



# Infor PLM Accelerate 10.12.5

## CAD to PDF Converter Setup Guide

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# Contents

- Intended audience ..... 4
- Related documents ..... 4
- Contacting Infor..... 4
- Chapter 1. Overview ..... 5
- Chapter 2. Prerequisites ..... 6
  - Conversion Server Operating System..... 6
  - Microsoft Visual C++ Redistributable Package ..... 6
  - Converter Executable ..... 6
  - Installation of Infor PLM Accelerate Agent Service..... 7
  - Feature License Key..... 7
    - Requesting a Feature License ..... 7
    - Installing the License..... 7
- Chapter 3. Configuring the Connections ..... 9
  - Configuring the Agent Service..... 9
  - Configuring the Conversion Server ..... 10
- Chapter 4. Installing the CAD to PDF Converter ..... 13
  - Code Tree Patch ..... 13
  - Import Package ..... 13
- Chapter 5. Using Legacy View Files..... 15
  - Preference Settings ..... 15
  - Converting Legacy View Files ..... 15
- Chapter 6. Troubleshooting ..... 17
  - Conversion Tasks Not Created ..... 17
  - Unauthorized Access Exception..... 17
  - 500.19 – Internal Server Error ..... 17
  - 404: Not Found..... 18
  - Could not load file or assembly ..... 19
  - 3D PDF does not activate in Firefox ..... 20

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## About this guide

This document provides information about how to perform a backup and recovery of the Infor PLM Accelerate software.

## Intended audience

This guide is intended for system administrators. This document assumes that you have at least some knowledge in:

- System architecture and function for your Infor system
- SQL Server database

For the most up-to-date list of software and hardware requirements for Infor products, see the documentation for your system.

## Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in the "Contacting Infor" section below.

## Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at [www.infor.com/inforxtreme](http://www.infor.com/inforxtreme).

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

If you have comments about Infor documentation, contact [documentation@infor.com](mailto:documentation@infor.com).

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## Chapter 1. Overview

The Infor PLM Accelerate Conversion Server is a framework to manage file conversion processes used to transform native files into other viewable formats, such as TIFF or PDF.

This document describes the installation of the CAD to PDF Converter, which you can use to convert CAD Native Files to PDF and PNG viewable files.

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## Chapter 2. Prerequisites

Before proceeding, you need to install a Conversion Server and ensure that you meet the additional prerequisites.

For instructions on installing a conversion server, see the **Infor PLM Accelerate 10.12.5 – Installation Guide**.

### Conversion Server Operating System

You must install the Conversion Server for the Infor PLM Accelerate CAD to PDF Converter on one of the following 64-bit Operating Systems:

- Windows Server 2008 R2 (x64)
- Windows Server 2012 (x64)
- Windows Server 2012 R2 (x64)
- Windows Server 2016 (x64)

**Note:** The 32-bit Operating Systems are not supported.

### Microsoft Visual C++ Redistributable Package

You must install The Microsoft Visual C++ 2010, 2012, 2013, and 2015 Redistributable Packages on the Conversion Server in order to run the Infor PLM Accelerate CAD to PDF Converter. The links to these downloads can be found at Microsoft's latest supported Visual C++:

**Microsoft Visual C++ 2010, 2012, 2013, and 2015 Redistributable Packages (x64):**

<https://support.microsoft.com/en-us/help/2977003/the-latest-supported-visual-c-downloads>

The following redistributable packages are required to be installed in order to use the HOOPS communicator on the Windows operating system:

- Microsoft Visual C++ 2010 64-bit redistributable
- Microsoft Visual C++ 2012 64-bit redistributable
- Microsoft Visual C++ 2013 64-bit redistributable
- Microsoft Visual C++ 2015 64-bit redistributable

### Converter Executable

The supported version of the HOOPS Converter is available to subscribers in the `\Utilities\Aras CAD to PDF Converter\` folder of the Infor PLM Accelerate CD Image on the FTP website.

Copy the `HOOPS Converter` folder to a directory on your Conversion Server. For example:

---

C:\HOOPS Converter\

## Installation of Infor PLM Accelerate Agent Service

In order to configure the Infor PLM Accelerate Conversion Server, you must also install the Agent Service. For instructions on installing the Agent Service, refer to the *Installation Guide*.

### Feature License Key

The Infor PLM Accelerate CAD to PDF Converter requires a Feature License in order to run.

*To check whether a valid Feature License exists in Infor PLM Accelerate:*


1. Log into Infor PLM Accelerate as an administrator.
2. Go to **Administration --> Feature Licenses**.
3. If you find an `Aras.CadConverter3` feature license, check the expiration date to confirm that the license is still active.

### Requesting a Feature License

Enter Infor's support portal at [www.infor.com/inforxtreme](http://www.infor.com/inforxtreme) to request a license key and download any related installation documentation.

### Installing the License

Once you have the activation key, install the feature license as follows:

1. Log into Infor PLM Accelerate as an administrator and click on the User menu button . The following menu appears:

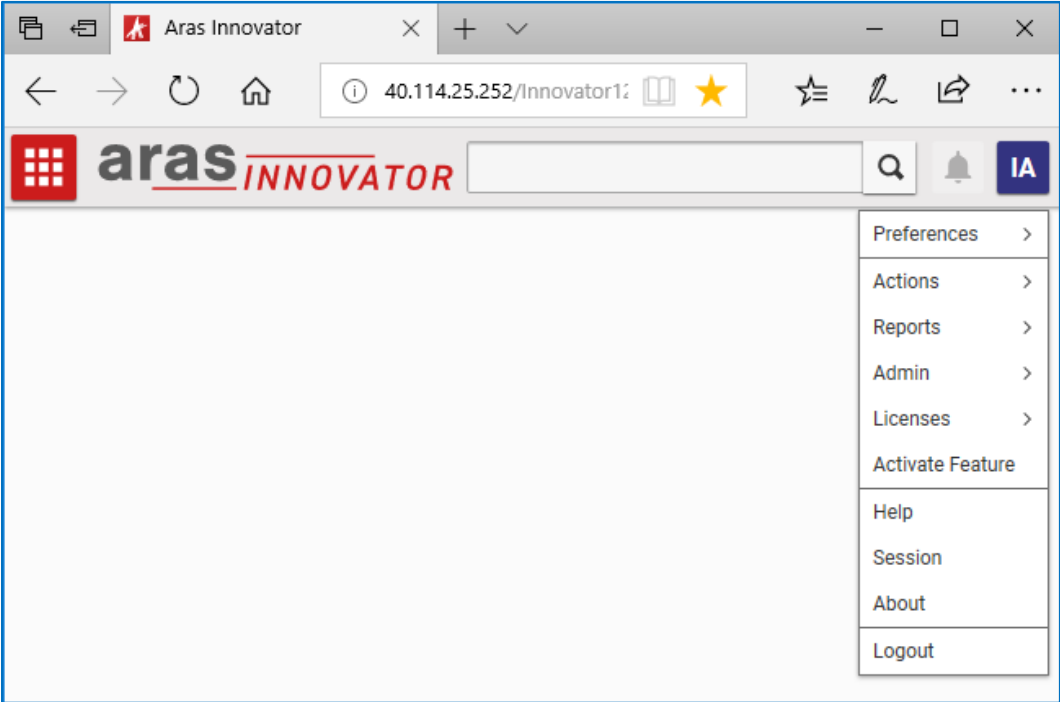


Figure 1.

2. Select **Activate Feature**.

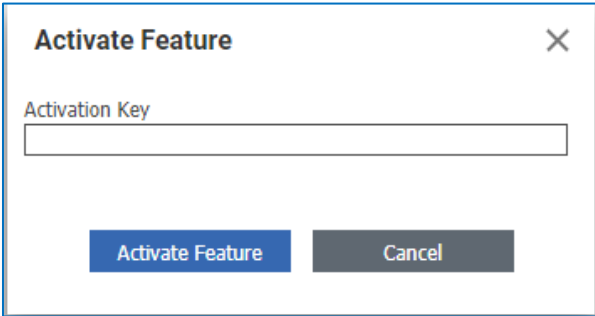


Figure 2.

3. Paste the acquired activation key and click **Activate Feature**. A success message appears.



## Chapter 3. Configuring the Connections

After installing the Conversion Server, you need to configure the two servers to communicate with one another.

### Configuring the Agent Service

1. Log on to the existing Server where the Agent Service is installed.
2. Open a Windows Explorer window to the root of the Agent Service Installation.
3. Open the `\AgentService\conversion.config` file in a text editor.
4. Configure the `cycle` tag near the bottom of the file as follows:
  - a. **DB:** Infor PLM Accelerate Database
  - b. **User:** admin

**Note:** The provided example, 'admin', does not work out of the box. The User specified must be a member of the Conversion Manager group and must have permissions to claim CAD Items that were created by other Users.

- c. **Interval:** default is 20000 (set in milliseconds). This value determines how often the Conversion Server checks if there are Conversion Tasks that need to be processed.

**MaxBatch:** default is 5. This value determines the number of Conversion Tasks that can be processed at the same time.

- d. Uncomment the tag as follows:

```
<configuration>
...
  <Innovator>
    <Conversion>
      <ProcessingCycles>
        <!--cycle DB="{db}" User="{user}"
          Interval="20000" MaxBatch="5" /-->
      </ProcessingCycles>
    </Conversion>
  </Innovator>
</configuration>
```

Should become:

```
<configuration>
...
  <Innovator>
    <Conversion>
      <ProcessingCycles>
        <cycle DB="InnovatorSolutions" User="admin"
          Interval="20000" MaxBatch="5" />
      </ProcessingCycles>
```

```

    </Conversion>
  </Innovator>
</configuration>

```

5. Save and close the `conversion.config` file.

**Note:** After making adjustments to the `conversion.config` file, restart the Infor PLM Accelerate Agent using **Control Panel --> Administrative Tools --> Services**.

## Configuring the Conversion Server

1. On the Conversion Server, go to the root of your Conversion Server installation and open the `ConversionServerConfig.xml` in a text editor.
2. Within the existing `configSections` tags at the top of the `ConversionServerConfig.xml`, there is a section group defined for settings that are unique to each Converter.

Add the following tag:

```

...
<configSections>
...
  <sectionGroup name ="ConverterSettings">
    <section name="ArasCadConverter"
type="Aras.ConversionFramework.Converter.Hoops.Configuration.HoopsConve
rterConfiguration, ArasCadConverter"></section>
    <section name="ArasCadConverterPrc"
type="Aras.ConversionFramework.Converter.Hoops.Configuration.HoopsConve
rterConfiguration, ArasCadConverter"></section>
  </sectionGroup>
  <section name="ConversionServer"...
</configSections>
...

```

3. Within the existing `Converters` tags, add a `Converter` tag for the new converter.

This tag specifies the DLL for the Converter as well as the Class within the DLL that performs the conversion.

```

...
<ConversionServer>
  <Converters>
    <Converter name="Aras CAD to PDF Converter"
type="Aras.ConversionFramework.Converter.Hoops.HoopsConverter,
ArasCadConverter" />
    <Converter name="Aras PRC to SCS Converter"
type="Aras.ConversionFramework.Converter.Hoops.HoopsConverterPrc,
ArasCadConverter" />
  ...
  </Converters>
  <InnovatorServer
url="http://localhost/InnovatorServer/Server/InnovatorServer.aspx" />

```

```
</ConversionServer>
```

...

**Note:** The `url` attribute of the `InnovatorServer` tag should contain the Infor PLM Accelerate URL to the `InnovatorServer.aspx` page.

4. Within the existing `ConverterSettings` tags, add a tag for the new converters. This tag must match the name configured in step 2.
  - a. Set the `converterPath` to the path on the Conversion Server to the `converter.exe` application that was set up in [Converter Executable](#).
  - b. Set the `arguments` under the `Command` tag as follows. Be sure to update the location of the templates directory highlighted here:

**Note:** The `arguments` attribute cannot contain carriage returns. The entire section from `arguments="` to `" />` must exist on only one line.

```
<ConverterSettings>
  <ArasCadConverter>
    <Application converterPath="C:\HOOPS
Converter\bin\converter.exe"/>
    <Command arguments="--input_pdf_template_file
'C:\HOOPS Converter\templates\Blank_Template_L.pdf' --output_pdf
'%filepath%\%filename%.pdf' --output_png '%filepath%\%filename%.png' --
output_png_resolution '150x150' --output_scs
'%filepath%\%filename%.scs' --output_xml_assemblytree
'%filepath%\%filename%.xml' --output_prc '%filepath%\%filename%.prc' --
background_color '1.0, 1.0, 1.0' --output_logfile
'%filepath%\%filename%.log' />
  </ArasCadConverter>
  <ArasCadConverterPrc>
    <Application converterPath="C:\HOOPS
Converter\bin\converter.exe"/>
    <Command arguments="--output_scs
'%filepath%\%filename%.scs' --output_xml_assemblytree
'%filepath%\%filename%.xml' --output_logfile
'%filepath%\%filename%.log' />
  </ArasCadConverterPrc>
</ConverterSettings>
```

**Note:** The parameters shown previously are also shown here to provide a better understanding. Please see the included documentation for a complete description of available parameters and their function: `\HOOPS Converter\Documentation\index.html`

```
--input_pdf_template_file '..\Blank_Template_L.pdf'
--output_pdf '%filepath%\%filename%.pdf'
--output_png '%filepath%\%filename%.png'
--output_png_resolution '150x150'
```

```
--output_scs '%filepath%\%filename%.scs'
--output_xml_assemblytree '%filepath%\%filename%.xml'
--output_prc '%filepath%\%filename%.prc'
--background_color '1.0, 1.0, 1.0'
--output_logfile '%filepath%\%filename%'
```

**Note:** The SCS, XML, and PRC outputs are used with the **Visual Collaboration** feature. Any outputs not required by your implementation can be removed from the command arguments.

5. **Optional step:** If you need to generate additional file types using the converter, then add the following section with definitions for each file type:

```
<ArasCadConverter>
  <Application .../>
  <Command ... />
  <Output>
    <UploadToVault>
      <File extension="prc" argsMarkers="--output_prc" />
      <File extension="scs" argsMarkers="--output_scs" />
      <File extension="pdf" argsMarkers="--output_pdf" />
      <File extension="png" argsMarkers="--output_png" />
      <File extension="stl" argsMarkers="--output_stl" />
      <File extension="xml" argsMarkers="--output_xml_assemblytree" />
    </UploadToVault>
  </Output>
</ArasCadConverter>
<ArasCadConverterPrc>
  <Application .../>
  <Command ... />
  <Output>
    <UploadToVault>
      <File extension="prc" argsMarkers="--output_prc" />
      <File extension="scs" argsMarkers="--output_scs" />
      <File extension="pdf" argsMarkers="--output_pdf" />
      <File extension="png" argsMarkers="--output_png" />
      <File extension="stl" argsMarkers="--output_stl" />
      <File extension="xml" argsMarkers="--
output_xml_assemblytree" />
    </UploadToVault>
  </Output>
</ArasCadConverterPrc>
```

6. Save and close the ConversionServerConfig.xml

## Chapter 4. Installing the CAD to PDF Converter

The CAD to PDF Converter is composed of two parts, compiled DLLs and an Import package. Use the following procedures to install the CAD to PDF Converter to your instance:

### Code Tree Patch

1. Unzip the CAD to PDF Converter package to a local drive on the Conversion Server.  
This package (ArasCadToPdfConverter\_x64.zip) is available to subscribers in the '\Utilities\Aras CAD to PDF Converter\' folder of the Aras Innovator CD Image on the Aras FTP website (<ftp://ftp.aras.com/InnovatorLatestRelease/>)
2. Copy the 'ConversionServer' folder to the root directory where the Conversion Server was installed, overwriting the existing 'ConversionServer' folder and its contents.

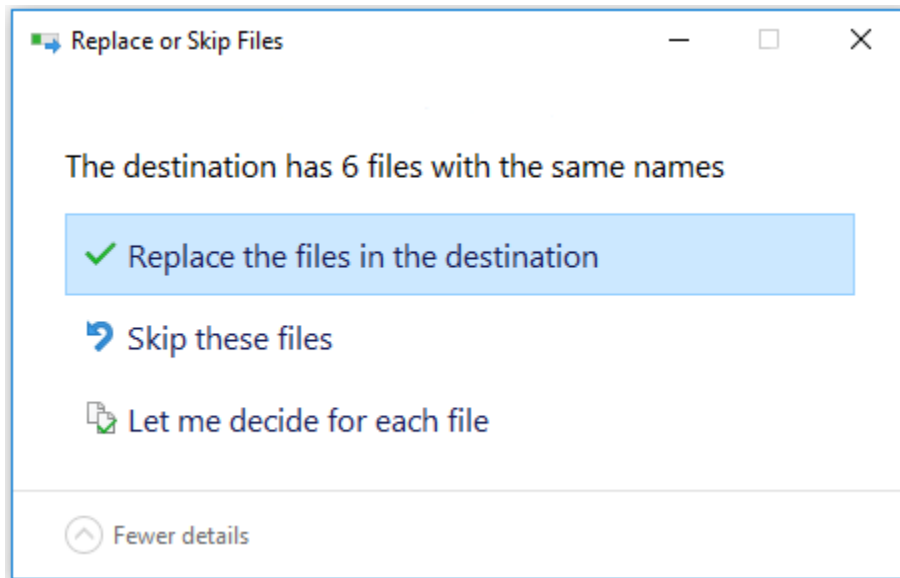


Figure 3.

3. Restart IIS.

### Import Package

You need to import the database package with the Package Import Export Utilities (For more information on using this tool, refer to the **Infor PLM Accelerate 10.12.5 - Package Import Export Utilities** document).

1. Enable the 'Super User' login to perform this step.
2. Browse to the `\PackageImportExportUtilities\Import\` folder in the Infor PLM Accelerate CD Image and run the `Import.exe` file

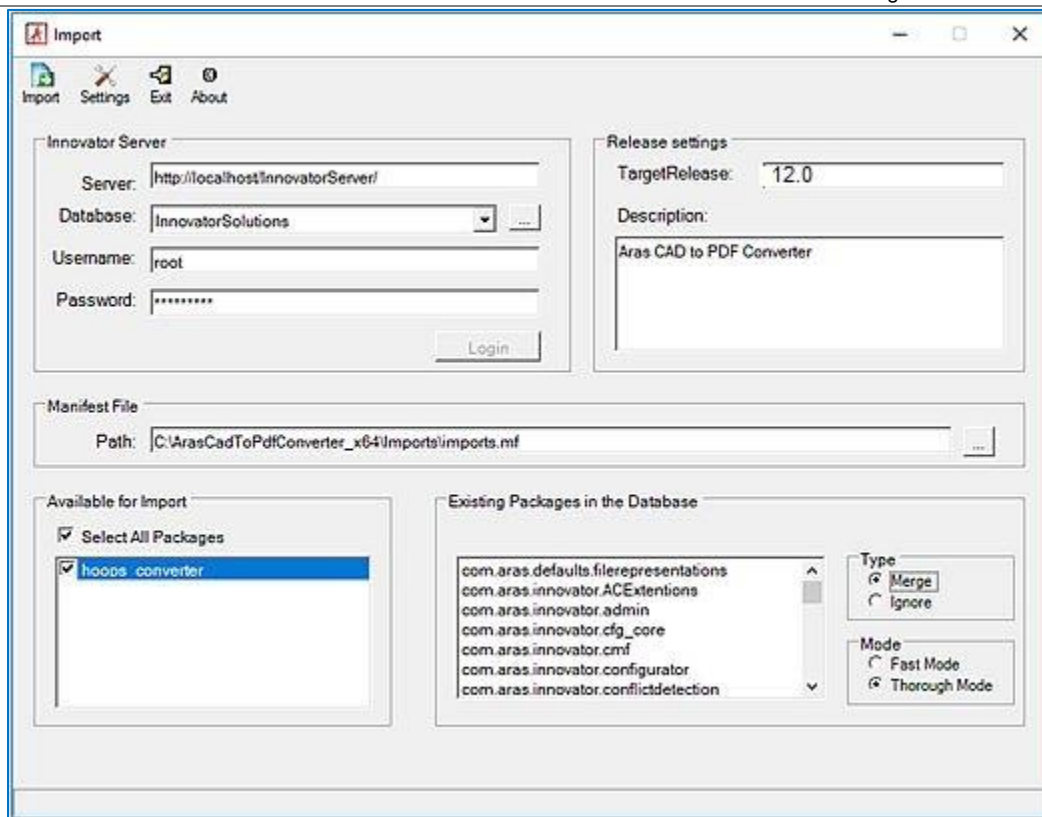


Figure 4.

3. Input the connection information:
  - a. **Server** = The connection URL for Infor PLM Accelerate
  - b. **Database** = The target Infor PLM Accelerate database
  - c. **Username** = root
  - d. **Password** = Password for 'root' login (Default is 'innovator')
  - e. **Target Release** = 12.0
  - f. **Description** = Infor PLM Accelerate CAD to PDF Converter
  - g. **Manifest File Path** = The manifest is found in the unzipped patch folder: '\\Imports\imports.mf'
  - h. **Available for Import** = Check '**hoops\_converter**'
  - i. **Type** = Select **Merge**
  - j. **Mode** = Select **Thorough Mode**
4. Click **Import** to start the utility

**Note:** Disable the 'Super User' login once complete. The Super User login should not be enabled in production.

## Chapter 5. Using Legacy View Files

The most recent version of the 3D Viewing and Translation software does not require users to convert their existing HWF view files. Infor PLM Accelerate provides backward compatibility in both the data model and viewing features. There is a new viewer in HOOPS Communicator 2017 that gives users the ability to convert legacy HWF View files to the new Stream Cache Single (SCS) file format using an automated, asynchronous process. CAD items can either use the legacy HWF format or the SCS format.

### Preference Settings

Users can choose to always display legacy HWF files instead of converting them to SCS by selecting the **Use Legacy 3D View Files** checkbox on the Secure Social tab.

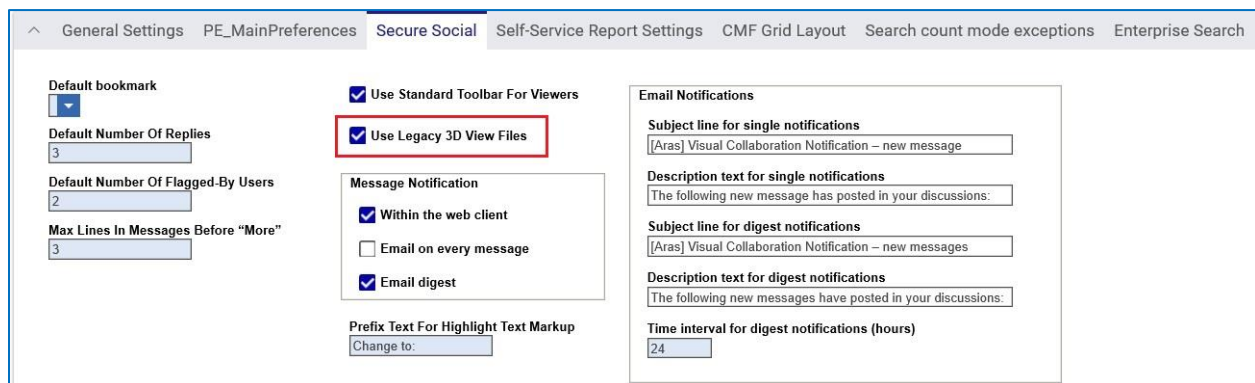


Figure 5.

The process for viewing and converting files are based on the following:

- The value of the Preference setting.
- The existence of a PRC file.
- The existence of an SCS file.

PRC files are created by default as part of the standard conversion server settings.

### Converting Legacy View Files

The conversion process for legacy view files begins when a user asks to view a CAD document or a Part with a related CAD document that includes a legacy view file (HWF). The following figure describes the process.

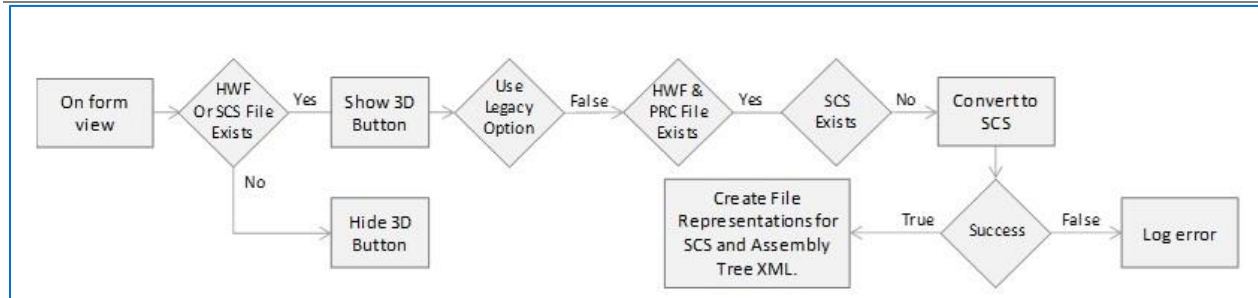


Figure 6.

The existence of an HWF or SCS file determines whether the 3D Viewer can be opened. If it can, a button appears in the sidebar enabling users to open the viewer. If either of these files do not exist, the user is unable to open the 3D Viewer. The value of the preference setting and the existence of an SCS file determines whether it is necessary to convert the file. If the following conditions exist, an ad hoc, asynchronous conversion process starts:

- The Preference setting is False.
- HWF and PRC files exist.
- An SCS file has not been created previously.

A successful conversion process results in a new file representation that points to the generated SCS and Assembly Tree files. Conversion process errors should be logged. Subsequent attempts to open the same CAD document after a successful conversion result in viewing the generated SCS file.



## Chapter 6. Troubleshooting

### Conversion Tasks Not Created

If more than one FileType Item has the same file extension set, then newly added files automatically choose the FileType that alphabetically comes first.

Due to this behavior, Conversion Rules should specify all possible FileTypes for each file extension that should be included in the rule.

### Unauthorized Access Exception

#### *Error Message:*

```
System.Web.Services.Protocols.SoapException:
System.Web.Services.Protocols.SoapException: Server was unable to process
request. ---> System.UnauthorizedAccessException: Access to the path
'...\ConversionServer\temp\...' is denied.
    at System.IO.__Error.WinIOError(Int32 errorCode, String maybeFullPath)
    at System.IO.Directory.InternalCreateDirectory(String fullPath, String
path, DirectorySecurity dirSecurity)
    at System.IO.Directory.CreateDirectory(String path, DirectorySecurity
directorySecurity)
...
```

#### *Solution:*

Expand permissions for the installed location to allow access as follows:

1. Go to the location of the 'ConversionServer\' directory as listed in the error message.
2. Right click on the 'ConversionServer\' folder and select **Properties**.
3. On the **Security** tab, select **Advanced**.
4. Click **Change Permissions**.
5. Click **Add**.
6. Type **Everyone**, click **OK**.
7. Select the **Full control allow** checkbox, and click **OK**.
8. Select **Replace all child object permissions with inheritable permissions from this object**.
9. Click **Apply** and click **Yes** when prompted.

### 500.19 – Internal Server Error

#### *Error Message:*

```
System.InvalidOperationException: Client found response content type of 'text/html; charset=utf-8', but
expected 'text/xml'.
```

The request failed with the error message:

```
--
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>IIS 7.0 Detailed Error - 500.19 - Internal Server Error</title>
...
<fieldset><legend>Error Summary</legend>
  <h2>HTTP Error 500.19 - Internal Server Error</h2>
  <h3>The requested page cannot be accessed because the related configuration
data for the page is invalid.</h3>
...
```

### ***Solution:***

Check for capitalization differences, other typos, and additional carriage returns in the ConversionServerConfig.xml file that was modified in [Configuring the Conversion Server](#). Note that the entire 'arguments' attribute must not contain carriage returns or new lines.

## 404: Not Found

### ***Error Message:***

```
System.Net.WebException: The request failed with HTTP status 404: Not Found.
  at
System.Web.Services.Protocols.SoapHttpClientProtocol.ReadResponse(SoapClientM
essage message, WebResponse response, Stream responseStream, Boolean
asyncCall)
  at
System.Web.Services.Protocols.SoapHttpClientProtocol.EndInvoke(IAsyncResult
asyncResult)
  at
Aras.ConversionFramework.Proxy.ConversionService.EndConvert(IAsyncResult
asyncResult) in d:\Builds\Daily\5779\RELS9-
3\Innovator\CompilableCode\_CommonFiles\ConversionService\ConversionService.v
b:line 78
  at Aras.Server.Core.InvokeStandardConverter.ConvertCallback(IAsyncResult
ar) in d:\Builds\Daily\5779\RELS9-
3\Innovator\Server\src\Core\InternalMethods\InvokeStandardConverter.vb:line
85
  at System.Web.Services.Protocols.WebClientAsyncResult.Complete()
  at
System.Web.Services.Protocols.WebClientProtocol.ProcessAsyncResponseStreamRes
ult(WebClientAsyncResult client, IAsyncResult asyncResult)
  at
System.Web.Services.Protocols.WebClientProtocol.ReadAsyncResponseStream(WebCl
ientAsyncResult client)
```

```

at
System.Web.Services.Protocols.WebClientProtocol.ReadAsyncResponse (WebClientAs
yncResult client)

```

### *Solution:*

Confirm that the URL that you are using for the Conversion Server Item in Infor PLM Accelerate is correct.

This URL is dependent on where under your website you installed the Conversion Server using the Infor PLM Accelerate installer. For example:

- In a standard complete install of Infor PLM Accelerate, the URL will be <http://serverName/InnovatorServer/ConversionServer/ConversionService.asmx>
- In a standard custom install of only the Conversion Server, the URL will be <http://serverName/ConversionServer/ConversionService.asmx>

**Note:** The 'serverName' refers to the domain of your Conversion Server.

## Could not load file or assembly

### *Error Message:*

```

Could not load file or assembly 'Conversion.Base,
Version={ArasCadConverter.dll file version}, Culture=neutral,
PublicKeyToken=524d880b05474146' or one of its dependencies. The located
assembly's manifest definition does not match the assembly reference.
(Exception from HRESULT: 0x80131040)

```

### *Solution:*

First, make sure that you are using the Converter DLLs from the Infor PLM Accelerate 10.12.5 CD Image matching your version of Infor PLM Accelerate.

If this does not solve the issue, it is possible that customizations were made to your core controls and your build version changed. In this case, you need to update the Conversion Server to point to the new version. This can be accomplished by adding the following section to the "...\ConversionServer\web.config" file:

```

...
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity name="Conversion.Base"
publicKeyToken="524d880b05474146" culture="neutral" />
      <bindingRedirect oldVersion="{ArasCadConverter.dll file version}"
newVersion="{Conversion.Base.dll file version}" />
    </dependentAssembly>
    <dependentAssembly>

```

```
<assemblyIdentity name="IOM" publicKeyToken="524d880b05474146"
culture="neutral" />
  <bindingRedirect oldVersion="{ArasCadConverter.dll File version}"
newVersion="{IOM.dll file version}" />
  </dependentAssembly>
</assemblyBinding>
</runtime>
</configuration>
```

Locate the file version of each dll by selecting **Properties** from the context menu of the file in the `...\ConversionServer\bin\` directory and then go to the **Details** tab. Also, make sure that the 'publicKeyToken' matches the one that appears in the error message.

## 3D PDF does not activate in Firefox

Clicking on the CAD image within a converted PDF file activates the ability to interactively manipulate the CAD Item. If this feature is not available when you open the PDF from within Firefox, then it is likely that the PDF is not being loaded in Adobe Reader.

















*Use the following procedure to configure Firefox to load PDFs using Adobe Reader:*

1. Open Mozilla Firefox.
2. Select **Option** from the Firefox menu.
3. Select the **Application** section.
4. Scroll down to **Portable Document Format (PDF)** and change the Action to **Use Adobe Reader (default)**

## Applications

Choose how Firefox handles the files you download from the web or the applications you use while browsing.

🔍 Search file types or applications

Content Type ▲	Action
 irc	 Always ask
 ircs	 Always ask
 mailto	 Use Mail (default)
 Podcast	 Preview in Firefox
 Portable Document Format (PDF)	 Use Adobe Acrobat Reader DC (defa... ▼
 Video Podcast	 Preview in Firefox
 Web Feed	 Preview in Firefox
 webcal	 Always ask