



ReviewAdapter

Manual

ENGINEERED EFFICIENCY



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1 Introduction

ReviewAdapter captures 3D graphics and attributes from Intergraph SmartPlant Review or CAXperts **3D/PDS/PDMS ReportAdapter** and stores it in a file (*.upvc). This file is used as input for CAXperts **UniversalPlantViewer** to generate WebViewer/3D PDF session.

1.1 General conventions




This document contains many visual cues to help you understand the meaning of certain words or phrases. The use of different fonts for different types of information allows you to scan the document for key concepts or commands. Symbols help abbreviate and identify commonly used words, phrases, or groups of related information

Typefaces

<i>Italic</i>	Indicates a system response, which is an explanation of what the software is doing. For example, <i>The text is placed in the viewing plane.</i>
Bold	Indicates a command name, parameter name, or dialog box title. Command paths are shown using an arrow between command names. For example, Choose File → Open to load a new file.
Normal typewriter	Indicates an actual file or directory name. For example, The ASCII report is stored in the layout.rpt file.
Bold typewriter	Indicates what you literally type in. For example, Key in original.dat to load the ASCII file.

Symbols

This document uses the following symbols to identify special information:

-  Note – important supplemental information.
-  Map or path – shows you how to get to a specific command or form.
-  More information – indicates there is additional or related information.

2 Installation

Requirements:

- Supported operating systems:
 - Microsoft Windows 7-10
 - Microsoft Windows 2008-2012R2
- Intergraph SmartPlant Review 2014 R1 or later (32 or x64 bit)
- Intergraph SmartSketch 2014 or later
- Microsoft .NET Framework 4.0

Administrator rights are required on each computer to install CAXperts **ReviewAdapter**. "Run as" is not supported.

Uninstall

To uninstall the software, select **Control panel** from the start menu. Then on large or small icon view, click **Programs and features**. If you are using category view, under **Programs**, click **Uninstall a program**.

Select the program you want to remove, and click Uninstall/Remove. Alternatively, right-click the program and select **Uninstall**.

Setup command line (for administrators)

The following command line options are supported by the installer:

/S:<<optional ini file>>

Allow an install to be run in silent mode. As a result, no screens or dialogs will be shown.

This command line option also has an optional INI file that can be passed containing session variable values. For example:

```
"C:\output\setup.exe" "/S:C:\setupvars.ini"
```

This will cause the session variables in the INI file to be used for the setup. The INI file should be in the format:

```
[SetupValues]
```

```
%AppFolder%=C:\Program Files\MyProduct
```

/U:<<XML config file>>

This command line option must be used when calling the uninstall program from the command line. This command also has an optional XML file that can be passed containing session variable values. For example:

```
"C:\Program Files\MyProduct\uninstall.exe" "/U:C:\Program Files\MyProduct\irunin.xml"
```

2.1 Licence

CAXperts software supports two types of licences:

Site licence (local)

Domain based licences are restricted to machines within a 5 miles (8 kilometres) radius at a specific geographic location (building) for which the licence key file was issued for. There is no limitation regarding the number of users or machines.




CAXperts will need your **Current domain name** to issue a licence file (.lic).

The licence file has to be stored on a local or network location accessible by the machine running the CAXperts product; a licence server is not required.

The location of the licence file should be defined on every machine with the CAXperts product installed, which can be done


- Either by setting the environment variable
CAXPERTS_LICENSE_FILE=C:\Program Files (x86)\CAXperts\Licensing\
- Or by setting the registry key
HKEY_CURRENT_USER\Software\FLEXlm License
Manager\CAXPERTS_LICENSE_FILE=C:\Program Files
(x86)\CAXperts\Licensing\

Multiple licence key file locations should be separated by semicolons (“;”).

-  Note: If the licence key file location is not defined, “C:\Program Files (x86)\CAXperts\Licensing\” is used
-  Note: The licence key file may be renamed (including the extension). The CAXperts product will check the content of all files in the licence folder(s) for valid keys.
-  Note: Changes to the key path (in the environment variable or registry key) are read during the next start of the CAXperts product.

Floating (server) licence

Floating licences require a FlexNET server (ladmin or lmgrd) accessible by the machine running the CAXperts product. The licence key file is typically located on the FlexNET server machine. The licence key file defines the maximum number of seats which can be used at the same time.

-  Note: Every running instance of the CAXperts software product will require one seat, no matter if the application is running multiple times on the same or different machine(s).


New instances can only be started as long as seats are available and the FlexNET server is accessible.

The location of the licence server must be defined on every machine with the CAXperts product installed, which can be done

- Either by setting the environment variable
CAXPERTS_LICENSE_FILE=@YourServerName
- Or by setting the registry key
HKEY_CURRENT_USER\Software\FLEXlm License
Manager\CAXPERTS_LICENSE_FILE=@YourServerName

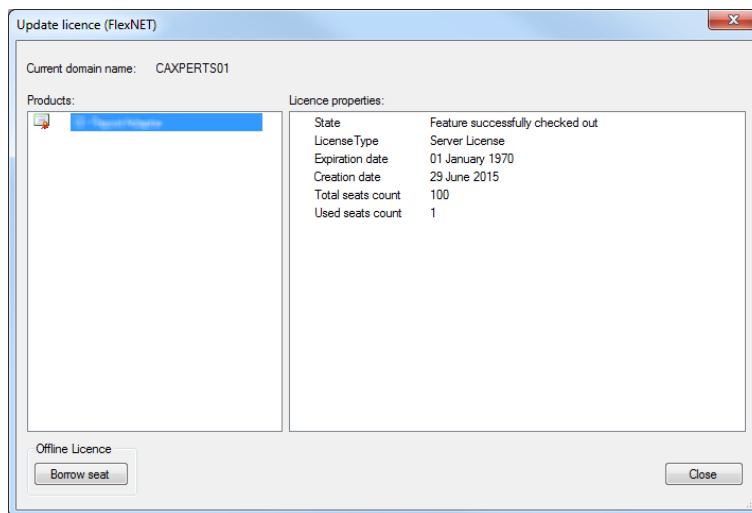
Every computer name must be preceded by the @ symbol. Multiple licence server locations should be separated by semicolons (“;”).

YourServerName is the Windows computer name of the machine running lmadmin (FlexNET server). If lmadmin is running on a non-default port, the port number should be defined like this: port@ YourServerName.

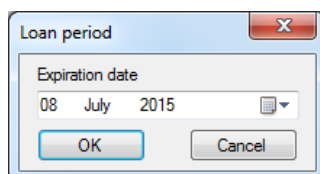
 **Note:** Changes to the server path (in the environment variable or registry key) are read during the next start of the CAXperts product.

Borrowed licences

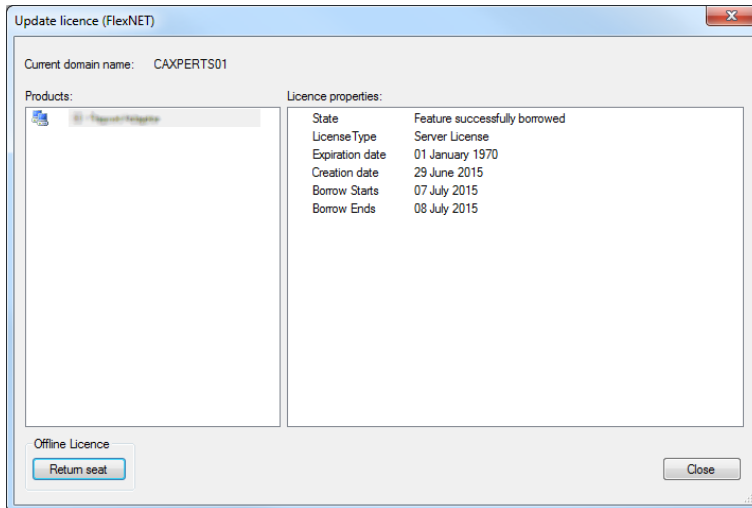
Licence seats can be borrowed for a period of time from the server and saved to the local machine. Once the seat has been borrowed the CAXperts application can be used without any connection to the FlexNET server.




To borrow a licence seat press the **Borrow seat** button, define the loan period (up to 7 days) and press OK. When the borrowed seat expires it gets automatically returned back to the FlexNET server.



The seat can be returned earlier by pressing the **Return borrowed seat** button.



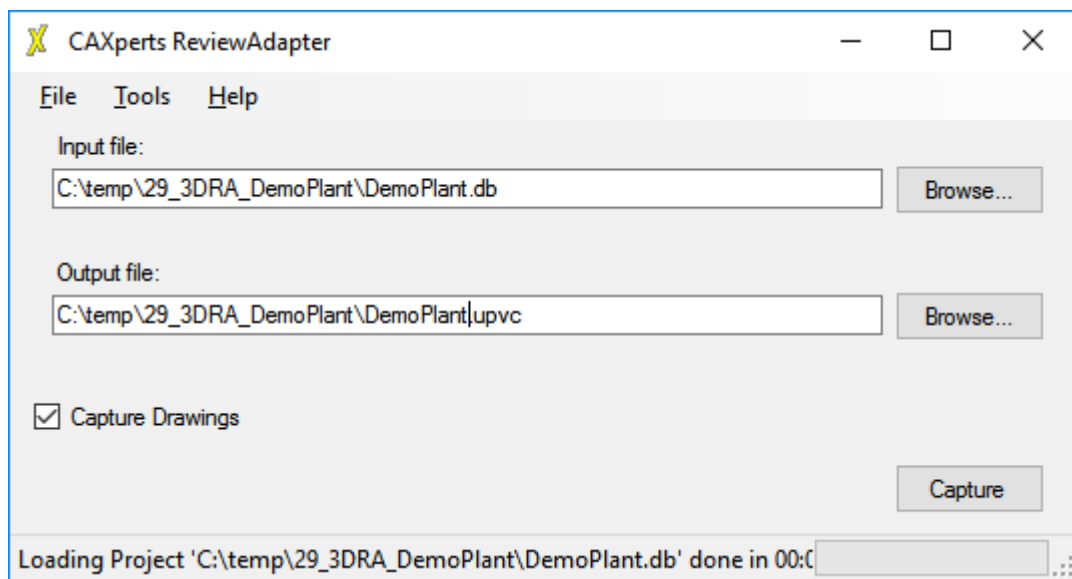
 Note: Without a valid licence file the software will run in demo mode.

3 Using ReviewAdapter

ReviewAdapter Setup detects automatically the platform of Intergraph SmartPlant Review (32 or 64 bit) and copies to disc appropriate version of ReviewAdapter. (64 bit version of ReviewAdapter is required to work with 64 bit version of SmartPlant Review).

Start **ReviewAdapter** and select an **input file**. These input types are supported:

- *.vue, *.svf and *.dri – Intergraph SmartPlant Review
- *.db – CAXperts 3D ReportAdapter session
- *_dri.dri with *.mdb – PDS ReportAdapter session
- *.mdb – CAXperts PDMS ReportAdapter session



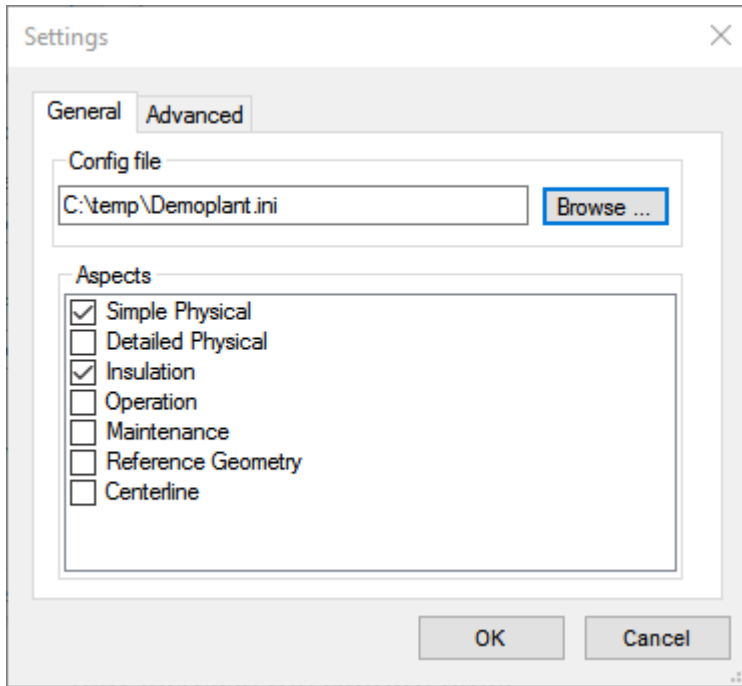
Output file: defines the path to the *.upvc output file. The file contains all required information (like graphics or attributes) in order to generate WebViewer or 3D PDF output using **Universal-Plant Viewer**.

If the *.upvc output file already exists, **ReviewAdapter** will work in update mode and re-capture changes only.

Capture drawings: if enabled isometric drawings are captured for input from CAXperts **3D** or **PDS ReportAdapter**. This functionality is available only in 32 bit mode (as Intergraph SmartSketch is provided only as 32 bit application).

3.1 Settings

All settings are stored automatically in the configuration file of the user profile. The location of the configuration file can be changed in the **Tools** → **Settings** menu.




General

Configuration File:

To export the settings use **File** → **Save settings to file**.

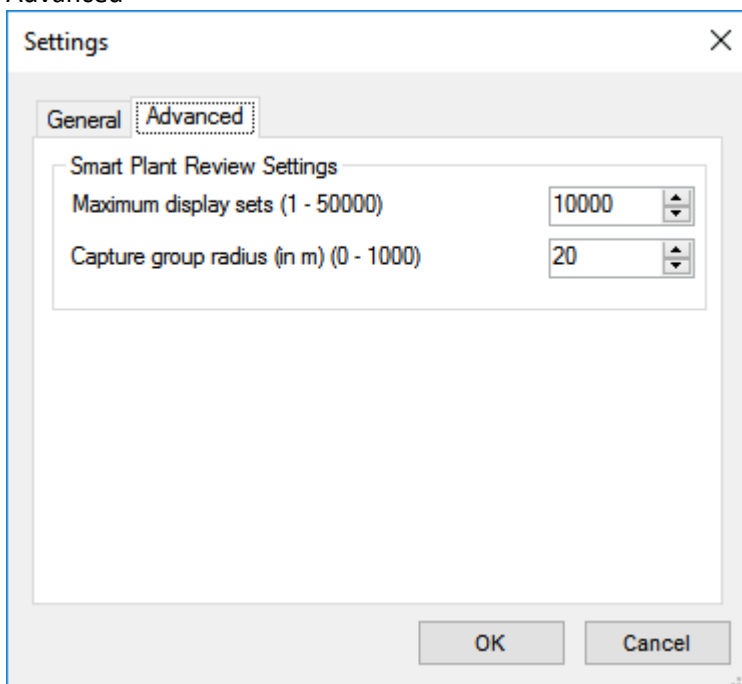
To import the settings from file use **File** → **Load settings from file**.

 Note: “Load settings from file” doesn’t change the current location of the configuration file. Once the settings have been imported any further changes are stored in the current configuration file displayed in the **Tools** → **Settings** menu.

Aspects:

Select graphical aspects to capture (default Simply Physical and Insulation). Additional aspects may increase the capture time.

Advanced



Maximum display sets (default 10000): the maximal number of objects captured at one time. Higher value increase performance but may also cause an over of SmartPlant Review MDB file (which is limited to max 2 Gb). SmartPlant Review needs longer to start with the high number of display sets.

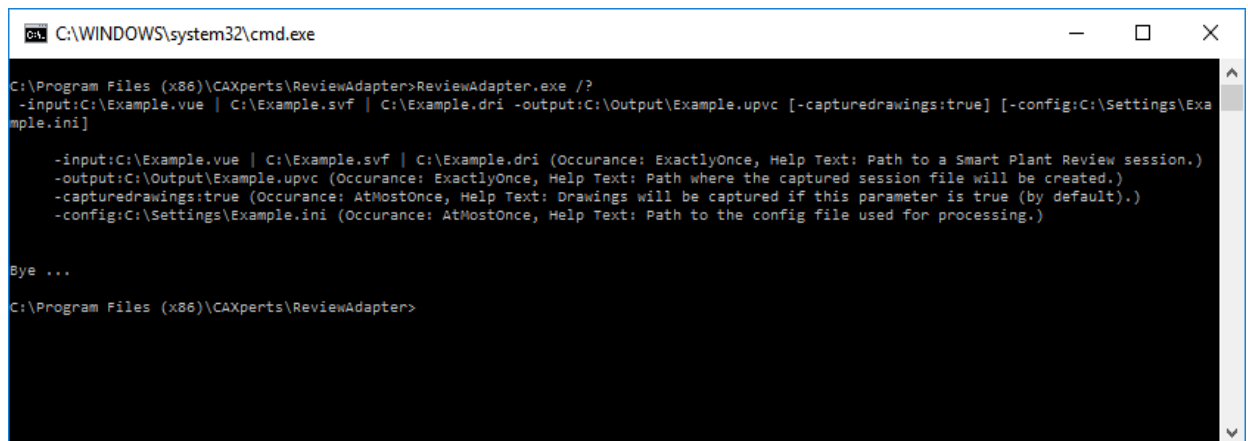
Capture group radius (default 20): defines the quality of the captured graphics. Lower values increases the quality but decreases the capture time.

3.2 Command line mode

ReviewAdapter can also be used in command line mode. Use the following command to show the command line arguments:

```
C:\>"C:\Program Files\CAXperts\ReviewAdapter\ReviewAdapter.exe" /?
```

Command line arguments:



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files (x86)\CAXperts\ReviewAdapter>ReviewAdapter.exe /?
-input:C:\Example.vue | C:\Example.svf | C:\Example.dri -output:C:\Output\Example.upvc [-capturedrawings:true] [-config:C:\Settings\Example.ini]

-input:C:\Example.vue | C:\Example.svf | C:\Example.dri (Occurance: ExactlyOnce, Help Text: Path to a Smart Plant Review session.)
-output:C:\Output\Example.upvc (Occurance: ExactlyOnce, Help Text: Path where the captured session file will be created.)
-capturedrawings:true (Occurance: AtMostOnce, Help Text: Drawings will be captured if this parameter is true (by default).)
-config:C:\Settings\Example.ini (Occurance: AtMostOnce, Help Text: Path to the config file used for processing.)

Bye ...
C:\Program Files (x86)\CAXperts\ReviewAdapter>
```

ReviewAdapter requires access to the desktop (to run **SmartPlant Review**), therefore to be able to run the software as a scheduled task following steps are required:

1. Save following script into file (e.g. C:\Temp\Script.bat) which is used to run ReviewAdapter from command line. Adjust ReviewAdapter path and parameters. Don't forget to add "Exit" command to end the script:

```
"C:\Program Files (x86)\CAXperts\ReviewAdapter\ReviewAdapter.exe" -input:C:\Example.vue -output:C:\Output\Example.upvc
Exit
```

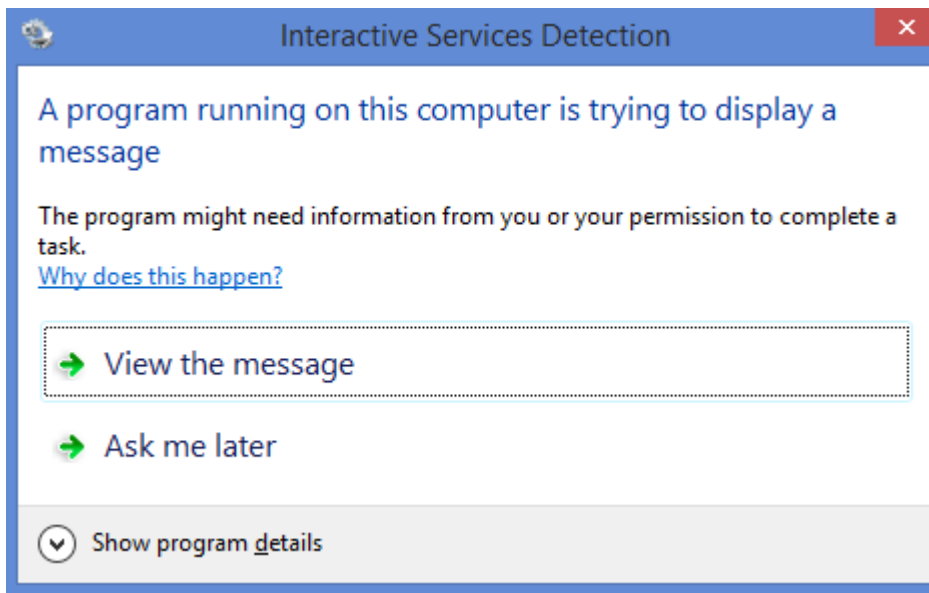
2. Save following script into file (e.g. C:\Temp\CreateServiceAndRunCommand.bat). This script creates new windows Service "ReviewAdapter", which starts the first script file C:\Temp\Script.bat as Interactive Service (called Session 0, see [https://msdn.microsoft.com/en-us/library/windows/desktop/ms683502\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/ms683502(v=vs.85).aspx) for details). CreateServiceAndRunCommand.bat waits until the C:\Temp\Script.bat has been completed and deletes the Service "ReviewAdapter". Adjust the path to the first Script file and the Service Name if required.

```
rem this script runs program defined in SCRIPT_FILE as a service in system
context. The script waits until the program has been completed.
rem define the name of windows service
SET SERVICE_NAME=ReviewAdapter
rem define script file to run
SET SCRIPT_FILE=c:\temp\script.bat
@echo off
```

```
cls
ver | find "Version 6." >NUL
IF NOT errorLevel 1 (
    echo Service for interactive services UI0Detect configure...
    sc config UI0Detect start= demand >NUL
    timeout /t 1 > NUL
    echo Service for interactive services UI0Detect start...
    sc start UI0Detect >NUL
)
echo enable interactive Services
reg add "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Windows" /v
"NoInteractiveServices" /t REG_DWORD /d "0" /f
echo Service %SERVICE_NAME% stop...
sc stop %SERVICE_NAME% >NUL
timeout /t 1 > NUL
echo Service %SERVICE_NAME% delete...
sc delete %SERVICE_NAME% >NUL
timeout /t 1 > NUL
echo Service %SERVICE_NAME% create...
sc create %SERVICE_NAME% binpath= "cmd.exe /k start /WAIT "%SCRIPT_FILE%"
type= own type= interact >NUL
timeout /t 1 > NUL
echo Service %SERVICE_NAME% start...
sc start %SERVICE_NAME% >NUL
echo Service %SERVICE_NAME% is now finished!
echo Service %SERVICE_NAME% delete...
sc delete %SERVICE_NAME% >NUL
```

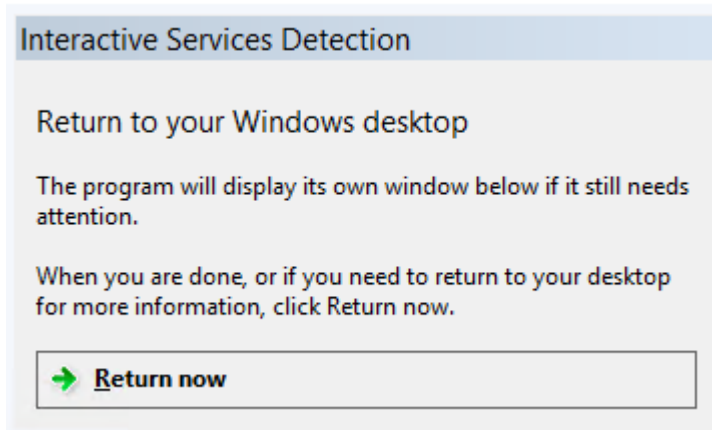
Notes:

- Use CreateServiceAndRunCommand.bat in the scheduled task.
- CreateServiceAndRunCommand.bat must be executed with enough privileges to create new Windows Service.
- CreateServiceAndRunCommand.bat executes the Script in a separate console – session 0. Review-Adapter UI won't be accessible or visible on the active desktop. In order to switch to session 0 press "View the message" button on the Interactive Service Detection window, which will appear automatically after CreateServiceAndRunCommand.bat has been executed.



If this window won't be shown, make sure "Interactive Services" services is enabled in a control panel of windows.

To revert back from session 0 console to the main desktop press button:



- Because the script is running in a separate session, the active user can continue working with windows or logoff. The session 0 will be executed in the background.
- First script is executed under LocalSystem account with limited permissions. If you need to access the network (e.g. copy result upvc file to a network drive) add corresponding at the end of CreateServiceAndRunCommand.bat.

4 Advanced features

4.1 Advanced configuration for capturing graphics

This chapter is for advanced users. You may ignore this chapter if advanced configuration is not required. Using an .ini file, users can define custom object types and rules for how **ReviewAdapter** should handle these objects.

Number of objects

The file size of the resulting PDF file depends noticeably on the number of objects captured. Ignoring less-meaningful objects (e.g. welds in **SmartPlant 3D** sessions) is one approach for reducing the overall 3D PDF file size.

The following syntax is used to define a custom object type in the .ini file:

```
[ObjectDefinition]
ObjectTypeName=AttributeName Operator Value
```

Example:

```
[ObjectDefinition]
MyWeld=Component=Weld
```

[ObjectDefinition] is the section name in the .ini file. **MyWeld** is the object type name, which can be freely defined. **Component** is an attribute name, which must exist in the design review session. The "=" character after **Component** is the operator. The operator may be "=" and "<>" for equality or "like" and "not like" when using wildcards. **Weld** is the attribute value.

The example defines that an object type **MyWeld** exists for the objects, whose attribute **Component** equals the value **Weld**. Users can build rules to ignore objects of type **MyWeld** using the following syntax in the .ini file:

```
[IgnoreObject]
MyWeld=1
```

The .ini file name is `ReviewAdapter.ini` and is copied automatically from the installation template to the folder of the design review session loaded in **ReviewAdapter**. By default the following definitions exist in the .ini file to ignore welds of **Smart 3D** sessions:

```
[ObjectDefinition]
Weld=Component=Weld
Weld1=Commodity type Like *weld*
```

```
[IgnoreObject]
Weld=1
Weld1=1
```

5 Log files

The software creates log files in the local TEMP directory (e.g. "C:\Temp\REviewAdapter\"). The user can also open these files by double-clicking on the CAXperts **REviewAdapter** status bar:

```

2015-11-05_075956 Universal Plant Viewer.log - Notepad
File Edit Format View Help
05/11/2015 07:59:56 [i] INFO - Application started...
*****
* CAXperts GmbH *
* Carl-Zeiss-Ring 4 *
* 85737 Ismaning (near Munich) *
* GERMANY *
* *
* Phone: +49 (89) 96 97 72 0 *
* Fax: +49 (89) 96 97 72 11 *
* URI: http://www.caxperts.com *
*****
* Application: universal plant viewer *
* Path: c:\Program Files (x86)\CAXperts\Universal Plant Viewer\Universal Plant Viewer.exe *
* Version: 2.0.1360.2701 *
* Platform: x86 *
* Date: 27.10.2015 16:28:59 *
* Size: 5.928.448 Bytes *
*****
OSFullName=Microsoft Windows 7 Ultimate
OSPlatform=Win32NT
OSVersion=6.1.7601.65536
AvailablePhysicalMemory=2.300.444.672 Bytes
*****
ALLUSERPROFILE=C:\Programdata
APPDATA=C:\Users\sb...CAXPERTS01\AppData\Roaming
CLIENTNAME=CAXN004
CommonProgramFiles(x86)=c:\Program Files (x86)\Common Files
CommonProgramFiles=c:\Program Files (x86)\Common Files
CommonProgramW6432=c:\Program Files\Common Files
COMPUTERNAME=CAX004
COMPSEC=C:\Windows\system32\cmd.exe
FP_NO_HOST_CHECK=NO
FW_PRODUCT=C:\WIN32APP\INGR\FWPLUS\
HOMEDRIVE=C:
HOMEPATH=Users\sb...CAXPERTS01
Include=c:\Program Files (x86)\Microsoft Visual Studio\VC98\atl\include;c:\Program Files (x86)\Microsoft Visual Studio\VC98\mf\include;c:\Program Files (x86)\Microsoft Visual St
lib=c:\Program Files (x86)\Microsoft Visual Studio\VC98\mf\lib;c:\Program Files (x86)\Microsoft Visual Studio\VC98\lib
LOCALAPPDATA=C:\Users\sb...CAXPERTS01\AppData\Local
LOGONSERVER=\\DC02
MS=c:\Bentley\Program\MicrosoftStation
MSDev01r=c:\Program Files (x86)\Microsoft Visual Studio\Common\MSDev98
MSTIME=1
NUMBER_OF_PROCESSORS=4
OS=Windows_NT
PARNUSUPPORT=c:\WIN32APP\INGR\PARNUSUPPORT\
Path=c:\Programdata\Oracle\Java\javapath;c:\oracle\product\11.2.0\client_1\bin;c:\win32app\Ingr;c:\Windows\system32;c:\Windows\C:\Windows\system32\wbem;c:\Windows\system32\wind
WIN32APP\INGR\PSHELL\share;c:\Program Files (x86)\Microsoft Visual Studio\Common\Tools\WinNT7\C:\Program Files (x86)\Microsoft Visual Studio\Common\MSDev98\bin;c:\Program Files (
PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PEHVAC=c:\WIN32APP\INGR\PEHVAC\
PROCESSOR_ARCHITECTURE=x86
PROCESSOR_IDENTIFIER=Intel64 Family 6 Model 45 Stepping 7, GenuineIntel
PROCESSOR_LEVEL=6
PROCESSOR_REVISION=2d07
Programdata=C:\Programdata

```

6 Technical support

Need more help? Contact CAXperts support by email, online, or phone:

[mailto: support@caxperts.com](mailto:support@caxperts.com)

www.caxperts.com