setting for HandleReleasedEnoviaObjects, start the task at 2:00 AM and repeat the task every 24 h.

```
<Task  
  name="TDX-Released"  
  startTime="2:00:00"  
  period="86400"  
  loadClass="com.tsystems.xci.scheduler.HandleReleasedEnoviaObjects"  
  type="FixedRate">  
  <TaskSetting name="initialStartTime">2020-11-09T00:00:00.000Z</TaskSetting>  
  <TaskSetting name="objectType">VPMReference</TaskSetting>  
  <TaskSetting name="objectName"></TaskSetting>  
  <TaskSetting name="plmExternalId"></TaskSetting>  
  <TaskSetting name="statusList">FROZEN,RELEASED</TaskSetting>  
  <TaskSetting name="collaborativeSpace">Common Space</TaskSetting>  
  <TaskSetting name="force">false</TaskSetting>  
  <TaskSetting name="waitForDesignJobs">false</TaskSetting>  
  <TaskSetting name="writeReport">true</TaskSetting>  
</Task>  
...
```

3.3.3 3DEXPERIENCE Custom Configuration

In the 3DEXPERIENCE batch server environment of the XPG Client Service Batch a `pdm-cust-config.xml` configuration file must be installed:

```
<CATIA install path>\win_b64\reffiles\XPG\config\client\pdm-cust-config.xml
```

The following sample shows a sample configuration for the PDM custom configuration:

```
<?xml version="1.0" encoding="UTF-8"?>
<XPGCustConfig SchemaVersion="V6R2013x" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="..\XSD\XPG\pdm-cust-config.xsd">
  <ObjectsConfig >
    <Object XPGXMLType="Product" V6Type="VPMReference" MappingType="DefaultCustomization" />
    <Object XPGXMLType="ProductInst" V6Type="VPMInstance" MappingType="DefaultCustomization" />
    <Object XPGXMLType="Rep3D" V6Type="3DShape" MappingType="DefaultCustomization" />
    <Object XPGXMLType="Rep3DAggr" V6Type="3DShape" MappingType="DefaultCustomization" />
    <Object XPGXMLType="Rep3DInst" V6Type="VPMRepInstance" MappingType="DefaultCustomization" />
    <Object XPGXMLType="Drawing" V6Type="Drawing" MappingType="DefaultCustomization" />
    <Object XPGXMLType="DrawingAggr" V6Type="Drawing" MappingType="DefaultCustomization" />
    <Object XPGXMLType="DrawingInst" V6Type="VPMRepInstance" MappingType="DefaultCustomization" />
  </ObjectsConfig>
</XPGCustConfig>
```

For more information about the 3DEXPERIENCE custom configuration please refer to the 3DEXPERIENCE documentation.

4 Installing the ACI Aras Data Model Extension

4.1 Installation

The “ArasAciDM_PLM.zip” and “ArasAciDM_UI.zip” file need to be unpacked first. Then at least the ArasAciDM_PLM package needs to be imported to Aras Innovator with the Aras Innovator import utility. The import utility has to be downloaded from the Aras homepage and to be installed. Link: www.aras.com → Support → Documentation → Downloads and Support → Additional Utilities → Package Import/Export Utilities

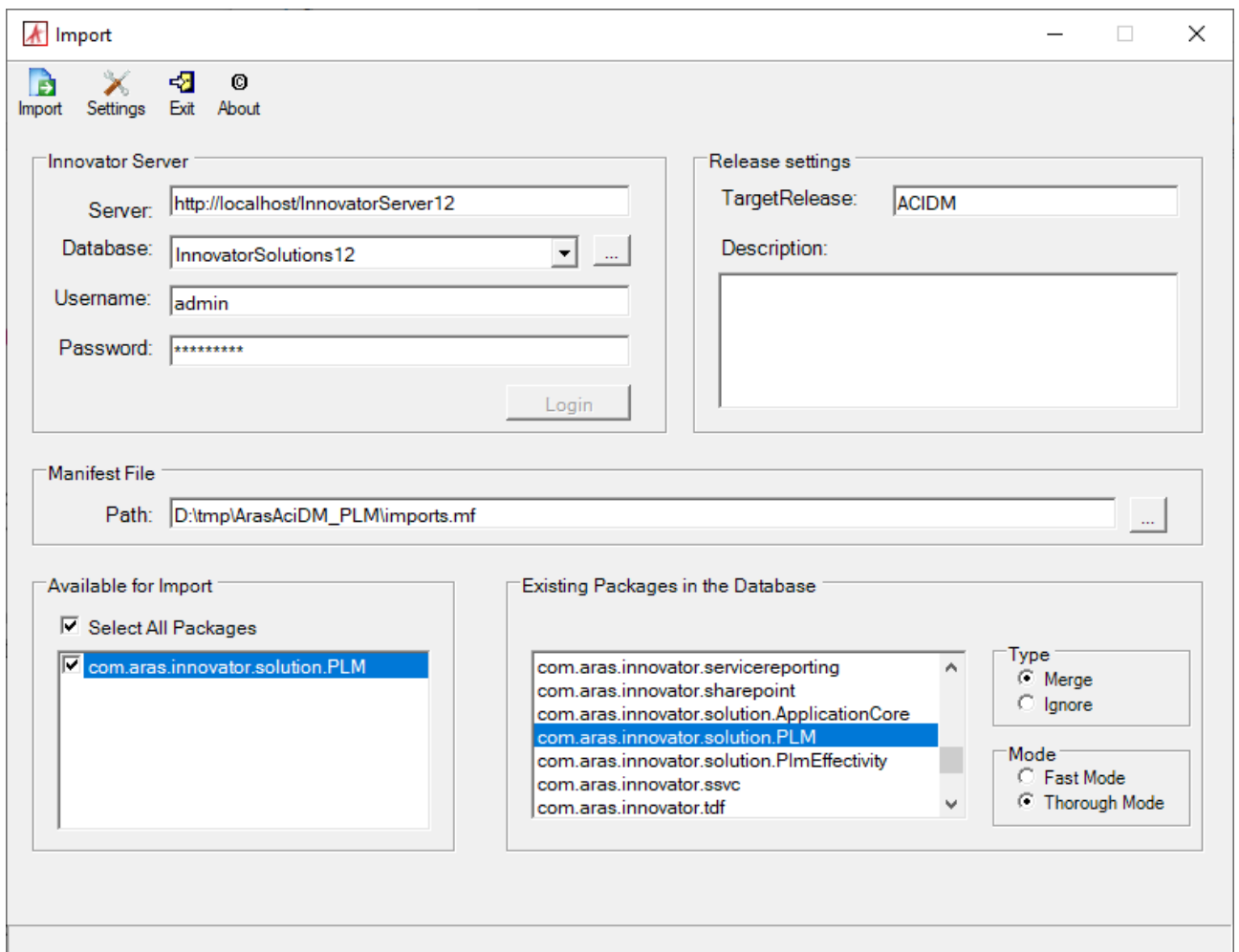


Figure 3: Import ArasAciDM_PLM package

The ArasAciDM_UI is optional and contains the Aras Innovator client extension.

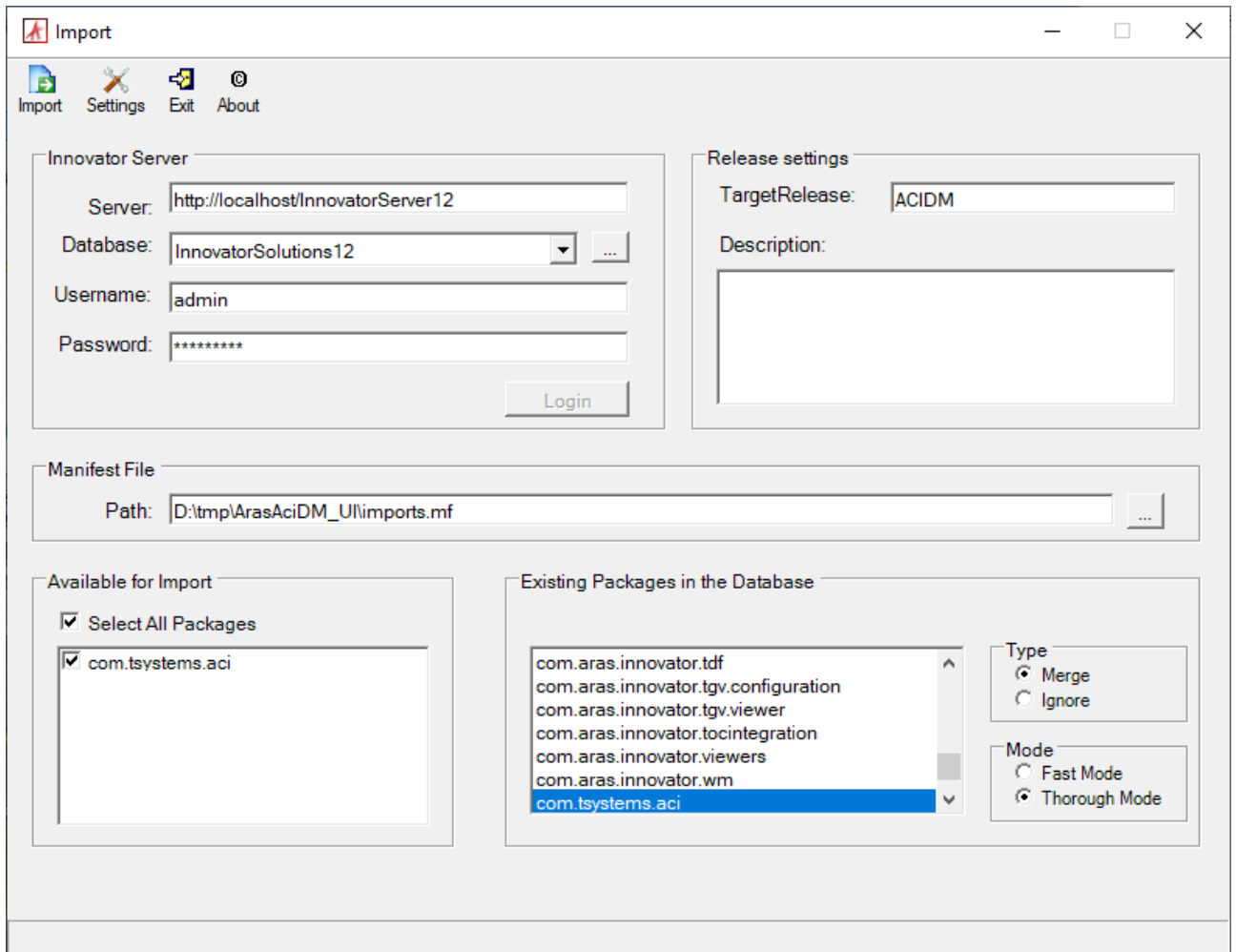


Figure 4: Import ArasAciDM_UI package

4.2 Aras Innovator variables

The installation of the ArasAciDM_UI package creates the `AciServerUrl` variable in the Aras Innovator Administration section. The `AciServerUrl` must be configured to the XCI server URL, e.g: `http://my.aci-integration-server.url:port/XCI`

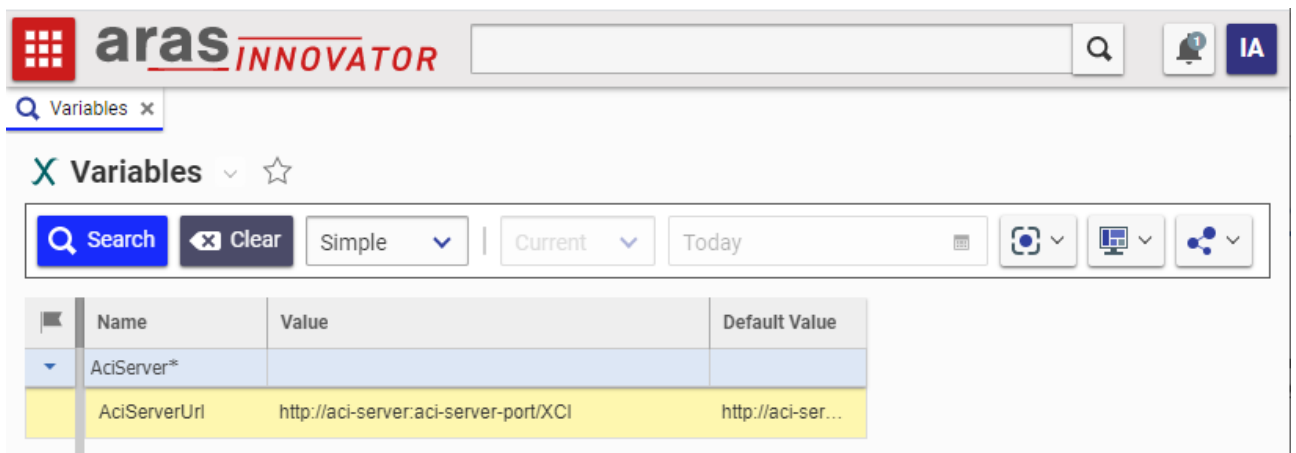


Figure 5: AciServerUrl variable in Aras Innovator

Optional Aras variables for specific functionality:

If “Open in 3DEXPERIENCE Rich Client” functionality is used, the `AciListenerServicePort` variable contains the port on which the Listener Service listens to Aras. The default port is 9191. See chapter 5.5.

If “Open in 3DEXPERIENCE Dashboard” functionality is used, the `Aci3DXDashboardUrl` must be configured to point to your 3DDashboard (e.g. `https://my.dashboard.url:port/3ddashboard`). If 3DEXPERIENCE cloud environment is used, the tenant must also be configured in variable `Aci3DXTenant`. Variable `Aci3DXDashboardApp` controls which dashboard app to open (default is `ENOSCEN_AP` for the Product Structure Explorer).

4.3 Additional Aras Configuration (Optional)

Using the ACI 3DEXPERIENCE command Open related Object in Aras Web Client an additional “helper window” or tab in the web browser. It is possible to close this window automatically after the Item is opened , if Aras is already open in another window or tab.

Modify the file

`\Innovator\Client\Modules\aras.innovator.core.MainWindow\deepLinking.js` in your Aras code tree. Around line 24 you can add an additional snippet of code to close the window:

```
if (!deepWindowIframe.src)
{
    deepWindowIframe.src = 'deepLinking.aspx';

    // Close this window if Innovator is already open
    var objWin = window.self;
    objWin.open('', '_self', '');
    objWin.close();
}
```

After changing the file restart the IIS.

The browser cache on the client must be cleared for the change becomes available.

5 Installing the ACI 3DEXPERIENCE Rich Client Extension

5.1 Installation

The ACI 3DEXPERIENCE Rich Client Extension extends the 3DEXPERIENCE Rich Client UI with ACI commands.

The extension additionally installs the Windows service “ACI Listener Service” used to communicate with 3DEXPERIENCE from the Aras web client, e.g. opening a Part in 3DEXPERIENCE from the Aras client.

You should perform the following steps with your 3DEXPERIENCE administrator.

Locate the downloaded archive file (ACI_3DX_UI_R[xxxxxx]_V[xxx].zip). Extract the content of the archive file to a temporary location, e.g. C:\temp\ACI_3DX_UI_R2024x_V3.11.0.0.

Inside the temporary installation location, locate the folder ACI_3DX_UI_R[xxxxxx]_V[xxx]\install\windows_64 for an installation on a client with Windows 64-bit.

Start the installation by double-clicking `Setup.exe` and follow the instructions. The 3DEXPERIENCE values will be received from the registry if possible.

5.1.1 Installation in a 3DEXPERIENCE cloud environment

If both a Cloud and On-Premise 3DEXPERIENCE Rich Client is detected on the machine, the user has to confirm with a checkbox if the installation is for Cloud or for On-Premise. Otherwise, the installer automatically detects the Cloud environment.

An additional installer page is presented where these necessary values must be set.:

- 3DSpace URL
- Cloud Tenant

For example, the 3DSpace URL and the Cloud tenant can be easily identified by starting the “Collaborations & Approvals” App from the 3D Compass menu:

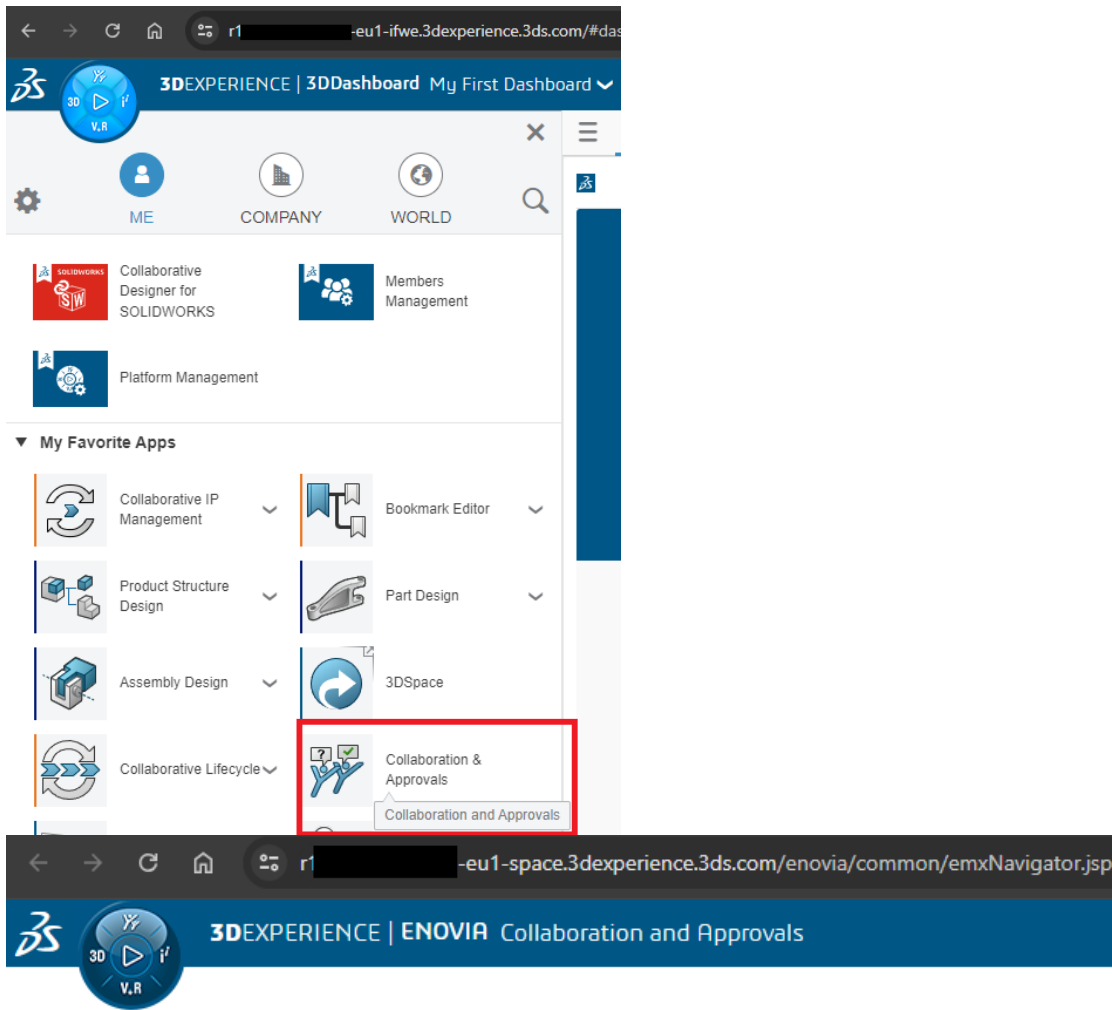


Figure 6: 3DEXPERIENCE Cloud 3DSpace URL

3DSpace URL: `https://r1234567890123-eu1-space.3dexperience.3ds.com`

The 3DSpace URL also contains the name of the Cloud Tenant, but with lower-case “r”!

Note: Change the starting letter “r” to upper-case letter “R” for the Cloud Tenant name!

`tenant=R1234567890123`

5.2 Silent Installation

It is possible to use a silent installation for the extension installation.

5.2.1 Parameters

The following parameters are available for the silent installation:

Parameter Name	Example Value	Description
/S		Activates the silent mode.
/User= value	Admin	Installation only for yourself ("User") or for all users of the computer ("Admin"). Default is the highest possible value.
/3DXInstDir= (Directory path)	C:\Program Files\Dassault Systemes\B426	The directory of the 3DEXPERIENCE installation.
/3DXEnvFile= (File full path)	C:\Program Files\Dassault Systemes\B426\CATE nv\Env.txt	The full path of the 3DEXPERIENCE environment file.
/XciServerURL= (URL)	http://my.aci-integration-server.url:port/XCI	The ACI Server URL. <must be set>
/Tenant= (tenant name)	R1234567890123	Cloud only: mandatory
/3DSpaceURL= (3DSpace URL)	https://r1234567890123-eu1-space.3dexperience.3ds.com:443/enovia	Cloud only: mandatory
/D=(Directory path)	C:\ACI\ACI_3DX_UI_R2024x_V3.11.0.0	The target directory of the installation.

Table 6: Silent installation parameters for 3DEXPERIENCE Rich Client Extension

ACI server URL must be set.

The parameter /S is required.

The parameter /User is optional. The highest possible value will be used as default value.

Both values for the 3DEXPERIENCE installation directory and environment file are optional; the values can be fetched from the Windows registry.

The parameter /D is optional. A part of the value will be taken from the current directory. It must be the last parameter used in the command line and must not contain any quotes, even if the path contains spaces. Only absolute paths are supported.

If one value is not given and it is not possible to fetch a value from the system the installation process will be stopped and the error message can be found in the file `install.log`.

5.2.2 Usage

For the silent installation please open a command line window as administrator.

Inside the temporary installation location, locate the folder `ACI_3DX_UI_R[xxxxx]_V[xxx]\install\windows_64` for an installation on a client with Windows 64-bit.

Start the silent installation with a command line like this example:

```
Setup.exe /S /User= Admin /3DXInstDir= "C:\Program Files\Dassault Systemes\B426"
/3DXEnvFile= "C:\Program Files\Dassault Systemes\B426\CATEnv\Env.txt"
/XciServerURL= "http://my.aci-integration-server.url:port/XCI"
/D=C:\ACI\ACI_3DX_UI_R2024x_V3.11.0.0
```

Start the silent installation for the cloud installation with a command line like this example:

```
Setup.exe /S /User= Admin /3DXInstDir= "C:\Program Files\Dassault
Systemes\B426_Cloud" /3DXEnvFile= "C:\Program Files\Dassault
Systemes\B426_Cloud\CATEnv\Env.txt" /XciServerURL= "http://my.aci-integration-
server.url:port/XCI" /Tenant= "R1234567890123" /3DSpaceURL=
"https://r1234567890123-eu1-space.3dexperience.3ds.com:443/enovia"
/D=C:\ACI\ACI_3DX_UI_R2024x_V3.11.0.0
```

The log file `install.log` of the installation will be stored in the current directory. There you can find the information about the installation process.

When the installation ended successful you will find the success message in this file.

5.3 Environment variables

The installation creates the start script `ACI_3DX_UI_Start.bat`.

Here you can find an overview of the possible environment variables in this start script.

Parameter Name	Example Value	Description
<code>XCI_DEBUG</code>	ON	Enable the ACI debug.
<code>XCI_ENABLE_OPENINPDMCMD</code>	ON	Enable command to open selected Item in Aras Innovator Client
<code>XCI_ARAS_URL</code>	<code>http://my.aras.host/InnovatorServer2023</code>	Aras Innovator client URL required by <code>XCI_ENABLE_OPENINPDMCMD</code>
<code>XCI_SERVER_URL</code>	See Client extensions configuration	Path to the ACI integration server

Table 7: ACI 3DEXPERIENCE Rich Client Extension environment variables

Please note: to omit the Aras html helper window that pops up when a selected Item is opened in the Aras Innovator web client apply the setting at the Aras server as described in chapter “4.3 Additional Aras Configuration (Optional)”.

5.4 Client extensions configuration

The client must be configured using the 3DEXPERIENCE options dialog.

The *ACI* configuration dialog under *Options* → *General* → *Compatibility* shows some version information of the integration and the server URL can be configured to connect to the ACI integration

server. The client supports the encryption of the communication channel using SSL. To enable this feature, the client must be configured to connect a https URL.

Examples:

```
http://my.aci-integration-server.url:port/XCI
```

Instead of using the preference you can also set the following variable in the start script

```
ACI_3DX_UI_Start.bat:
```

```
XCI_SERVER_URL
```

```
Ex.: set XCI_SERVER_URL=http://my.aci-integration-server.url:port/XCI
```

This URL will be used if the preference is not set.

To verify the connectivity to the configured server the *Check Server* button can be used. A message will be shown to indicate successful or unsuccessful connection.

5.5 ACI Listener service configuration

The “ACI Listener Service” is a Windows service that enables communication between the Aras ACI plugin and the 3DEXPERIENCE ACI plugin. For example, opening a Part in 3DEXPERIENCE from the Aras web client.

The service listens by default on port 9191 on messages from the ACI plugin. If necessary, the port and other options can be changed in a configuration file.

If the port is changed, the port must also be changed for the Aras Variable `AcListenerServicePort` in Aras.

The configuration file for the service is stored in the installation directory of the ACI 3DEXPERIENCE plugin at `ACI_3DX_UI_R[xxxxxx]_V[xxx]\config\XciListenerService.cfg`

Parameter Name	Example Value	Description
PORT	9191	The port on which the service listens for messages.
3DEXPERIENCE_DIR	C:\Program Files\Dassault Systemes\B426	The directory of the 3DEXPERIENCE installation.
3DEXPERIENCE_ENV_FILE	C:\Program Files\Dassault Systemes\B426\CATEnv\Env.txt	The full path of the 3DEXPERIENCE environment file.
LOG_LEVEL	INFO	Optional. The detail level for logging. One of ERROR, INFO, DEBUG. Default level is INFO.
LOG_DIR	C:\Temp	Optional. Full path of a directory for storing log files. The directory must exist. Default directory is %TEMP%.

Table 8: Configuration parameters for the Windows Service "ACI Listener Service".

6 Installing the XCI 3DEXPERIENCE Batch

The XCI 3DEXPERIENCE Batch must be installed on any host that you configure to export or import from 3DEXPERIENCE.

As a prerequisite the 3DEXPERIENCE Rich Client needs to be installed.

The XCI 3DEXPERIENCE Batch utility requires Licman21 as its license manager.

For detailed information about configuration of the XCI 3DEXPERIENCE Batch also see after installation the Readme files in the doc directory of the installation.

6.1 Installation

You should perform the following steps with your 3DEXPERIENCE administrator.

Locate the downloaded archive file (XCI_3DX_BATCH_R[xxxxx]_V[xxx].zip). Extract the content of the archive file to a temporary location, e.g. "C:\temp\XCI_3DX_BATCH_R2024x_V3.11.0.0".

Inside the temporary installation location, locate the folder "XCI_3DX_BATCH_R[xxxxx]_V[xxx]\install\windows_64" for the installation.

Start the installation by double-clicking "Setup.exe" and follow the instructions. The 3DEXPERIENCE values will be received from the registry if possible.

In the installation directory the file Report.txt is stored. It describes where the customized 3DEXPERIENCE environment for the batch can be found.

Make sure that the %JAVA_HOME% in your 3DEXPERIENCE environment is set correctly and points to a valid Java runtime.

You should add the following best practice settings to the environment:

XPG_ACTIVATE_3DPART=1	activate the 3D Part support
XPG_ACTIVATE_NONCADDDOC=1	activate the non-CAD document support
XPG_ACTIVATE_MAPPED_REVISIONFAMILY=1	activate the mapped Revision Family support
ENABLE_DETAILED_REPORT=1	enable a detailed report
CATForceNotCertifiedGraphics=1	ignore outdated graphic card driver warning

6.2 Additional Configuration for Post Processing for XPDM

Additional configuration steps are required if you import any files to 3DEXPERIENCE or export via XPDM.

6.2.1 Copy required library from the 3DEXPERIENCE environment

This is only needed if "Set Maturity of Rep Children", "Set Maturity of Rep" or "Add configured material" is configured.

Copy the file **eMatrixServletRMI.jar** to

```
... \XCI_3DX_BATCH_R<XXXX>_V<XXX>\win_b64\fromServer\docs\java
```

You can find this file on the 3DEXPERIENCE server host: <3DEXPERIENCE installation directory>\server\win_b64\docs\java

In some cases, the following files in

...\XCI_3DX_BATCH_R<XXXX>_V<XXX>\win_b64\fromServer\code\bin may have to be replaced with updated files from your 3DX Server installation after installation of a 3DX Fix Pack (you can check the installation with CheckServerConnection.bat):

mxUtil.dll, vgalaxy7k.dll

You can find these files on the 3DEXPERIENCE server host: <3DEXPERIENCE installation directory>\studio\win_b64\code\bin)

eMatrixMqlU.dll

You can find this file on the 3DEXPERIENCE server host: <3DEXPERIENCE installation directory>\adk\win_b64\code\bin).

6.2.2 Configuration of the TSI 3DEXPERIENCE xPDM Post Process behavior

TSI 3DEXPERIENCE xPDM Post Process comes with the configuration file

...\XCI_3DX_BATCH_R<XXXX>_V<XXX>\win_b64\reffiles\TCIXpgConfig.xml

The ACI Server URL must be configured in TCIXpgConfig.xml file. The TCIXpgPostProcess_SERVERURL attribute must point to the ACI installation:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<TCIXpgConfig>
  <Attribute name="TCIXpgPostProcess_SERVERURL"
    value="http://my.aci-integration-server.url:port/XCI"/>
</TCIXpgConfig>
```

The following connectivity information for the Enovia server must be provided if specific options are used (eg. TCIXpgPostProcess_REPAIRINSTANCE=ON):

Server URL of 3DEXPERIENCE server (https://enovia-server.url:port/3dspace)

- o It is mandatory to include the port in the URL. :443 for https and :80 for http if you did not choose a different port.

TCIXpgPostProcess_ENOVIASERVERURL=<3DEXPERIENCE Server URL>

3DEXPERIENCE username

This 3DEXPERIENCE user has to be ENOVIA business and system administrator. You should use the same 3DEXPERIENCE user that is used for the XPDM import.

TCIXpgPostProcess_ENOVIAUSER=<3DEXPERIENCE username>

Encrypted 3DEXPERIENCE password

TCIXpgPostProcess_ENCRYPTEDENOVIAPASSWORD=<encrypted password>

3DEXPERIENCE Vault (optional)

TCIXpgPostProcess_ENOVIAVAULT=<3DEXPERIENCE Vault>

If 3DPassport is used to check the 3DEXPERIENCE credentials:

```
TCIXpgPostProcess_USE3DPASSPORT=ON
```

6.2.3 Encrypting the password for the TSI 3DEXPERIENCE xPDM Post Process

This step is only required if "Repair Instance" or "Set Maturity of Rep Children" is configured in the TSI 3DEXPERIENCE xPDM Post Process.

The TSI 3DEXPERIENCE xPDM Post Process needs a direct (MQL) login to the 3DEXPERIENCE server. To use the post-processing, it is necessary to store the login information in the environment. As it is not allowed to store a plain password, TSI 3DEXPERIENCE xPDM Post Process uses an encrypted password.

Use the script "EncryptPassword.bat" to encrypt the 3DEXPERIENCE password. If you use the 3DEXPERIENCE environment file <Your Path>\XCI_3DX_BATCH_<3DX-version>_<XCI-version>\config\XCI_3DX_BATCH_Env.txt (created during the installation of this batch utility collection) you can just double click the batch file. If you use a different environment file you drag and drop your environment file on the script "EncryptPassword.bat", or use a command window:

```
C:\<Your Path>\XCI_3DX_BATCH_<3DX-version>_<XCI-version>\config\EncryptPassword.bat <path>\<your env-file.txt>
```

You have to encrypt the password using the same Windows OS user that runs the XPDM import/export (XPGClientBatch service, or TSI3DXBatch). The encrypted password can be used on different hosts, as long as the import uses the same Windows user.

You will be asked for the password to encrypt:

```
Encrypt 3DEXPERIENCE password
type password:
```

After typing in your password the encryption is executed:

```
starting encryption ...
Encrypting password: *****
Encrypted password: <26e5d4eencrypted331846533ppassworddcbe21975ssample>
Insert encrypted password in TCIXpgConfig.xml
Press any key to continue . . .
```

Insert the password in the configuration file TCIXpgConfig.xml.

6.2.4 Test the TSI 3DEXPERIENCE xPDM Post Process environment

This step is only required if "Repair Instance" or "Set Maturity of Rep Children" is configured in the TSI 3DEXPERIENCE xPDM Post Process!

Use the script "CheckServerConnection.bat" to test your installation.

If you use the 3DEXPERIENCE environment file <Your Path>\XCI_3DX_BATCH_<3DX-version>_<XCI-version>\config\XCI_3DX_BATCH_Env.txt (created during the installation of this batch utility collection) you can just double click the batch file. If you use a different

environment file you drag and drop your environment file on the script "EncryptPassword.bat", or use a command window:

```
C:\<Your Path>\XCI_3DX_BATCH_<3DX-version>_<XCI-
version>\config\EncryptPassword.bat <path>\<your env-file.txt>
```

You will get a warning if a needed library could not be loaded, or if one of the following settings is missing in the TCIXpgConfig.xml

- TCIXpgPostProcess_ENOVIA SERVERURL
- TCIXpgPostProcess_ENOVIAUSER
- TCIXpgPostProcess_ENCRYPTEDENOVIAPASSWORD

If you get the message "login: Cannot get instance of matrix/db/Context", please check the following settings:

- wrong setting TCIXpgPostProcess_ENOVIA SERVERURL
- wrong TCIXpgPostProcess_ENOVIAUSER / TCIXpgPostProcess_ENCRYPTEDENOVIAPASSWORD combination
- wrong / missing certificate (in case of https)
- wrong setting TCIXpgPostProcess_USE3DPASSPORT

This command also warns if the 3DEXPERIENCE user does not have the 3DEXPERIENCE privileges "system administrator" and "business administrator". These 3DEXPERIENCE privileges are required to repair an instance and to set the maturity of an imported object to a specified state:

```
TCIMQL Library build: Mar 31 2016 16:18:16
```

```
3DEXPERIENCE server version: 3DEXPERIENCE R2015x HotFix 5
```

```
!!! User MigratUsr does not have required ENOVIA business privileges !!!
```

```
!!! User MigratUsr does not have required ENOVIA system privileges !!!
```


7 Installing the license manager

7.1 Remarks

The ACI requires Licman21 as its license manager.

During the installation of the Licman, you have to specify a temporary working directory. Choose a directory where the user has full access rights.

7.2 Running Licman as a regular executable on Windows

If you install Licman with the setup program on Windows, it will be run as a service and require administrator rights. Beginning with ptf19, it is possible to launch Licman as a regular executable when the ACI is started.

You need to set the license path variable:

```
SET LICMAN_LICENSE_PATH=<port>@<host>
```

Then call `licman21_11d.exe` as a regular executable.

No execution of the setup routine is required in this case.

For more information, see *Licman User Manual*.

8 Installing the COMReconV5 package

If V5ToV6Preprocessing or V6ToV5Postprocessing is enabled, the COMReconV5 package must be installed.

8.1 Installation

The COMReconV5 package is delivered as a zip file (e.g. 191118_COMReconV5_R34.zip).

8.1.1 Unzip the COMReconV5 package

Unzip the package to disk (e.g. C:\ACI\191118_COMReconV5_R34 see Figure 7: COMReconV5 package content) at the ACI install host (where the XCI web application is installed).

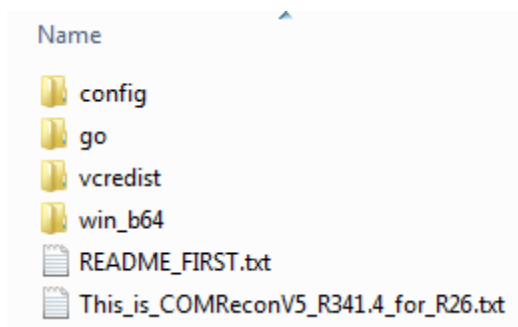


Figure 7: COMReconV5 package content

8.1.2 Create CATIA V5 environment file

Copy the CATIA V5 environment file to the config folder. Open the copied Environment file and enhance the PATH variable with the win_b64 folder as shown in the following example.

```
PATH=C:\ACI\191118_COMReconV5_R34\win_b64;C:\Program Files\Dassault Systemes\B34\win_b64\code\bin;...
```

8.1.3 Configuration

Then open the go\COMReconV5.bat file for edit and customize the 4 environment variables to your environment and save the file.

```
rem -----
rem Please customize following variables for your environment.
rem
rem Installation directory of COMReconV5.
rem Example: C:\ACI\191118_COMReconV5_R34
set COMRECONV5_INSTALL_DIR=C:\ACI\191118_COMReconV5_R34
rem
rem Installation directory of CATIA.
rem Example: C:\Program Files\Dassault Systemes\B34
set CATIA_BASEDIR=C:\Program Files\Dassault Systemes\B34
rem
rem Directory where to find CATIA env-files.
rem Example: C:\TSI\CATEnv
set CONVERTER_ENVDIR=C:\ACI\191118_COMReconV5_R34\config
rem
```

```
rem Filename (without extension) that will be used by CATIA batch client.
rem Example: COMReconV5_R34
set CONVERTER_ENVFILE=COMReconV5_R34
...
```

8.1.3.1 Option File in 3DEXPERIENCE Cloud import scenario

Settings for COMReconV5 are configured in two option files in the go subdirectory in the COMReconV5 installation. If data is imported into 3DEXPERIENCE Cloud, an additional option must be set in the XCI_V5_V6.opt file for V5ToV6Preprocessing:

```
# import stepx file - cloud
# set the Name (title as partnumber in the V5 file
# the Importer uses the partnumber for the Title
-MetaDataAddtlPropsProduct=(Name::<Part Number>)
```

8.1.3.2

8.1.4 Install Microsoft Visual C++ Redistributable Packages

Login as user with administrative rights and install all the Microsoft Visual C++ Redistributable Packages from the vcredist folder.