

PRODUCT RELEASE SUMMARY

AVEVA LFM Server 5.1.0.1

Release Date: 27/08/2019

This document outlines all changes made in the above release of AVEVA LFM Server.

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Superseded Software Version: LFM Server 5.0.0.8

1. AVEVA LFM Version Numbers

AVEVA LFM version numbers take the format X.X.X.X.

- First version field denotes general software series number.
- Second version field is incremented to track major new feature implementation.
- Third version field is incremented to track minor new feature implementation.
- Final (fourth) version field is incremented to track error fixes.

2. Recommended CAD Machine Specification

COMPONENT	RECOMMENDATION
Processor	Intel Core i7 Processor. 8MB cache 4/8 Cores
Operating System	Windows 10 Pro x64
Memory	DDR3 1600 MHz 8GB RAM 1600 MHz
Graphics	NVidia Quadro K2200 with 4GB of GPU memory
Data Storage	500GB SSD (Operating System & local project storage – if required)
Network	1GB Ethernet Card

For further information about AVEVA LFM machine specifications please click [here](#).

3. Recommended Graphics Cards

LFM Server is tested with a range of graphics cards. Below is a list of graphics cards that work successfully with LFM Server.

GRAPHICS CARDS	GPU MEMORY
NVIDIA Quadro P5000	16GB GDDR5X
NVIDIA Quadro K6000	12GB GDDR5
NVIDIA Quadro M6000	12GB GDDR5
NVIDIA Quadro M5000	8GB GDDR5
NVIDIA Quadro P2000	5GB GDDR5
NVIDIA Quadro M2000	4GB GDDR5
NVIDIA Quadro K600	1024MB DDR3
NVIDIA Quadro P600	2GB 64-Bit GDDR5
NVIDIA Quadro K2000	2GB GDDR5
NVIDIA Quadro P6000	24GB GDDR5X
NVIDIA Quadro RTX6000	24GB GDDR6

4. Enhancements for this Series

4.1. Clashing Enhancements

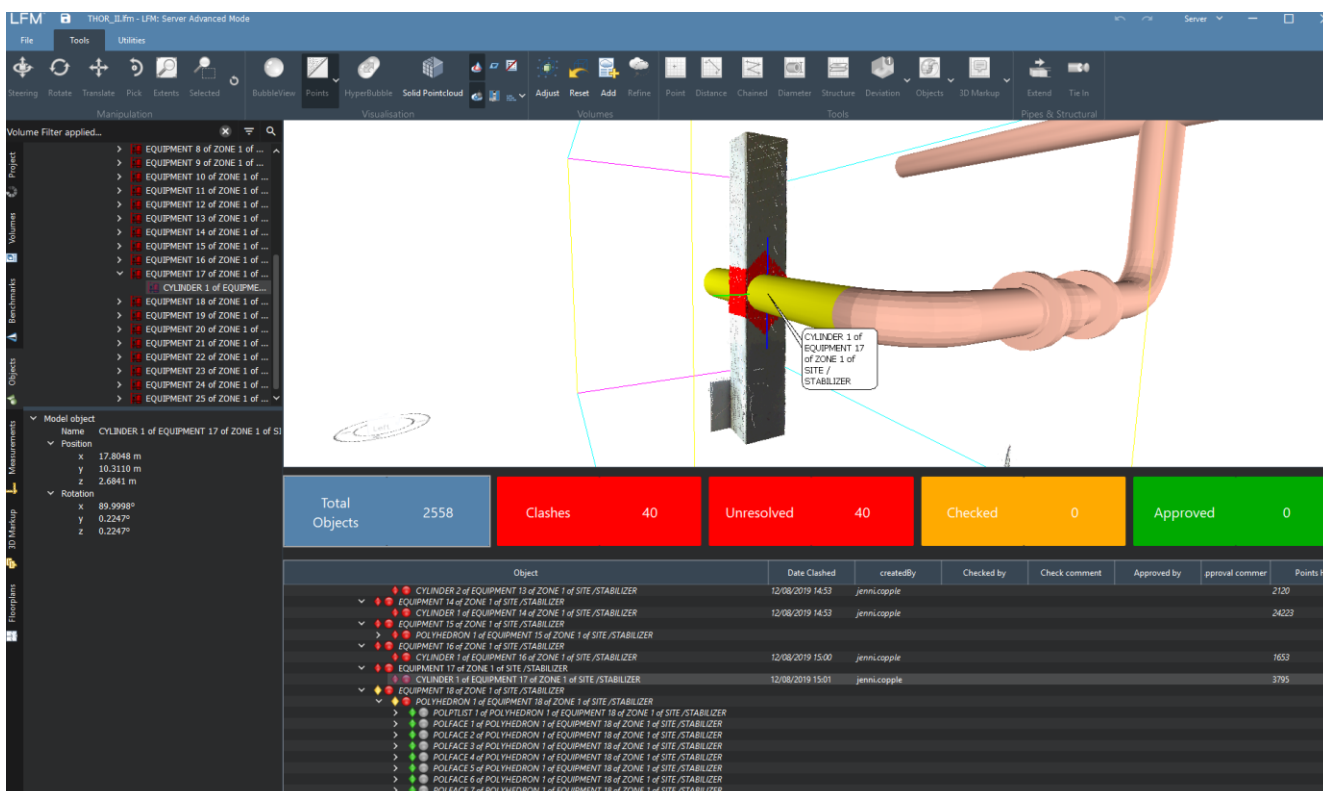
One of the core uses of AVEVA LFM Server is the ability to clash models with the as-is condition of an asset – in AVEVA LFM Server 5.1 users now have an extended set of clashing features.

Firstly, AVEVA LFM Server now supports the import of a wider range of model files. In addition to the already supported model formats (ZGL and XGL files) AVEVA LFM Server now imports data from FBX, RVM and IFC files. Further to this, AVEVA LFM Server will now clash against these imported model files. This marks the first time AVEVA LFM Server can clash against an imported model file rather than a model file pushed over a CAD Link.

AVEVA LFM Server will show you the clashes in the newly designed Clash Report window just like it does for models clashed via a CAD Link. Users can then view the clashed points in the 3D view, as well as see the full model file structure in the Clash Report window for easy navigation. New indicator icons have been also added to tell the user the status of the clash – unchecked or approved for example, or hard, near or no clash.

Additionally, the link is maintained between those clashes and source model file – this means user can return to view the same clashes in the future. AVEVA LFM Server will now also detect if a clash clearance has changed or the source model has been altered which is then flagged in the Clash Report window, indicating that the clash should be rerun.

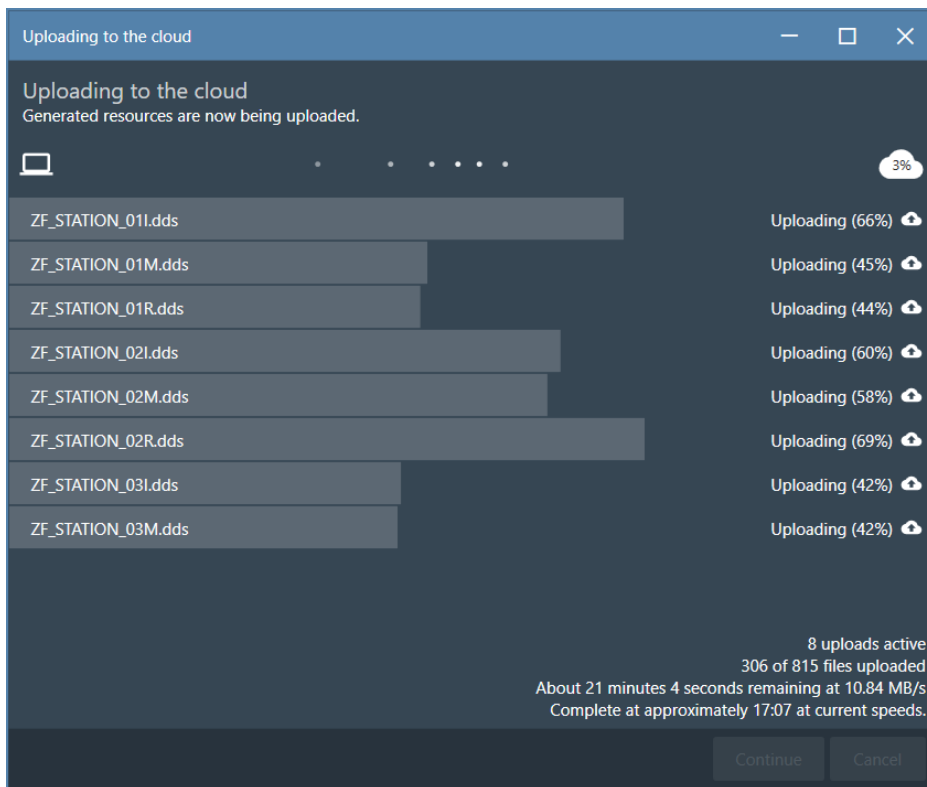
Lastly, AVEVA LFM Server now performs Exact Clashing when linked to Intergraph Smart® 3D.



4.2. Login and Upload to AVEVA LFM NetView on AVEVA Connect

Making 3D captured data available in AVEVA LFM NetView is a concept our users have been familiar with for a while – however, getting data there has previously been a cumbersome and sometimes slow process. In AVEVA LFM Server 5.1, the focus has been to implement a system that makes the uploading of data to AVEVA LFM NetView on AVEVA Connect a seamless and straightforward process. AVEVA LFM Server now has the ability for users to login and upload AVEVA LFM NetView projects directly to AVEVA Connect from AVEVA LFM Server.

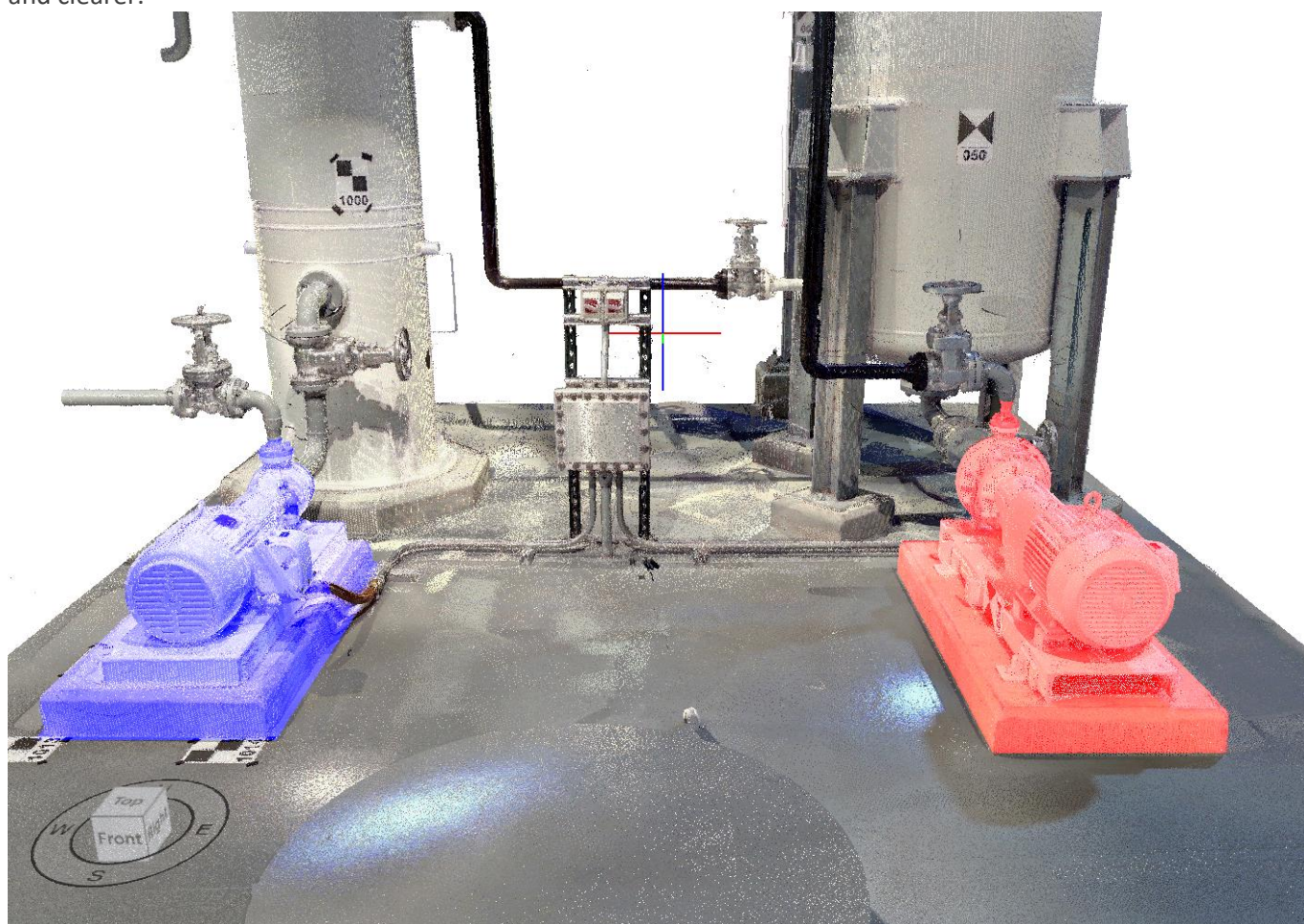
Users simply work through the new intuitive wizard which guides them through the publication process – then AVEVA LFM Server will automatically upload the project to AVEVA Connect with no further user interaction required. This is a significant step forward in the cloud adoption process as it makes is extremely easy for users to get data onto the cloud in a secure and efficient way.



4.3. Extended Colour Highlight

One area AVEVA LFM Server has had a lot of interest in from our users is the ability to highlight different areas of the point cloud for planning. Users wanted the ability to highlight the point cloud data with colours to associate the data directly with external plans such as decommissioning or maintenance.

Now in AVEVA LFM Server 5.1, users simply highlight an area of the point cloud using the existing volume selection tools then select a colour to highlight the data in. The colours are saved for the future so there is consistency across the project. This is a large step forward for users with regards to productivity, as it makes planning with data easier and clearer.



4.4. Autodesk Enhancements

AVEVA LFM have also been focusing on improving interoperability with 3rd Party CAD applications – this is a continuous focus and one that will remain a priority. Users of AVEVA LFM Server 5.1 can now fully utilise point cloud data within Autodesk's 2020 releases of AutoCAD®, Navisworks® and Revit®.

5. Known Issues

INTERNAL REFERENCE	DESCRIPTION
LFM-5255	Unable to add a clash clearance for Smart® 3D clashing. This is due to limitations on the Smart® 3D side when using exact clashing. We are currently working with Hexagon to find a solution.
LFM-5250	HD BubbleViews are not published for AVEVA LFM NetView if the “Mask Demolished Areas” option is ticked in the AVEVA LFM NetView publishing wizard.
LFM-5216	AVEVA LFM Server crashes on importing certain .ifc files. This is caused by the errors thrown by the third-party library that AVEVA LFM Server uses to read the .ifc format. AVEVA will be replacing this library in due course.
LFM-5204	AVEVA LFM Server asks for the location of the .lfd file when the project is opened from the Recents menu if the project is connected to an SQL database.
LFM-2920	Solid Pointcloud data is white for .rxp scans.
LFM-4059	Not all points are visible in the Ortho View after selecting Register All on a group of scans in Gateway Mode. This is expected behaviour for scans at certain positions if the Options > Orthographic View Depth setting is set to Automatic. To resolve this issue, please change the Options > Orthographic View Depth setting to Medium Range or Long Range.
LFM-2196	Clashing PDMS objects are not displayed in LFM Server after performing exact clashing and toggling objects on.
B3692	Importing an .lfm project file into another .lfm project file gives the wrong target positions resulting in red traffic lights for all targets. To get around this please update the scan headers in the source projects and add the updated .zfc files to a new project. This will result in one project containing all scans that are registered correctly.
B5195	<p>LFM Server: Gateway Mode expects and supports the following variant of .ptx file:</p> <pre> 20222 X size 8623 Y size 785.884915 534.863432 43.552212 Position -0.086158 -0.996281 0.000973 3x3 orientation 0.996280 -0.086159 -0.001912 0.001988 0.000805 0.999998 -0.086158 -0.996281 0.000973 0 Homogenous matrix of position and orientation 0.996280 -0.086159 -0.001912 0 0.001988 0.000805 0.999998 0 785.884915 534.863432 43.552212 1 0.000176 0.539844 -1.156689 0.056916 36 35 33 x,y,z, intensity(0.0 -> 1.0), r,g,b (8-bit) 0.000175 0.537848 -1.151469 0.056931 36 35 33 </pre> <p><i>AVEVA are aware of some instances of ptx files that do not match the format above. AVEVA will look to incorporate support for these variants as and when they become known. However, any variations on this format are susceptible to problems (including crashes or failure to convert). This includes failure to convert with the error "Failed to create a .zfc file, Intensity and Image files PATH.int ! Disk Full?"</i></p>
LFM-4216	Generation Recovery fails

6. Product QA cycle:

The development philosophy used to produce AVEVA LFM Server applies AGILE principles to ensure a high-quality product which evolves to match customer requirements. Throughout the development cycle, test and evaluation is used to guide the process and minimise the final test overhead.

The final test process has three stages, and this document has been prepared after these have been completed. These stages are outlined below.

6.1. Individual Function Test

All LFM Server desktop functionality is examined for correct responses. Functions called from the Main Menubar, Main Toolbar, Modelling Toolbars, and Component Browser are tested in turn. This ensures that the functionality matches the design intent, and previously recorded errors have been fixed.

6.2. Destructive Test

This section of the test schedule is aimed at investigating to see if a software product exhibits proper behaviour when subjected to improper usage, or improper input. The tests are applied to different data samples, machines, and in a random manner to try to replicate 'real world' variations in user conditions.

6.3. Software Acceptance Tests

AVEVA concludes the LFM Server test cycle with a series of controlled examples aimed at simulating real life use situations. The finished models are QA checked against calibrated historical data, to ensure that the product maintains the previous output standard.