

Aras 3D Visualization 21

Installation Guide

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Document Conventions

The following table highlights the document conventions used in the document:

Convention	Description
Bold	This shows the names of menu items, dialog boxes, dialog box elements, and commands. Example: Click OK .
Code	Code examples appear in <code>courier</code> text. It may represent text you type or data you read.
Yellow highlight	Code with yellow highlight is used to draw attention to the code that is being indicated in the content.
Yellow highlight with red text	Red color text with yellow highlight is used to indicate the code parameter that needs to be changed or replaced.
<i>Italics</i>	Reference to other documents.
Note:	Notes contain additional useful information.
Warning	Warning contains important information. Pay special attention to information highlighted this way.
Successive menu choices	Successive menu choices may appear with a greater than sign (-->) between the items that you will select consecutively. Example: Navigate to File --> Save --> OK .

1 Overview

This section explains the purpose and scope of this Guide and describes the target audience.

1.1 Purpose and Scope of This Guide

This Installation Guide provides detailed information and instructions for installing the Aras 3D Visualization (3DV) 21 platform component for the first time.

1.2 Target Audience

This Guide is written for Administrators of every level performing the 3DV installation. Experience with installing Aras Innovator is required by Administrators installing the Aras 3DV platform component.

2 Aras 3DV Architecture Overview

Aras 3D Visualization is modular and flexible.

The modularity is the Aras 3DV delivery as a set of the following components:

- Aras CAD Converter: a generator of viewable files that converts by default native 3D CAD files to formats such as PDF, XML, SCS, PNG, and PRC.
- Aras 3D Viewers: a core 3D Visualization functionality that is the Monolithic 3D Viewer and a prerequisite for the Dynamic 3D Viewer.
- Aras Dynamic Visualization: the Dynamic 3D Viewer that includes the Dynamic Product Navigation (shattered viewing) and configuration capabilities for the 3D and Tree Grid Views based on selected Query and Dynamic View Definitions. It requires Aras 3D Viewers.

The flexibility is the possibility to install one, many, or all Aras 3D Visualization components on one or multiple machines per an organization's needs.

3 Software and Hardware Requirements

Aras 3D Visualization has the following software and hardware requirements:

- General for all components
- Specific for the Aras CAD Converter

3.1 General Aras 3DV Requirements

Aras 3DV is an optional component for the Aras Innovator platform: it requires a certified or supported version of Aras Innovator with Conversion Server and Agent Service to be installed and running. For the Conversion Server requirements, see subsection [3.2 Aras CAD Converter Requirements](#).

At the time of its release, Aras 3D Visualization 21 was certified on Aras Innovator versions from 14 to 21. Given that newer Aras Innovator versions will be after this release, refer to the [Support Matrix](#) on the Subscriber Portal for the complete list of the certified or supported Aras Innovator versions.

Subscribers can obtain an Aras Innovator CD Image from the Aras FTP site. The installation and configuration documentation for a given Aras Innovator instance is in the **Documentation** folder of the Aras Innovator CD Image.

If using an earlier, unsupported Aras Innovator version, please upgrade it before installing Aras 3D Visualization. For any upgrade assistance, consult Aras Support at support@aras.com before installing Aras 3D Visualization.

For the full list of required software, refer to section *Platform Support Matrix* in the *Aras 3D Visualization 21 - Release Notes*.

3.2 Aras CAD Converter Requirements

The Aras CAD Converter has software requirements in addition to the general Aras 3DV requirements. This required software should be installed and configured on the same machine where the CAD Converter is going to be installed.

If the Aras CAD Converter is not going to be installed, these requirements can be excluded.

3.2.1 Aras Innovator Conversion Server

The Aras CAD Converter uses the Aras Innovator Conversion Server that should be installed on one of the following 64-bit operating systems:

- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022

The 32-bit operating systems are not supported.

3.2.2 Microsoft Visual C++ Redistributable Package

Depending on your configuration, the Aras CAD Converter and HOOPS Communicator may require the following redistributable packages to be installed on a machine with the Conversion Server:

- Microsoft Visual C++ 2010 64-bit
- Microsoft Visual C++ 2012 64-bit
- Microsoft Visual C++ 2013 64-bit
- Microsoft Visual C++ 2015 64-bit
- Microsoft Visual C++ 2017 64-bit

These packages can be downloaded from the [Microsoft](#) portal page with the latest supported Visual C++ downloads.

3.2.3 Conversion Server Requirements and Recommendations

See the *Aras Innovator 21 - Platform Specifications* for the Conversion Server requirements and recommendations.

3.2.4 Conversion Server and Agent Service Setup

The Conversion Server and Agent Service should be set up to work with Aras Innovator. For more information, refer to the *Aras Innovator 21 – Conversion Server Setup Guide*.

4 Aras 3DV Licenses

The Aras 3D Visualization components require the following Feature Licenses:

- Aras CAD Converter: **Aras.CADConverter3**
- Aras 3D Viewers: **Aras.SecureSocial**

To request an activation key for a necessary Feature License, a customer should have an active Aras subscription and send an email to either:

- licenses@aras.com
- Their account representative

The email should be in the following format:

- Subject: **Feature License Name** Activation Key Required
- Body: Aras Innovator Version

A reply should contain the Feature License activation key.

4.1.1 Activating the CAD Converter License

To activate the **CAD Converter 3** Feature License:

1. Log into Aras Innovator as an administrator.
2. Go to **User Menu --> Activate Feature**.

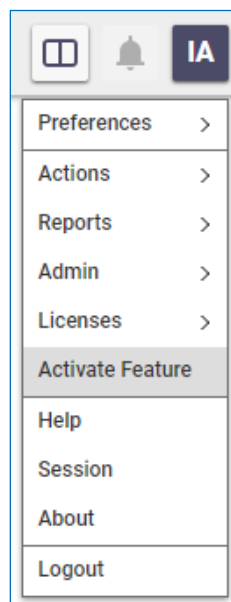


Figure 1.

The **Activate Feature** dialog appears.

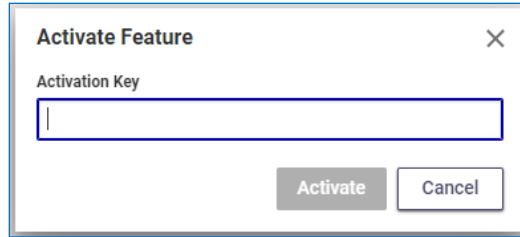


Figure 2.

3. In the **Activation Key** field, enter the feature license activation key.
4. Click the **Activate** button. The **Activation Successful** dialog appears.

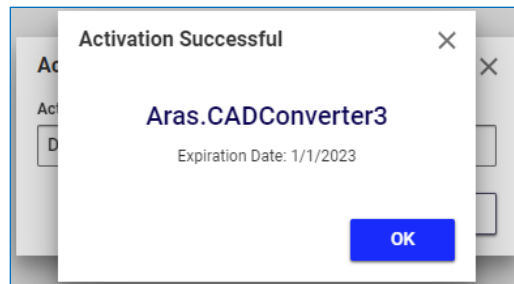


Figure 3.

5. Close the **Activate Feature** and **Activation Successful** dialogs.

5 Downloading Aras 3DV

The Aras 3D Visualization 21 platform component is delivered as the **Aras 3D Visualization 14.0.3 CD Image** package, which subscribers can download from the [Aras FTP](#) site. The FTP content and folder structure are specific for a given logged-in user. The downloaded package may be a zip archive that should be extracted. The unzipped package should be copied to a machine where an Aras 3D Visualization component is going to be installed.

6 Preinstallation Procedures

Before installing Aras 3D Visualization:

- Users should be informed that Aras Innovator will be down.
- The Aras Innovator code tree, Conversion Server, and database should be backed up. Such files should be placed in a safe location as they will be used for reverting to the pre-installation condition if the installation fails.

6.1 Aras Innovator Code Tree

The Aras Innovator code tree is inclusive of files and folders installed on a disk with the first Aras Innovator installation.

The default code tree installation path is the following:

- **C:\Program Files(x86)\Aras\Innovator**

The following figure shows the out-of-the-box code tree content.

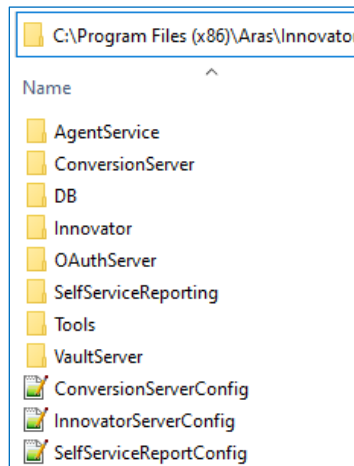


Figure 4.

If Aras Innovator was installed in a different location, follow the steps below to locate the installation path:

1. Click the Windows **Start** button and go to **Control Panel --> Programs and Features**.
2. Click **Aras Innovator** from the installed applications list. The full installation path appears in the **Comments** field.

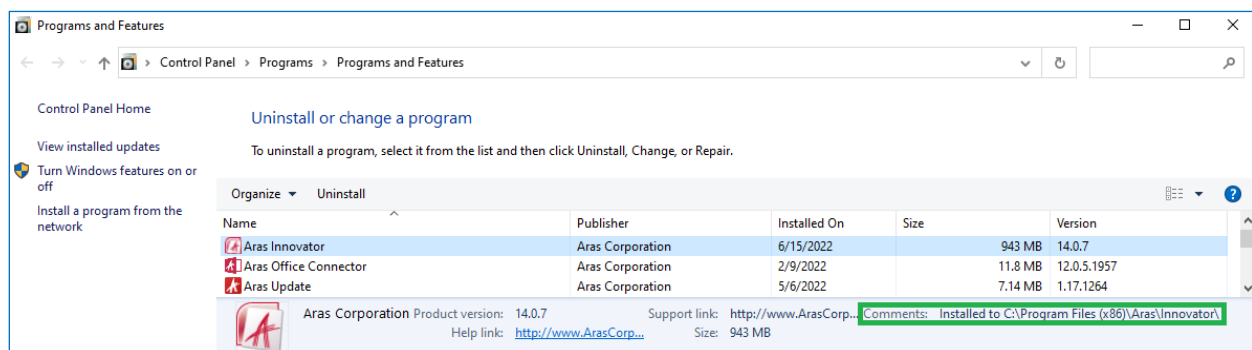


Figure 5.

6.2 Notifying Users and Backing Up Code Tree and Database

Before installing Aras 3D Visualization:

1. Notify users that:
 - Aras Innovator will be down at a scheduled time.
 - They should log out of Aras Innovator prior to starting the installation.

It is best to give at least a 24-hour notice and a reminder 15 minutes before taking the platform offline.

2. Back up the Aras Innovator code tree.

3. Back up the Conversion Server.

The default Conversion Server installation path is the following:

- **C:\Program Files(x86)\Aras\ConversionServer**

4. Disconnect all users from the database to prevent client sessions from committing any further changes to the database.

The easiest way is to change the database connection string from `<DB-Connection...` to `<xDB-Connection` in the **InnovatorServerConfig.xml** file and restart the **w3svc** service (IIS). This expires all sessions and prevents all new connections to the Aras Innovator database through the existing instance.

5. Back up the database.
6. After your database backup has been completed, enable the database connections.

If you are following the abovementioned easiest way, change the database connection string from `<xDB-Connection...` to `<DB-Connection` in the **InnovatorServerConfig.xml** file and restart the **w3svc** service (IIS).

7 Aras 3DV Installation Overview

The Aras 3D Visualization can be installed using the standard Aras tools.

Aras 3DV components should be installed in a specific order, except when all Aras 3DV components are simultaneously installed on the same machine.

All components can be installed on one machine if that machine has the Conversion and Innovator Servers.

The Aras 3D Visualization installation modifies the Aras Innovator database and Conversion Server. Aras Innovator will be down during the installation.

7.1 Installation Tools

The Aras 3D Visualization can be installed with:

- Aras Update 1.18 or later.

The installation process is automated.

It is possible to install:

- a. All components on one machine at once.
- b. All components on multiple machines in the order discussed in the [7.2 Component Installation Order](#) section.
- c. Multiple components on one or multiple machines in the order discussed in the [7.2 Component Installation Order](#) section.
- d. One component on one machine.

For the automated installation procedure, see section [8 Automated Aras 3DV Installation](#).

This tool requires installation. By default, the **ArasUpdate.exe** file is installed in the following directory: **C:\Program Files (x86)\Aras\Aras Update**. For tool details, see the *Aras Update – Installation Guide* and *Aras Update – User Guide*.

- Aras Package Import.

The installation process is manual.

It is possible to install:

- a. All or multiple components on one or multiple machines in the order discussed in the [7.2 Component Installation Order](#) section.
- b. One component on one machine.

For the manual installation procedure, see section [9 Manual Aras 3DV Installation](#).

This tool does not require installation. It is launched with the **import.exe** file located in the **Import** directory of the **PackagelImportExportUtilities** package. For tool details, see the *Aras Innovator - Package Import Export Utilities* document.

The Aras Update and Aras Package Import installation packages can be downloaded from the [Downloads and Support](#) page on the public Aras website. Additionally, the Aras Innovator and **Aras 3D Visualization 14.0.3 CD Image** packages include the **PackagelImportExportUtilities** package.

7.2 Component Installation Order

Using Aras Update, all three Aras 3DV components can be installed simultaneously on the same machine that has the Conversion Server and the Innovator Server. If otherwise, the components should be installed strictly in the following order:

1. Aras CAD Converter
2. Aras 3D Viewers
3. Aras Dynamic Visualization

Aras Dynamic Visualization requires Aras 3D Viewers.

7.3 Installing Dynamic 3D Viewer After Using Monolithic 3D Viewer

If installing the Dynamic 3D Viewer (Aras Dynamic Visualization) in an environment where CAD assemblies were viewed with the Monolithic 3D Viewer, the Dynamic Enable process should be activated for these CAD assemblies because Aras CAD Converter has not generated data for viewing them in the Dynamic 3D Viewer.

For the process details and activation procedure, see the *Dynamic Enabling* section in the *Aras 3D Visualization 21 - Administrator Guide*.

8 Automated Aras 3DV Installation

Aras Update provides an automated application installation process.

The installation procedure is the same when installing one, multiple, or all Aras 3D Visualization components on one machine. If installing multiple or all components on multiple machines, the procedure should be performed on each machine in the order discussed in section [7.2 Component Installation Order](#).

All components can be installed at once only on a machine that has the Conversion Server and Aras Innovator Server.

To install one, multiple, or all Aras 3D Visualization components on one machine using Aras Update:

1. Do the pre-installation procedures as discussed in section [6 Pre-Installation Procedures](#).
2. Copy the unzipped **Aras 3D Visualization 14.0.3 CD Image** package to a target machine.
3. Enable logon for the **root (Super User)** User.
4. Launch the Aras Update tool as an administrator.
5. In Aras Update, go to the **Local** sidebar tab and click **+ Add package reference**. A search dialog appears.

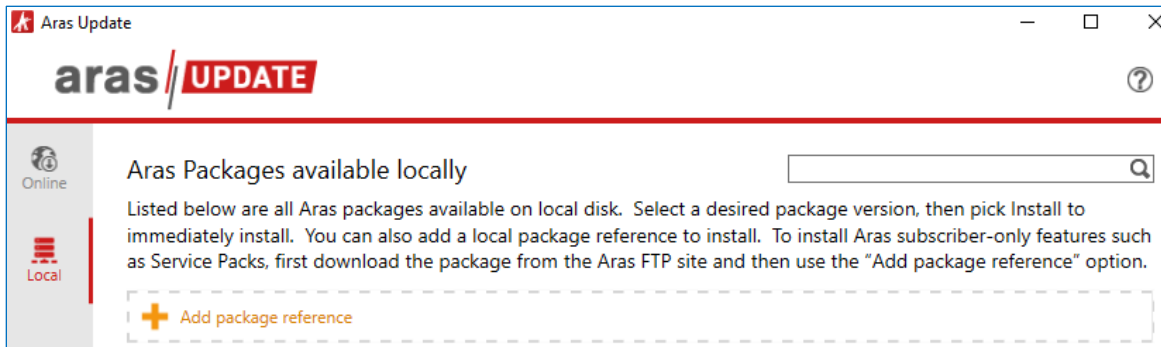


Figure 6.

6. Search for and select the **Aras 3D Visualization 14.0.3 CD Image** folder. The **Aras 3D Visualization** option appears in Aras Update.

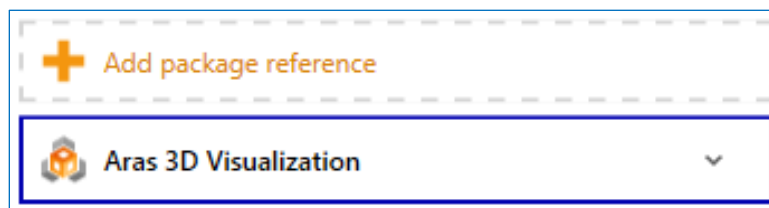


Figure 7.

7. Click the **Aras 3D Visualization Release 21 (14.0.3)** option and then click **Install**.

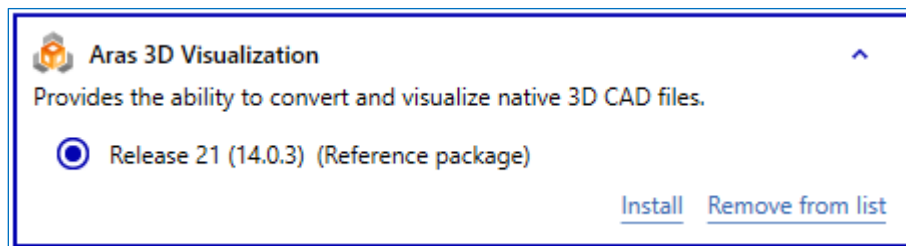


Figure 8.

8. Select the installation modules of the Aras 3D Visualization components that should be installed on the given machine and click **Next**.

Note: Each Aras 3D Visualization component consists of two installation modules: code tree and database updates. To install a component, both of its modules should be installed; otherwise, the component will not be completely installed. It is possible to update the code tree and database in separate installation sessions.

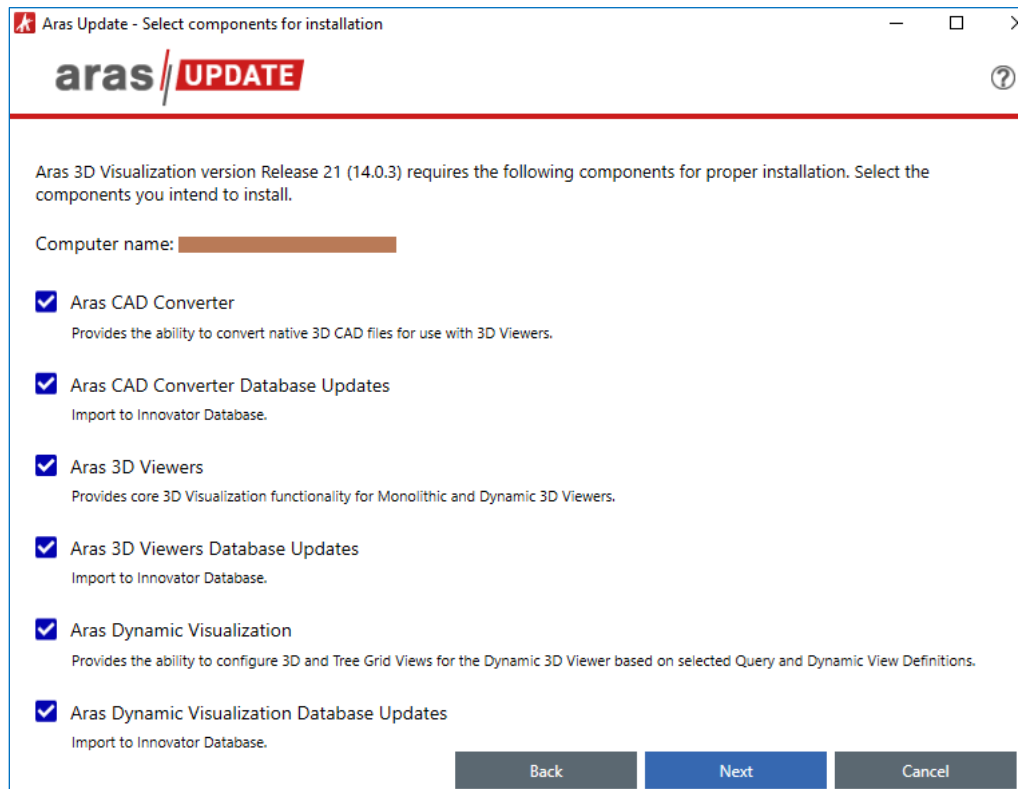


Figure 9.

9. Select the appropriate logging option and click **Next**. When selected, a log file records the installation process to troubleshoot issues.

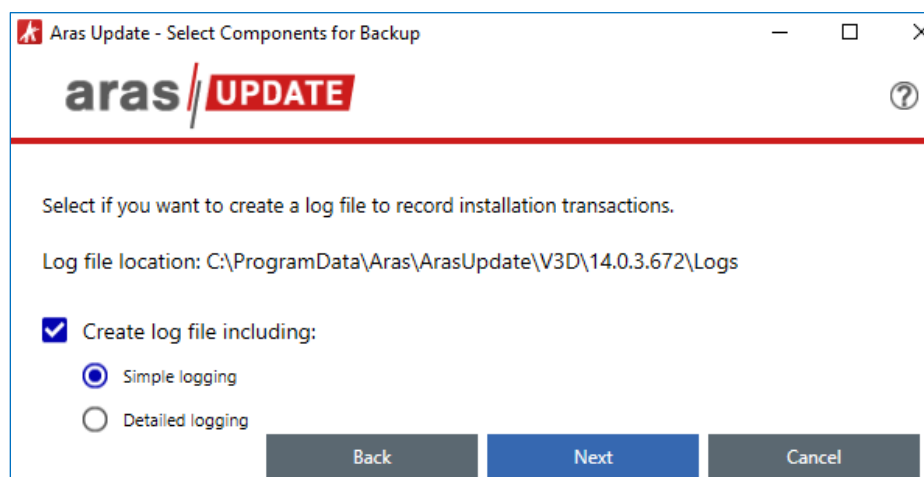


Figure 10.

10. Specify the connection information for the installation modules of the components to be installed:

The screenshot shows a configuration window with several sections, each with a checkmark and an expand/collapse arrow:

- Aras CAD Converter**:
 - Path to root folder where Innovator Server is installed:
 - Specify local directory where HOOPS Converter should be installed (example: 'C:\HOOPS Converter'):
- Aras CAD Converter Database Updates**:
 - Server URL (example - 'http://localhost/InnovatorServer'):
 - Database Name (example - 'InnovatorSolutions'):
 - Username (should use 'root' User):
 - Password for 'root' User:
- Aras 3D Viewers**
- Aras 3D Viewers Database Updates**
- Aras Dynamic Visualization**
- Aras Dynamic Visualization Database Updates**

Figure 11.

- Component:
 - **Path to root folder where Innovator Server is installed:** a physical path to the Aras Innovator code tree. See section [6.1 Aras Innovator Code Tree](#).
 - **Specify local directory where HOOPS Converter should be installed:** a physical path to a local folder where HOOPS Converter files will be installed; for example, **C:\HOOPS Converter**.
- Component Database Updates:
 - **Server URL:** a URL for connecting to a given Aras Innovator instance. By default, it is **http://localhost/InnovatorServer/**.
 - **Database Name:** a name of a target Aras Innovator database. By default, it is **InnovatorSolutions**.
 - **Username:** **root**.
 - **Password for 'root' User:** a password for the **root** User. By default, it is **innovator**.

If installing multiple Aras 3D Visualization components, connection settings for the following components are automatically inherited from the preceding ones. For example, if Aras 3D Viewers is installed with Aras CAD Converter, the Aras 3D Viewers modules inherit connection settings from the Aras CAD Converter modules.

11. Once the connection information is provided, click **Install**. The installation process begins.

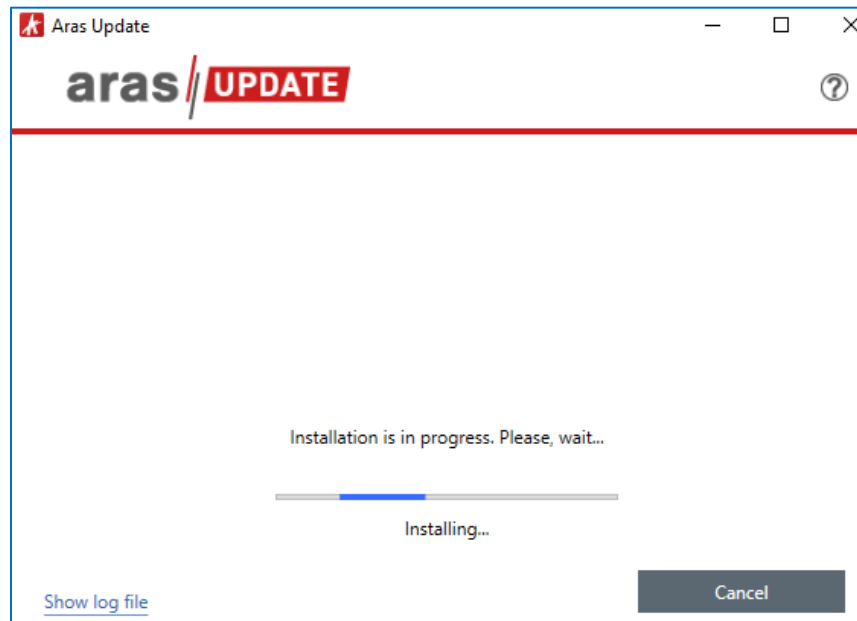


Figure 12.

12. Once the installation is successfully completed, close Aras Update.

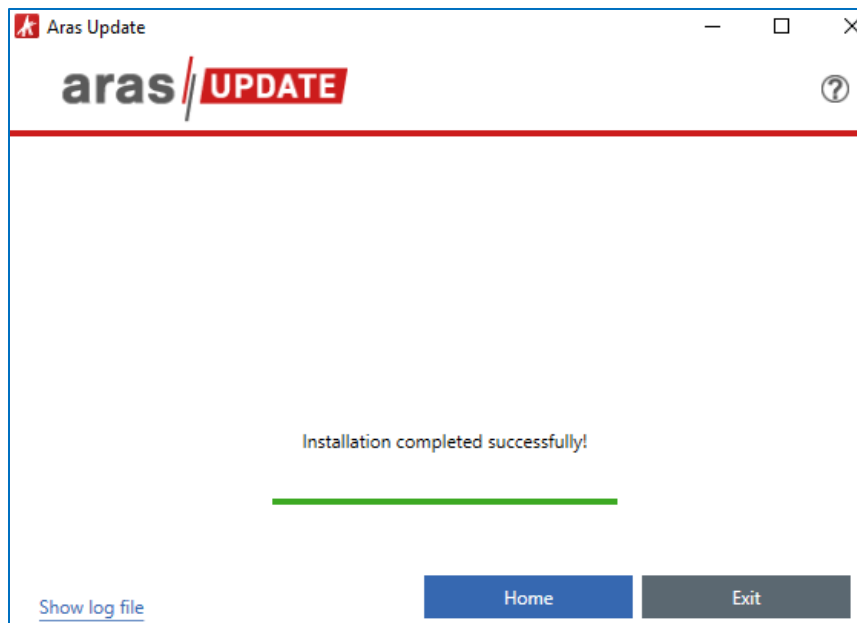


Figure 13.

13. Disable the logon for the **root (Super User)** User.

14. This step is optional. Confirm the successful Aras 3D Visualization installation. See section [10 Confirming Aras 3DV Installation](#).

If the installation fails, restore the Aras Innovator code tree, Conversion Server, and database with the backups done before the installation and contact Aras Support at support@aras.com.

9 Manual Aras 3DV Installation

Aras Package Import provides a manual application installation process.

The installation procedure differs across Aras 3D Visualization components. The subsections of this section discuss the procedure for each component. The installation procedure should be performed for every component to be installed in the order discussed in section [7.2 Component Installation Order](#).

9.1 Manual Aras CAD Converter Installation

1. Do the pre-installation procedures as discussed in section [6 Pre-Installation Procedures](#).
2. In the unzipped **Aras 3D Visualization 14.0.3 CD Image** package, go to the following folder:
 - **Aras 3D Visualization 14.0.3 CD Image\Packages\CADConverter**
3. Copy the **HOOPS Converter** folder from the **CADConverter** package folder into a permanent location on a machine with the Conversion Server. For example, **C:\HOOPS Converter**.
4. Copy the **ConversionServer** folder from the **CADConverter** package folder to a folder that includes the **ConversionServer** folder with the installed Conversion Server.
5. Open the **ConversionServerConfig.xml** file in a text editor with an admin's privileges. This file is the root Aras Innovator code tree folder in the case of the default installation. Do not confuse this file with the **ConversionServer.config** XML file in the **ConversionServer** folder with the Conversion Server.
6. In the child `sectionGroup name="ConverterSettings"` tag of the `configSections` tag, add the following `section` tags with attributes:

```
<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>
</configSections>
```

These new tags define the configurations of the new `ArasCadConverter` and `ArasCadConverterPrc` converters.

7. In the child `Converters` tag of the `ConversionServer` tag, add the following `Converter` tags with attributes:

```
<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>
</ConversionServer>
```

These new tags define the new converters. Such a tag specifies a DLL for a given converter and a Class within this DLL that performs the conversion.

8. In the ConverterSettings tag, add the following ArasCadConverter and ArasCadConverterPrc tags with child tags and attributes:

```
<ConverterSettings>
  <ArasCadConverter>
    <Application converterPath="C:\HOOPS Converter\bin\converter.exe"/>
    <Command arguments="--sc_compute_bounding_boxes 'All' --
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'"
/>
    <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>
    <AssemblyCommand dynamicEnabled="True" arguments="--
sc_compute_bounding_boxes 'All' --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'" />
    <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>
</ConverterSettings>
```

The ArasCadConverter and ArasCadConverterPrc tags set up the new converters.

The converterPath attributes should include the path to the **converter.exe** application in the **HOOPS Converter** folder copied in step 3.

The --input_pdf_template_file argument in the arguments attributes should include the path to the **Blank_Template_L.pdf** template file in the **HOOPS Converter** folder copied in step 3.

An entire `<... arguments="..." />` attribute must be only one single line without carriage returns or newlines.

The child `File` tags of the `UploadToVault` tags enable the files of the given file types to be uploaded to the Vault and rendered correctly by the Viewer.

Capitalization differences, typos, extra newlines, and carriage returns in the **ConversionServerConfig.xml** file raise an error discussed in section [11.3 500.19 Internal Server Error](#).

9. Save and close the **ConversionServerConfig.xml** file.
10. Restart the Internet Information Services (IIS).
11. Enable logon for the **root (Super User)** User.
12. Launch the Aras Package Import tool.

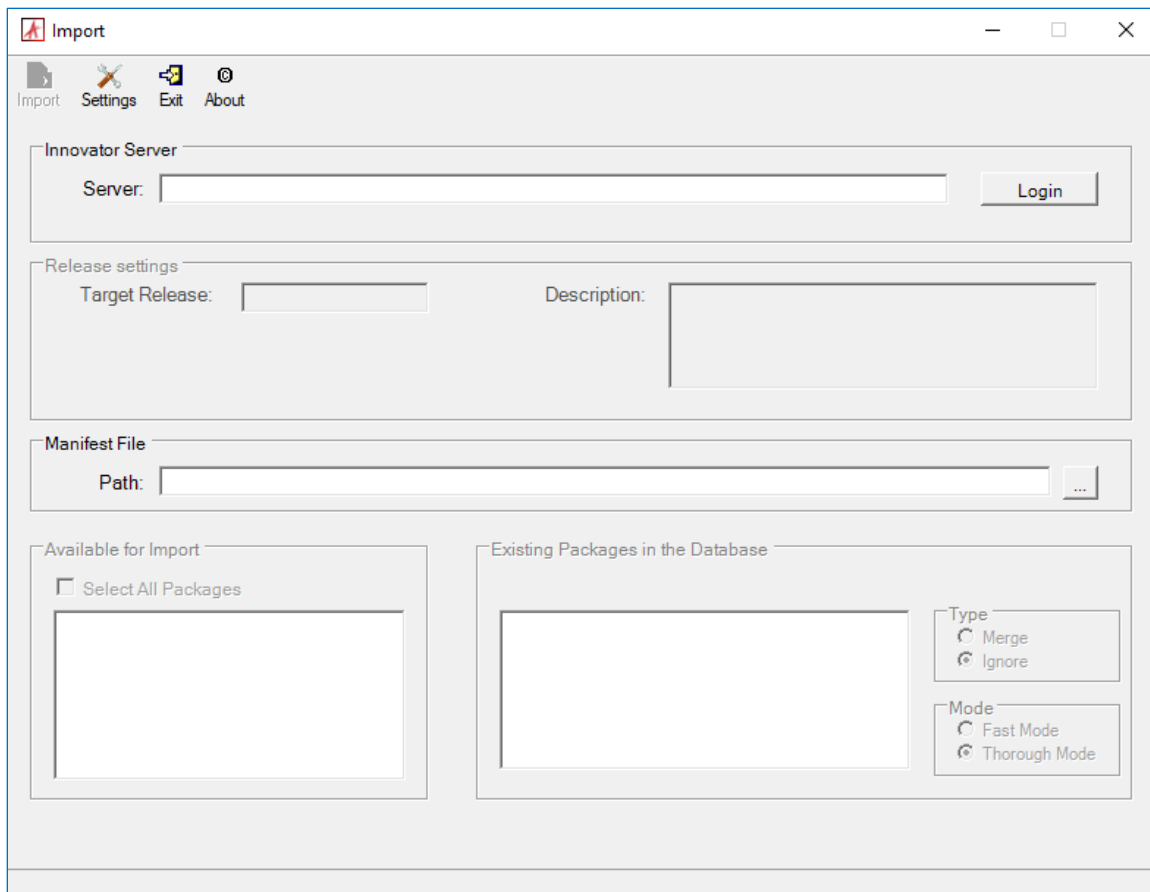


Figure 14.

13. Enter a connection URL for a given Aras Innovator instance in the **Server** field. By default, it is **http://localhost/InnovatorServer/**.

14. Click the **Login** button. The **Login to Aras Innovator** dialog box appears.

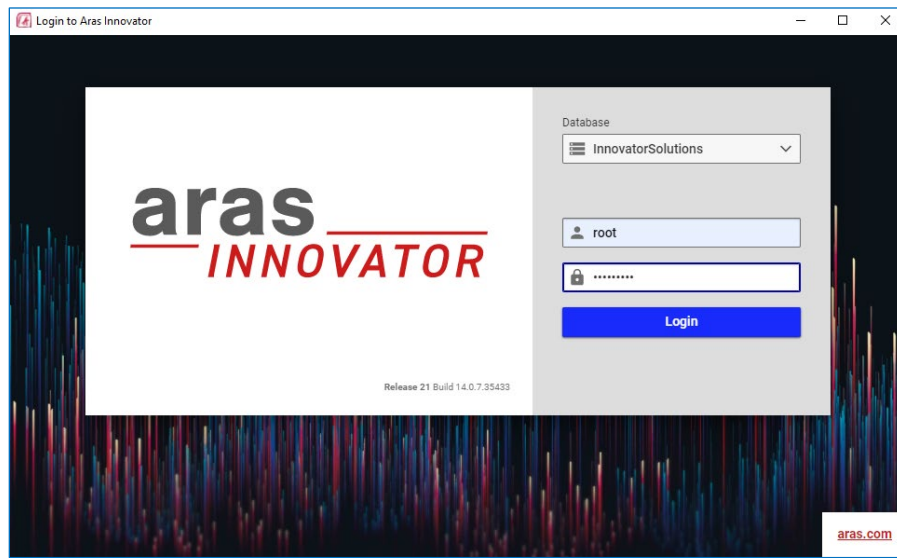


Figure 15.

15. Specify the connection information for the given Aras Innovator instance:

- **Database:** a name of a target Aras Innovator database. By default, it is **InnovatorSolutions**.
- **Username:** **root**.
- **Password:** a password for the **root** User. By default, it is **innovator**.

16. Click the **Login** button. Aras Package Import should have successfully connected to the given Aras Innovator instance.

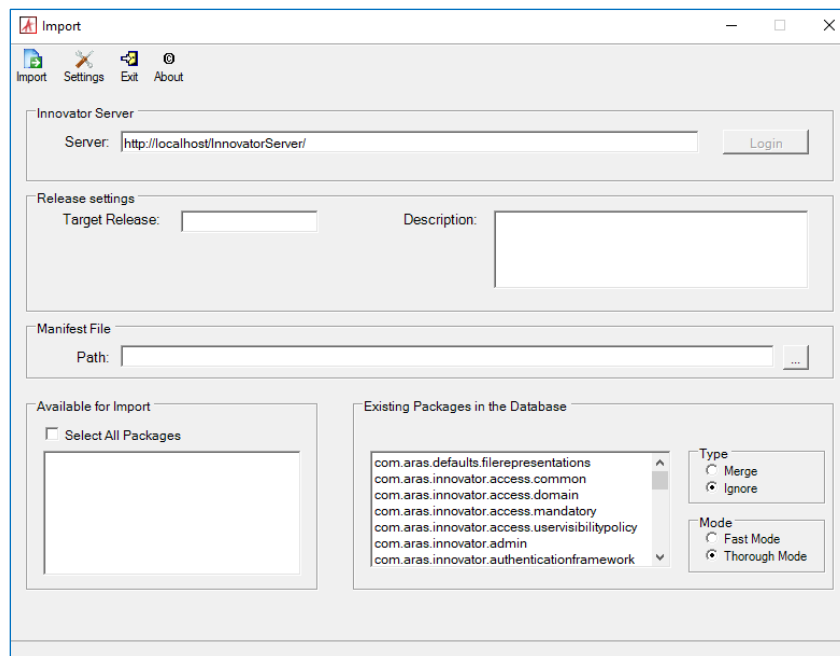


Figure 16.

17. Specify the connection information for the Aras CAD Converter installation modules:

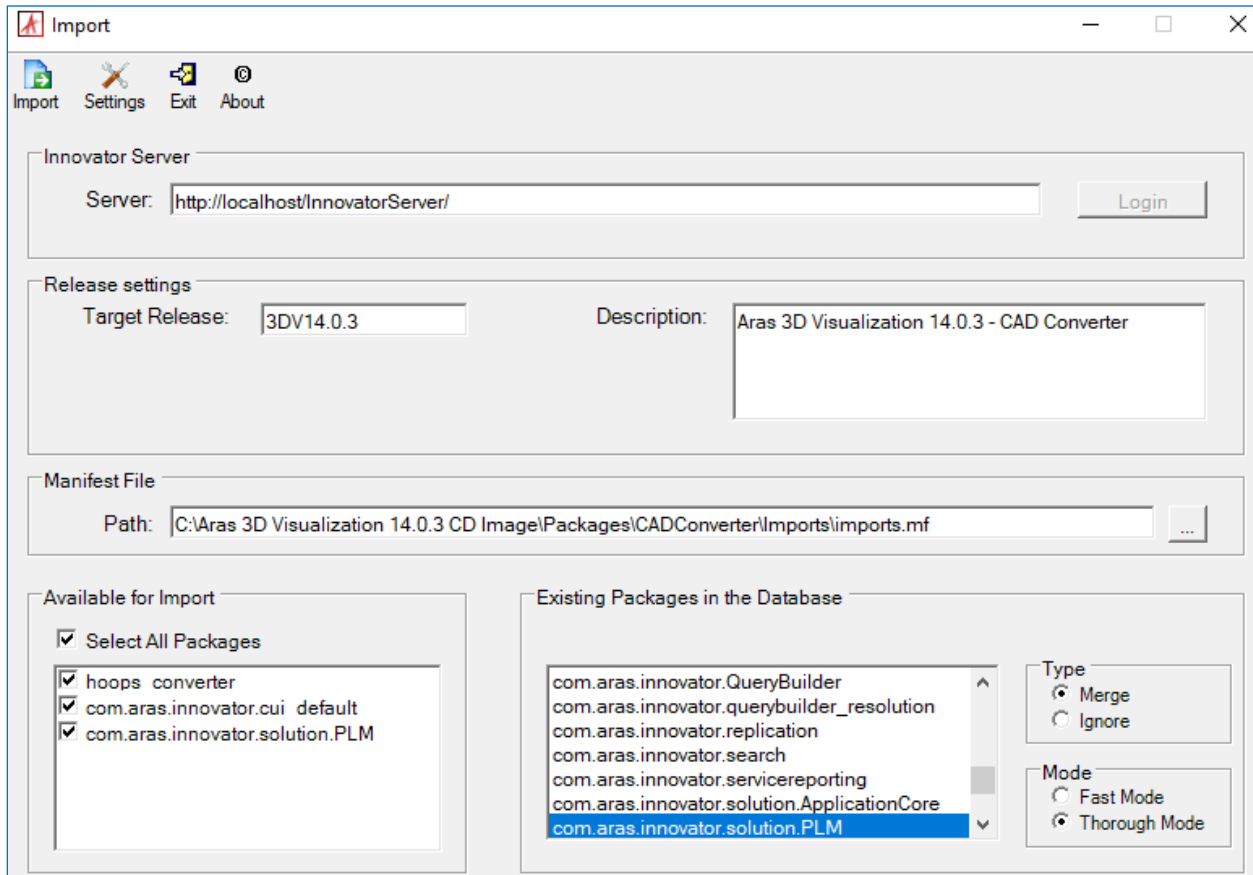


Figure 17.

- **Target Release: 3DV14.0.3.**
- **Description: Aras 3D Visualization 14.0.3 - CAD Converter.**
- **Manifest File Path:** a path to the CAD Converter import manifest file in the unzipped **Aras 3D Visualization 14.0.3 CD Image** package. For example, **C:\Aras 3D Visualization 14.0.3 CD Image\Packages\CADConverter\Imports\imports.mf**.
- **Available for Import:** click **Select All Packages**.
- **Type: Merge.**
- **Mode: Thorough Mode.**

18. Click **Import** to start the installation.

19. Once the installation is successfully completed, close the Aras Package Import tool.

20. Disable the logon for the **root (Super User)** User.

21. This step is optional. Confirm the successful Aras CAD Converter installation. See section [10 Confirming Aras 3DV Installation](#).

If the installation fails, restore the Aras Innovator code tree, Conversion Server, and database with the backups done before the installation and contact Aras Support at support@aras.com.

9.2 Manual Aras 3D Viewers Installation

1. Do the pre-installation procedures as discussed in section [6 Pre-Installation Procedures](#).
2. In the unzipped **Aras 3D Visualization 14.0.3 CD Image** package, go to the following folder:
 - **Aras 3D Visualization 14.0.3 CD Image\Packages\3DViewers**
3. Copy the **Innovator** folder from the **3DViewers** package folder to the root Aras Innovator code tree folder that includes the **Innovator** folder.

Replace the files in the destination if you are prompted to do so.

Note: It is recommended that a server administrator performs this step.

4. In the Aras Innovator code tree, go to **Innovator\Client** and open the **InnovatorClient.config** file in a text editor with an admin's privileges.
5. In the `cachingModule` tag, change the value of the `filesRevision` attribute from `std` to `2`. If it is already an integer, change it to a next higher value; for example, from `2` to `3`:

```
<configuration>
...
<cachingModule moduleEnabled="true" filesRevision="2" />
...
</configuration>
```

Such value modification reloads the cache. If the cache is not reloaded after the Aras 3DV installation, the Aras 3DV UI may not be displayed correctly; for example, icons can be absent.

6. Save and close the **InnovatorClient.config** file.
7. Enable logon for the **root (Super User)** User.
8. Launch the Aras Package Import tool.

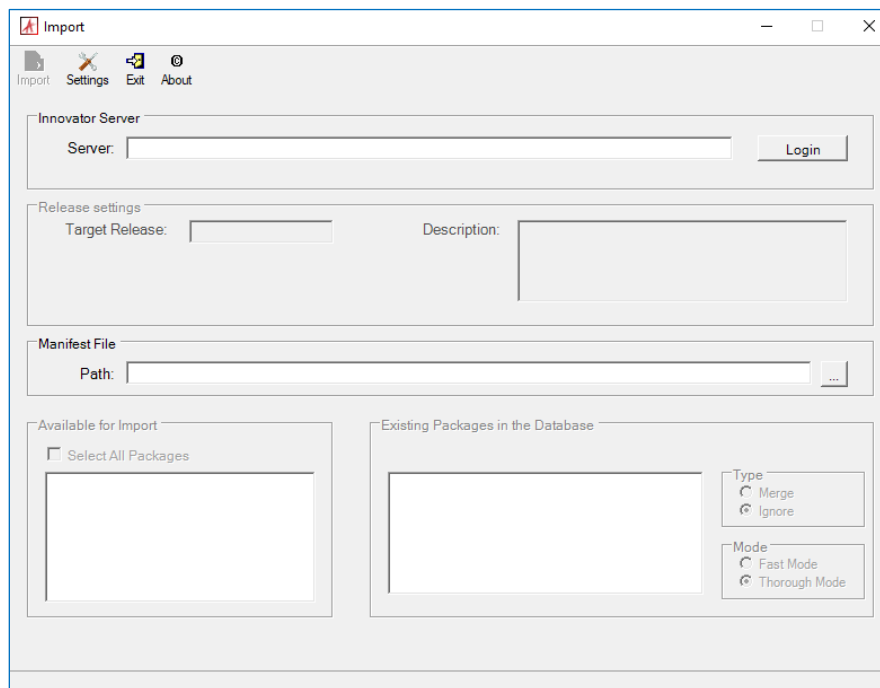


Figure 18.

9. Enter a connection URL for a given Aras Innovator instance in the **Server** field. By default, it is **http://localhost/InnovatorServer/**.
10. Click the **Login** button. The **Login to Aras Innovator** dialog box appears.

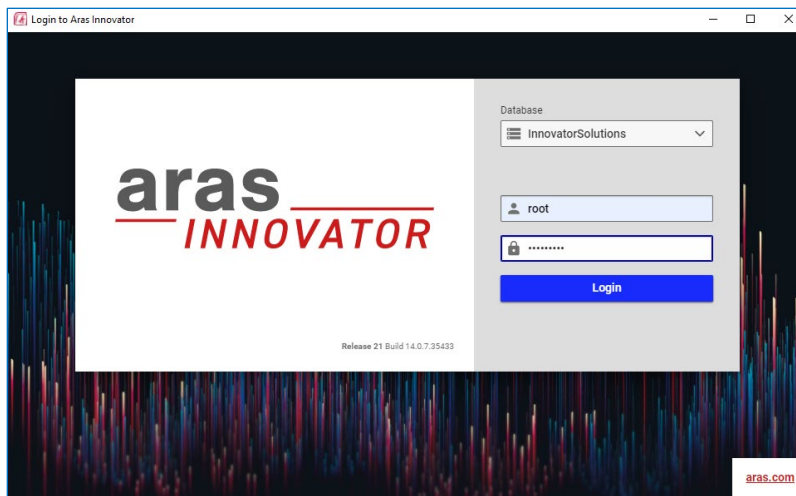


Figure 19.

11. Specify the connection information for the given Aras Innovator instance:
 - **Database:** a name of a target Aras Innovator database. By default, it is **InnovatorSolutions**.
 - **Username:** **root**.
 - **Password:** a password for the **root** User. By default, it is **innovator**.
12. Click the **Login** button. Aras Package Import should have successfully connected to the given Aras Innovator instance.

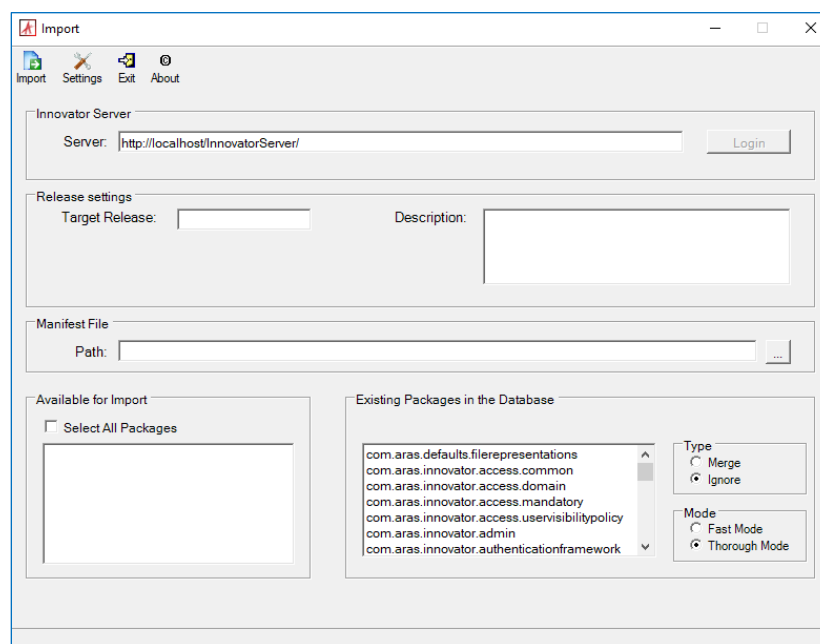


Figure 20.

13. Specify the connection information for the 3D Viewers installation modules:

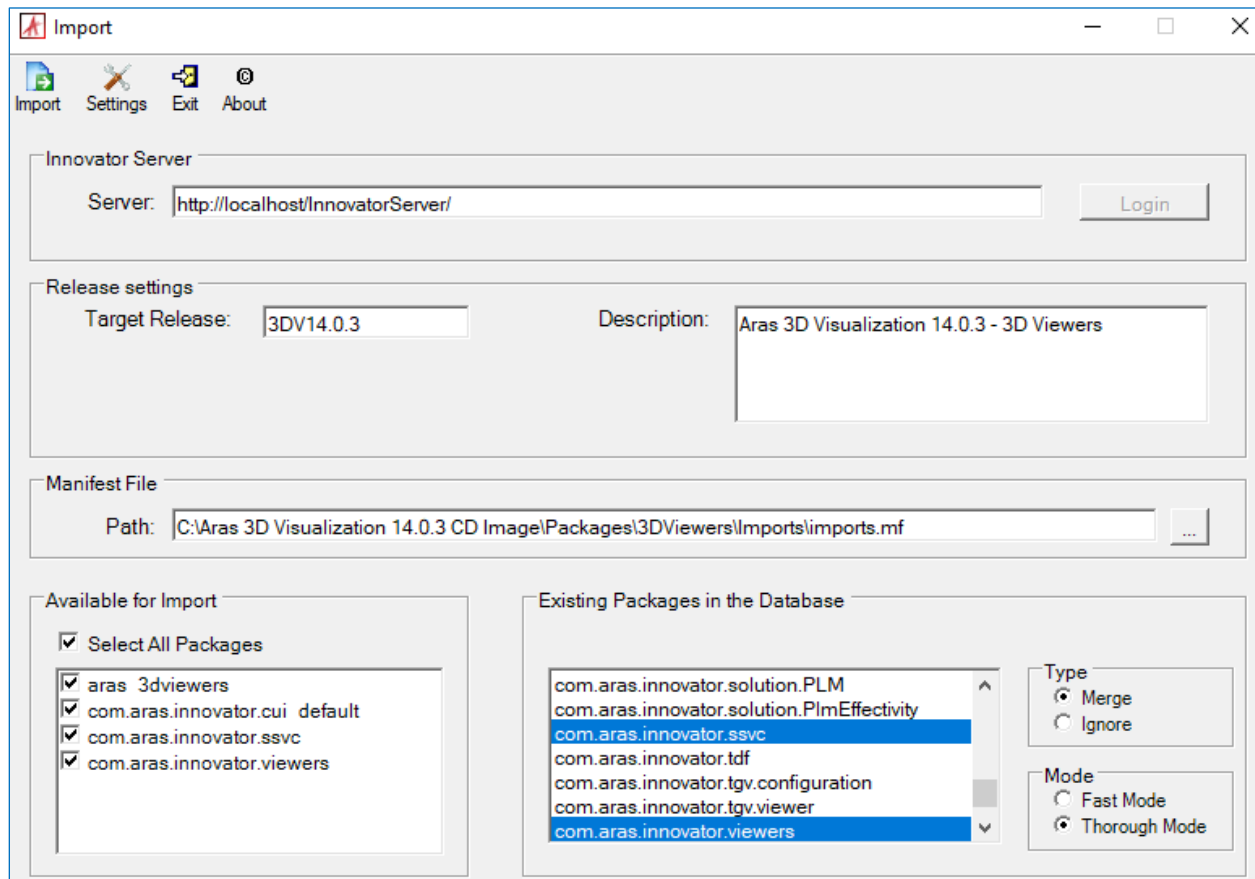


Figure 21.

- **Target Release: 3DV14.0.3.**
- **Description: Aras 3D Visualization 14.0.3 - 3D Viewers.**
- **Manifest File Path:** a path to the 3D Viewers import manifest file in the unzipped **Aras 3D Visualization 14.0.3 CD Image** package. For example, **C:\Aras 3D Visualization 14.0.3 CD Image\Packages\3DViewers\Imports\imports.mf**.
- **Available for Import:** click **Select All Packages**.
- **Type: Merge.**
- **Mode: Thorough Mode.**

14. Click **Import** to start the installation.

15. Once the installation is successfully completed, close the Aras Package Import tool.

16. Disable the logon for the **root (Super User)** User.

17. This step is optional. Confirm the successful Aras 3D Viewers installation. See section [10 Confirming Aras 3DV Installation](#).

If the installation fails, restore the Aras Innovator code tree and database with the backups done before the installation and contact Aras Support at support@aras.com.

9.3 Manual Aras Dynamic Visualization Installation

1. Do the pre-installation procedures as discussed in section [6 Pre-Installation Procedures](#).
2. In the unzipped **Aras 3D Visualization 14.0.3 CD Image** package, go to the following folder:
 - **Aras 3D Visualization 14.0.3 CD Image\Packages\DPN**
3. Copy the **Innovator** folder from the **DPN** package folder to the root Aras Innovator code tree folder that includes the **Innovator** folder.

Replace the files in the destination if you are prompted to do so.

Note: It is recommended that a server administrator performs this step.

4. In the Aras Innovator code tree, go to **\Innovator\Server** and open the **method-config.xml** file in a text editor with an admin's privileges.
5. In the **ReferencedAssemblies** tag, add the following child name tags:

```
<ReferencedAssemblies>
...
  <name>$(binpath)/Aras.DynamicModelViewer.Core.dll</name>
  <name>$(binpath)/Aras.DynamicModelViewer.DataModel.dll</name>
  <name>$(binpath)/Aras.DynamicModelViewer.QueryProcessor.dll</name>
  <name>Microsoft.Extensions.Logging.dll</name>
</ReferencedAssemblies>
```

6. Save and close the **method-config.xml** file.
7. Restart the Internet Information Services (IIS).
8. Enable logon for the **root (Super User)** User.
9. Launch the Aras Package Import tool.

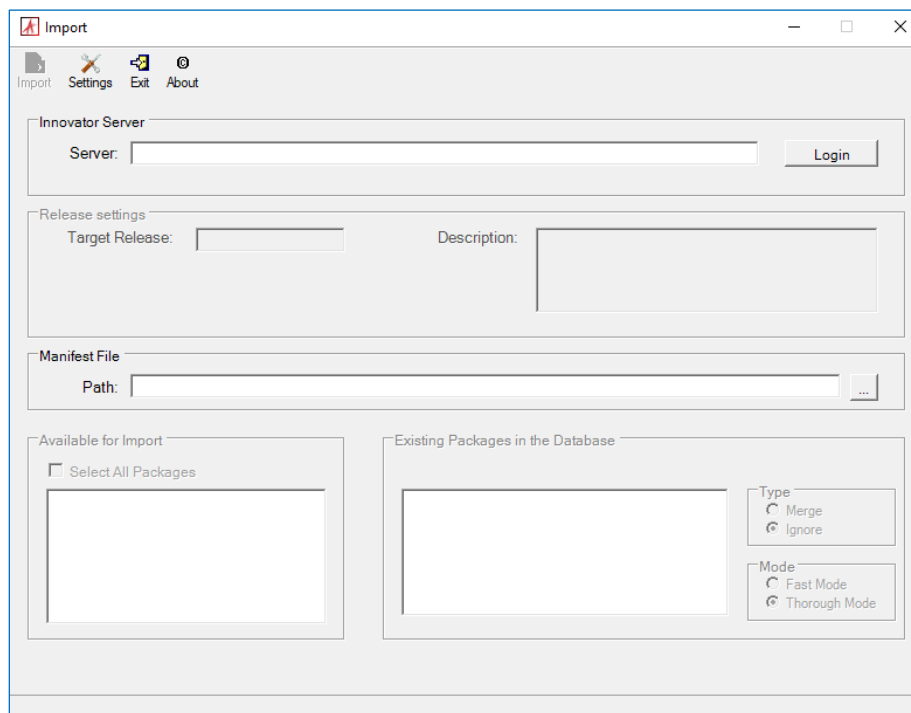


Figure 22.

10. Enter a connection URL for a given Aras Innovator instance in the **Server** field. By default, it is **http://localhost/InnovatorServer/**.
11. Click the **Login** button. The **Login to Aras Innovator** dialog box appears.

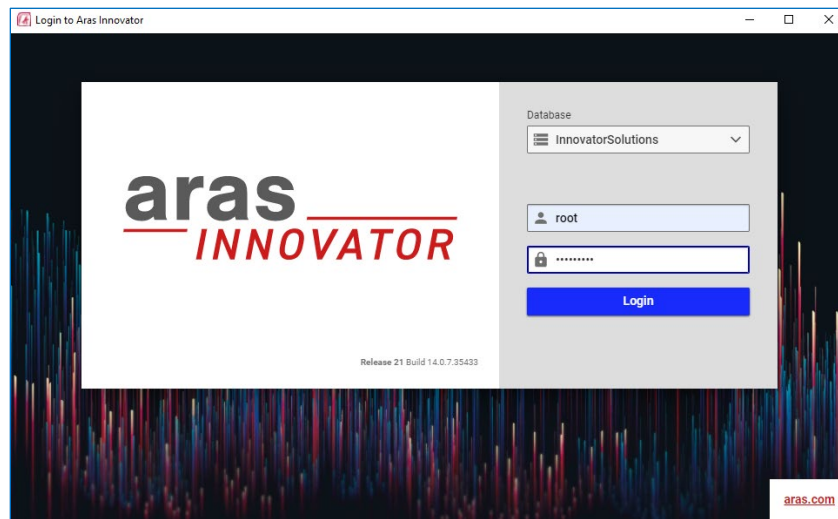


Figure 23.

12. Specify the connection information for the given Aras Innovator instance:
 - **Database:** a name of a target Aras Innovator database. By default, it is **InnovatorSolutions**.
 - **Username:** **root**.
 - **Password:** a password for the **root** User. By default, it is **innovator**.
13. Click the **Login** button. Aras Package Import should have successfully connected to the given Aras Innovator instance.

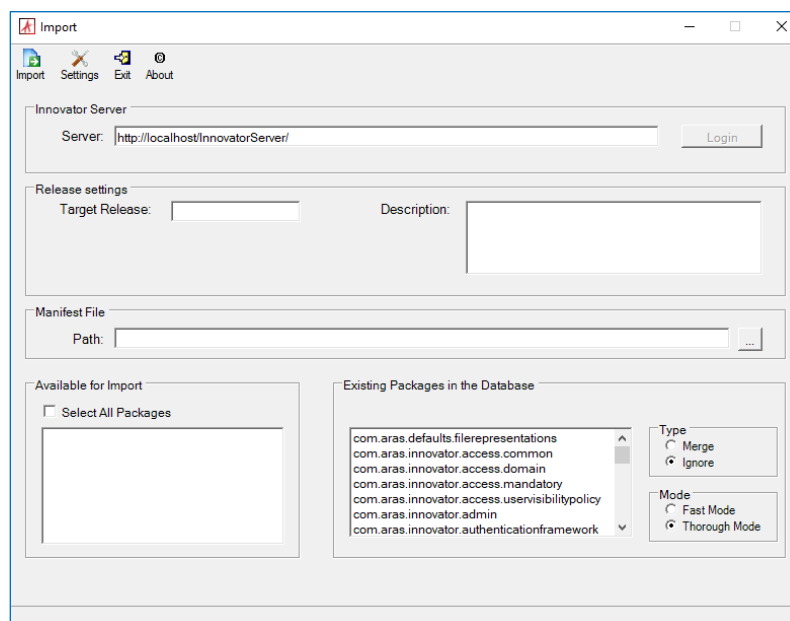


Figure 24.

14. Specify the connection information for the Aras Dynamic Visualization installation modules:

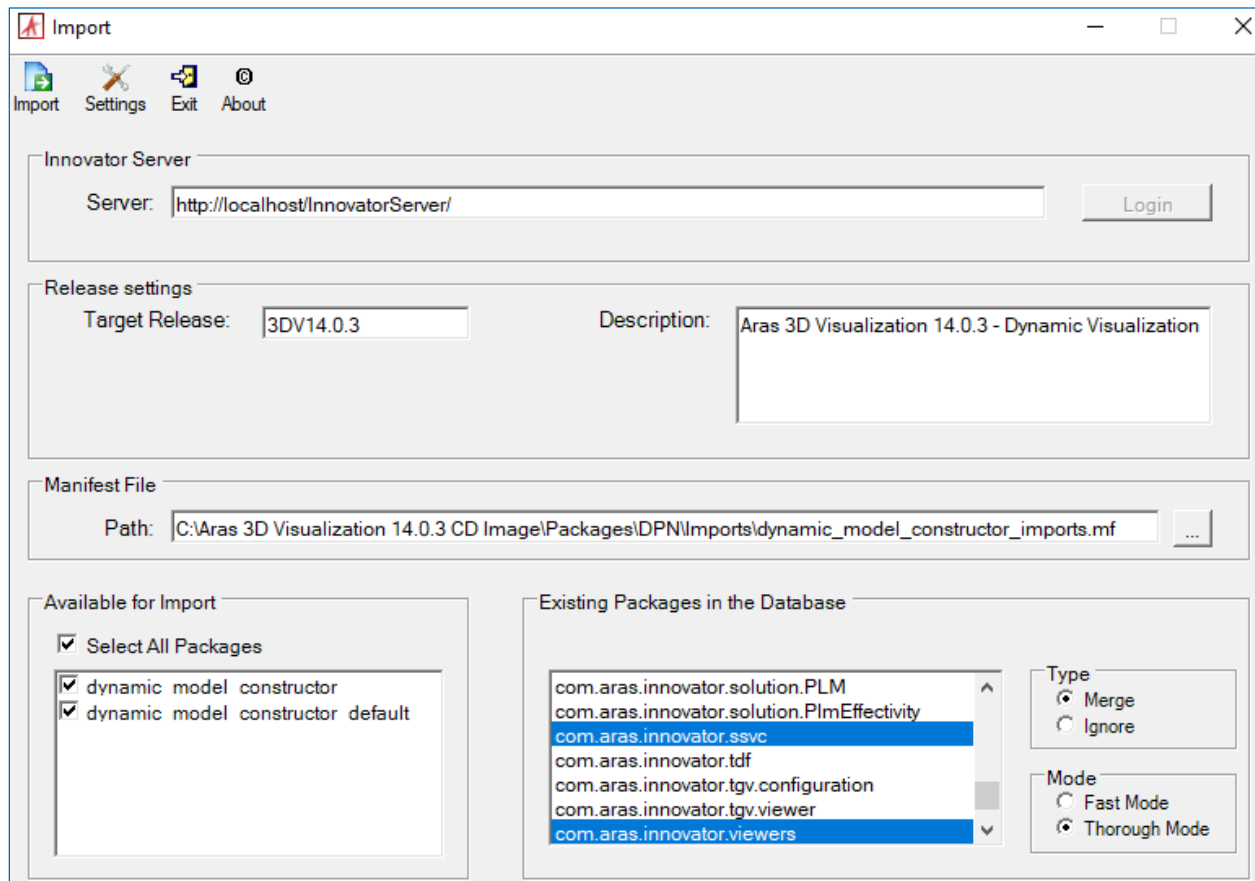


Figure 25.

- **Target Release: 3DV14.0.3.**
- **Description: Aras 3D Visualization 14.0.3 - Dynamic Visualization.**
- **Manifest File Path:** a path to the dynamic visualization import manifest file in the unzipped **Aras 3D Visualization 14.0.3 CD Image** package. For example, **C:\Aras 3D Visualization 14.0.3 CD Image\Packages\DPN\Imports\dynamic_model_constructor_imports.mf**.
- **Available for Import:** click **Select All Packages**.
- **Type: Merge.**
- **Mode: Thorough Mode.**

15. Click **Import** to start the installation.

16. Once the installation is successfully completed, close the Aras Package Import tool.

17. Disable the logon for the **root (Super User)** User.

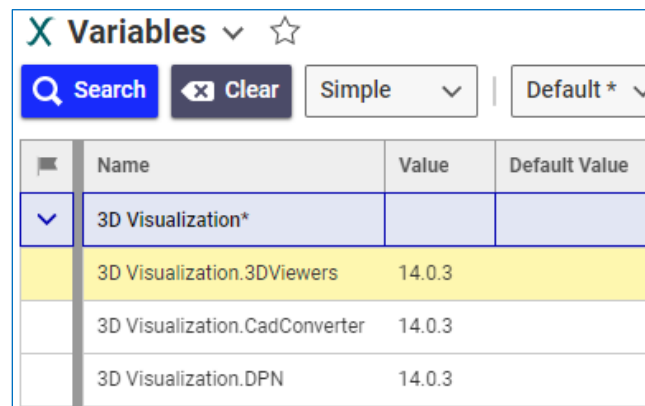
18. This step is optional. Confirm the successful Aras Dynamic Visualization installation. See section [10 Confirming Aras 3DV Installation](#).

If the installation fails, restore the Aras Innovator code tree and database with the backups done before the installation and contact Aras Support at support@aras.com.

10 Confirming Aras 3DV Installation

To confirm the successful installation of given Aras 3D Visualization components:

1. Log into Aras Innovator as an administrator.
2. Go to **Contents --> Administration --> Variables**.
3. Confirm that Variables for the given components are listed with necessary Values:
 - **3D Visualization.3DViewers: 14.0.3**
 - **3D Visualization.CadConverter: 14.0.3**
 - **3D Visualization.DPN: 14.0.3**



The screenshot shows the 'Variables' page in Aras Innovator. At the top, there is a search bar with 'Search' and 'Clear' buttons, and dropdown menus for 'Simple' and 'Default *'. Below this is a table with the following data:

Name	Value	Default Value
3D Visualization*		
3D Visualization.3DViewers	14.0.3	
3D Visualization.CadConverter	14.0.3	
3D Visualization.DPN	14.0.3	

Figure 26.

If there is no Variable with the correct Value for a component, the installation of this component fails. Restore the Aras Innovator code tree, Conversion Server, and database with the backups done before the installation and contact Aras Support at support@aras.com.

11 Troubleshooting

11.1 Conversion Tasks Not Created

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

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

11.2 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

Grant necessary permissions for the **ConversionServer** folder:

1. Go to the **ConversionServer** folder following the path given in the error message.
2. Right-click the **ConversionServer** folder and click **Properties**.
3. On the **Security** tab, click **Advanced**.
4. Click **Change Permissions**.
5. Click **Add**.
6. Type **Everyone** and click **OK**.
7. Select the **Full control** checkbox for **Access** and **Allow** for **Type**.
8. Click **OK**.
9. Select **Replace all child object permissions with inheritable permissions from this object**.
10. Click **Apply** and click **Yes** when prompted.

11.3 500.19 Internal Server Error

Error Message

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

The request failed with the following 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 8.0 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, typos, extra newlines, and carriage returns in the **ConversionServerConfig.xml** file located in the **ConversionServer** folder with the installed Conversion Server. This file is modified when installing the Aras CAD Converter manually; see section [9.1 Manual Aras CAD Converter Installation](#). An entire `<... arguments="..." .../>` attribute must be only one single line without carriage returns or newlines.

11.4 404: 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 Conversion Server URL is correct in Aras Innovator.

This URL depends on where the Conversion Server was installed on the website with the Aras Innovator installer. For example, the default URL is the following:

- When the Conversion Server was installed with the Aras Innovator instance:
<http://serverName/InnovatorServer/ConversionServer/ConversionService.asmx>
- When only the Conversion Server was installed:
<http://serverName/ConversionServer/ConversionService.asmx>

where **serverName** is the Aras Innovator domain name

11.5 3D PDF Is Not Activated in Firefox

Clicking a CAD image in a converted 3D PDF file activates the ability to manipulate the CAD content interactively. If this feature is not available in a 3D PDF file opened in Firefox, this file may be loaded without using Adobe Reader.

To configure Firefox to load PDF files using Adobe Reader:

1. Open Mozilla Firefox.
2. Go to **Settings --> General --> Applications**.
3. Set the **Portable Document Format (PDF)** Content Type to the **Use Adobe Acrobat Reader (default)** Action.

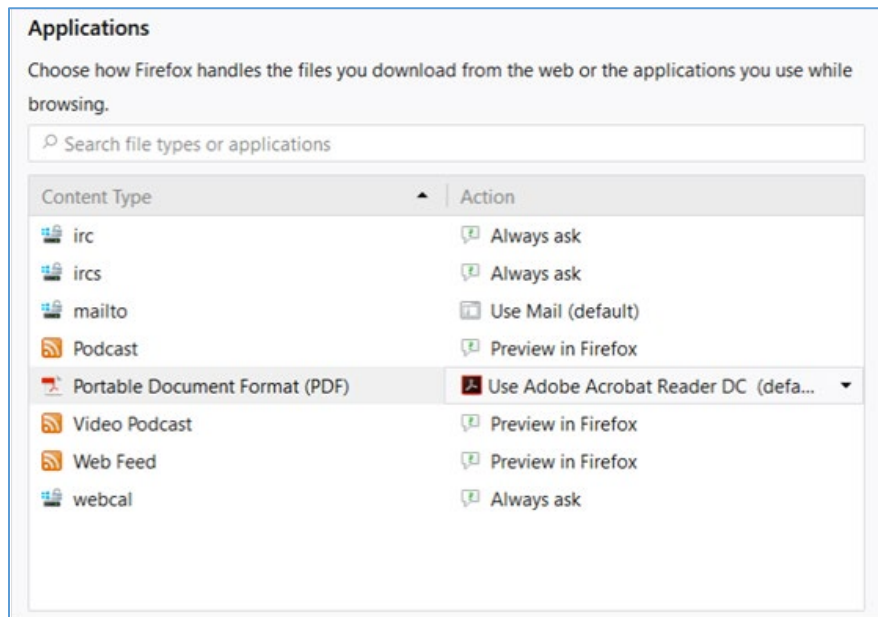


Figure 27.