

AVEVA Review

Release 12.1

User Bulletin

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1 About this software release

AVEVA Review 12.1 is supplied on a DVD-R.

The full software suite is normally loaded onto individual MS Windows workstations and the license file is normally loaded onto a networked Windows server (see Licensing below).

Prior to installing the software you should ensure that your system meets the Minimum System Requirements.

1.1 How to Install AVEVA Review 12.1

Note: For full instructions on how to install AVEVA Review 12.1 and associated components please refer to the **Review Installation Guide**, available on the DVD or from the AVEVA product support site.

To install AVEVA Review 12.1 from DVD: Insert the DVD into your DVD-ROM drive. If you have AutoPlay enabled for the drive, the installation starts automatically. Otherwise, run **Start.htm** on the DVD.

To install REVIEW from the network: Click **Start>Run** on the Windows taskbar and type the path to the **Start.htm** file on your network.

Click on **Contents of DVD** and select the product that you want to install (in this case AVEVA Review 12.1). Before installing, click on the **product release notes** link, as you may have to install other programs or change system settings etc.

From the **Select a product to review release notes and install** form, select the **AVEVA Review 12.1** product.

Click **INSTALL**. Then click **OK** on any confirmation forms that appear.

On the **File Download** form, select **Run this program** from its current location (Internet Explorer 5.0) or

Open (Internet Explorer 5.5 or later) to install the program files directly from their current location onto your hard disk.

Select **Yes** on the Security Warning query about an Authenticode signature. This starts the Installation Wizard, which will lead you through the rest of the installation process.

1.2 Licensing

All AVEVA Review 12.1 software requires access to a licensing file provided by the Flexman 5.2 application and loaded by the install wizard. The license file can be stored on a networked server with client access, a networked workstation with client access, or on the workstation on which the AVEVA Review 12.1 software is currently loaded.

1.3 Compatibility

AVEVA Review 12.1 is compatible with:

- AVEVA ReviewShare 1.3
- AVEVA ReviewShare Server 1.3
- AVEVA ReviewShare Replication Server 1.3
- AVEVA Review Texture Library 1.0

Status files created by Review version 5.1 onwards are fully compatible with this release.

Models EXPORTed from AVEVA PDMS 10.4 and AVEVA Hull & Outfitting 12.0 or later are compatible with AVEVA Review 12.1.

Export colour, insulation and obstruction volume support requires models exported from AVEVA Plant 12.0.SP5 and AVEVA Hull & Outfitting 12.0.SP5 or later.

Review's database connection tools require access to an installation of AVEVA Plant or AVEVA Hull & Outfitting versions 12.0.SP3 or later. No additional licenses are required.

2 Introduction

2.1 About AVEVA Review

AVEVA Review is a powerful 3D visualisation tool for large complex plant and marine models. With features such as walk-through, animation, and high-quality photo-realistic images, AVEVA Review lets you analyse designs and communicate complex ideas easily.

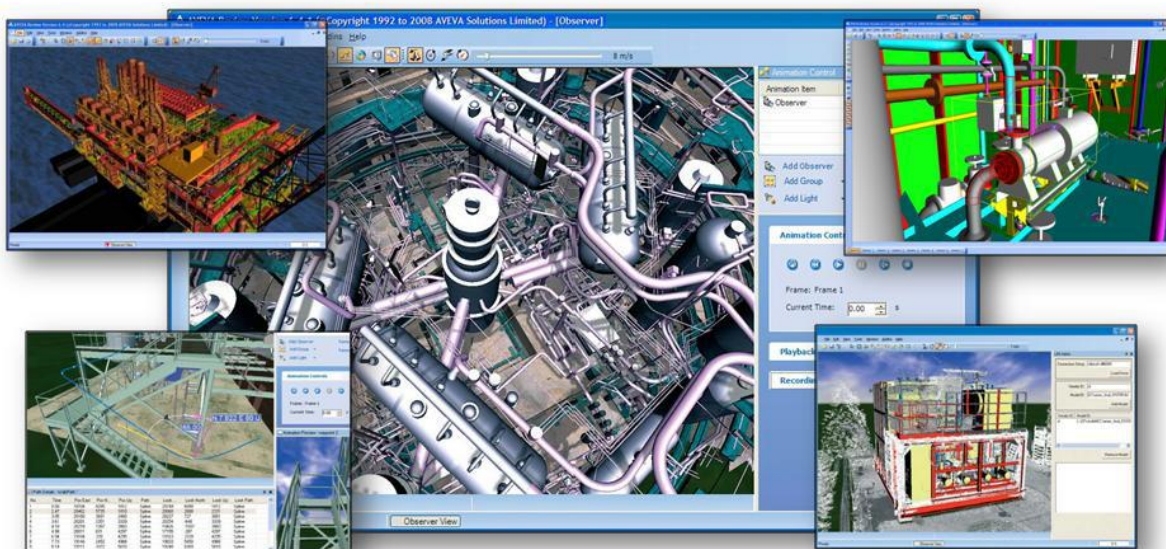


Figure 1: High Performance 3D Visualisation for design, installation, operation & maintenance

Key features include:

- High-performance 3D model rendering and walk-through
- Large model support
- Multi-format model composition (rvm, rvz, zgl, step, iges, sat)
- Load geometry and attribute data direct from an AVEVA PDMS or Outfitting database
- High-quality graphical realism with lighting, textures, scenic backdrops, fog and real-time shadows.
- Advanced animation and avi production tools
- Object manipulation & clashing
- Dimensioning
- Sectioning and Clipping

- Laser Model Interface for point cloud data
- Link Review sessions for global project review
- Publish models and data to AVEVA ReviewShare for easy collaboration
- 3D Export of Review model to Adobe Acrobat 3D PDF and Autodesk DWF



Figure 2: High quality graphical realism for plant and ship design

2.2 About AVEVA ReviewShare

AVEVA ReviewShare is a 3D model visualization and collaboration tool, enabling reviewers to combine marked-up 3D model views, 2D screenshots and comments in a single, easily distributable collaboration document. Making use of AVEVA's unique 3D streaming technology, it combines the high quality 3D visualization of Review with intuitive comment and mark-up tools, to create compact, and easily distributable, 3D collaboration documents.

AVEVA ReviewShare integrates fully with AVEVA Review to enable the creation, viewing, editing and distribution of ReviewShare documents with embedded 3D Review model views, extending the power of AVEVA Review by delivering 3D design communication over the internet to project participants anywhere around the world.

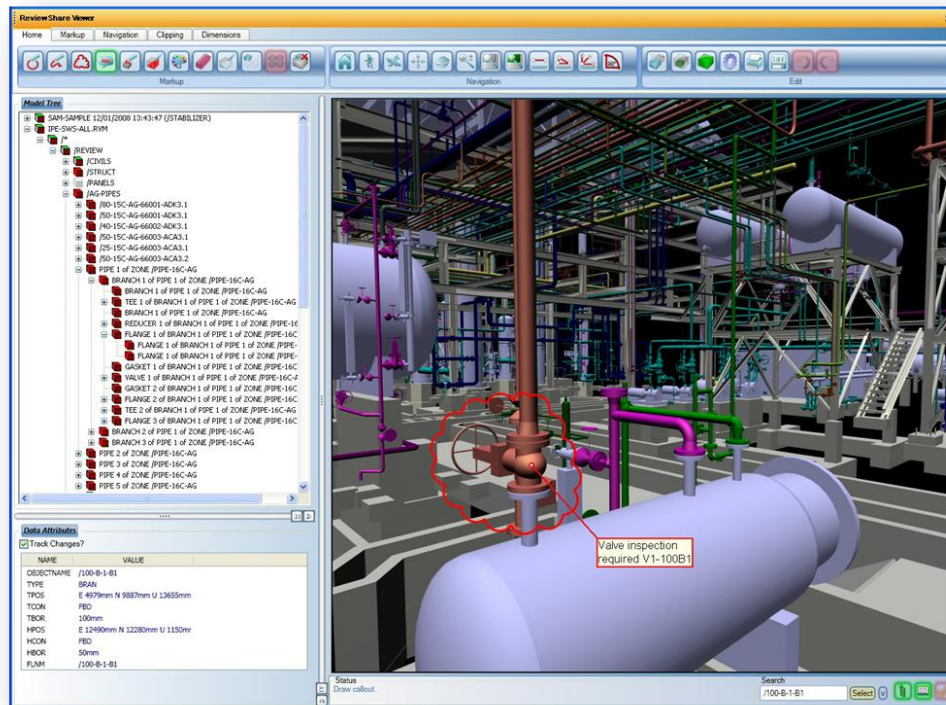


Figure 3: The AVEVA ReviewShare reader is available as a free download from www.aveva.com

Key Features

- Freely distributable 3D model collaboration
- Creation, viewing, editing & distribution of ReviewShare documents
 - Configurable header section
 - Threaded comment list with embedded 2D & 3D views
- Built-in password protection and expiry date
- Advanced Streaming technology delivers centrally managed 3D data to the client
- Multi-format support via ZGL
- View, manipulate & mark-up 3D model views
 - Pan, Rotate, Zoom...
 - Highlighting, redlining, dimensioning...
 - Object isolation, sectioning...
- Query model attribute data
- Capture and mark-up 2D screenshots (e.g. datasheets, drawings)
- Embedded web/file links

- Small file size for easy distribution
- Available as a standalone application and as add-ins to AVEVA Review, AVEVA Plant and AVEVA Hull and Outfitting

3 AVEVA Review 12.1

3.1 Overview

AVEVA Review 12.1, incorporating AVEVA ReviewShare 1.3, replaces version 12.0.SP2 to provide the following new and enhanced capabilities:

- **Native 64-bit Review**
 - Support for multi-gigabyte models
 - High performance rendering, manipulation and animation
 - Windows 7 64bit
- **VizStream Integration**
 - Support for picking, material changes, dimensioning, clipping, context menu actions
- **Marine Grid coordinates**
- **Customisable axis coordinates**
 - XYZ or ENU
- **Other Enhancements**
 - Extended Review API
 - Improved velocity control
 - Wavefront Export

3.2 Native 64-bit Review

Released in both 32-bit and 64-bit versions on Windows 7 Professional and Enterprise editions (the 32-bit version is also supported on Windows XP SP3), AVEVA Review 12.1 represents a significant leap forward in the ability to visualise, interrogate and review the very largest engineering design projects.

Whereas 32bit applications are limited to just 3GB of memory, native 64bit applications are able to address up to 192GB (on Windows 7 64-bit OS). This increase in available memory allows AVEVA Review 64-bit to open and manipulate significantly larger models than was previously possible.



Figure 4: The 64-bit version of AVEVA Review allows more of your model to be loaded

As a guide, users should expect an rvm file of a given size on disk to occupy approx three times as much space in memory. For example, a 1GB rvm file would occupy approximately 3GB RAM when loaded into Review (Note: this is a general rule of thumb which depends also on the complexity of the given model,

users are also encouraged to use the compressed rvz format which occupies much less space on disk (although the RAM requirements remain the same). A consequence of this is that the 32-bit version of Review, which is limited to 3GB of RAM, will only be able to handle rvm files of up to approximately 1GB in size. Provided the client machine has sufficient RAM Review 12.1 64-bit can easily handle model files of 2GB, 4GB, 8GB or more, allowing users to visualise, run animations and output high resolution images of entire assets.

The increase in memory also brings additional benefits, including smoother, more detailed handling of streamed models and improved system performance and stability when viewing very large models.

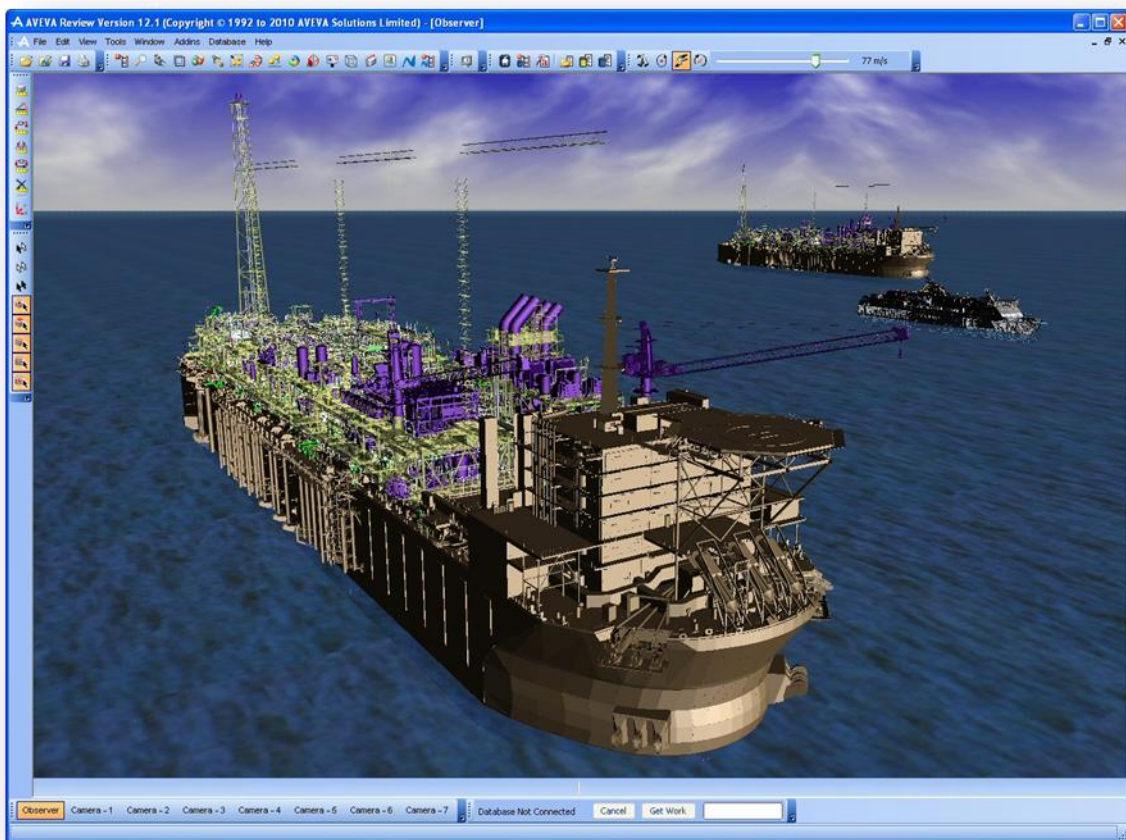


Figure 5: Native 64-bit Review supports viewing and manipulation of large complex models

3.3 VizStream Integration

Review 12.0.SP2 introduced the ability to display both streamed (zgl) and non-streamed (rvm) geometry concurrently within the Review observer view. This capability provided Review users with a number of benefits:

- Import 3rd party models into Review via conversion to zgl
- Viewing of large models even on low memory machines
- Ability to scale, orientate and position imported geometry alongside rvm data
- Ability to save composite models as single rvz file

There were limitations however, including the inability to select streamed items in the 3D view. Review 12.1 removes these limitations, allowing users to seamlessly interact with streamed models in the same way as for non-streamed models.

Enhancements include:

- Pick/selection of elements within the streamed model
- Placement of waypoints, signboards, observer etc. on streamed surfaces
- Ability to dimension between streamed and non-streamed objects
- Consistent context menus for navigation, add/remove elements, change visual properties etc.
- Clipping and sectioning of both streamed and non-streamed models

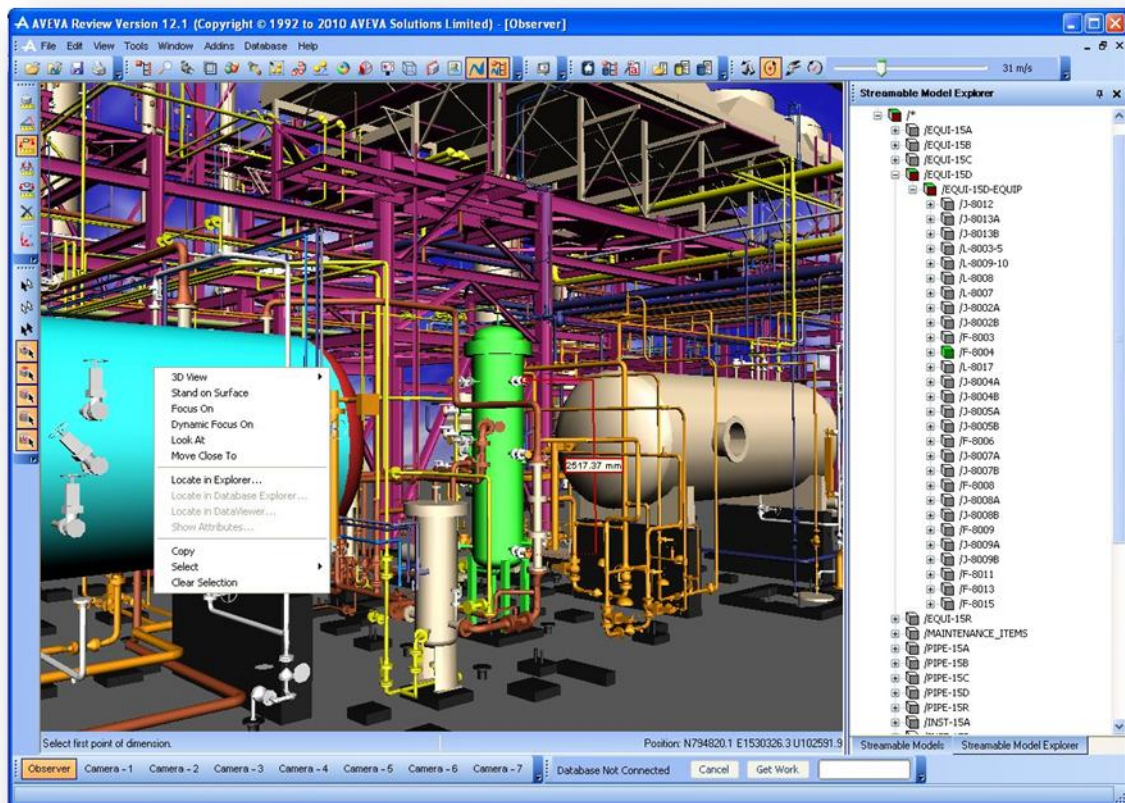


Figure 6: Seamless integration of streamed models allows even greater performance and capacity on all platforms

Model streaming allows users with limited memory 32-bit machines to visualise large models that would otherwise not be viewable as native rvm files. Support for streamed models is further enhanced on 64-bit machines where the additional memory allows for improved streaming performance at higher levels of detail, which is particularly useful when running animations involving streamed models.

3.4 Ship Grid Support

The live database access capability delivered in AVEVA Review 12.0 answered a significant need in the Marine industry for an easy-to-use standalone application providing read only viewing of the live design

model and associated attribute data. AVEVA Review 12.1 further supports the needs of the Marine industry through its support for Ship Grids.

Ship Grids are used in AVEVA Marine to locate certain parts or sections of the ship using Frame Position (FP) and Longitudinal positions (LP) on the database defined grid system. AVEVA Review 12.1 allows the user to read the Ship Grid definition from the Marine database using Review's Database Connection capability. Once connected the Ship Grid can be displayed within the Review Observer view, and used to report on the location of model parts and panels selected in the 3D view.

The new *Edit > Ship Grid* control in Review 12.1 gives users control over the display of the grid, which axes are displayed, their colour, where they are positioned and the spacing of the tag labels.

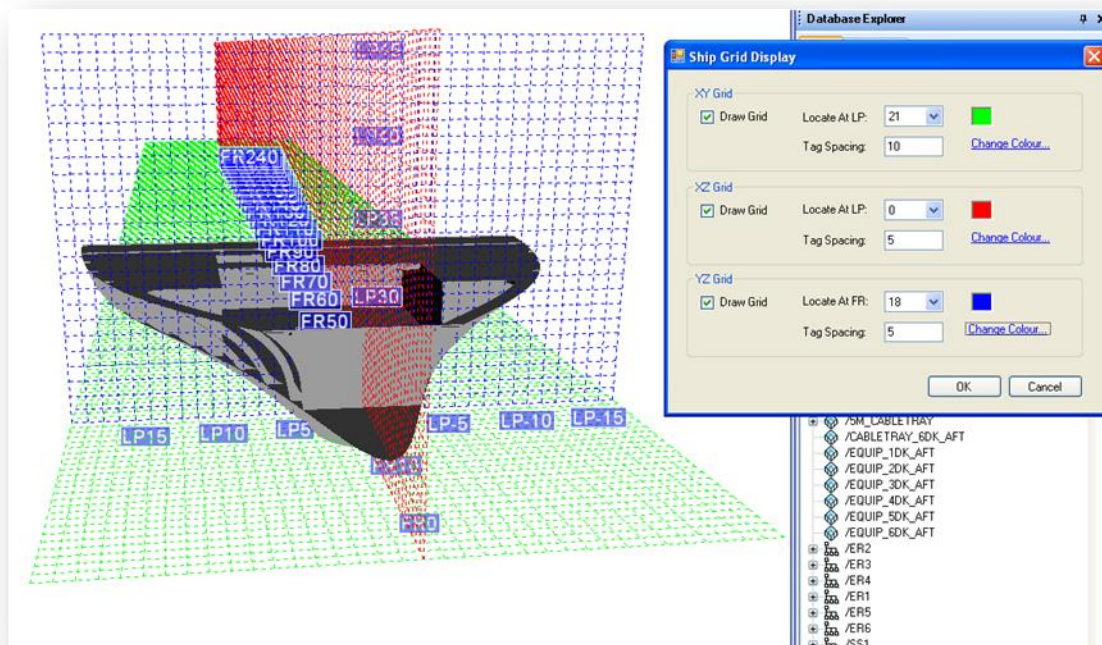


Figure 7: Ship Grid coordinates can be loaded from the Marine database and displayed in Review

The Ship Grid can be saved to an rvz file alongside the loaded model and other status information. The Ship Grid can then be accessed the next time the file is opened without the need to reconnect to the database.

3.4.1 Customisable axis coordinates

In previous release of AVEVA Review all position information was reported solely in terms of ENU (East-North-Up) coordinates. While standard for Plant assets and models these coordinate axes have little or no meaning for Marine projects. AVEVA Review 12.1 now supports the option to report and input all position information in XYZ coordinates throughout the UI.

This capability is equally applicable to Plant as well as Marine models.

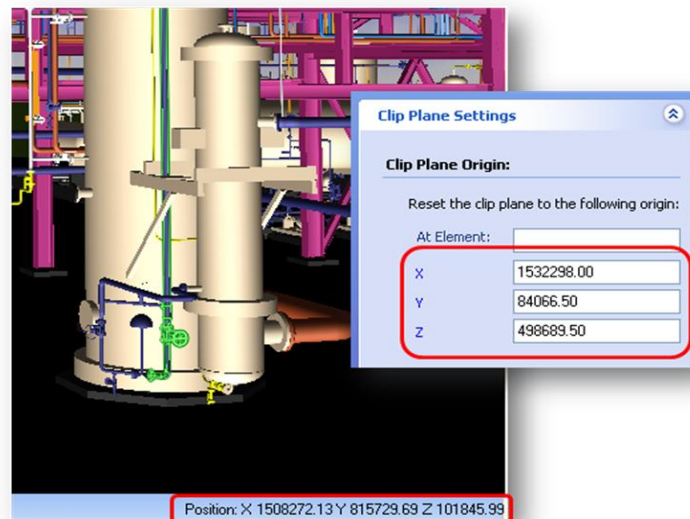


Figure 8: Positions can be displayed and input in either ENU or XYZ axes

3.5 Other Enhancements

3.5.1 Extended Review API

AVEVA Review provides an extensive API that allows developers to build custom add-ins that interface with Review's controls and capabilities.

The API has been enriched at version 12.1 to provide access to Review's lighting and animation controls, including the ability to manage animation groups and trajectories e.g. to allow groups, lights or the observer to be animated along any number of trajectories.

3.5.2 Improved velocity control

The Review velocity control, which controls the speed of the observer during walkthrough and flythrough modes, has been modified to better support large scale models. In previous releases the velocity slider supported velocities of between 1 m/s and 100 m/s along a linear scale. In Review 12.1 the same control offers an exponential scale of between 1 m/s and 1000 m/s to provide easier navigation of large models whilst still allowing fine control of velocity at low speeds.

3.5.3 Wavefront Export

AVEVA Review supports the export of the loaded rvm model to a number of 3rd party model formats, including PDF, U3D, DWF and XGL. It has also been possible to export the model to the Wavefront .obj format, a common interchange format often used to import 3D model data into 3D Studio Max and other 3D rendering packages, although this capability has only been enabled via a separate AVEVA license. AVEVA Review 12.1 removes this condition, making Wavefront the export option available to all users without the need for an additional license.

4 AVEVA ReviewShare 1.3

4.1 Overview

AVEVA ReviewShare 1.3 replaces version 1.2.SP2 to provide the following new and enhanced capabilities:

- **Native 64 bit Support**
- **Export to Excel**
- **Read-only by mode**
- **Replication Server File Timestamping**

4.2 Native 64-bit Support

The AVEVA ReviewShare 1.3 viewer application is now supported on Windows 7 Professional and Enterprise editions in both 32-bit and native 64-bit versions (the 32-bit version of AVEVA ReviewShare 1.3 is also supported on Windows XP SP3 and Windows Vista).

Although the benefits of moving to native 64-bit support are not as significant as for AVEVA Review the increase in available memory does allow for smoother, more detailed handling of streamed models within ReviewShare, better handling of rvf documents with a large number of embedded models and comments, as well as general improvements to system performance and stability.

4.3 Export to Excel

AVEVA ReviewShare 1.3 provides an administrator option to allow the rvf document to be saved out to an Excel document, e.g. for the purposes of archiving or reporting.

The option is disabled by default and can be enabled using the "Enable rvf export to Excel" checkbox in the ReviewShare client Security Settings dialog. Once enabled, a new entry (**Excel Document *.xls**) will be available to all users of the document in the ReviewShare "Save As" dialog (provided Microsoft Excel is installed on the client machine).

The exported Excel file contains all the data and comments captured in the rvf document together with the embedded screenshot images.

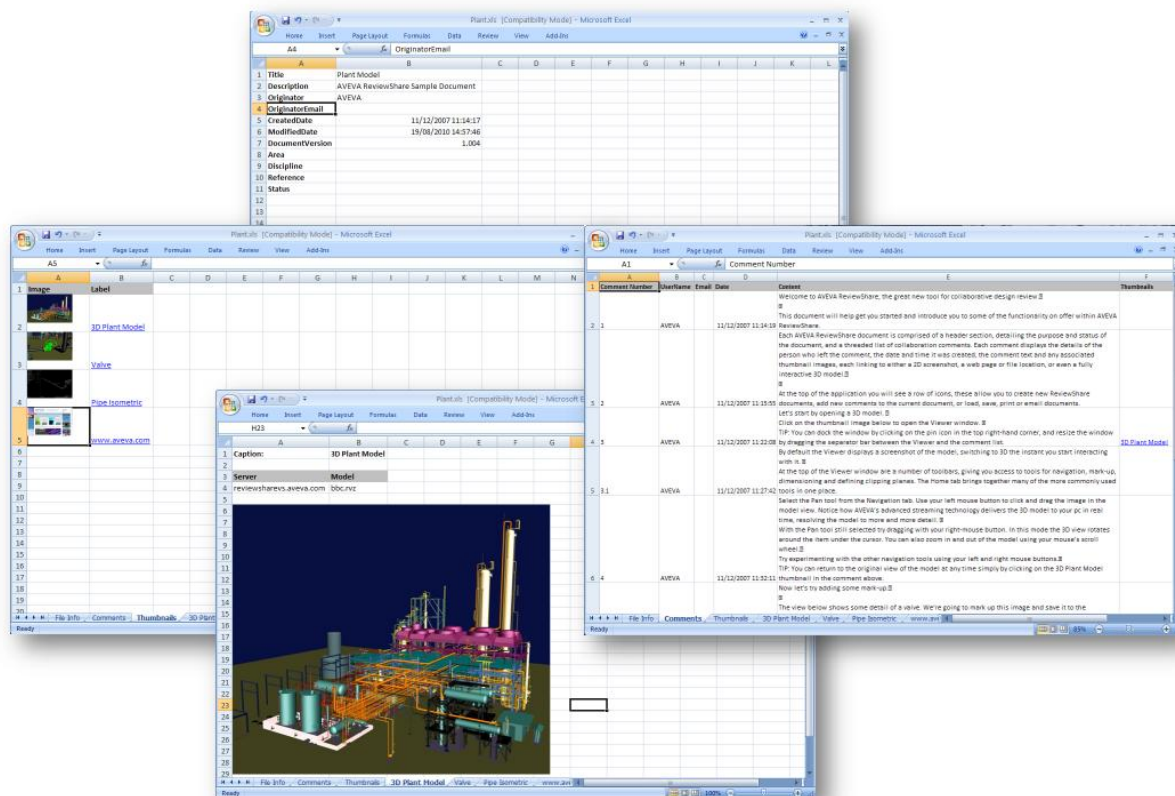


Figure 9: rvf document header data, comments and images can be exported to Excel

4.4 Read-only mode

A document security option has been added to allow users without password access to the document to still view the document in read-only mode.

In previous releases failure to enter a correct document password prevented the user from opening the rvf document. With the “Allow Read-only Anonymous Access” option set an unauthorised user can see all comments, view and interact with all embedded views, but will not be able to Reply, Delete or Edit any comments.

Read-only mode is also enabled when a user attempts to view an rvf file that is already in use by another user. In this scenario the second user will be notified that the document is currently in use and that it has been opened as read-only.

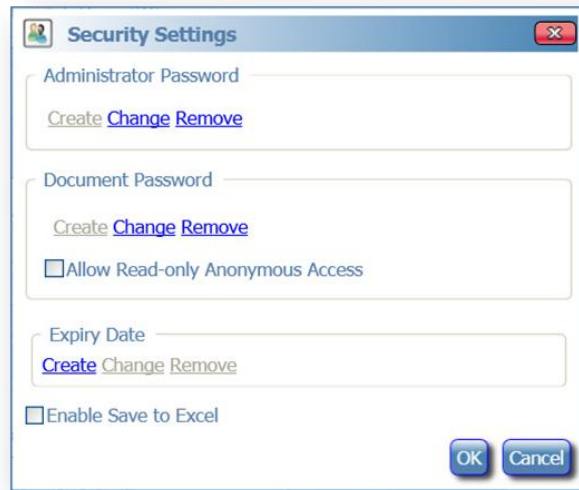


Figure 10: Enhanced document security options include read-only access and export to Excel

4.5 Replication Server File Timestamping

The AVEVA ReviewShare Replication Server uses file timestamping to determine the uniqueness of files copied to the ReviewShare Server

Each file placed on the Replication Server is given a unique name, based on the file name and the date/time that the file was last modified. This unique name is recorded in the Replication Server .rs file.

The consequence of this is that if a previously published model file is modified and reposted to the Replication Server, it will still be assigned a unique name and will be uploaded to the ReviewShare Server as a new model. Any rvf documents referencing the original model will remain unchanged.

A new option in the ReviewShare Replication Service Admin Tool allow for Timestamping to be disabled. In this case the last modified time/date is ignored and any modified model files placed in the Replication folder will replace the equivalent files on the ReviewShare Server, automatically updating any rvf documents that reference those models.

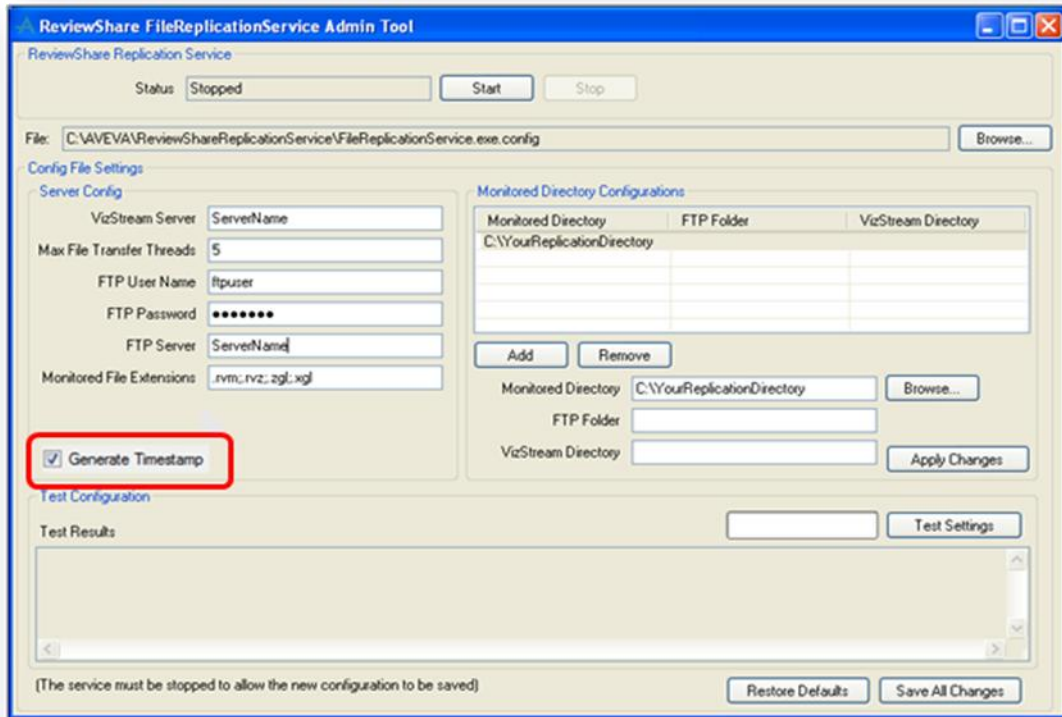


Figure 11: File Timestamping control in the ReviewShare Replication Server 1.3 Admin Tool

5 Withdrawn Functionality

The following functionality has been withdrawn or superseded in this release of AVEVA Review 12.1:

- *Support for RVQ has been removed at Review 12.1.*

6 Faults Corrected in Review 12.1

6.1 Review

Defects that have been fixed in AVEVA Review 12.1 as a result of *user reports* may be reviewed through the AVEVA Helpdesk system. Users who have raised specific Software Change Requests that have been implemented should already have been notified individually of our response.

This release includes all fixes issued since the previous 12.0.SP2 release. In addition, the following Helpdesk calls have been resolved and closed:

Incident number	Defect number	Description
23095		Recording animations that manipulate large groups cause memory to increase drastically, with likelihood of crash.
17352		Unable to start Review if installed from a network share by a different user.
28979		Clip plane capping is not working for open facet groups.
17363		Import DGN fails.
		DWF export to paths containing non-English characters fails.
		Wavefront export to paths containing non-English characters crashes.
		Alpha generation for textures does not work as expected.
		Review RVF command line generation should support all streamable model formats.
		Fix QuickFind when multiple models loaded.

6.2 ReviewShare

This release addresses defects arising from the following support incidents:

Incident number	Defect number	Description
		Fix QuickFind when multiple models loaded.
		XGL background colour is not be correctly overridden in ReviewShare

6.3 ReviewShare Server

This release addresses defects arising from the following support incidents:

Incident number	Defect number	Description
16632		Unable to capture with data if the server has a remapped data directory.
		Server does not publish RVM files with uppercase file extension.
		Model parser extents are incorrect.
		ReviewShare Server Performance Counters do not work on non-English OS.

6.4 ReviewShare Replication Server

This release addresses defects arising from the following support incidents:

In this release

Incident number	Defect number	Description
23370		Replication Service doesn't update file of same size but different modify time.

7 Known Issues

7.1 Known faults and Outstanding Issues

For a list of known defects please refer to the *AVEVA Review 12.1 Product Release Letter* (d20225.pdf) on the installation CD, or for the latest information see the *AVEVA Review 12.1 Product Release Latest Update* document (w20225.pdf) available from <http://support.aveva.com>.